Centrifugal fans and blowers

version 07

The engineer's choice

ebmpapst

Centrifugal fans and blowers

Centrifugal fans from ebm-papst are available with forward or backward curved blades. The outstanding feature of the external rotor motors is their compact, flat design, which results from integrating the external rotor motor into the impeller. "Blowers" refers to devices with scroll housing, while centrifugal fans are shipped without scrolls.
Our complete range of blowers is available in AC and EC technology.

More power
Centrifugal fans with backward curved blades are used primarily for intake suction and do not require a scroll housing. They have high hydraulic efficiency.

Quiet movement
Centrifugal fans and blowers with forward curved blades always require a scroll housing. Their characteristic features are a low noise level, relatively small air flow with a high increase in static pressure, and space-saving application.

ebmpapst is a registered trademark of ebm-papst Mulfingen GmbH & Co. KG

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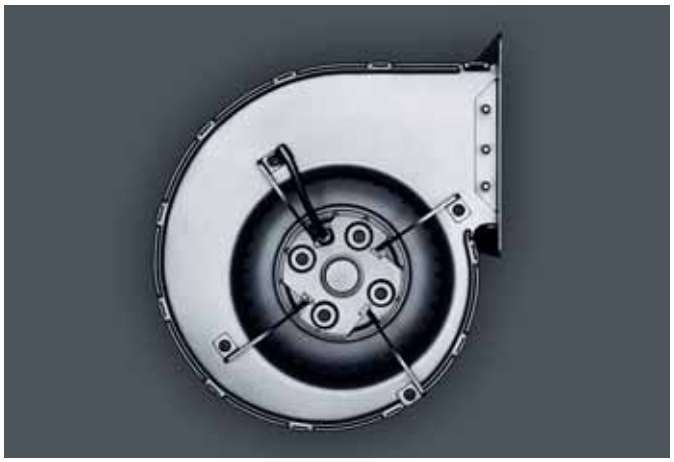

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Company profile: ebm-papst

The entire scope of ventilation and drive technology: this is the world of ebm-papst. More than 9,800 people – in Germany and throughout the world – develop, produce and sell our motors and fans. Our global presence and our unique range of products based on a quality standard that surpasses every other have made us what we are: world market leader in motors and fans. Expertly knowing what our customers need and incessantly striving to arrive at the perfect application solution for a wide variety of different industries is what determines our daily work. Those who know us know the high standards we apply to our work and know our creed: to be as close to our customers as possible and to simply be the best in terms of innovation and reliability.

Our headquarters in Mulfingen

Left:
Our location in St. Georgen
Right:
Our location in Landshut

Our history – Our drive

Rooted in ebm, PAPST and mvl, the three leading innovators in the development and production of motors and fans, ebm-papst has established itself as the world market leader. Now as ever, our legendary inventive spirit shines through in products that set standards in many segments of industry worldwide. We are proud to say that despite difficult competition, our performance has always been exemplary and outstanding – in business, in our personal relationship with our customers, and of course with respect to technology and engineering. For decades, we have contributed to the world of air technology and drive engineering with small revolutions and large milestones.

To maintain this advantage in skills and knowledge to get maximum quality and thus the highest degree of customer satisfaction, our employees around the world put their passion and dedication to work for you.

Passionately involved in R&D

Our catalogues just list the results of our incessant efforts in R&D: products of highest quality and reliability. After all, it is our passion to constantly try something new and improve what we have. In doing so, we take advantage of the latest development methods and state-of-the-art technology and invest quite heavily in R&D facilities. Best of all, though, we rely on excellently trained and skilled engineers and technicians to be at your service in R&D and Sales & Distribution.

Producing and safeguarding high-quality products and services

This is our promise without any compromise. Whether produced in one of our five factories in Germany or one of our eleven international production sites, our products always have the same high level of quality. This quality control is something you can definitely rely on! And this across all levels of production and throughout all processes: consulting customers, development, material selection through to picking certified, choice suppliers and on to the production of parts and final delivery. On top of this, our products have to pass the most rigourous tests under all realistic operating conditions: continuous stress test, salt spray test, vibration test, or precision noise measuring, just to mention a few. And the product gets clearance for serial production only after all the desired characteristics have been determined to be just right.

Environmental care is another priority with ebm-papst. This is why we have developed ou product line in EC technology, which makes for very low power consumption. Due to our manufacturing philosophy, there is absolute focus on environmental care in production, recycling, waste and waste water disposal.

Global Domestic

In order to be specialist for customised solutions throughout the world, you need strong partners. Global Domestic – i.e. being present all over the world and being a national company in each individual country – is how we have established ourselves in all important markets on this globe with our successful subsidiaries. And so you will always find ebm-papst close to home, speaking your language, and knowing the demands of your markets. Besides, our worldwide production alliance serves as a basis for competitive pricing. Our global services and logistic outlets, i.e. IT networking, safeguard short reaction times and just-in-time delivery.

All our efforts are documented in a comprehensive quality management system, both for products and services. Being certified as complying with the tough requirements of the international standards DIN EN ISO 9001, ISO/TS 16949-2 and of standard DIN EN ISO 14001 is just one seal of approval we have received for our unceasing efforts to provide only the best quality products and services.

Our key to success

Our innovations and technologies keep on turning into new industrial standards. This competitive capability can only be maintained by seeing ventilation as a whole: the interrelationship between, and thus the system of, motor engineering, aerodynamics, and electronics. These are our three core competencies, imminently connected and linked in each of our products. And so we handle air intelligently and quietly and continue to set new standards in drive technology. Our system solutions form the main part of our product range by now. And they will be our main key to success.

Production

Winding machine

Motor engineering, aerodynamics, electronics
Our drive is well known and famous with specialists: our external-rotor motor, which has made us world market leader – quietly, yet powerfully. Being versatile as to integration, it is ideally suited to the most diverse applications. Based on this principle, we here at ebm-papst have developed the widest range of fans and motor types in the world. And for hot or aggressive blower mediums, the internal-rotor motor is the perfect complement.

Still, in drive engineering, certain applications simply require the internal-rotor motor principle, and they are then realised with our motors specifically developed for such cases. Take, for instance, the steering support motor in the automotive field developed as innovation in active steering.

Be it axial or centrifugal fans, centrifugal blowers, compact fans or tangential blowers: we always design fan blades, impeller blades and ducted housings with the specific application in mind. We strive to minimise noise and to optimise efficiency. This is the challenge that we have taken up and which we meet – working away powerfully and quietly.

Finally, intelligence will become the decisive factor on all markets in future. After all, only in connection with electronics can drive and air flow – as a system solution – have an optimal effect in a product or application. Interfaces are avoided, and thus potential faults and failures.

Setting new standards with EC technology
Wherever intelligent air handling is required, where energy consumption needs to be reduced and performance has to be maximised, there our EC motors are your reliable answer. They do not waste financial or natural resources. Instead, they boost high efficiency, continuous controllability via analogue or digital inputs, long and maintenance-free service life, and robustness.

Left: Endurance test room
Centre: Shaker
Right: Measurement station

Top: Betz manometer
Left: Precision noise measurement lab

Without any problems, the ebm-papst EC technology allows you to realise networked, bus-linked appliances, to integrate simple or complex controls at low cost and to also realise time and again new, customised and complete solutions. Here, ebm-papst excels as competent development partner, with our experience of more than 25 years and our excellent know-how in R & D and production also being well documented in a few hundred national and international patents. And there is also our ability to listen intently, to pay good attention to our customers and their demands – in order to come up with new and pioneering ideas, such as:

– EC fan units for clean room technology.
  As the electronics are integrated and the unit is wired up completely and ready to plug in, there is no need for our customers to waste time and money on laborious wiring work.
– Sensitive EC sensor fans for the automotive industry providing optimal selection of the air-conditioning unit in the car and, combined with booster blowers, individual air-conditioning of each and every passenger seat.
– EC gas blowers with commutation and control electronics including a processor.
  They are developed in such a way as to make the blower premix the required amount of air with the gas. Aerodynamics with these blowers are adjusted in such a way as to make these blowers ideal for use in very limited space at high back pressure.

How to use this catalogue

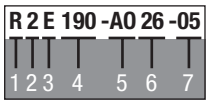
The ebm-papst catalogue combines a technical and a product-specific section.

Technical section: General information on how to select and find ebm-papst products for your specific application is found in the chapters "Selection" (p. 10) and "Technical parameters" (p. 572).
In case you require technical background information on ebm-papst product groups, simply turn to the chapters "Impellers" (p. 576), "Motors" (p.590) and "Control technology" (p. 594).
Product-specific section: The product-specific section is organised according to product diameters, lines, materials and/or design principles.

Headline

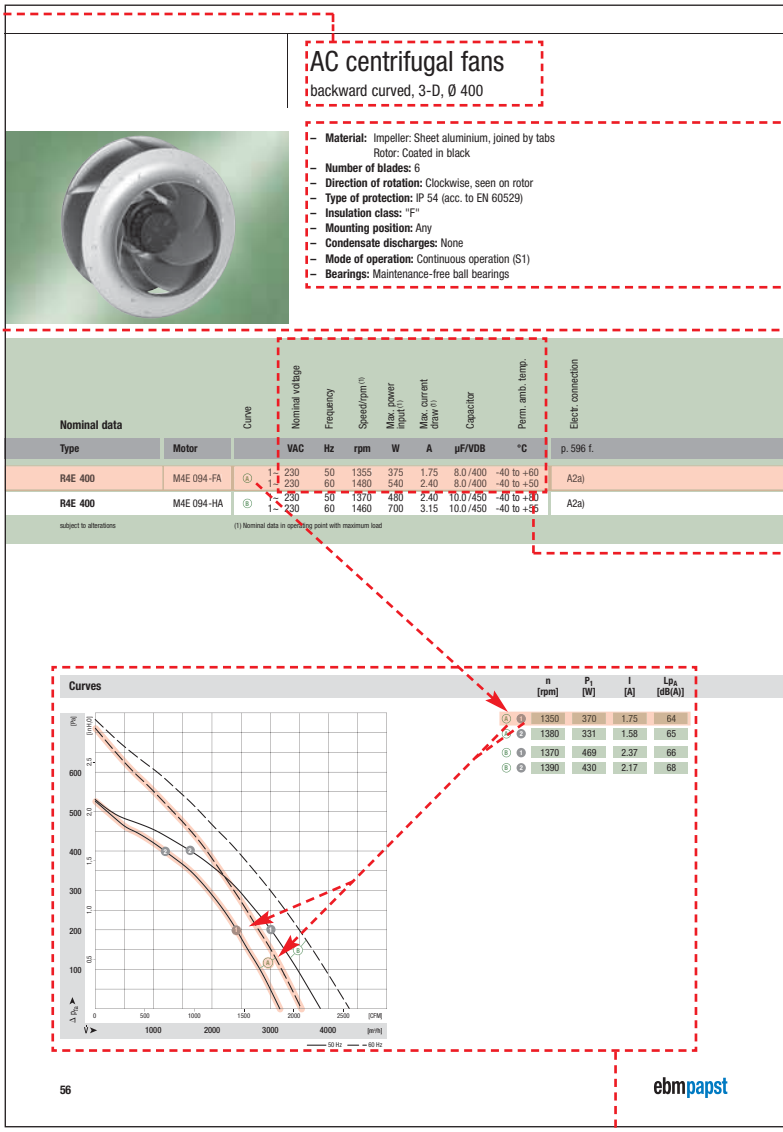
The headline indicates which technology (AC or EC), which design (centrifugal, axial, etc.), and which line (e.g. S-Range) the product belongs to. Impeller diameter or other features are also indicated.

Part designation / Type



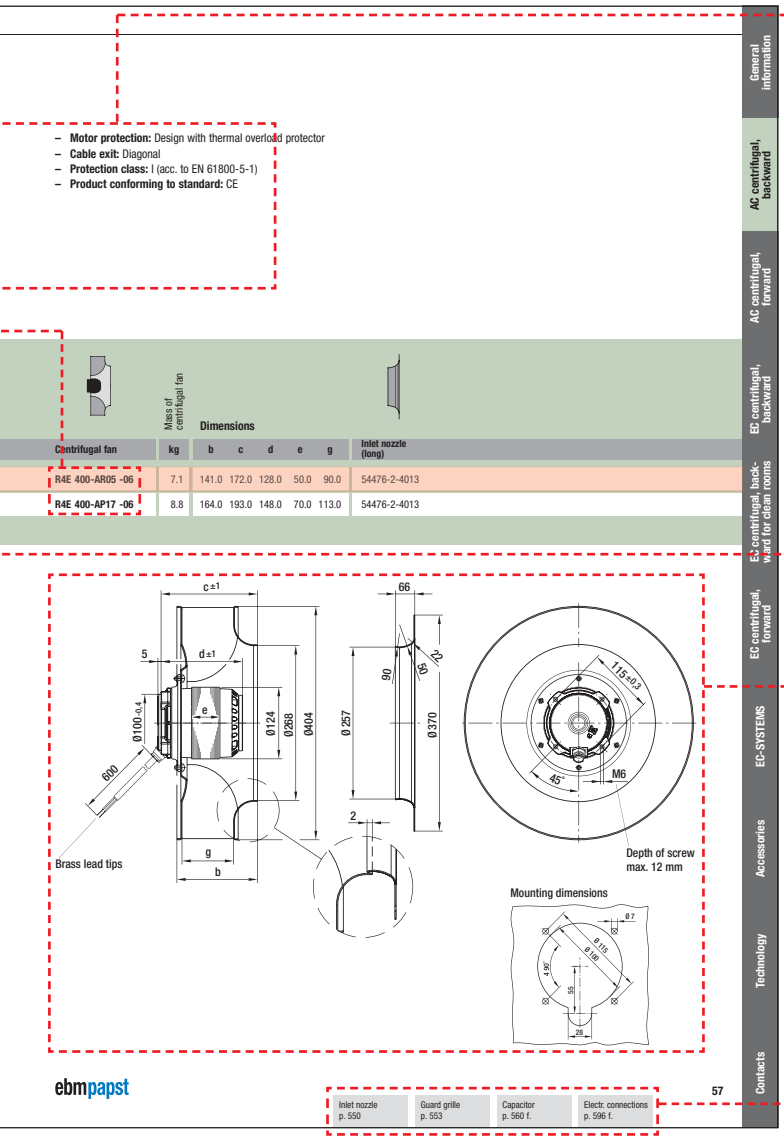
This key designates and identifies all ebm-papst products and serves as part number:

1) Type
   - A – axial fan
   - S – axial fan with guard grille
   - W – axial fan with wall ring
   - V – axial combination
   - R – centrifugal fan, single inlet
   - G – centrifugal blower, single inlet (with scroll housing)
   - B – centrifugal fan, dual inlet
   - D – centrifugal blower, dual inlet (with scroll housing)
   - K – centrifugal combination
   - M – motor
   - P – pumps
2) Number of poles (AC) / number of cores (EC)
   2-, 4-, 6-, 8- and 12-pole (Z = 12) / 1- and 3-core
3) Type of motor
   - D – 3-phase motor
   - E – single-phase motor with capacitor
   - G – EC motor
   - S – shaded-pole motor
   - Q – square shaded-pole motor
4) Impeller diameter in mm
5) Key for mechanical design
6) Key for electrical design
7) Key for mechanical variants



What a product page is made up of (reduced scale - 50%)

ebmpapst



Product description

Depending on the product, information is provided here on the following: material, number of blades, direction of air flow, direction of rotation, system of protection, insulation class, mounting position, condensate discharge holes, mode of operation, design, bearing, technical equipment, EMC, leakage current, motor protection, electrical connection, cable exit, protection class, capacitor, product conforming to standards, approvals and options.

Nominal data

AC products (up to motor size 074) and EC products (DC-fed):
Free-blowing or at minimal backpressure
AC products (from motor size 094) and EC products (AC-fed):
In operating point at maximum load

Graphic rendition of products

All drawings represent the design principle and are not to scale. Dimensions are either given in the product drawing or, with varying dimensions, in the table of dimensions given above the drawing.

Indication of relevant accessories and additional information

The pages indicated at the bottom refer to the accessories, e.g. inlet nozzles, guard grilles, wall rings, etc. for this particular product, as well as additional information (e. g. the connection diagram).

Curves and operating points

The diagram gives air performance curves pertaining to the product. Refer to the operating point table to the right for information on speed, power consumption, current draw, sound level or sound pressure level and overall efficiency of the impeller.

How to select your ebm-papst product

Solutions for ventilation offered by ebm-papst

In the field of ventilation, ebm-papst offers the perfect solution for a vast number of applications. Depending on motor, impeller and control technology, there is almost no limit to the number of possible combinations, thus making sure you can find the best solution for your application.

Criteria for selection

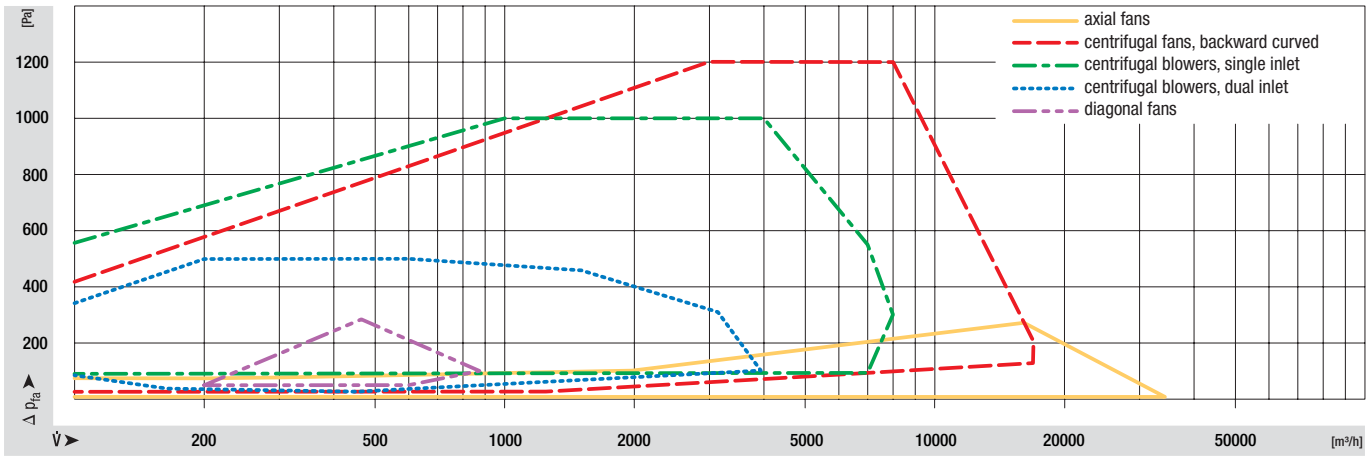
When selecting a fan for a specific application, these parameters play an important role:

– Air flow with given back pressure
– Voltage supply, divided into DC and AC voltage (1~, 3~)
– Noise generation
– Efficiency
– Available mounting space

Selecting a fan

The following diagram shows the range of characteristic curves for the most important fan designs and serves as a helpful tool in preselecting a design on the basis of air flow and back pressure.

Characteristic curves of the various designs



How to order your ebm-papst product

Have you found the suitable ebm-papst product and would like to order it now?
In this case, simply contact your nearest ebm-papst sales office by E-mail, fax or phone.

Don't know exactly which ebm-papst product you need to order?
In this case, simply contact your nearest ebm-papst sales office by E-mail, fax or phone. Our specialists in ventilation and drive technology are always there to help you find the best solution for your specific application.

Using the questions provided in the checklist here as a guideline, you can make sure your ebm-papst contact has all the necessary information to handle your enquiry as efficiently and quickly as possible.

How your ebm-papst product is delivered
In our order confirmation, you will find information on when, how and where to the delivery will be made.

We deliver:
– Ex works (excluding packaging)
– Via freight carrier (we also use postal services for shipments up to 30 kg)

All the other details such as packaging, freight, insurance and customs duty will be settled with your ebm-papst contact prior to the time we issue our order confirmation.

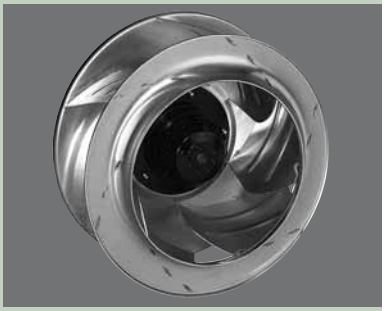
Is there anything else you need to know about your ebm-papst product?
In this case, simply contact your nearest ebm-papst sales office by E-mail, fax or phone. We have the answer to your problem and are always glad to be able to be of assistance.

Using the questions provided in the checklist here as a guideline, you can make sure your ebm-papst contact has all the necessary information to handle your enquiry as efficiently and quickly as possible.

Checklist

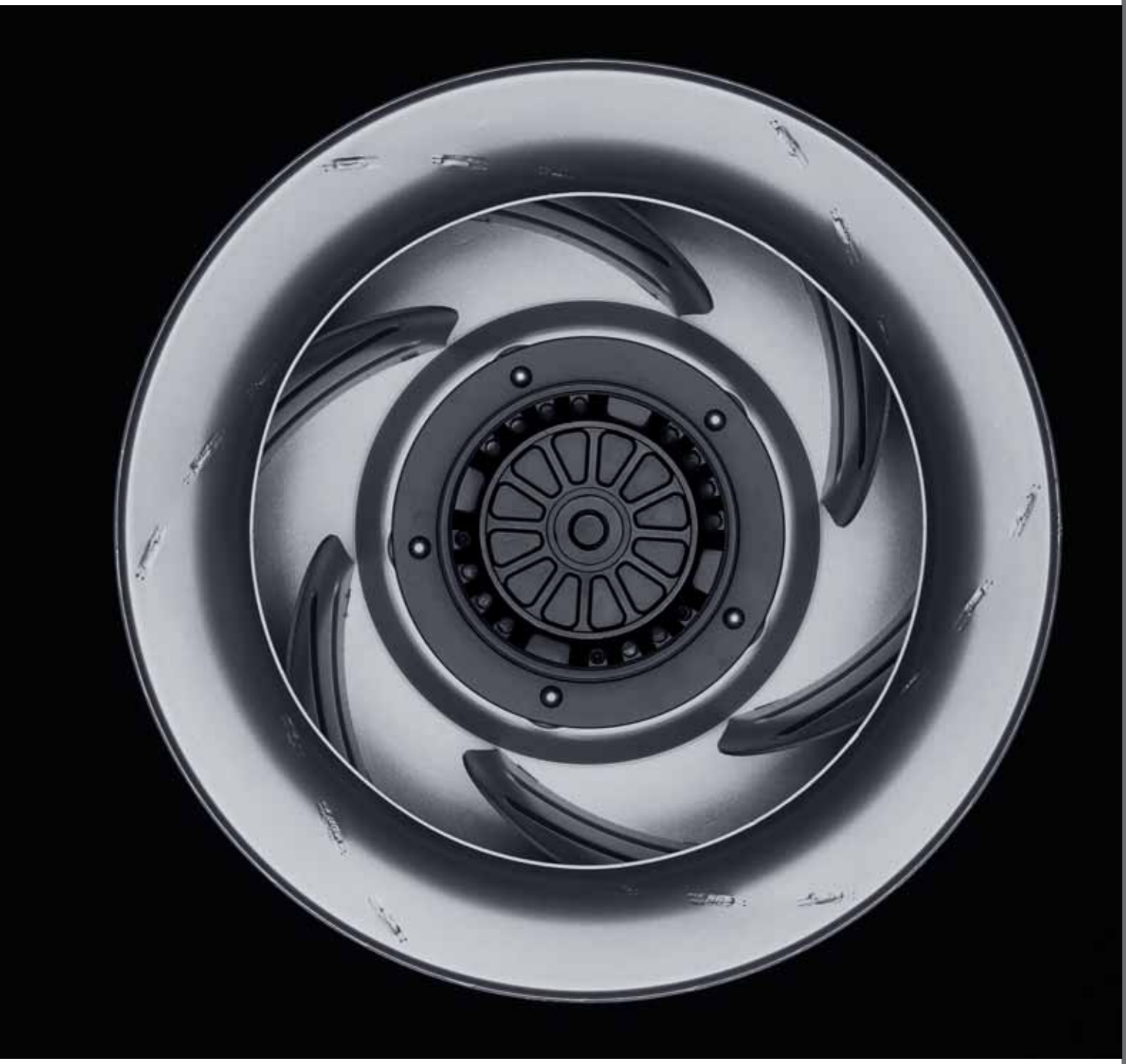
– Part designation / type
– Quantity needed
– Field of application
– Ambient conditions (humidity, temperature, climate)
– Impeller diameter
– Air flow
– Back pressure
– Voltage supply

For your nearest sales office, please turn to page 610.



AC centrifugal fans backward curved

	AC centrifugal fans with plastic impeller	Ø 133 - Ø 355	14
	AC centrifugal fans with sheet steel impeller	Ø 250 - Ø 280	36
	AC centrifugal fans with aluminium impeller	Ø 310 - Ø 630	44



AC centrifugal fans

backward curved, Ø 133

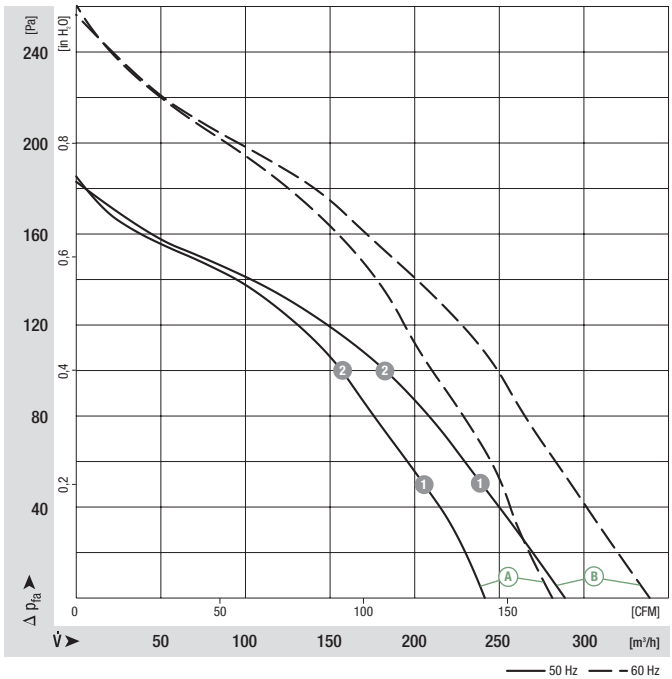
- **Material:** Impeller: PA plastic 6.6, fibreglass-reinforced
  Rotor: Partially cast in aluminium
- **Number of blades:** 7
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 44
- **Insulation class:** "B"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data

Type	Motor	Curve	Nominal voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Sound pressure level	Perm. amb. temp.	Electr. connection
			VAC	Hz	m³/h	rpm	W	A	µF/VDB	dB(A)	°C	p. 596 f.
R2E 133	M2E 052-BF	Ⓐ	1~ 230 1~ 230	50 60	240 280	2700 3200	25 28	0.11 0.13	1.0/400 1.0/400	53 56	-25 to +55 -25 to +65	A1)
R2E 133	M2E 052-BF	Ⓑ	1~ 230 1~ 230	50 60	290 345	2800 3300	24 27	0.11 0.13	1.0/400 1.0/400	56 60	-25 to +45 -25 to +60	A1)

subject to alterations

Curves



	n [rpm]	P_1 [W]	I [A]
Ⓐ 1	2680	25	0.11
Ⓐ 2	2680	25	0.11
Ⓑ 1	2710	25	0.11
Ⓑ 2	2700	26	0.12

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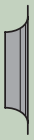
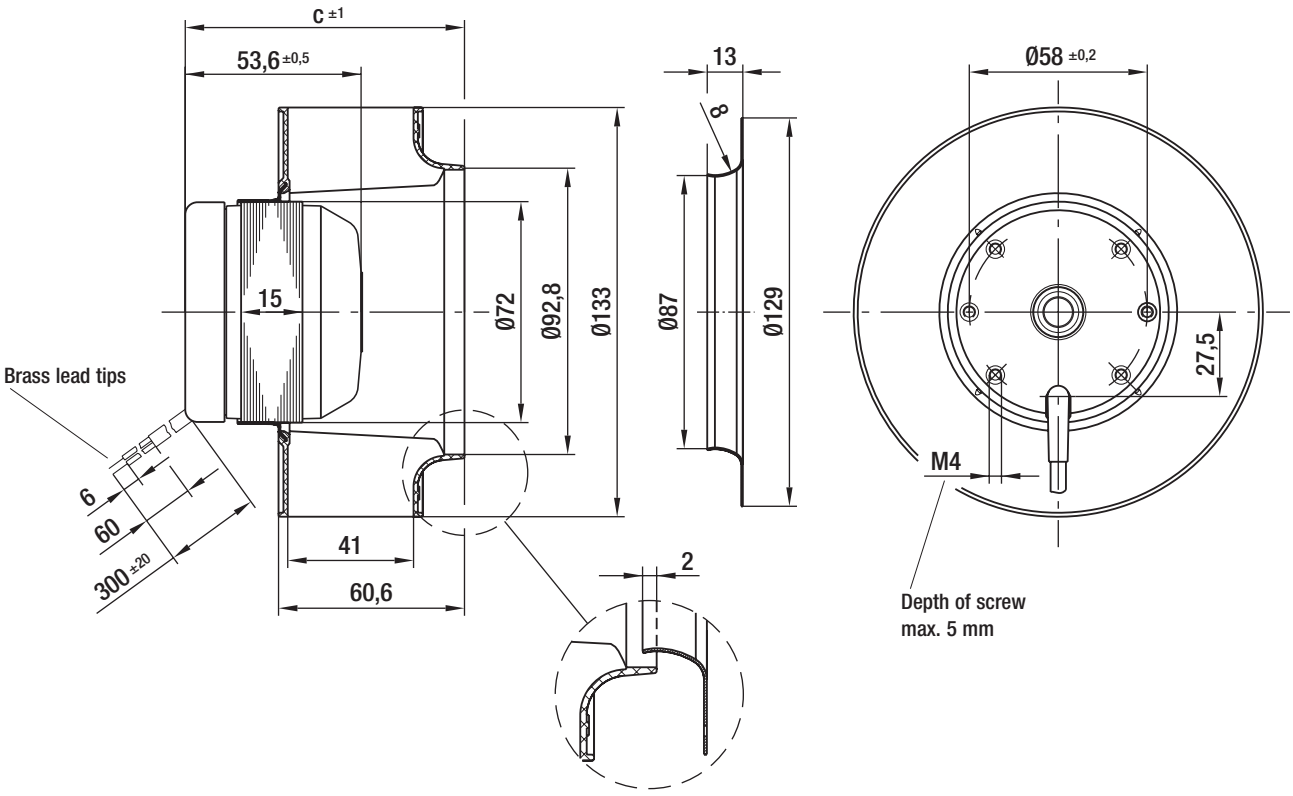
- **Motor protection:** TOP wired internally
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 60335-1, CE
- **Approvals:** CCC, GOST



Centrifugal fan	Mass of centrifugal fan kg	Dimensions c	Inlet nozzle (long)
R2E 133-BH66 -07	0.7	73.0	09566-2-4013
R2E 133-BH66 -05	0.7	91.0	09566-2-4013



AC centrifugal fans

backward curved, Ø 133

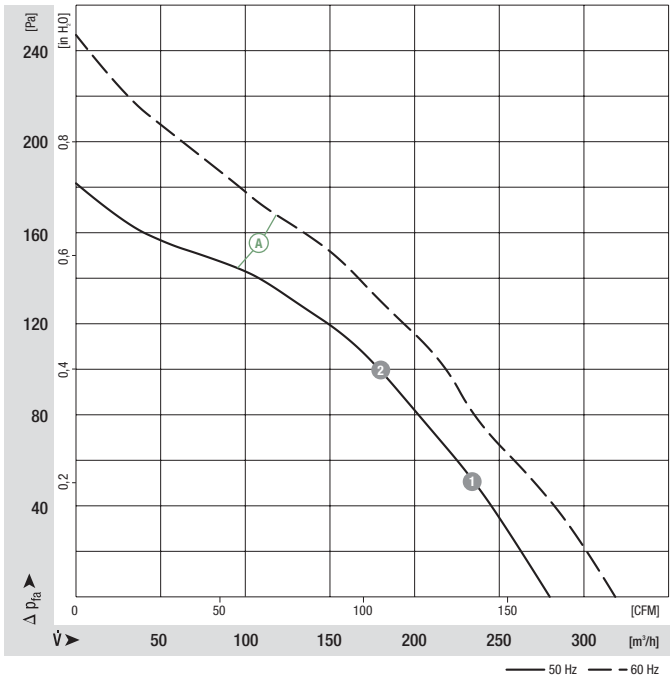
- **Material:** Impeller: PA plastic 6.6, fibreglass-reinforced
  Rotor: Coated in black
- **Number of blades:** 7
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 22
- **Insulation class:** "B"
- **Mounting position:** Shaft horizontal or rotor on bottom; rotor on top on request
- **Condensate discharges:** Rotor-side
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data

Type	Motor	Curve	Nominal voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Sound pressure level	Perm. amb. temp.	Electr. connection
			VAC	Hz	m³/h	rpm	W	A	µF/VDB	dB(A)	°C	p. 596 f.
R2S 133	M2S 052-CA	Ⓐ	1~ 230	50	280	2780	36	0.25	—	55	-25 to +40	B)
			1~ 230	60	320	3200	34	0.21	—	58	-25 to +40	

subject to alterations

Curves



	n [rpm]	P_1 [W]	I [A]
Ⓐ 1	2720	38	0.27
Ⓐ 2	2720	38	0.27

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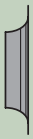
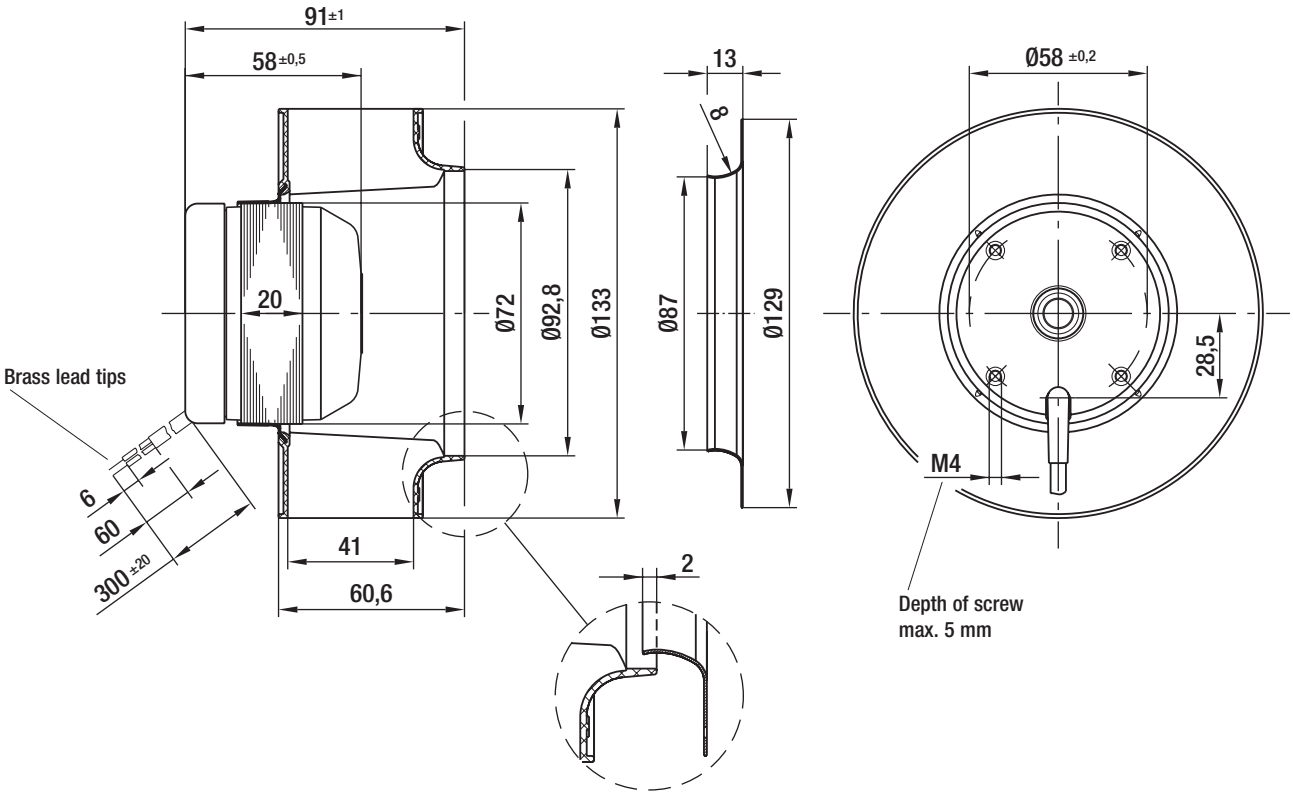
- **Motor protection:** TOP wired internally
- **Cable exit:** Axial
- **Protection class:** I
- **Product conforming to standards:** EN 60335-1, CE
- **Approvals:** CCC



Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle (long)
R2S 133-AE17 -05	0.9	09566-2-4013



AC centrifugal fans

backward curved, Ø 175

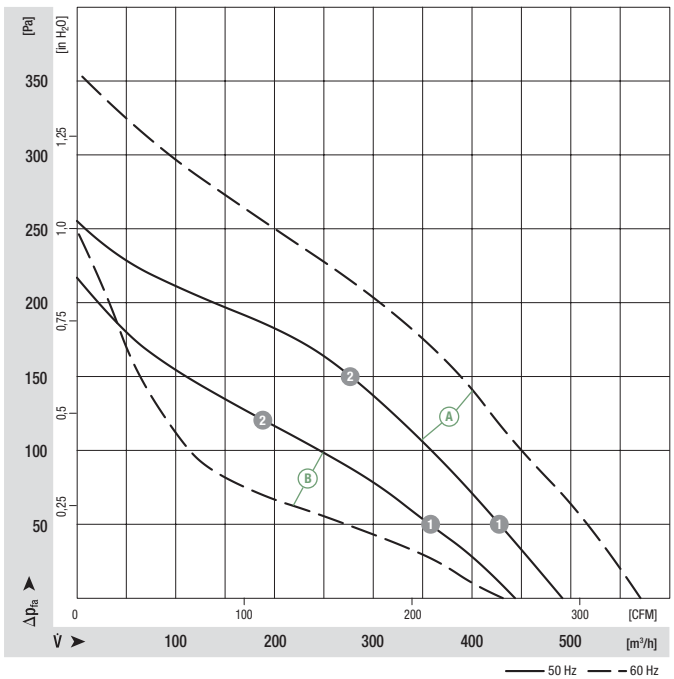
- **Material:** Impeller: PA plastic 6.6, fibreglass-reinforced
  Rotor: Coated in black
- **Number of blades:** 7
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** Ⓐ IP 44, Ⓑ IP 20
- **Insulation class:** Ⓐ "F", Ⓑ "B"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data

Type	Motor	Curve	Nominal voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Sound pressure level	Perm. amb. temp.	Electr. connection
			VAC	Hz	m³/h	rpm	W	A	µF/VDB	dB(A)	°C	p. 596 f.
R2E 175	M2E 052-CA	Ⓐ	1~ 230 1~ 230	50 60	490 570	2650 3100	50 51	0.25 0.23	1.5 / 400 1.5 / 400	63 68	-25 to +50 -25 to +80	A1)
R2S 175	M2S 052-CA	Ⓑ	1~ 230 1~ 230	50 60	440 430	2350 2300	53 51	0.33 0.29	— —	61 60	-25 to +40 -25 to +55	B)

subject to alterations

Curves



	n [rpm]	P_1 [W]	I [A]
Ⓐ 1	2600	51	0.25
Ⓐ 2	2530	53	0.26
Ⓑ 1	2240	54	0.27
Ⓑ 2	2120	56	0.28

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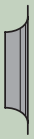
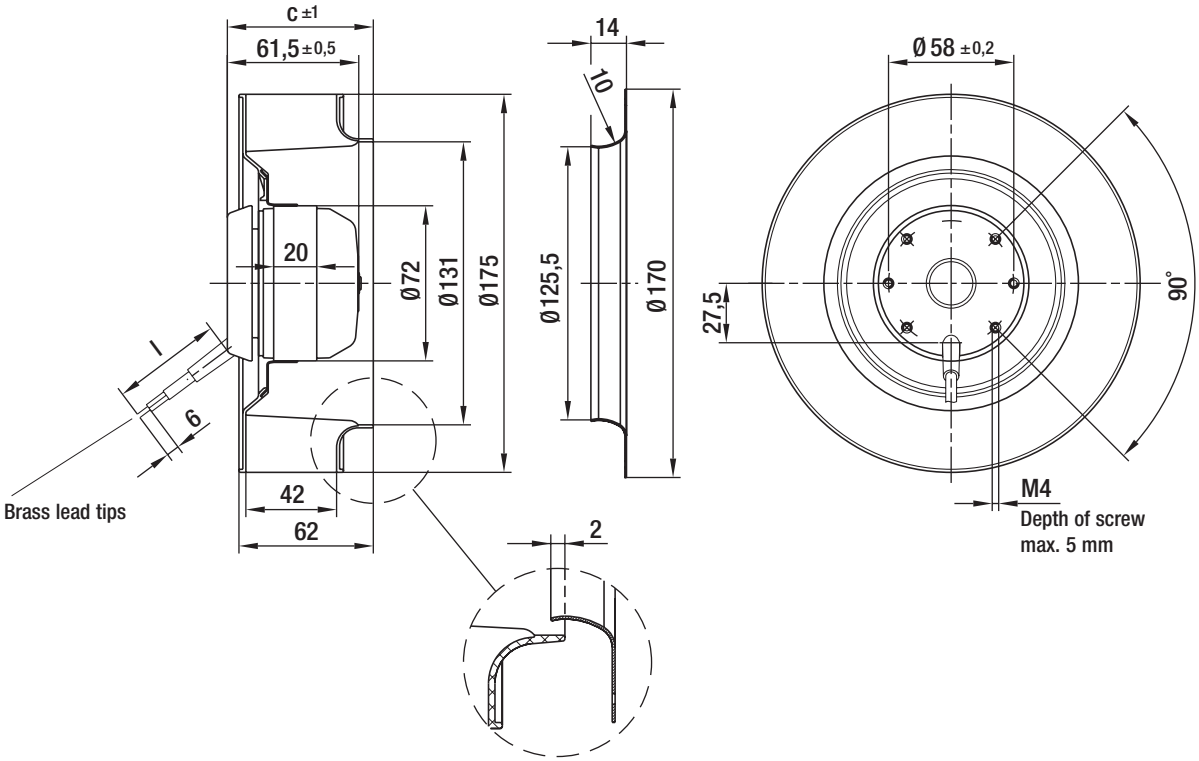
- **Motor protection:** TOP wired internally
- **Cable exit:** Ⓐ variable, Ⓑ axial
- **Protection class:** I
- **Product conforming to standards:** EN 60335-1, CE
- **Approvals:** CCC, Ⓑ also GOST



Centrifugal fan	Mass of centrifugal fan kg	Dimensions c	Dimensions l	Inlet nozzle (long)
R2E 175-AR72 -05	0.9	68.5	450.0	09576-2-4013
R2S 175-AB56 -01	0.9	69.0	400.0	09576-2-4013



AC centrifugal fans

backward curved, Ø 190

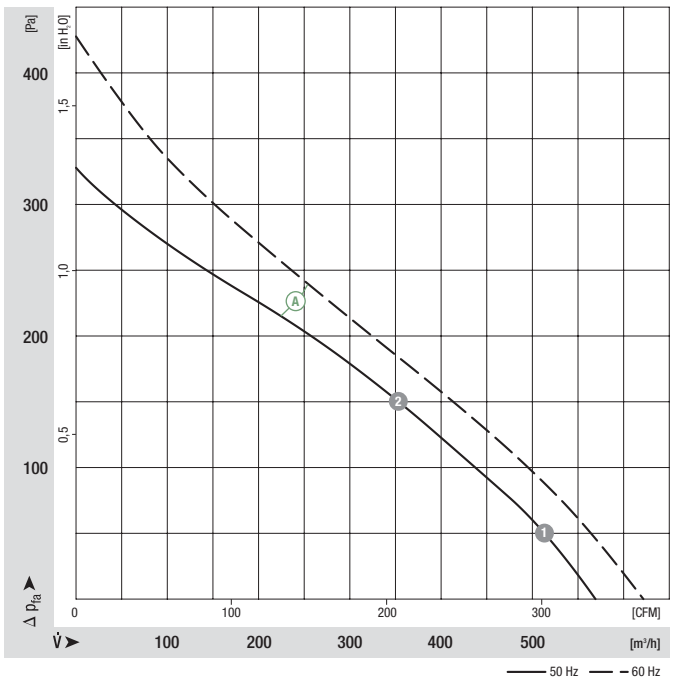
- **Material:** Impeller: PA plastic 6.6, fibreglass-reinforced
  Rotor: Coated in black
- **Number of blades:** 7
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 44
- **Insulation class:** "B"
- **Mounting position:** Shaft horizontal or rotor on bottom; rotor on top on request
- **Condensate discharges:** Rotor-side
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data

Type	Motor	Curve	Nominal voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Sound pressure level	Perm. amb. temp.	Electr. connection
			VAC	Hz	m³/h	rpm	W	A	µF/VDB	dB(A)	°C	p. 596 f.
R2E 190	M2E 068-BF	Ⓐ	1~ 230	50	570	2500	58	0.26	2.0/400	62	-25 to +50	A1)
			1~ 230	60	620	2700	75	0.34	2.0/400	64	-25 to +55	

subject to alterations

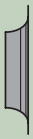
Curves



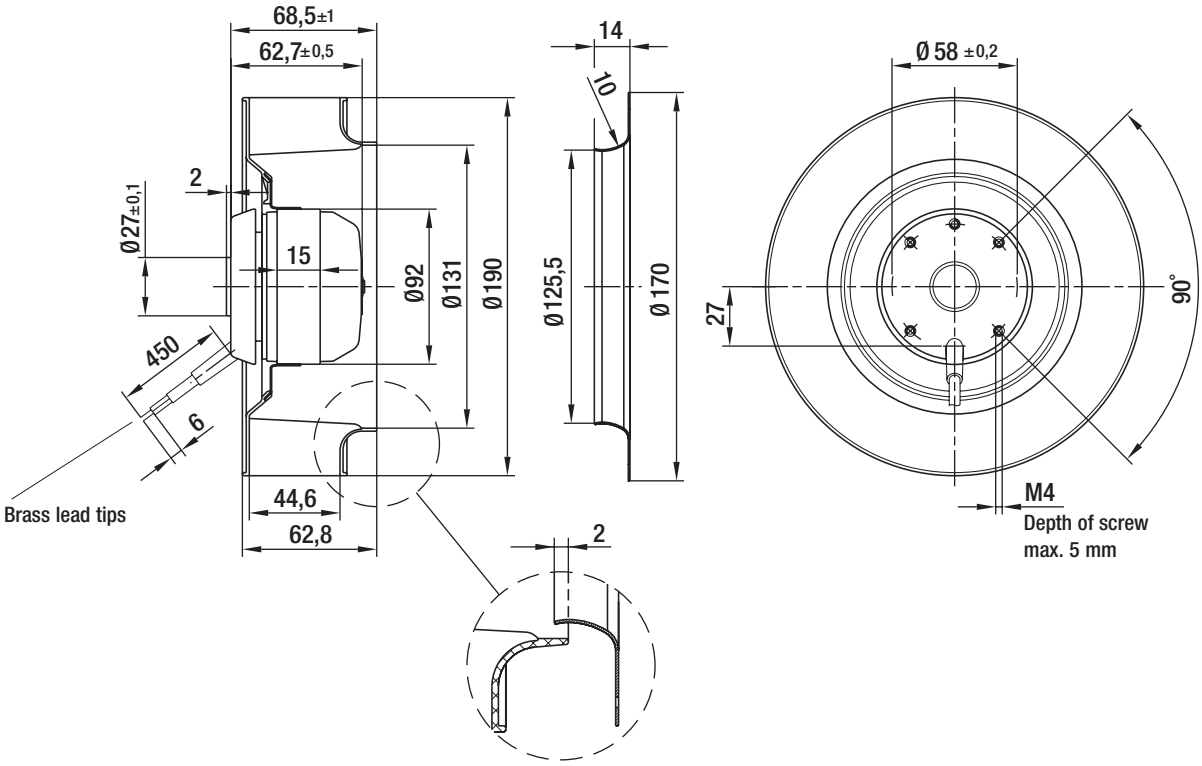
	n [rpm]	P_1 [W]	I [A]
Ⓐ 1	2490	59	0.26
Ⓐ 2	2410	61	0.27

ebmpapst

- **Motor protection:** TOP wired internally
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 60335-1, CE
- **Approvals:** CCC, GOST



Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle (long)
R2E 190-A026 -05	1.2	09576-2-4013



AC centrifugal fans

backward curved, Ø 220

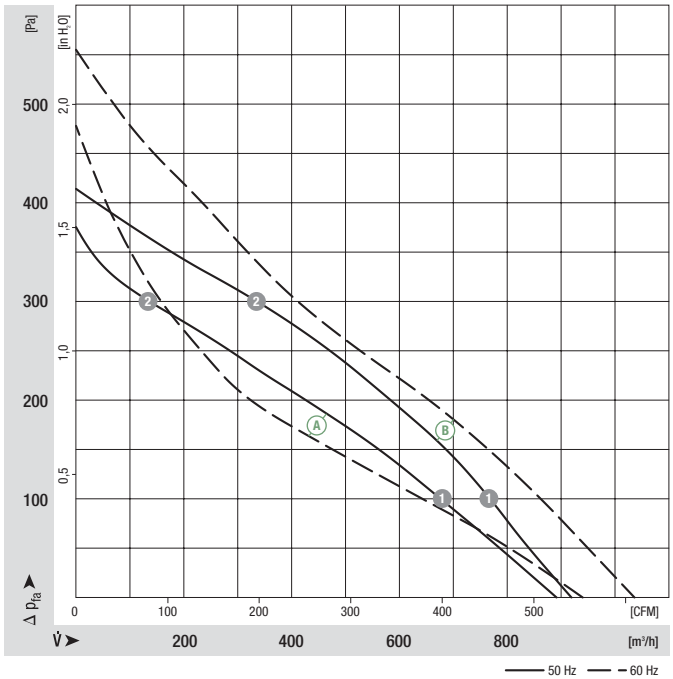
- **Material:** Impeller: PA plastic 6.6, fibreglass-reinforced
  Rotor: Coated in black
- **Number of blades:** 11
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 44
- **Insulation class:** "B"
- **Mounting position:** Shaft horizontal or rotor on bottom; rotor on top on request
- **Condensate discharges:** Rotor-side
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data

Type	Motor	Curve	Nominal voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Sound pressure level	Perm. amb. temp.	Electr. connection
			VAC	Hz	m³/h	rpm	W	A	µF/VDB	dB(A)	°C	p. 596 f.
R2E 220	M2E 068-BF	Ⓐ	1~ 230	50	860	2600	85	0.38	3.0 / 400	73	-25 to +40	A1)
			1~ 230	60	900	2700	90	0.40	2.0 / 400	74	-25 to +40	
R2E 220	M2E 068-CF	Ⓑ	1~ 230	50	885	2700	85	0.38	2.5 / 400	72	-25 to +55	A1)
			1~ 230	60	990	3050	115	0.51	2.5 / 400	75	-25 to +55	

subject to alterations

Curves

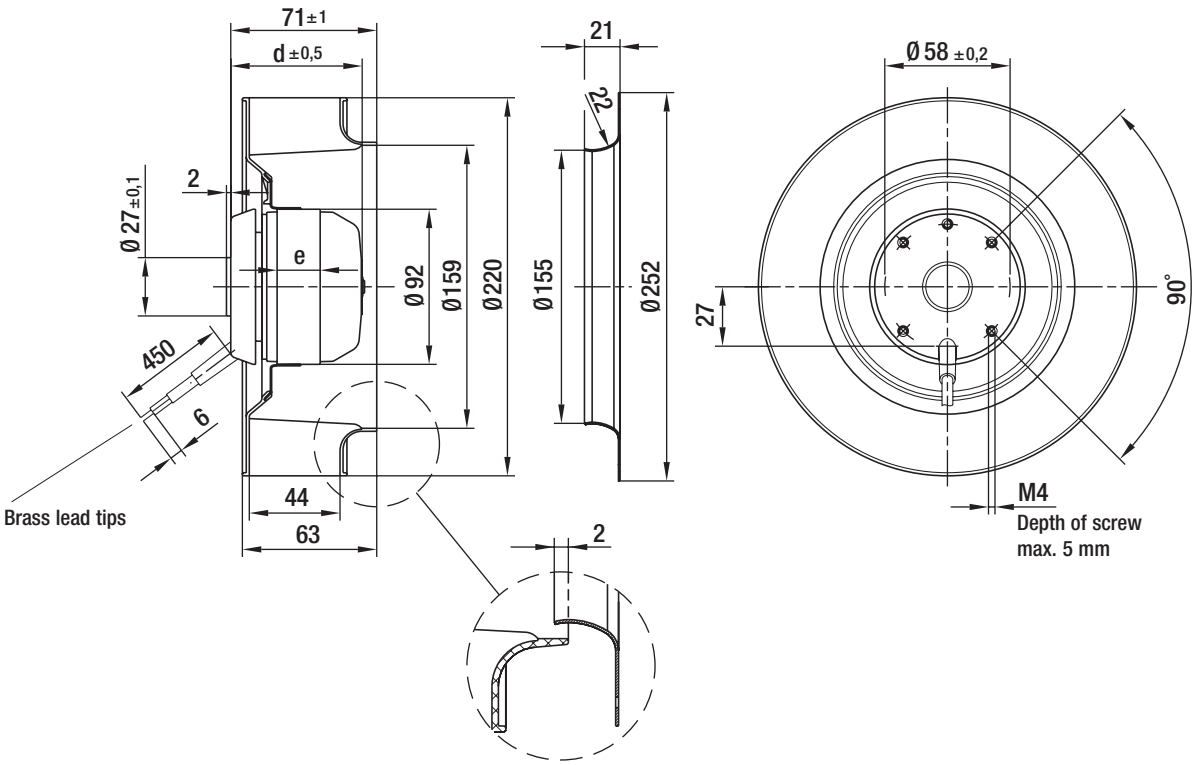


	n [rpm]	P_1 [W]	I [A]
Ⓐ 1	2390	95	0.42
Ⓐ 2	2490	90	0.40
Ⓑ 1	2650	96	0.43
Ⓑ 2	2600	102	0.46

ebmpapst

- **Motor protection:** TOP wired internally
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 60335-1, CE
- **Approvals:** CCC, GOST

Centrifugal fan	Mass of centrifugal fan	Dimensions		Inlet nozzle (long)
	kg	d	e	
R2E 220-AA40 -05	1.3	63.0	15.0	09609-2-4013
R2E 220-AB06 -05	1.5	73.0	25.0	09609-2-4013



AC centrifugal fans

backward curved, Ø 225

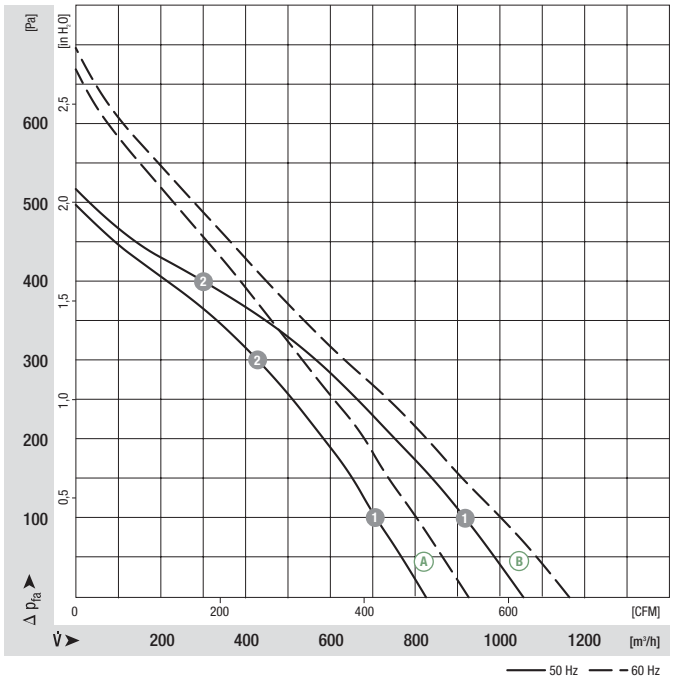
- **Material:** Impeller: PA plastic 6.6, fibreglass-reinforced
  Rotor: Coated in black
- **Number of blades:** 11
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 44
- **Insulation class:** "B"
- **Mounting position:** Shaft horizontal or rotor on bottom; rotor on top on request
- **Condensate discharges:** Rotor-side
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data

Type	Motor	Curve	Nominal voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Sound pressure level	Perm. amb. temp.	Electr. connection
			VAC	Hz	m³/h	rpm	W	A	µF/VDB	dB(A)	°C	p. 596 f.
R2E 225	M2E 068-DF	Ⓐ	1~ 230 1~ 230	50 60	850 945	2650 2950	105 145	0.46 0.64	3.0 / 450 3.0 / 450	70 72	-25 to +60 -25 to +65	A1)
R2E 225	M2E 068-DF	Ⓑ	1~ 230 1~ 230	50 60	1050 1160	2700 3000	115 165	0.51 0.72	3.0 / 450 3.0 / 450	72 75	-25 to +60 -25 to +30	A1)

subject to alterations

Curves

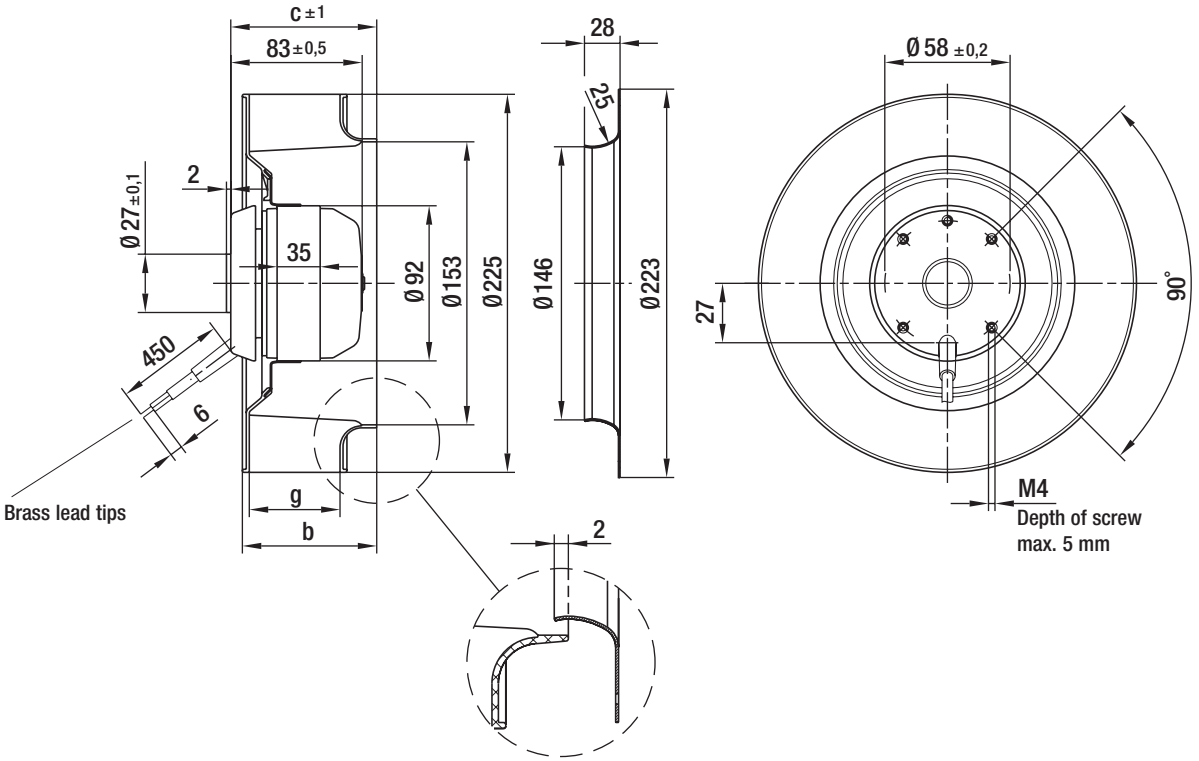


	n [rpm]	P_1 [W]	I [A]
Ⓐ ❶	2580	110	0.49
Ⓐ ❷	2560	113	0.50
Ⓑ ❶	2620	135	0.60
Ⓑ ❷	2670	124	0.55

ebmpapst

- **Motor protection:** TOP wired internally
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 60335-1, CE
- **Approvals:** CCC, ⓑ also GOST

Centrifugal fan	Mass of centrifugal fan kg	Dimensions b	c	g	Inlet nozzle (long)
R2E 225-AT51 -05	2.1	63.3	69.0	38.0	96358-2-4013
R2E 225-AX52 -05	2.1	75.3	85.0	50.0	96358-2-4013



AC centrifugal fans

backward curved, Ø 225

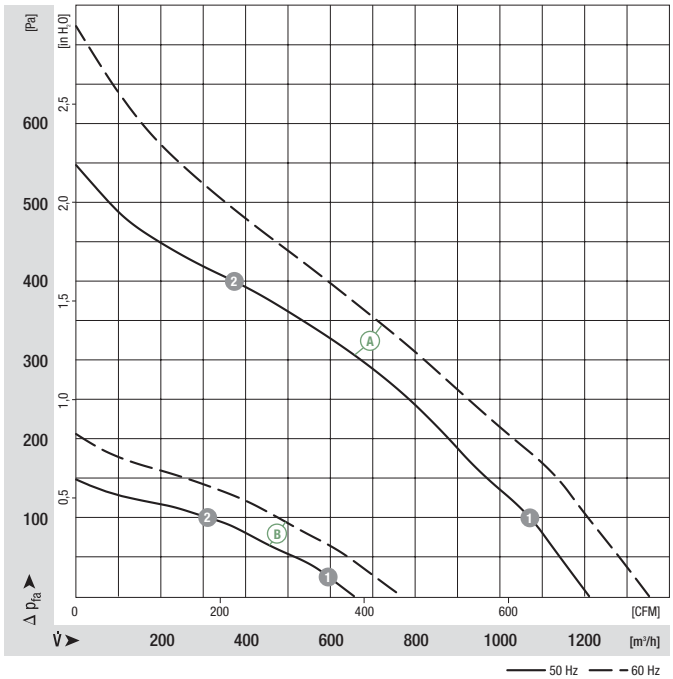
- **Material:** Impeller: PA plastic 6.6, fibreglass-reinforced
  Rotor: Coated in black
- **Number of blades:** 7
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 44
- **Insulation class:** Ⓐ "F", Ⓑ "B"
- **Mounting position:** Shaft horizontal or rotor on bottom; rotor on top on request
- **Condensate discharges:** Rotor-side
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data

Type	Motor	Curve	Nominal voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Sound pressure level	Perm. amb. temp.	Electr. connection
			VAC	Hz	m³/h	rpm	W	A	µF/VDB	dB(A)	°C	p. 596 f.
R2E 225	M2E 068-DF	Ⓐ	1~ 230 1~ 230	50 60	1200 1340	2650 2950	135 200	0.60 0.88	4.0 / 450 4.0 / 450	69 71	-25 to +60 -25 to +60	A1)
R4E 225	M4E 068-CF	Ⓑ	1~ 230 1~ 230	50 60	655 765	1420 1660	40 37	0.20 0.18	1.5 / 400 1.0 / 400	59 61	-25 to +50 -25 to +80	A1)

subject to alterations

Curves

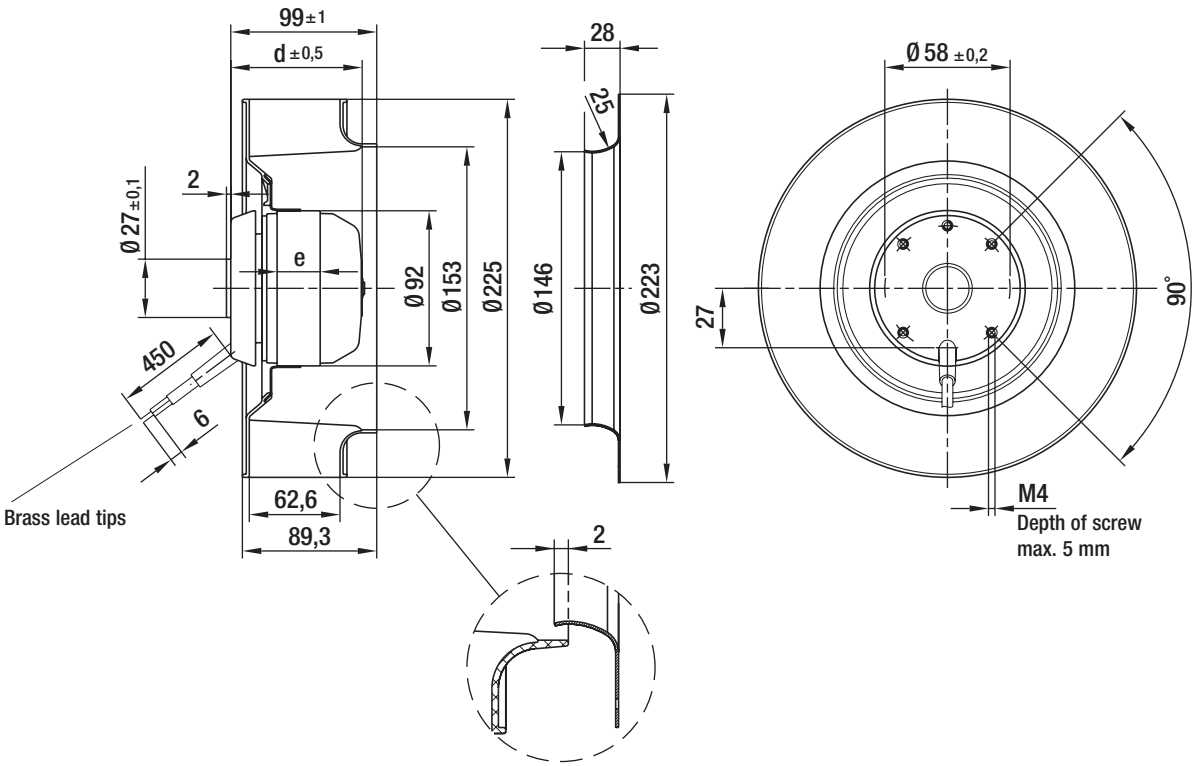


	n [rpm]	P_1 [W]	I [A]
Ⓐ 1	2610	146	0.66
Ⓐ 2	2650	138	0.61
Ⓑ 1	1410	41	0.20
Ⓑ 2	1400	43	0.21

ebmpapst

- **Motor protection:** TOP wired internally
- **Cable exit:** Ⓐ variable, Ⓑ axial
- **Protection class:** I
- **Product conforming to standards:** EN 60335-1, CE
- **Approvals:** CCC

Centrifugal fan	Mass of centrifugal fan kg	Dimensions d	e	Inlet nozzle (long)
R2E 225-BD92 -09	2.1	83.0	35.0	96358-2-4013
R4E 225-AT01 -05	1.8	72.6	25.0	96358-2-4013



AC centrifugal fans

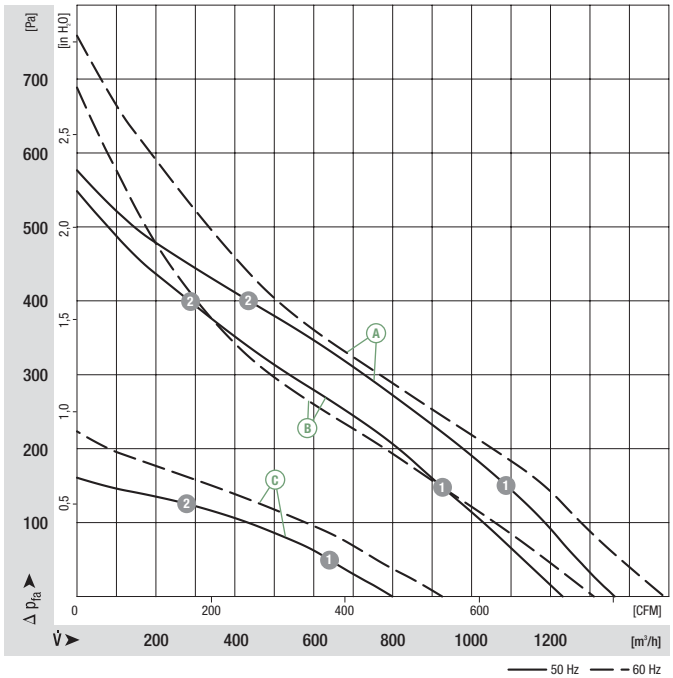
backward curved, Ø 250

- **Material:** Impeller: PA plastic 6.6, fibreglass-reinforced
  Rotor: Coated in black
- **Number of blades:** 11
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 44
- **Insulation class:** Ⓐ "F", Ⓑ Ⓒ "B"
- **Mounting position:** Shaft horizontal or rotor on bottom; rotor on top on request
- **Condensate discharges:** Rotor-side
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Sound pressure level	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VAC**	**Hz**	**m³/h**	**rpm**	**W**	**A**	**µF/VDB**	**dB(A)**	**°C**	p. 596 f.
R2E 250	M2E 068-EC	Ⓐ	1~ 230	50	1450	2600	155	0.70	5.0 / 400	75	-25 to +70	A1)
			1~ 230	60	1490	2700	215	0.95	5.0 / 400	76	-25 to +45	
R2E 250	M2E 068-DF	Ⓑ	1~ 230	50	1230	2550	115	0.51	4.0 / 400	71	-25 to +65	A1)
			1~ 230	60	1335	2750	160	0.71	4.0 / 400	72	-25 to +45	
R4E 250	M4E 068-CF	Ⓒ	1~ 230	50	810	1400	43	0.20	1.5 / 400	61	-25 to +70	A1)
			1~ 230	60	930	1600	43	0.20	1.0 / 400	64	-25 to +80	

subject to alterations

Curves

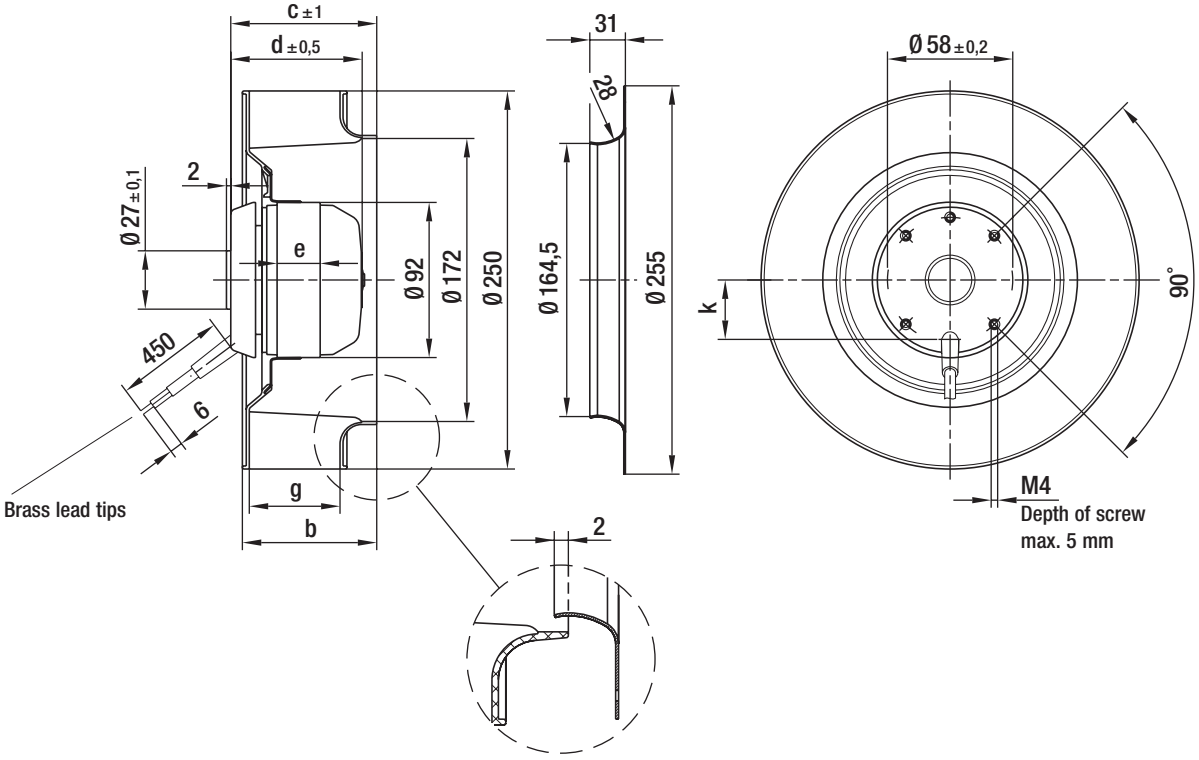


	n [rpm]	P_1 [W]	I [A]
Ⓐ 1	2400	152	0.69
Ⓐ 2	2400	152	0.69
Ⓑ 1	2350	137	0.61
Ⓑ 2	2435	127	0.56
Ⓒ 1	1385	46	0.21
Ⓒ 2	1370	47	0.21

ebmpapst

- **Motor protection:** TOP wired internally
- **Cable exit:** Ⓐ Ⓑ **variable,** Ⓒ axial
- **Protection class:** I
- **Product conforming to standards:** EN 60335-1, CE
- **Approvals:** CCC, Ⓐ Ⓒ also GOST

Centrifugal fan	Mass of centrifugal fan kg	Dimensions b	c	d	e	g	k	Inlet nozzle (long)
R2E 250-AS47 -26	3.1	84.3	99.0	97.5	42.0	56.0	27.0	96359-2-4013
R2E 250-AV65 -01	2.6	73.3	89.0	83.0	35.0	45.0	27.0	96359-2-4013
R4E 250-AH01 -05	2.2	84.3	99.0	72.6	25.0	56.0	29.0	96359-2-4013



AC centrifugal fans

backward curved, Ø 310

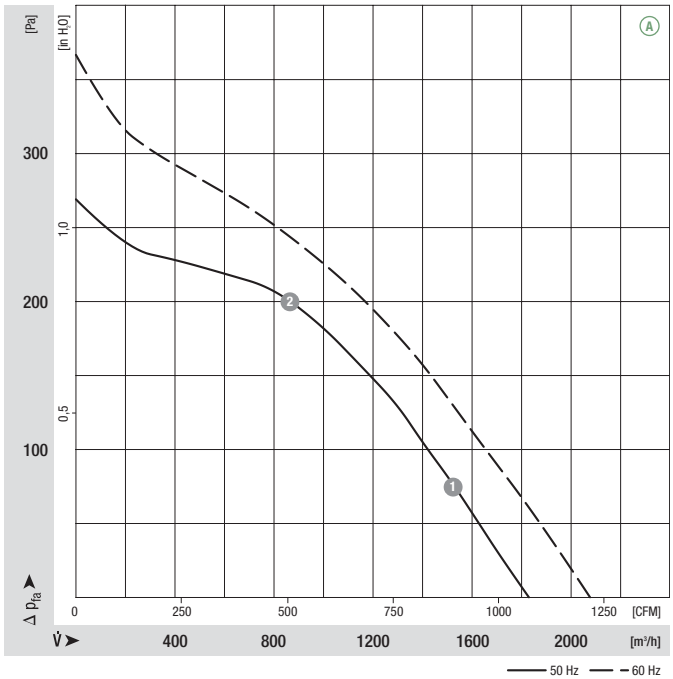
- **Material:** Impeller: PA plastic 6.6
  Rotor: Coated in black
- **Number of blades:** 6
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 44
- **Insulation class:** "B"
- **Mounting position:** Shaft horizontal or rotor on bottom; rotor on top on request
- **Condensate discharges:** Rotor-side
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data

Type	Motor	Curve	Nominal voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Sound pressure level	Perm. amb. temp.	Electr. connection
			VAC	Hz	m³/h	rpm	W	A	µF/VDB	dB(A)	°C	p. 596 f.
R4E 310	M4E 068-EC	Ⓐ	1~ 230	50	1830	1400	105	0.50	4.0 / 400	63	-25 to +55	A1)
			1~ 230	60	2070	1600	140	0.62	4.0 / 400	66	-25 to +55	

subject to alterations

Curves

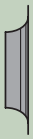


	n [rpm]	P_1 [W]	I [A]
Ⓐ 1	1380	118	0.56
Ⓐ 2	1360	127	0.60

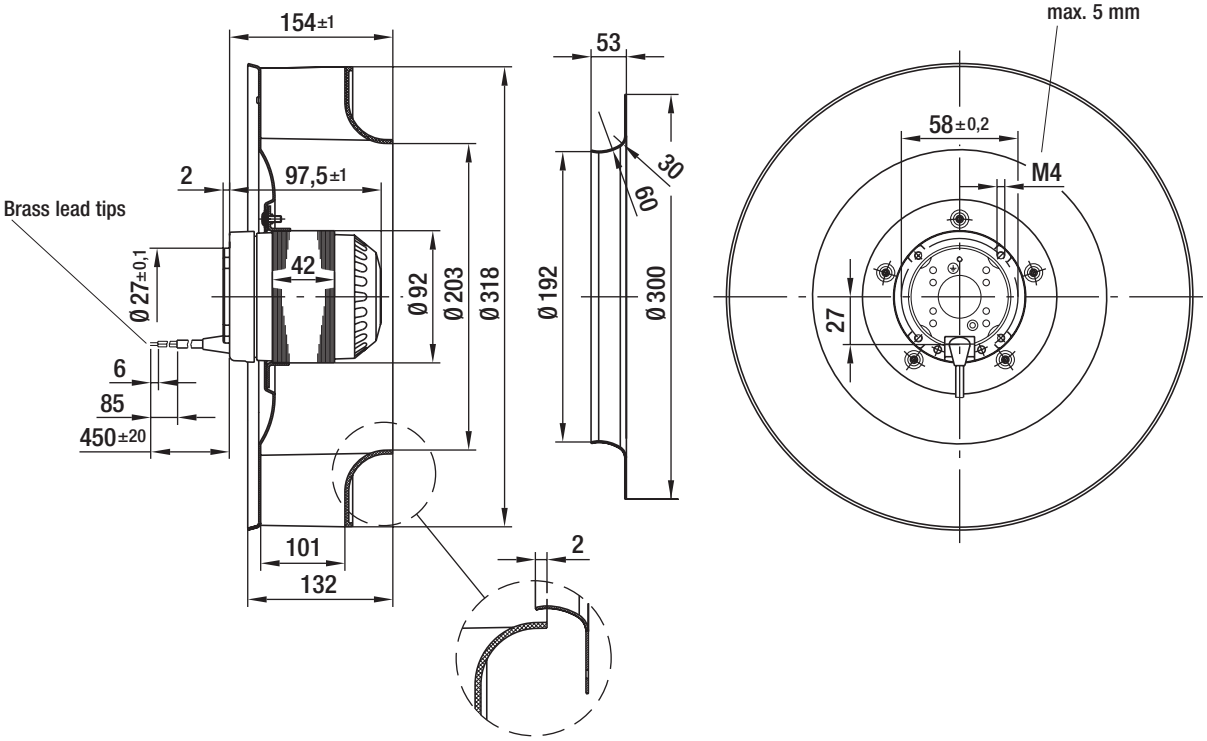
ebmpapst

- **Motor protection:** TOP wired internally
- **Cable exit:** Axial
- **Protection class:** I
- **Product conforming to standards:** EN 60335-1, CE
- **Approvals:** CCC

Mass of centrifugal fan



Centrifugal fan	kg	Inlet nozzle (long)
R4E 310-AT06 -01	3.5	97512-2-4013



AC centrifugal fans

backward curved, Ø 330

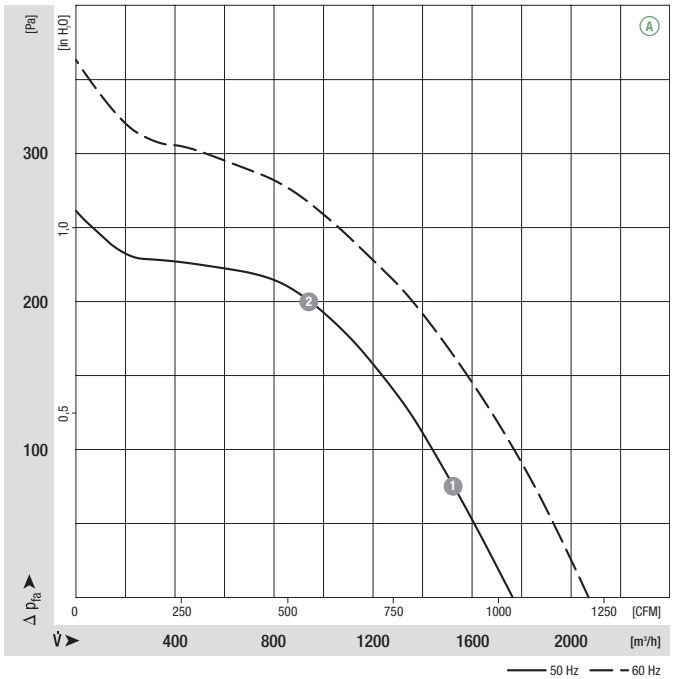
- **Material:** Impeller: PA plastic 6.6
  Rotor: Coated in black
- **Number of blades:** 6
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 44
- **Insulation class:** "B"
- **Mounting position:** Shaft horizontal or rotor on bottom; rotor on top on request
- **Condensate discharges:** Rotor-side
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data

Type	Motor	Curve	Nominal voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Sound pressure level	Perm. amb. temp.	Electr. connection
			VAC	Hz	m³/h	rpm	W	A	µF/VDB	dB(A)	°C	p. 596 f.
R4E 330	M4E 074-DF	Ⓐ	1~ 230	50	1760	1450	95	0.44	4.0 / 400	66	-25 to +60	A1)
			1~ 230	60	2070	1700	135	0.61	4.0 / 400	69	-25 to +40	

subject to alterations

Curves

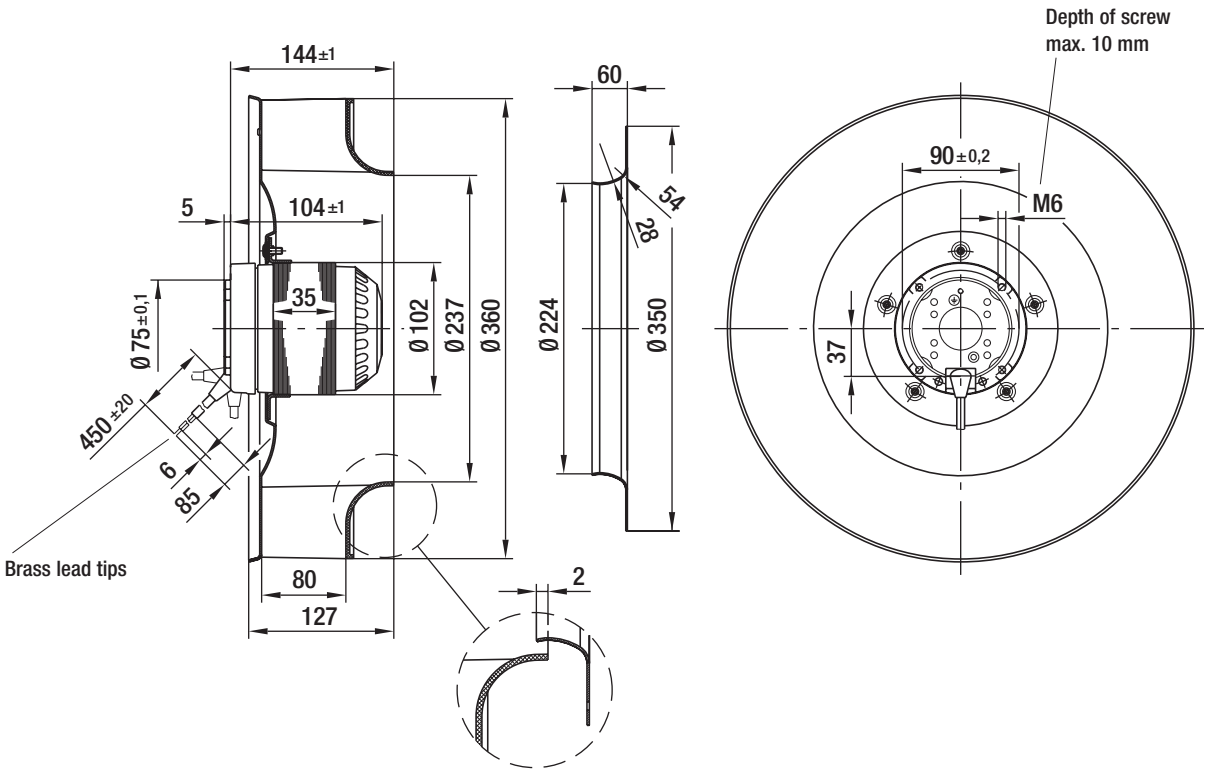


	n [rpm]	P_1 [W]	I [A]
Ⓐ 1	1420	112	0.52
Ⓐ 2	1395	128	0.59

ebmpapst

- **Motor protection:** TOP wired internally
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 60335-1, CE
- **Approvals:** CCC

Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle (long)
R4E 330-AA06 -05	3.6	51357-2-4013



AC centrifugal fans

backward curved, Ø 355

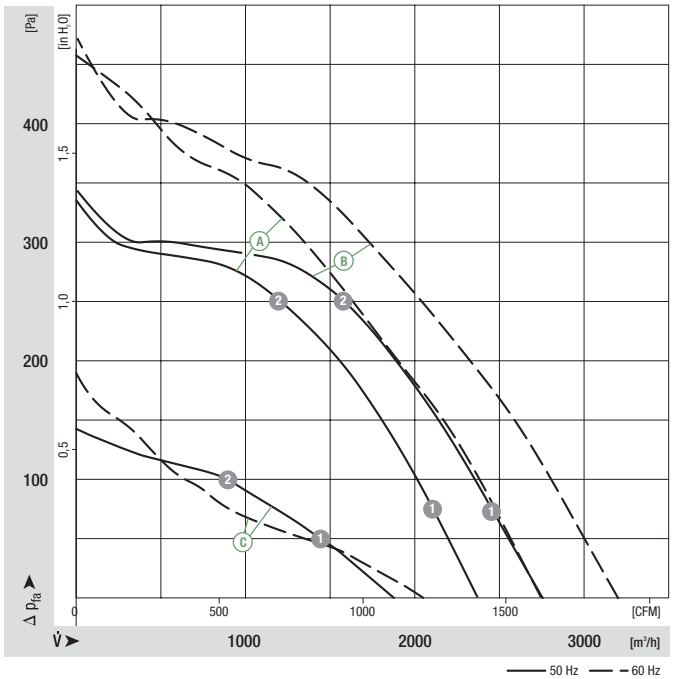
- **Material:** Impeller: PA plastic 6.6
  Rotor: Coated in black
- **Number of blades:** 6
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 44
- **Insulation class:** "B"
- **Mounting position:** Shaft horizontal or rotor on bottom; rotor on top on request
- **Condensate discharges:** Rotor-side
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data

Type	Motor	Curve	Nominal voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Sound pressure level	Perm. amb. temp.	Electr. connection
			VAC	Hz	m³/h	rpm	W	A	µF/VDB	dB(A)	°C	p. 596 f.
R4E 355	M4E 074-EI	Ⓐ	1~ 230	50	2365	1410	170	0.78	6.0/400	66	-25 to +55	A1)
			1~ 230	60	2740	1630	250	1.10	6.0/400	70	-25 to +40	
R4E 355	M4E 074 -GA	Ⓑ	1~ 230	50	2740	1400	215	1.00	7.0/400	68	-25 to +50	A1)
			1~ 230	60	3190	1630	300	1.32	7.0/400	68	-25 to +30	
R6E 355	M6E 074-DF	Ⓒ	1~ 230	50	1875	910	65	0.29	2.0/400	61	-25 to +70	A1)
			1~ 230	60	2050	1000	90	0.40	2.0/400	62	-25 to +50	

subject to alterations

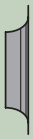
Curves



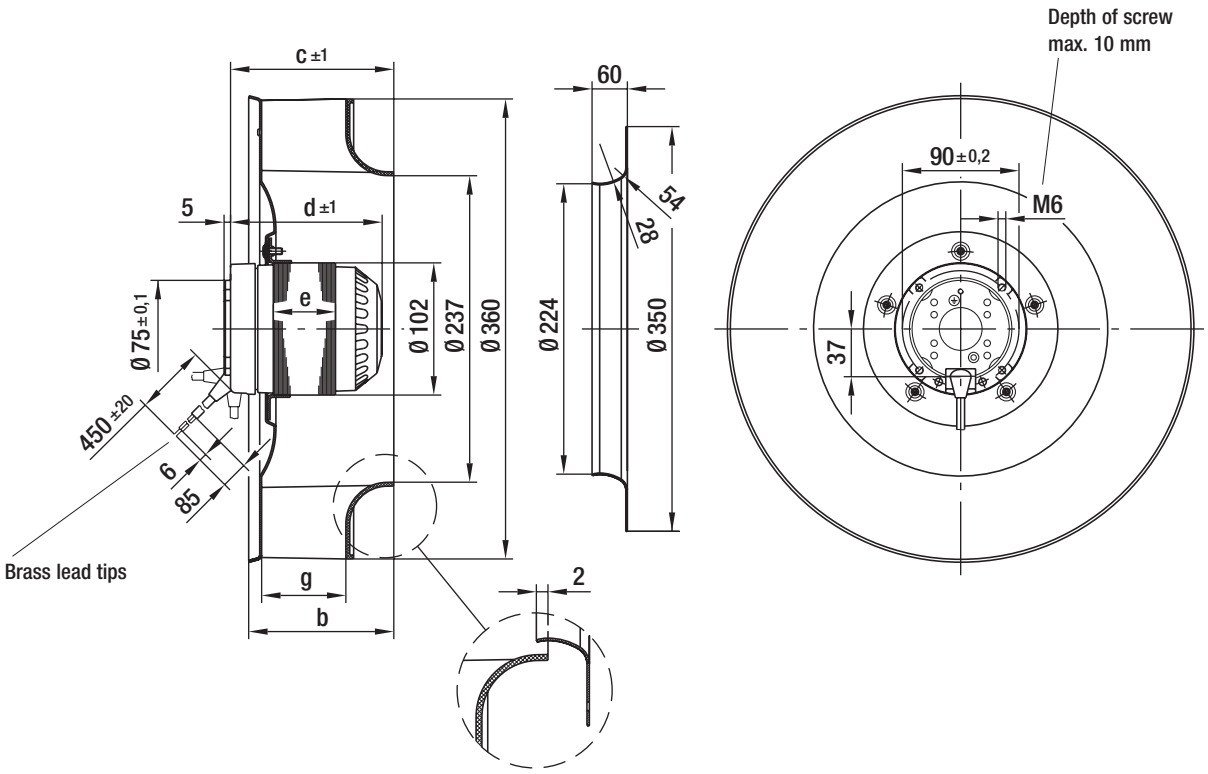
	n [rpm]	P_1 [W]	I [A]
Ⓐ 1	1390	190	0.82
Ⓐ 2	1360	212	0.94
Ⓑ 1	1390	228	1.06
Ⓑ 2	1360	259	1.20
Ⓒ 1	870	73	0.33
Ⓒ 2	835	77	0.36

ebmpapst

- **Motor protection:** TOP wired internally
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 60335-1, CE
- **Approvals:** CCC



Centrifugal fan	Mass of centrifugal fan kg	Dimensions b	c	d	e	g	Inlet nozzle (long)
R4E 355-AF05 -05	4.4	148.5	165.5	117.0	48.0	101.5	51357-2-4013
R4E 355-AG01 -05	4.5	173.0	190.0	129.0	60.0	126.0	51357-2-4013
R6E 355-AB16 -05	4.0	173.0	190.0	104.0	35.0	126.0	51357-2-4013



AC centrifugal fans

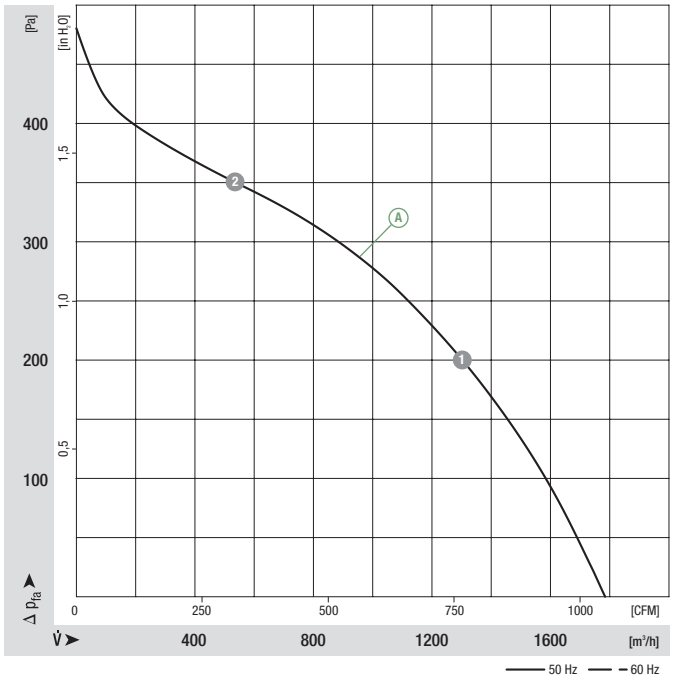
backward curved, Ø 250

- **Material:** Impeller: Sheet steel, coated in black
  Rotor: Coated in black
- **Number of blades:** 11
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 44
- **Insulation class:** "B"
- **Mounting position:** Shaft horizontal or rotor on bottom; rotor on top on request
- **Condensate discharges:** Rotor-side
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Sound pressure level	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VAC**	**Hz**	**m³/h**	**rpm**	**W**	**A**	**µF/VDB**	**dB(A)**	**°C**	p. 596 f.
R2E 250	M2E 068-EC	Ⓐ	1~ 230	50	1780	2650	185	0.81	6.0 / 400	72	-25 to +50	A1)

subject to alterations

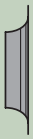
Curves



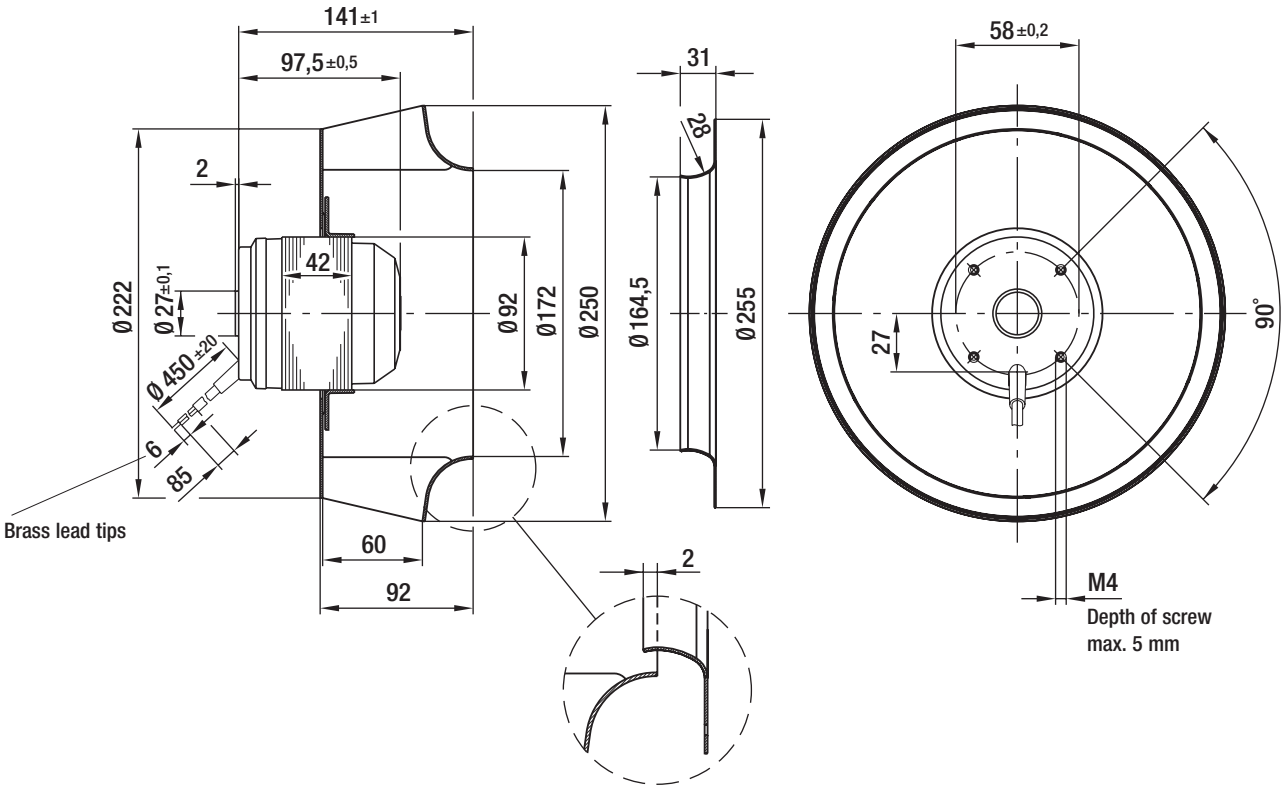
	n [rpm]	P_1 [W]	I [A]
Ⓐ ❶	2510	220	0.97
Ⓐ ❷	2615	190	0.84

ebmpapst

- **Motor protection:** TOP wired internally
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 60335-1, CE
- **Approvals:** CCC



Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle (long)
R2E 250-AW50-05	3.1	96359-2-4013



AC centrifugal fans

backward curved, Ø 270

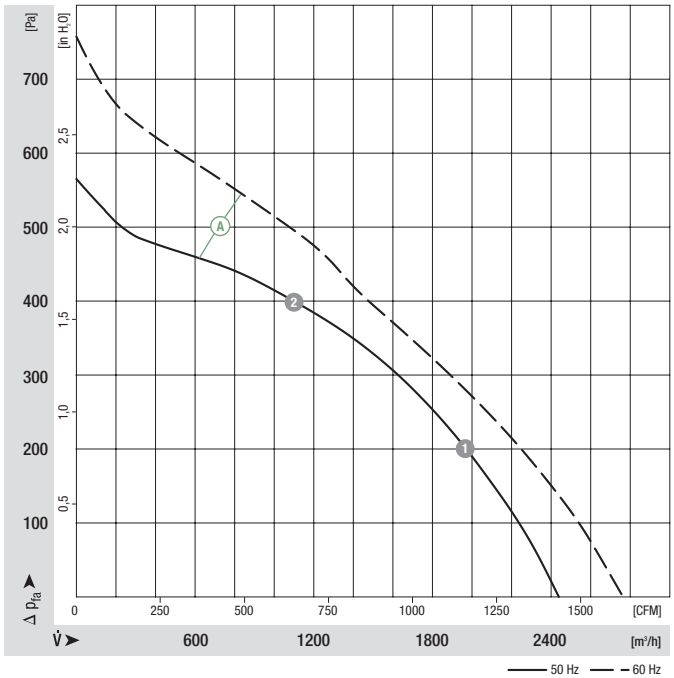
- **Material:** Impeller: Sheet steel
  Rotor: Coated in black
- **Number of blades:** 11
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 44
- **Insulation class:** "F"
- **Mounting position:** Shaft horizontal or rotor on bottom; rotor on top on request
- **Condensate discharges:** Rotor-side
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data

Type	Motor	Curve	Nominal voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Sound pressure level	Perm. amb. temp.	Electr. connection
			VAC	Hz	m³/h	rpm	W	A	µF/VDB	dB(A)	°C	p. 596 f.
R2E 270	M2E 074-GA	Ⓐ	1~ 230	50	2435	2750	280	1.23	10.0 / 400	77	-25 to +60	A1)
			1~ 230	60	2760	3100	430	1.88	10.0 / 400	80	-25 to +60	

subject to alterations

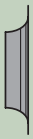
Curves



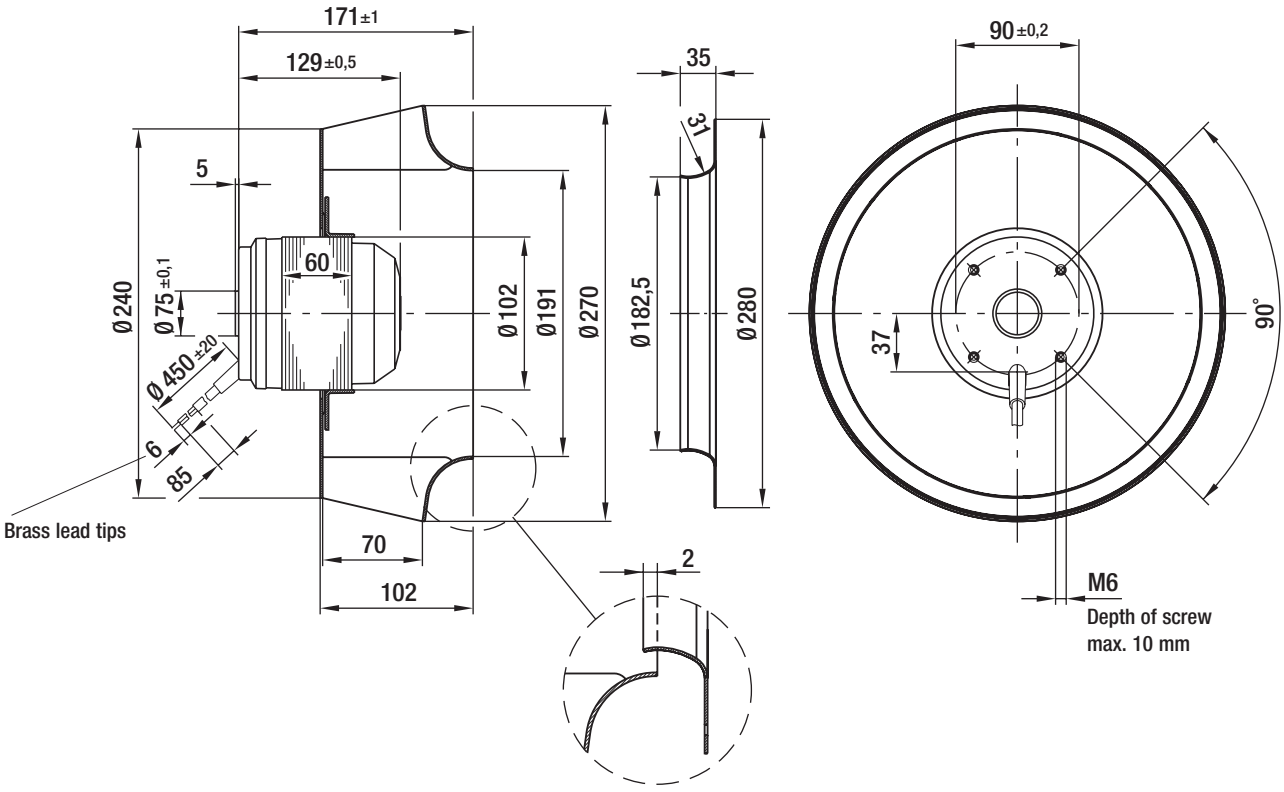
	n [rpm]	P_1 [W]	I [A]
Ⓐ 1	2665	245	1.08
Ⓐ 2	2690	332	1.47

ebmpapst

- **Motor protection:** TOP wired internally
- **Cable exit:** Variable
- **Protection class:** I
- **Capacitor:** FPU (P2) acc. to IEC 252
- **Product conforming to standards:** EN 60335-1, CE
- **Approvals:** CCC



Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle (long)
R2E 270-AA01 -05	4.7	96360-2-4013



AC centrifugal fans

backward curved, Ø 280

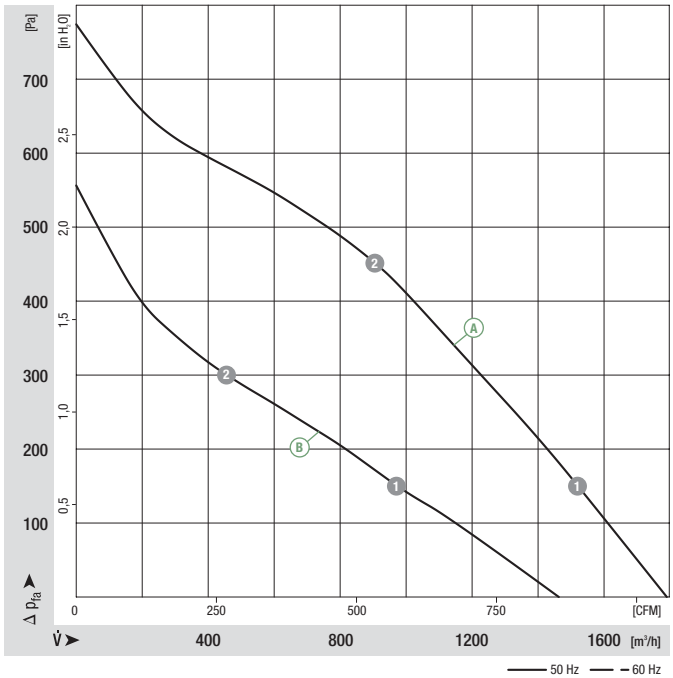
- **Material:** Impeller: Sheet steel, galvanised
  Rotor: Coated in black
- **Number of blades:** 11
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 44
- **Insulation class:** "F"
- **Mounting position:** Shaft horizontal or rotor on bottom; rotor on top on request
- **Condensate discharges:** Rotor-side
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data

Type	Motor	Curve	Nominal voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Sound pressure level	Perm. amb. temp.	Electr. connection
			VAC	Hz	m³/h	rpm	W	A	µF/VDB	dB(A)	°C	p. 596 f.
R2D 280	M2D 074-EI	Ⓐ	3~ 400 Δ	50	1790	2730	210	0.37	—	79	-25 to +80	F1a)/F2a)
		Ⓑ	3~ 400 Y	50	1460	2200	160	0.25	—	75	-25 to +70	

subject to alterations

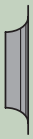
Curves



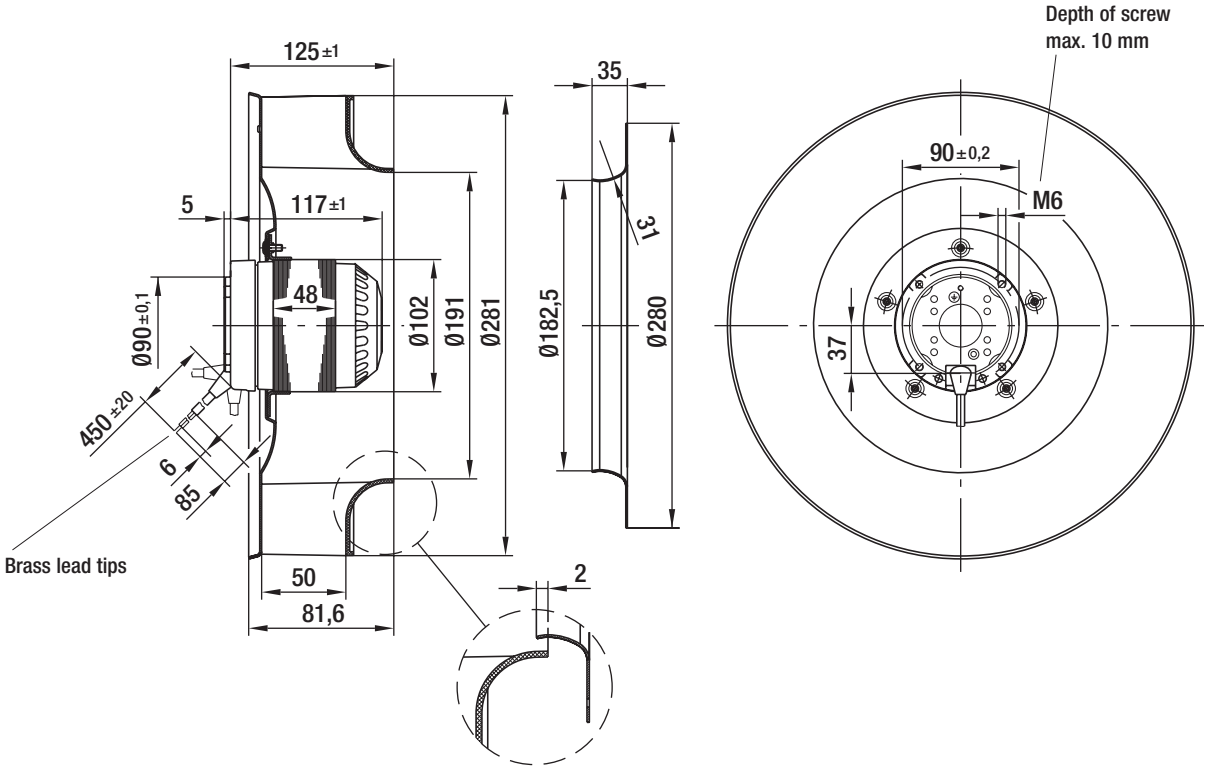
	n [rpm]	P_1 [W]	I [A]
Ⓐ 1	2650	252	0.44
Ⓐ 2	2550	302	0.53
Ⓑ 1	1960	187	0.30
Ⓑ 2	1975	185	0.29

ebmpapst

- **Motor protection:** Design with thermal overload protector
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 60335-1, CE



Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle (long)
R2D 280-AF10 -09	4.6	96360-2-4013



AC centrifugal fans

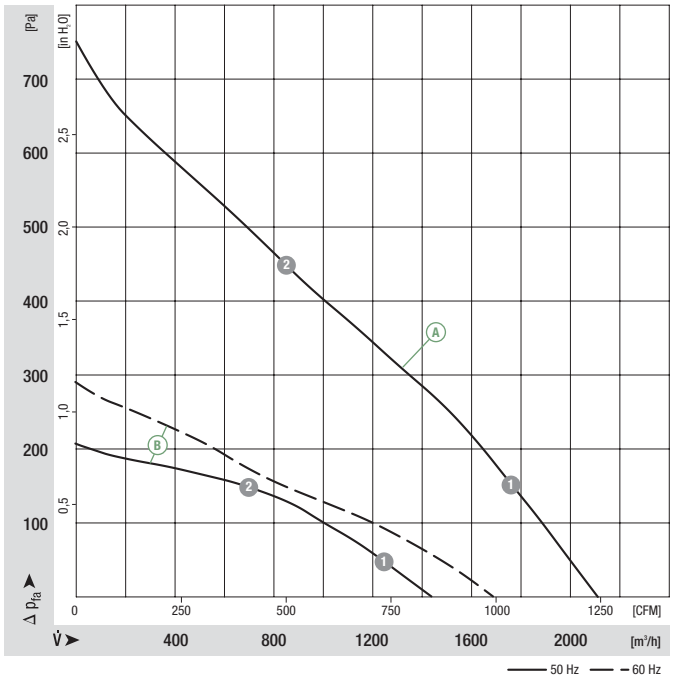
backward curved, Ø 280

- **Material:** Impeller: Sheet steel, coated in black
  Rotor: Coated in black
- **Number of blades:** 11
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 44
- **Insulation class:** Ⓐ "F", Ⓑ "B"
- **Mounting position:** Shaft horizontal or rotor on bottom; rotor on top on request
- **Condensate discharges:** Rotor-side
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Sound pressure level	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VAC**	**Hz**	**m³/h**	**rpm**	**W**	**A**	**µF/VDB**	**dB(A)**	**°C**	p. 596 f.
R2E 280	M2E 068-EC	Ⓐ	1~ 230	50	2110	2700	225	1.00	7.0 / 400	76	-25 to +40	A1)
R4E 280	M4E 068-DF	Ⓑ	1~ 230 1~ 230	50 60	1435 1685	1420 1635	78 105	0.35 0.42	2.5 / 450 2.5 / 450	62 67	-25 to +40 -25 to +40	A1)

subject to alterations

Curves

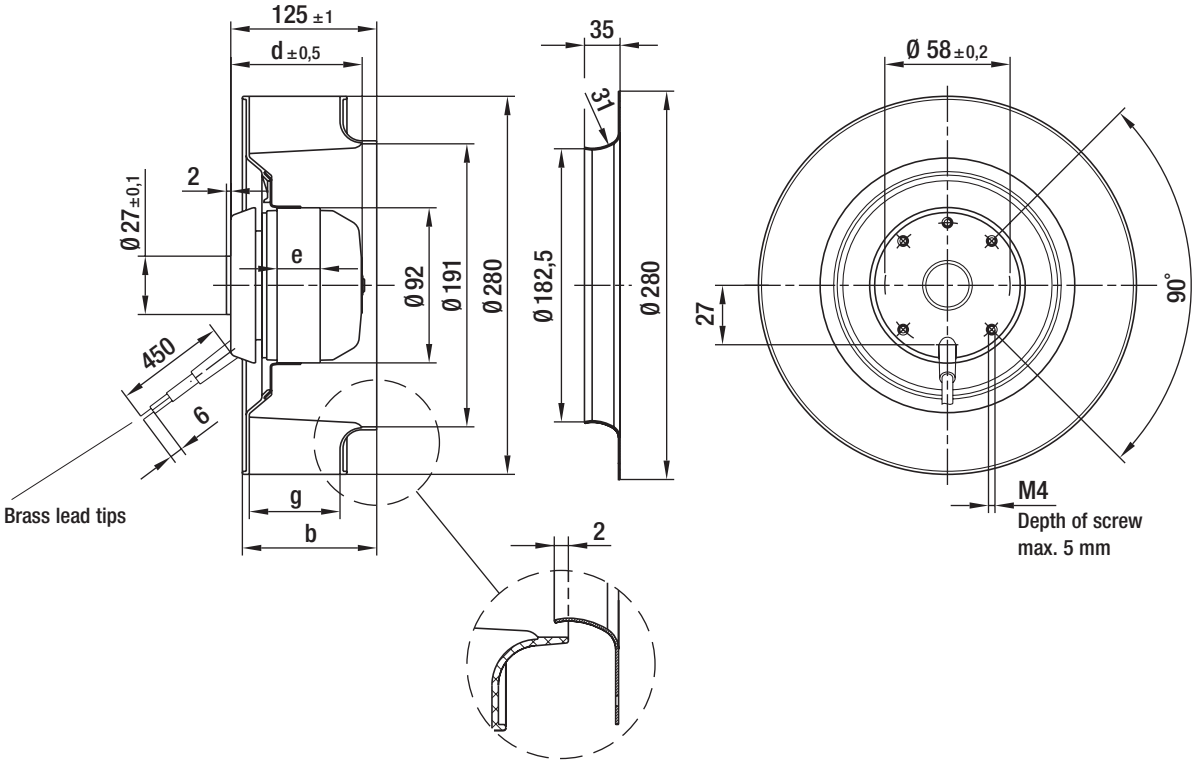


	n [rpm]	P_1 [W]	I [A]
Ⓐ 1	2560	265	1.18
Ⓐ 2	2390	312	1.38
Ⓑ 1	1380	88	0.40
Ⓑ 2	1340	99	0.44

ebmpapst

- **Motor protection:** TOP wired internally
- **Cable exit:** Ⓐ variable, Ⓑ axial
- **Protection class:** I
- **Capacitor:** Ⓐ FPU (P2) acc. to IEC 252
- **Product conforming to standards:** EN 60335-1, CE
- **Approvals:** CCC, GOST

Centrifugal fan	Mass of centrifugal fan kg	Dimensions b	d	e	g	Inlet nozzle (long)
R2E 280-AE52 -05	3.0	81.6	97.5	42.0	50.0	96360-2-4013
R4E 280-AD08 -05	2.8	111.4	82.5	35.0	80.0	96360-2-4013



AC centrifugal fans

backward curved, 3-D, Ø 310

- **Material:** Impeller: Sheet aluminium, laser-welded
  Rotor: Coated in black
- **Number of blades:** 6
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 44
- **Insulation class:** "B"
- **Mounting position:** Shaft horizontal or rotor on bottom; rotor on top on request
- **Condensate discharges:** Rotor-side
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

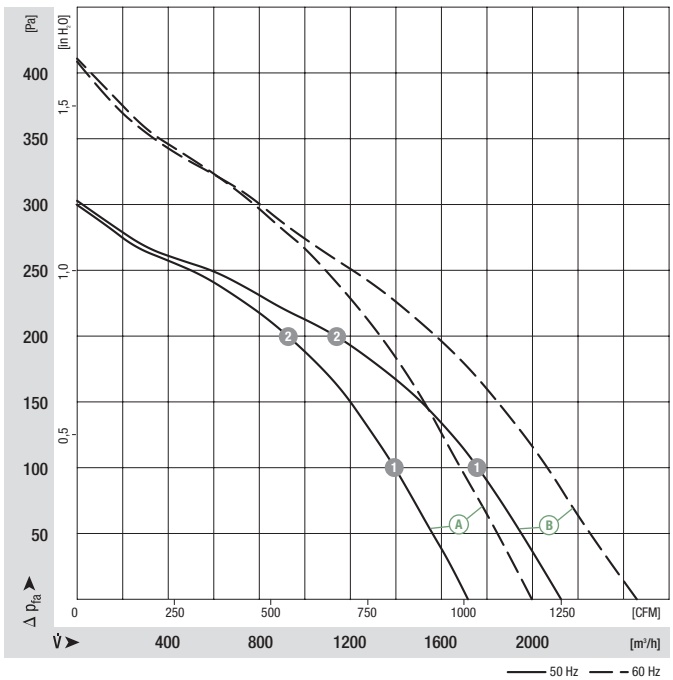
Nominal data

Type	Motor	Curve	Nominal voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Sound pressure level	Perm. amb. temp.	Electr. connection
			VAC	Hz	m³/h	rpm	W	A	µF/VDB	dB(A)	°C	p. 596 f.
R4D 310 (1)	M4D 068-EC	Ⓐ	3~ 230/400	50	1710	1430	85	0.52/0.30	—	62	-25 to +75	C1)/C2)
			3~ 230/400	60	1990	1650	115	0.45/0.26	—	66	-25 to +80	
R4D 310 (1)	M4D 068-EC	Ⓑ	3~ 230/400	50	2120	1400	110	0.55/0.32	—	60	-25 to +65	C1)/C2)
			3~ 230/400	60	2450	1600	150	0.52/0.30	—	63	-25 to +55	

subject to alterations

(1) 230 VAC Δ / 400 VAC Y

Curves (established with long inlet nozzle)



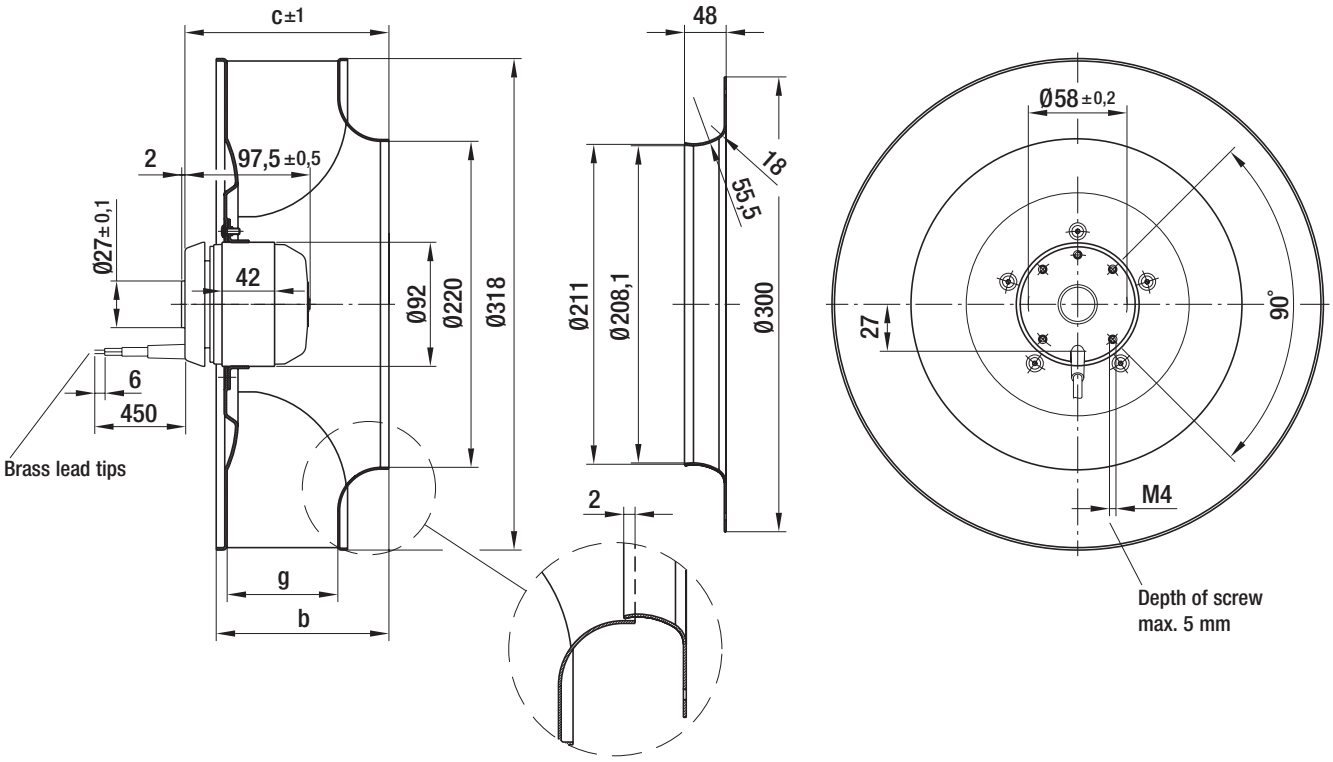
	n [rpm]	P_1 [W]	I [A]
Ⓐ ❶	1400	107	0.65/0.38
Ⓐ ❷	1400	113	0.69/0.40
Ⓑ ❶	1360	136	0.69/0.40
Ⓑ ❷	1350	141	0.71/0.41

ebmpapst

- **Motor protection:** Design with thermal overload protector
- **Cable exit:** Axial
- **Protection class:** I
- **Product conforming to standards:** EN 60335-1, CE
- **Approvals:** CCC

Centrifugal fan	Mass of centrifugal fan kg	Dimensions b	c	g	Inlet nozzle (long)	Inlet nozzle (short)
R4D 310-AR18 -01	3.3	104.0	123.0	70.0	31050-2-4013	31051-2-4013
R4D 310-AS18 -01	3.4	139.0	154.0	101.0	31050-2-4013	31051-2-4013

Inlet nozzle (long)



AC centrifugal fans

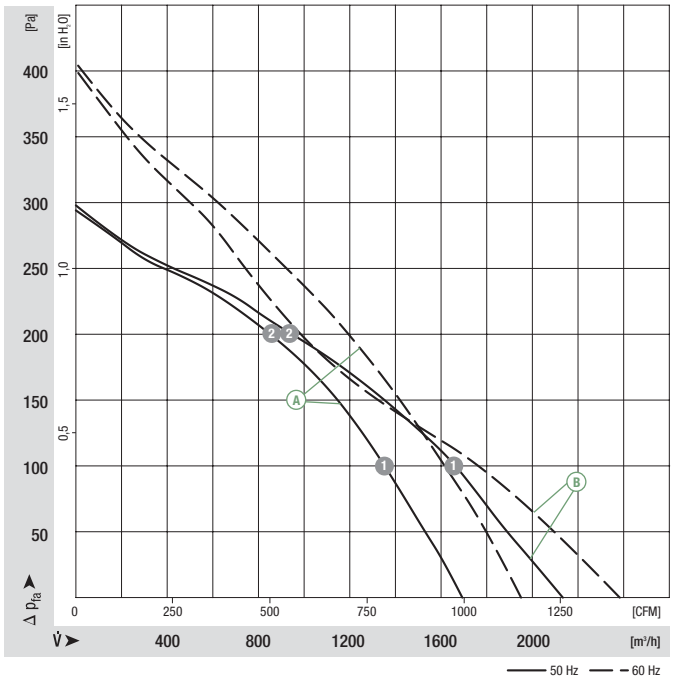
backward curved, 3-D, Ø 310

- **Material:** Impeller: Sheet aluminium, laser-welded
  Rotor: Coated in black
- **Number of blades:** 6
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 44
- **Insulation class:** Ⓐ "B", Ⓑ "F"
- **Mounting position:** Shaft horizontal or rotor on bottom; rotor on top on request
- **Condensate discharges:** Rotor-side
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Sound pressure level	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VAC**	**Hz**	**m³/h**	**rpm**	**W**	**A**	**µF/VDB**	**dB(A)**	**°C**	p. 596 f.
R4E 310	M4E 068-EC	Ⓐ	1~ 230 1~ 230	50 60	1690 1950	1410 1650	95 125	0.46 0.56	4.0 / 400 4.0 / 400	62 66	-25 to +70 -25 to +65	A1)
R4E 310	M4E 068-EC	Ⓑ	1~ 230 1~ 230	50 60	2130 2380	1370 1530	120 160	0.54 0.71	4.0 / 400 4.0 / 400	59 62	-25 to +85 -25 to +50	A1)

subject to alterations

Curves (established with long inlet nozzle)



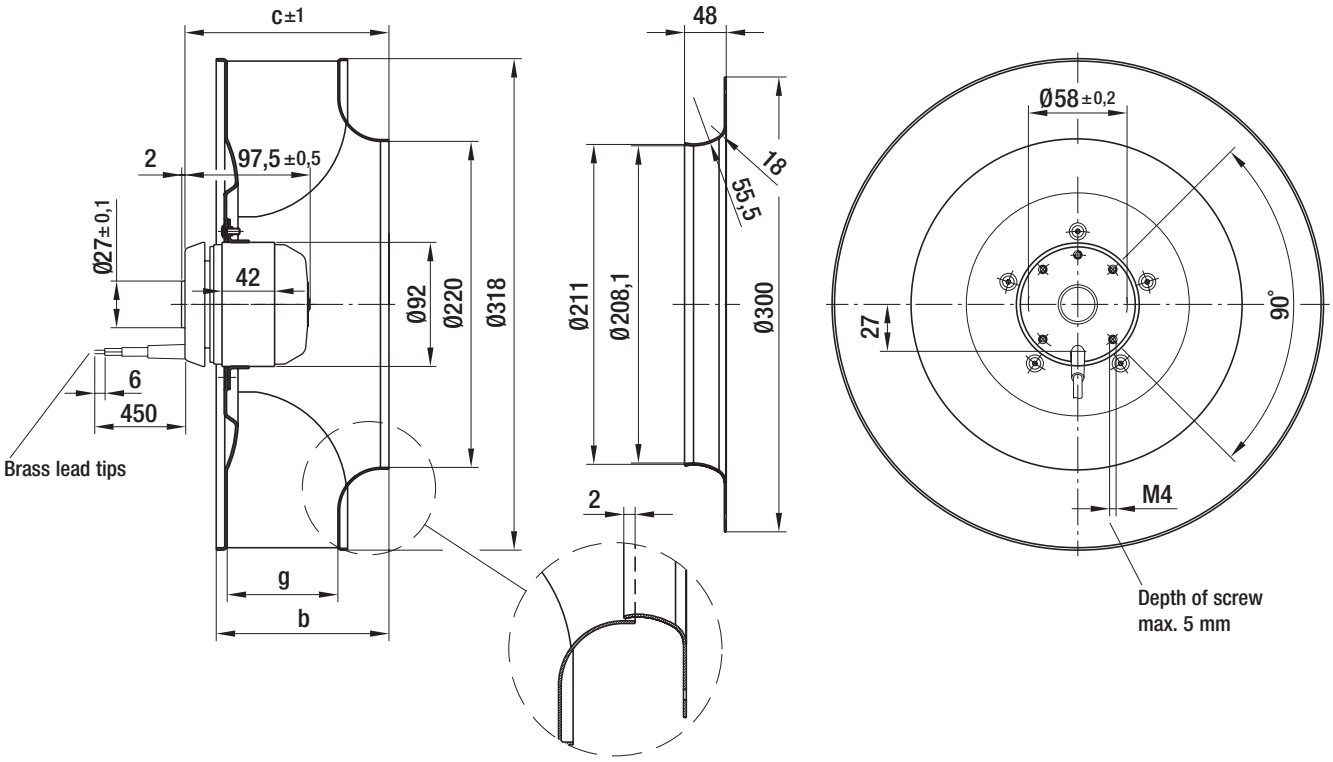
	n [rpm]	P_1 [W]	I [A]
Ⓐ 1	1370	114	0.55
Ⓐ 2	1360	118	0.57
Ⓑ 1	1310	140	0.63
Ⓑ 2	1320	140	0.63

ebmpapst

- **Motor protection:** TOP wired internally
- **Cable exit:** Axial
- **Protection class:** I
- **Product conforming to standards:** EN 60335-1, CE
- **Approvals:** CCC

Centrifugal fan	Mass of centrifugal fan kg	Dimensions b	c	g	Inlet nozzle (long)	Inlet nozzle (short)
R4E 310-AR06 -01	3.3	104.0	123.0	70.0	31050-2-4013	31051-2-4013
R4E 310-AS06 -01	3.4	139.0	154.0	101.0	31050-2-4013	31051-2-4013

Inlet nozzle (long)



AC centrifugal fans

backward curved, 3-D, Ø 310

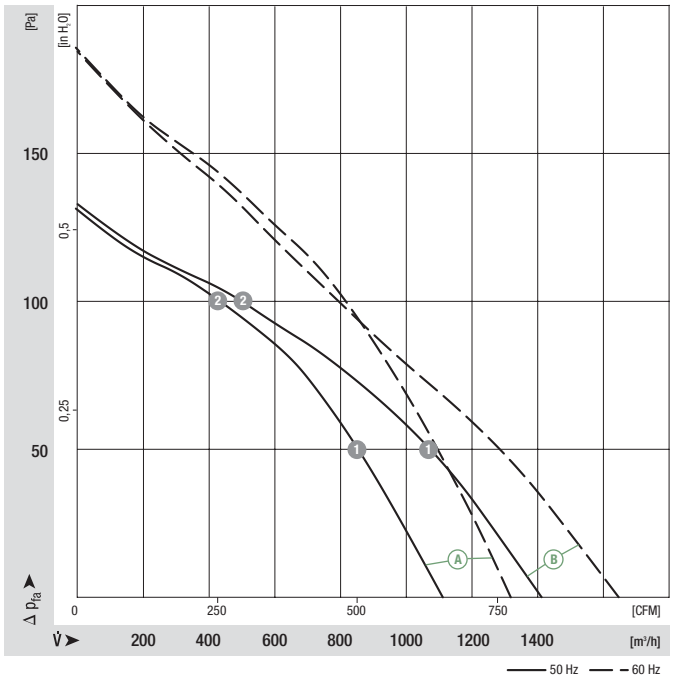
- **Material:** Impeller: Sheet aluminium, laser-welded
  Rotor: Coated in black
- **Number of blades:** 6
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 44
- **Insulation class:** "B"
- **Mounting position:** Shaft horizontal or rotor on bottom; rotor on top on request
- **Condensate discharges:** Rotor-side
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data

Type	Motor	Curve	Nominal voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Sound pressure level	Perm. amb. temp.	Electr. connection
			VAC	Hz	m³/h	rpm	W	A	µF/VDB	dB(A)	°C	p. 596 f.
R6E 310	M6E 068-EC	Ⓐ	1~ 230	50	1110	950	45	0.21	1.5/450	51	-25 to +75	A1)
			1~ 230	60	1320	1120	55	0.25	1.5/450	55	-25 to +80	
R6E 310	M6E 068-EC	Ⓑ	1~ 230	50	1400	920	48	0.22	1.5/450	50	-25 to +75	A1)
			1~ 230	60	1640	1070	60	0.27	1.5/450	53	-25 to +75	

subject to alterations

Curves (established with long inlet nozzle)



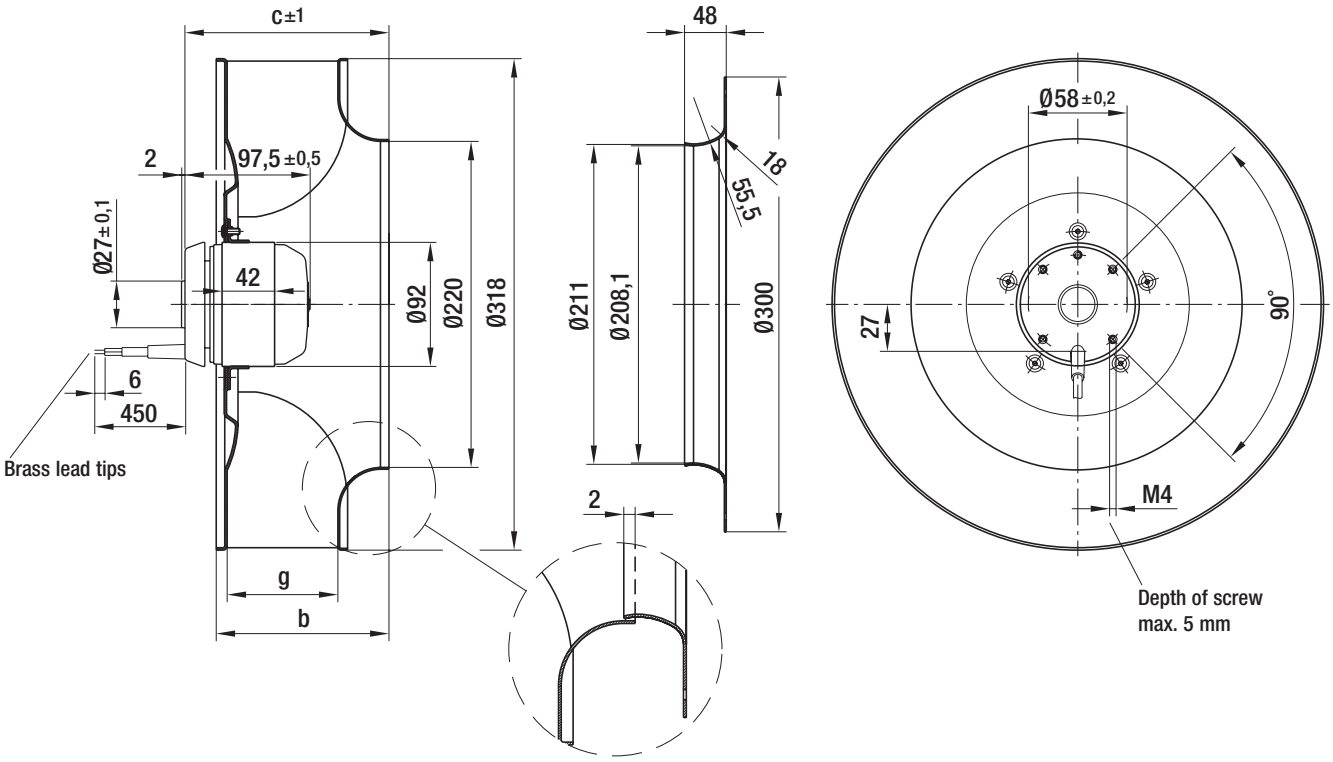
	n [rpm]	P_1 [W]	I [A]
Ⓐ 1	950	46	0.21
Ⓐ 2	925	50	0.23
Ⓑ 1	885	53	0.24
Ⓑ 2	900	51	0.23

ebmpapst

- **Motor protection:** TOP wired internally
- **Cable exit:** Axial
- **Protection class:** I
- **Product conforming to standards:** EN 60335-1, CE
- **Approvals:** CCC

Centrifugal fan	Mass of centrifugal fan kg	Dimensions b	c	g	Inlet nozzle (long)	Inlet nozzle (short)
R6E 310-AI04 -01	3.3	104.0	123.0	70.0	31050-2-4013	31051-2-4013
R6E 310-AJ04 -01	3.4	139.0	154.0	101.0	31050-2-4013	31051-2-4013

Inlet nozzle (long)



AC centrifugal fans

backward curved, 3-D, Ø 355

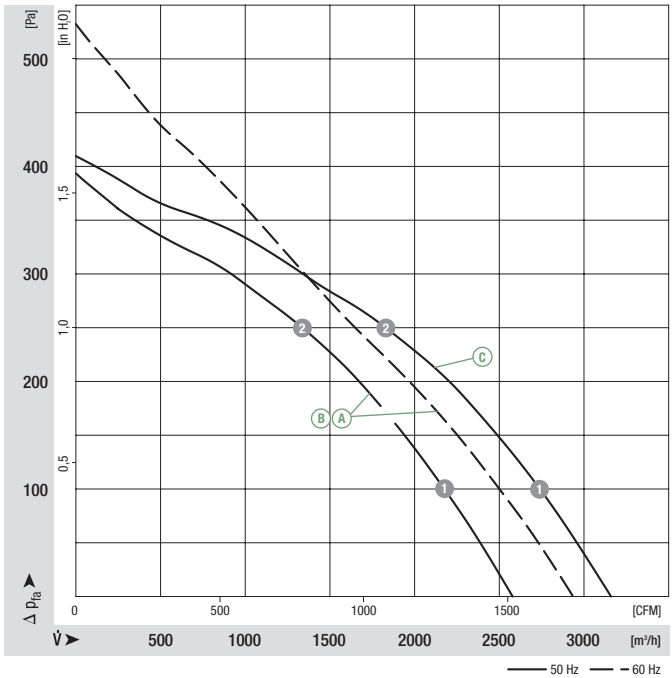
- **Material:** Impeller: Sheet aluminium, laser-welded
  Rotor: Coated in black
- **Number of blades:** 6
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 44
- **Insulation class:** "F"
- **Mounting position:** Shaft horizontal or rotor on bottom; rotor on top on request
- **Condensate discharges:** Rotor-side
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data

Type	Motor	Curve	Nominal voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Sound pressure level	Perm. amb. temp.	Electr. connection
			VAC	Hz	m³/h	rpm	W	A	µF/VDB	dB(A)	°C	p. 596 f.
R4D 355	M4D 074-EI	Ⓐ	3~ 400 Y 3~ 400 Y	50 60	2580 2930	1400 1600	170 235	0.52 0.50	— —	65 69	-25 to +70 -25 to +65	D2)
R4E 355	M4E 074-EI	Ⓑ	1~ 230 1~ 230	50 60	2580 2940	1400 1600	180 260	0.80 1.14	6.0 / 450 6.0 / 450	66 69	-25 to +60 -25 to +35	A1)
R4E 355	M4E 074-GA	Ⓒ	1~ 230	50	3160	1420	245	1.12	8.0 / 400	66	-25 to +50	A1)

subject to alterations

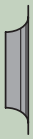
Curves (established with long inlet nozzle)



	n [rpm]	P_1 [W]	I [A]
Ⓐ 1	1375	205	0.63
Ⓐ 2	1360	227	0.70
Ⓑ 1	1350	209	0.93
Ⓑ 2	1330	229	1.02
Ⓒ 1	1395	273	1.25
Ⓒ 2	1375	295	1.35

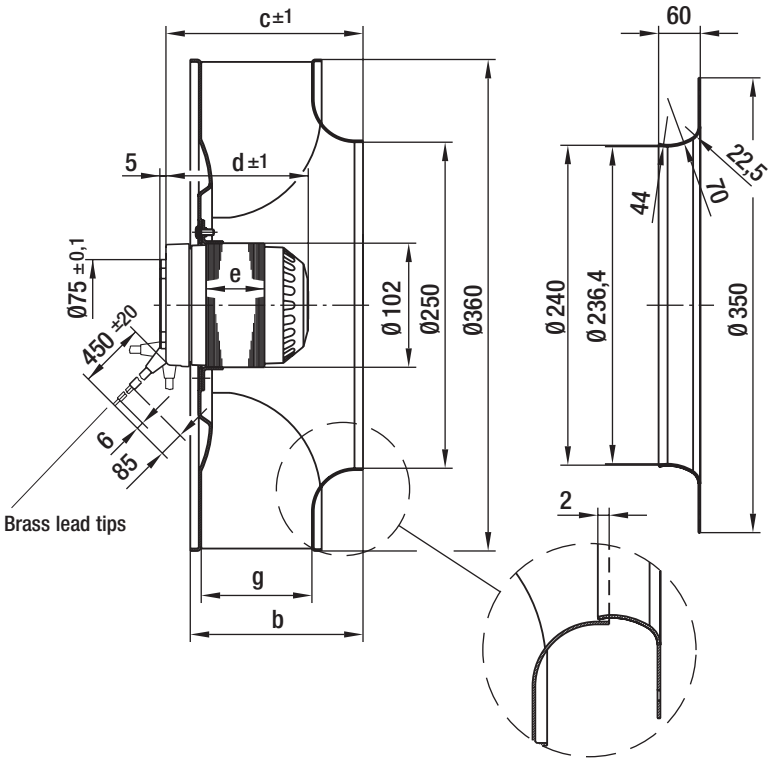
ebmpapst

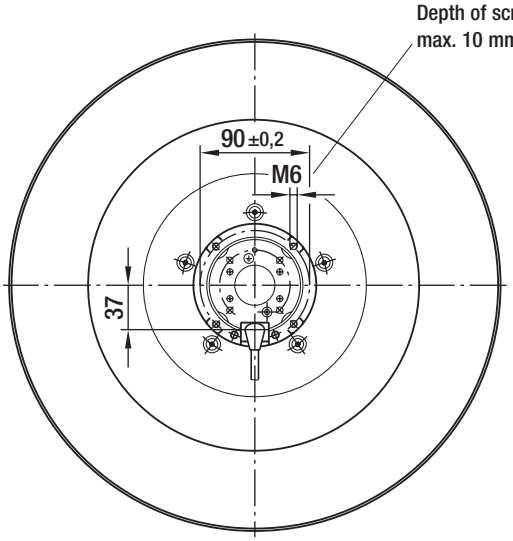
- **Motor protection:** Ⓐ design with thermal overload protector, Ⓑ Ⓒ TOP wired internally
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 60335-1, CE
- **Approvals:** CCC



Centrifugal fan	Mass of centrifugal fan kg	Dimensions b	c	d	e	g	Inlet nozzle (long)	Inlet nozzle (short)
R4D 355-AH11 -05	4.7	146.5	167.0	117.0	48.0	96.0	35560-2-4013	35561-2-4013
R4E 355-AK05 -05	4.7	146.5	167.0	117.0	48.0	96.0	35560-2-4013	35561-2-4013
R4E 355-AL02 -05	5.3	171.0	190.0	129.0	60.0	120.5	35560-2-4013	35561-2-4013

Inlet nozzle (long)





AC centrifugal fans

backward curved, 3-D, Ø 355

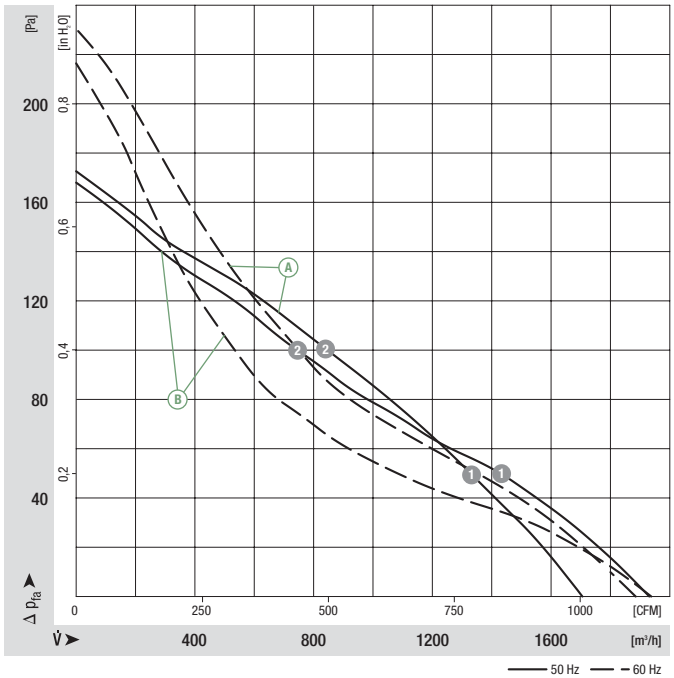
- **Material:** Impeller: Sheet aluminium, laser-welded
  Rotor: Coated in black
- **Number of blades:** 6
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 44
- **Insulation class:** "F"
- **Mounting position:** Shaft horizontal or rotor on bottom; rotor on top on request
- **Condensate discharges:** Rotor-side
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data

Type	Motor	Curve	Nominal voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Sound pressure level	Perm. amb. temp.	Electr. connection
			VAC	Hz	m³/h	rpm	W	A	µF/VDB	dB(A)	°C	p. 596 f.
R6E 355	M6E 074-DF	Ⓐ	1~ 230 1~ 230	50 60	1700 1890	910 1000	65 85	0.29 0.37	2.0 / 400 2.0 / 400	54 57	-25 to +90 -25 to +75	A1)
R6E 355	M6E 074-DF	Ⓑ	1~ 230 1~ 230	50 60	1930 1940	870 890	70 90	0.31 0.40	2.0 / 400 2.0 / 400	52 53	-25 to +85 -25 to +60	A1)

subject to alterations

Curves (established with long inlet nozzle)



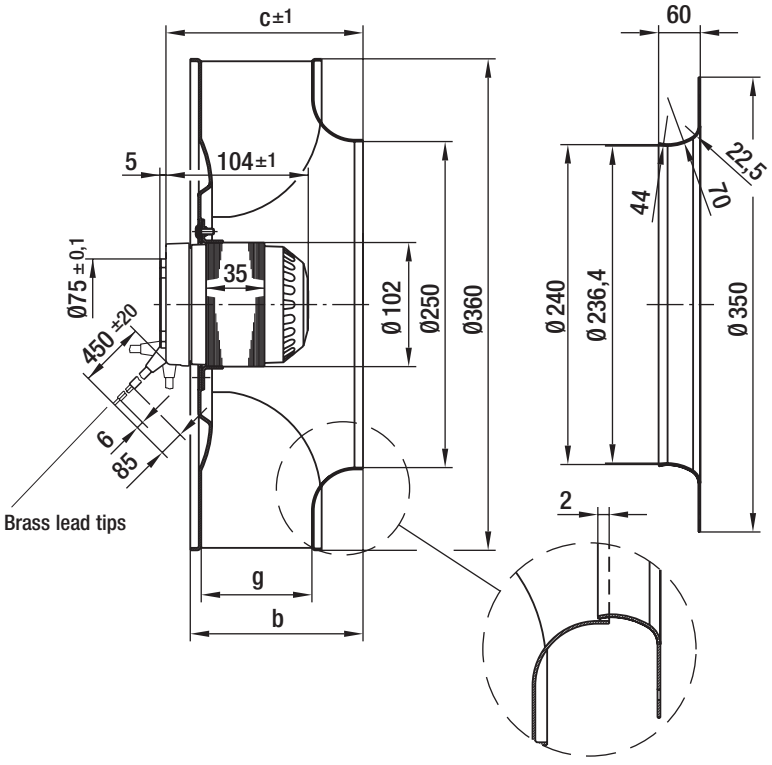
	n [rpm]	P_1 [W]	I [A]
Ⓐ 1	860	71	0.32
Ⓐ 2	850	73	0.33
Ⓑ 1	785	80	0.35
Ⓑ 2	805	78	0.34

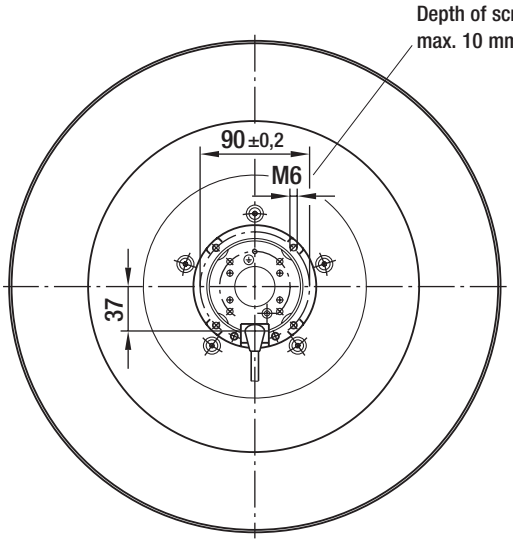
ebmpapst

- **Motor protection:** TOP wired internally
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 60335-1, CE
- **Approvals:** GOST

Centrifugal fan	Mass of centrifugal fan kg	Dimensions b	c	g	Inlet nozzle (long)	Inlet nozzle (short)
R6E 355-AD16 -05	3.5	146.5	167.0	96.0	35560-2-4013	35561-2-4013
R6E 355-AE16 -05	4.1	171.0	190.0	120.5	35560-2-4013	35561-2-4013

Inlet nozzle (long)





AC centrifugal fans

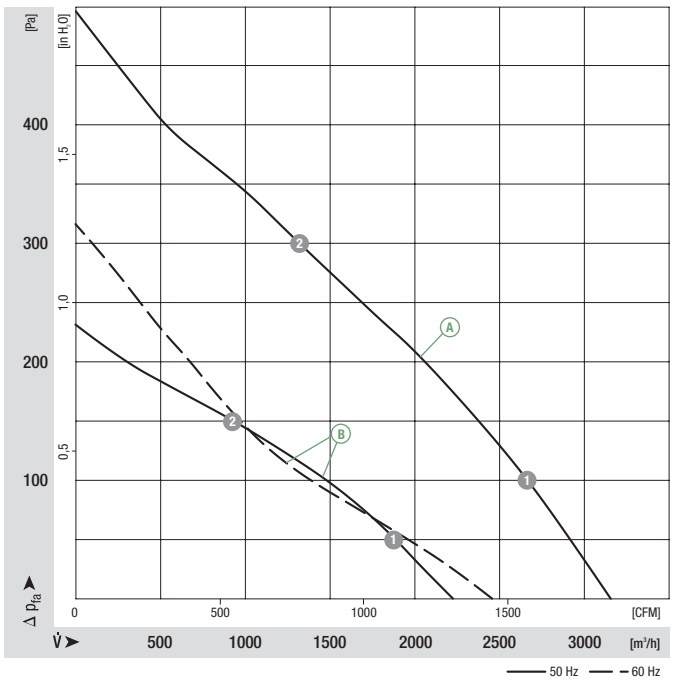
backward curved, 3-D, Ø 400

- **Material:** Impeller: Sheet aluminium, joined by tabs
  Rotor: Coated in black
- **Number of blades:** 6
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 44
- **Insulation class:** Ⓐ "F", Ⓑ "B"
- **Mounting position:** Ⓐ any, Ⓑ shaft horizontal or rotor on bottom; rotor on top on request
- **Condensate discharge holes:** Ⓐ none, Ⓑ rotor-side
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Sound pressure level	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VAC**	**Hz**	**m³/h**	**rpm**	**W**	**A**	**µF/VDB**	**dB(A)**	**°C**	p. 596 f.
R4E 400	M4E 074-EI	Ⓐ	1~ 230	50	3150	1300	270	1.20	8.0 / 400	68	-25 to +45	A1)
R6E 400	M6E 074-EI	Ⓑ	1~ 230 1~ 230	50 60	2225 2455	910 1000	117 160	0.52 0.70	3.0 / 450 3.0 / 450	62 64	-25 to +55 -25 to +40	A1)

subject to alterations

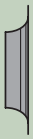
Curves



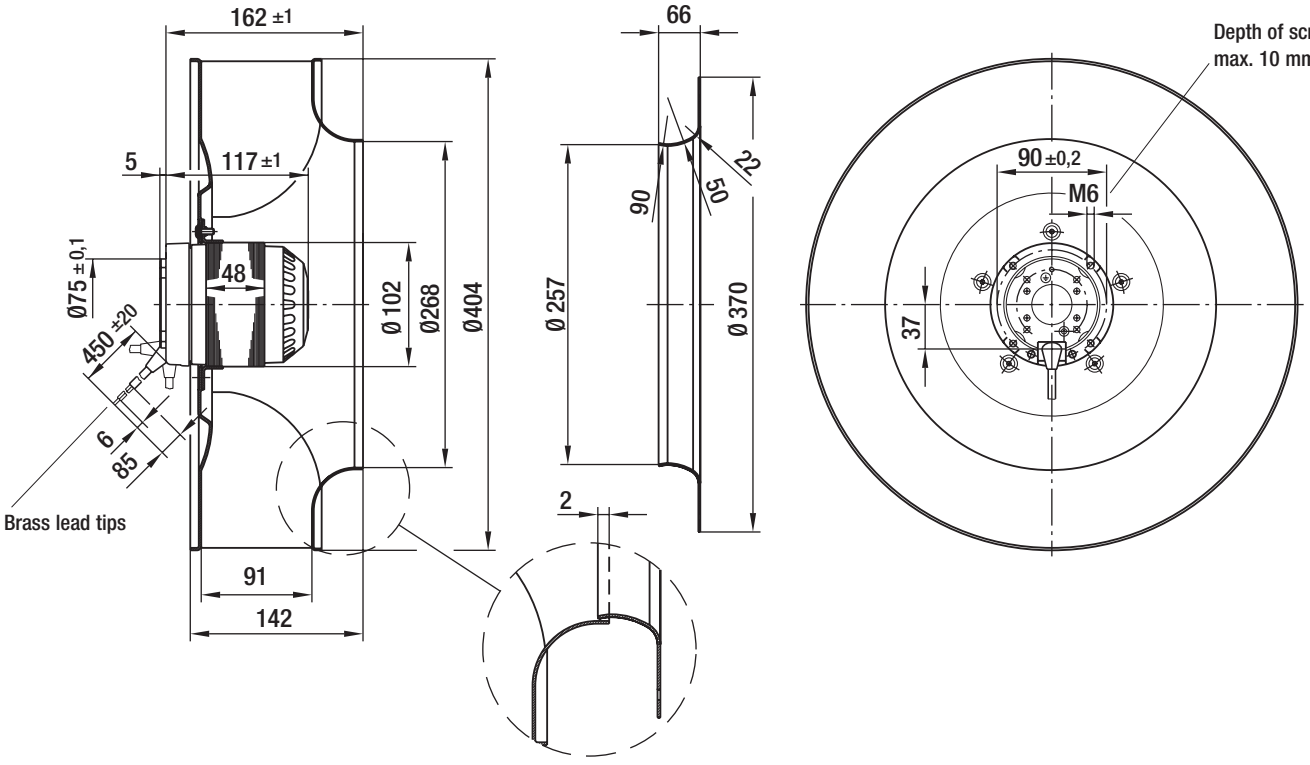
	n [rpm]	P_1 [W]	I [A]
Ⓐ 1	1240	292	1.30
Ⓐ 2	1250	287	1.27
Ⓑ 1	880	125	0.56
Ⓑ 2	880	125	0.56

ebmpapst

- **Motor protection:** TOP wired internally
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 60335-1, CE
- **Approvals:** CCC, ⓑ also GOST



Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle (long)
R4E 400-AB23 -05	5.2	54476-2-4013
R6E 400-AA04 -05	5.2	54476-2-4013



AC centrifugal fans

backward curved, 3-D, Ø 400

- **Material:** Impeller: Sheet aluminium, joined by tabs
  Rotor: Coated in black
- **Number of blades:** 6
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 54 (acc. to EN 60529)
- **Insulation class:** "F"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

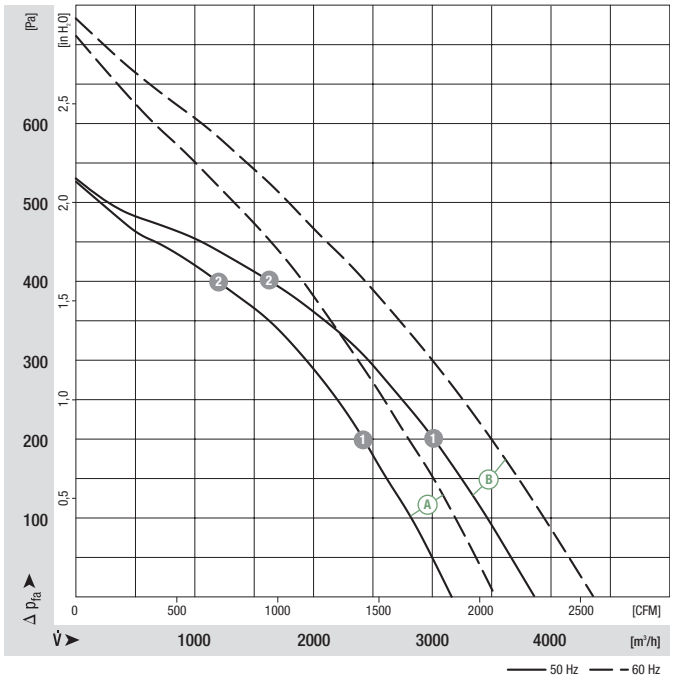
Nominal data

Type	Motor	Curve	Nominal voltage VAC	Frequency Hz	Speed/rpm (1) rpm	Max. power input (1) W	Max. current draw (1) A	Capacitor µF/VDB	Perm. amb. temp. °C	Electr. connection p. 596 f.
R4E 400	M4E 094-FA	Ⓐ	1~ 230	50	1355	375	1.75	8.0/400	-40 to +60	A2a)
			1~ 230	60	1480	540	2.40	8.0/400	-40 to +50	
R4E 400	M4E 094-HA	Ⓑ	1~ 230	50	1370	480	2.40	10.0/450	-40 to +80	A2a)
			1~ 230	60	1460	700	3.15	10.0/450	-40 to +55	

subject to alterations

(1) Nominal data in operating point with maximum load

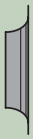
Curves



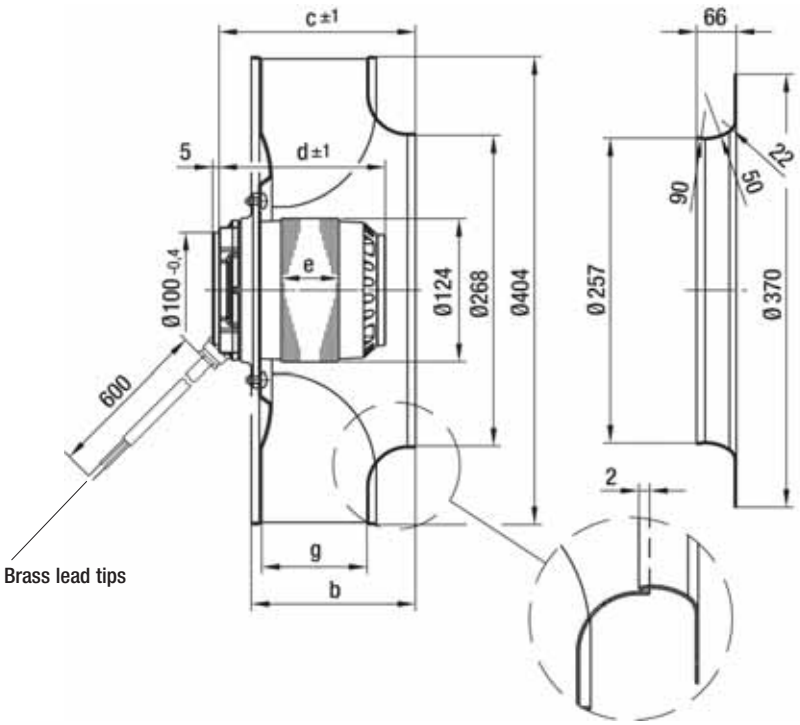
	n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]
Ⓐ 1	1350	370	1.75	64
Ⓐ 2	1380	331	1.58	65
Ⓑ 1	1370	469	2.37	66
Ⓑ 2	1390	430	2.17	68

ebmpapst

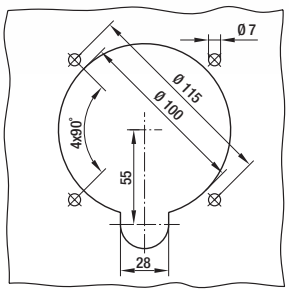
- **Motor protection:** Design with thermal overload protector
- **Cable exit:** Diagonal
- **Protection class:** I (acc. to EN 61800-5-1)
- **Product conforming to standard:** CE



Centrifugal fan	Mass of centrifugal fan kg	Dimensions b	c	d	e	g	Inlet nozzle (long)
R4E 400-AR05 -06	7.1	141.0	172.0	128.0	50.0	90.0	54476-2-4013
R4E 400-AP17 -06	8.8	164.0	193.0	148.0	70.0	113.0	54476-2-4013



Mounting dimensions



AC centrifugal fans

backward curved, Ø 400

- **Material:** Impeller: Sheet aluminium, riveted
  Rotor: Coated in black
- **Number of blades:** 6
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 54 (acc. to EN 60529)
- **Insulation class:** "F"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

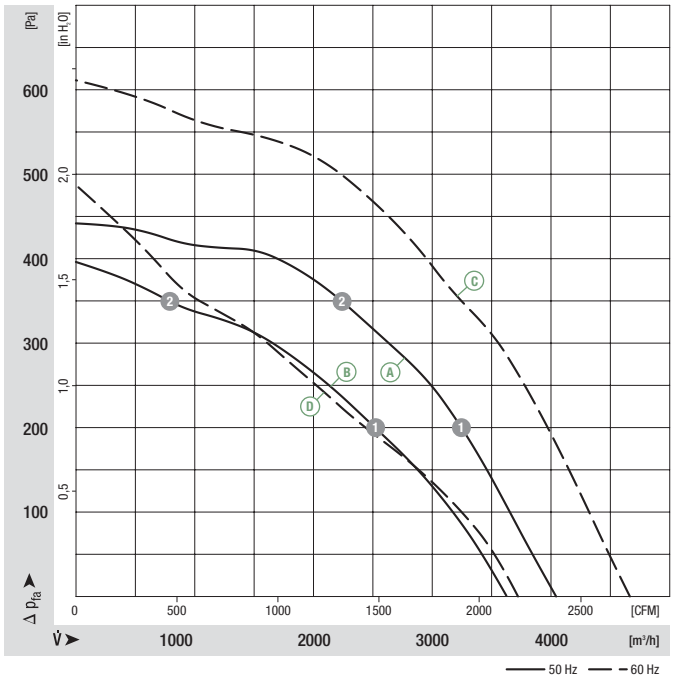
Nominal data

Type	Motor	Curve	Nominal voltage	Frequency	Speed/rpm (1)	Max. power input (1)	Max. current draw (1)	Capacitor	Perm. amb. temp.	Electr. connection
			VAC	Hz	rpm	W	A	µF/VDB	°C	p. 596 f.
R4D 400	M4D 094-HA	Ⓐ	3~ 400 Δ	50	1415	515	1.41	—	-40 to +60	F1a)/F2a)
		Ⓑ	3~ 400 Y	50	1235	385	0.70	—	-40 to +80	
		Ⓒ	3~ 400 Δ	60	1610	750	1.44	—	-40 to +60	
		Ⓓ	3~ 400 Y	60	1220	515	0.93	—	-40 to +40	

subject to alterations

(1) Nominal data in operating point with maximum load

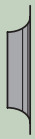
Curves



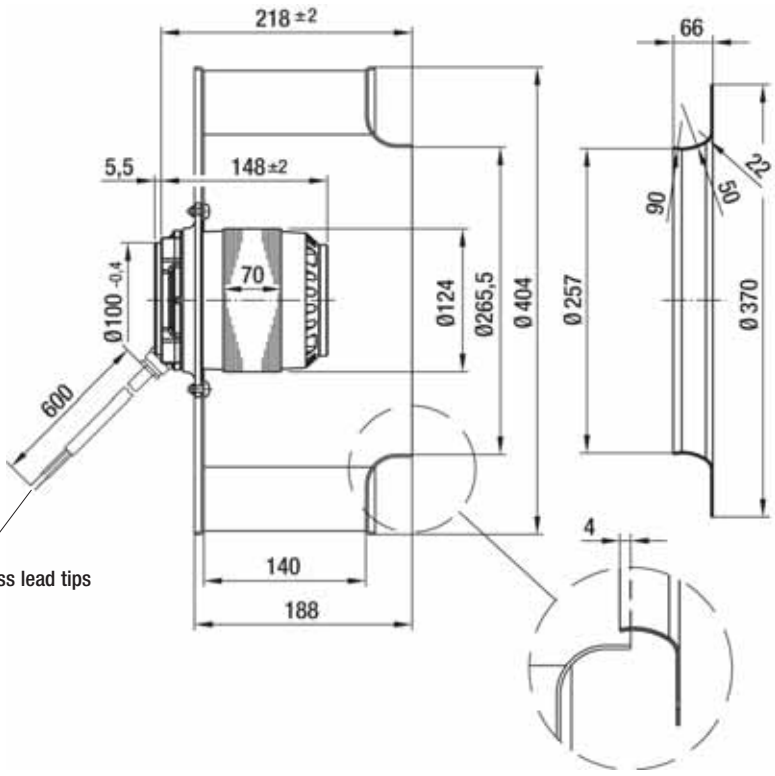
	n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]
Ⓐ 1	1415	490	1.40	63
Ⓐ 2	1415	500	1.41	65
Ⓑ 1	1240	380	0.67	70
Ⓑ 2	1320	281	0.52	66

ebmpapst

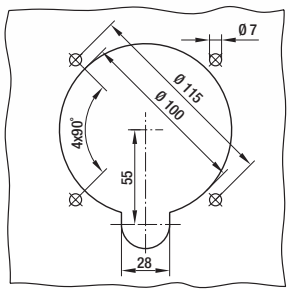
- **Motor protection:** Design with thermal overload protector
- **Cable exit:** Diagonal
- **Protection class:** I (acc. to EN 61800-5-1)
- **Product conforming to standard:** CE



Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle (long)
R4D 400-AD22 -06	8.7	54476-2-4013



Mounting dimensions



Inlet nozzle p. 550
Guard grille p. 553
Electr. connections p. 596 f.

AC centrifugal fans

backward curved, Ø 400

- **Material:** Impeller: Sheet aluminium, riveted
  Rotor: Coated in black
- **Number of blades:** 6
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 54 (acc. to EN 60529)
- **Insulation class:** "F"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

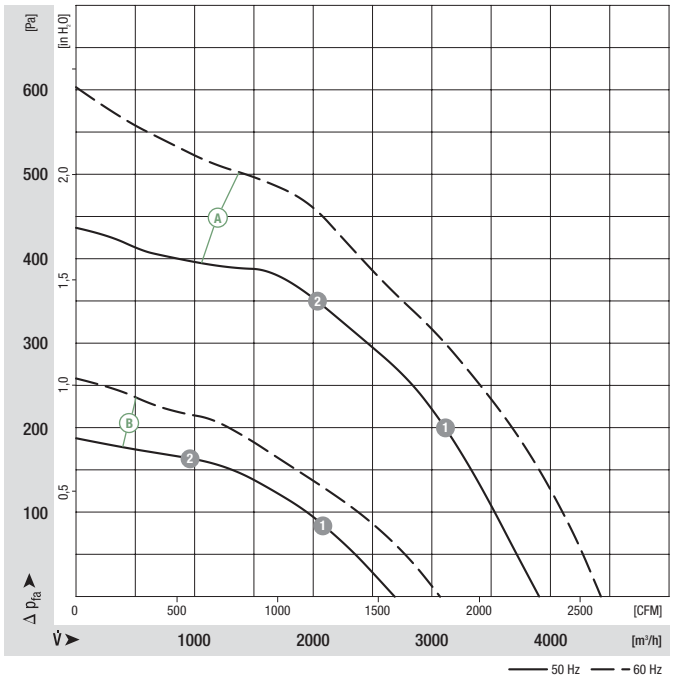
Nominal data

Type	Motor	Curve	Nominal voltage VAC	Frequency Hz	Speed/rpm (1) rpm	Max. power input (1) W	Max. current draw (1) A	Capacitor µF/VDB	Perm. amb. temp. °C	Electr. connection p. 596 f.
R4E 400	M4E 094-HA	Ⓐ	1~ 230	50	1370	480	2.40	10.0/400	-40 to +70	A2a)
			1~ 230	60	1500	695	3.18	10.0/450	-40 to +55	
R6E 400	M6E 094-FA	Ⓑ	1~ 230	50	895	155	0.68	5.0/450	-40 to +95	A2a)
			1~ 230	60	990	220	0.97	5.0/450	-40 to +85	

subject to alterations

(1) Nominal data in operating point with maximum load

Curves

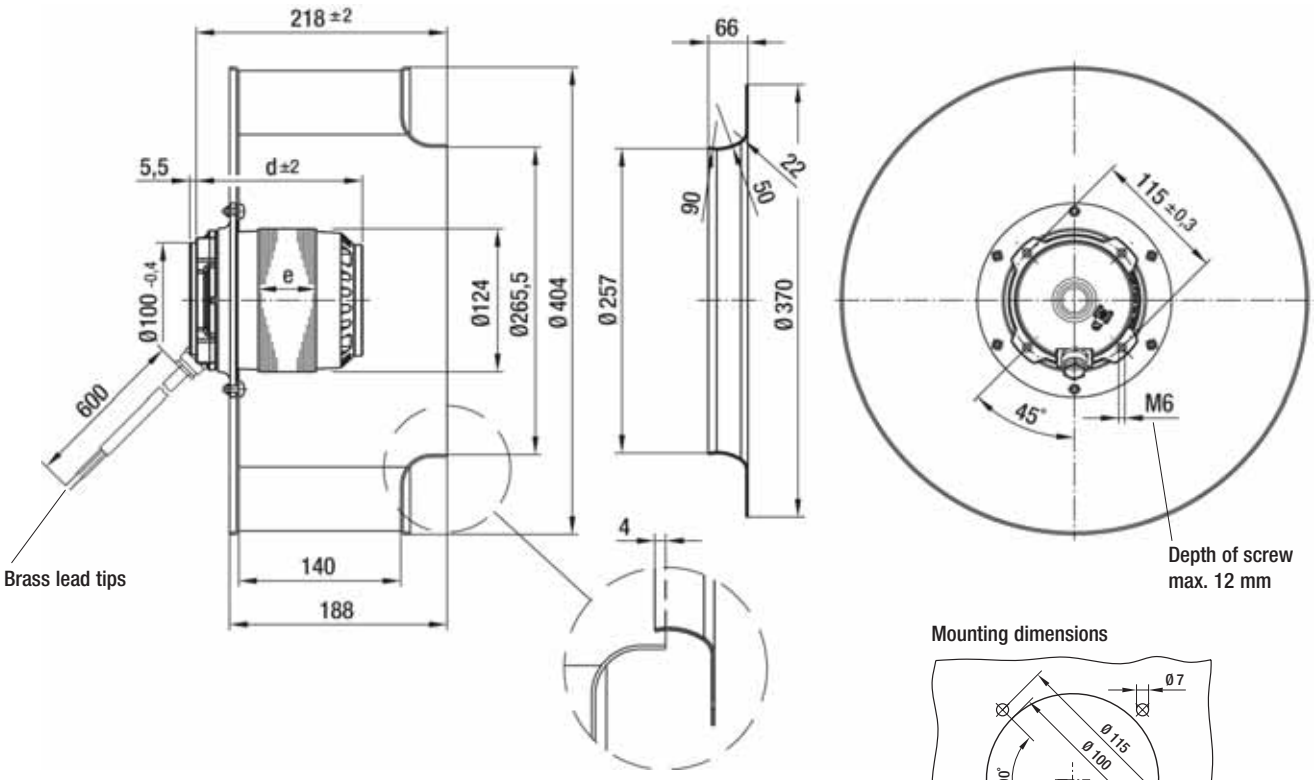


	n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]
Ⓐ 1	1380	464	2.36	68
Ⓐ 2	1380	462	2.36	65
Ⓑ 1	900	149	0.65	56
Ⓑ 2	910	143	0.65	54

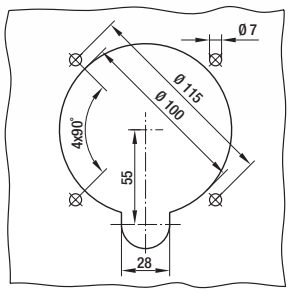
ebmpapst

- **Motor protection:** Design with thermal overload protector
- **Cable exit:** Diagonal
- **Protection class:** I (acc. to EN 61800-5-1)
- **Product conforming to standard:** CE

Centrifugal fan	Mass of centrifugal fan kg	Dimensions d	e	Inlet nozzle (long)
R4E 400-AN09 -06	8.7	148.0	70.0	54476-2-4013
R6E 400-AK06 -06	8.7	128.0	50.0	54476-2-4013



Mounting dimensions



AC centrifugal fans

backward curved, 3-D, Ø 450

- **Material:** Impeller: Sheet aluminium, welded
  Rotor: Cast in aluminium
- **Number of blades:** 6
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 54 (acc. to EN 60529)
- **Insulation class:** "F"
- **Mounting position:** Any
- **Condensate discharge holes:** On rotor and stator sides
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

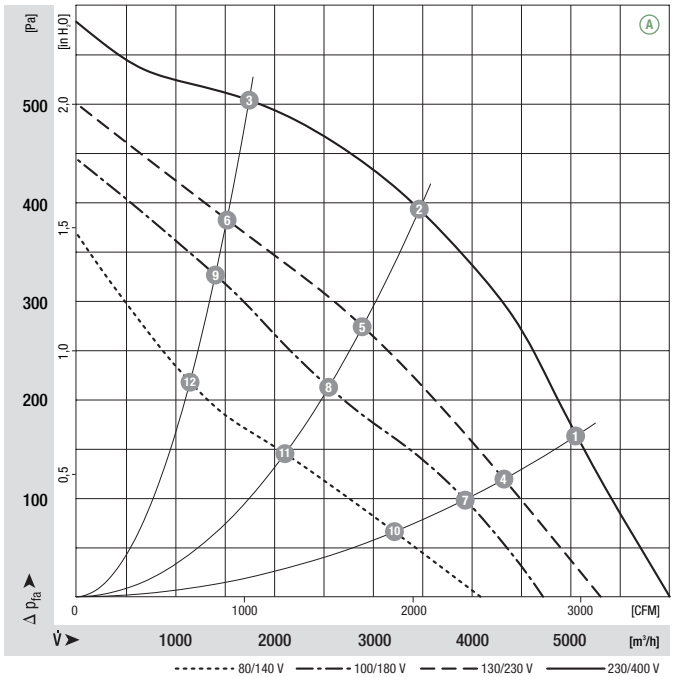
Nominal data

Type	Motor	Curve	Nominal voltage	Frequency	Speed/rpm (1)	Max. power input (1)	Max. current draw (1)	Capacitor	Perm. amb. temp.	Electr. connection
			VAC	Hz	rpm	kW	A	µF/VDB	°C	p. 596 f.
R4D 450 (2)	M4D 110-GF	Ⓐ	3~ 230/400	50	1350	0.74	2.60/1.50	—	-40 to +80	D1)/D2)

subject to alterations

(1) Nominal data in operating point with maximum load (2) 230 VAC Δ / 400 VAC Y

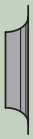
Curves



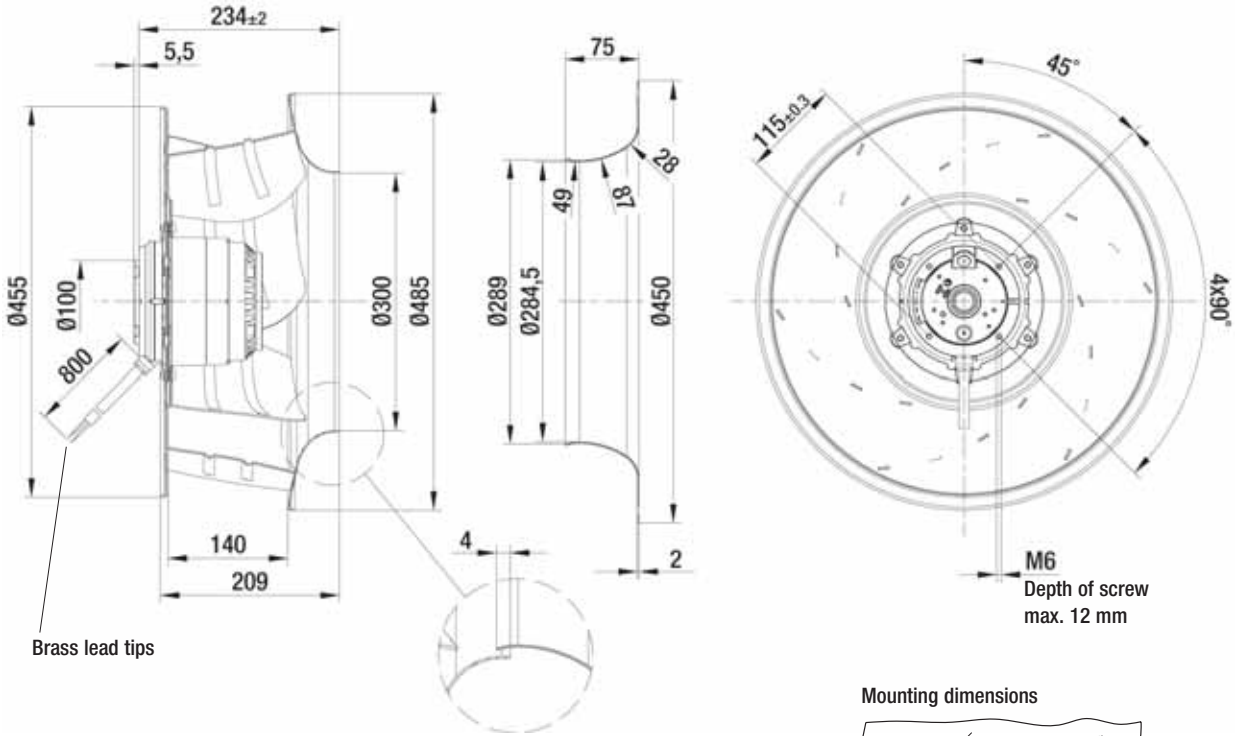
	n [rpm]	P_1 [kW]	I [A]	Lw_A [dB(A)]
Ⓐ 1	1370	0.65	2.35/1.35	75
Ⓐ 2	1350	0.73	2.50/1.45	70
Ⓐ 3	1380	0.61	2.25/1.30	76
Ⓐ 4	1155	0.47	2.40/1.40	70
Ⓐ 5	1115	0.51	2.60/1.50	65
Ⓐ 6	1180	0.45	2.25/1.30	72
Ⓐ 7	1055	0.37	2.45/1.40	68
Ⓐ 8	955	0.38	2.60/1.50	61
Ⓐ 9	1100	0.32	2.25/1.30	70
Ⓐ 10	830	0.26	2.25/1.30	61
Ⓐ 11	780	0.27	2.25/1.30	56
Ⓐ 12	850	0.25	2.15/1.25	63

ebmpapst

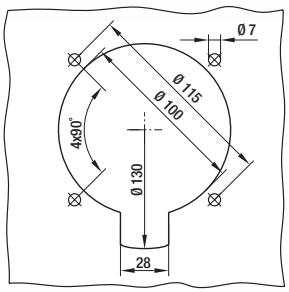
- **Motor protection:** Design with thermal overload protector
- **Cable exit:** Diagonal
- **Protection class:** I (acc. to EN 61800-5-1)
- **Product conforming to standard:** CE
- **Approvals:** VDE (acc. to EN 60034)



Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle (long)
R4D 450-AK01 -01	12.5	63045-2-4013



Mounting dimensions



AC centrifugal fans

backward curved, 3-D, Ø 450

- **Material:** Impeller: Sheet aluminium, welded
  Rotor: Cast in aluminium
- **Number of blades:** 6
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 54 (acc. to EN 60529)
- **Insulation class:** "F"
- **Mounting position:** Any
- **Condensate discharge holes:** On rotor and stator sides
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

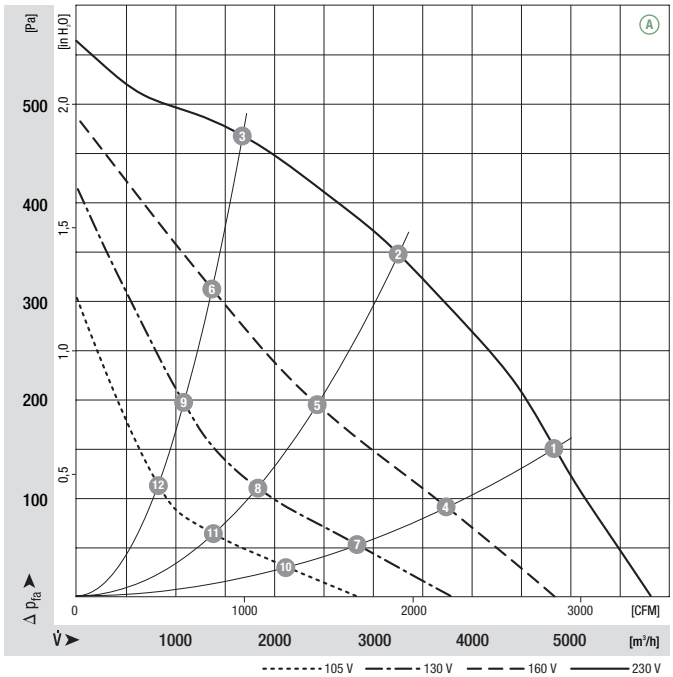
Nominal data

Type	Motor	Curve	Nominal voltage	Frequency	Speed/rpm (1)	Max. power input (1)	Max. current draw (1)	Capacitor	Perm. amb. temp.	Electr. connection
			VAC	Hz	rpm	kW	A	µF/VDB	°C	p. 596 f.
R4E 450	M4E 110-GF	Ⓐ	1~ 230	50	1250	0.68	3.00	14.0 / 400	-40 to +70	A2a)

subject to alterations

(1) Nominal data in operating point with maximum load

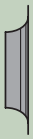
Curves



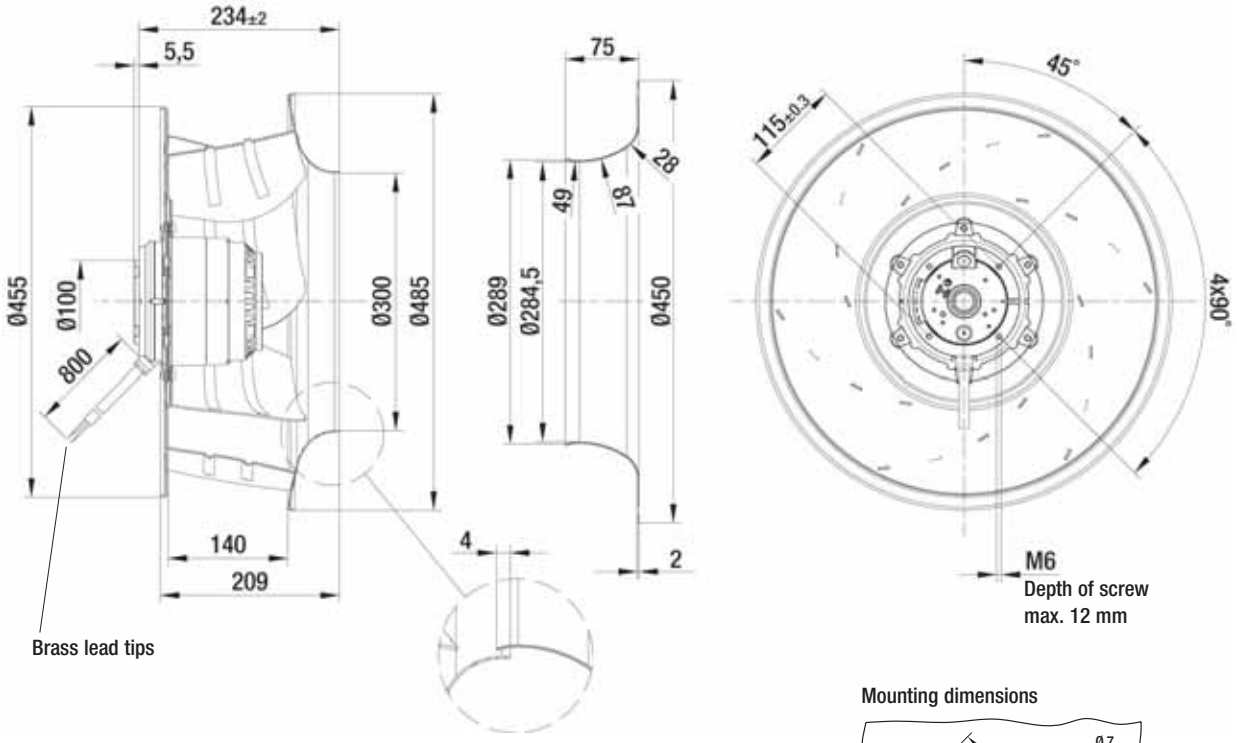
	n [rpm]	P_1 [kW]	I [A]	Lw_A [dB(A)]
Ⓐ 1	1300	0.65	2.80	74
Ⓐ 2	1265	0.68	3.00	69
Ⓐ 3	1320	0.62	2.68	75
Ⓐ 4	970	0.43	2.80	65
Ⓐ 5	900	0.43	2.90	60
Ⓐ 6	1040	0.41	2.71	69
Ⓐ 7	720	0.29	2.40	61
Ⓐ 8	670	0.29	2.49	53
Ⓐ 9	790	0.29	2.41	62
Ⓐ 10	545	0.19	2.00	50
Ⓐ 11	510	0.19	2.00	47
Ⓐ 12	580	0.19	2.00	54

ebmpapst

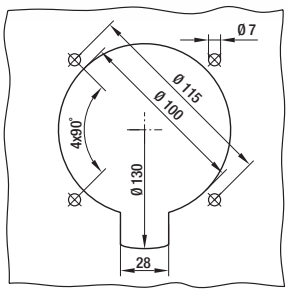
- **Motor protection:** Design with thermal overload protector
- **Cable exit:** Diagonal
- **Protection class:** I (acc. to EN 61800-5-1)
- **Product conforming to standard:** CE
- **Approvals:** VDE (acc. to EN 60034)



Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle (long)
R4E 450-AK01 -01	12.5	63045-2-4013



Mounting dimensions



AC centrifugal fans

backward curved, 3-D, Ø 450

- **Material:** Impeller: Sheet aluminium, welded
  Rotor: Cast in aluminium
- **Number of blades:** 6
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 54 (acc. to EN 60529)
- **Insulation class:** "F"
- **Mounting position:** Any
- **Condensate discharge holes:** On rotor and stator sides
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

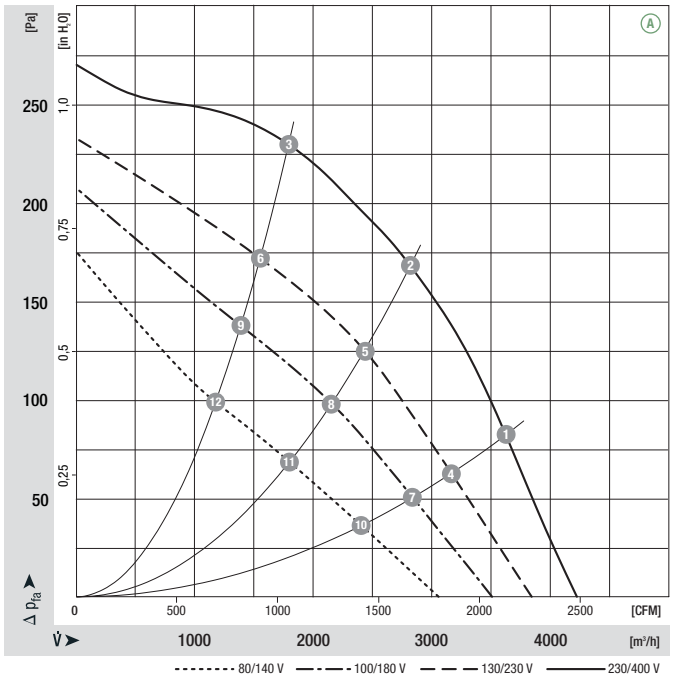
Nominal data

Type	Motor	Curve	Nominal voltage	Frequency	Speed/rpm (1)	Max. power input (1)	Max. current draw (1)	Capacitor	Perm. amb. temp.	Electr. connection
			VAC	Hz	rpm	kW	A	µF/VDB	°C	p. 596 f.
R6D 450 (2)	M6D 110-EF	Ⓐ	3~ 230/400	50	930	0.29	1.30/0.75	—	-40 to +85	D1)/D2)

subject to alterations

(1) Nominal data in operating point with maximum load (2) 230 VAC Δ / 400 VAC Y

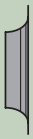
Curves



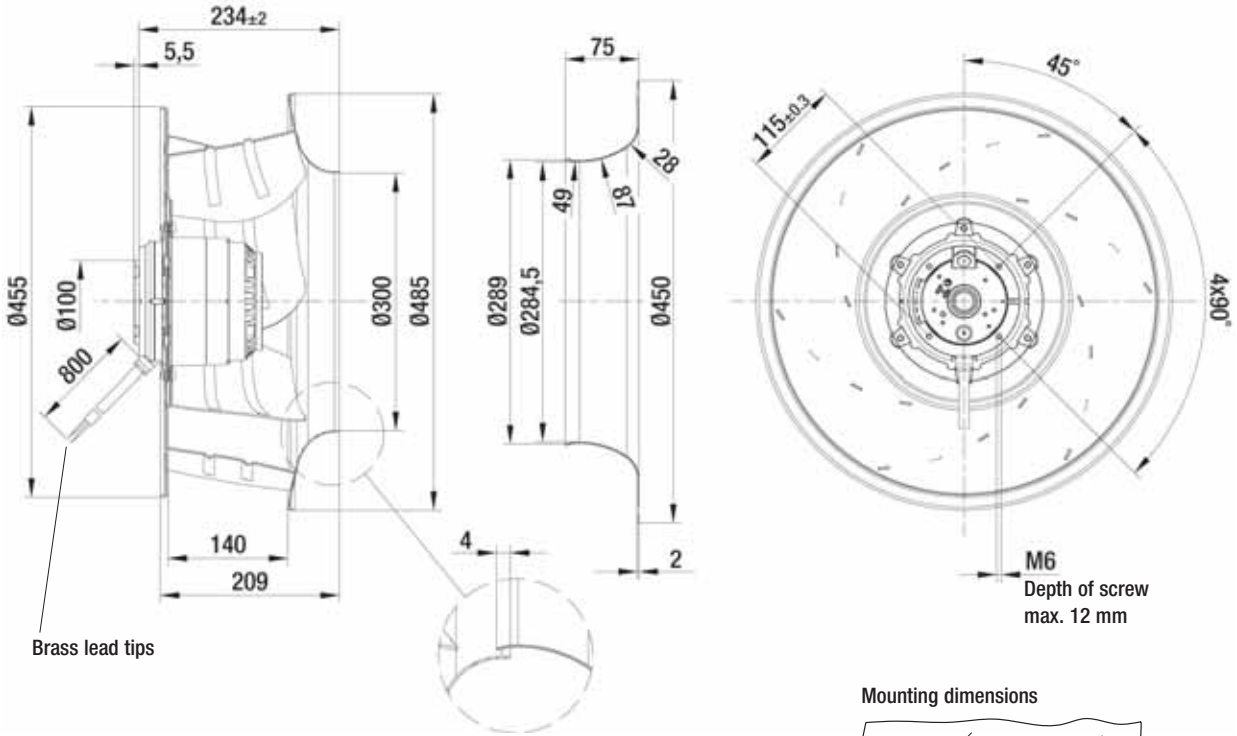
	n [rpm]	P_1 [kW]	I [A]	Lw_A [dB(A)]
Ⓐ 1	950	0.25	1.12/0.65	66
Ⓐ 2	940	0.28	1.15/0.66	63
Ⓐ 3	950	0.26	1.12/0.65	65
Ⓐ 4	830	0.18	0.92/0.53	61
Ⓐ 5	805	0.20	1.00/0.58	58
Ⓐ 6	825	0.18	0.94/0.54	60
Ⓐ 7	735	0.15	0.94/0.54	58
Ⓐ 8	705	0.16	1.01/0.58	54
Ⓐ 9	730	0.15	0.95/0.55	58
Ⓐ 10	615	0.11	0.90/0.52	52
Ⓐ 11	580	0.11	0.94/0.54	48
Ⓐ 12	610	0.11	0.90/0.52	52

ebmpapst

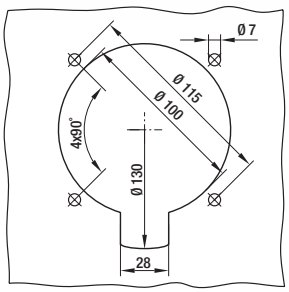
- **Motor protection:** Design with thermal overload protector
- **Cable exit:** Diagonal
- **Protection class:** I (acc. to EN 61800-5-1)
- **Product conforming to standard:** CE
- **Approvals:** VDE (acc. to EN 60034)



Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle (long)
R6D 450-AN01 -01	10.0	63045-2-4013



Mounting dimensions



AC centrifugal fans

backward curved, 3-D, Ø 450

- **Material:** Impeller: Sheet aluminium, welded
  Rotor: Cast in aluminium
- **Number of blades:** 6
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 54 (acc. to EN 60529)
- **Insulation class:** "F"
- **Mounting position:** Any
- **Condensate discharge holes:** On rotor and stator sides
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

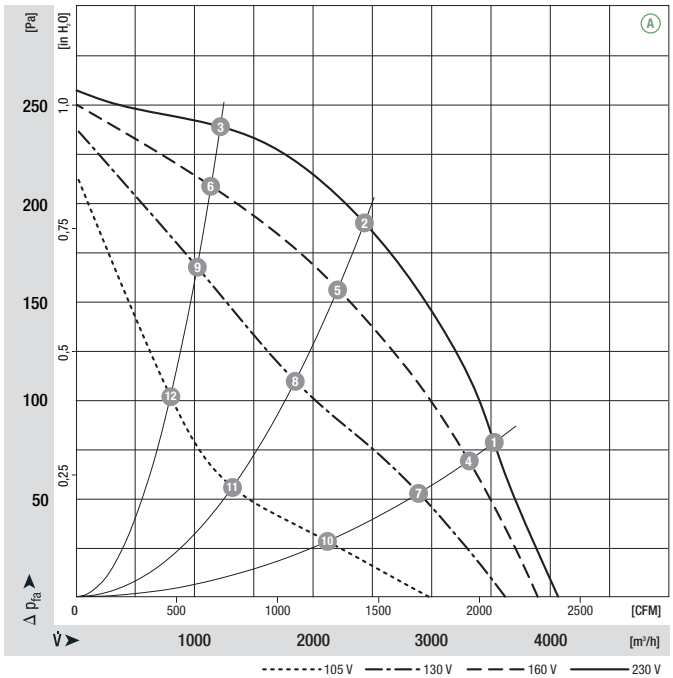
Nominal data

Type	Motor	Curve	Nominal voltage	Frequency	Speed/rpm (1)	Max. power input (1)	Max. current draw (1)	Capacitor	Perm. amb. temp.	Electr. connection
			VAC	Hz	rpm	kW	A	µF/VDB	°C	p. 596 f.
R6E 450	M6E 110-EF	Ⓐ	1~ 230	50	930	0.30	1.42	8.0 / 450	-40 to +70	A2a)

subject to alterations

(1) Nominal data in operating point with maximum load

Curves

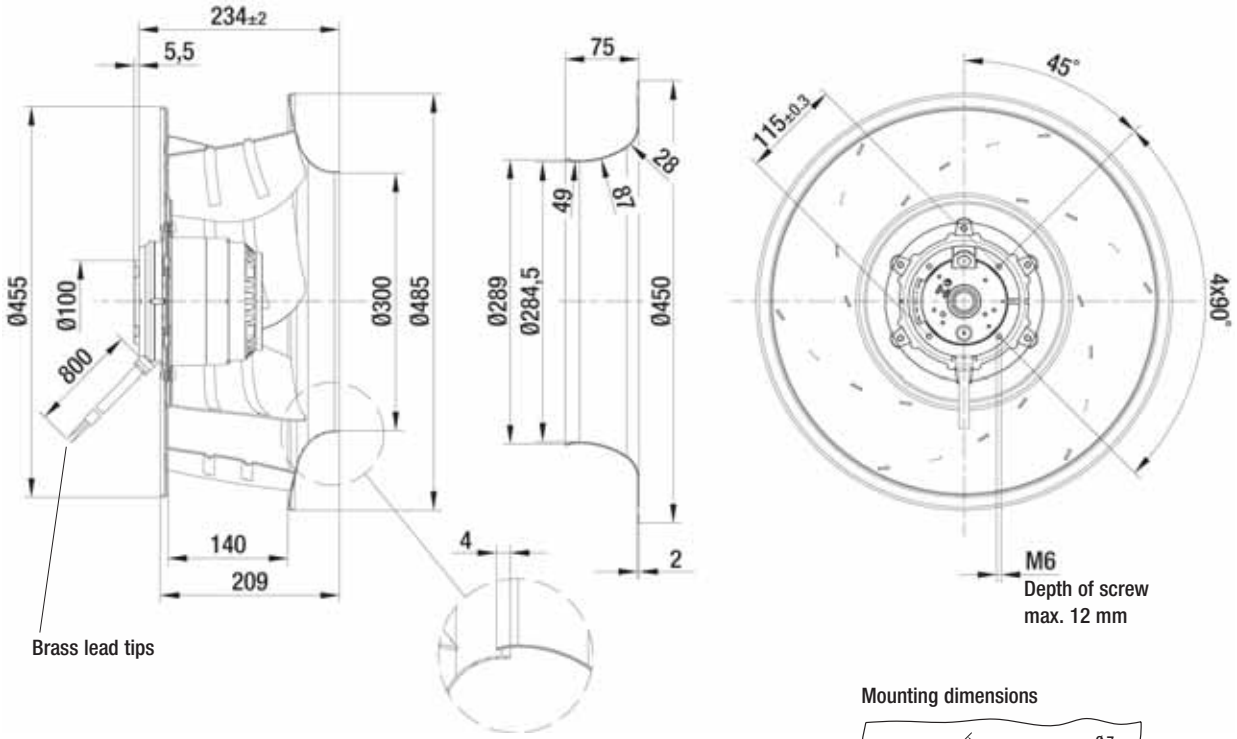


		n [rpm]	P_1 [kW]	I [A]	Lw_A [dB(A)]
Ⓐ	1	945	0.27	1.30	65
Ⓐ	2	935	0.29	1.38	61
Ⓐ	3	945	0.27	1.28	67
Ⓐ	4	865	0.21	1.30	62
Ⓐ	5	840	0.22	1.40	59
Ⓐ	6	880	0.19	1.20	64
Ⓐ	7	740	0.17	1.41	58
Ⓐ	8	665	0.18	1.50	53
Ⓐ	9	775	0.16	1.39	61
Ⓐ	10	520	0.12	1.30	48
Ⓐ	11	465	0.12	1.38	44
Ⓐ	12	565	0.12	1.30	52

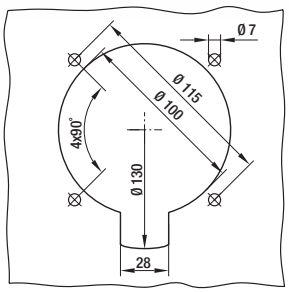
ebmpapst

- **Motor protection:** Design with thermal overload protector
- **Cable exit:** Diagonal
- **Protection class:** I (acc. to EN 61800-5-1)
- **Product conforming to standard:** CE
- **Approvals:** VDE (acc. to EN 60034)

Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle (long)
R6E 450-AN01 -01	10.0	63045-2-4013



Mounting dimensions



AC centrifugal fans

backward curved, Ø 450

- **Material:** Impeller: Sheet aluminium, riveted
  Rotor: Coated in black
- **Number of blades:** 6
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 54 (acc. to EN 60529)
- **Insulation class:** "F"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

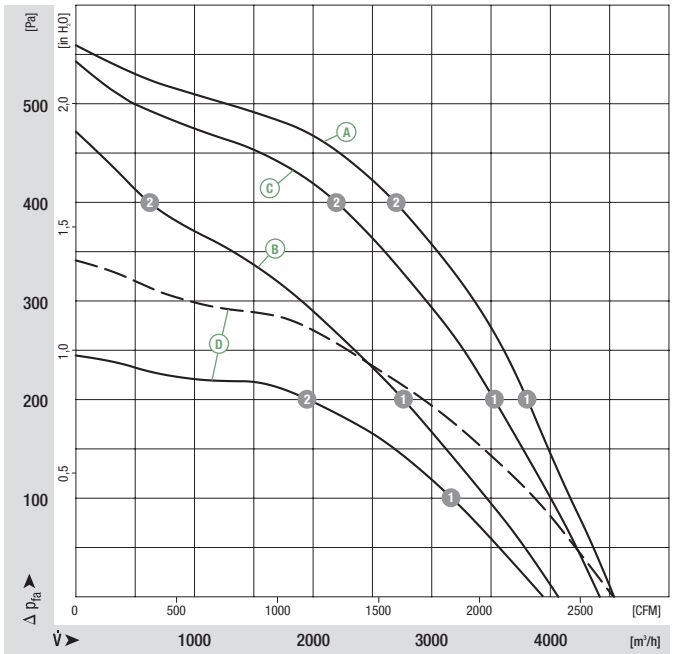
Nominal data

Type	Motor	Curve	Nominal voltage	Frequency	Speed/rpm (1)	Max. power input (1)	Max. current draw (1)	Capacitor	Perm. amb. temp.	Electr. connection
			VAC	Hz	rpm	W	A	µF/VDB	°C	p. 596 f.
R4D 450	M4D 094-HA	Ⓐ	3~ 400 Δ	50	1380	665	1.55	—	-40 to +50	F1a)/F2a)
		Ⓑ	3~ 400 Y	50	1130	470	0.82	—	-40 to +55	
R4E 450	M4E 094-HA	Ⓒ	1~ 230	50	1290	640	3.10	10.0 / 400	-40 to +50	A2a)
R6E 450	M6E 094-HA	Ⓓ	1~ 230	50	905	320	1.56	10.0 / 400	-40 to +40	A2a)
			1~ 230	60	1010	425	1.86	10.0 / 450	-40 to +55	

subject to alterations

(1) Nominal data in operating point with maximum load

Curves

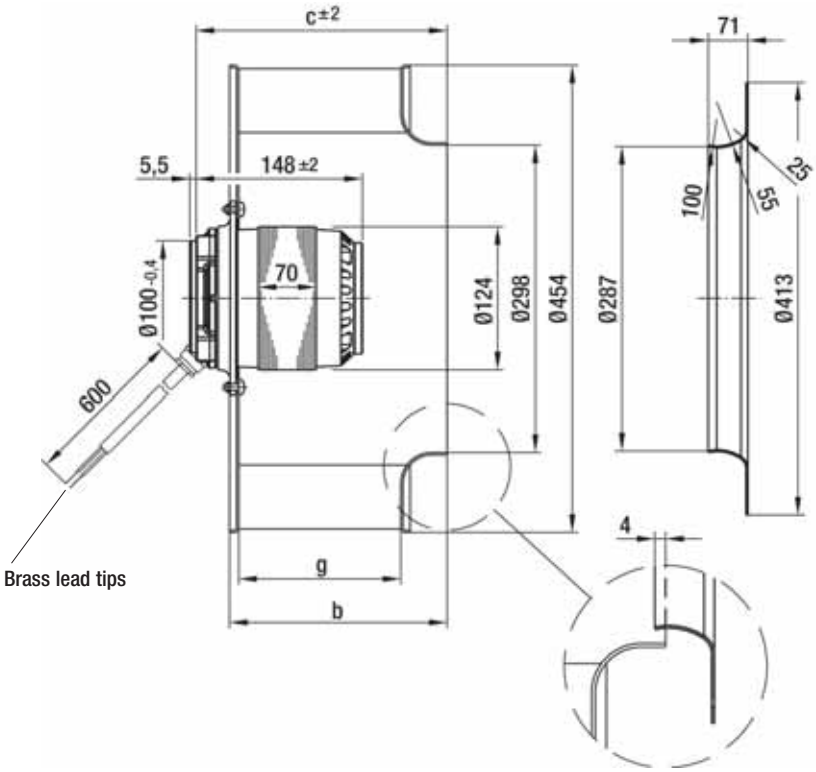


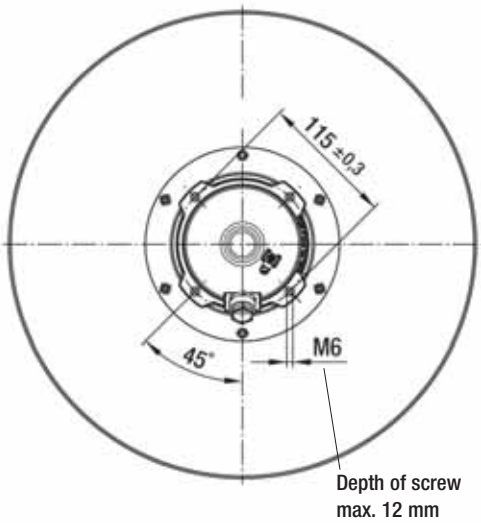
	n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]
Ⓐ ❶	1390	610	1.52	70
Ⓐ ❷	1380	650	1.53	69
Ⓑ ❶	1130	470	0.82	64
Ⓑ ❷	1260	350	0.65	68
Ⓒ ❶	1310	602	2.97	69
Ⓒ ❷	1310	596	2.92	68
Ⓓ ❶	910	305	1.50	61
Ⓓ ❷	905	310	1.53	58

ebmpapst

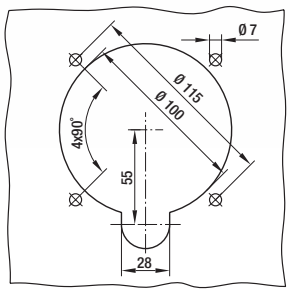
- **Motor protection:** Design with thermal overload protector
- **Cable exit:** Diagonal
- **Protection class:** I (acc. to EN 61800-5-1)
- **Product conforming to standard:** CE

Centrifugal fan	Mass of centrifugal fan kg	Dimensions b	c	g	Inlet nozzle (long)
R4D 450-AD22 -06	9.3	175.0	204.0	120.0	54478-2-4013
R4E 450-AB09 -06	9.3	175.0	204.0	120.0	54478-2-4013
R6E 450-AB06 -06	9.6	215.0	244.0	160.0	54478-2-4013





Mounting dimensions



AC centrifugal fans

backward curved, 3-D, Ø 500

- **Material:** Impeller: Sheet aluminium, welded
  Rotor: Cast in aluminium
- **Number of blades:** 9
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 54 (acc. to EN 60529)
- **Insulation class:** "F"
- **Mounting position:** Any
- **Condensate discharge holes:** On rotor and stator sides
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

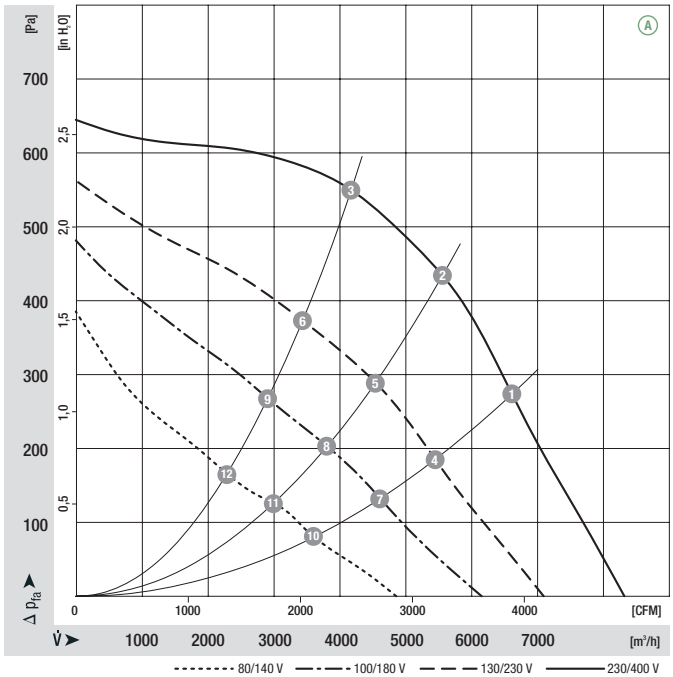
Nominal data

Type	Motor	Curve	Nominal voltage	Frequency	Speed/rpm (1)	Max. power input (1)	Max. current draw (1)	Capacitor	Perm. amb. temp.	Electr. connection
			VAC	Hz	rpm	kW	A	µF/VDB	°C	p. 596 f.
R4D 500(2)	M4D 138-HF	Ⓐ	3~ 230/400	50	1375	1.43	5.20/3.00	—	-40 to +80	D1)/D2)

subject to alterations

(1) Nominal data in operating point with maximum load (2) 230 VAC Δ / 400 VAC Y

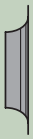
Curves



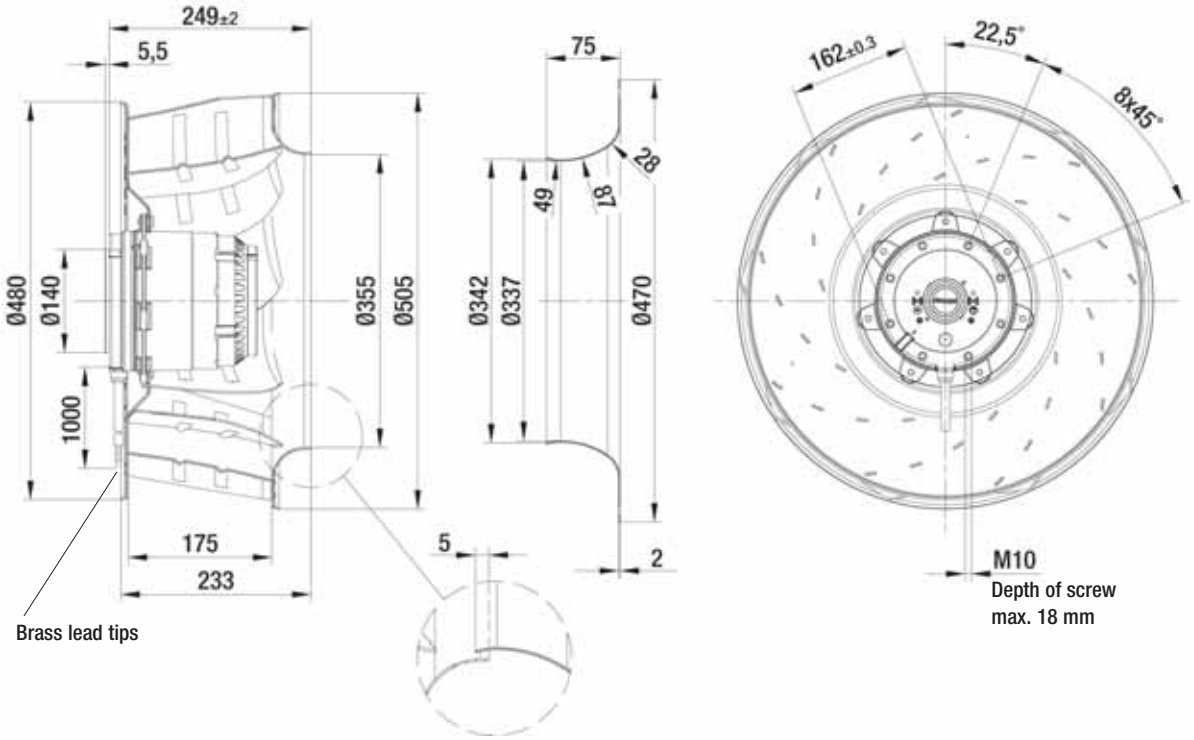
	n [rpm]	P_1 [kW]	I [A]	Lw_A [dB(A)]
Ⓐ 1	1380	1.36	4.99/2.88	81
Ⓐ 2	1375	1.42	5.13/2.96	79
Ⓐ 3	1375	1.43	5.20/3.00	77
Ⓐ 4	1150	0.97	5.25/3.03	76
Ⓐ 5	1125	1.00	5.42/3.13	74
Ⓐ 6	1140	0.97	5.28/3.05	73
Ⓐ 7	970	0.73	5.18/2.99	71
Ⓐ 8	945	0.74	5.30/3.06	69
Ⓐ 9	970	0.73	5.16/2.98	68
Ⓐ 10	775	0.49	4.66/2.69	64
Ⓐ 11	755	0.49	4.73/2.73	63
Ⓐ 12	775	0.49	4.68/2.70	62

ebmpapst

- **Motor protection:** Design with thermal overload protector
- **Cable exit:** Lateral
- **Protection class:** I (acc. to EN 61800-5-1)
- **Product conforming to standard:** CE
- **Approvals:** VDE (acc. to EN 60034)



Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle (long)
R4D 500-AT03 -01	26.0	63072-2-4013



AC centrifugal fans

backward curved, 3-D, Ø 500

- **Material:** Impeller: Sheet aluminium, welded
  Rotor: Cast in aluminium
- **Number of blades:** 9
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 54 (acc. to EN 60529)
- **Insulation class:** "F"
- **Mounting position:** Any
- **Condensate discharge holes:** On rotor and stator sides
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

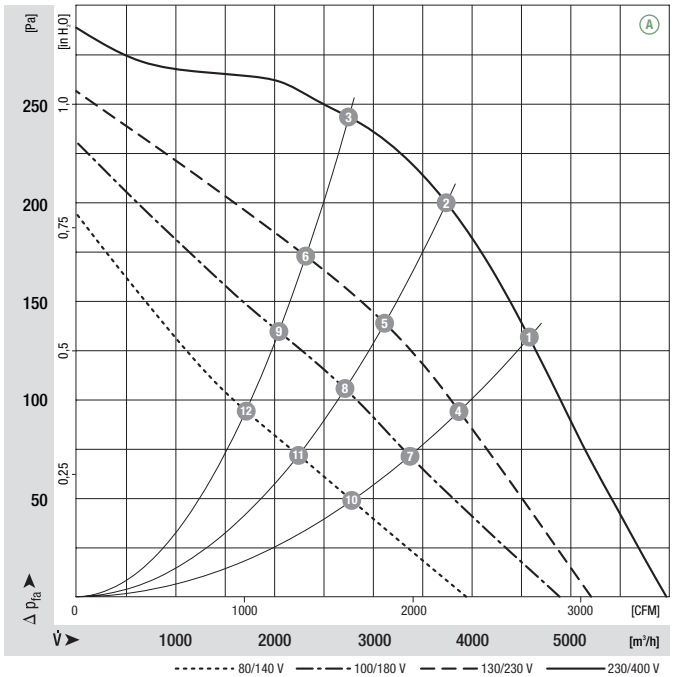
Nominal data

Type	Motor	Curve	Nominal voltage	Frequency	Speed/rpm (1)	Max. power input (1)	Max. current draw (1)	Capacitor	Perm. amb. temp.	Electr. connection
			VAC	Hz	rpm	kW	A	µF/VDB	°C	p. 596 f.
R6D 500(2)	M6D 110-GF	Ⓐ	3~ 230/400	50	910	0.48	1.90/1.10	—	-40 to +80	D1)/D2)

subject to alterations

(1) Nominal data in operating point with maximum load (2) 230 VAC Δ / 400 VAC Y

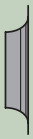
Curves



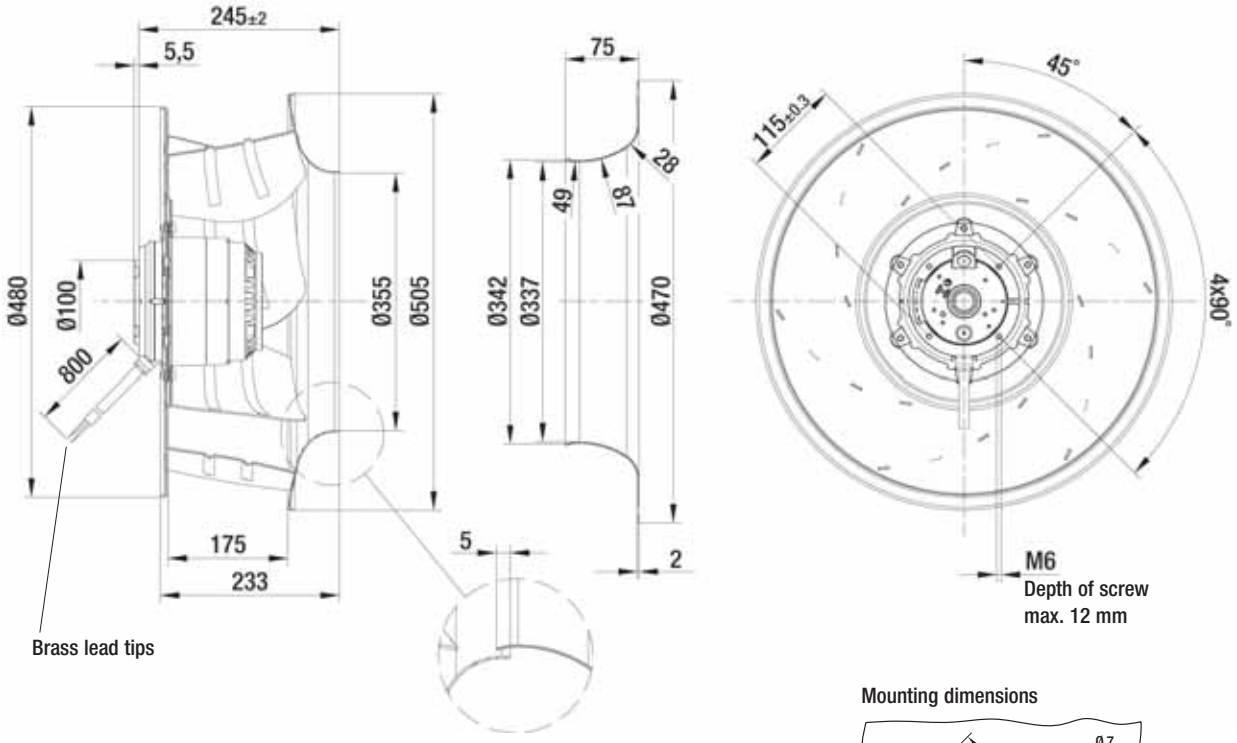
		n [rpm]	P_1 [kW]	I [A]	Lw_A [dB(A)]
Ⓐ	1	915	0.45	1.73/1.00	68
Ⓐ	2	910	0.47	1.77/1.02	65
Ⓐ	3	915	0.44	1.69/0.98	66
Ⓐ	4	760	0.31	1.66/0.96	62
Ⓐ	5	745	0.32	1.72/1.00	60
Ⓐ	6	770	0.30	1.60/0.93	61
Ⓐ	7	650	0.23	1.59/0.92	57
Ⓐ	8	630	0.24	1.64/0.95	55
Ⓐ	9	665	0.23	1.57/0.90	57
Ⓐ	10	530	0.16	1.43/0.82	52
Ⓐ	11	510	0.16	1.45/0.84	49
Ⓐ	12	545	0.16	1.41/0.81	52

ebmpapst

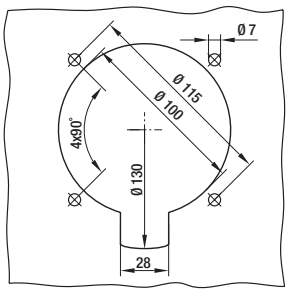
- **Motor protection:** Design with thermal overload protector
- **Cable exit:** Diagonal
- **Protection class:** I (acc. to EN 61800-5-1)
- **Product conforming to standard:** CE
- **Approvals:** VDE (acc. to EN 60034)



Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle (long)
R6D 500-AK03 -01	13.0	63072-2-4013



Mounting dimensions



AC centrifugal fans

backward curved, 3-D, Ø 500

- **Material:** Impeller: Sheet aluminium, welded
  Rotor: Cast in aluminium
- **Number of blades:** 9
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 54 (acc. to EN 60529)
- **Insulation class:** "F"
- **Mounting position:** Any
- **Condensate discharge holes:** On rotor and stator sides
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

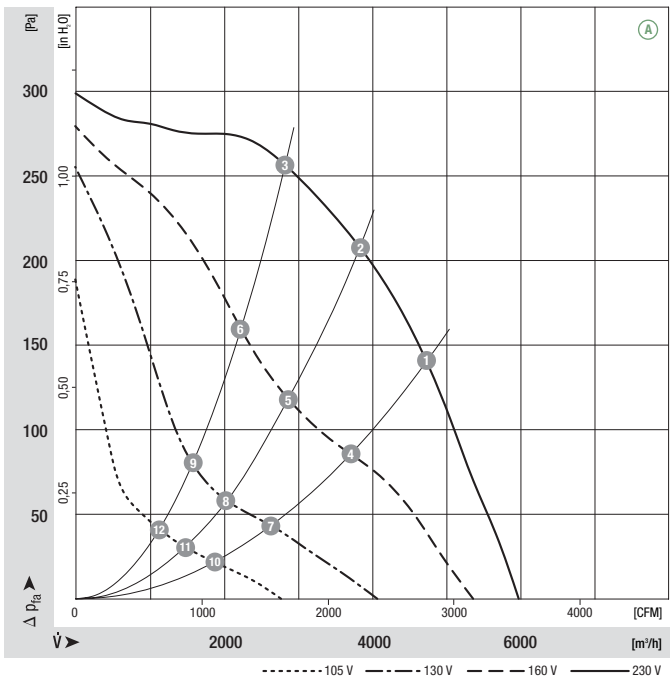
Nominal data

Type	Motor	Curve	Nominal voltage	Frequency	Speed/rpm (1)	Max. power input (1)	Max. current draw (1)	Capacitor	Perm. amb. temp.	Electr. connection
			VAC	Hz	rpm	kW	A	µF/VDB	°C	p. 596 f.
R6E 500	M6E 110-GF	Ⓐ	1~ 230	50	910	0.51	2.34	12.0 / 450	-40 to +60	A2a)

subject to alterations

(1) Nominal data in operating point with maximum load

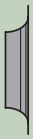
Curves



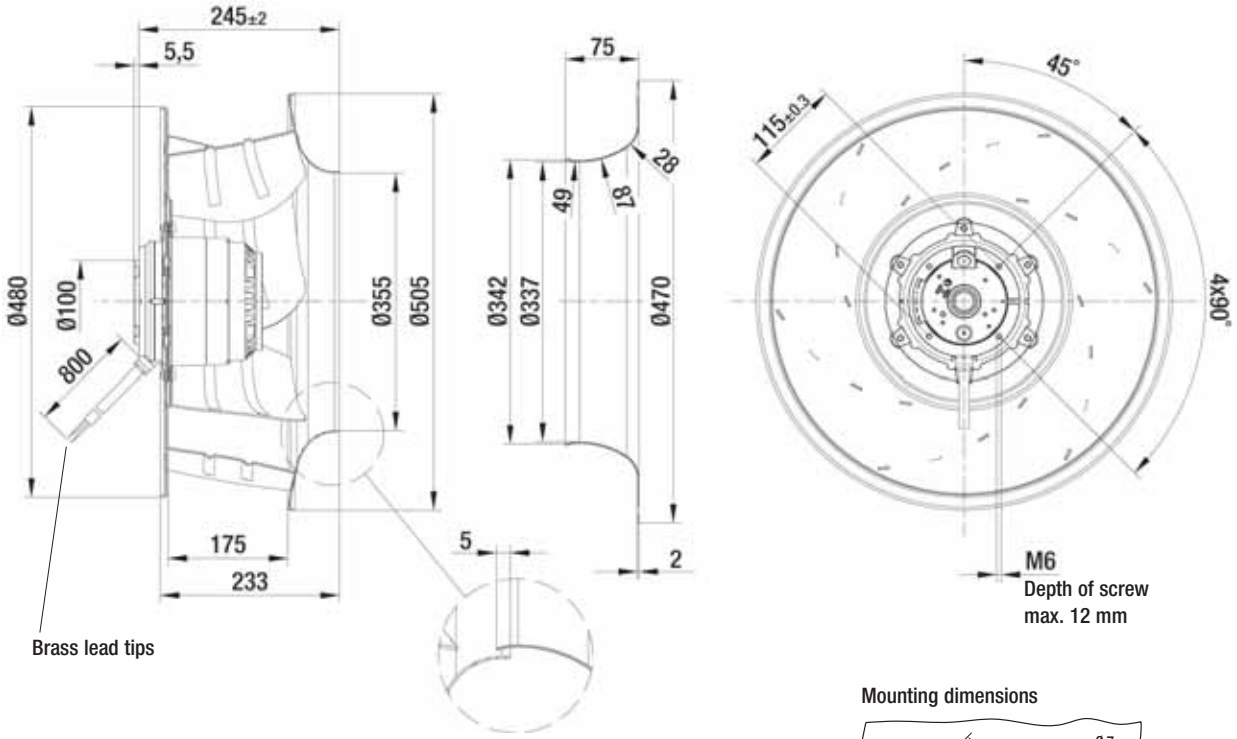
	n [rpm]	P_1 [kW]	I [A]	Lw_A [dB(A)]
Ⓐ 1	915	0.49	2.24	70
Ⓐ 2	910	0.51	2.33	67
Ⓐ 3	915	0.48	2.22	68
Ⓐ 4	720	0.37	2.55	62
Ⓐ 5	690	0.38	2.64	60
Ⓐ 6	730	0.37	2.50	61
Ⓐ 7	515	0.27	2.35	52
Ⓐ 8	485	0.27	2.37	49
Ⓐ 9	510	0.27	2.34	52
Ⓐ 10	370	0.17	1.94	46
Ⓐ 11	355	0.17	1.94	44
Ⓐ 12	375	0.17	1.94	45

ebmpapst

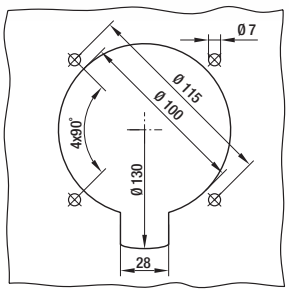
- **Motor protection:** Design with thermal overload protector
- **Cable exit:** Diagonal
- **Protection class:** I (acc. to EN 61800-5-1)
- **Product conforming to standard:** CE
- **Approvals:** VDE (acc. to EN 60034)



Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle (long)
R6E 500-AK01 -01	13.0	63072-2-4013



Mounting dimensions



AC centrifugal fans

backward curved, Ø 500

- **Material:** Impeller: Sheet aluminium, riveted
  Rotor: Coated in black
- **Number of blades:** 6
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 54 (acc. to EN 60529)
- **Insulation class:** "F"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

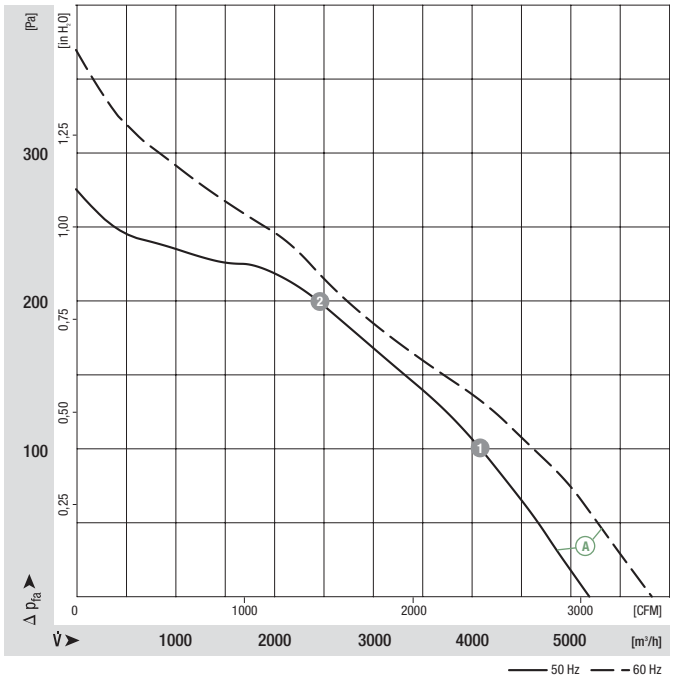
Nominal data

Type	Motor	Curve	Nominal voltage	Frequency	Speed/rpm (1)	Max. power input (1)	Max. current draw (1)	Capacitor	Perm. amb. temp.	Electr. connection
			VAC	Hz	rpm	W	A	µF/VDB	°C	p. 596 f.
R6E 500	M6E 094-HA	Ⓐ	1~ 230	50	820	385	1.82	10.0/400	-40 to +40	A2a)
			1~ 230	60	850	475	2.10	10.0/450	-40 to +40	

subject to alterations

(1) Nominal data in operating point with maximum load

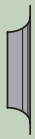
Curves



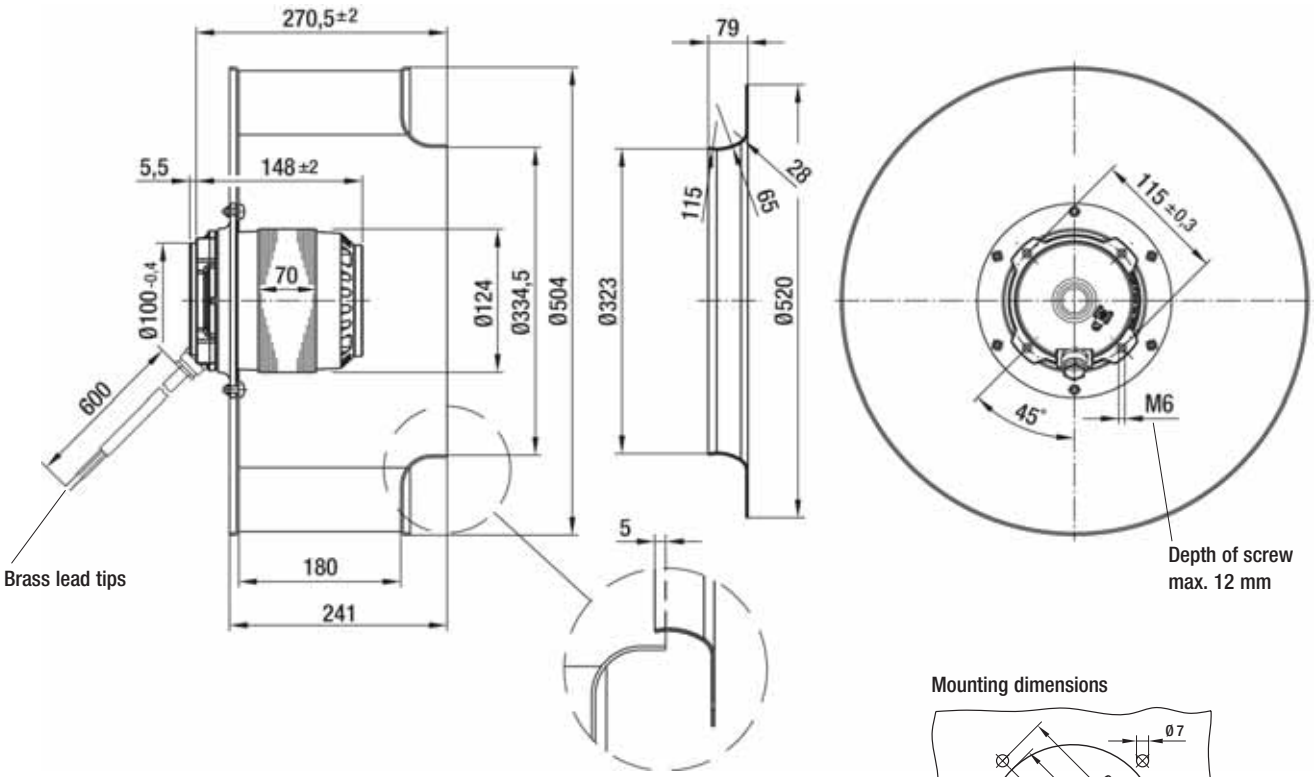
	n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]
Ⓐ 1	845	360	1.72	62
Ⓐ 2	830	376	1.79	57

ebmpapst

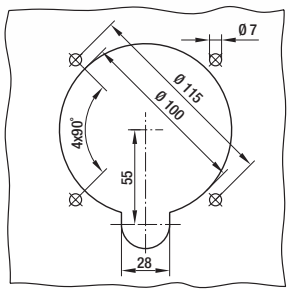
- **Motor protection:** Design with thermal overload protector
- **Cable exit:** Diagonal
- **Protection class:** I (acc. to EN 61800-5-1)
- **Product conforming to standard:** CE



Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle (long)
R6E 500-AB05 -06	11.1	54480-2-4013



Mounting dimensions



AC centrifugal fans

backward curved, 3-D, Ø 560

- **Material:** Impeller: Sheet aluminium, welded
  Rotor: Cast in aluminium
- **Number of blades:** 9
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 54 (acc. to EN 60529)
- **Insulation class:** "F"
- **Mounting position:** Any
- **Condensate discharge holes:** On rotor and stator sides
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

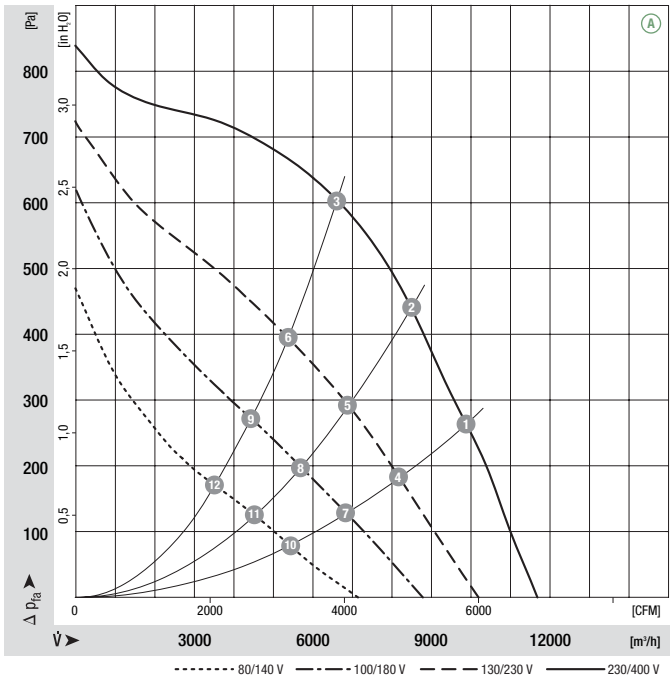
Nominal data

Type	Motor	Curve	Nominal voltage	Frequency	Speed/rpm (1)	Max. power input (1)	Max. current draw (1)	Capacitor	Perm. amb. temp.	Electr. connection
			VAC	Hz	rpm	kW	A	µF/VDB	°C	p. 596 f.
R4D 560 (2)	M4D 138-LA	Ⓐ	3~ 230/400	50	1365	2.38	8.66/5.00	—	-40 to +60	D1)/D2)

subject to alterations

(1) Nominal data in operating point with maximum load (2) 230 VAC Δ / 400 VAC Y

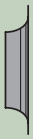
Curves



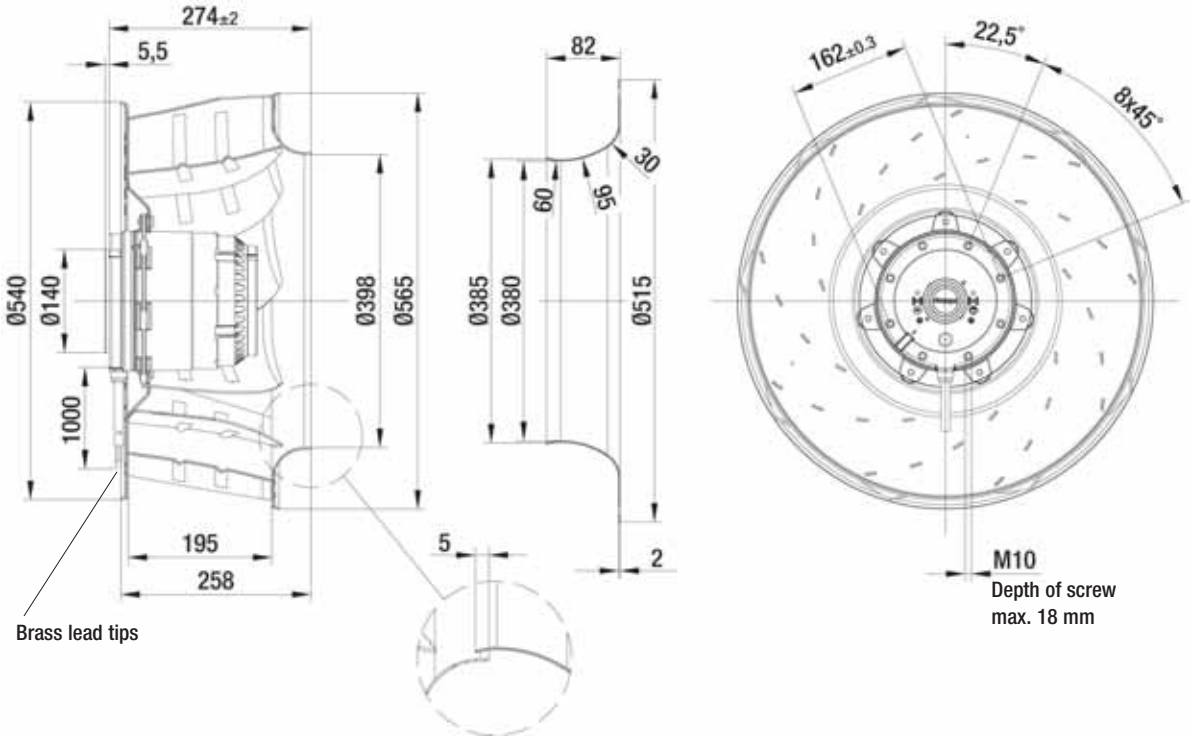
		n [rpm]	P_1 [kW]	I [A]	Lw_A [dB(A)]
Ⓐ	1	1380	2.14	8.33/4.81	84
Ⓐ	2	1370	2.33	8.66/5.00	82
Ⓐ	3	1365	2.34	8.66/5.00	81
Ⓐ	4	1140	1.53	8.31/4.80	77
Ⓐ	5	1110	1.62	8.75/5.05	76
Ⓐ	6	1105	1.62	8.73/5.04	75
Ⓐ	7	955	1.13	8.11/4.68	74
Ⓐ	8	920	1.17	8.42/4.86	73
Ⓐ	9	915	1.17	8.38/4.84	71
Ⓐ	10	765	0.77	7.31/4.22	70
Ⓐ	11	735	0.78	7.45/4.30	67
Ⓐ	12	730	0.78	7.47/4.31	65

ebmpapst

- **Motor protection:** Design with thermal overload protector
- **Cable exit:** Lateral
- **Protection class:** I (acc. to EN 61800-5-1)
- **Product conforming to standard:** CE
- **Approvals:** VDE (acc. to EN 60034)



Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle (long)
R4D 560-AQ03 -01	28.0	63071-2-4013



AC centrifugal fans

backward curved, 3-D, Ø 560

- **Material:** Impeller: Sheet aluminium, welded
  Rotor: Cast in aluminium
- **Number of blades:** 9
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 54 (acc. to EN 60529)
- **Insulation class:** "F"
- **Mounting position:** Any
- **Condensate discharge holes:** On rotor and stator sides
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

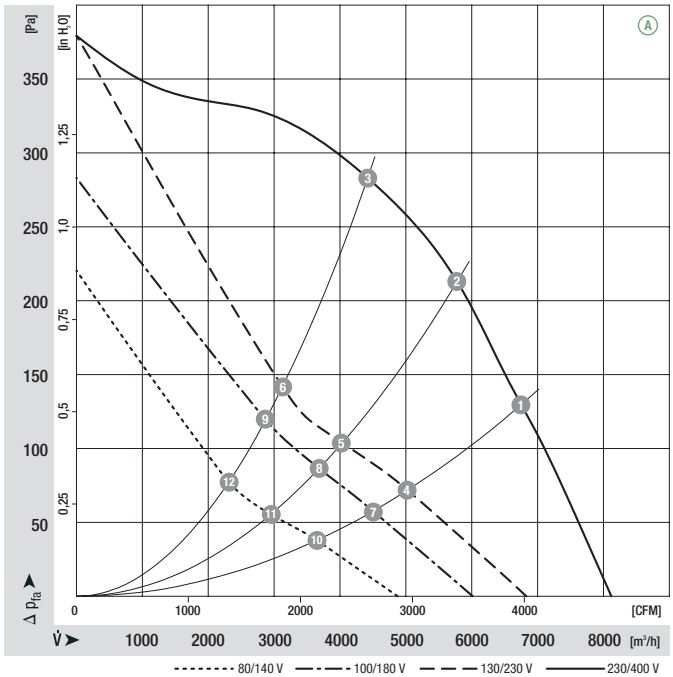
Nominal data

Type	Motor	Curve	Nominal voltage	Frequency	Speed/rpm (1)	Max. power input (1)	Max. current draw (1)	Capacitor	Perm. amb. temp.	Electr. connection
			VAC	Hz	rpm	kW	A	µF/VDB	°C	p. 596 f.
R6D 560 (2)	M6D 110-IA	Ⓐ	3~ 230/400	50	885	0.78	2.95/1.70	—	-40 to +55	D1)/D2)

subject to alterations

(1) Nominal data in operating point with maximum load (2) 230 VAC Δ / 400 VAC Y

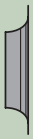
Curves



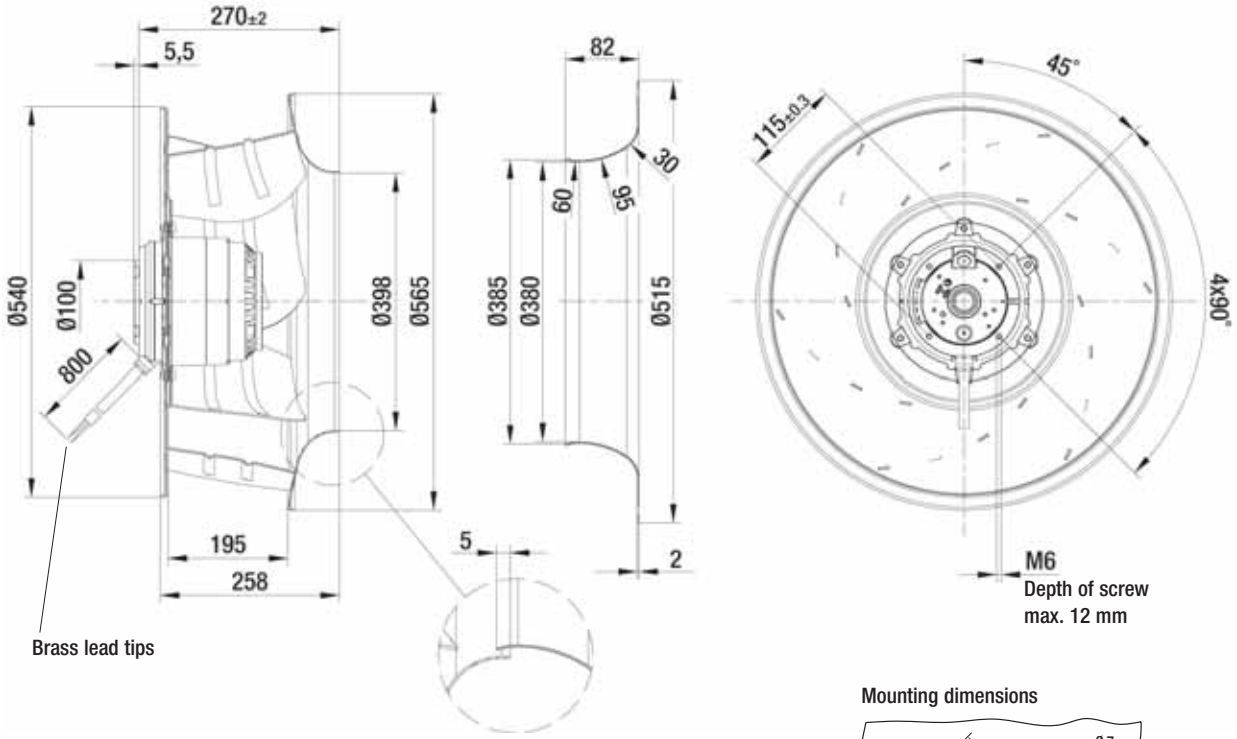
	n [rpm]	P_1 [kW]	I [A]	Lw_A [dB(A)]
Ⓐ 1	905	0.68	2.71/1.56	71
Ⓐ 2	890	0.76	2.87/1.65	69
Ⓐ 3	890	0.76	2.85/1.64	69
Ⓐ 4	665	0.48	2.85/1.64	68
Ⓐ 5	610	0.49	2.89/1.67	58
Ⓐ 6	605	0.49	2.88/1.66	59
Ⓐ 7	595	0.32	2.31/1.34	65
Ⓐ 8	560	0.33	2.40/1.39	58
Ⓐ 9	565	0.33	2.39/1.38	57
Ⓐ 10	480	0.21	1.99/1.15	54
Ⓐ 11	450	0.21	2.03/1.17	50
Ⓐ 12	450	0.18	2.03/1.17	50

ebmpapst

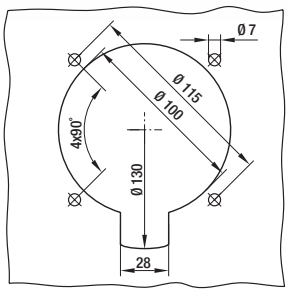
- **Motor protection:** Design with thermal overload protector
- **Cable exit:** Diagonal
- **Protection class:** I (acc. to EN 61800-5-1)
- **Product conforming to standard:** CE
- **Approvals:** VDE (acc. to EN 60034)



Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle (long)
R6D 560-AH05 -01	15.0	63071-2-4013



Mounting dimensions



AC centrifugal fans

backward curved, 3-D, Ø 630

- **Material:** Impeller: Sheet aluminium, welded
  Rotor: Cast in aluminium
- **Number of blades:** 9
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 20 (acc. to EN 60529)
- **Insulation class:** "F"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

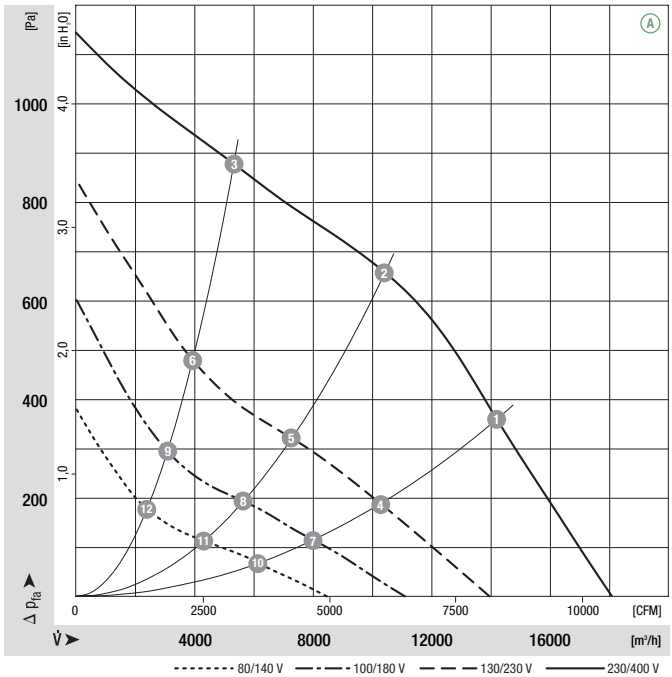
Nominal data

Type	Motor	Curve	Nominal voltage	Frequency	Speed/rpm (1)	Max. power input (1)	Max. current draw (1)	Capacitor	Perm. amb. temp.	Electr. connection
			VAC	Hz	rpm	kW	A	µF/VDB	°C	p. 596 f.
R4D 630 (2)	M4D 138-LA	Ⓐ	3~ 230/400	50	1300	4.25	13.10/7.55	—	-40 to +60	D1)/D2)

subject to alterations

(1) Nominal data in operating point with maximum load (2) 230 VAC Δ / 400 VAC Y

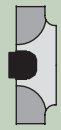
Curves

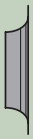


	n [rpm]	P_1 [kW]	I [A]	Lw_A [dB(A)]
Ⓐ 1	1325	3.93	12.33/7.12	84
Ⓐ 2	1300	4.21	13.01/7.51	82
Ⓐ 3	1340	3.55	11.19/6.46	86
Ⓐ 4	960	2.30	12.85/7.42	76
Ⓐ 5	930	2.36	13.10/7.55	74
Ⓐ 6	1005	2.19	12.13/7.01	78
Ⓐ 7	745	1.50	11.32/6.53	70
Ⓐ 8	725	1.54	11.49/6.63	69
Ⓐ 9	785	1.46	11.03/6.37	71
Ⓐ 10	575	0.94	9.47/5.47	63
Ⓐ 11	550	0.94	9.54/5.51	61
Ⓐ 12	610	0.93	9.34/5.39	64

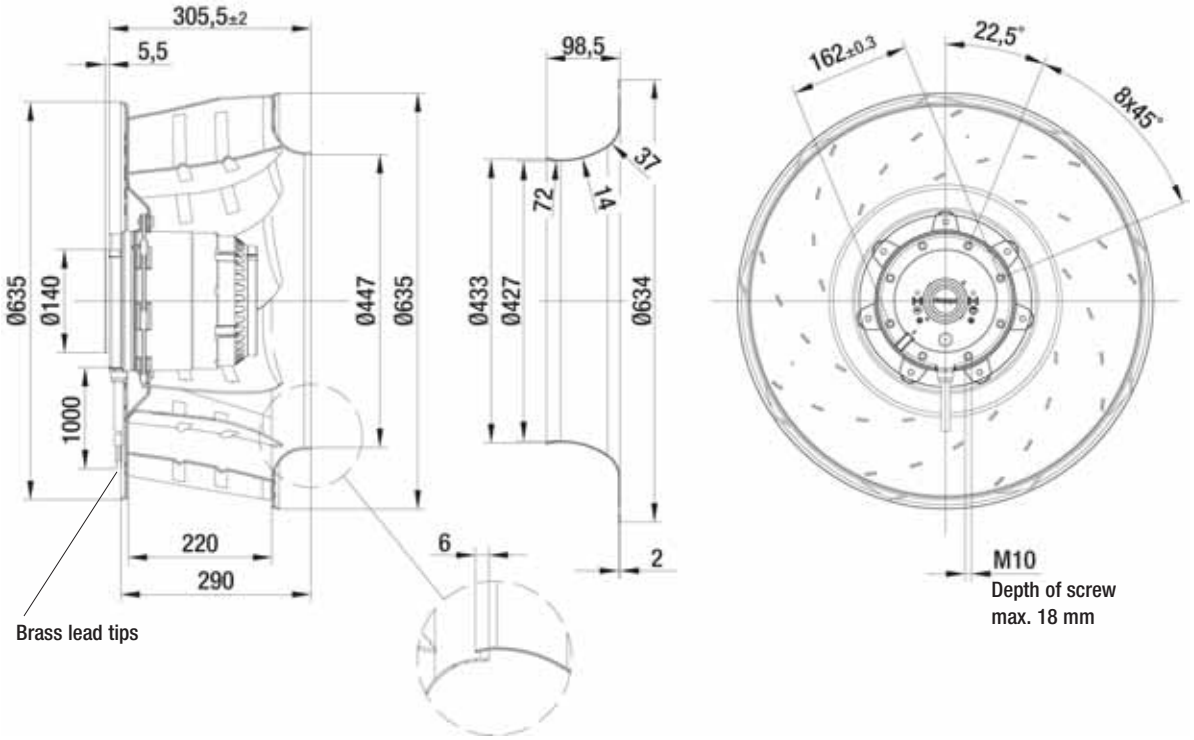
ebmpapst

- **Motor protection:** Design with thermal overload protector
- **Cable exit:** Lateral
- **Protection class:** I (acc. to EN 61800-5-1)
- **Product conforming to standard:** CE
- **Approvals:** VDE (acc. to EN 60034)





Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle (long)
R4D 630-AQ03 -01	29.0	63070-2-4013



AC centrifugal fans

backward curved, 3-D, Ø 630

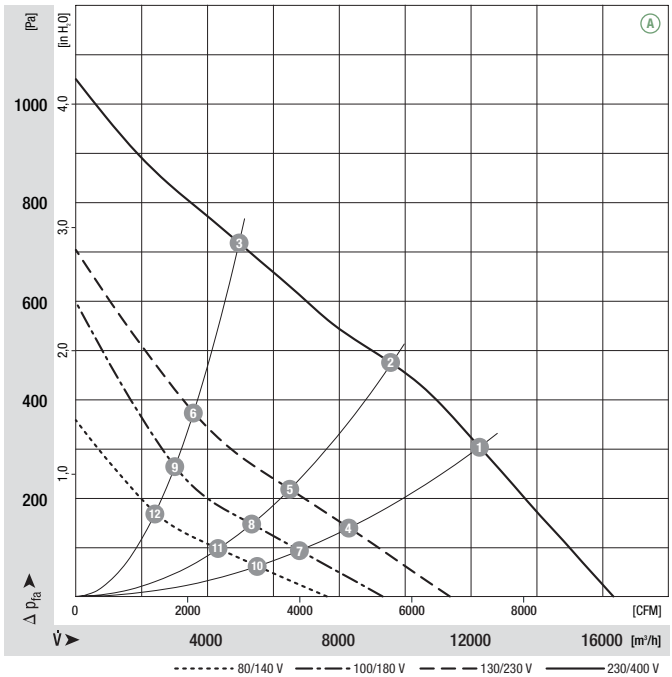
- **Material:** Impeller: Sheet aluminium, welded
  Rotor: Cast in aluminium
- **Number of blades:** 9
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 54 (acc. to EN 60529)
- **Insulation class:** "F"
- **Mounting position:** Any
- **Condensate discharge holes:** On rotor and stator sides
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage	Frequency	Speed/rpm (1)	Max. power input (1)	Max. current draw (1)	Capacitor	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VAC**	**Hz**	**rpm**	**kW**	**A**	**µF/VDB**	**°C**	p. 596 f.
R4D 630 (2)	M4D 138-NA	Ⓐ	3~ 230/400	50	1170	3.31	10.74/6.20	—	-40 to +35	D1)/D2)

subject to alterations

(1) Nominal data in operating point with maximum load (2) 230 VAC Δ / 400 VAC Y

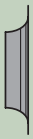
Curves



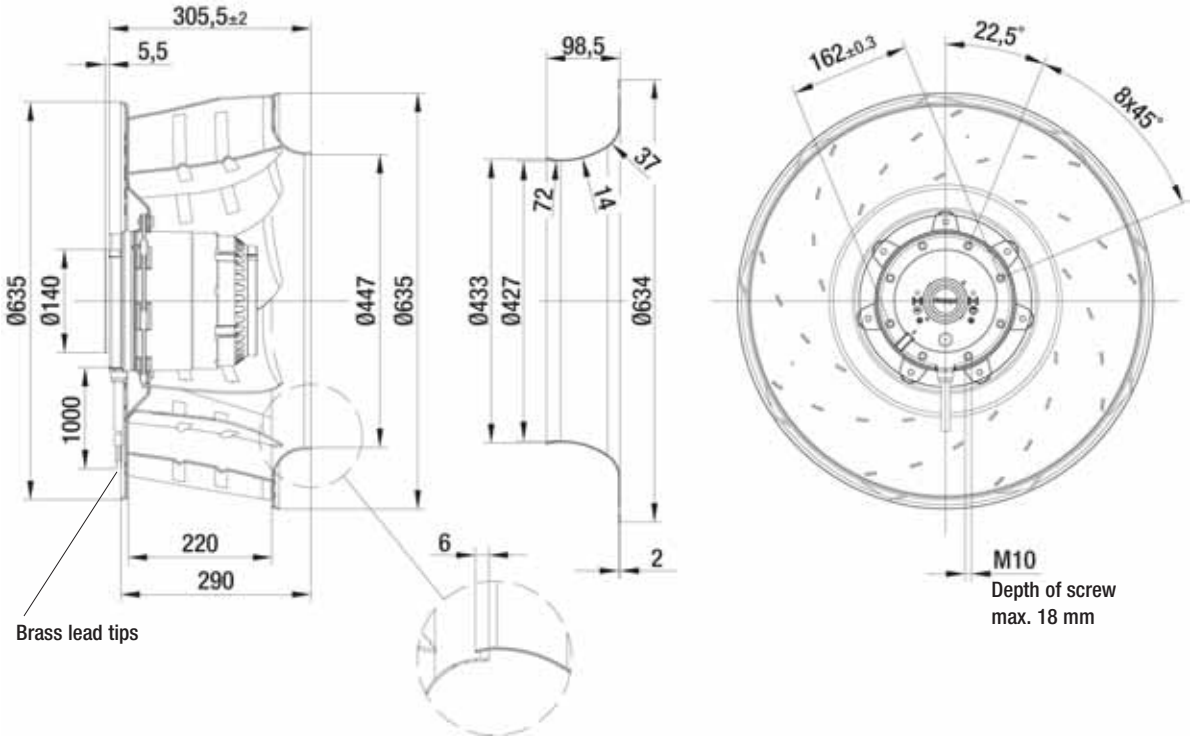
		n [rpm]	P_1 [kW]	I [A]	Lw_A [dB(A)]
Ⓐ	1	1170	3.11	10.09/5.83	81
Ⓐ	2	1145	3.21	10.30/5.95	79
Ⓐ	3	1200	2.84	9.18/5.30	83
Ⓐ	4	785	1.42	8.06/4.65	70
Ⓐ	5	760	1.42	8.09/4.67	68
Ⓐ	6	830	1.35	7.65/4.41	72
Ⓐ	7	640	0.93	6.77/3.91	65
Ⓐ	8	625	0.93	6.78/3.92	63
Ⓐ	9	685	0.89	6.52/3.76	66
Ⓐ	10	520	0.59	5.57/3.22	59
Ⓐ	11	510	0.59	5.56/3.21	58
Ⓐ	12	550	0.57	5.40/3.12	60

ebmpapst

- **Motor protection:** Design with thermal overload protector
- **Cable exit:** Lateral
- **Protection class:** I (acc. to EN 61800-5-1)
- **Product conforming to standard:** CE
- **Approvals:** VDE (acc. to EN 60034)



Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle (long)
R4D 630-AW01 -01	31.0	63070-2-4013



AC centrifugal fans

backward curved, 3-D, Ø 630

- **Material:** Impeller: Sheet aluminium, welded
  Rotor: Cast in aluminium
- **Number of blades:** 9
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 54 (acc. to EN 60529)
- **Insulation class:** "F"
- **Mounting position:** Any
- **Condensate discharge holes:** On rotor and stator sides
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

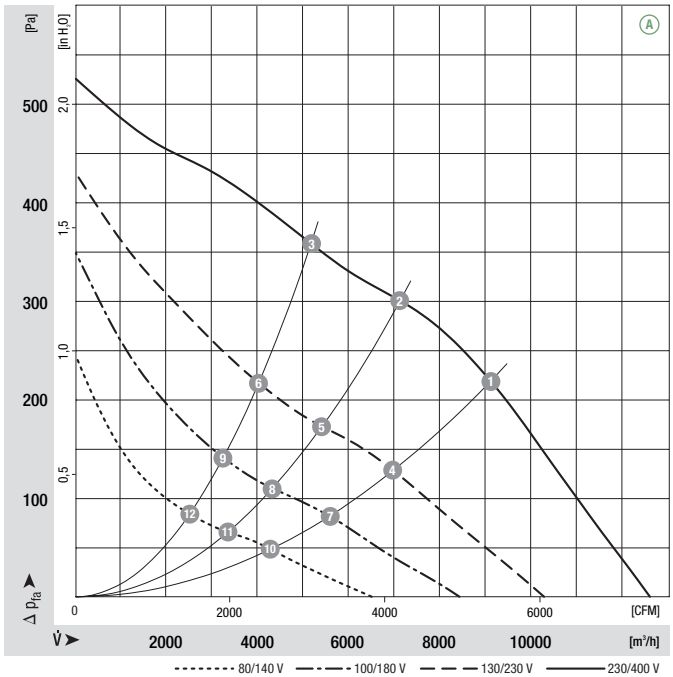
Nominal data

Type	Motor	Curve	Nominal voltage	Frequency	Speed/rpm (1)	Max. power input (1)	Max. current draw (1)	Capacitor	Perm. amb. temp.	Electr. connection
			VAC	Hz	rpm	kW	A	µF/VDB	°C	p. 596 f.
R6D 630 (2)	M6D 138-HF	Ⓐ	3~ 230/400	50	880	1.31	4.85/2.80	—	-40 to +60	D1)/D2)

subject to alterations

(1) Nominal data in operating point with maximum load (2) 230 VAC Δ / 400 VAC Y

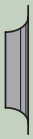
Curves



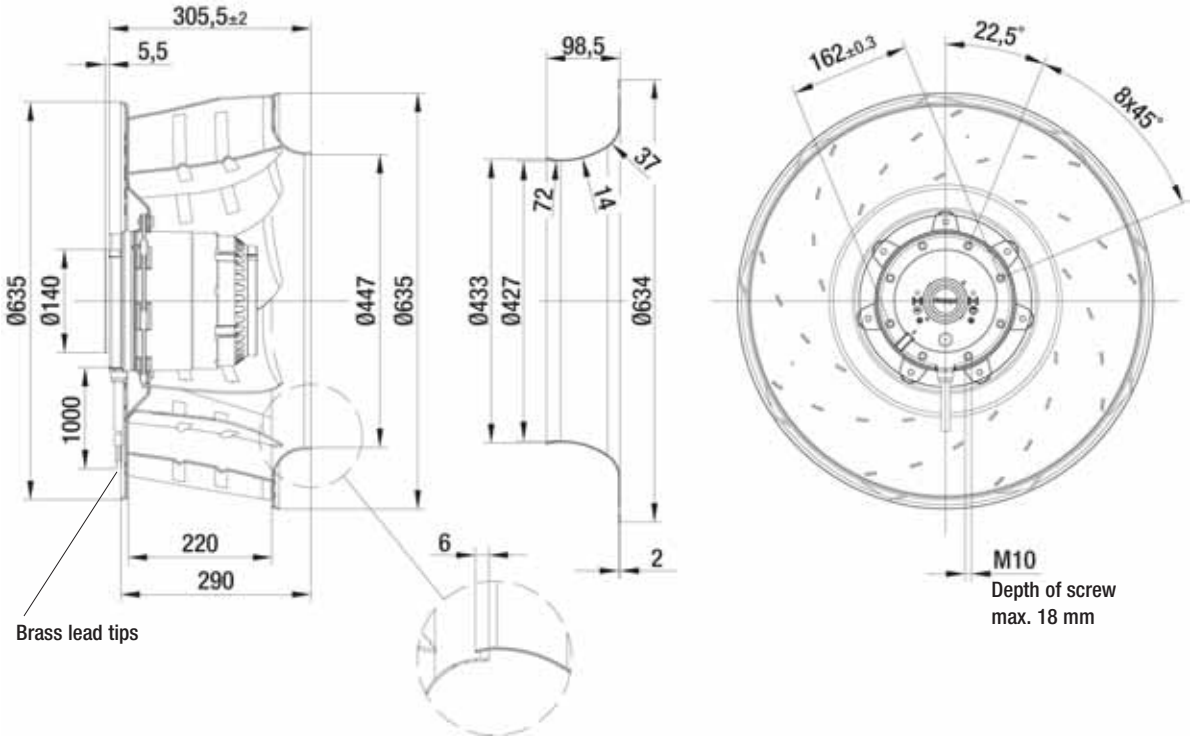
	n [rpm]	P_1 [kW]	I [A]	Lw_A [dB(A)]
Ⓐ 1	885	1.28	4.85/2.80	73
Ⓐ 2	885	1.30	4.82/2.79	73
Ⓐ 3	890	1.23	4.65/2.69	73
Ⓐ 4	675	0.82	4.72/2.72	67
Ⓐ 5	675	0.82	4.75/2.74	67
Ⓐ 6	690	0.80	4.59/2.65	67
Ⓐ 7	540	0.57	4.37/2.52	60
Ⓐ 8	535	0.56	4.35/2.51	60
Ⓐ 9	560	0.57	4.27/2.46	61
Ⓐ 10	420	0.36	3.72/2.15	54
Ⓐ 11	415	0.36	3.74/2.16	54
Ⓐ 12	430	0.36	3.70/2.14	54

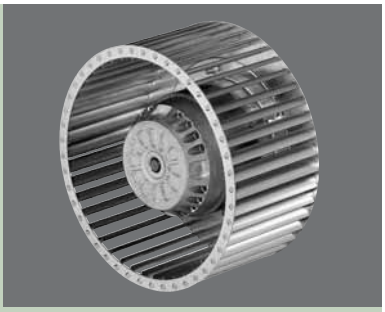
ebmpapst

- **Motor protection:** Design with thermal overload protector
- **Cable exit:** Lateral
- **Protection class:** I (acc. to EN 61800-5-1)
- **Product conforming to standard:** CE
- **Approvals:** VDE (acc. to EN 60034)



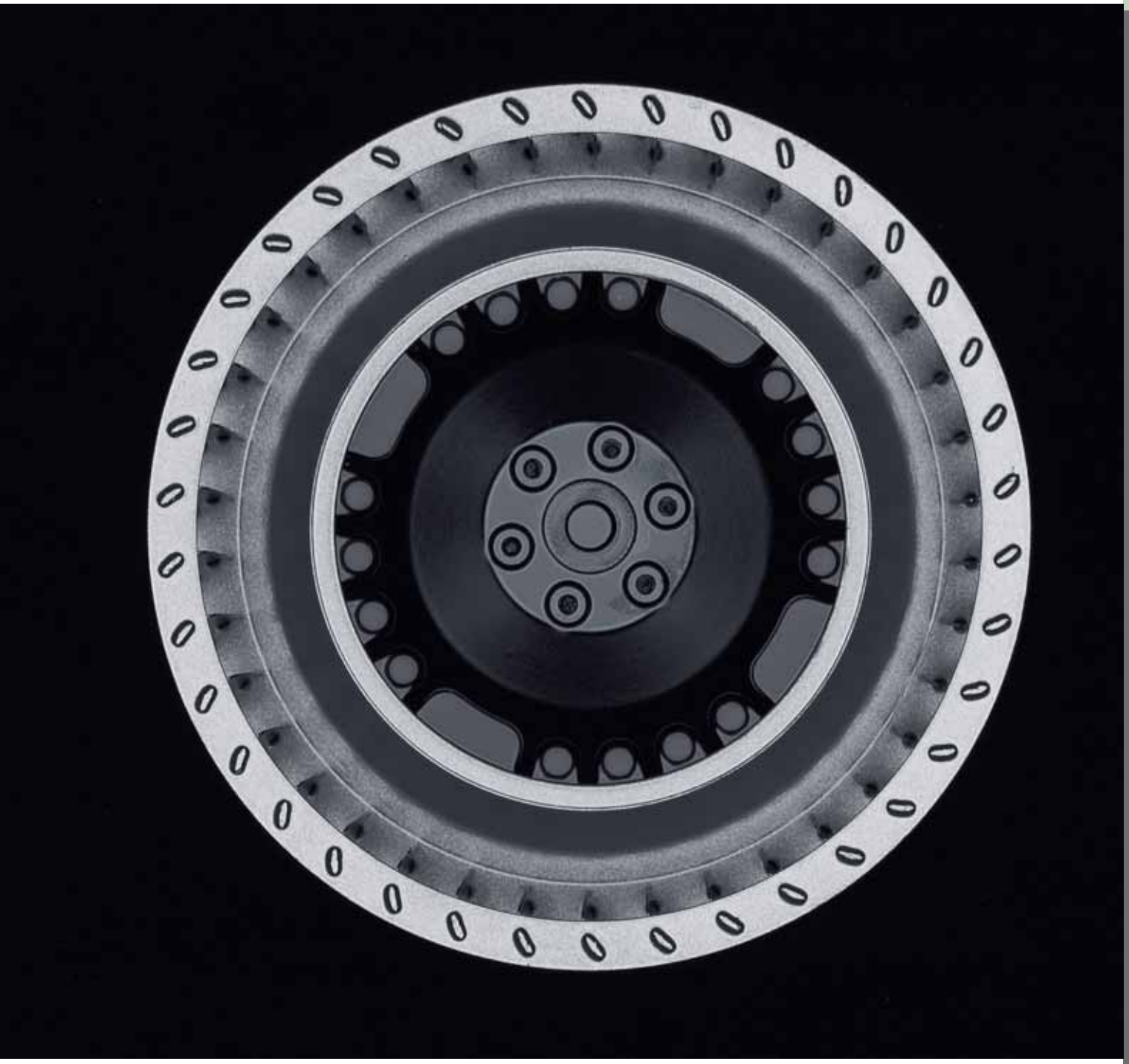
Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle (long)
R6D 630-AT03 -01	27.0	63070-2-4013





AC centrifugal fans and blowers forward curved

	AC centrifugal fans and blowers, single inlet	Ø 085 - Ø 400	92
	AC centrifugal blowers with plastic housing, dual inlet	Ø 140 - Ø 160	158
	AC centrifugal blowers, dual inlet	Ø 097 - Ø 250	178



AC centrifugal fan and blower

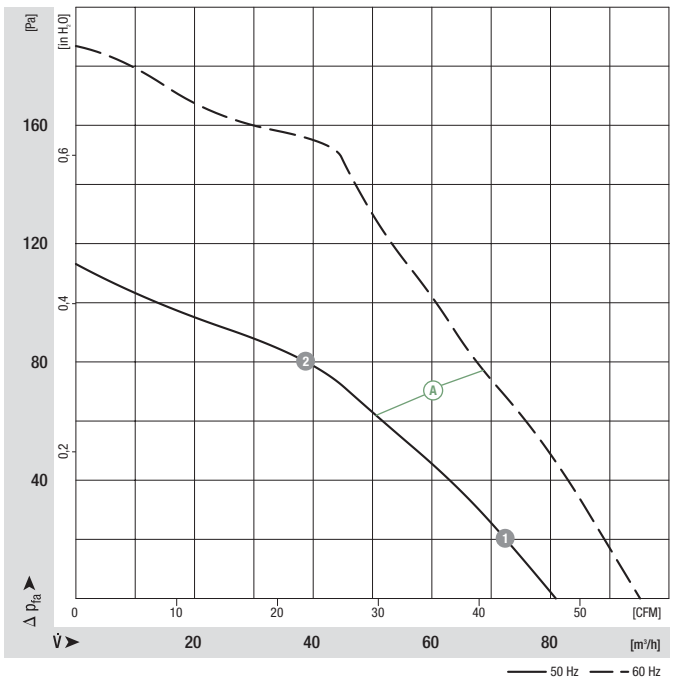
single inlet, Ø 085

- **Material:** Housing: Die-cast aluminium
  Impeller: Galvanised sheet steel
  Rotor: Partially cast in aluminium
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 44
- **Insulation class:** "B"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Sound pressure level	Min. back pressure	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VAC**	**Hz**	**m³/h**	**rpm**	**W**	**A**	**µF/VDB**	**dB(A)**	**Pa**	**°C**	p. 596 f.
***2E 085**	M2E 042-CA	Ⓐ	1~ 230	50	80	2350	32	0.15	1.0/400	53	0	-25 to +60	A1)
			1~ 230	60	95	2800	30	0.14	1.0/400	57	0	-25 to +70	

subject to alterations

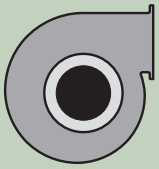
Curves



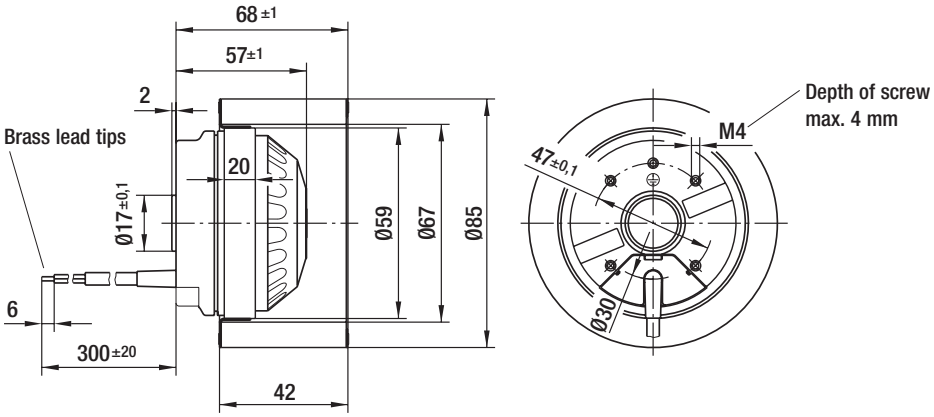
	n [rpm]	P_1 [W]	I [A]
Ⓐ ❶	2430	32	0.15
Ⓐ ❷	2590	30	0.14

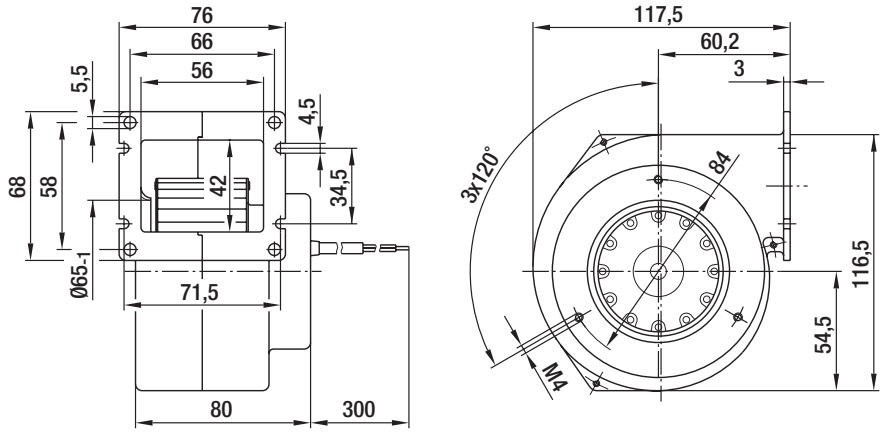
ebmpapst

- **Motor protection:** TOP wired internally
- **Cable exit:** Variable
- **Protection class:** I
- **Capacitor:** FPU (P2) acc. to IEC 252
- **Product conforming to standards:** EN 60335-1, CE
- **Approvals:** CCC



Centrifugal fan	Mass of centrifugal fan kg	Centrifugal blower with flange	Mass of centrifugal blower kg
R2E 085-AA01 -05	0.7	G2E 085-AA01 -01	0.9





AC centrifugal fan and blower

single inlet, Ø 097

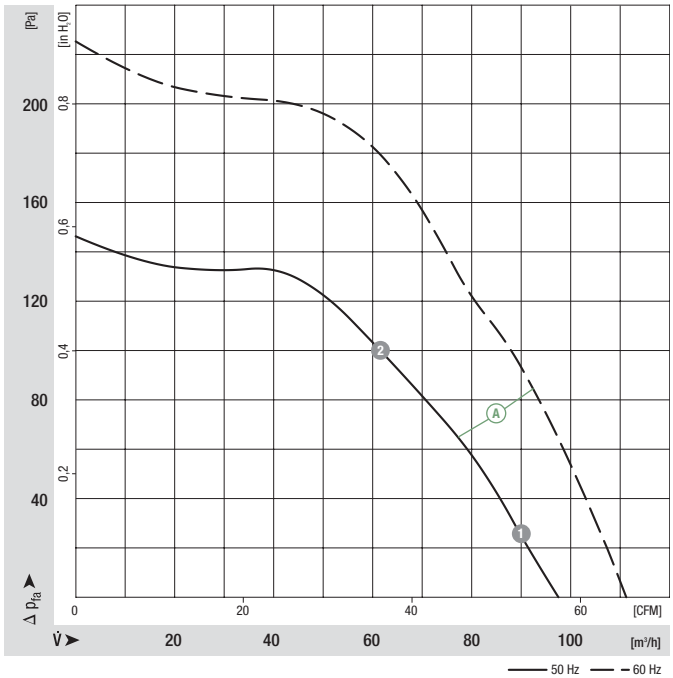
- **Material:** Housing: Galvanised sheet steel
  Impeller: Galvanised sheet steel
  Rotor: Partially cast in aluminium
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 44
- **Insulation class:** "B"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data

Type	Motor	Curve	Nominal voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Sound pressure level	Min. back pressure	Perm. amb. temp.	Electr. connection
			VAC	Hz	m³/h	rpm	W	A	µF/VDB	dB(A)	Pa	°C	p. 596 f.
*2E 097	M2E 042-CA	Ⓐ	1~ 230	50	100	2050	35	0.16	1.5/400	55	0	-25 to +40	A1)
			1~ 230	60	110	2300	37	0.17	1.5/400	58	0	-25 to +55	

subject to alterations

Curves

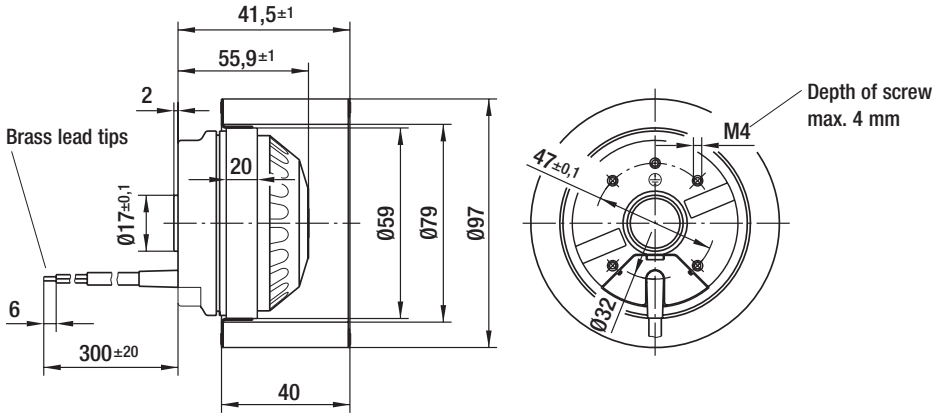


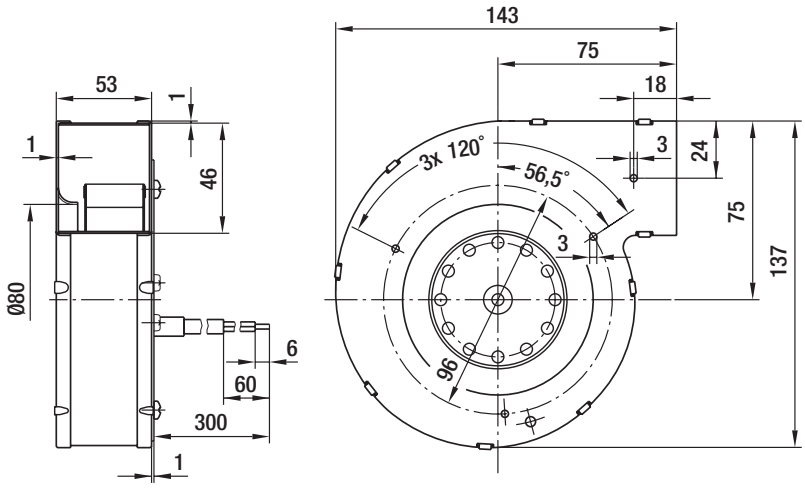
	n [rpm]	P_1 [W]	I [A]
Ⓐ 1	2120	35	0.16
Ⓐ 2	2335	33	0.15

ebmpapst

- **Motor protection:** TOP wired internally
- **Cable exit:** Variable
- **Protection class:** I
- **Capacitor:** FPU (P2) acc. to IEC 252
- **Product conforming to standards:** EN 60335-1, CE
- **Approvals:** CCC

Centrifugal fan	Mass of centrifugal fan kg	Centrifugal blower without flange	Mass of centrifugal blower kg
R2E 097-AD01 -05	0.6	G2E 097-HD01 -02	1.1





Inlet nozzle	Capacitor	Electr. connections
p. 552	p. 560 f.	p. 596 f.

AC centrifugal fan and blower

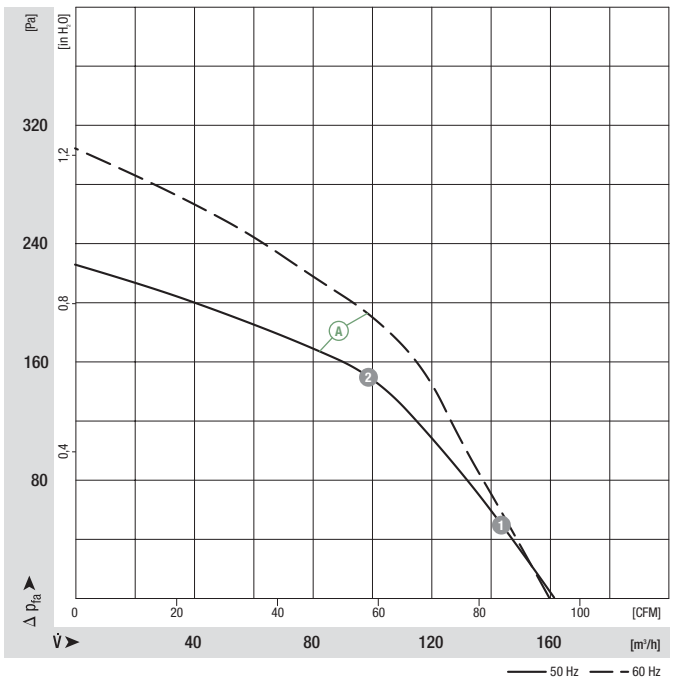
single inlet, Ø 108

- **Material:** Housing: Die-cast aluminium
  Impeller: Galvanised sheet steel
  Rotor: Partially cast in aluminium
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 44
- **Insulation class:** "B"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Sound pressure level	Min. back pressure	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VAC**	**Hz**	**m³/h**	**rpm**	**W**	**A**	**µF/VDB**	**dB(A)**	**Pa**	**°C**	p. 596 f.
***2E 108**	M2E 052-BF	Ⓐ	1~ 230 1~ 230	50 60	160 160	1850 1850	30 35	0.14 0.16	1.0 / 400 1.0 / 400	56 56	0 0	-25 to +85 -25 to +80	A1)

subject to alterations

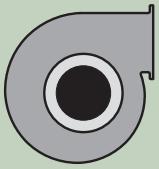
Curves



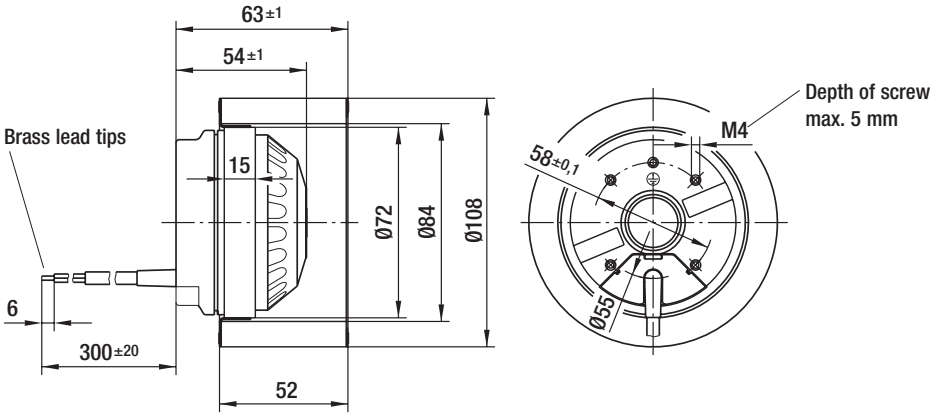
	n [rpm]	P_1 [W]	I [A]
Ⓐ 1	2070	34	0.16
Ⓐ 2	2470	31	0.15

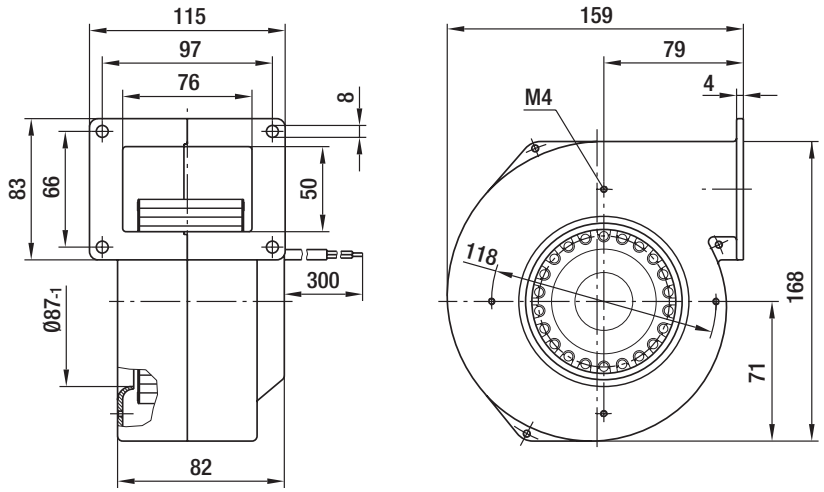
ebmpapst

- **Motor protection:** TOP wired internally
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 60335-1, CE
- **Approvals:** CCC



Centrifugal fan	Mass of centrifugal fan kg	Centrifugal blower with flange	Mass of centrifugal blower kg
R2E 108-AG63 -05	0.6	**G2E 108-AG63 -01**	1.3





AC centrifugal fan and blower

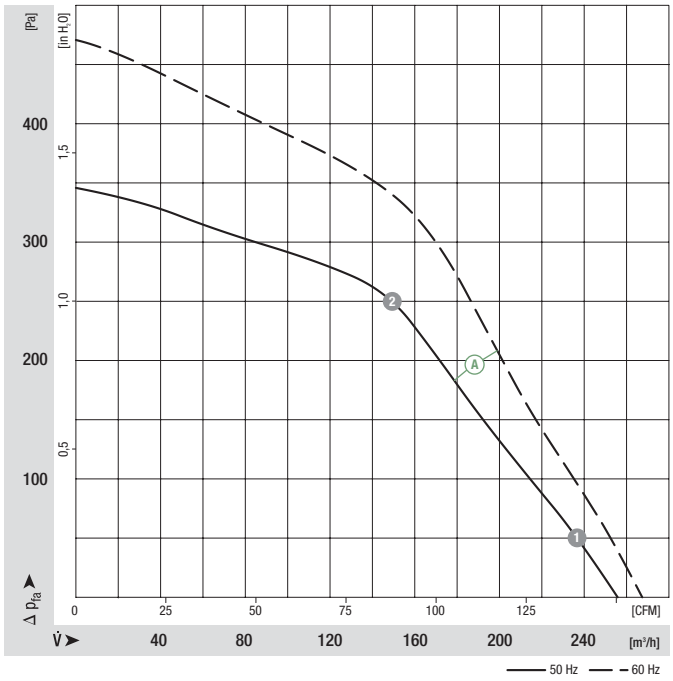
single inlet, Ø 120

- **Material:** Housing: Die-cast aluminium
  Impeller: Galvanised sheet steel
  Rotor: Partially cast in aluminium
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 44
- **Insulation class:** "B"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Sound pressure level	Min. back pressure	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VAC**	**Hz**	**m³/h**	**rpm**	**W**	**A**	**µF/VDB**	**dB(A)**	**Pa**	**°C**	p. 596 f.
***2E 120**	M2E 068-BF	Ⓐ	1~ 230 1~ 230	50 60	255 265	2350 2450	80 100	0.35 0.44	2.0 / 450 2.0 / 450	61 62	0 0	-25 to +55 -25 to +60	A1)

subject to alterations

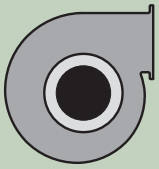
Curves



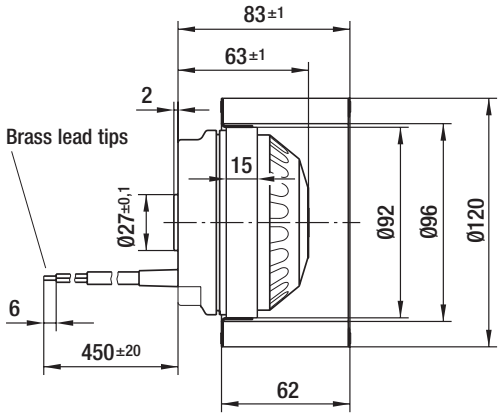
	n [rpm]	P_1 [W]	I [A]
Ⓐ 1	2460	77	0.34
Ⓐ 2	2665	69	0.31

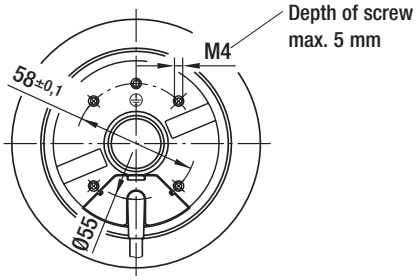
ebmpapst

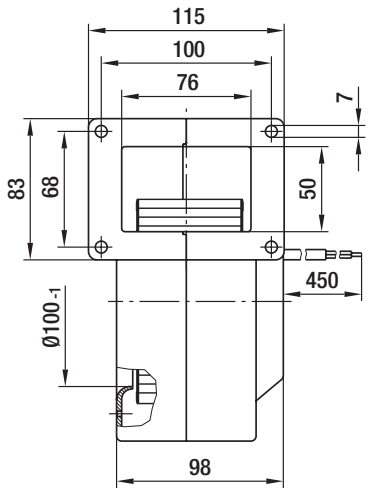
- **Motor protection:** TOP wired internally
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 60335-1, CE
- **Approvals:** CCC, GOST

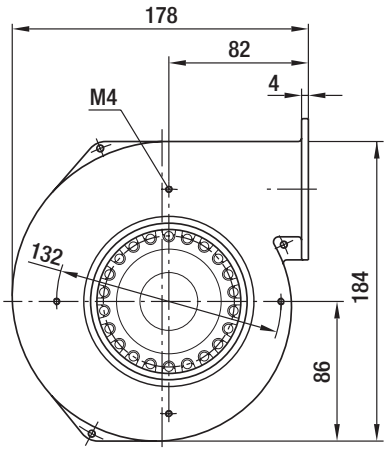


Centrifugal fan	Mass of centrifugal fan kg	Centrifugal blower with flange	Mass of centrifugal blower kg
R2E 120-AR77 -05	1.2	**G2E 120-AR77 -01**	1.8









AC centrifugal fans and blowers

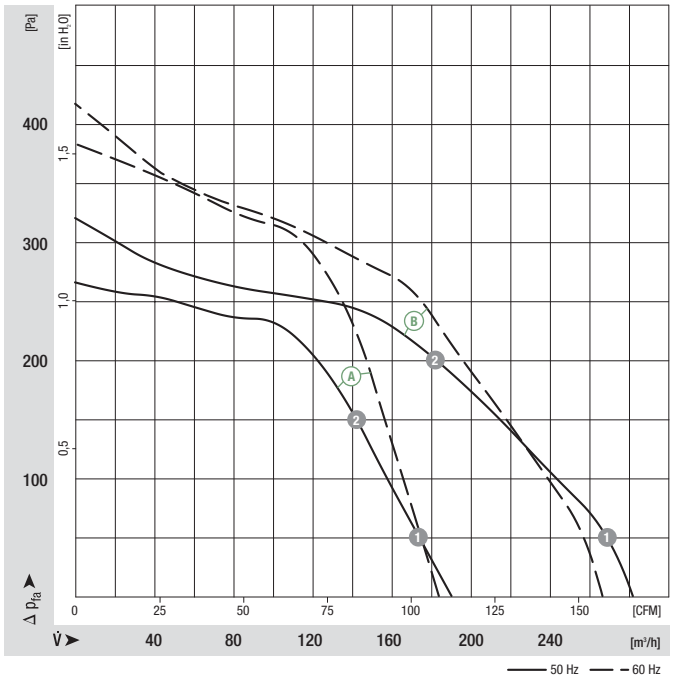
single inlet, Ø 120

- **Material:** Housing: Galvanised sheet steel
  Impeller: Galvanised sheet steel
  Rotor: Partially cast in aluminium
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 44
- **Insulation class:** Ⓐ "F", Ⓑ "B"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Sound pressure level	Min. back pressure	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VAC**	**Hz**	**m³/h**	**rpm**	**W**	**A**	**µF/VDB**	**dB(A)**	**Pa**	**°C**	p. 596 f.
***2E 120**	M2E 052-BF	Ⓐ	1~ 230	50	190	2050	57	0.25	1.5/400	63	0	-25 to +55	A1)
			1~ 230	60	185	2000	66	0.29	1.5/400	63	0	-25 to +55	
***2E 120**	M2E 068-BF	Ⓑ	1~ 230	50	275	2200	83	0.37	2.0/450	64	0	-25 to +70	A1)
			1~ 230	60	255	2050	100	0.45	2.0/450	63	0	-25 to +60	

subject to alterations

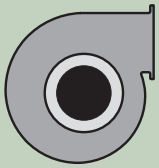
Curves



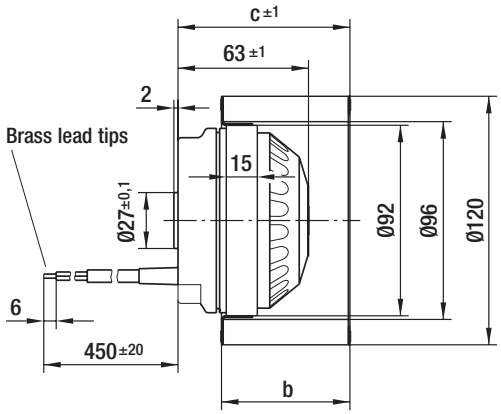
	n [rpm]	P_1 [W]	I [A]
Ⓐ 1	2200	54	0.24
Ⓐ 2	2410	51	0.23
Ⓑ 1	2335	80	0.36
Ⓑ 2	2580	72	0.32

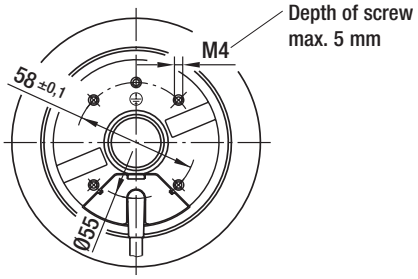
ebmpapst

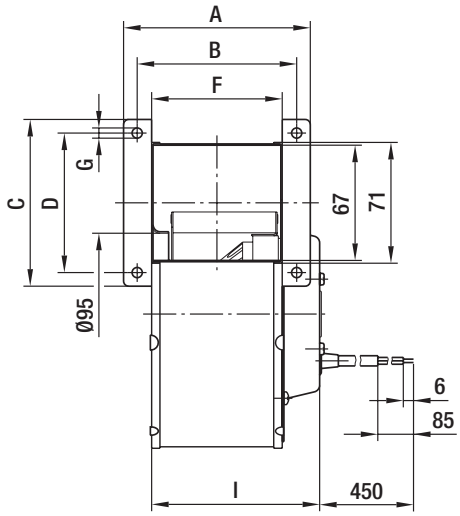
- **Motor protection:** TOP wired internally
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 60335-1, CE
- **Approvals:** ⓑCCC

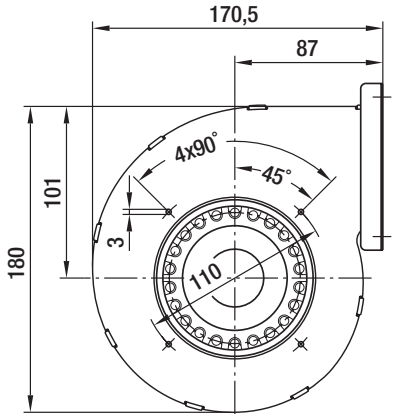


Centrifugal fan	Mass of centrifugal fan kg	Dimensions b	Dimensions c	Centrifugal blower without flange	Centrifugal blower with flange	Mass of centrifugal blower kg	Dimensions A	B	C	D	F	G	I
R2E 120-BD76 -09	1.0	42.0	48.0	**G2E 120-TD76 -01**	—	1.3	—	—	—	—	59.0	—	60.0
R2E 120-AR21 -05	1.2	62.0	85.0	—	**G2E 120-CR21 -01**	1.9	110.0	94.0	98.0	82.0	77.0	6.0	99.0



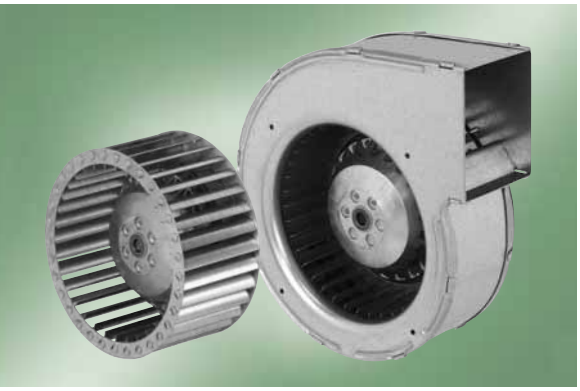






AC centrifugal fan and blower

single inlet, Ø 133



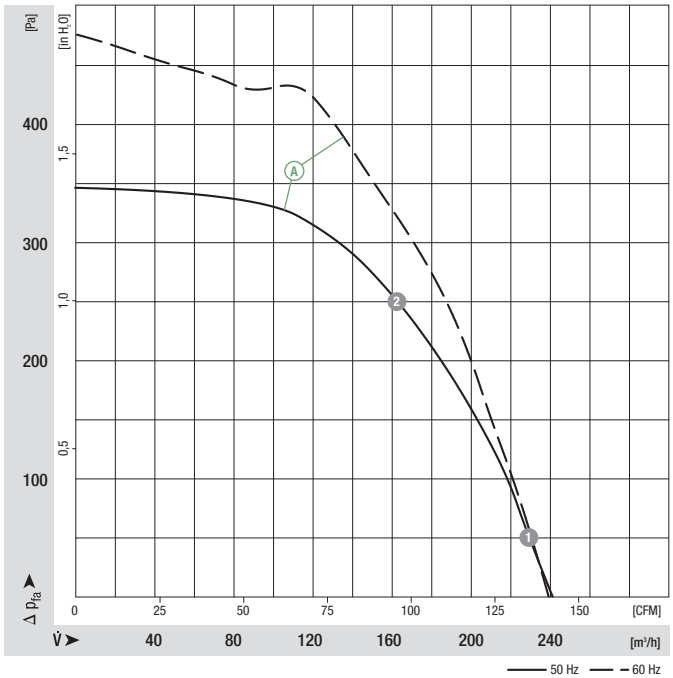
- **Material:** Housing: Galvanised sheet steel
  Impeller: Galvanised sheet steel
  Rotor: Partially cast in aluminium
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 44
- **Insulation class:** "B"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data

Type	Motor	Curve	Nominal voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Sound pressure level	Min. back pressure	Perm. amb. temp.	Electr. connection
			VAC	Hz	m³/h	rpm	W	A	µF/VDB	dB(A)	Pa	°C	p. 596 f.
*2E 133	M2E 068-BF	Ⓐ	1~ 230	50	245	2150	88	0.39	2.0/450	65	0	-25 to +60	A1)
			1~ 230	60	235	2100	110	0.49	2.0/450	65	0	-25 to +50	

subject to alterations

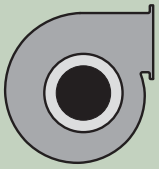
Curves



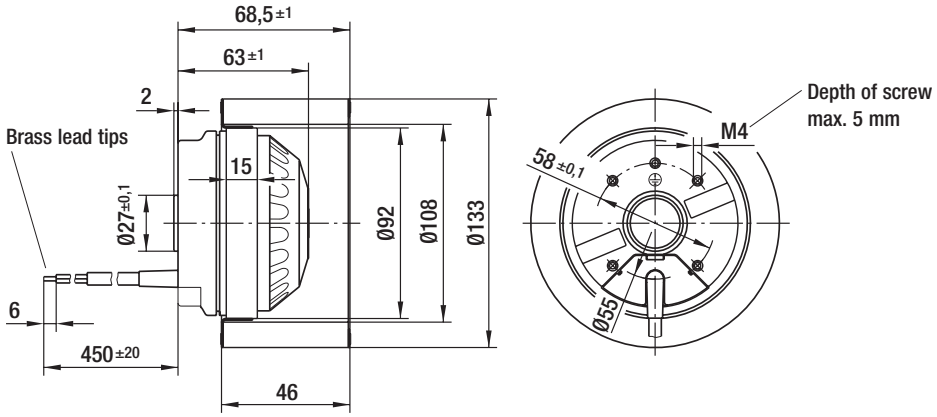
	n [rpm]	P_1 [W]	I [A]
Ⓐ 1	2290	83	0.37
Ⓐ 2	2530	73	0.33

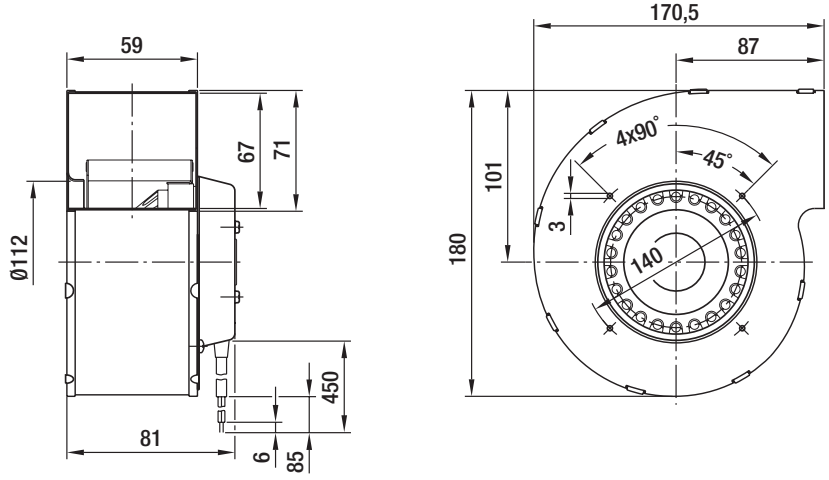
ebmpapst

- **Motor protection:** TOP wired internally
- **Cable exit:** Axial
- **Protection class:** I
- **Product conforming to standards:** EN 60335-1, CE
- **Approvals:** CCC



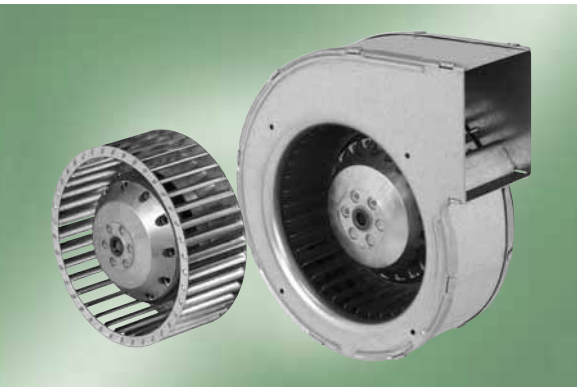
Centrifugal fan	Mass of centrifugal fan kg	Centrifugal blower with flange	Mass of centrifugal blower kg
R2E 133-AN77 -01	1.3	**G2E 133-DN77 -01**	1.9





AC centrifugal fan and blower

single inlet, Ø 140



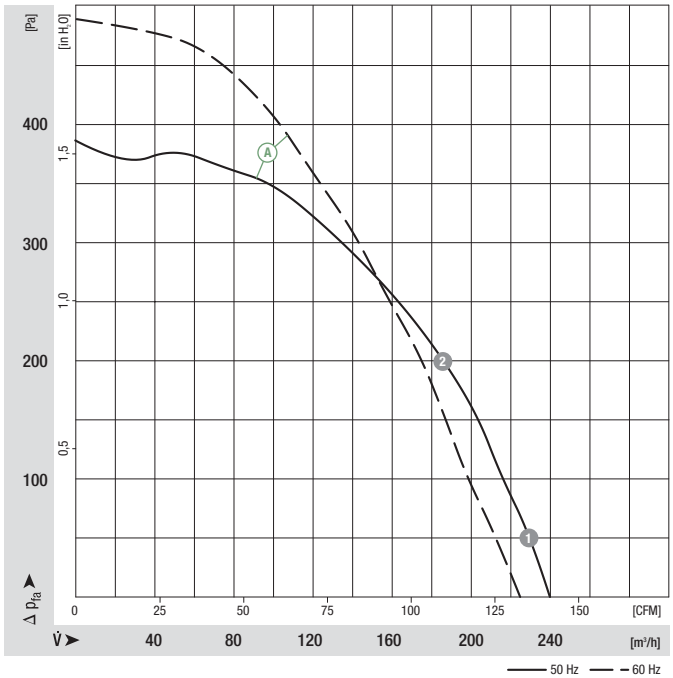
- **Material:** Housing: Galvanised sheet steel
  Impeller: Galvanised sheet steel
  Rotor: Partially cast in aluminium
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 44
- **Insulation class:** "B"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data

Type	Motor	Curve	Nominal voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Sound pressure level	Min. back pressure	Perm. amb. temp.	Electr. connection
			VAC	Hz	m³/h	rpm	W	A	µF/VDB	dB(A)	Pa	°C	p. 596 f.
*2E 140	M2E 052-CA	Ⓐ	1~ 230	50	240	1350	63	0.29	1.5/400	55	0	-25 to +45	A1)
			1~ 230	60	225	1300	70	0.31	1.5/400	53	0	-25 to +35	

subject to alterations

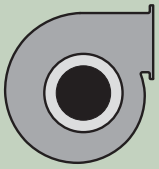
Curves



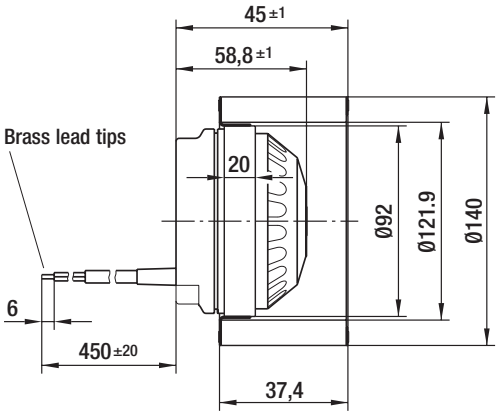
	n [rpm]	P_1 [W]	I [A]
Ⓐ 1	1460	62	0.29
Ⓐ 2	1930	56	0.26

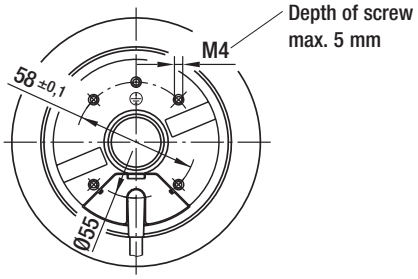
ebmpapst

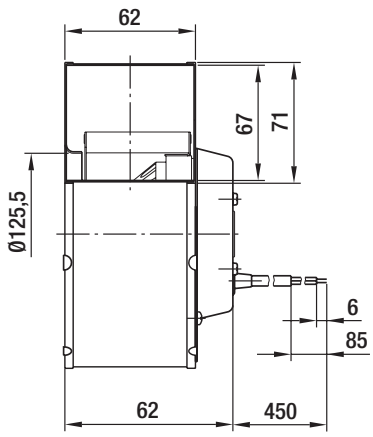
- **Motor protection:** TOP wired internally
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 60335-1, CE

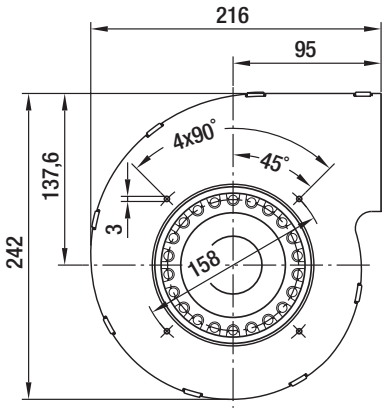


Centrifugal fan	Mass of centrifugal fan kg	Centrifugal blower with flange	Mass of centrifugal blower kg
R2E 140-BI52 -05	1.4	G2E 140-DI52 -01	1.9









Inlet nozzle p. 552
Guard grille p. 554
Capacitor p. 560 f.
Electr. connections p. 596 f.

AC centrifugal fan and blower

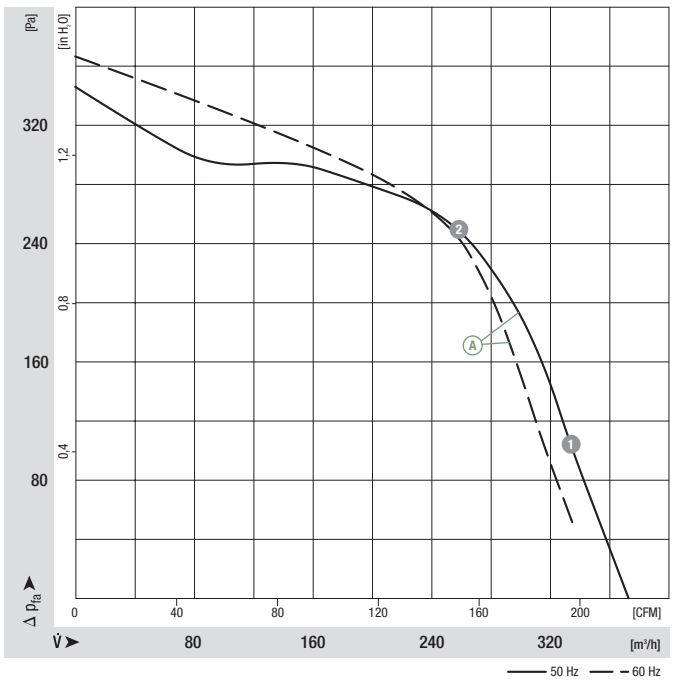
single inlet, Ø 140

- **Material:** Housing: Die-cast aluminium
  Impeller: Galvanised sheet steel
  Rotor: Partially cast in aluminium
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 44
- **Insulation class:** "B"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Sound pressure level	Min. back pressure	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VAC**	**Hz**	**m³/h**	**rpm**	**W**	**A**	**µF/VDB**	**dB(A)**	**Pa**	**°C**	p. 596 f.
***2E 140**	M2E 068-BF	Ⓐ	1~ 230	50	370	1400	105	0.46	2.0/450	59	0	-25 to +40	A1)
			1~ 230	60	335	1500	115	0.51	2.0/450	57	50	-25 to +45	

subject to alterations

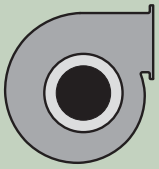
Curves



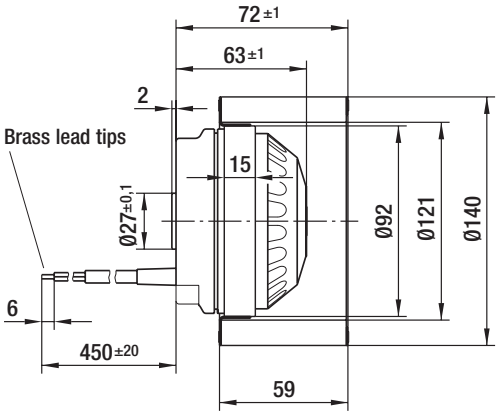
	n [rpm]	P_1 [W]	I [A]
Ⓐ 1	1700	98	0.43
Ⓐ 2	2100	89	0.40

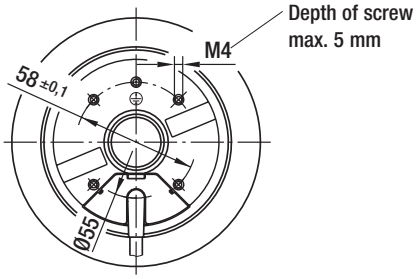
ebmpapst

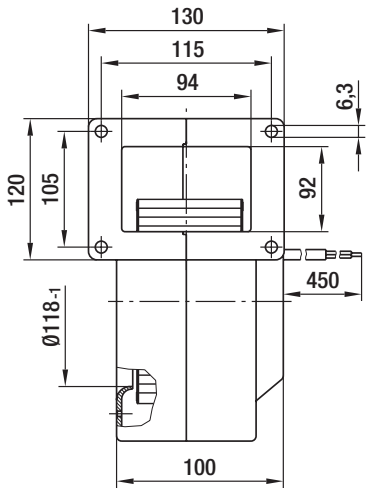
- **Motor protection:** TOP wired internally
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 60335-1, CE
- **Approvals:** CCC, GOST

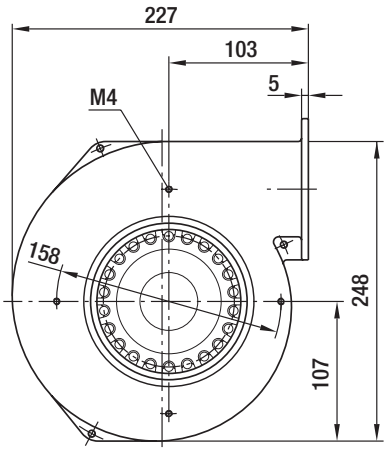


Centrifugal fan	Mass of centrifugal fan kg	Centrifugal blower with flange	Mass of centrifugal blower kg
R2E 140-AE77 -05	1.2	**G2E 140-AE77 -01**	2.6









AC centrifugal fans and blowers

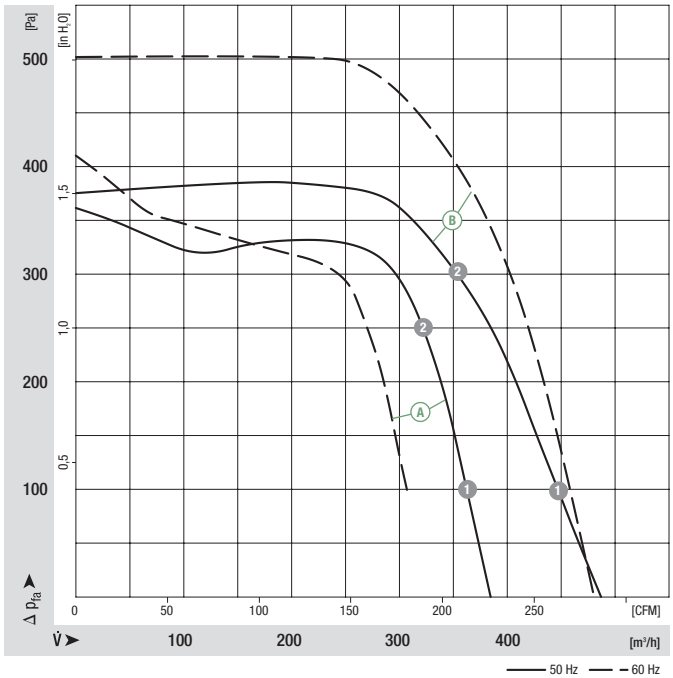
single inlet, Ø 140

- **Material:** Housing: Die-cast aluminium
  Impeller: Galvanised sheet steel
  Rotor: Partially cast in aluminium
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 44
- **Insulation class:** "B"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Sound pressure level	Min. back pressure	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VAC**	**Hz**	**m³/h**	**rpm**	**W**	**A**	**µF/VDB**	**dB(A)**	**Pa**	**°C**	p. 596 f.
***2E 140**	M2E 068-CF	Ⓐ	1~ 230	50	385	1650	135	0.60	2.0/400	63	0	-25 to +55	A1)
			1~ 230	60	305	1700	145	0.64	2.0/400	60	100	-25 to +40	
***2E 140**	M2E 068-DF	Ⓑ	1~ 230	50	485	2400	160	0.70	4.0/400	72	0	-25 to +70	A1)
			1~ 230	60	480	2350	205	0.90	4.0/400	71	0	-25 to +45	

subject to alterations

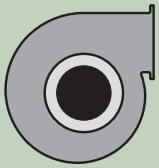
Curves



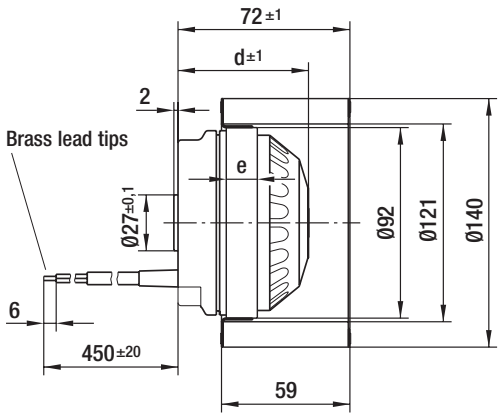
	n [rpm]	P_1 [W]	I [A]
Ⓐ 1	1900	128	0.57
Ⓐ 2	2200	117	0.52
Ⓑ 1	2485	148	0.65
Ⓑ 2	2630	128	0.57

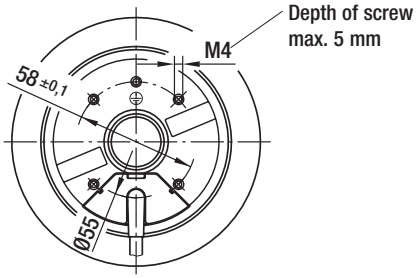
ebmpapst

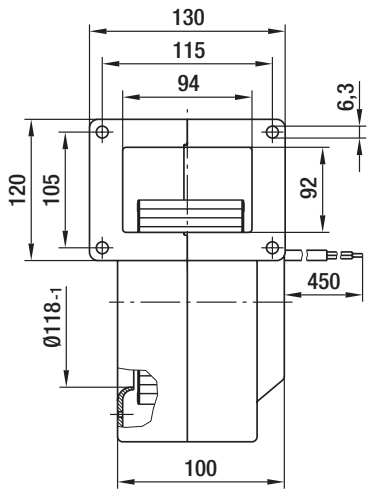
- **Motor protection:** TOP wired internally
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 60335-1, CE
- **Approvals:** CCC, GOST

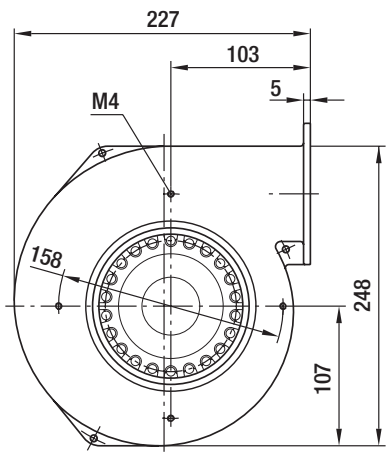


Centrifugal fan	Mass of centrifugal fan kg	Dimensions d	e	Centrifugal blower with flange	Mass of centrifugal blower kg
R2E 140-AL40 -05	1.7	73.0	25.0	**G2E 140-AL40 -01**	3.0
R2E 140-AI28 -05	2.1	83.0	35.0	**G2E 140-AI28 -01**	3.4









AC centrifugal blowers

single inlet, Ø 140

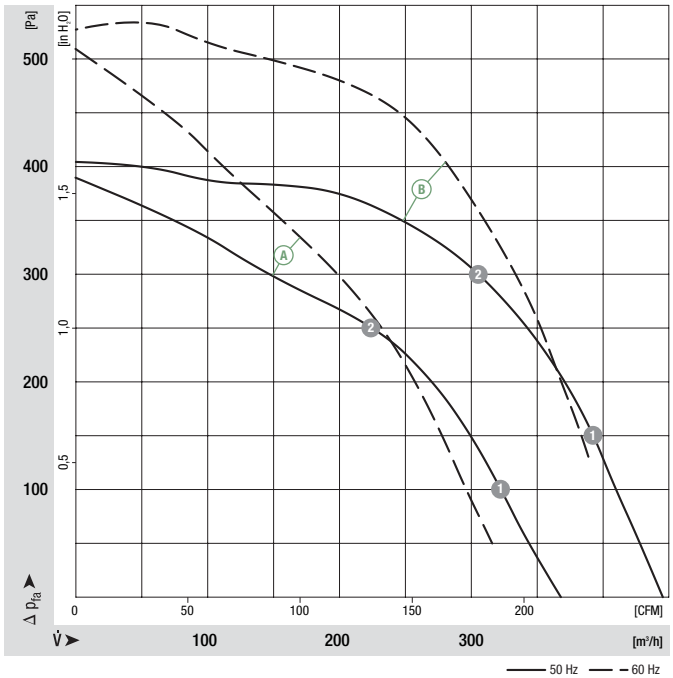
- **Material:** Housing: Heat-resistant plastic
  Impeller: Ⓐ heat-resistant plastic, Ⓑ galvanised sheet steel
  Rotor: Partially cast in aluminium
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 44
- **Insulation class:** "B"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data

Type	Motor	Curve	Nominal voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Sound pressure level	Min. back pressure	Perm. amb. temp.	Electr. connection
			VAC	Hz	m³/h	rpm	W	A	µF/VDB	dB(A)	Pa	°C	p. 596 f.
G2E 140	M2E 068-BF	Ⓐ	1~ 230	50	370	1650	105	0.46	2.0/400	59	0	-25 to +55	A1)
			1~ 230	60	315	1700	115	0.51	2.0/400	57	50	-25 to +40	
G2E 140	M2E 068-CF	Ⓑ	1~ 230	50	445	2000	137	0.60	3.0/400	65	0	-25 to +65	A1)
			1~ 230	60	390	2150	155	0.68	3.0/400	64	130	-25 to +50	

subject to alterations

Curves

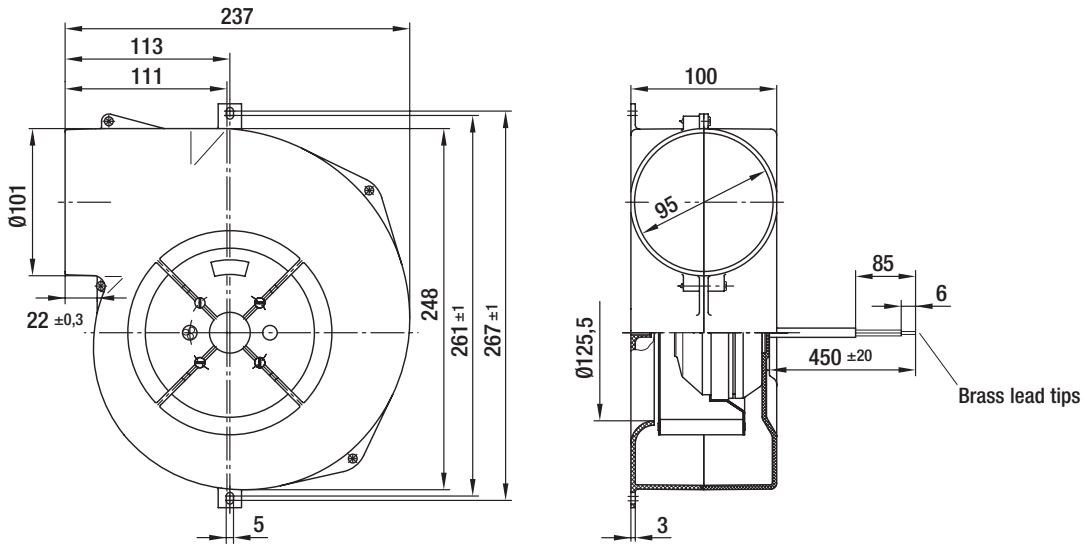


	n [rpm]	P_1 [W]	I [A]
Ⓐ 1	1910	98	0.43
Ⓐ 2	2280	86	0.38
Ⓑ 1	2220	123	0.54
Ⓑ 2	2470	105	0.46

ebmpapst

- **Motor protection:** TOP wired internally
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 60335-1, CE
- **Approvals:** CCC, GOST

Centrifugal blower without flange	Mass of centrifugal blower kg
G2E 140-NS38 -01	1.6
G2E 140-NL33 -01	1.6



AC centrifugal fan and blower

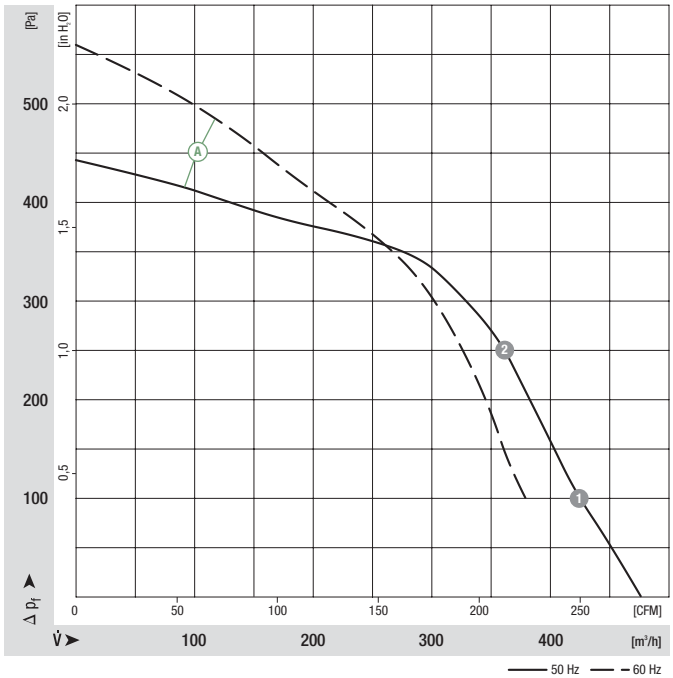
single inlet, Ø 146

- **Material:** Housing: Die-cast aluminium
  Impeller: Galvanised sheet steel
  Rotor: Partially cast in aluminium
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 44
- **Insulation class:** "B"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Sound pressure level	Min. back pressure	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VAC**	**Hz**	**m³/h**	**rpm**	**W**	**A**	**µF/VDB**	**dB(A)**	**Pa**	**°C**	p. 596 f.
***2E 146**	M2E 068-CA	Ⓐ	1~ 230	50	470	1550	140	0.62	3.0/450	60	0	-25 to +50	A1)
			1~ 230	60	380	1750	155	0.68	3.0/450	58	100	-25 to +40	

subject to alterations

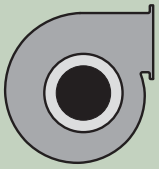
Curves



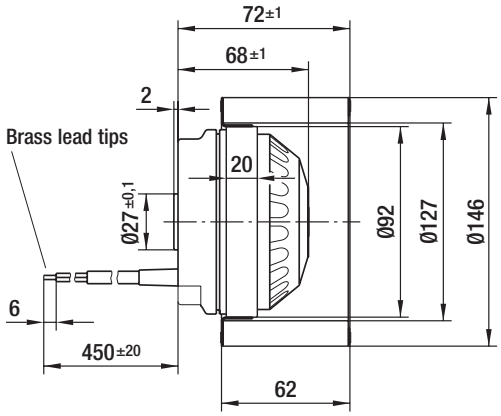
	n [rpm]	P_1 [W]	I [A]
Ⓐ 1	1835	136	0.60
Ⓐ 2	2070	126	0.56

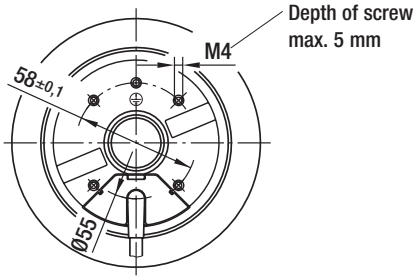
ebmpapst

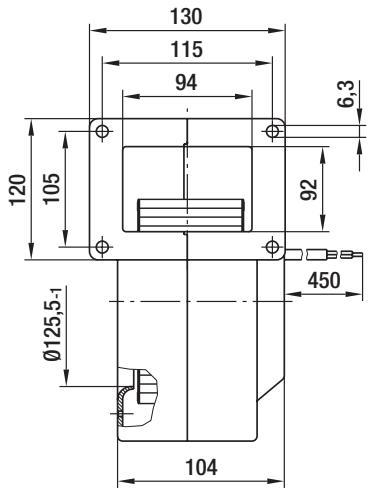
- **Motor protection:** TOP wired internally
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 60335-1, CE
- **Approvals:** CCC, GOST

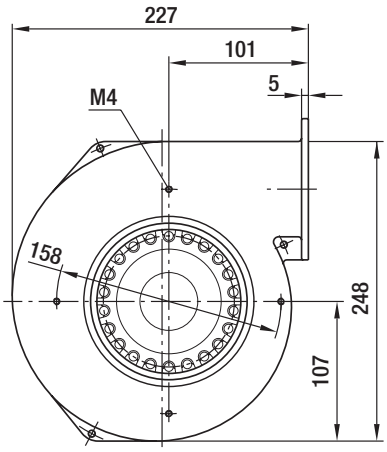


Centrifugal fan	Mass of centrifugal fan kg	Centrifugal blower with flange	Mass of centrifugal blower kg
R2E 146-AW07-05	1.4	G2E 146-DW07-01	2.6









AC centrifugal fans and blowers

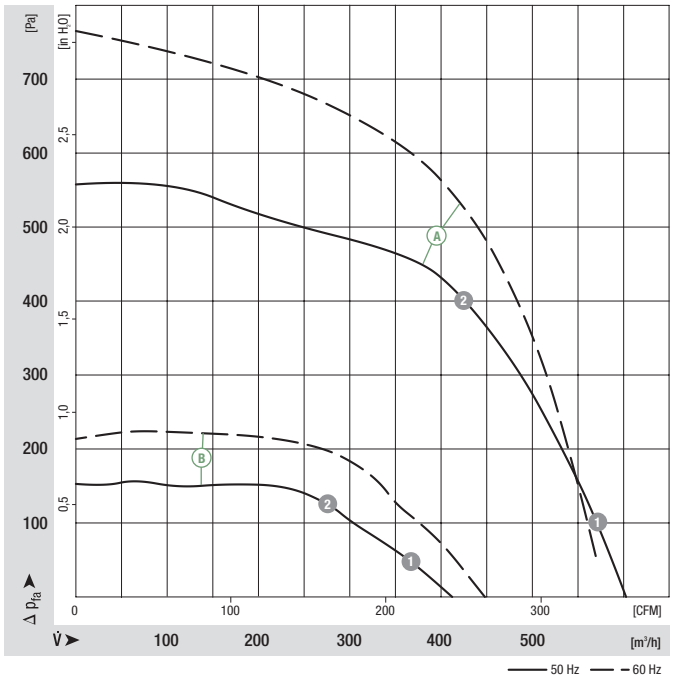
single inlet, Ø 160

- **Material:** Housing: Die-cast aluminium
  Impeller: Galvanised sheet steel
  Rotor: Partially cast in aluminium
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 44
- **Insulation class:** "B"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Sound pressure level	Min. back pressure	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VAC**	**Hz**	**m³/h**	**rpm**	**W**	**A**	**µF/VDB**	**dB(A)**	**Pa**	**°C**	p. 596 f.
***2E 160**	M2E 068-EC	Ⓐ	1~ 230	50	600	2100	240	1.05	6.0/400	72	0	-25 to +50	A1)
			1~ 230	60	570	2100	280	1.23	6.0/400	71	50	-25 to +40	
***4E 160**	M4E 068-CF	Ⓑ	1~ 230	50	410	1300	67	0.30	2.0/450	65	0	-25 to +65	A1)
			1~ 230	60	445	1400	90	0.40	2.0/450	67	0	-25 to +65	

subject to alterations

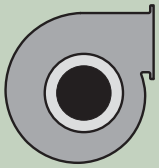
Curves



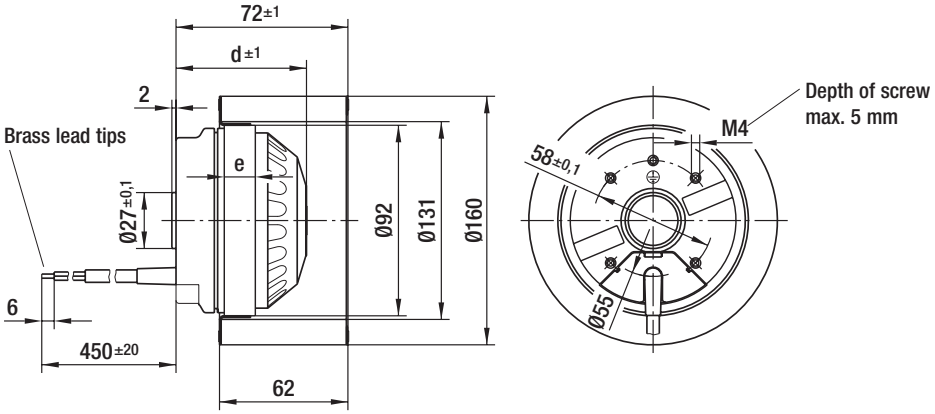
	n [rpm]	P_1 [W]	I [A]
Ⓐ ❶	2210	223	0.98
Ⓐ ❷	2525	172	0.76
Ⓑ ❶	1350	63	0.28
Ⓑ ❷	1395	58	0.26

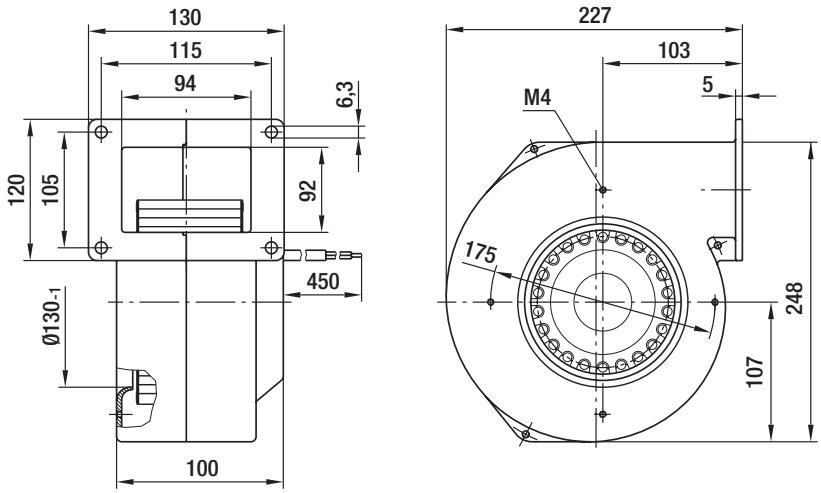
ebmpapst

- **Motor protection:** TOP wired internally
- **Cable exit:** Ⓐ variable, Ⓑ lateral
- **Protection class:** I
- **Product conforming to standards:** EN 60335-1, CE
- **Approvals:** CCC



Centrifugal fan	Mass of centrifugal fan kg	Dimensions d	e	Centrifugal blower with flange	Mass of centrifugal blower kg
R2E 160-AY47 -01	2.6	91.0	42.0	**G2E 160-AY47 -01**	3.9
R4E 160-AB01 -01	1.7	72.0	25.0	**G4E 160-AB01 -01**	2.9





AC centrifugal fan and blower

single inlet, Ø 180

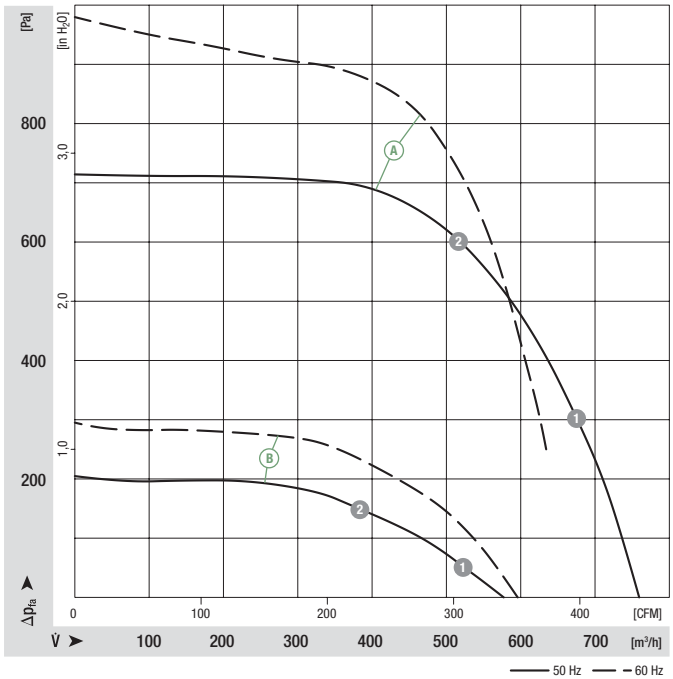
- **Material:** Housing: Die-cast aluminium
  Impeller: Galvanised sheet steel
  Rotor: Ⓐ coated in black, Ⓑ partially cast in aluminium
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 44
- **Insulation class:** "B"
- **Mounting position:** Any
- **Condensate discharges:** Rotor-side
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data

Type	Motor	Curve	Nominal voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Sound pressure level	Min. back pressure	Perm. amb. temp.	Electr. connection
			VAC	Hz	m³/h	rpm	W	A	µF/VDB	dB(A)	Pa	°C	p. 596 f.
G2E 180	M2E 074-EI	Ⓐ	1~ 230	50	760	1950	400	1.75	8.0/400	73	0	-25 to +40	A1)
			1~ 230	60	630	2150	415	1.82	8.0/400	71	250	-25 to +40	
***4E 180**	M4E 068-DF	Ⓑ	1~ 230	50	575	1250	110	0.49	3.0/450	65	0	-25 to +55	A1)
			1~ 230	60	594	1300	145	0.64	3.0/450	65	0	-25 to +45	

subject to alterations

Curves



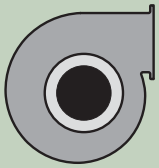
	n [rpm]	P_1 [W]	I [A]
Ⓐ 1	2290	335	1.47
Ⓐ 2	2600	255	1.12
Ⓑ 1	1300	105	0.47
Ⓑ 2	1385	92	0.41

ebmpapst

- **Motor protection:** TOP wired internally
- **Cable exit:** Axial
- **Protection class:** I
- **Product conforming to standards:** EN 60335-1, CE
- **Approvals:** CCC

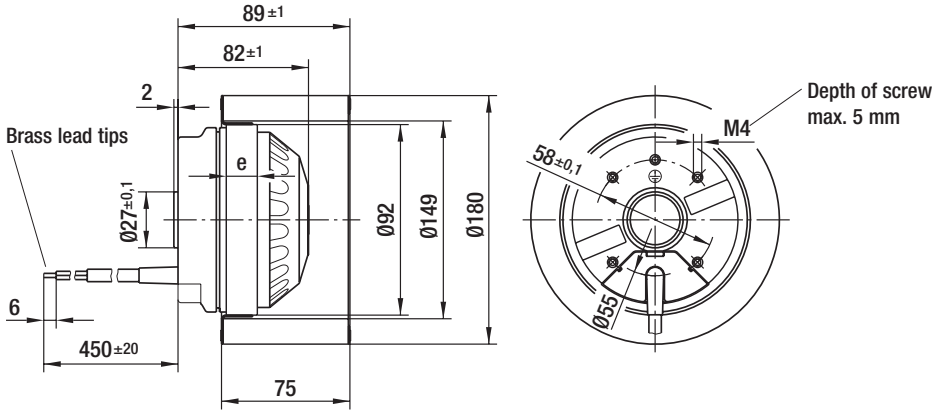
Mass of centrifugal fan

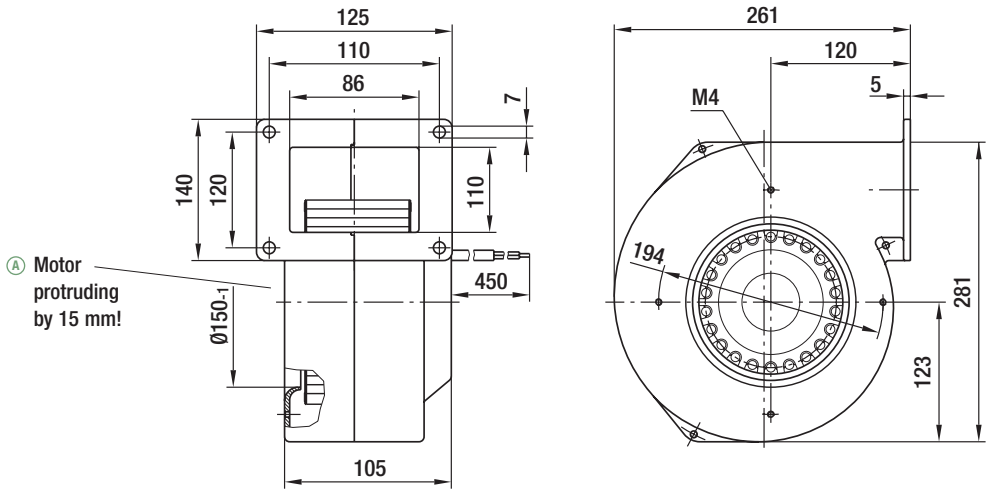
Dimensions



Mass of centrifugal blower

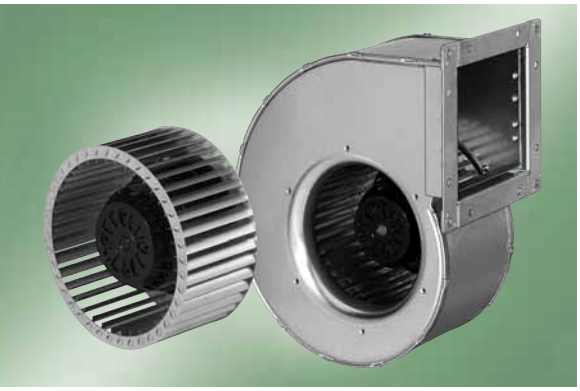
Centrifugal fan	kg	e	Centrifugal blower with flange	kg
—	—	48.0	**G2E 180-EH03 -01**	5.6
R4E 180-AB01 -05	1.7	35.0	**G4E 180-AB01 -01**	3.7





AC centrifugal fan and blower

single inlet, Ø 180



- **Material:** Housing: Galvanised sheet steel
  Impeller: Galvanised sheet steel
  Rotor: Coated in black
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 44
- **Insulation class:** "B"
- **Mounting position:** Any
- **Condensate discharges:** Rotor-side
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

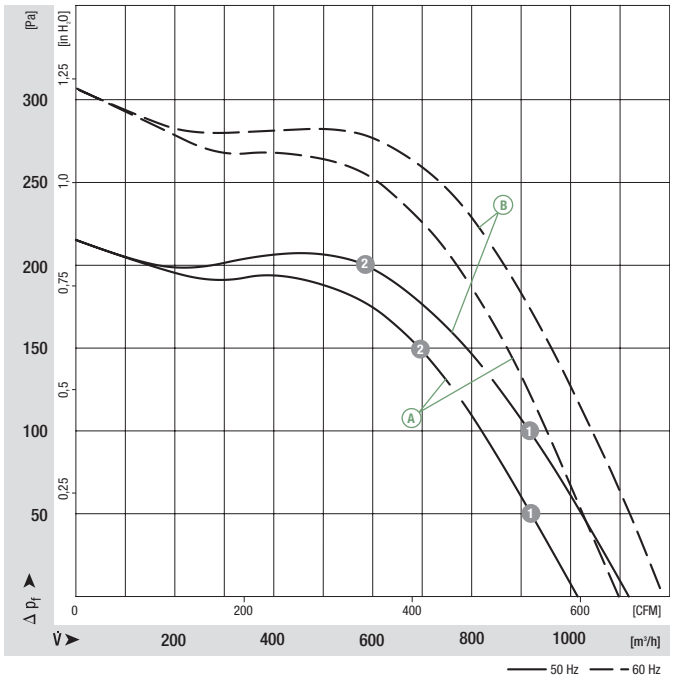
Nominal data		Curve	Nominal voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Sound pressure level	Min. back pressure	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VAC**	**Hz**	**m³/h**	**rpm**	**W**	**A**	**µF/VDB**	**dB(A)**	**Pa**	**°C**	p. 596 f.
***4D 180**(2)	M4D 074-DF	Ⓐ	3~ 230/400	50	1010	1330	175	0.68/0.39	—	67	0	-25 to +60	C1)/C2)
			3~ 230/400	60	1090	1440	240	0.74/0.43	—	69	0	-25 to +55	
G4D 180 (1)(2)	M4D 074-DF	Ⓑ	3~ 230/400	50	1110	1290	195	0.69/0.40	—	69	0	-25 to +60	C1)/C2)
			3~ 230/400	60	1180	1370	265	0.81/0.47	—	70	0	-25 to +45	

subject to alterations

(1) data collected via exhaust duct (step diffuser, 1 m length)

(2) 230 VAC Δ / 400 VAC Y

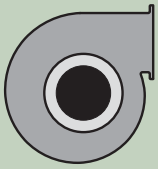
Curves

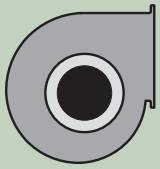


	n [rpm]	P_1 [W]	I [A]
Ⓐ 1	1360	160	0.62/0.36
Ⓐ 2	1410	120	0.46/0.27
Ⓑ 1	1360	163	0.58/0.33
Ⓑ 2	1420	105	0.38/0.22

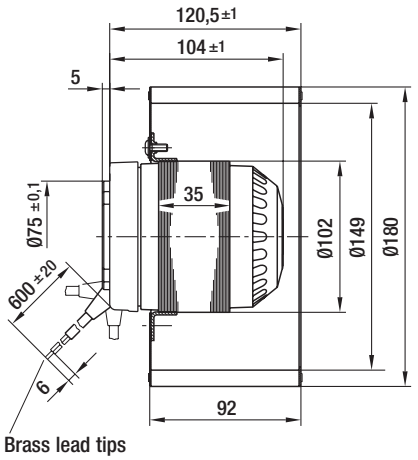
ebmpapst

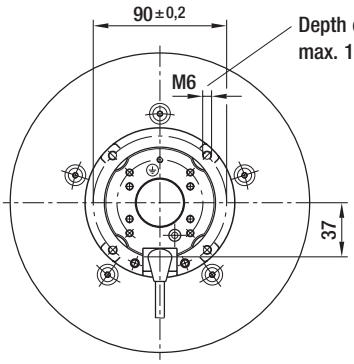
- **Motor protection:** Without thermal protection
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 60335-1, CE
- **Approvals:** CCC

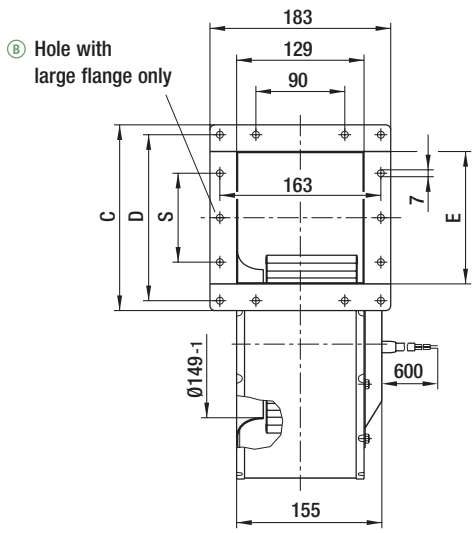


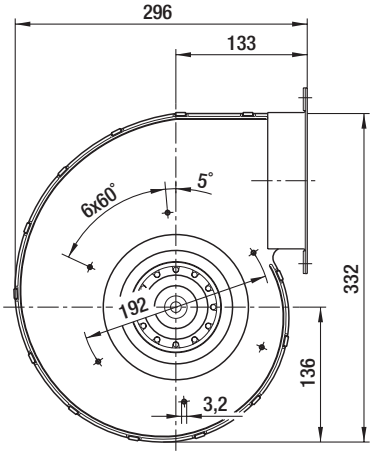


Centrifugal fan	Mass of centrifugal fan kg	Centrifugal blower with flange (small)	Centrifugal blower with flange (large)	Mass of centrifugal blower kg	Dimensions C	D	E	S
R4D 180-AF20 -05	3.2	G4D 180-FF20 -01	—	6.4	188.0	168.0	134.0	90.0
—	—	—	G4D 180-GF20 -01	6.4	278.0	258.0	224.0	180.0



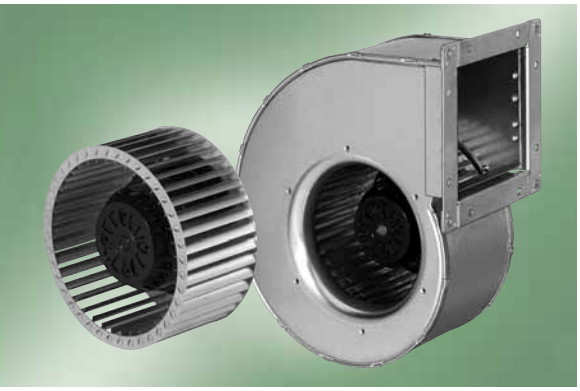






AC centrifugal fan and blower

single inlet, Ø 180



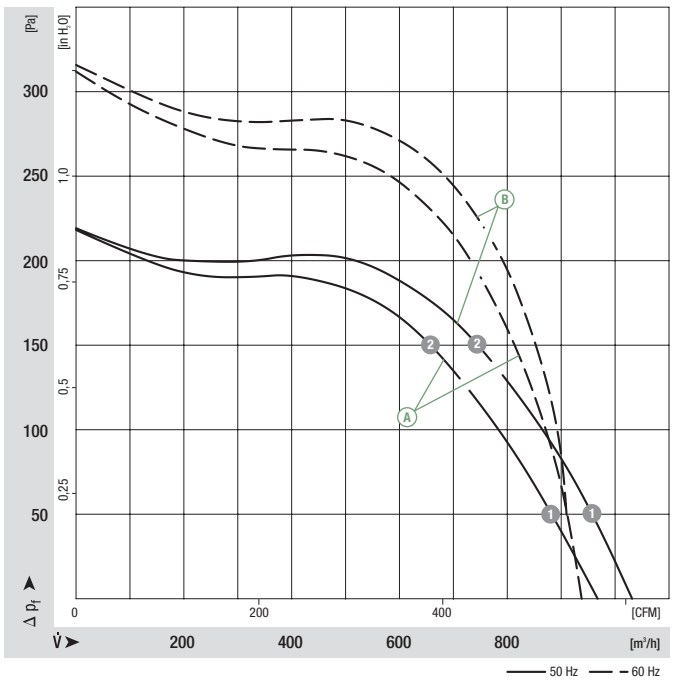
- **Material:** Housing: Galvanised sheet steel
  Impeller: Galvanised sheet steel
  Rotor: Coated in black
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 44
- **Insulation class:** "B"
- **Mounting position:** Any
- **Condensate discharges:** Rotor-side
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Sound pressure level	Min. back pressure	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VAC**	**Hz**	**m³/h**	**rpm**	**W**	**A**	**µF/VDB**	**dB(A)**	**Pa**	**°C**	p. 596 f.
***4E 180**	M4E 074-DF	Ⓐ	1~ 230	50	965	1220	160	0.71	4.0/400	66	0	-25 to +60	A1)
			1~ 230	60	935	1200	197	0.87	4.0/400	65	0	-25 to +40	
G4E 180 (1)	M4E 074-DF	Ⓑ	1~ 230	50	1030	1130	180	0.80	4.0/400	66	0	-25 to +45	A1)
			1~ 230	60	910	1170	200	0.88	4.0/400	64	50	-25 to +35	

subject to alterations

(1) data collected via exhaust duct (step diffuser, length 1 m)

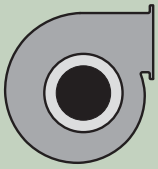
Curves

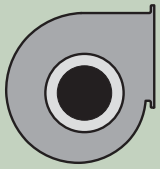


	n [rpm]	P_1 [W]	I [A]
Ⓐ ❶	1280	142	0.63
Ⓐ ❷	1375	112	0.50
Ⓑ ❶	1210	160	0.71
Ⓑ ❷	1340	123	0.55

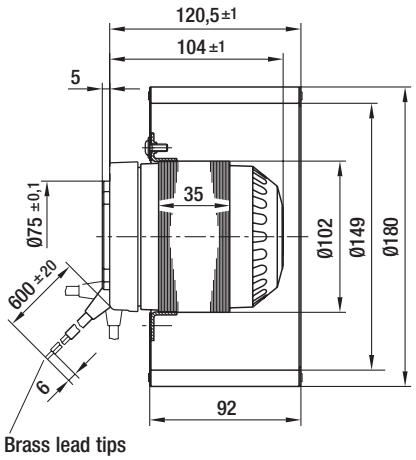
ebmpapst

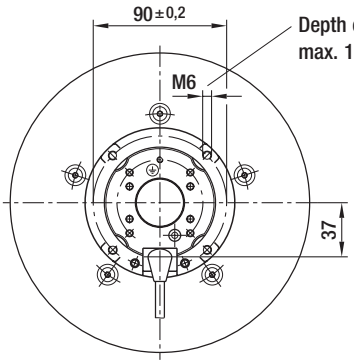
- **Motor protection:** TOP wired internally
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 60335-1, CE
- **Approvals:** CCC

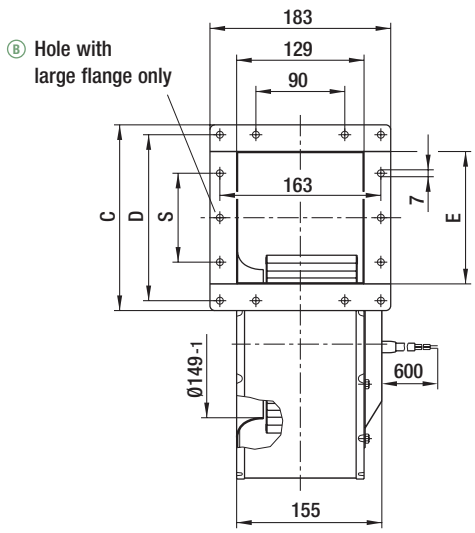


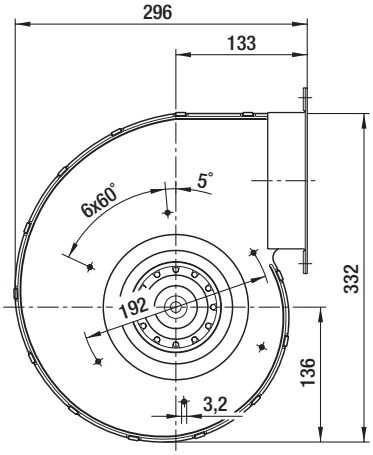


Centrifugal fan	Mass of centrifugal fan kg	Centrifugal blower with flange (small)	Centrifugal blower with flange (large)	Mass of centrifugal blower kg	Dimensions C	D	E	S
R4E 180-AS11 -05	3.2	G4E 180-FS11 -01	—	6.4	188.0	168.0	134.0	90.0
—	—	—	G4E 180-GS11 -01	6.4	278.0	258.0	224.0	180.0









AC centrifugal fan and blower

single inlet, Ø 200

- **Material:** Housing: Galvanised sheet steel
  Impeller: Galvanised sheet steel
  Rotor: Coated in black
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 44
- **Insulation class:** "B"
- **Mounting position:** Any
- **Condensate discharges:** Rotor-side
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

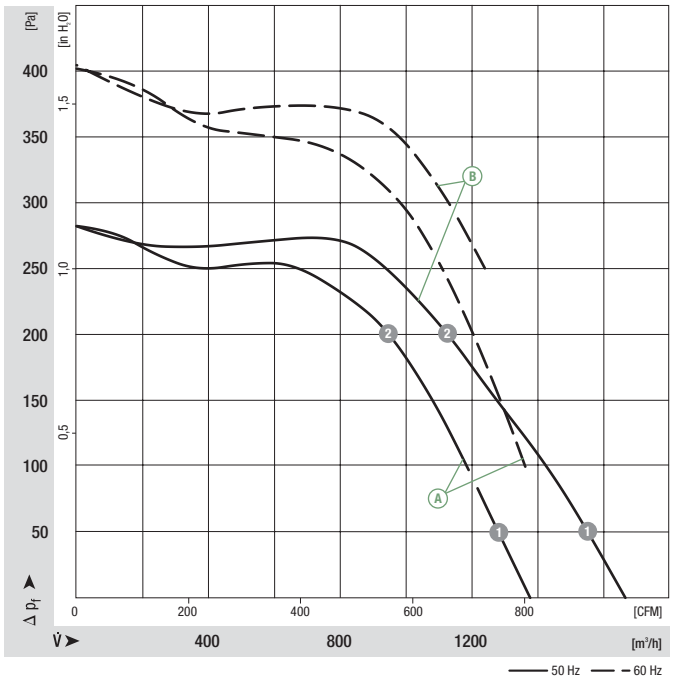
Nominal data		Curve	Nominal voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Sound pressure level	Min. back pressure	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VAC**	**Hz**	**m³/h**	**rpm**	**W**	**A**	**µF/VDB**	**dB(A)**	**Pa**	**°C**	p. 596 f.
***4D 200** (2)	M4D 074-EI	Ⓐ	3~ 230/400	50	1375	1350	285	1.00/0.58	—	69	0	-25 to +45	C1)/C2)
			3~ 230/400	60	1360	1530	360	1.13/0.65	—	69	100	-25 to +45	
G4D 200 (1)(2)	M4D 074-EI	Ⓑ	3~ 230/400	50	1665	1300	360	1.14/0.66	—	71	0	-25 to +45	C1)/C2)
			3~ 230/400	60	1220	1550	340	1.07/0.62	—	69	250	-25 to +40	

subject to alterations

(1) data collected via exhaust duct (step diffuser, 1 m length)

(2) 230 VAC Δ / 400 VAC Y

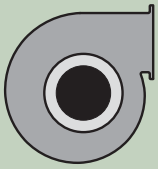
Curves

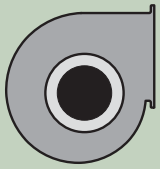


		n [rpm]	P_1 [W]	I [A]
Ⓐ	1	1375	255	0.90/0.52
Ⓐ	2	1415	192	0.68/0.39
Ⓑ	1	1315	330	1.05/0.61
Ⓑ	2	1385	230	0.74/0.43

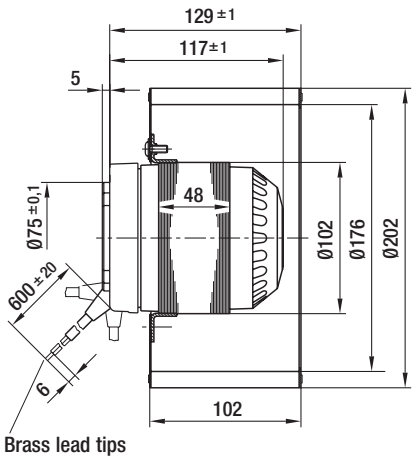
ebmpapst

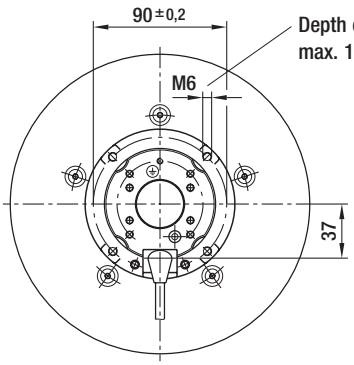
- **Motor protection:** Without thermal protection
- **Cable exit:** Axial
- **Protection class:** I
- **Product conforming to standards:** EN 60335-1, CE
- **Approvals:** CCC

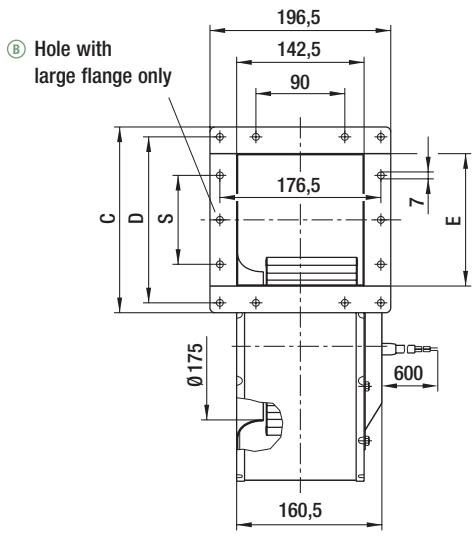


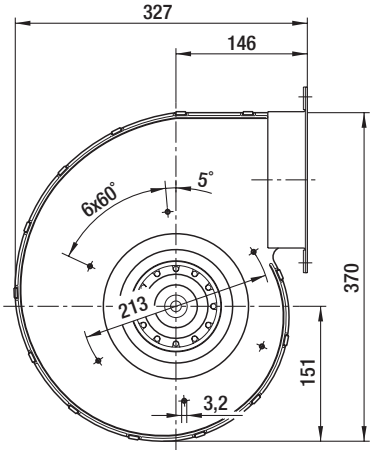


Centrifugal fan	Mass of centrifugal fan kg	Centrifugal blower with flange (small)	Centrifugal blower with flange (large)	Mass of centrifugal blower kg	Dimensions C	D	E	S
R4D 200-AL12 -05	3.7	G4D 200-BL12 -01	—	7.0	200.0	180.0	146.0	90.0
—	—	—	G4D 200-CL12 -01	7.0	304.0	284.0	250.0	180.0









Inlet nozzle p. 552

Terminal box p. 562

Electr. connections p. 596 f.

AC centrifugal fans and blowers

single inlet, Ø 200

- **Material:** Housing: Galvanised sheet steel
  Impeller: Galvanised sheet steel
  Rotor: Partially cast in aluminium
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 44
- **Insulation class:** "F"
- **Mounting position:** Any
- **Condensate discharges:** Rotor-side
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

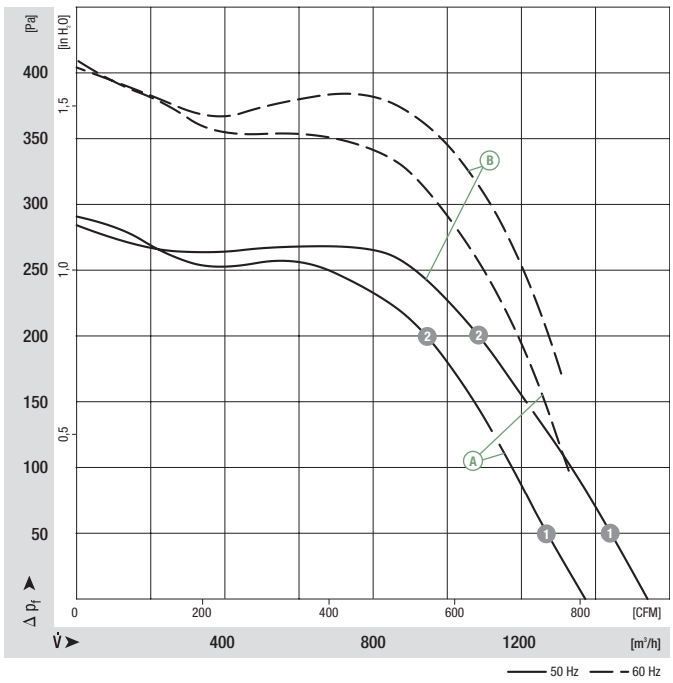
Nominal data

Type	Motor	Curve	Nominal voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Sound pressure level	Min. back pressure	Perm. amb. temp.	Electr. connection
			VAC	Hz	m³/h	rpm	W	A	µF/VDB	dB(A)	Pa	°C	p. 596 f.
***4E 200**	M4E 074-EI	Ⓐ	1~ 230	50	1370	1300	280	1.25	8.0/400	69	0	-25 to +40	A1)
			1~ 230	60	1315	1480	350	1.55	8.0/400	69	100	-25 to +40	
G4E 200 (1)	M4E 074-EI	Ⓑ	1~ 230	50	1540	1240	330	1.45	8.0/400	70	0	-25 to +50	A1)
			1~ 230	60	1300	1430	370	1.62	8.0/400	68	170	-25 to +40	

subject to alterations

(1) data collected via exhaust duct (step diffuser, length 1 m)

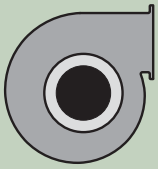
Curves

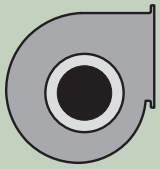


	n [rpm]	P_1 [W]	I [A]
Ⓐ 1	1350	258	1.15
Ⓐ 2	1400	214	0.96
Ⓑ 1	1285	303	1.33
Ⓑ 2	1370	242	1.07

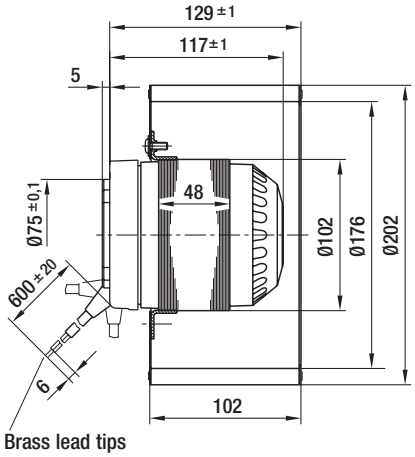
ebmpapst

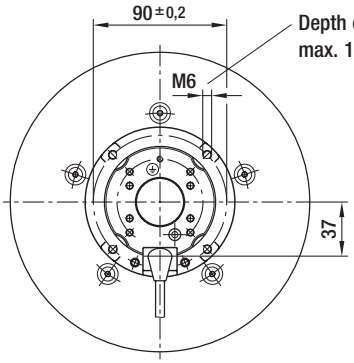
- **Motor protection:** TOP wired internally
- **Cable exit:** Axial
- **Protection class:** I
- **Capacitor:** FPU (P2) acc. to IEC 252
- **Product conforming to standards:** EN 60335-1, CE
- **Approvals:** CCC, Ⓑ also GOST

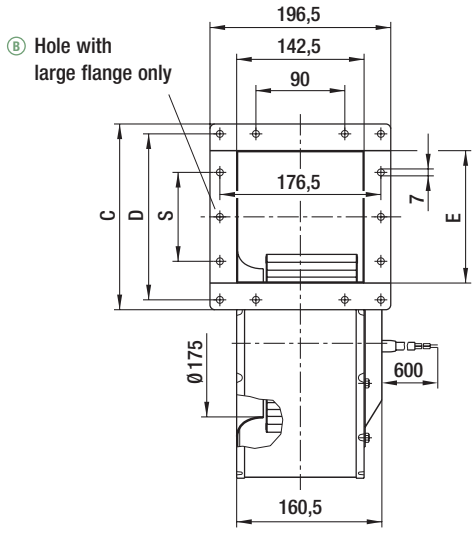


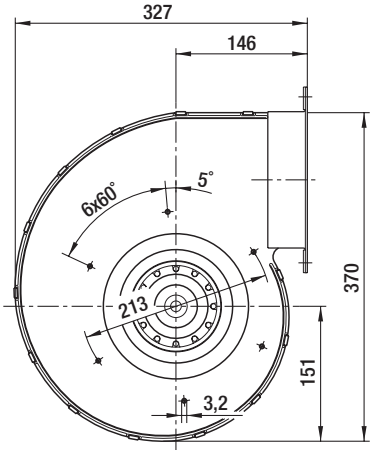


Centrifugal fan	Mass of centrifugal fan kg	Centrifugal blower with flange (small)	Centrifugal blower with flange (large)	Mass of centrifugal blower kg	Dimensions C	D	E	S
R4E 200-AL03 -05	3.7	G4E 200-BL03 -01	—	7.0	200.0	180.0	146.0	90.0
—	—	—	G4E 200-CL03 -01	7.0	304.0	284.0	250.0	180.0



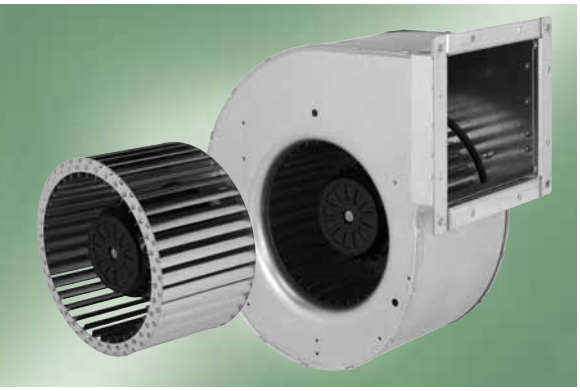






AC centrifugal fan and blower

single inlet, Ø 225



- **Material:** Housing: Galvanised sheet steel
  Impeller: Galvanised sheet steel
  Rotor: Coated in black
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 54 (acc. to EN 60529)
- **Insulation class:** "F"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

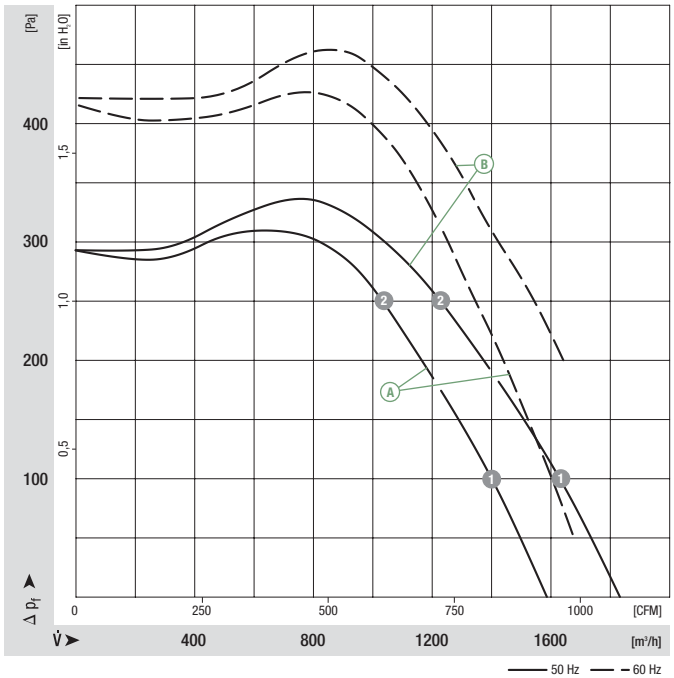
Nominal data

Type	Motor	Curve	Nominal voltage	Frequency	Speed/rpm (1)	Max. power input (1)	Max. current draw (1)	Capacitor	Min. back pressure	Perm. amb. temp.	Electr. connection
			VAC	Hz	rpm	W	A	µF/VDB	Pa	°C	p. 596 f.
*4D 225	M4D 094-FA	Ⓐ	3~ 400 Y	50	1350	380	0.75	—	0	-40 to +90	D2)
			3~ 400 Y	60	1500	540	0.94	—	50	-40 to +55	
G4D 225 (2)	M4D 094-FA	Ⓑ	3~ 400 Y	50	1310	460	0.85	—	0	-40 to +75	D2)
			3~ 400 Y	60	1520	515	0.90	—	200	-40 to +60	

subject to alterations

(1) Nominal data in operating point with maximum load (2) Data collected via exhaust duct (step diffuser, 1 m length)

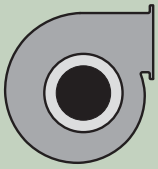
Curves

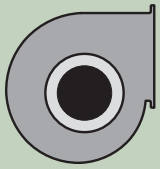


		n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]
Ⓐ	1	1380	325	0.69	71
Ⓐ	2	1420	228	0.60	67
Ⓑ	1	1345	388	0.76	74
Ⓑ	2	1400	271	0.64	69

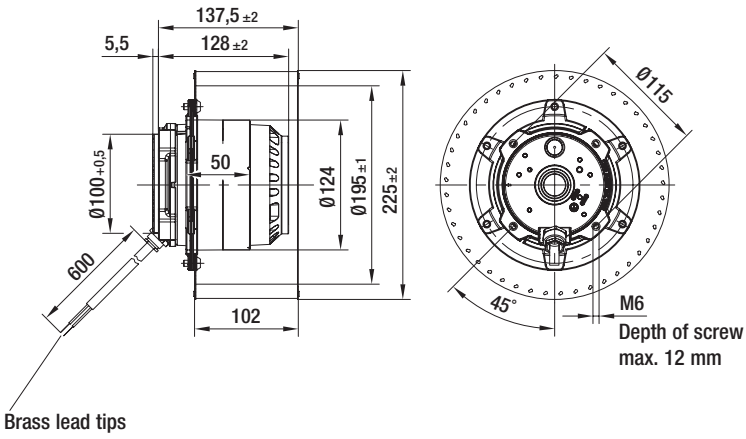
ebmpapst

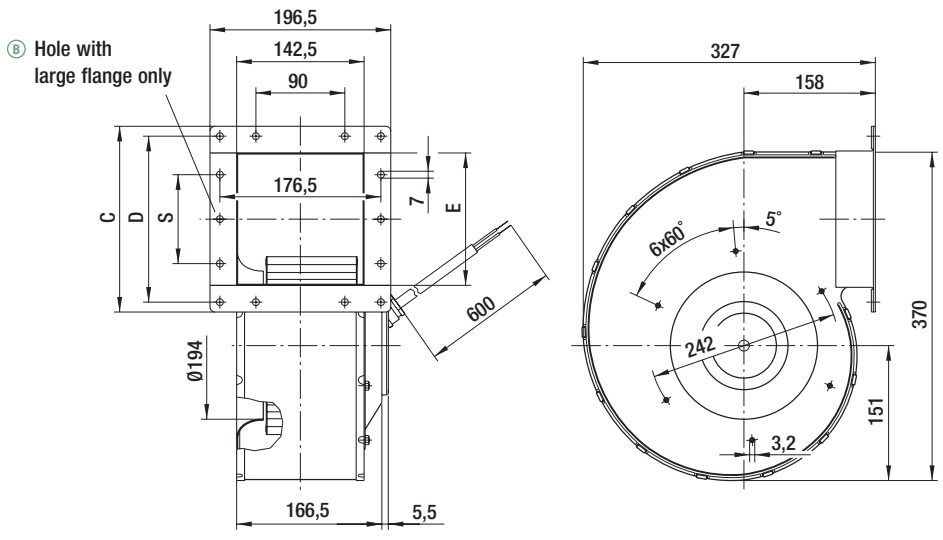
- **Motor protection:** Design with thermal overload protector
- **Cable exit:** Diagonal
- **Protection class:** I (acc. to EN 61800-5-1)
- **Product conforming to standard:** CE
- **Options:** Ⓑ 400 VAC Δ/Y for two speed steps available on request





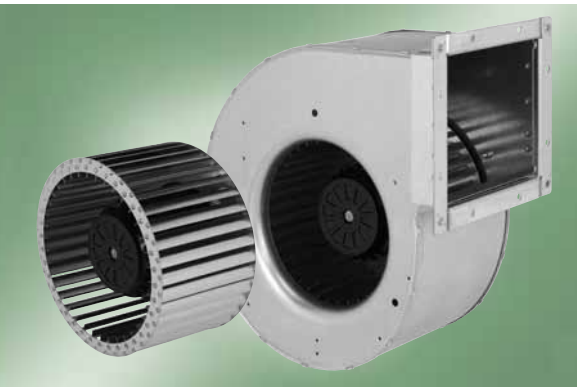
Centrifugal fan	Mass of centrifugal fan kg	Centrifugal blower with flange (small)	Centrifugal blower with flange (large)	Mass of centrifugal blower kg	Dimensions C	D	E	S
R4D 225-AK10 -06	6.5	G4D 225-FK10 -03	—	9.5	200.0	180.0	146.0	90.0
—	—	—	G4D 225-GK10 -03	9.7	304.0	284.0	250.0	180.0





AC centrifugal fan and blower

single inlet, Ø 225



- **Material:** Housing: Galvanised sheet steel
  Impeller: Galvanised sheet steel
  Rotor: Coated in black
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 54 (acc. to EN 60529)
- **Insulation class:** "F"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

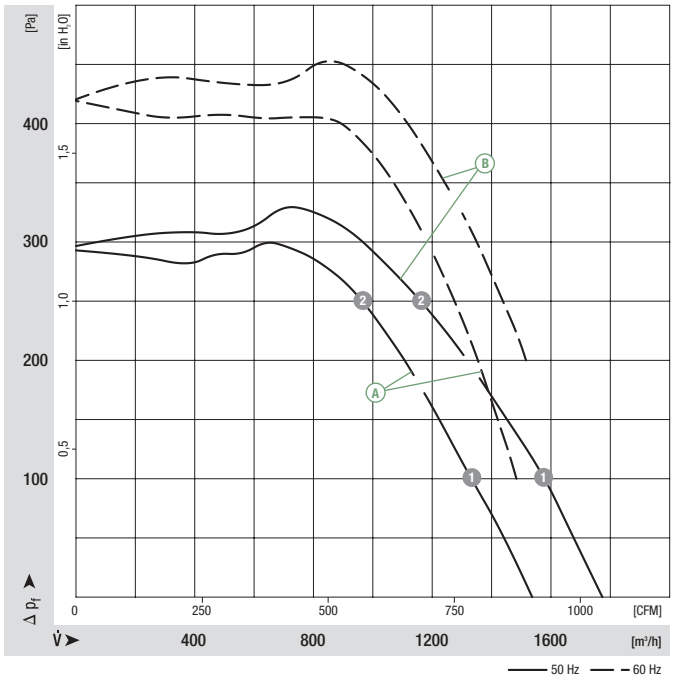
Nominal data

Type	Motor	Curve	Nominal voltage VAC	Frequency Hz	Speed/rpm (1) rpm	Max. power input (1) W	Max. current draw (1) A	Capacitor µF/VDB	Min. back pressure Pa	Perm. amb. temp. °C	Electr. connection
											p. 596 f.
*4E 225	M4E 094-FA	Ⓐ	1~ 230	50	1330	395	1.98	6.0/450	0	-40 to +70	A2a)
			1~ 230	60	1500	500	2.30	6.0/450	100	-40 to +50	
G4E 225 (2)	M4E 094-FA	Ⓑ	1~ 230	50	1260	485	2.30	6.0/450	0	-40 to +55	A2a)
			1~ 230	60	1470	510	2.30	6.0/450	200	-40 to +45	

subject to alterations

(1) Nominal data in operating point with maximum load (2) Data collected via exhaust duct (step diffuser, 1 m length)

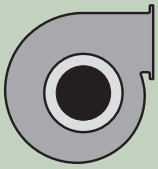
Curves

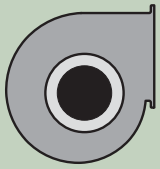


	n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]
Ⓐ 1	1365	339	1.75	67
Ⓐ 2	1415	255	1.46	70
Ⓑ 1	1320	401	2.00	74
Ⓑ 2	1395	292	1.57	69

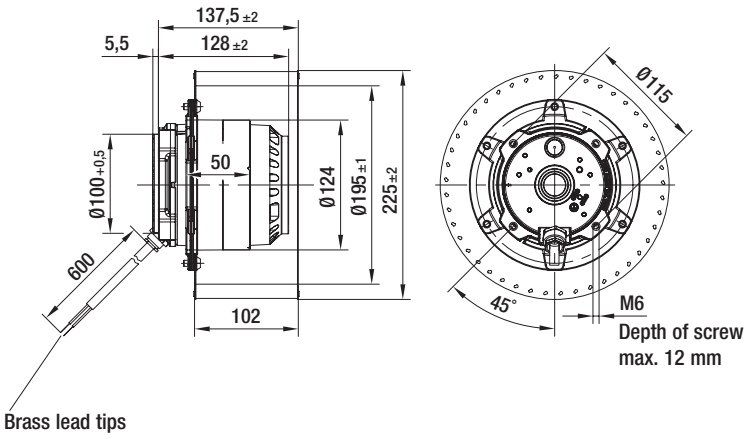
ebmpapst

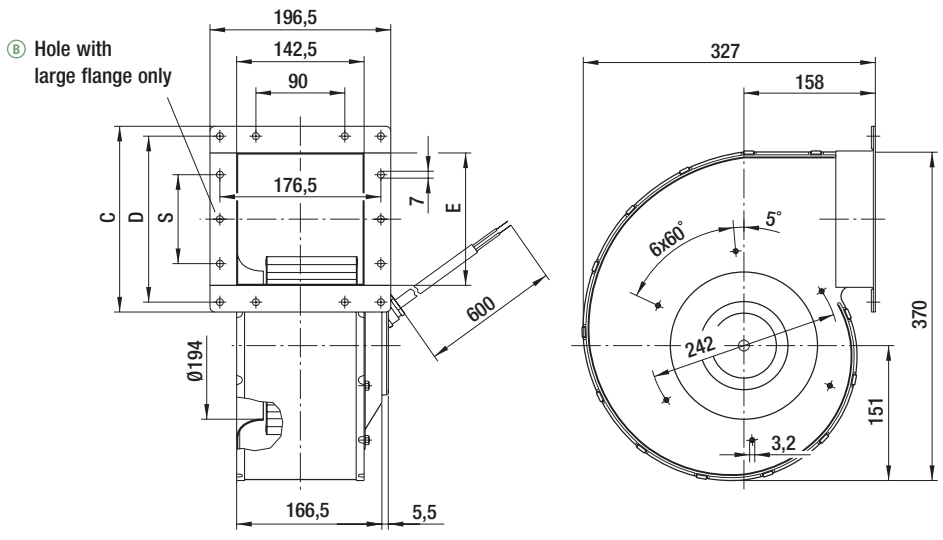
- **Motor protection:** Design with thermal overload protector
- **Cable exit:** Diagonal
- **Protection class:** I (acc. to EN 61800-5-1)
- **Product conforming to standard:** CE





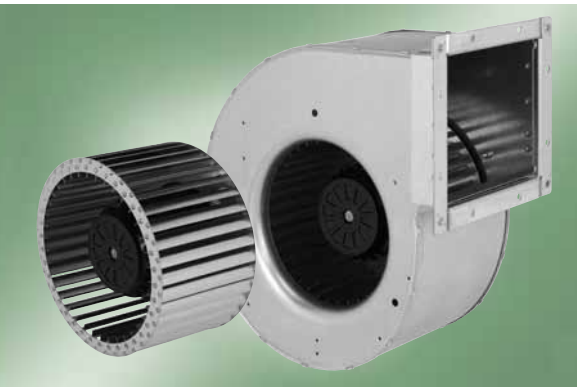
Centrifugal fan	Mass of centrifugal fan kg	Centrifugal blower with flange (small)	Centrifugal blower with flange (large)	Mass of centrifugal blower kg	Dimensions C	D	E	S
R4E 225-BK05 -03	6.6	G4E 225-DK05 -03	—	9.6	200.0	180.0	146.0	90.0
—	—	—	G4E 225-EK05 -03	9.8	304.0	284.0	250.0	180.0





AC centrifugal fan and blower

single inlet, Ø 250



- **Material:** Housing: Galvanised sheet steel
  Impeller: Galvanised sheet steel
  Rotor: Coated in black
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 54 (acc. to EN 60529)
- **Insulation class:** "F"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

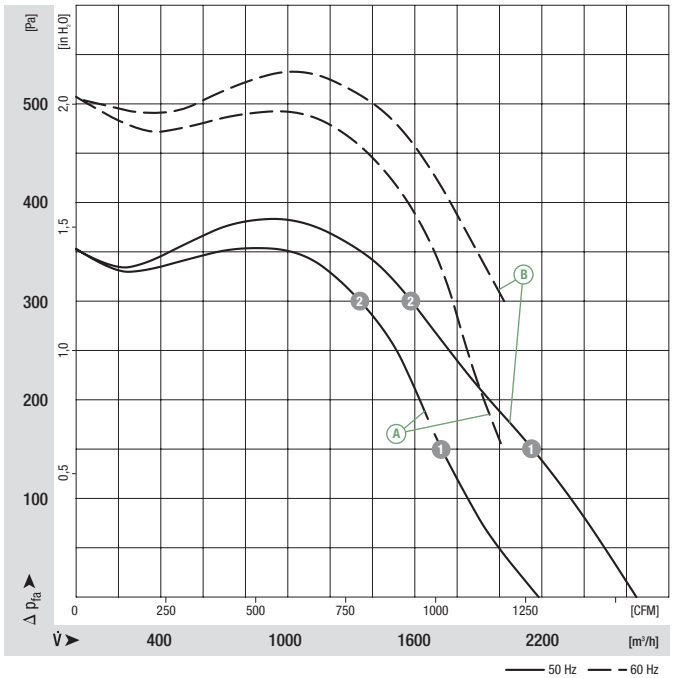
Nominal data

Type	Motor	Curve	Nominal voltage	Frequency	Speed/rpm (1)	Max. power input (1)	Max. current draw (1)	Capacitor	Min. back pressure	Perm. amb. temp.	Electr. connection
			VAC	Hz	rpm	W	A	µF/VDB	Pa	°C	p. 596 f.
*4D 250	M4D 094-HA	Ⓐ	3~ 400 Y	50	1350	590	1.17	—	0	-40 to +80	D2)
			3~ 400 Y	60	1560	710	1.26	—	150	-40 to +60	
G4D 250 (2)	M4D 094-HA	Ⓑ	3~ 400 Y	50	1280	800	1.46	—	0	-40 to +50	D2)
			3~ 400 Y	60	1560	700	1.24	—	300	-40 to +55	

subject to alterations

(1) Nominal data in operating point with maximum load (2) Data collected via exhaust duct (step diffuser, 1 m length)

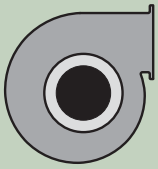
Curves

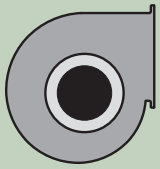


	n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]
Ⓐ 1	1390	444	0.99	72
Ⓐ 2	1430	312	0.87	70
Ⓑ 1	1330	654	1.13	76
Ⓑ 2	1410	386	0.94	71

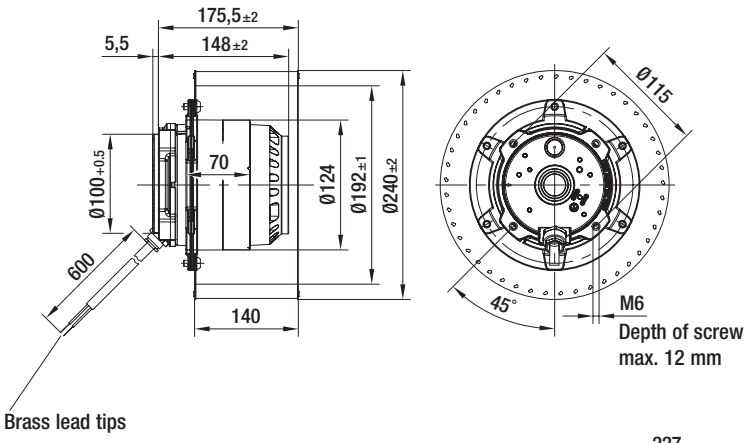
ebmpapst

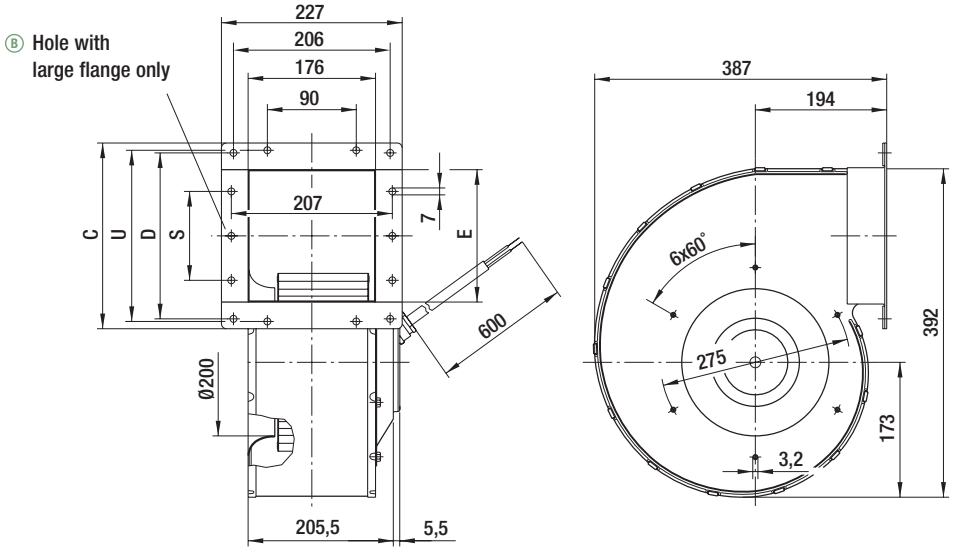
- **Motor protection:** Design with thermal overload protector
- **Cable exit:** Diagonal
- **Protection class:** I (acc. to EN 61800-5-1)
- **Product conforming to standard:** CE
- **Options:** 400 VAC Δ/Y for two speed steps available on request





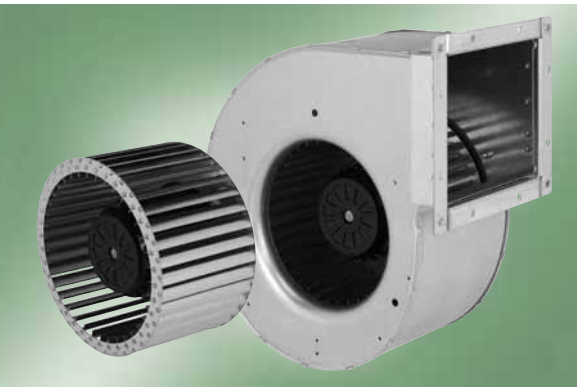
Centrifugal fan	Mass of centrifugal fan kg	Centrifugal blower with flange (small)	Centrifugal blower with flange (large)	Mass of centrifugal blower kg	Dimensions C	D	E	S	U
R4D 250-AC10 -03	9.7	G4D 250-DC10 -03	—	13.1	218.0	190.0	167.0	90.0	198.0
—	—	—	G4D 250-EC10 -03	13.5	313.0	285.0	262.0	180.0	293.0





AC centrifugal fan and blower

single inlet, Ø 250



- **Material:** Housing: Galvanised sheet steel
  Impeller: Galvanised sheet steel
  Rotor: Coated in black
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 54 (acc. to EN 60529)
- **Insulation class:** "F"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

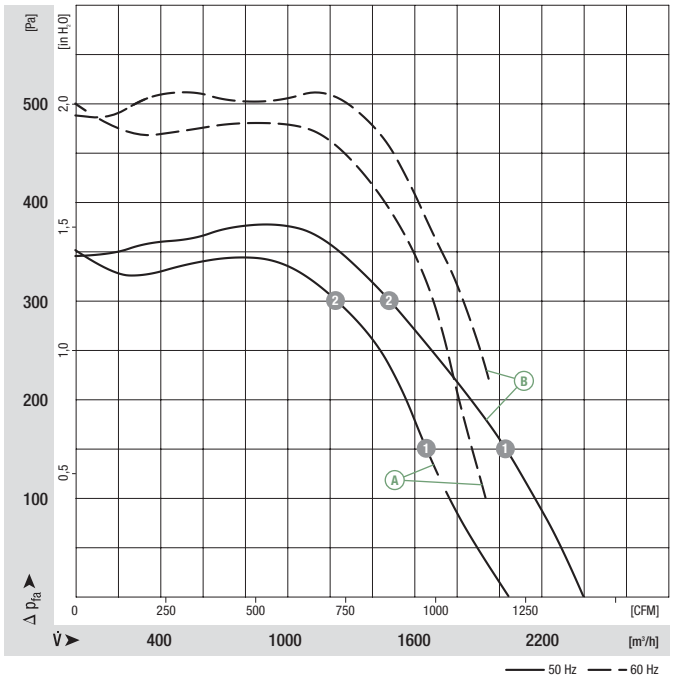
Nominal data

Type	Motor	Curve	Nominal voltage	Frequency	Speed/rpm (1)	Max. power input (1)	Max. current draw (1)	Capacitor	Min. back pressure	Perm. amb. temp.	Electr. connection
			VAC	Hz	rpm	W	A	µF/VDB	Pa	°C	p. 596 f.
*4E 250	M4E 094-HA	Ⓐ	1~ 230	50	1310	570	2.48	10.0/450	0	-40 to +70	A2a)
			1~ 230	60	1470	690	3.05	10.0/450	100	-40 to +55	
G4E 250(2)	M4E 094-HA	Ⓑ	1~ 230	50	1150	760	3.80	10.0/450	0	-40 to +45	A2a)
			1~ 230	60	1400	730	3.30	10.0/450	220	-40 to +55	

subject to alterations

(1) Nominal data in operating point with maximum load (2) Data collected via exhaust duct (step diffuser, 1 m length)

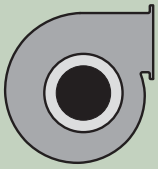
Curves

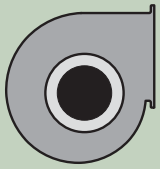


	n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]
Ⓐ 1	1370	448	2.25	70
Ⓐ 2	1420	325	1.85	68
Ⓑ 1	1310	560	2.73	73
Ⓑ 2	1390	395	2.05	69

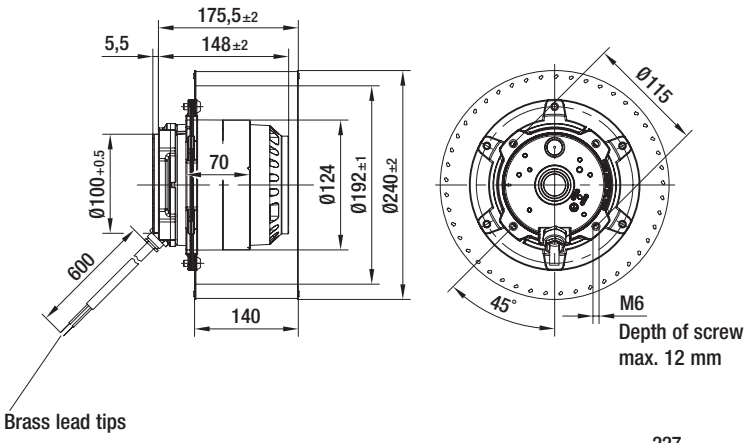
ebmpapst

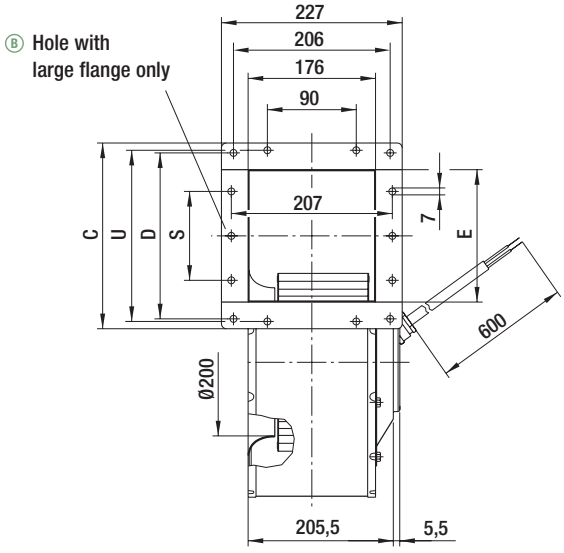
- **Motor protection:** Design with thermal overload protector
- **Cable exit:** Diagonal
- **Protection class:** I (acc. to EN 61800-5-1)
- **Product conforming to standard:** CE

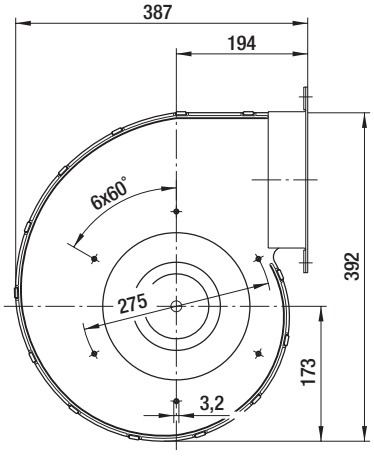




Centrifugal fan	Mass of centrifugal fan kg	Centrifugal blower with flange (small)	Centrifugal blower with flange (large)	Mass of centrifugal blower kg	Dimensions C	D	E	S	U
R4E 250-BA09 -03	9.3	G4E 250-DA09 -03	—	12.7	218.0	190.0	167.0	90.0	198.0
—	—	—	G4E 250-EA09 -03	13.1	313.0	285.0	262.0	180.0	293.0

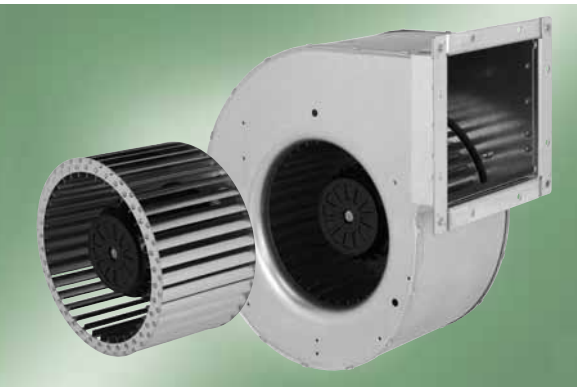






AC centrifugal fan and blowers

single inlet, Ø 250



- **Material:** Housing: Galvanised sheet steel
  Impeller: Galvanised sheet steel
  Rotor: Coated in black
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 54 (acc. to EN 60529)
- **Insulation class:** "F"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

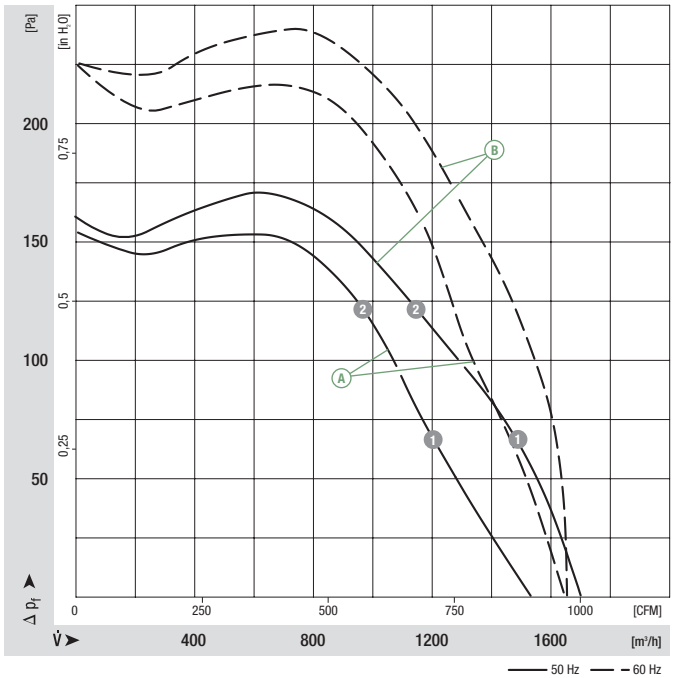
Nominal data

Type	Motor	Curve	Nominal voltage	Frequency	Speed/rpm (1)	Max. power input (1)	Max. current draw (1)	Capacitor	Min. back pressure	Perm. amb. temp.	Electr. connection
			VAC	Hz	rpm	W	A	µF/VDB	Pa	°C	p. 596 f.
***6E 250**	M6E 094-FA	Ⓐ	1~ 230	50	850	220	1.00	6.0/450	0	-40 to +80	A2a)
			1~ 230	60	900	295	1.30	6.0/500	0	-40 to +80	
G6E 250 (2)	M6E 094-FA	Ⓑ	1~ 230	50	780	255	1.15	6.0/450	0	-40 to +80	A2a)
			1~ 230	60	760	305	1.35	6.0/500	0	-40 to +70	

subject to alterations

(1) Nominal data in operating point with maximum load (2) Data collected via exhaust duct (step diffuser, 1 m length)

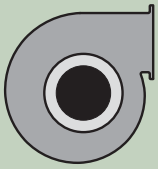
Curves

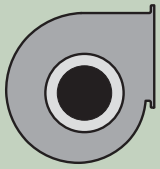


	n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]
Ⓐ 1	900	180	0.82	63
Ⓐ 2	930	156	0.74	61
Ⓑ 1	855	215	0.96	65
Ⓑ 2	910	173	0.79	62

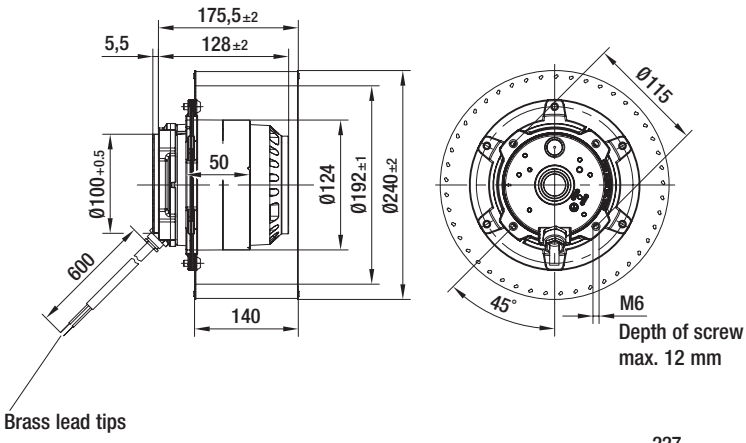
ebmpapst

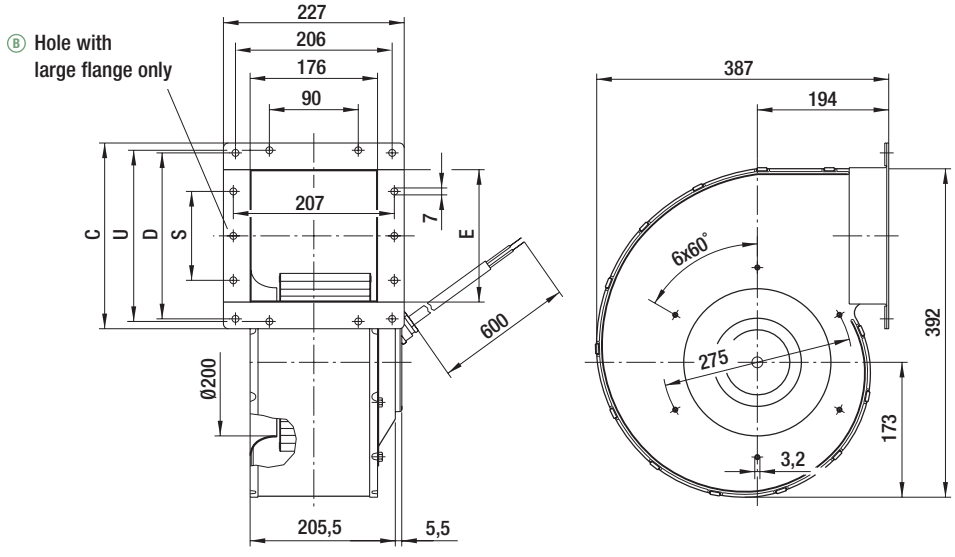
- **Motor protection:** Design with thermal overload protector
- **Cable exit:** Diagonal
- **Protection class:** I (acc. to EN 61800-5-1)
- **Product conforming to standard:** CE





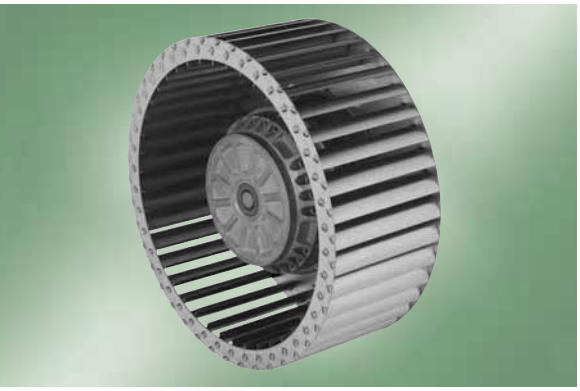
Centrifugal fan	Mass of centrifugal fan kg	Centrifugal blower with flange (small)	Centrifugal blower with flange (large)	Mass of centrifugal blower kg	Dimensions C	D	E	S	U
R6E 250-AK05 -03	7.0	G6E 250-DK05 -03	—	10.5	218.0	190.0	167.0	90.0	198.0
—	—	—	G6E 250-EK05 -03	10.9	313.0	285.0	262.0	180.0	293.0





AC centrifugal fans

single inlet, Ø 250



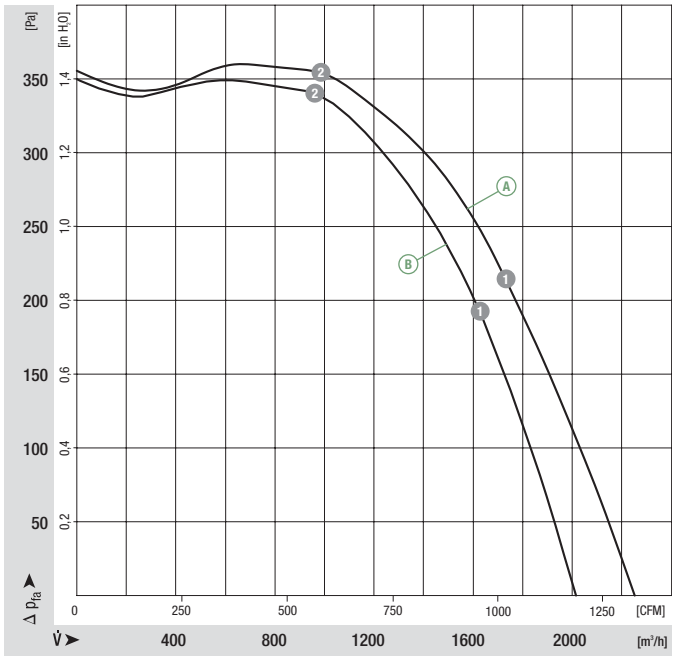
- **Material:** Impeller: Galvanised sheet steel
  Rotor: Cast in aluminium
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 54 (acc. to EN 60529)
- **Insulation class:** "F"
- **Mounting position:** Any
- **Condensate discharge holes:** On rotor and stator sides
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage	Frequency	Speed/rpm (1)	Max. power input (1)	Max. current draw (1)	Capacitor	Min. back pressure	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VAC**	**Hz**	**rpm**	**kW**	**A**	**µF/VDB**	**Pa**	**°C**	p. 596 f.
R4D 250 (2)	M4D 110-GF	Ⓐ	3~ 230/400	50	1400	0.75	2.77/1.60	—	0	-25 to +80	D1)/D2)
R4E 250	M4E 110-GF	Ⓑ	1~ 230	50	1270	0.64	2.80	12.0/450	0	-25 to +80	A2a)

subject to alterations

(1) Nominal data in operating point with maximum load (2) 230 VAC Δ / 400 VAC Y

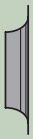
Curves



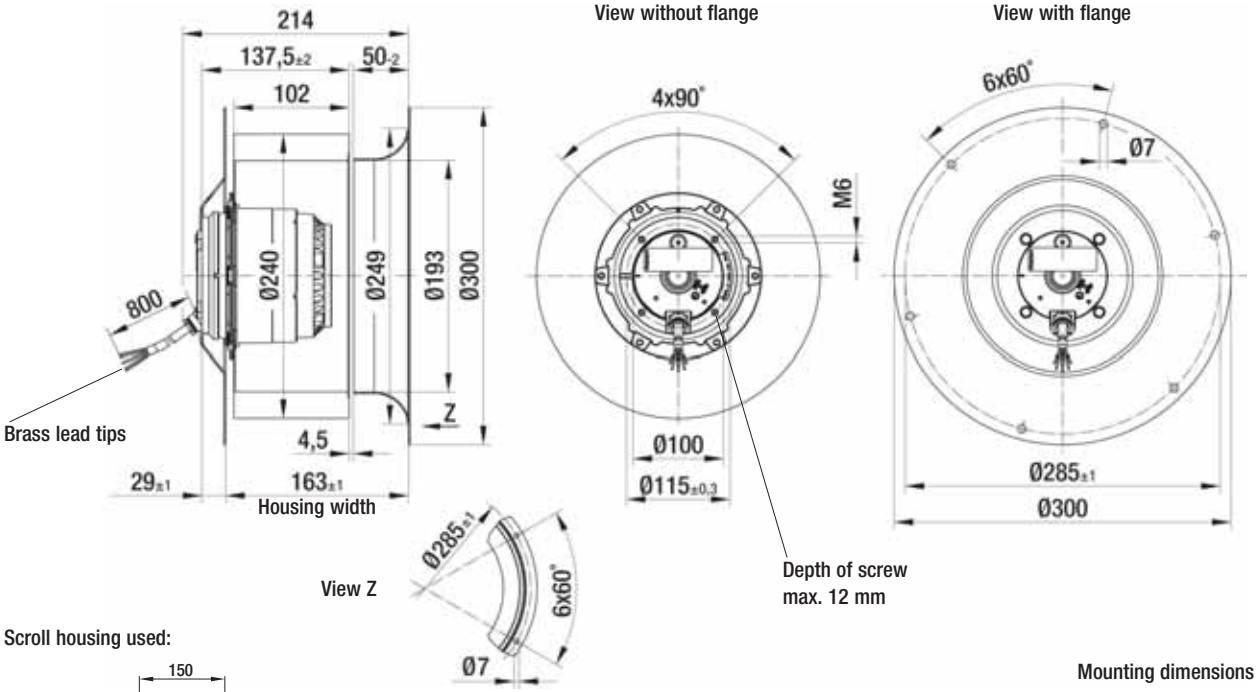
	n [rpm]	P_1 [kW]	I [A]	Lp_A [dB(A)]
Ⓐ 1	1430	0.53	2.48/1.43	77
Ⓐ 2	1460	0.32	2.23/1.29	70
Ⓑ 1	1370	0.49	2.14	76
Ⓑ 2	1430	0.33	1.49	70

ebmpapst

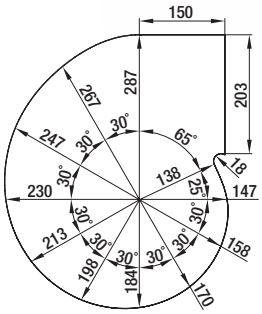
- **Motor protection:** Design with thermal overload protector
- **Cable exit:** Diagonal
- **Protection class:** I (acc. to EN 61800-5-1)
- **Product conforming to standard:** CE
- **Approvals:** VDE (acc. to EN 60034)



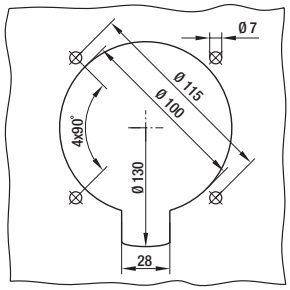
Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle	Flange
R4D 250-CG01 -01	12.0	25010-2-4013	94250-2-4017
R4E 250-CG01 -01	12.0	25010-2-4013	94250-2-4017



Scroll housing used:

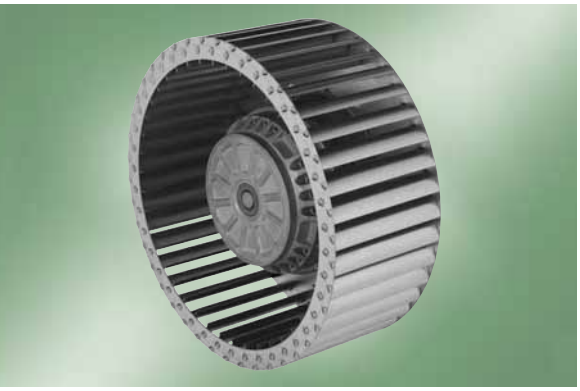


Mounting dimensions



AC centrifugal fans

single inlet, Ø 250



- **Material:** Impeller: Galvanised sheet steel
  Rotor: Ⓐ cast in aluminium, Ⓑ coated in black
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 54 (acc. to EN 60529)
- **Insulation class:** "F"
- **Mounting position:** Any
- **Condensate discharge holes:** Ⓐ on rotor and stator sides, Ⓑ none
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

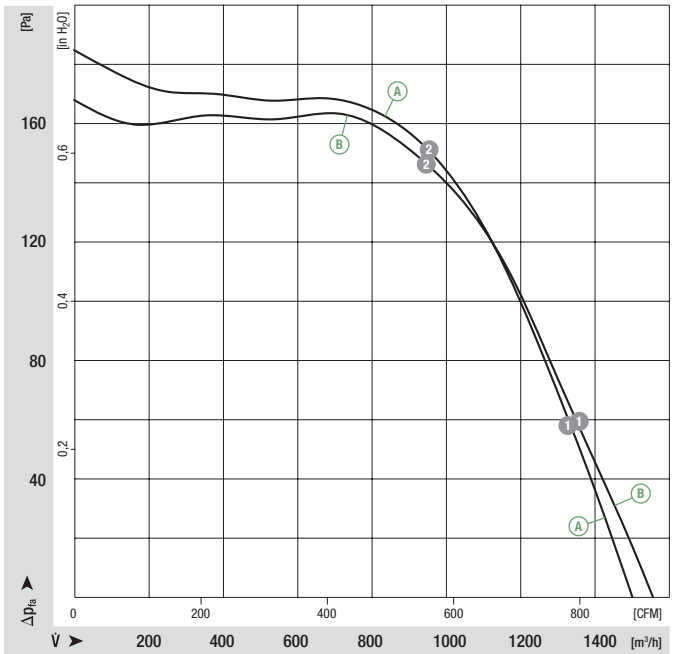
Nominal data

Type	Motor	Curve	Nominal voltage	Frequency	Speed/rpm (1)	Max. power input (1)	Max. current draw (1)	Capacitor	Min. back pressure	Perm. amb. temp.	Electr. connection
			VAC	Hz	rpm	kW	A	µF/VDB	Pa	°C	p. 596 f.
R6D 250 (2)	M6D 110-EF	Ⓐ	3~ 230/400	50	930	0.27	1.25/0.72	—	0	-25 to +95	D1)/D2)
R6E 250	M6E 094-FA	Ⓑ	1~ 230	50	800	0.26	1.16	6.0/450	0	-25 to +90	A2a)

subject to alterations

(1) Nominal data in operating point with maximum load (2) 230 VAC Δ / 400 VAC Y

Curves

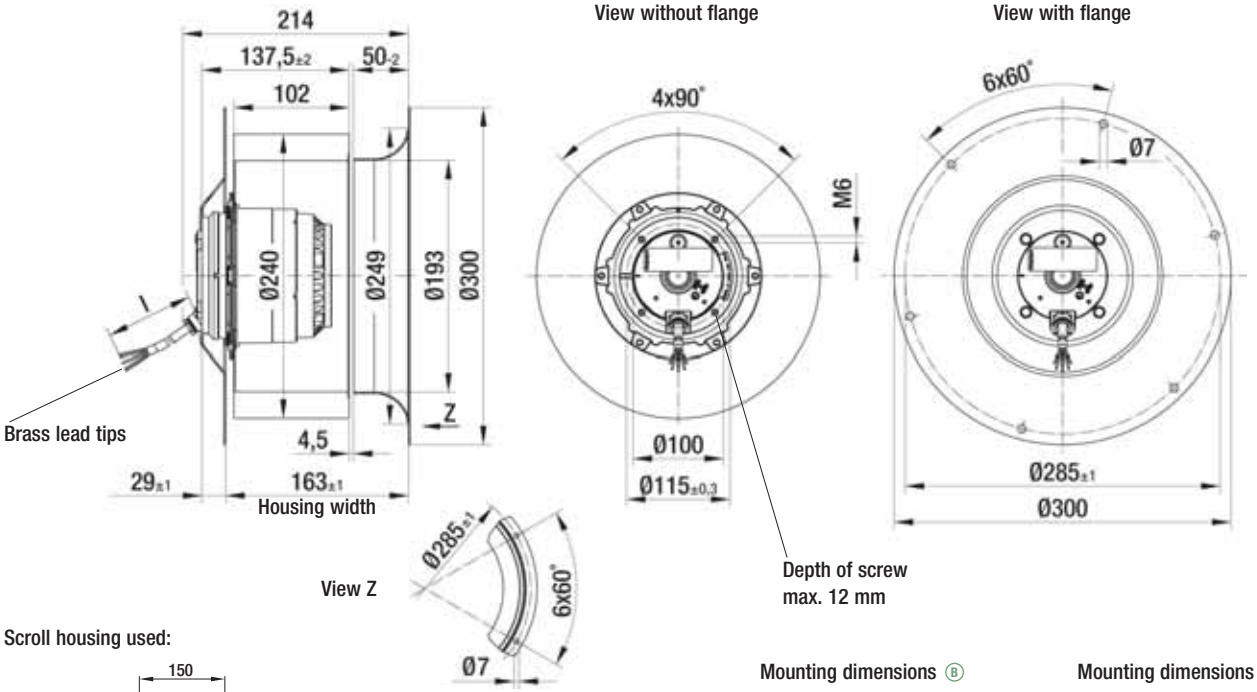


	n [rpm]	P_1 [kW]	I [A]	Lp_A [dB(A)]
Ⓐ 1	945	0.23	1.18/0.68	68
Ⓐ 2	965	0.17	1.11/0.64	63
Ⓑ 1	875	0.22	1.00	67
Ⓑ 2	930	0.17	0.81	62

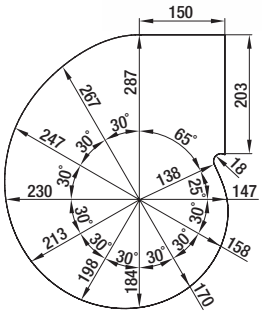
ebmpapst

- **Motor protection:** Design with thermal overload protector
- **Cable exit:** Diagonal
- **Protection class:** I (acc. to EN 61800-5-1)
- **Product conforming to standard:** CE
- **Approvals:** Ⓐ VDE (acc. to EN 60034)

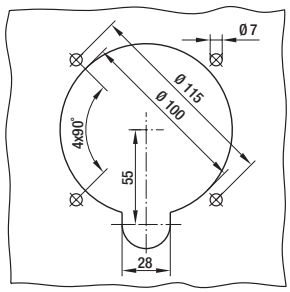
Centrifugal fan	Mass of centrifugal fan kg	Dimensions l	Inlet nozzle	Flange
R6D 250-CE01 -01	9.5	800.0	25010-2-4013	94250-2-4017
R6E 250-CA08 -01	7.0	600.0	25010-2-4013	94250-2-4017



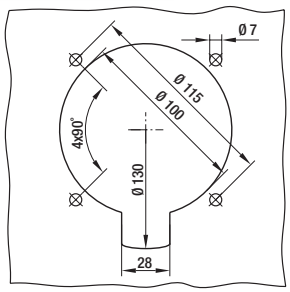
Scroll housing used:



Mounting dimensions Ⓑ



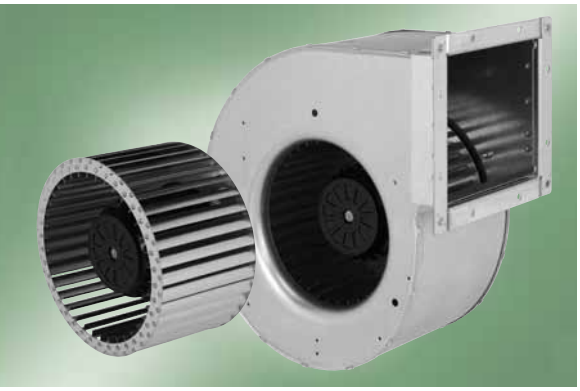
Mounting dimensions Ⓐ



Inlet nozzle p. 552
Capacitor p. 560 f.
Electr. connections p. 596 f.

AC centrifugal fan and blower

single inlet, Ø 280



- **Material:** Housing: Galvanised sheet steel
  Impeller: Galvanised sheet steel
  Rotor: Coated in black
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 20 (acc. to EN 60529)
- **Insulation class:** "F"
- **Mounting position:** Shaft horizontal or rotor on bottom; rotor on top on request
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

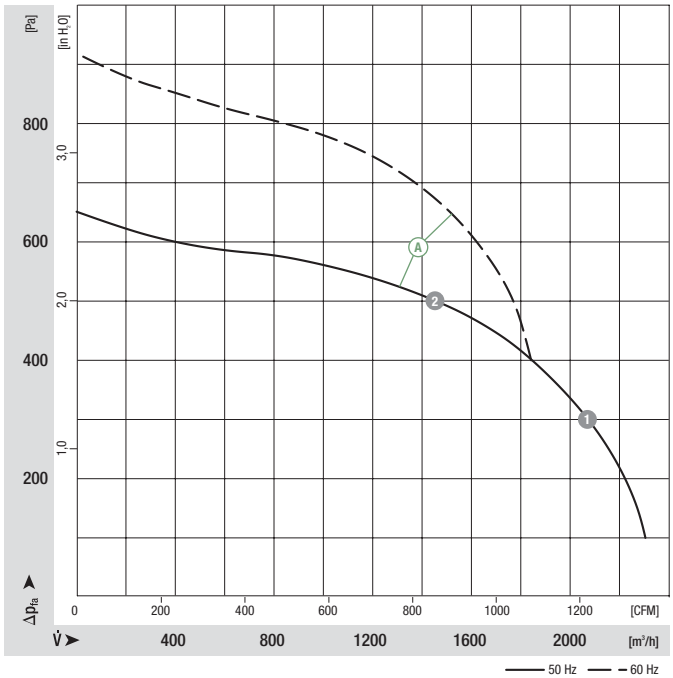
Nominal data

Type	Motor	Curve	Nominal voltage	Frequency	Speed/rpm (1)	Max. power input (1)	Max. current draw (1)	Capacitor	Min. back pressure	Perm. amb. temp.	Electr. connection
			VAC	Hz	rpm	W	A	µF/VDB	Pa	°C	p. 596 f.
*4E 280	M4E 094-HA	Ⓐ	1~ 230	50	1100	1080	5.30	12.0/400	100	-40 to +60	A2a)
			1~ 230	60	1350	990	4.70	12.0/450	400	-40 to +55	

subject to alterations

(1) Nominal data in operating point with maximum load

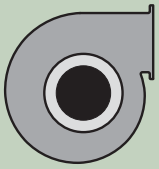
Curves



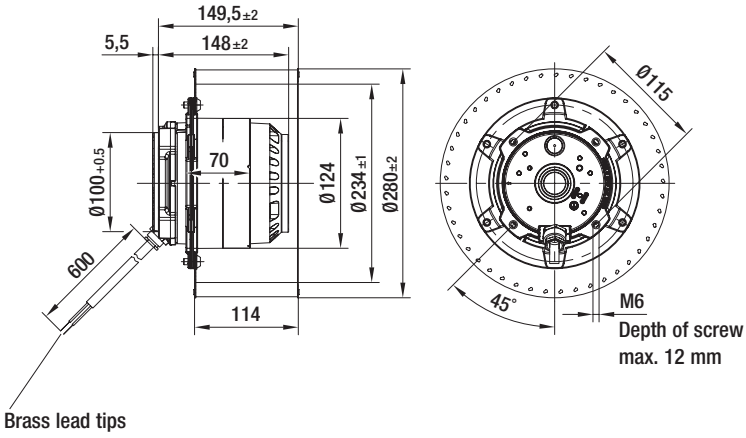
	n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]
Ⓐ 1	1250	845	4.20	73
Ⓐ 2	1380	555	3.02	73

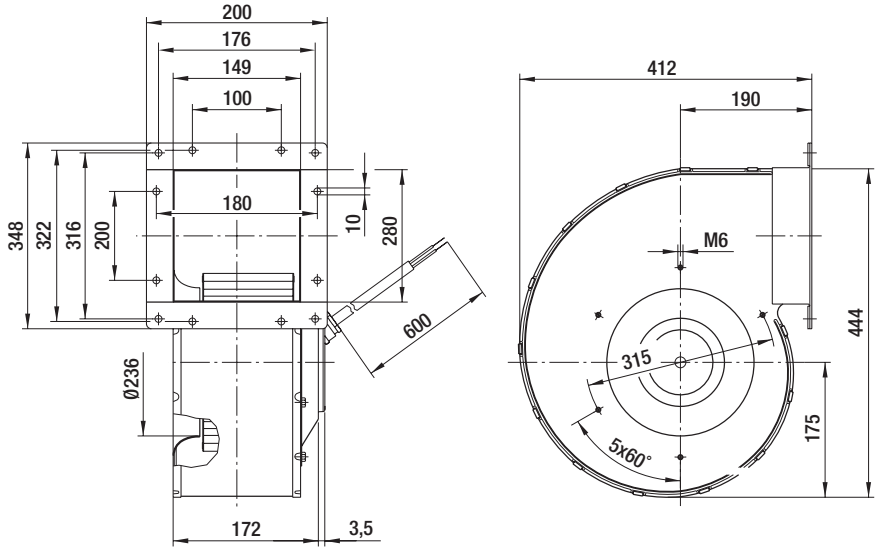
ebmpapst

- **Motor protection:** Design with thermal overload protector
- **Cable exit:** Diagonal
- **Protection class:** I (acc. to EN 61800-5-1)
- **Product conforming to standard:** CE



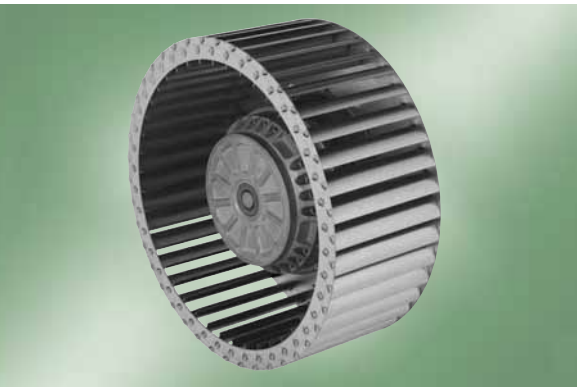
Centrifugal fan	Mass of centrifugal fan kg	Centrifugal blower with flange (small)	Mass of centrifugal blower kg
R4E 280-CC21 -01	10.2	**G4E 280-CA21 -01**	14.0





AC centrifugal fans

single inlet, Ø 280



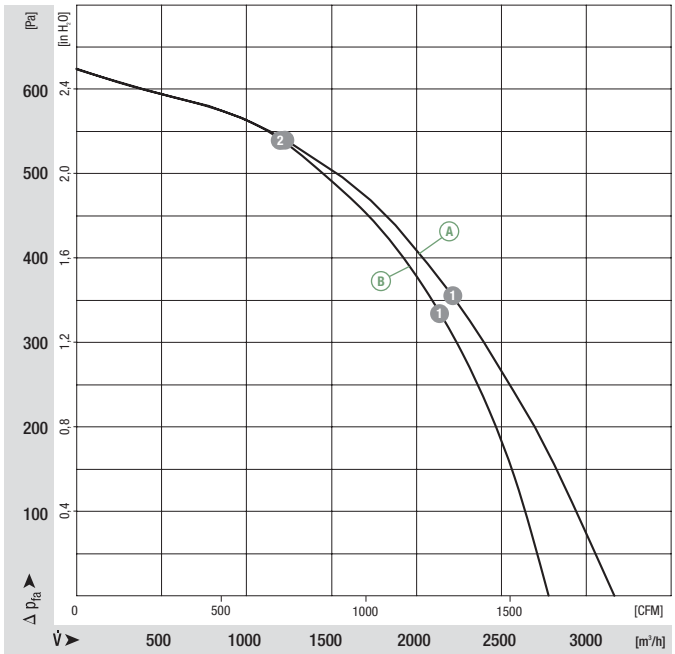
- **Material:** Impeller: Galvanised sheet steel
  Rotor: Cast in aluminium
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 54 (acc. to EN 60529)
- **Insulation class:** "F"
- **Mounting position:** Any
- **Condensate discharge holes:** On rotor and stator sides
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage	Frequency	Speed/rpm (1)	Max. power input (1)	Max. current draw (1)	Capacitor	Min. back pressure	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VAC**	**Hz**	**rpm**	**kW**	**A**	**µF/VDB**	**Pa**	**°C**	p. 596 f.
R4D 280 (2)	M4D 110-IA	Ⓐ	3~ 230/400	50	1330	1.32	4.75/2.75	—	0	-25 to +65	D1)/D2)
R4E 280	M4E 110-IA	Ⓑ	1~ 230	50	1230	1.05	4.75	16.0/450	100	-25 to +50	A2a)

subject to alterations

(1) Nominal data in operating point with maximum load (2) 230 VAC Δ / 400 VAC Y

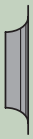
Curves



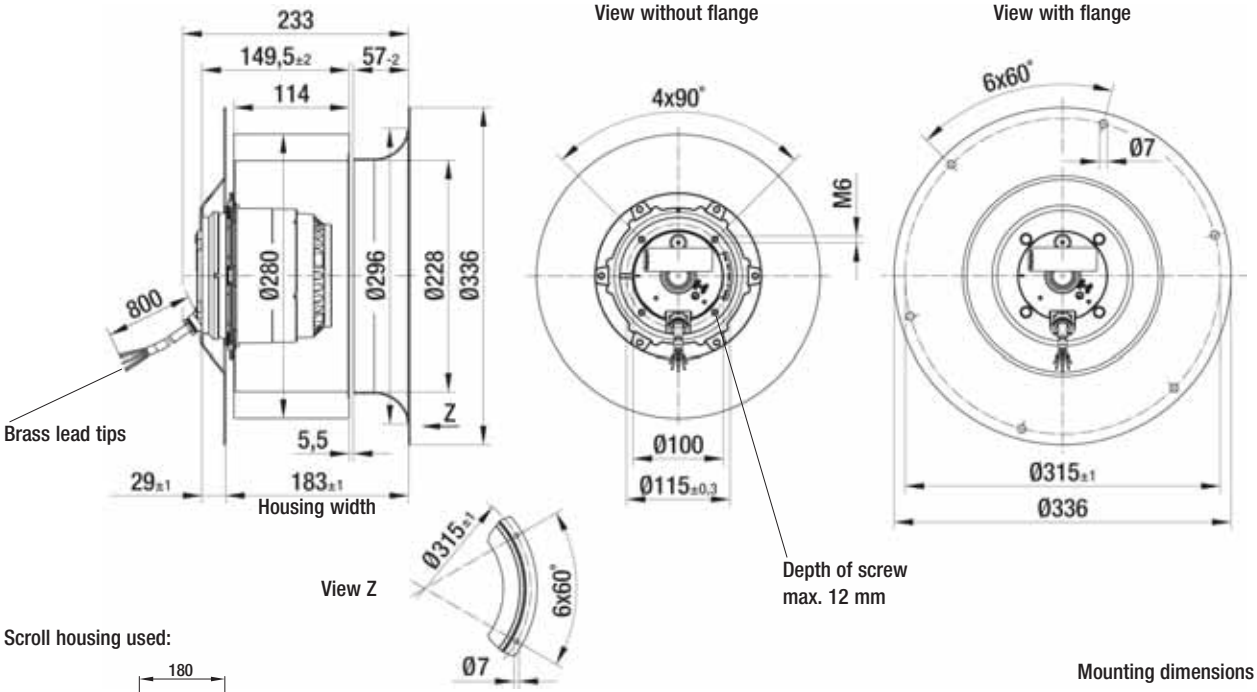
		n [rpm]	P_1 [kW]	I [A]	Lp_A [dB(A)]
Ⓐ	1	1390	0.87	3.79/2.19	77
Ⓐ	2	1440	0.51	3.29/1.90	72
Ⓑ	1	1340	0.82	3.59	76
Ⓑ	2	1425	0.54	2.34	72

ebmpapst

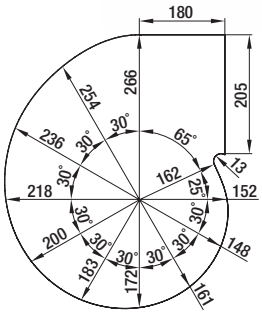
- **Motor protection:** Design with thermal overload protector
- **Cable exit:** Diagonal
- **Protection class:** I (acc. to EN 61800-5-1)
- **Product conforming to standard:** CE
- **Approvals:** VDE (acc. to EN 60034)



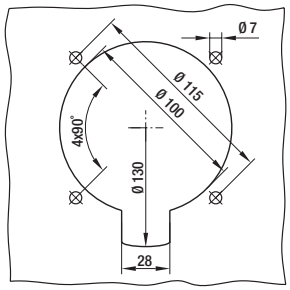
Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle	Flange
R4D 280-CI03 -01	14.5	28010-2-4013	10280-2-4017
R4E 280-CI01 -01	14.5	28010-2-4013	10280-2-4017



Scroll housing used:



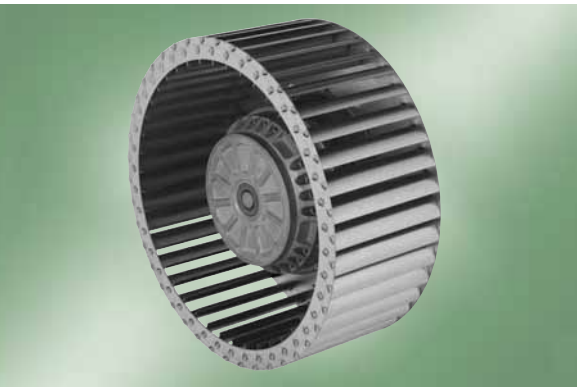
Mounting dimensions



Inlet nozzle p. 552
Capacitor p. 560 f.
Electr. connections p. 596 f.

AC centrifugal fans

single inlet, Ø 280



- **Material:** Impeller: Galvanised sheet steel
  Rotor: Ⓐ cast in aluminium, Ⓑ coated in black
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 54 (acc. to EN 60529)
- **Insulation class:** "F"
- **Mounting position:** Any
- **Condensate discharge holes:** Ⓐ on rotor and stator sides, Ⓑ none
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

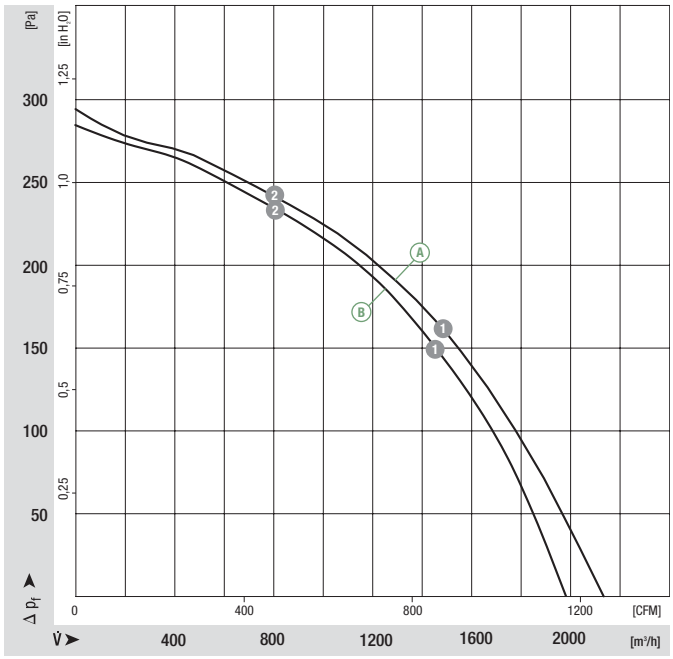
Nominal data

Type	Motor	Curve	Nominal voltage	Frequency	Speed/rpm (1)	Max. power input (1)	Max. current draw (1)	Capacitor	Min. back pressure	Perm. amb. temp.	Electr. connection
			VAC	Hz	rpm	kW	A	µF/VDB	Pa	°C	p. 596 f.
R6D 280 (2)	M6D 110-EF	Ⓐ	3~ 230/400	50	870	0.45	1.56/0.90	—	0	-25 to +70	D1)/D2)
R6E 280	M6E 094-HA	Ⓑ	1~ 230	50	795	0.42	1.95	12.0/450	0	-25 to +55	A2a)

subject to alterations

(1) Nominal data in operating point with maximum load (2) 230 VAC Δ / 400 VAC Y

Curves

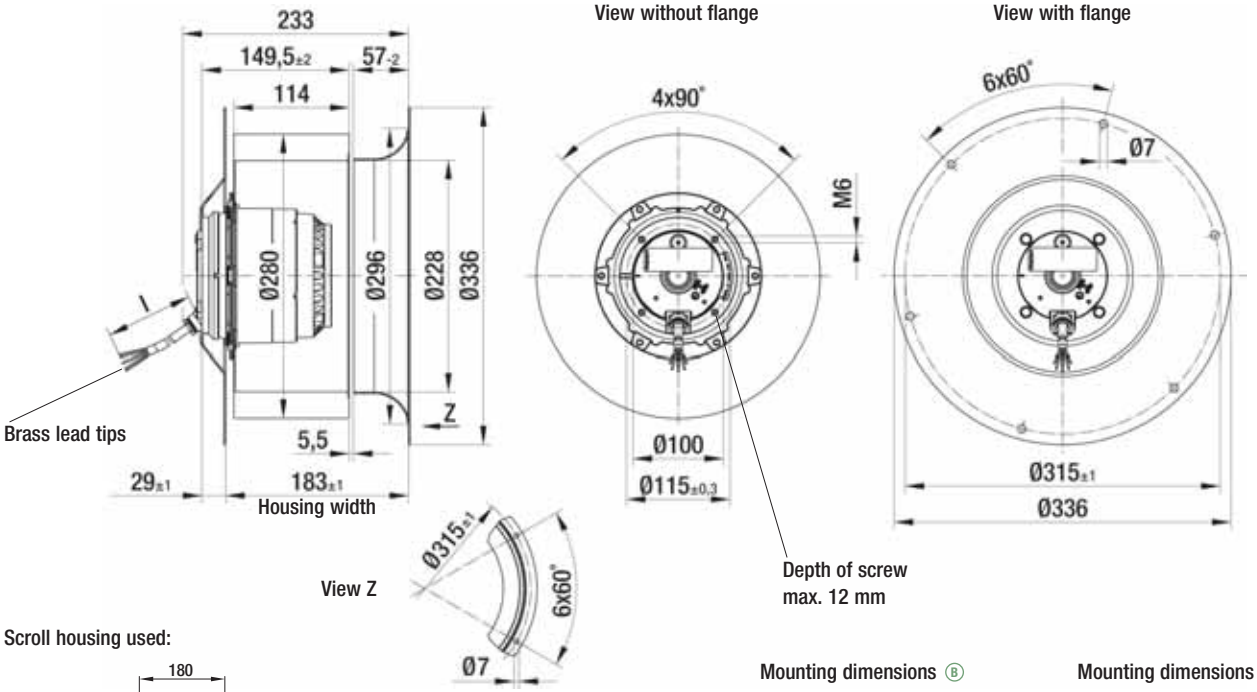


	n [rpm]	P_1 [kW]	I [A]	Lp_A [dB(A)]
Ⓐ 1	930	0.29	1.30/0.75	66
Ⓐ 2	960	0.18	1.16/0.67	61
Ⓑ 1	890	0.34	1.60	66
Ⓑ 2	940	0.27	1.37	61

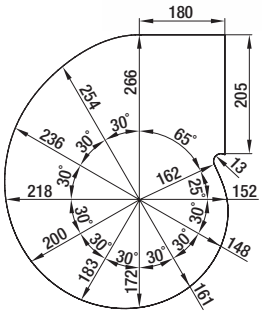
ebmpapst

- **Motor protection:** Design with thermal overload protector
- **Cable exit:** Diagonal
- **Protection class:** I (acc. to EN 61800-5-1)
- **Product conforming to standard:** CE
- **Approvals:** Ⓐ VDE (acc. to EN 60034)

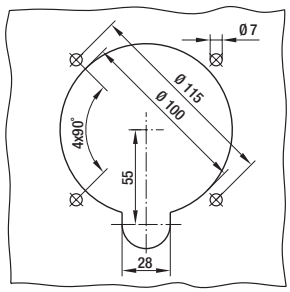
Centrifugal fan	Mass of centrifugal fan kg	Dimensions l	Inlet nozzle	Flange
R6D 280-CE01 -01	10.0	800.0	28010-2-4013	10280-2-4017
R6E 280-CC05 -01	9.5	600.0	28010-2-4013	10280-2-4017



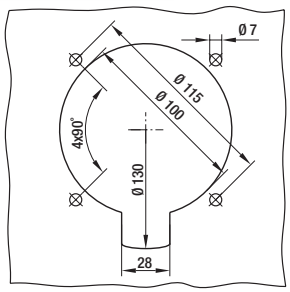
Scroll housing used:



Mounting dimensions Ⓑ



Mounting dimensions Ⓐ



Inlet nozzle p. 552
Capacitor p. 560 f.
Electr. connections p. 596 f.

AC centrifugal fan

single inlet, Ø 310

- **Material:** Impeller: Galvanised sheet steel
  Rotor: Cast in aluminium
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 54 (acc. to EN 60529)
- **Insulation class:** "F"
- **Mounting position:** Any
- **Condensate discharge holes:** On rotor and stator sides
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

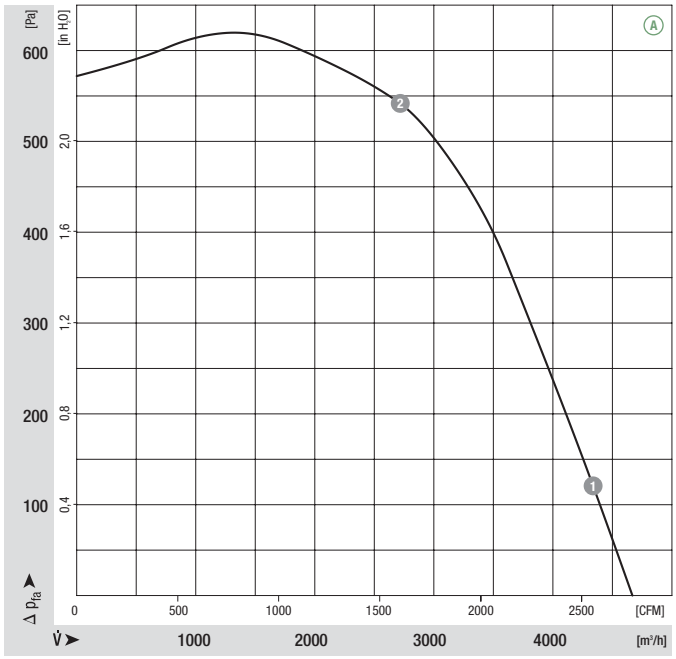
Nominal data

Type	Motor	Curve	Nominal voltage	Frequency	Speed/rpm (1)	Max. power input (1)	Max. current draw (1)	Capacitor	Min. back pressure	Perm. amb. temp.	Electr. connection
			VAC	Hz	rpm	kW	A	µF/VDB	Pa	°C	p. 596 f.
R4D 310 (2)	M4D 138-HF	Ⓐ	3~ 230/400	50	1310	2.18	6.75/3.90	—	0	-25 to +55	D1)/D2)

subject to alterations

(1) Nominal data in operating point with maximum load (2) 230 VAC Δ / 400 VAC Y

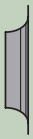
Curves



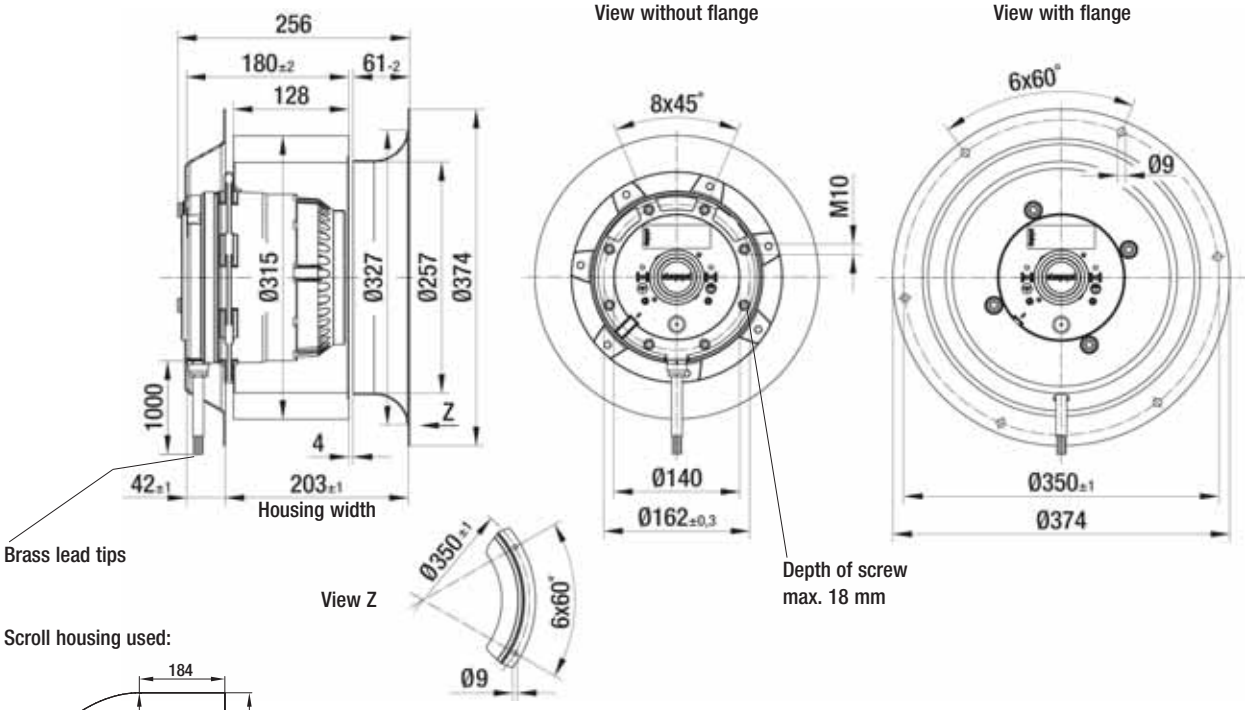
	n [rpm]	P_1 [kW]	I [A]	Lp_A [dB(A)]
Ⓐ 1	1330	1.96	6.29/3.63	82
Ⓐ 2	1410	1.12	4.43/2.56	77

ebmpapst

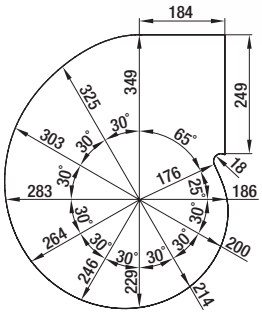
- **Motor protection:** Design with thermal overload protector
- **Cable exit:** Lateral
- **Protection class:** I (acc. to EN 61800-5-1)
- **Product conforming to standard:** CE
- **Approvals:** VDE (acc. to EN 60034)



Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle	Flange
R4D 310-CK03 -01	24.5	31010-2-4013	38310-2-4017



Scroll housing used:



AC centrifugal fans

single inlet, Ø 310

- **Material:** Impeller: Galvanised sheet steel
  Rotor: Cast in aluminium
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 54 (acc. to EN 60529)
- **Insulation class:** "F"
- **Mounting position:** Any
- **Condensate discharge holes:** On rotor and stator sides
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

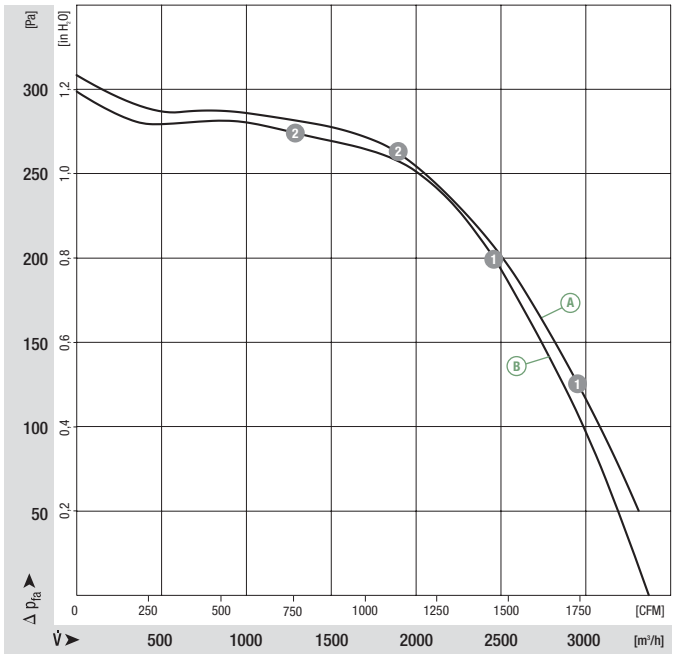
Nominal data

Type	Motor	Curve	Nominal voltage	Frequency	Speed/rpm (1)	Max. power input (1)	Max. current draw (1)	Capacitor	Min. back pressure	Perm. amb. temp.	Electr. connection
			VAC	Hz	rpm	kW	A	µF/VDB	Pa	°C	p. 596 f.
R6D 310 (2)	M6D 110-GF	Ⓐ	3~ 230/400	50	840	0.76	2.50/1.45	—	50	-25 to +50	D1)/D2)
R6E 310	M6E 110-IA	Ⓑ	1~ 230	50	800	0.77	3.37	16.0/400	0	-25 to +65	A2a)

subject to alterations

(1) Nominal data in operating point with maximum load (2) 230 VAC Δ / 400 VAC Y

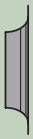
Curves



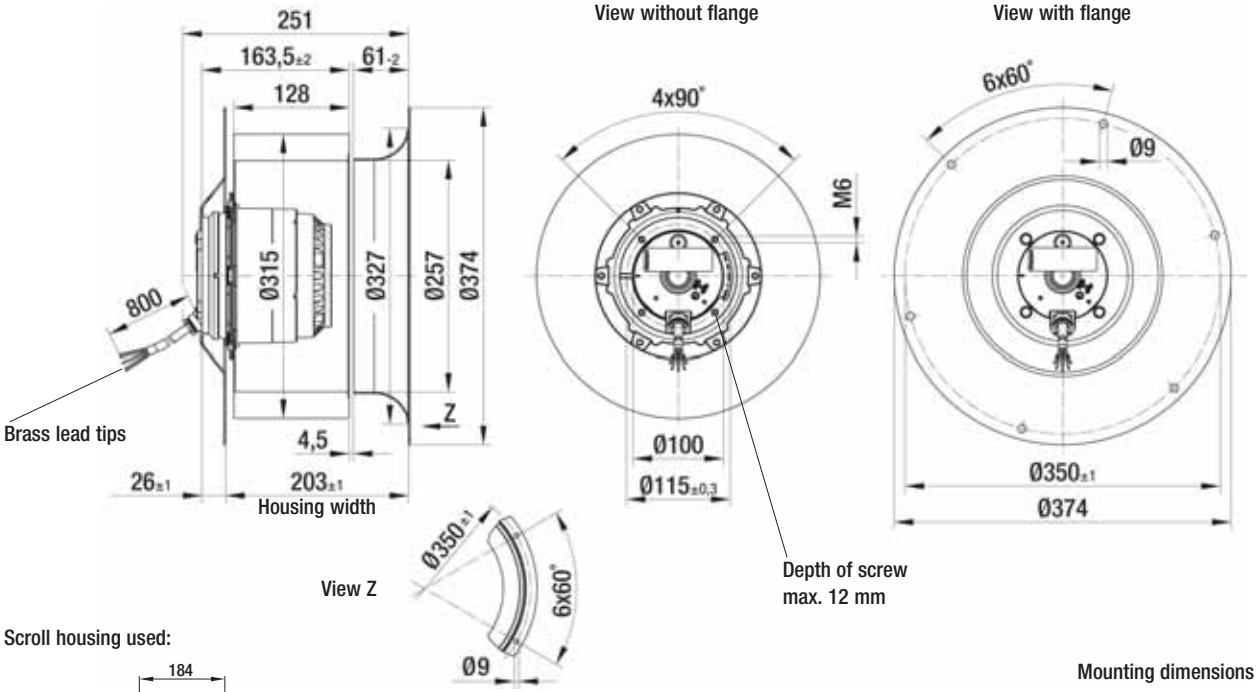
	n [rpm]	P_1 [kW]	I [A]	Lp_A [dB(A)]
Ⓐ 1	870	0.65	2.25/1.30	72
Ⓐ 2	930	0.40	1.75/1.01	67
Ⓑ 1	900	0.58	2.81	70
Ⓑ 2	950	0.42	2.32	65

ebmpapst

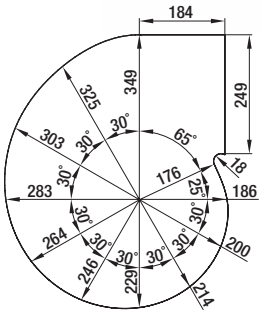
- **Motor protection:** Design with thermal overload protector
- **Cable exit:** Diagonal
- **Protection class:** I (acc. to EN 61800-5-1)
- **Product conforming to standard:** CE
- **Approvals:** VDE (acc. to EN 60034)



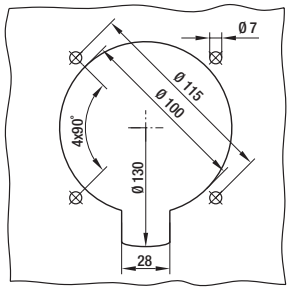
Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle	Flange
R6D 310-CG03 -01	12.5	31010-2-4013	10310-2-4017
R6E 310-CI01 -01	15.0	31010-2-4013	10310-2-4017



Scroll housing used:



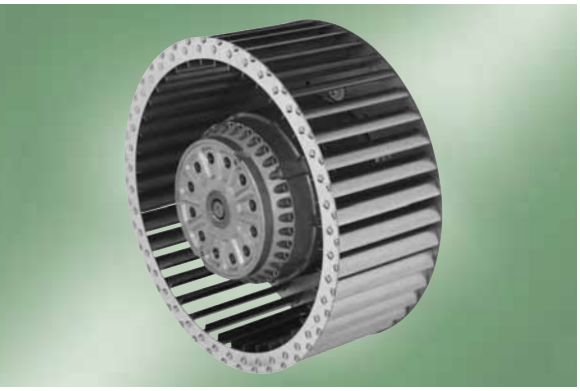
Mounting dimensions



Inlet nozzle p. 552
Capacitor p. 560 f.
Electr. connections p. 596 f.

AC centrifugal fan

single inlet, Ø 355



- **Material:** Impeller: Galvanised sheet steel
  Rotor: Cast in aluminium
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 20 (acc. to EN 60529)
- **Insulation class:** "F"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

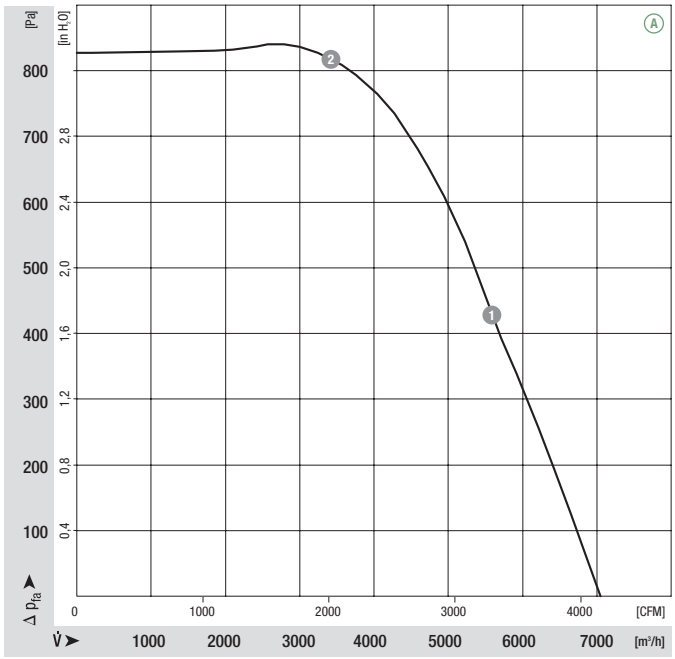
Nominal data

Type	Motor	Curve	Nominal voltage	Frequency	Speed/rpm (1)	Max. power input (1)	Max. current draw (1)	Capacitor	Min. back pressure	Perm. amb. temp.	Electr. connection
			VAC	Hz	rpm	kW	A	µF/VDB	Pa	°C	p. 596 f.
R4D 355 (2)	M4D 138-LA	Ⓐ	3~ 230/400	50	1300	4.36	13.75/7.95	—	0	-25 to +70	D1)/D2)

subject to alterations

(1) Nominal data in operating point with maximum load (2) 230 VAC Δ / 400 VAC Y

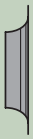
Curves



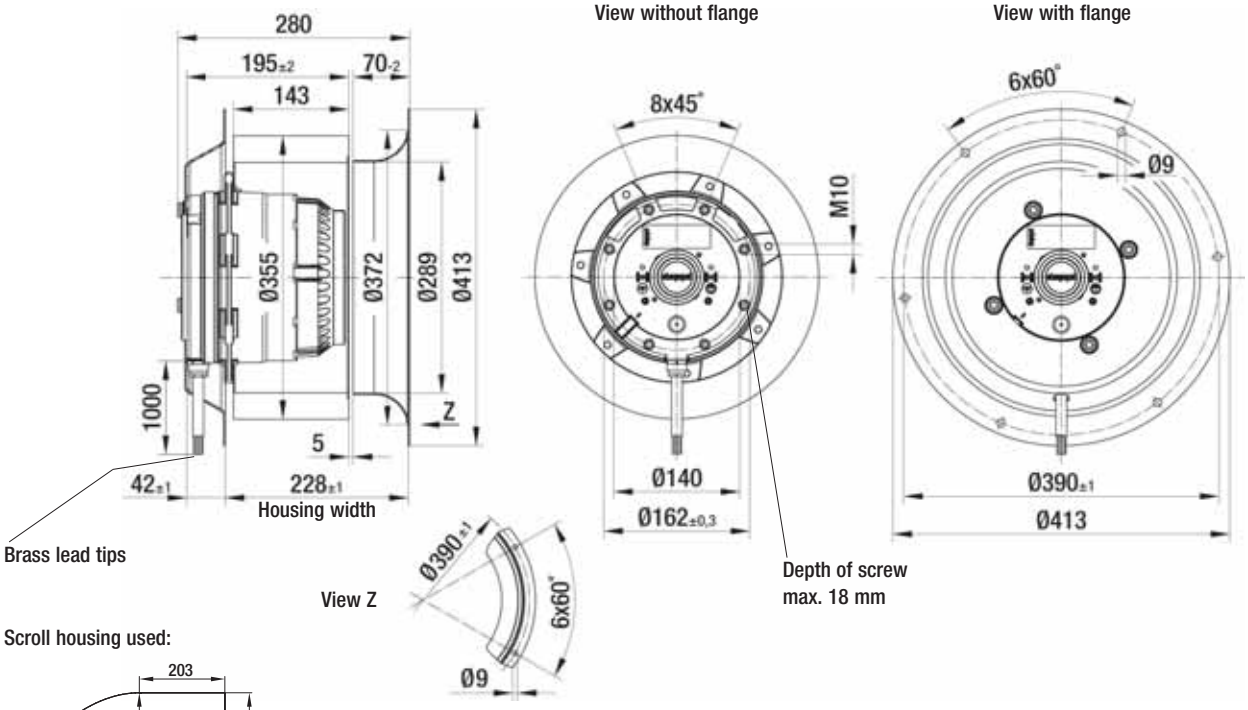
	n [rpm]	P_1 [kW]	I [A]	Lp_A [dB(A)]
Ⓐ 1	1370	3.20	10.58/6.11	86
Ⓐ 2	1430	1.89	7.52/4.34	80

ebmpapst

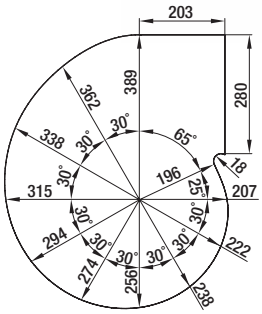
- **Motor protection:** Design with thermal overload protector
- **Cable exit:** Lateral
- **Protection class:** I (acc. to EN 61800-5-1)
- **Product conforming to standard:** CE
- **Approvals:** VDE (acc. to EN 60034)



Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle	Flange
R4D 355-CM03-01	28.0	35510-2-4013	38355-2-4017



Scroll housing used:



AC centrifugal fans

single inlet, Ø 355

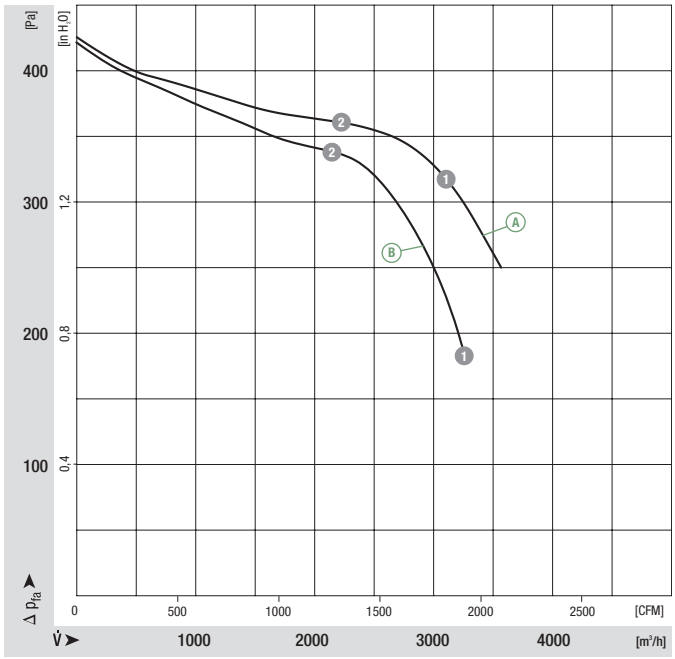
- **Material:** Impeller: Galvanised sheet steel
  Rotor: Cast in aluminium
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 54 (acc. to EN 60529)
- **Insulation class:** "F"
- **Mounting position:** Any
- **Condensate discharge holes:** On rotor and stator sides
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage	Frequency	Speed/rpm (1)	Max. power input (1)	Max. current draw (1)	Capacitor	Min. back pressure	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VAC**	**Hz**	**rpm**	**kW**	**A**	**µF/VDB**	**Pa**	**°C**	p. 596 f.
R6D 355 (2)	M6D 110-IA	Ⓐ	3~ 230/400	50	865	0.90	3.05/1.77	—	250	-25 to +50	D1)/D2)
R6E 355	M6E 110-IA	Ⓑ	1~ 230	50	830	0.83	3.90	16.0/400	175	-25 to +55	A2a)

subject to alterations

(1) Nominal data in operating point with maximum load (2) 230 VAC Δ / 400 VAC Y

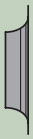
Curves



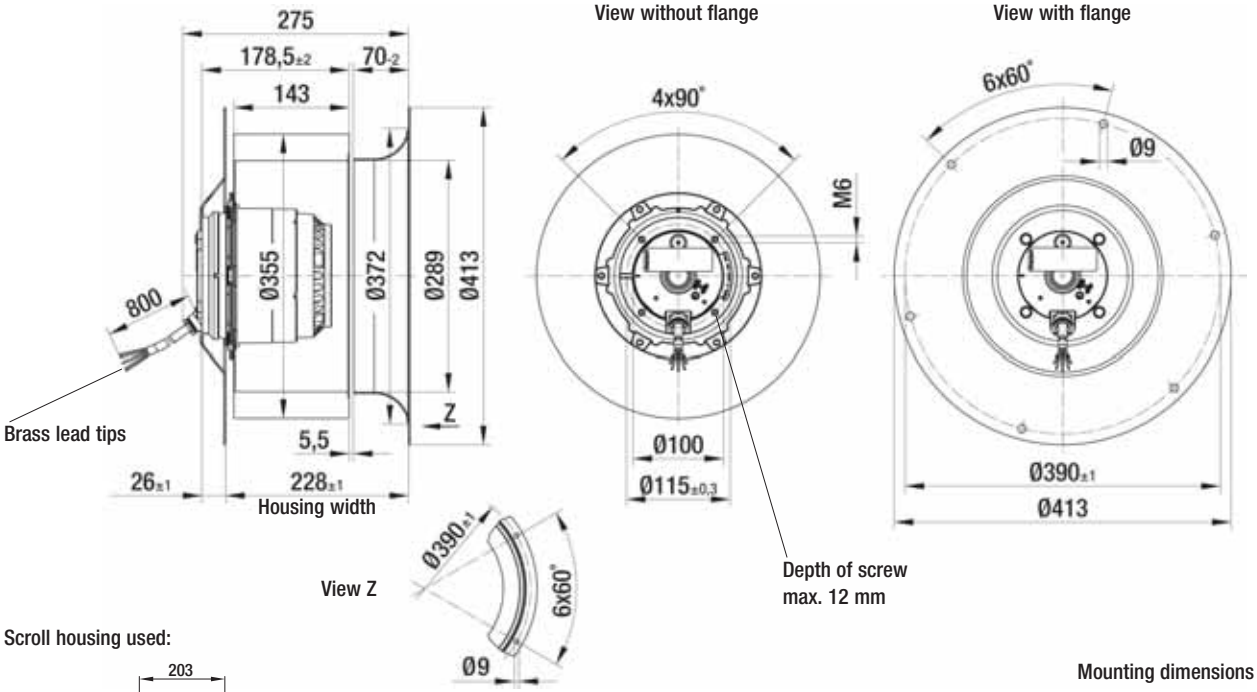
	n [rpm]	P_1 [kW]	I [A]	Lp_A [dB(A)]
Ⓐ 1	890	0.78	2.82/1.63	70
Ⓐ 2	920	0.59	2.44/1.41	68
Ⓑ 1	830	0.83	3.90	70
Ⓑ 2	890	0.61	2.90	67

ebmpapst

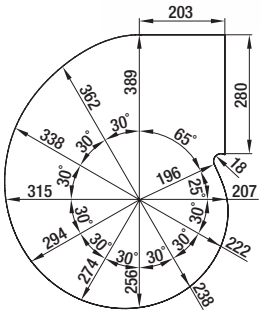
- **Motor protection:** Design with thermal overload protector
- **Cable exit:** Diagonal
- **Protection class:** I (acc. to EN 61800-5-1)
- **Product conforming to standard:** CE
- **Approvals:** VDE (acc. to EN 60034)



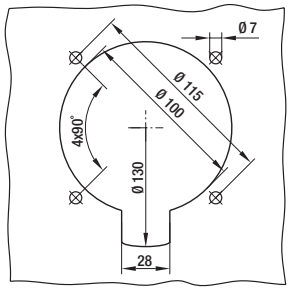
Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle	Flange
R6D 355-CI05 -01	15.5	35510-2-4013	10355-2-4017
R6E 355-CI01 -01	15.5	35510-2-4013	10355-2-4017



Scroll housing used:



Mounting dimensions



Inlet nozzle p. 552
Capacitor p. 560 f.
Electr. connections p. 596 f.

AC centrifugal fan

single inlet, Ø 400

- **Material:** Impeller: Galvanised sheet steel
  Rotor: Cast in aluminium
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 20 (acc. to EN 60529)
- **Insulation class:** "F"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data

Type	Motor	Curve	Nominal voltage	Frequency	Speed/rpm (1)	Max. power input (1)	Max. current draw (1)	Capacitor	Min. back pressure	Perm. amb. temp.	Electr. connection
			VAC	Hz	rpm	kW	A	µF/VDB	Pa	°C	p. 596 f.
R4D 400 (2)	M4D 138-NA	Ⓐ	3~ 230/400	50	1210	4.92	14.70/8.50	—	550 (3)	-25 to +35	D1)/D2)

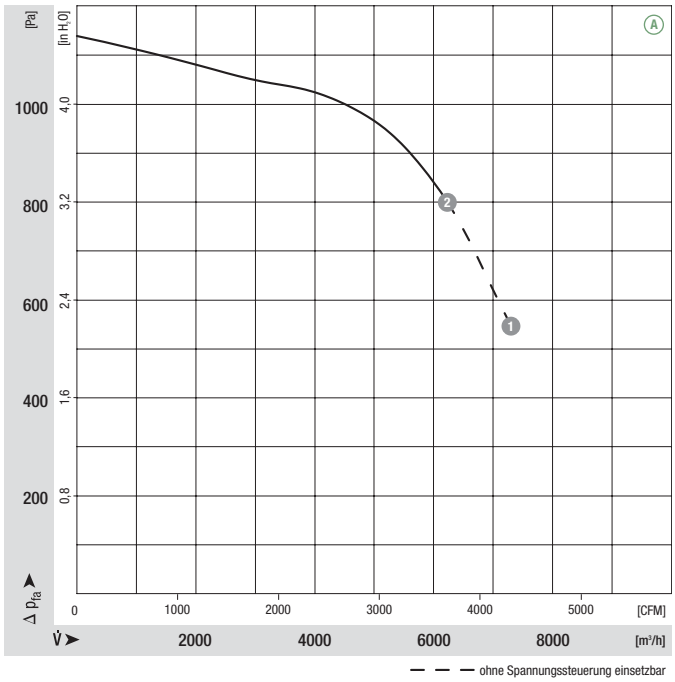
subject to alterations

(1) Nominal data in operating point with maximum load

(2) 230 VAC Δ / 400 VAC Y

(3) without voltage control

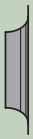
Curves



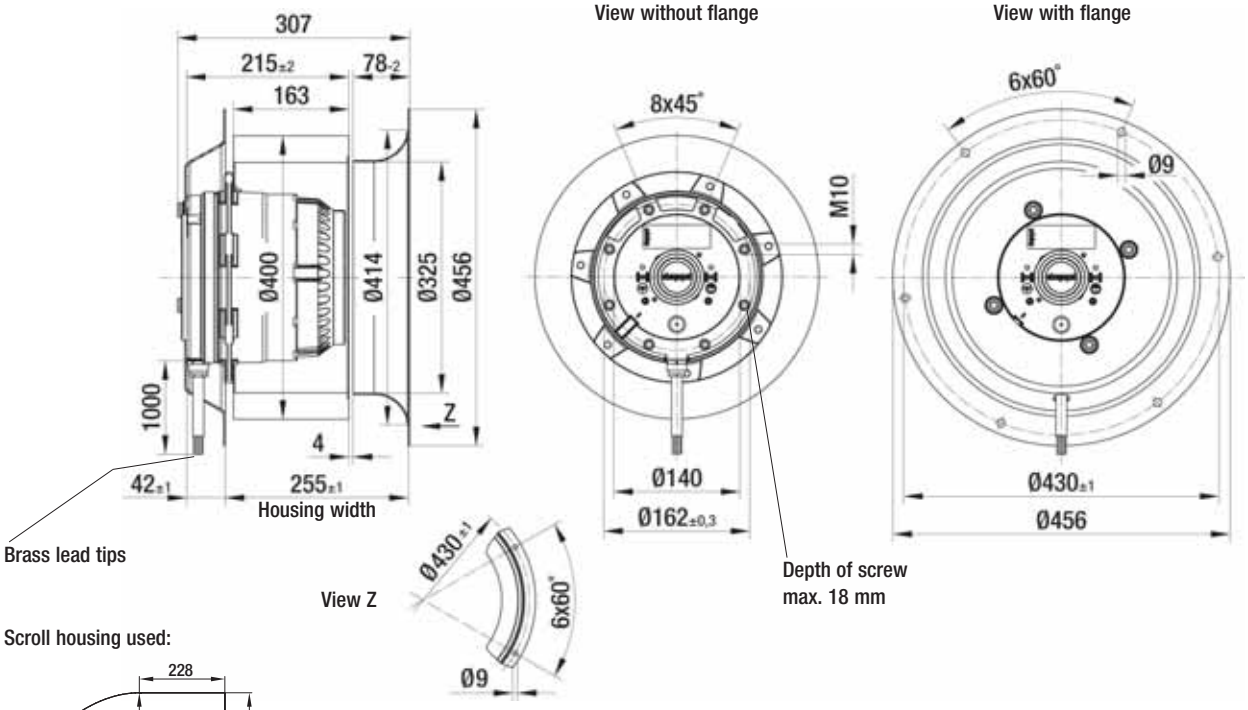
	n [rpm]	P_1 [kW]	I [A]	Lp_A [dB(A)]
Ⓐ 1	1210	4.92	14.70/8.50	87
Ⓐ 2	1300	3.70	11.19/6.46	86

ebmpapst

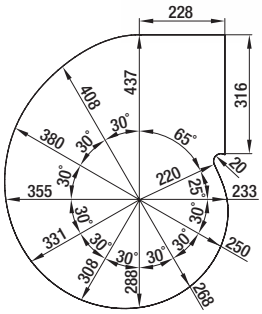
- **Motor protection:** Design with thermal overload protector
- **Cable exit:** Lateral
- **Protection class:** I (acc. to EN 61800-5-1)
- **Product conforming to standard:** CE
- **Approvals:** VDE (acc. to EN 60034)



Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle	Flange
R4D 400-C001 -01	32.5	40010-2-4013	38400-2-4017



Scroll housing used:



Inlet nozzle p. 552
Electr. connections p. 596 f.

AC centrifugal fans

single inlet, Ø 400

- **Material:** Impeller: Galvanised sheet steel
  Rotor: Cast in aluminium
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** Ⓐ IP 20, Ⓑ IP 54 (acc. to EN 60529)
- **Insulation class:** "F"
- **Mounting position:** Any
- **Condensate discharge holes:** Ⓐ none, Ⓑ on rotor and stator sides
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

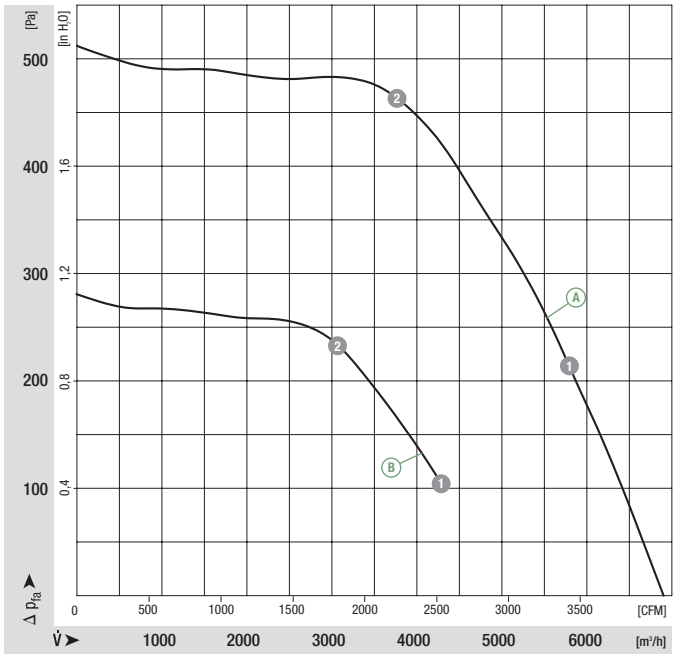
Nominal data

Type	Motor	Curve	Nominal voltage	Frequency	Speed/rpm (1)	Max. power input (1)	Max. current draw (1)	Capacitor	Min. back pressure	Perm. amb. temp.	Electr. connection
			VAC	Hz	rpm	kW	A	µF/VDB	Pa	°C	p. 596 f.
R6D 400 (2)	M6D 138-LA	Ⓐ	3~ 230/400	50	840	2.40	8.47/4.90	—	0	-25 to +75	D1)/D2)
R8D 400 (2)	M8D 138-HF	Ⓑ	3~ 230/400	50	615	0.89	3.46/2.00	—	100	-25 to +65	D1)/D2)

subject to alterations

(1) Nominal data in operating point with maximum load (2) 230 VAC Δ / 400 VAC Y

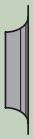
Curves



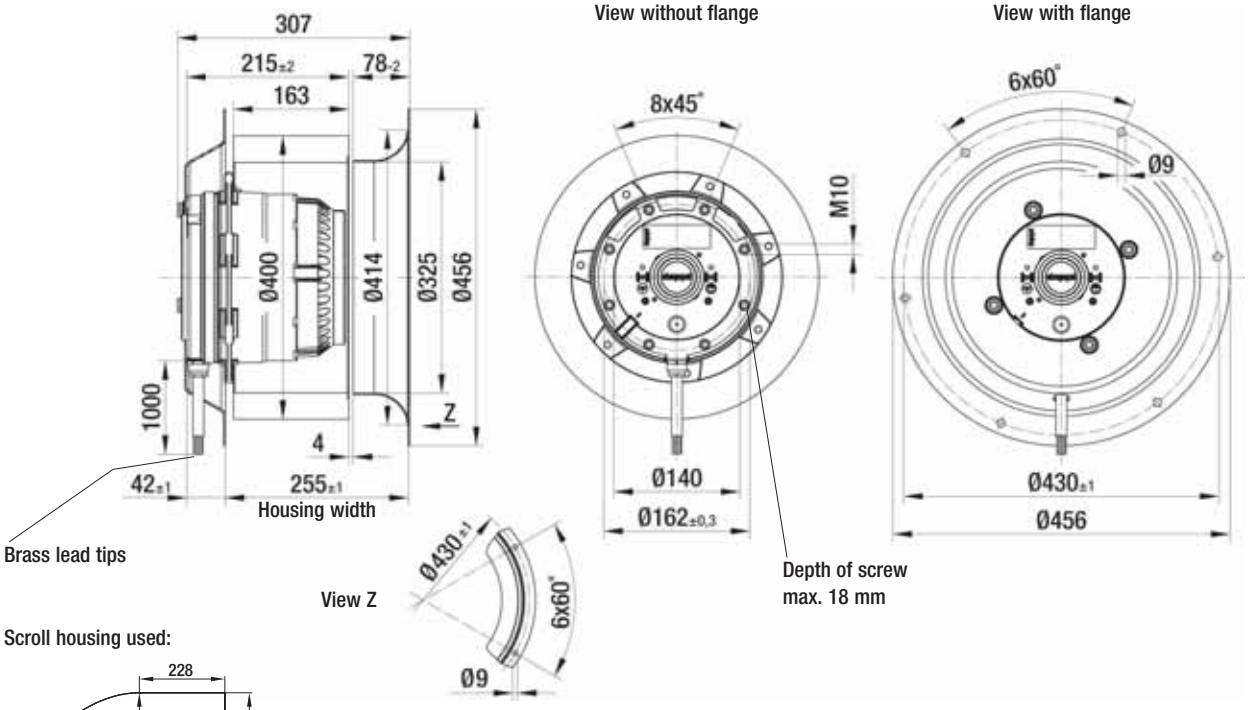
	n [rpm]	P_1 [kW]	I [A]	Lp_A [dB(A)]
Ⓐ 1	890	1.86	7.10/4.10	80
Ⓐ 2	940	1.16	5.51/3.18	74
Ⓑ 1	615	0.89	3.46/2.00	71
Ⓑ 2	675	0.60	2.74/1.58	67

ebmpapst

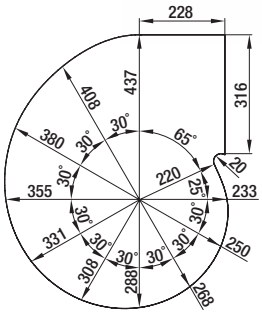
- **Motor protection:** Design with thermal overload protector
- **Cable exit:** Lateral
- **Protection class:** I (acc. to EN 61800-5-1)
- **Product conforming to standard:** CE
- **Approvals:** VDE (acc. to EN 60034)



Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle	Flange
R6D 400-CM05 -01	29.0	40010-2-4013	38400-2-4017
R8D 400-CK05 -01	26.0	40010-2-4013	38400-2-4017



Scroll housing used:



Inlet nozzle p. 552
Electr. connections p. 596 f.

AC centrifugal blowers

dual inlet, Ø 140

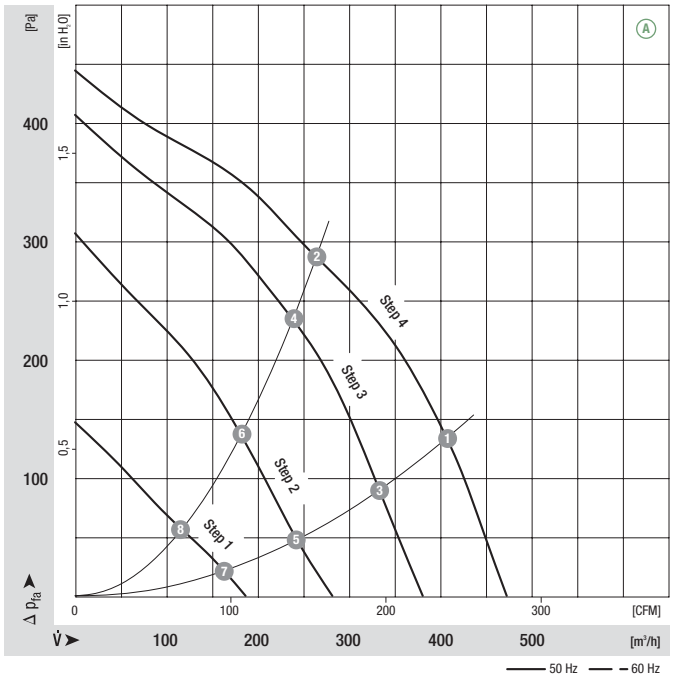
- **Material:** Housing: PP plastic, black
  Impeller: PP plastic, white
  Rotor: Partially cast in aluminium
  Terminal box: PP plastic, black
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 44
- **Insulation class:** "F"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Design:** 4-step blower with integrated terminal box, standard external-rotor motor anti-vibration mounted on one side
- **Bearings:** Maintenance-free ball bearings

Nominal data

Type	Motor	Curve	Nominal voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Sound pressure level	Min. back pressure	Perm. amb. temp.	Electr. connection
			VAC	Hz	m³/h	rpm	W	A	µF/VDB	dB(A)	Pa	°C	
D2E 140	M2E 068-CF	Ⓐ	1~ 230	50	470	1150	130	0.58	2.0/400	58	0	-25 to +50	—
			1~ 230	60	430	1050	130	0.58	2.0/400	56	0	-25 to +40	

subject to alterations

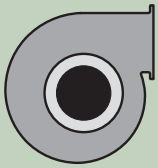
Curves



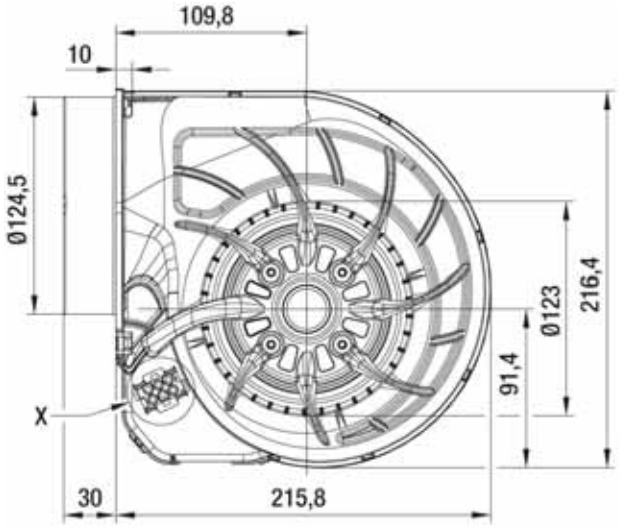
	n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]
Ⓐ 1	1675	118	0.51	56
Ⓐ 2	2235	100	0.43	59
Ⓐ 3	1385	93	0.41	52
Ⓐ 4	2020	80	0.36	56
Ⓐ 5	1000	73	0.33	46
Ⓐ 6	1540	68	0.31	49
Ⓐ 7	690	56	0.26	36
Ⓐ 8	1015	55	0.25	38

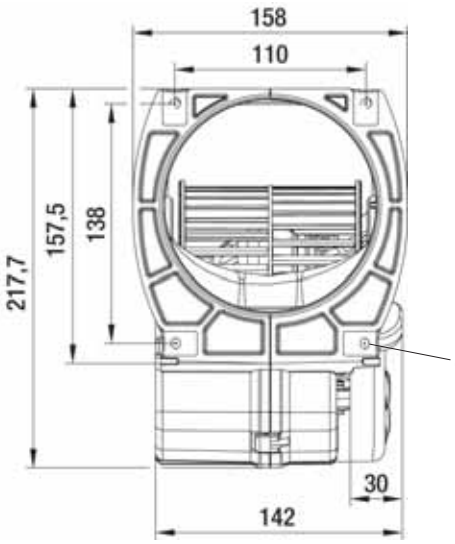
ebmpapst

- **Motor protection:** TOP wired internally
- **Connection leads:** Via plug
- **Protection class:** I
- **Capacitor:** FPU (P2) integrated in terminal box completely wired up and ready for plug-in
- **Product conforming to standards:** EN 60335-2-31, CE
- **Approvals:** VDE



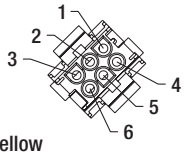
Centrifugal blower with flange	Mass of centrifugal blower kg
D2E 140-HR97 -07	2.3



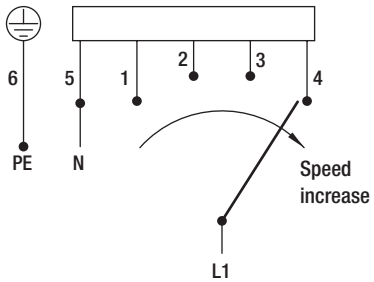


View X
AMP Universal Mate-N-Lok coded plug system
Connector shell: AMP 926 682-3
6 x plug pin: AMP 926 886-1

1 =	Step 1 (min.)	white
2 =	Step 2	red
3 =	Step 3	grey
4 =	Step 4 (max.)	black
5 =	N	blue
6 =	Protective earth	green/yellow



Electrical connection:
When changing speeds, switch must break the circuit



Guard grille p. 556
Connection lead p. 558
Capacitor p. 560 f.

AC centrifugal blowers

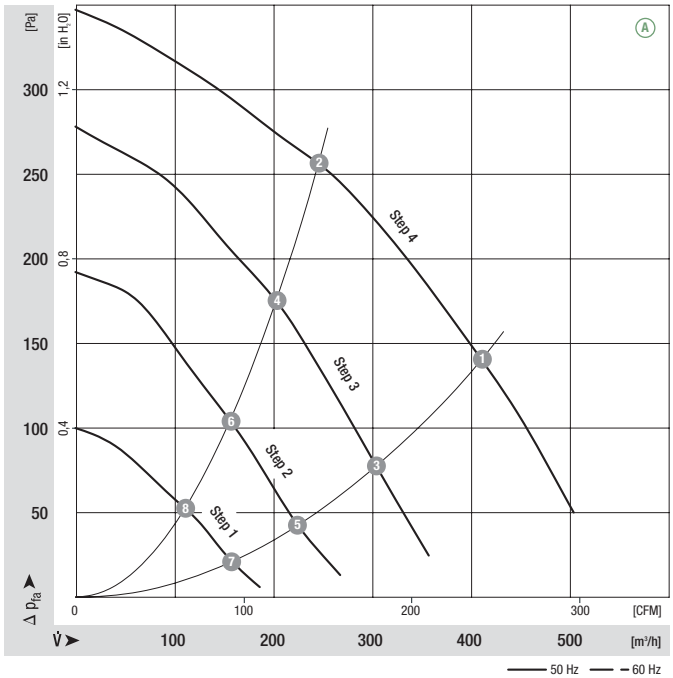
dual inlet, Ø 146

- **Material:** Housing: PP plastic, black
  Impeller: PA plastic, red-brown
  Rotor: Partially cast in aluminium
  Terminal box: PP plastic, black
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 44
- **Insulation class:** "F"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Design:** 4-step blower with integrated terminal box, standard external-rotor motor anti-vibration mounted via support plate
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Sound pressure level	Min. back pressure	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VAC**	**Hz**	**m³/h**	**rpm**	**W**	**A**	**µF/VDB**	**dB(A)**	**Pa**	**°C**	
D2E 146	M2E 068-CA	Ⓐ	1~ 230 1~ 230	50 60	520 375	1350 1400	120 125	0.53 0.55	3.0 / 400 3.0 / 400	51 53	50 100	-25 to +55 -25 to +40	—

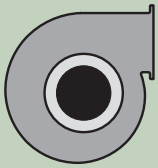
subject to alterations

Curves

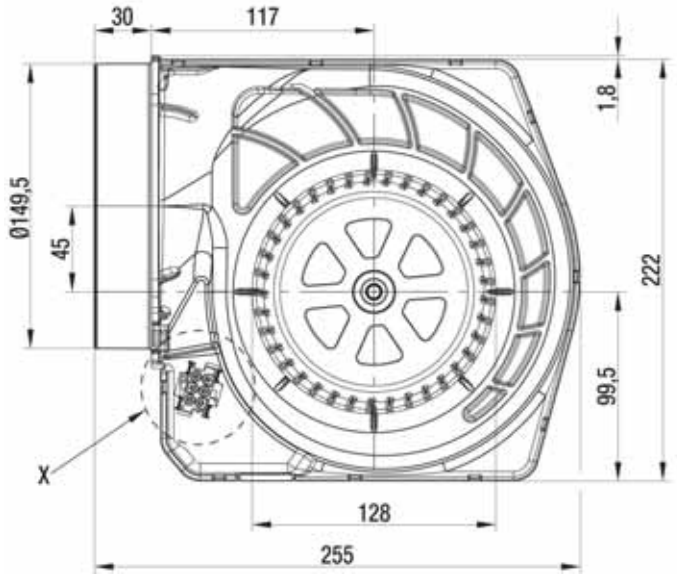


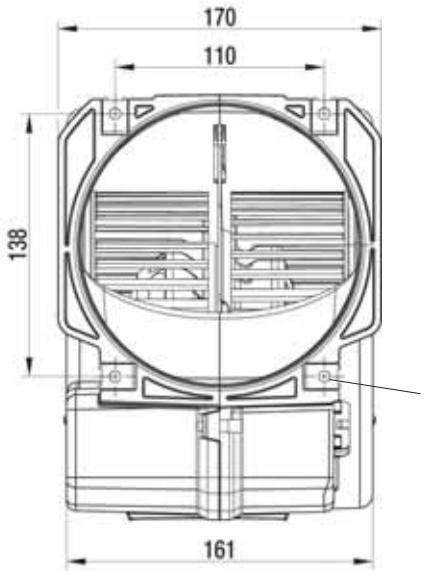
	n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]
Ⓐ 1	1635	113	0.49	55
Ⓐ 2	2115	104	0.45	58
Ⓐ 3	1210	72	0.36	48
Ⓐ 4	1740	66	0.35	53
Ⓐ 5	925	58	0.31	40
Ⓐ 6	1355	55	0.30	47
Ⓐ 7	660	48	0.27	31
Ⓐ 8	960	46	0.26	38

- **Motor protection:** TOP wired internally
- **Connection leads:** Via plug
- **Protection class:** I
- **Capacitor:** FPU (P2) integrated in terminal box completely wired up and ready for plug-in
- **Product conforming to standards:** EN 60335-2-31, CE
- **Approvals:** VDE



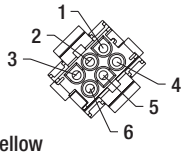
Centrifugal blower with flange	Mass of centrifugal blower kg
D2E 146-KA45 -01	2.5



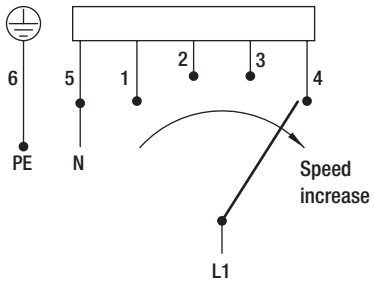


View X
AMP Universal Mate-N-Lok coded plug system
Connector shell: AMP 926 682-3
6 x plug pin: AMP 926 886-1

1 =	Step 1 (min.)	white
2 =	Step 2	red
3 =	Step 3	grey
4 =	Step 4 (max.)	black
5 =	N	blue
6 =	Protective earth	green/yellow



Electrical connection:
When changing speeds, switch must break the circuit



Guard grille p. 556
Connection lead p. 558
Capacitor p. 560 f.

AC centrifugal blowers

dual inlet, Ø 146

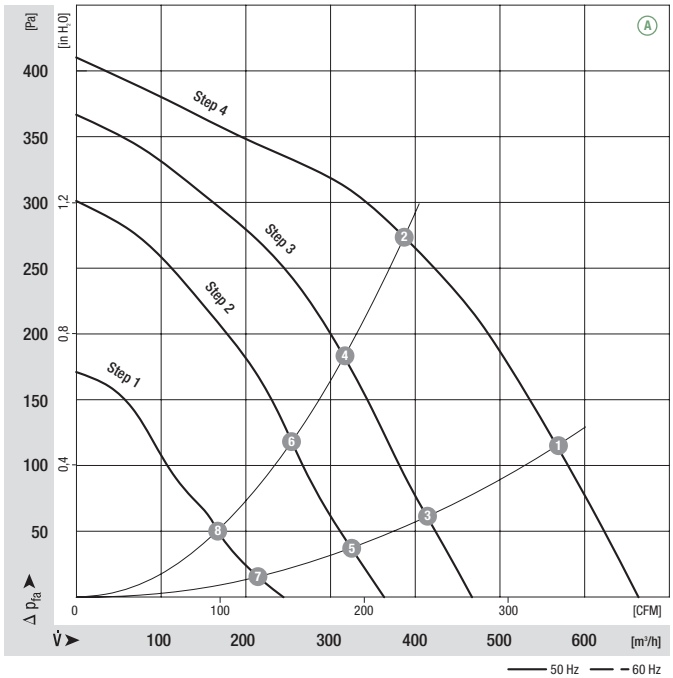
- **Material:** Housing: PP plastic, black
  Impeller: PA plastic, red-brown
  Rotor: Partially cast in aluminium
  Terminal box: PP plastic, black
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 44
- **Insulation class:** "F"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Design:** 4-step blower with integrated terminal box, standard external-rotor motor anti-vibration mounted via support plate
- **Bearings:** Maintenance-free ball bearings

Nominal data

Type	Motor	Curve	Nominal voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Sound pressure level	Min. back pressure	Perm. amb. temp.	Electr. connection
			VAC	Hz	m³/h	rpm	W	A	µF/VDB	dB(A)	Pa	°C	
D2E 146	M2E 068-CF	Ⓐ	1~ 230	50	665	1250	160	0.70	4.0 / 400	53	0	-25 to +50	—
			1~ 230	60	390	1950	170	0.75	4.0 / 400	58	200	-25 to +40	

subject to alterations

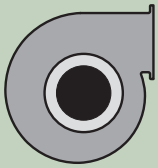
Curves



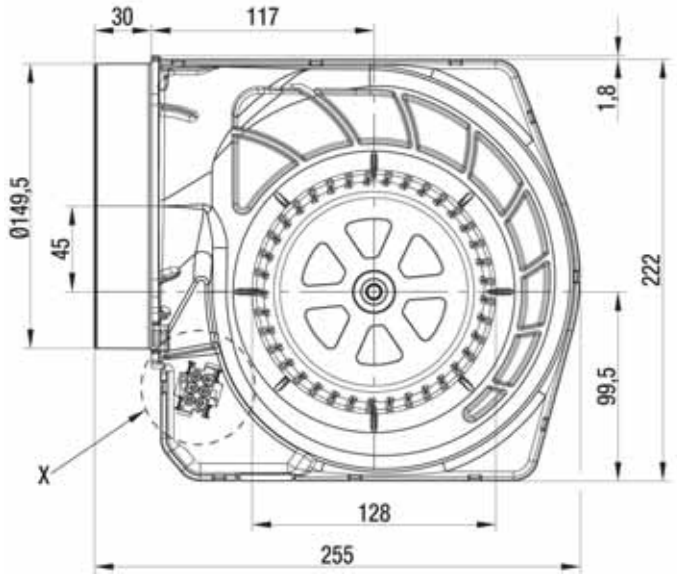
	n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]
Ⓐ 1	1675	151	0.66	59
Ⓐ 2	2185	136	0.60	62
Ⓐ 3	1230	101	0.50	50
Ⓐ 4	1800	92	0.47	55
Ⓐ 5	950	85	0.43	43
Ⓐ 6	1440	80	0.42	49
Ⓐ 7	660	71	0.37	31
Ⓐ 8	960	68	0.36	38

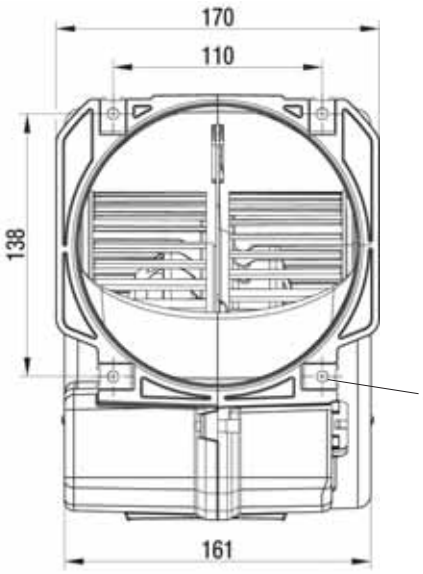
ebmpapst

- **Motor protection:** TOP wired internally
- **Connection leads:** Via plug
- **Protection class:** I
- **Capacitor:** FPU (P2) integrated in terminal box completely wired up and ready for plug-in
- **Product conforming to standards:** EN 60335-2-31, CE
- **Approvals:** VDE



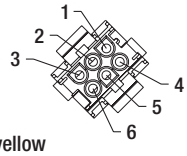
Centrifugal blower with flange	Mass of centrifugal blower kg
D2E 146-KB27 -01	2.7



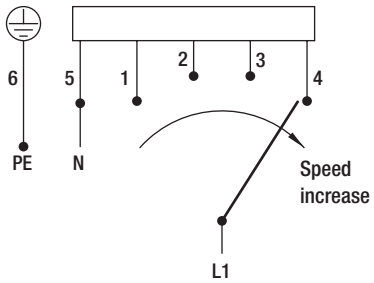


View X
AMP Universal Mate-N-Lok coded plug system
Connector shell: AMP 926 682-3
6 x plug pin: AMP 926 886-1

1 =	Step 1 (min.)	white
2 =	Step 2	red
3 =	Step 3	grey
4 =	Step 4 (max.)	black
5 =	N	blue
6 =	Protective earth	green/yellow



Electrical connection:
When changing speeds, switch must break the circuit



Guard grille p. 556
Connection lead p. 558
Capacitor p. 560 f.

AC centrifugal blowers

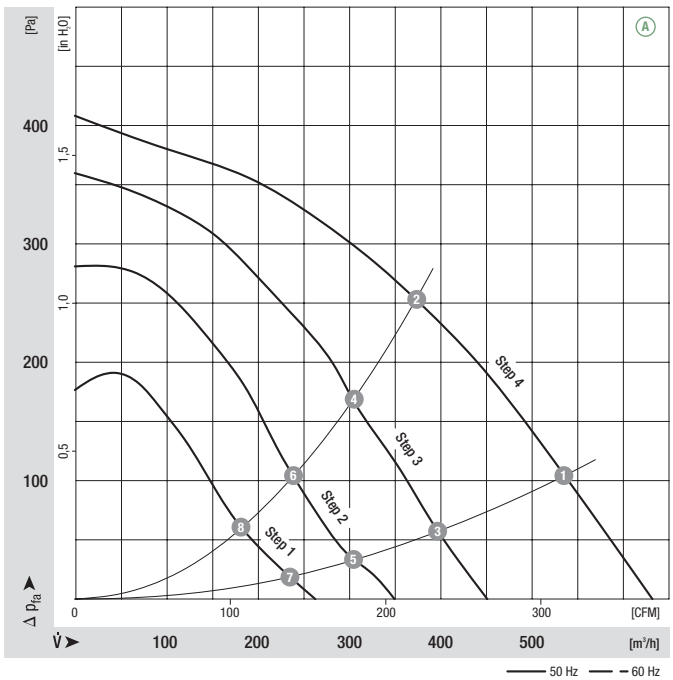
dual inlet, Ø 146

- **Material:** Housing: PP plastic, black
  Impeller: PP plastic, white
  Rotor: Partially cast in aluminium
  Terminal box: PP plastic, black
- **Direction of rotation:** Counter-clockwise, seen on plug
- **Type of protection:** IP 20
- **Insulation class:** "F"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Design:** 4-step blower with integrated terminal box, EW motor
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Sound pressure level	Min. back pressure	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VAC**	**Hz**	**m³/h**	**rpm**	**W**	**A**	**µF/VDB**	**dB(A)**	**Pa**	**°C**	
D2E 146	M2E 068-CF	Ⓐ	1~ 230	50	630	1100	150	0.66	4.0 / 400	51	0	-25 to +50	—
			1~ 230	60	415	1600	160	0.71	4.0 / 400	55	150	-25 to +45	

subject to alterations

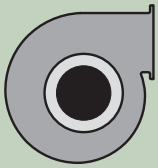
Curves



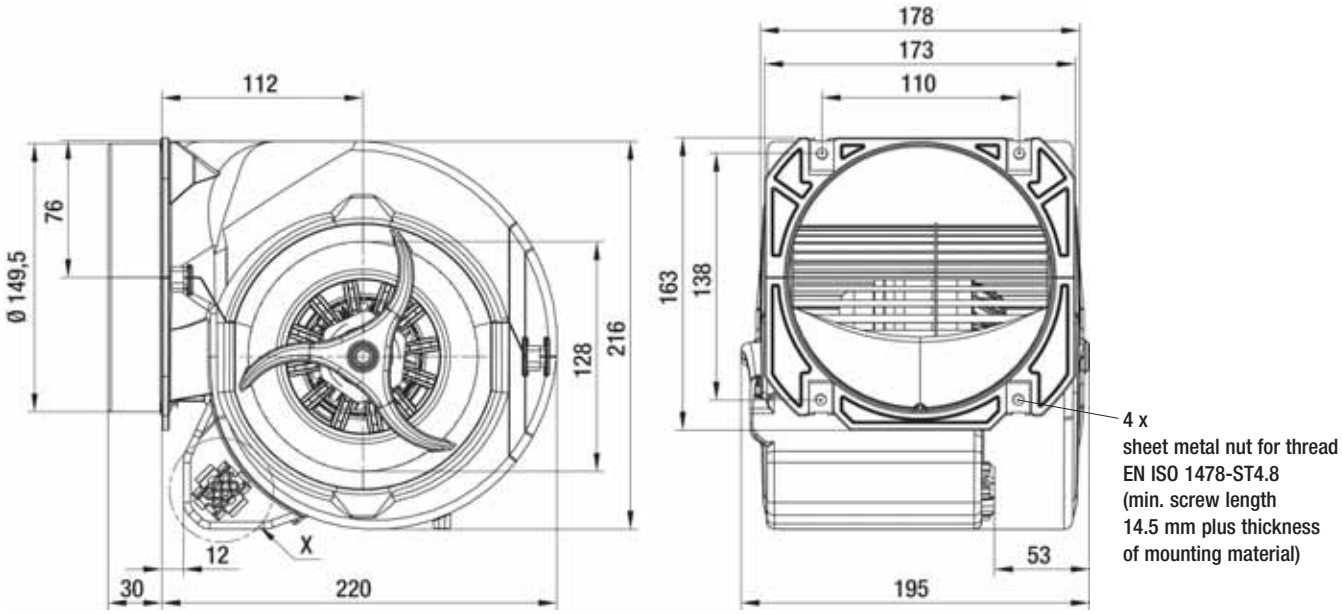
		n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]
Ⓐ	1	1490	143	0.62	51
Ⓐ	2	2005	133	0.59	55
Ⓐ	3	1110	98	0.49	47
Ⓐ	4	1635	92	0.47	49
Ⓐ	5	890	81	0.42	37
Ⓐ	6	1315	77	0.42	43
Ⓐ	7	680	69	0.38	31
Ⓐ	8	990	67	0.37	35

ebmpapst

- **Motor protection:** TOP wired internally
- **Connection leads:** Via plug
- **Protection class:** I
- **Capacitor:** FPU (P2) integrated in terminal box completely wired up and ready for plug-in
- **Product conforming to standards:** EN 60335-2-31, CE
- **Approvals:** VDE, CCC, GOST

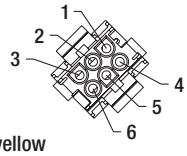


Centrifugal blower with flange	Mass of centrifugal blower kg
D2E 146-HR93 -03	3.0

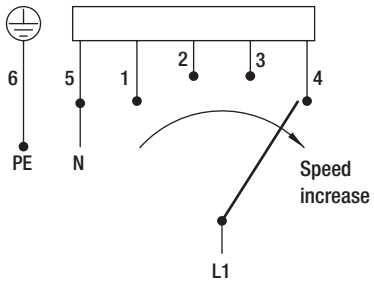


View X
AMP Universal Mate-N-Lok coded plug system
Connector shell: AMP 926 682-3
6 x plug pin: AMP 926 886-1

1 =	Step 1 (min.)	white
2 =	Step 2	red
3 =	Step 3	grey
4 =	Step 4 (max.)	black
5 =	N	blue
6 =	Protective earth	green/yellow



Electrical connection:
When changing speeds, switch must break the circuit



Guard grille p. 556
Connection lead p. 558
Capacitor p. 560 f.

AC centrifugal blowers

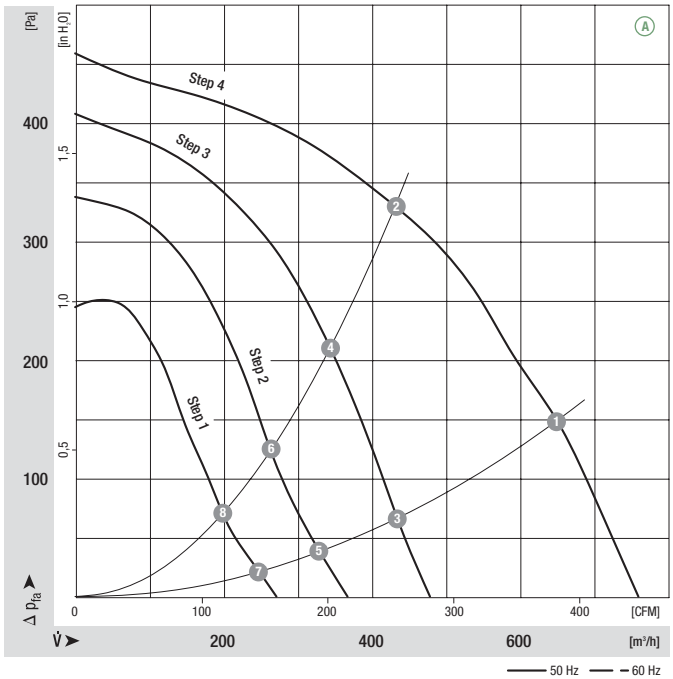
dual inlet, Ø 146

- **Material:** Housing: PP plastic, black
  Impeller: PP plastic, white
  Rotor: Partially cast in aluminium
  Terminal box: PP plastic, black
- **Direction of rotation:** Counter-clockwise, seen on plug
- **Type of protection:** IP 20
- **Insulation class:** "F"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Design:** 4-step blower with integrated terminal box, EW motor
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Sound pressure level	Min. back pressure	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VAC**	**Hz**	**m³/h**	**rpm**	**W**	**A**	**µF/VDB**	**dB(A)**	**Pa**	**°C**	
D2E 146	M2E 068-DF	Ⓐ	1~ 230 1~ 230	50 60	755 580	1350 1750	195 215	0.86 0.94	5.0 / 400 5.0 / 400	57 54	0 150	-25 to +55 -25 to +40	—

subject to alterations

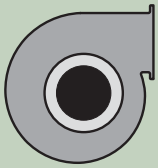
Curves



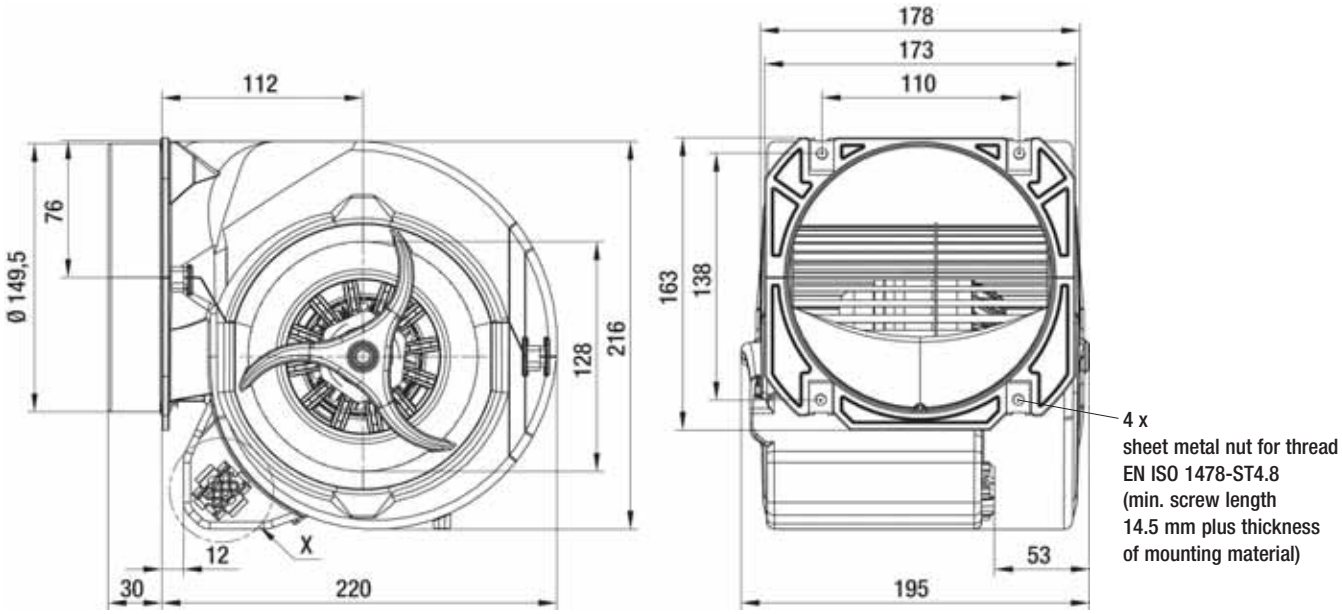
		n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]
Ⓐ	1	1790	185	0.81	56
Ⓐ	2	2290	164	0.72	59
Ⓐ	3	1210	125	0.60	45
Ⓐ	4	1820	112	0.57	52
Ⓐ	5	910	106	0.52	38
Ⓐ	6	1415	100	0.50	45
Ⓐ	7	710	94	0.47	30
Ⓐ	8	1055	91	0.46	38

ebmpapst

- **Motor protection:** TOP wired internally
- **Connection leads:** Via plug
- **Protection class:** I
- **Capacitor:** FPU (P2) integrated in terminal box completely wired up and ready for plug-in
- **Product conforming to standards:** EN 60335-2-31, CE
- **Approvals:** VDE, GOST

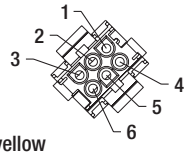


Centrifugal blower with flange	Mass of centrifugal blower kg
D2E 146-HS97 -03	3.5

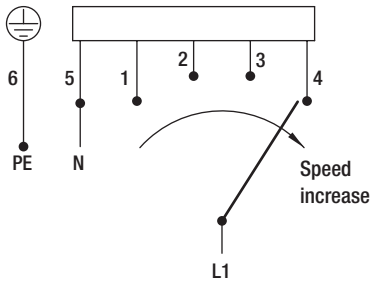


View X
AMP Universal Mate-N-Lok coded plug system
Connector shell: AMP 926 682-3
6 x plug pin: AMP 926 886-1

1 =	Step 1 (min.)	white
2 =	Step 2	red
3 =	Step 3	grey
4 =	Step 4 (max.)	black
5 =	N	blue
6 =	Protective earth	green/yellow



Electrical connection:
When changing speeds, switch must break the circuit



Guard grille p. 556
Connection lead p. 558
Capacitor p. 560 f.

AC centrifugal blowers

dual inlet, Ø 146

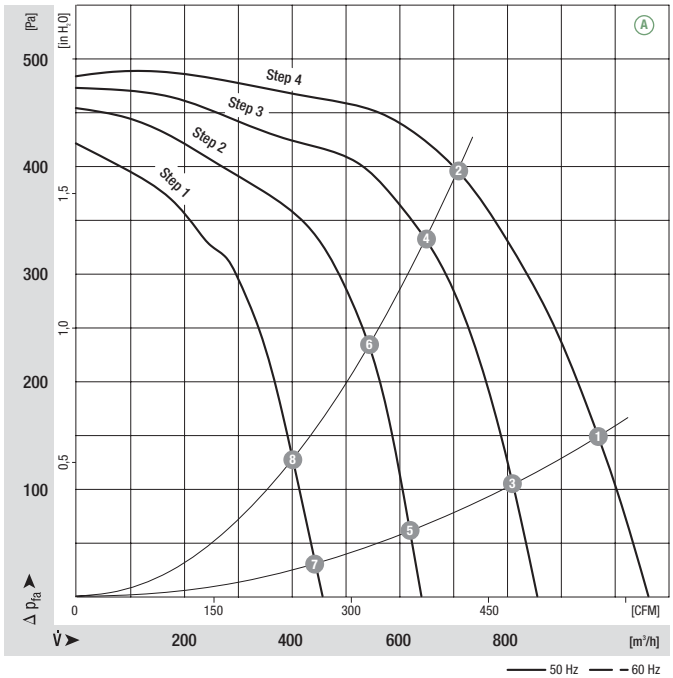
- **Material:** Housing: PP plastic, black
  Impeller: Galvanised sheet steel
  Rotor: Partially cast in aluminium
  Terminal box: PP plastic, black
- **Direction of rotation:** Counter-clockwise, seen on plug
- **Type of protection:** IP 20
- **Insulation class:** "F"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Design:** 4-step blower with integrated terminal box, EW motor
- **Bearings:** Maintenance-free ball bearings

Nominal data

Type	Motor	Curve	Nominal voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Sound pressure level	Min. back pressure	Perm. amb. temp.	Electr. connection
			VAC	Hz	m³/h	rpm	W	A	µF/VDB	dB(A)	Pa	°C	
D2E 146	M2E 068-EC	Ⓐ	1~ 230	50	1060	1850	355	1.55	8.0/450	66	0	-25 to +50	—
			1~ 230	60	875	2100	400	1.75	8.0/450	63	200	-25 to +55	

subject to alterations

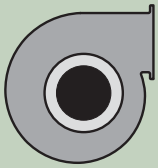
Curves



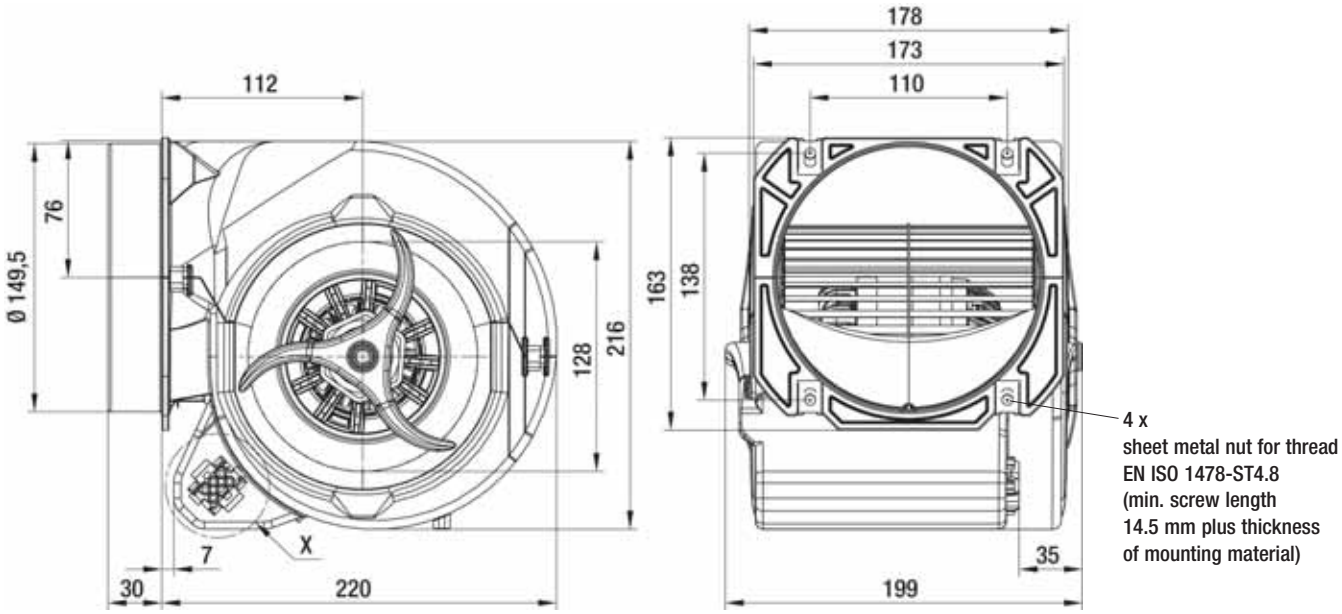
	n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]
Ⓐ 1	2075	328	1.42	66
Ⓐ 2	2430	269	1.17	61
Ⓐ 3	1770	268	1.20	61
Ⓐ 4	2230	222	1.04	62
Ⓐ 5	1375	225	1.03	54
Ⓐ 6	1885	197	0.94	57
Ⓐ 7	1000	192	0.88	45
Ⓐ 8	1415	180	0.84	49

ebmpapst

- **Motor protection:** TOP wired internally
- **Connection leads:** Via plug
- **Protection class:** I
- **Capacitor:** FPU (P2) integrated in terminal box completely wired up and ready for plug-in
- **Product conforming to standards:** EN 60335-2-31, CE
- **Approvals:** VDE

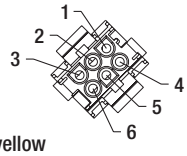


Centrifugal blower with flange	Mass of centrifugal blower kg
D2E 146-HT67 -02	3.6

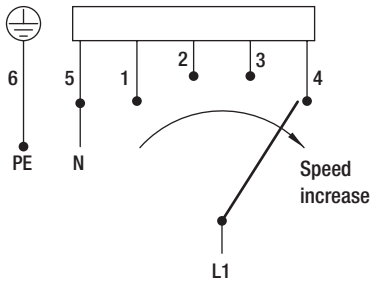


View X
AMP Universal Mate-N-Lok coded plug system
Connector shell: AMP 926 682-3
6 x plug pin: AMP 926 886-1

1 =	Step 1 (min.)	white
2 =	Step 2	red
3 =	Step 3	grey
4 =	Step 4 (max.)	black
5 =	N	blue
6 =	Protective earth	green/yellow



Electrical connection:
When changing speeds, switch must break the circuit



Guard grille p. 556
Connection lead p. 558
Capacitor p. 560 f.

AC centrifugal blowers

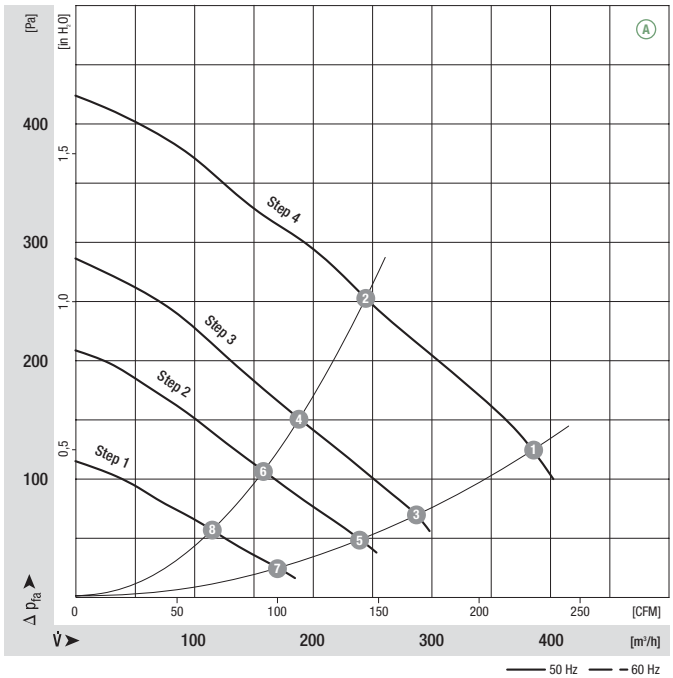
dual inlet, Ø 160

- **Material:** Housing: PP plastic, black
  Impeller: Galvanised sheet steel
  Rotor: Partially cast in aluminium
  Terminal box: PP plastic, black
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 44
- **Insulation class:** "F"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Design:** 4-step blower with integrated terminal box, standard external-rotor motor anti-vibration mounted on one side
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Sound pressure level	Min. back pressure	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VAC**	**Hz**	**m³/h**	**rpm**	**W**	**A**	**µF/VDB**	**dB(A)**	**Pa**	**°C**	
D2E 160	M2E 068-BF	Ⓐ	1~ 230	50	400	1170	110	0.49	2.5 / 400	53	100	-25 to +55	—

subject to alterations

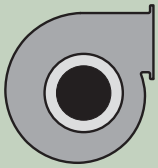
Curves



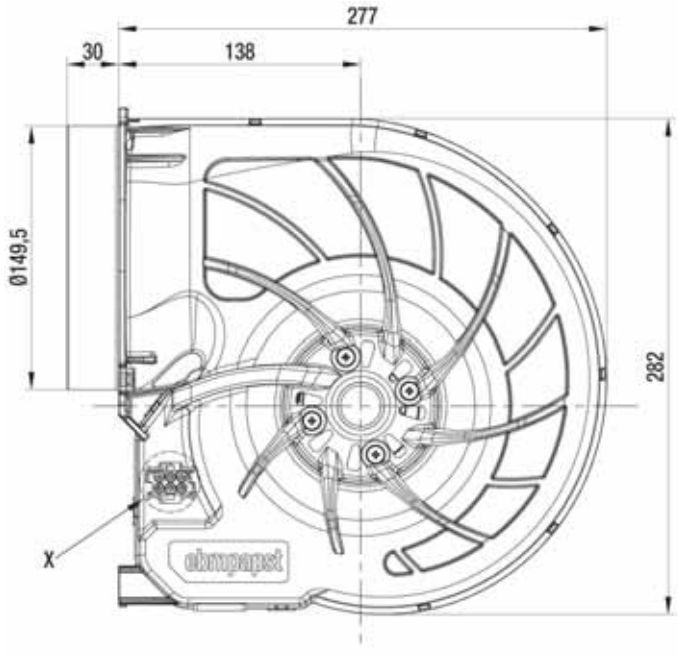
	n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]
Ⓐ 1	1210	108	0.47	51
Ⓐ 2	1735	102	0.44	55
Ⓐ 3	910	74	0.35	43
Ⓐ 4	1345	71	0.34	48
Ⓐ 5	765	64	0.31	38
Ⓐ 6	1135	61	0.30	44
Ⓐ 7	555	50	0.26	30
Ⓐ 8	835	49	0.25	36

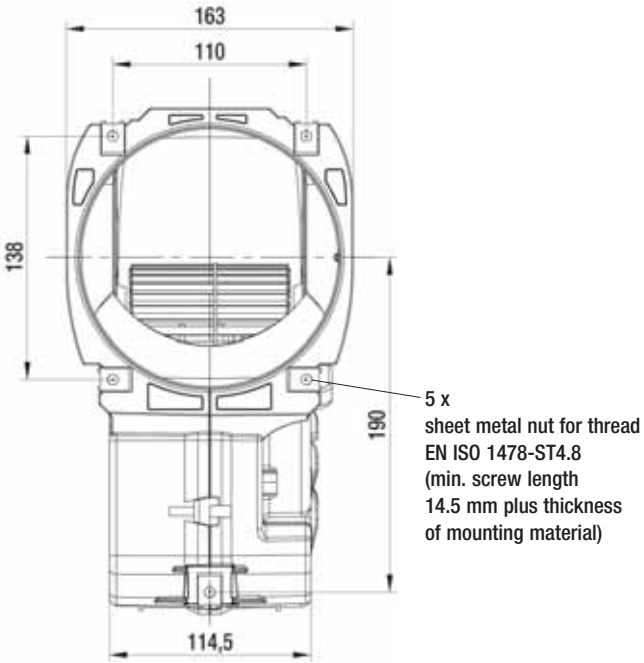
ebmpapst

- **Motor protection:** TOP wired internally
- **Connection leads:** Via plug
- **Protection class:** I
- **Capacitor:** FPU (P2) integrated in terminal box completely wired up and ready for plug-in
- **Product conforming to standards:** EN 60335-2-31, CE
- **Approvals:** CCC, GOST



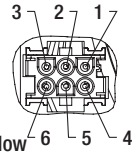
Centrifugal blower with flange	Mass of centrifugal blower kg
D2E 160-FI01 -01	2.5



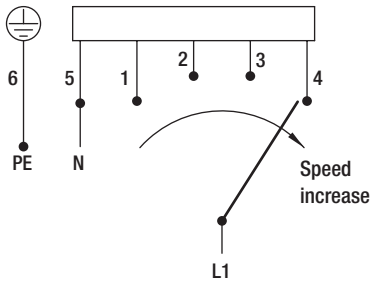


View X
AMP Universal Mate-N-Lok coded plug system
Connector shell: AMP 926 682-3
6 x plug pin: AMP 926 886-1

1 =	Step 1 (min.)	white
2 =	Step 2	red
3 =	Step 3	grey
4 =	Step 4 (max.)	black
5 =	N	blue
6 =	Protective earth	green/yellow



Electrical connection:
When changing speeds, switch must break the circuit



Connection lead p. 558
Capacitor p. 560 f.

AC centrifugal blowers

dual inlet, Ø 160

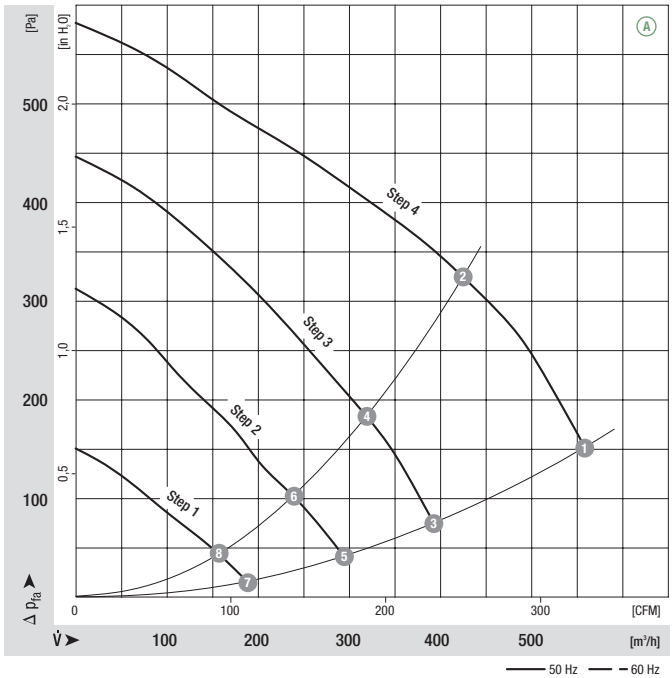
- **Material:** Housing: PP plastic, black
  Impeller: Galvanised sheet steel
  Rotor: Partially cast in aluminium
  Terminal box: PP plastic, black
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 44
- **Insulation class:** "F"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Design:** 4-step blower with integrated terminal box, standard external-rotor motor anti-vibration mounted on one side
- **Bearings:** Maintenance-free ball bearings

Nominal data

Type	Motor	Curve	Nominal voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Sound pressure level	Min. back pressure	Perm. amb. temp.	Electr. connection
			VAC	Hz	m³/h	rpm	W	A	µF/VDB	dB(A)	Pa	°C	
D2E 160	M2E 068-CF	Ⓐ	1~ 230	50	550	1400	180	0.80	4.0 / 400	59	150	-25 to +40	—

subject to alterations

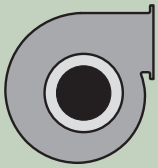
Curves



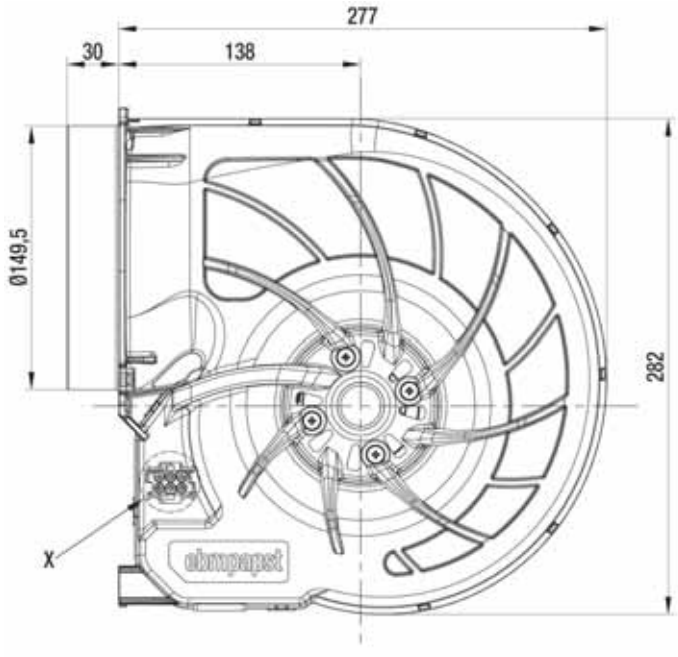
	n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]
Ⓐ 1	1400	180	0.80	59
Ⓐ 2	1920	162	0.70	60
Ⓐ 3	1010	120	0.56	48
Ⓐ 4	1450	113	0.53	52
Ⓐ 5	770	96	0.46	40
Ⓐ 6	1115	93	0.45	44
Ⓐ 7	500	76	0.38	28
Ⓐ 8	740	75	0.37	34

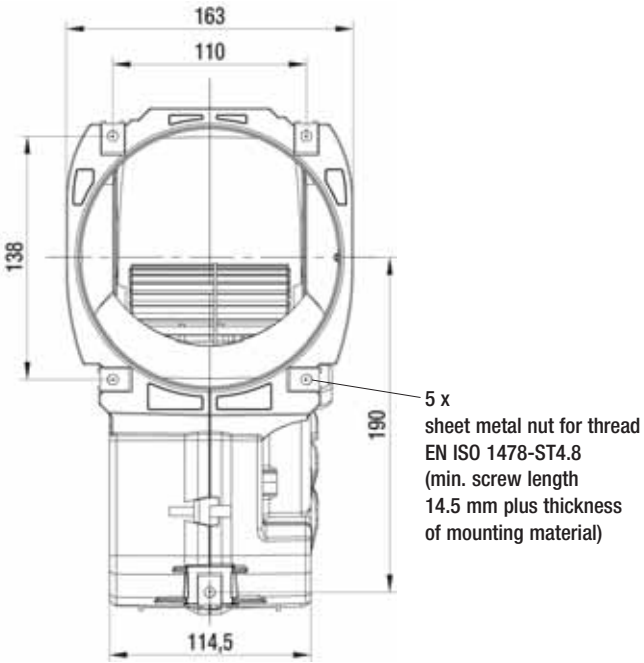
ebmpapst

- **Motor protection:** TOP wired internally
- **Connection leads:** Via plug
- **Protection class:** I
- **Capacitor:** FPU (P2) integrated in terminal box completely wired up and ready for plug-in
- **Product conforming to standards:** EN 60335-2-31, CE
- **Approvals:** CCC, GOST



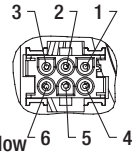
Centrifugal blower with flange	Mass of centrifugal blower kg
D2E 160-FK11 -02	3.0



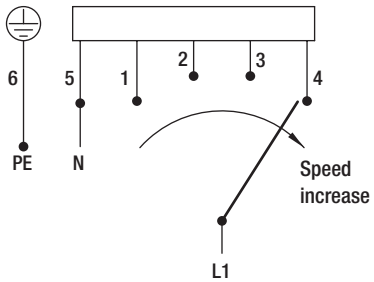


View X
AMP Universal Mate-N-Lok coded plug system
Connector shell: AMP 926 682-3
6 x plug pin: AMP 926 886-1

1 =	Step 1 (min.)	white
2 =	Step 2	red
3 =	Step 3	grey
4 =	Step 4 (max.)	black
5 =	N	blue
6 =	Protective earth	green/yellow



Electrical connection:
When changing speeds, switch must break the circuit



AC centrifugal blowers

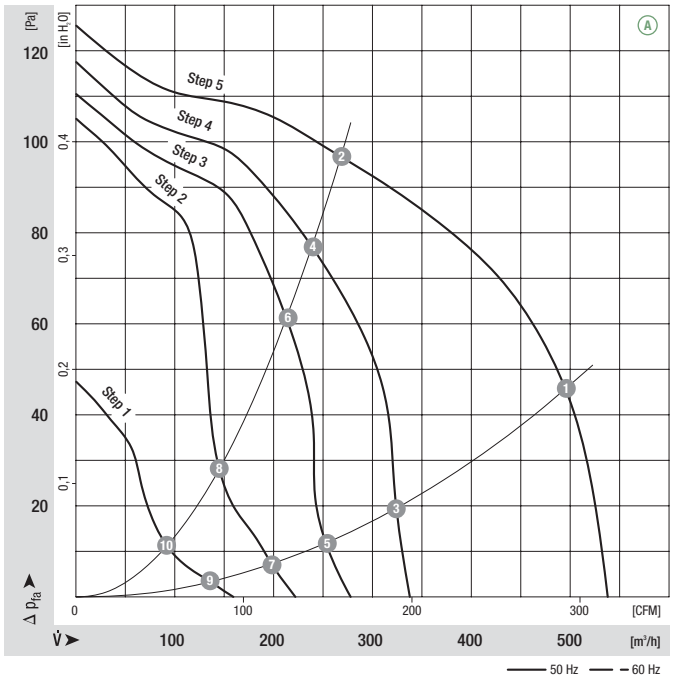
dual inlet, Ø 146

- **Material:** Housing: PP plastic, black
  Impeller: PA plastic, black
  Rotor: Partially cast in aluminium
  Terminal box: PP plastic, black
- **Direction of rotation:** Counter-clockwise, seen on cable exit
- **Type of protection:** IP 44
- **Insulation class:** "F"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Design:** 5-step blower with integrated terminal box, EW motor anti-vibration mounted on both sides
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Sound pressure level	Min. back pressure	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VAC**	**Hz**	**m³/h**	**rpm**	**W**	**A**	**µF/VDB**	**dB(A)**	**Pa**	**°C**	
D4E 146	M4E 068-CF	Ⓐ	1~ 230	50	565	780	65	0.29	2.0/400	46	0	-25 to +50	—
			1~ 230	60	510	710	68	0.30	2.0/400	42	0	-25 to +40	

subject to alterations

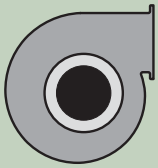
Curves



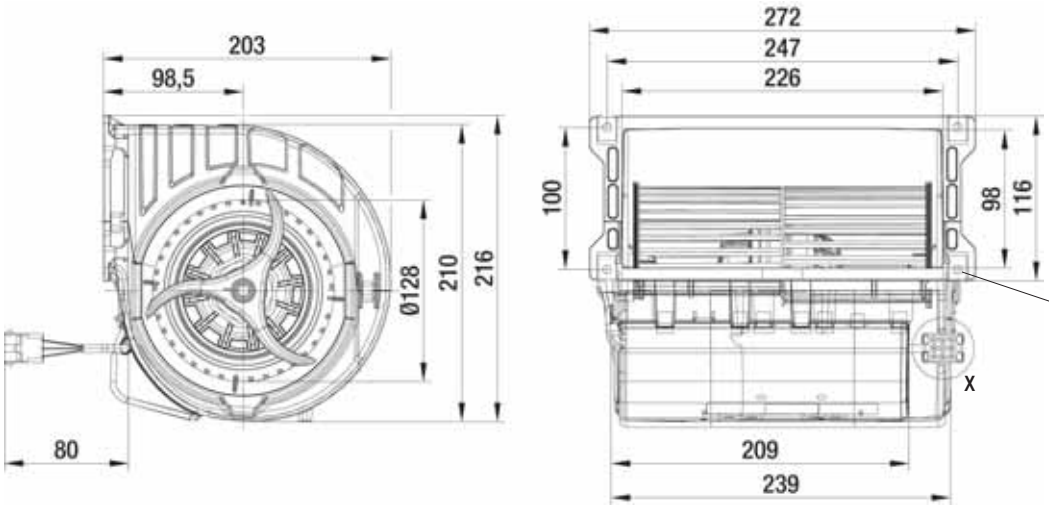
	n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]
Ⓐ 1	1080	58	0.25	45
Ⓐ 2	1345	43	0.19	46
Ⓐ 3	695	52	0.23	33
Ⓐ 4	1210	39	0.18	43
Ⓐ 5	560	48	0.22	26
Ⓐ 6	1080	40	0.19	39
Ⓐ 7	450	20	0.16	21
Ⓐ 8	735	20	0.16	29
Ⓐ 9	315	13	0.13	17
Ⓐ 10	475	13	0.13	20

ebmpapst

- **Motor protection:** TOP wired internally
- **Connection leads:** Via plug
- **Protection class:** I
- **Capacitor:** FPU (P2) integrated in terminal box completely wired up and ready for plug-in
- **Product conforming to standards:** EN 60335-1, CE

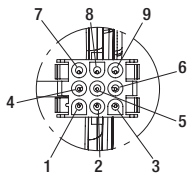


Centrifugal blower with flange	Mass of centrifugal blower kg
D4E 146-LV19 -14	2.5

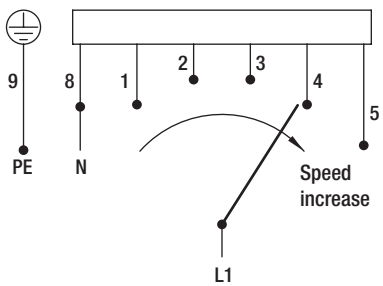


View X
AMP Universal Mate-N-Lok coded plug system
Connector shell: AMP 927 231-3
7 x plug pin: AMP 926 886-1

1 = Step 1 (min.)
2 = Step 2
3 = Step 3
4 = Step 4
5 = Step 5 (max.)
8 = N
9 = Protective earth



Electrical connection:
When changing speeds, switch must break the circuit



Guard grille p. 556
Connection lead p. 558
Capacitor p. 560 f.

AC centrifugal blowers

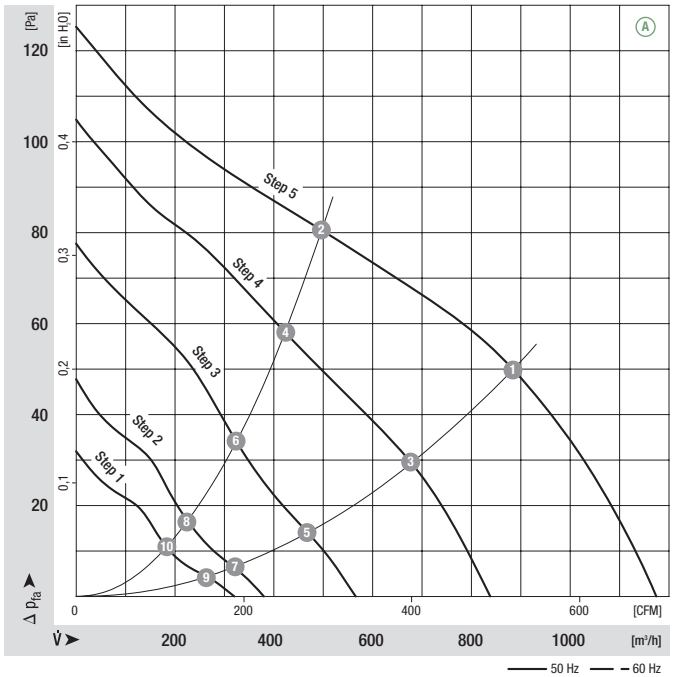
dual inlet, Ø 146

- **Material:** Housing: PP plastic, black
  Impeller / motor suspension: PA plastic, black
  Rotor: Partially cast in aluminium
  Terminal box: PP plastic, black
- **Direction of rotation:** Counter-clockwise, seen on cable exit
- **Type of protection:** IP 44
- **Insulation class:** "F"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Design:** 5-step dual blower with integrated terminal box, standard external-rotor motor anti-vibration mounted on both sides
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Sound pressure level	Min. back pressure	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VAC**	**Hz**	**m³/h**	**rpm**	**W**	**A**	**µF/VDB**	**dB(A)**	**Pa**	**°C**	
K4E 146	M4E 068-DF	Ⓐ	1~ 230	50	1180	750	85	0.38	2.5 / 450	47	0	-25 to +50	—

subject to alterations

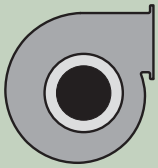
Curves



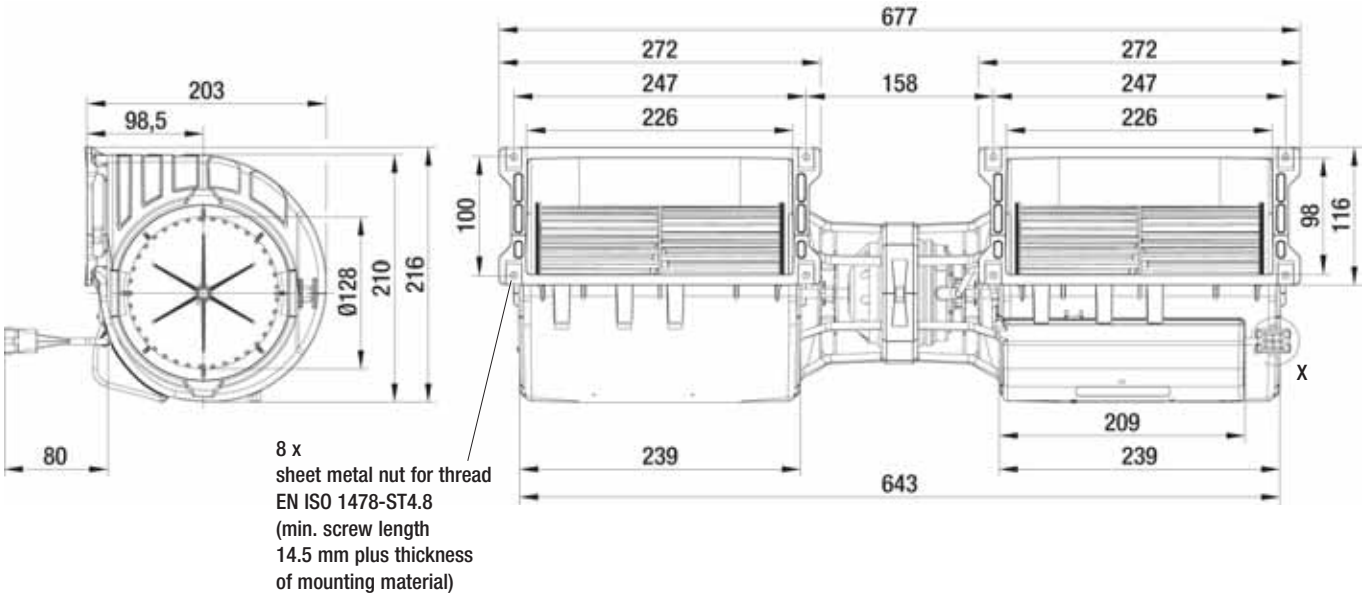
	n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]
Ⓐ 1	1050	76	0.33	45
Ⓐ 2	1240	65	0.28	46
Ⓐ 3	810	59	0.27	39
Ⓐ 4	1060	51	0.24	41
Ⓐ 5	570	47	0.22	29
Ⓐ 6	820	43	0.21	35
Ⓐ 7	400	13	0.15	25
Ⓐ 8	580	13	0.15	28
Ⓐ 9	330	10	0.13	25
Ⓐ 10	480	10	0.13	26

ebmpapst

- **Motor protection:** TOP wired internally
- **Connection leads:** Via plug
- **Protection class:** I
- **Capacitor:** FPU (P2) integrated in terminal box completely wired up and ready for plug-in
- **Product conforming to standards:** EN 60335-1, CE
- **Approvals:** CCC

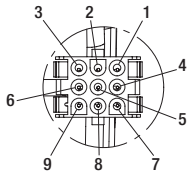


Dual centrifugal blower with flange	Mass of dual centrifugal blower kg
K4E 146-AB73 -21	4.0

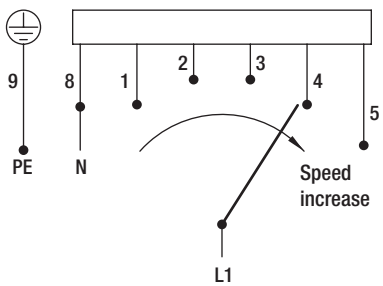


View X
AMP Universal Mate-N-Lok coded plug system
Connector shell: AMP 927 231-3
7 x plug pin: AMP 926 886-1

1 = Step 1 (min.)
2 = Step 2
3 = Step 3
4 = Step 4
5 = Step 5 (max.)
8 = N
9 = Protective earth



Electrical connection:
When changing speeds, switch must break the circuit



Guard grille p. 556
Connection lead p. 558
Capacitor p. 560 f.

AC centrifugal blowers

dual inlet, Ø 097

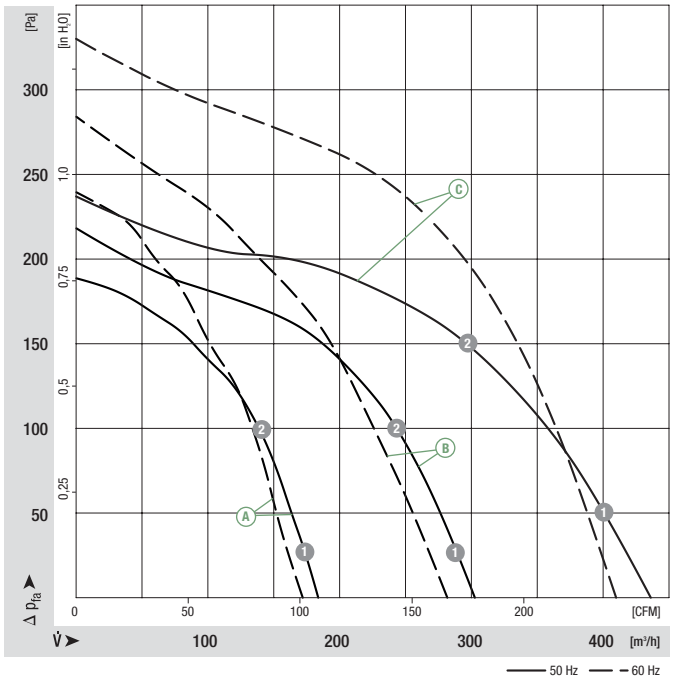
- **Material:** Housing: Galvanised sheet steel
  Impeller: Galvanised sheet steel
  Rotor: Partially cast in aluminium
- **Direction of rotation:** Counter-clockwise, seen on rotor
- **Type of protection:** IP 20
- **Insulation class:** "B"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Design:** Standard external-rotor motor mounted via brackets on one side
- **Bearings:** Maintenance-free ball bearings

Nominal data

Type	Motor	Curve	Nominal voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Sound pressure level	Min. back pressure	Perm. amb. temp.	Electr. connection
			VAC	Hz	m³/h	rpm	W	A	µF/VDB	dB(A)	Pa	°C	p. 596 f.
D2E 097	M2E 052-BF	Ⓐ	1~ 230	50	180	1550	28	0.13	1.0 / 400	46	0	-25 to +85	A1)
			1~ 230	60	170	1450	32	0.15	1.0 / 400	44	0	-25 to +80	
D2E 097	M2E 052-BF	Ⓑ	1~ 230	50	300	1350	50	0.23	1.5 / 400	50	0	-25 to +70	A1)
			1~ 230	60	280	1250	55	0.25	1.5 / 400	48	0	-25 to +55	
D2E 097	M2E 052-CA	Ⓒ	1~ 230	50	435	1950	87	0.39	2.0 / 400	58	0	-25 to +40	A1)
			1~ 230	60	410	1850	100	0.45	2.0 / 400	57	0	-25 to +35	

subject to alterations

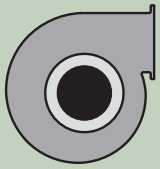
Curves



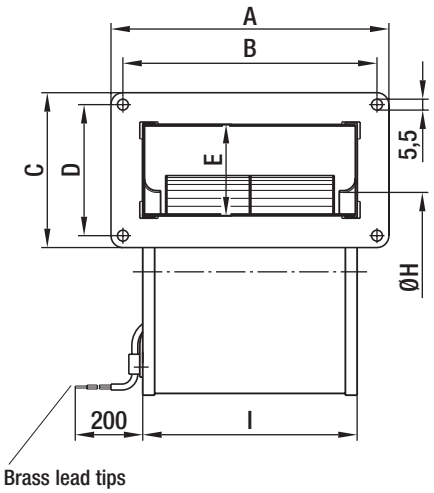
	n [rpm]	P_1 [W]	I [A]
Ⓐ 1	1670	27	0.13
Ⓐ 2	2080	25	0.12
Ⓑ 1	1490	48	0.22
Ⓑ 2	2000	44	0.20
Ⓒ 1	2150	83	0.37
Ⓒ 2	2475	73	0.33

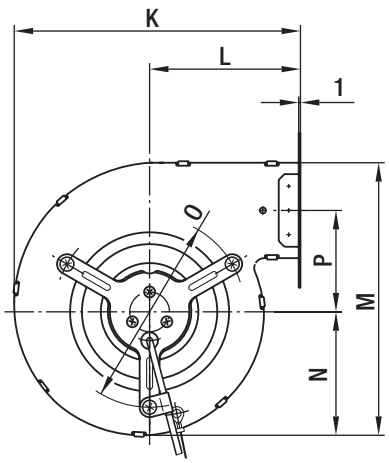
ebmpapst

- **Motor protection:** TOP wired internally
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 60335-1, CE
- **Approvals:** © CCC, GOST



Centrifugal blower without flange	Centrifugal blower with flange	Mass of centrifugal blower kg	Dimensions A	B	C	D	E	H	I	K	L	M	N	O	P
D2E 097-CH85 -02	D2E 097-CH85 -48	1.5	140.0	128.0	78.0	66.0	46.0	80.0	108.0	144.0	76.0	137.0	62.0	96.0	51.0
D2E 097-BK66 -02	D2E 097-BK66 -48	1.5	180.0	168.0	100.0	88.0	67.0	79.5	146.0	162.0	86.0	165.0	68.0	114.0	62.5
D2E 097-BI56 -02	D2E 097-BI56 -48	1.5	180.0	168.0	100.0	88.0	67.0	79.5	146.0	162.0	86.0	165.0	68.0	114.0	62.5





Guard grille p. 555
Capacitor p. 560 f.
Electr. connections p. 596 f.

AC centrifugal blowers

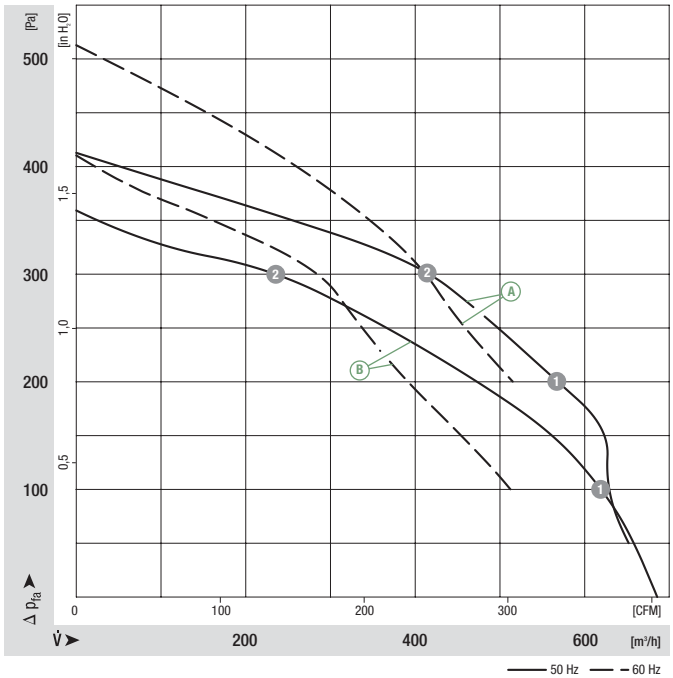
dual inlet, Ø 133

- **Material:** Housing: Galvanised sheet steel
  Impeller: Galvanised sheet steel
  Rotor: Partially cast in aluminium
- **Direction of rotation:** Ⓐ Counter-clockwise, Ⓑ clockwise seen on rotor
- **Type of protection:** IP 44
- **Insulation class:** "B"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Design:** Standard external-rotor motor mounted via brackets on one side
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Sound pressure level	Min. back pressure	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VAC**	**Hz**	**m³/h**	**rpm**	**W**	**A**	**µF/VDB**	**dB(A)**	**Pa**	**°C**	p. 596 f.
D2E 133	M2E 068-CF	Ⓐ	1~ 230	50	700	1700	175	0.77	4.0 / 400	58	50	-25 to +40	A1)
			1~ 230	60	500	2100	190	0.84	4.0 / 400	58	200	-25 to +40	
D2E 133	M2E 068-DF	Ⓑ	1~ 230	50	685	1500	190	0.84	3.0 / 450	59	0	-25 to +45	A1)
			1~ 230	60	510	1800	200	0.88	3.0 / 450	56	100	-25 to +40	

subject to alterations

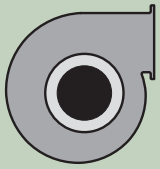
Curves



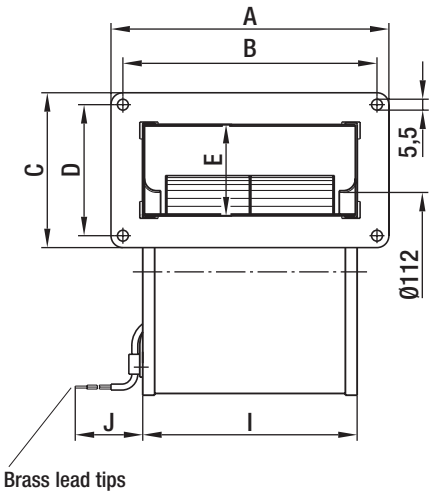
	n [rpm]	P_1 [W]	I [A]
Ⓐ 1	2135	160	0.70
Ⓐ 2	2450	138	0.61
Ⓑ 1	1885	180	0.80
Ⓑ 2	2640	130	0.58

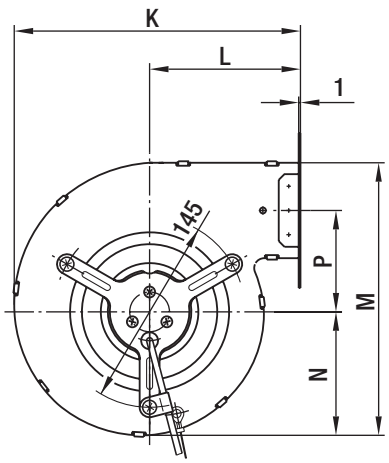
ebmpapst

- **Motor protection:** TOP wired internally
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 60335-1, CE
- **Approvals:** CCC, ⓑ also GOST



Centrifugal blower without flange	Centrifugal blower with flange	Mass of centrifugal blower kg	Dimensions A	B	C	D	E	I	J	K	L	M	N	P
D2E 133-CI33 -56	D2E 133-CI33 -22	3.3	206.0	190.0	142.0	126.0	102.0	168.0	400.0	204.0	97.0	213.0	93.5	67.5
D2E 133-AM47-01	D2E 133-AM47-23	3.5	254.0	238.0	108.0	92.0	69.0	215.0	300.0	171.5	88.0	180.0	79.0	66.0





Guard grille p. 555
Capacitor p. 560 f.
Electr. connections p. 596 f.

AC centrifugal blowers

dual inlet, Ø 133

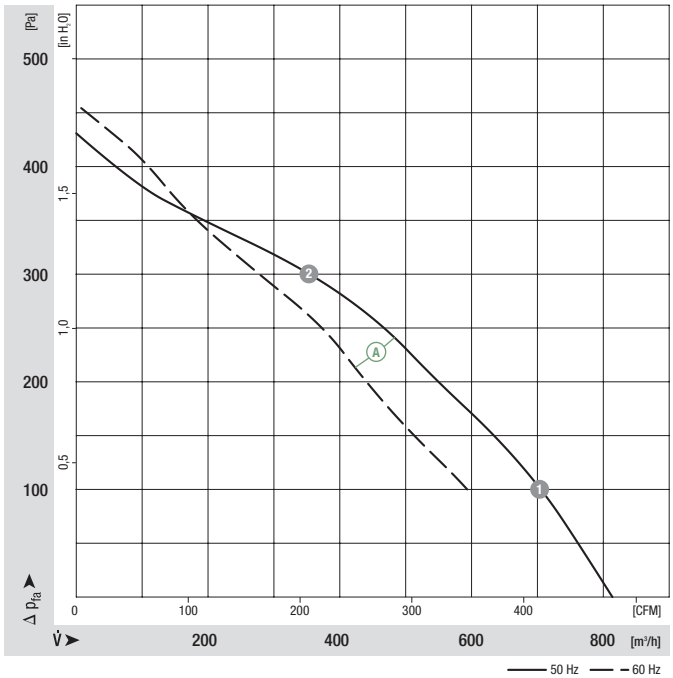
- **Material:** Housing: Galvanised sheet steel
  Impeller: Galvanised sheet steel
  Rotor: Partially cast in aluminium
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 44
- **Insulation class:** "B"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Design:** Standard external-rotor motor mounted via brackets on one side
- **Bearings:** Maintenance-free ball bearings

Nominal data

Type	Motor	Curve	Nominal voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Sound pressure level	Min. back pressure	Perm. amb. temp.	Electr. connection
			VAC	Hz	m³/h	rpm	W	A	µF/VDB	dB(A)	Pa	°C	p. 596 f.
D2E 133	M2E 068-DF	Ⓐ	1~ 230	50	810	1150	190	0.84	3.0 / 450	56	0	-25 to +40	A1)
			1~ 230	60	600	1550	195	0.85	3.0 / 450	55	100	-25 to +40	

subject to alterations

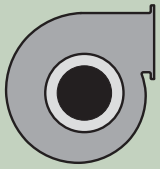
Curves



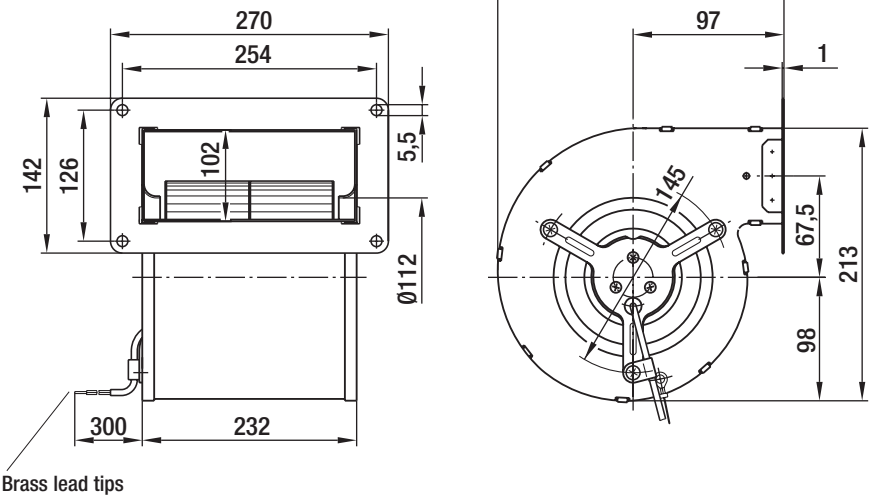
	n [rpm]	P_1 [W]	I [A]
Ⓐ 1	1700	180	0.80
Ⓐ 2	2480	138	0.61

ebmpapst

- **Motor protection:** TOP wired internally
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 60335-1, CE
- **Approvals:** CCC



Centrifugal blower without flange	Centrifugal blower with flange	Mass of centrifugal blower kg
D2E 133-DM47-01	D2E 133-DM47-23	4.4



Guard grille p. 555
Capacitor p. 560 f.
Electr. connections p. 596 f.

AC centrifugal blowers

dual inlet, Ø 133

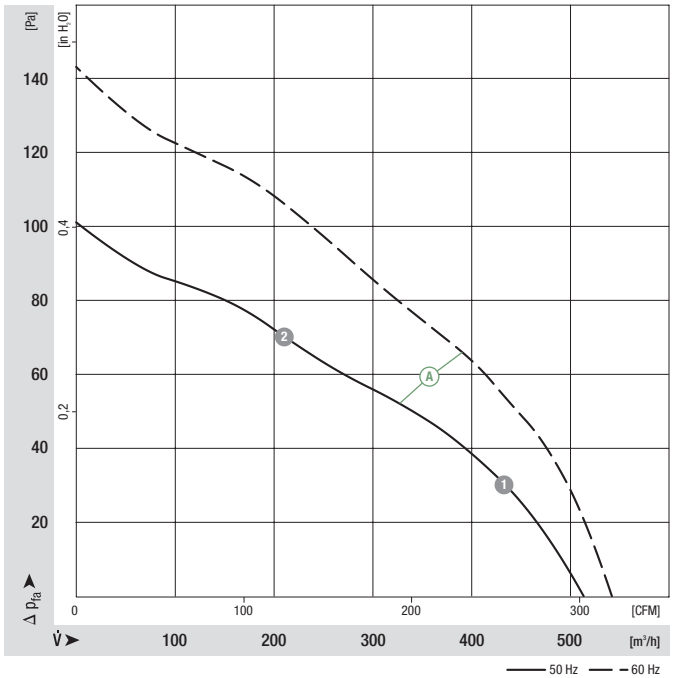
- **Material:** Housing: Galvanised sheet steel
  Impeller: PA plastic
  Rotor: Partially cast in aluminium
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 44
- **Insulation class:** "B"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Design:** Standard external-rotor motor mounted via brackets on one side
- **Bearings:** Maintenance-free ball bearings

Nominal data

Type	Motor	Curve	Nominal voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Sound pressure level	Min. back pressure	Perm. amb. temp.	Electr. connection
			VAC	Hz	m³/h	rpm	W	A	µF/VDB	dB(A)	Pa	°C	p. 596 f.
D4E 133	M4E 068-BF	Ⓐ	1~ 230	50	510	1180	70	0.32	2.0/400	52	0	-25 to +40	A1)
			1~ 230	60	540	1240	80	0.35	2.0/400	54	0	-25 to +40	

subject to alterations

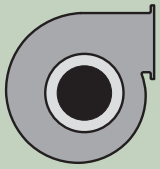
Curves



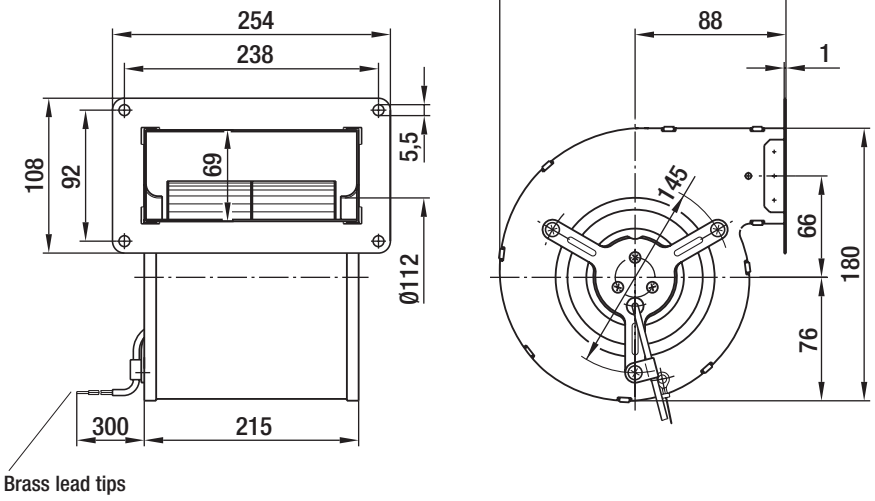
	n [rpm]	P_1 [W]	I [A]
Ⓐ 1	1240	66	0.30
Ⓐ 2	1380	63	0.29

ebmpapst

- **Motor protection:** TOP wired internally
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 60335-1, CE
- **Approvals:** CCC



Centrifugal blower without flange	Centrifugal blower with flange	Mass of centrifugal blower kg
D4E 133-AH01 -55	D4E 133-AH01 -58	2.6



AC centrifugal blowers

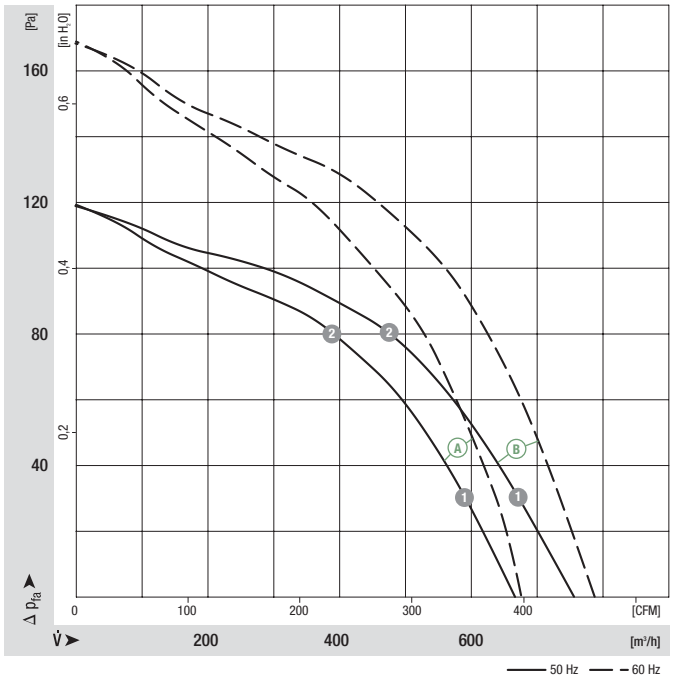
dual inlet, Ø 133

- **Material:** Housing: Galvanised sheet steel
  Impeller: PA plastic
  Rotor: Partially cast in aluminium
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 44
- **Insulation class:** "B"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Design:** Standard external-rotor motor mounted via brackets on one side
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Sound pressure level	Min. back pressure	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VAC**	**Hz**	**m³/h**	**rpm**	**W**	**A**	**µF/VDB**	**dB(A)**	**Pa**	**°C**	p. 596 f.
D4E 133	M4E 068-BF	Ⓐ	1~ 230	50	670	1080	73	0.33	2.0/400	52	0	-25 to +40	A1)
			1~ 230	60	675	1100	83	0.37	2.0/400	52	0	-25 to +40	
D4E 133	M4E 068-CF	Ⓑ	1~ 230	50	760	1230	75	0.34	2.0/450	55	0	-25 to +70	A1)
			1~ 230	60	790	1280	95	0.43	2.0/450	56	0	-25 to +60	

subject to alterations

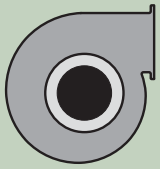
Curves



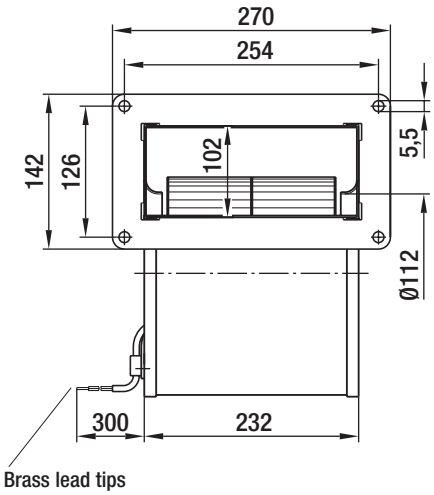
	n [rpm]	P_1 [W]	I [A]
Ⓐ 1	1150	69	0.31
Ⓐ 2	1300	65	0.30
Ⓑ 1	1280	67	0.30
Ⓑ 2	1370	58	0.27

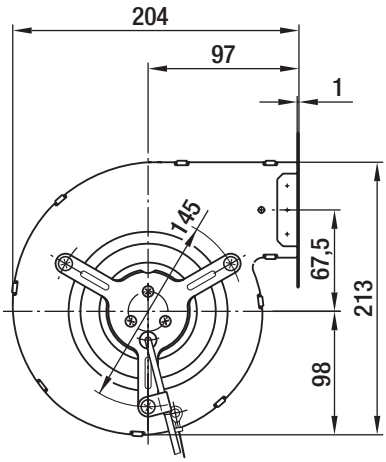
ebmpapst

- **Motor protection:** TOP wired internally
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 60335-1, CE



Centrifugal blower without flange	Centrifugal blower with flange	Mass of centrifugal blower kg
D4E 133-DH01 -J2	D4E 133-DH01 -J4	3.3
D4E 133-DL01 -H9	D4E 133-DL01 -J5	3.8





Guard grille p. 555
Capacitor p. 560 f.
Electr. connections p. 596 f.

AC centrifugal blowers

dual inlet, Ø 146

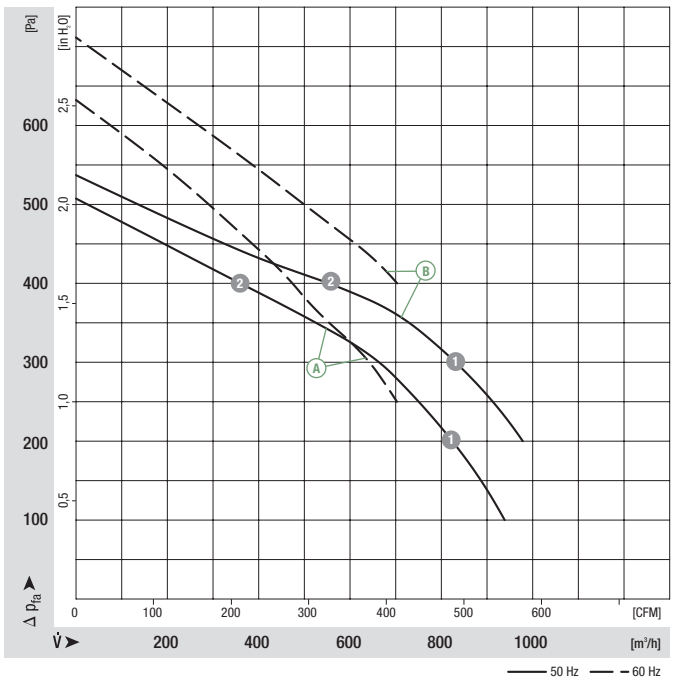
- **Material:** Housing: Galvanised sheet steel
  Impeller: Galvanised sheet steel
  Rotor: Partially cast in aluminium
- **Direction of rotation:** Counter-clockwise, seen on rotor
- **Type of protection:** IP 44
- **Insulation class:** "B"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Design:** Standard external-rotor motor mounted via brackets on one side
- **Bearings:** Maintenance-free ball bearings

Nominal data

Type	Motor	Curve	Nominal voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Sound pressure level	Min. back pressure	Perm. amb. temp.	Electr. connection
			VAC	Hz	m³/h	rpm	W	A	µF/VDB	dB(A)	Pa	°C	p. 596 f.
D2E 146	M2E 068-EC	Ⓐ	1~ 230	50	935	1650	245	1.08	6.0/400	60	100	-25 to +40	A1)
			1~ 230	60	690	2100	270	1.20	6.0/400	62	250	-25 to +40	
D2E 146	M2E 068-EC	Ⓑ	1~ 230	50	970	2050	300	1.31	8.0/400	63	200	-25 to +40	A1)
			1~ 230	60	690	2550	330	1.45	8.0/400	68	400	-25 to +35	

subject to alterations

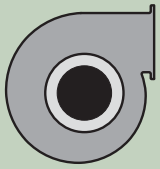
Curves



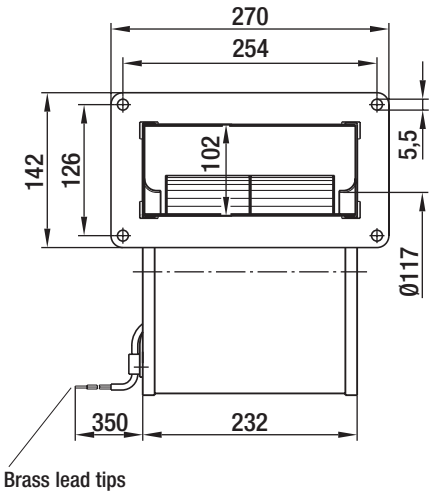
	n [rpm]	P_1 [W]	I [A]
Ⓐ 1	1935	230	1.02
Ⓐ 2	2560	167	0.74
Ⓑ 1	2300	262	1.15
Ⓑ 2	2600	206	0.91

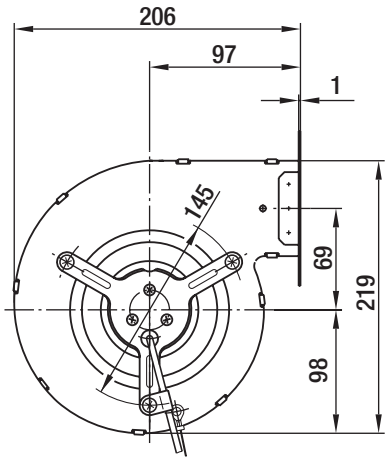
ebmpapst

- **Motor protection:** TOP wired internally
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 60335-1, CE
- **Approvals:** CCC, GOST



Centrifugal blower without flange	Centrifugal blower with flange	Mass of centrifugal blower kg
D2E 146-AP43 -02	D2E 146-AP43 -22	4.2
D2E 146-AP47 -02	D2E 146-AP47 -22	4.2





AC centrifugal blowers

dual inlet, Ø 146

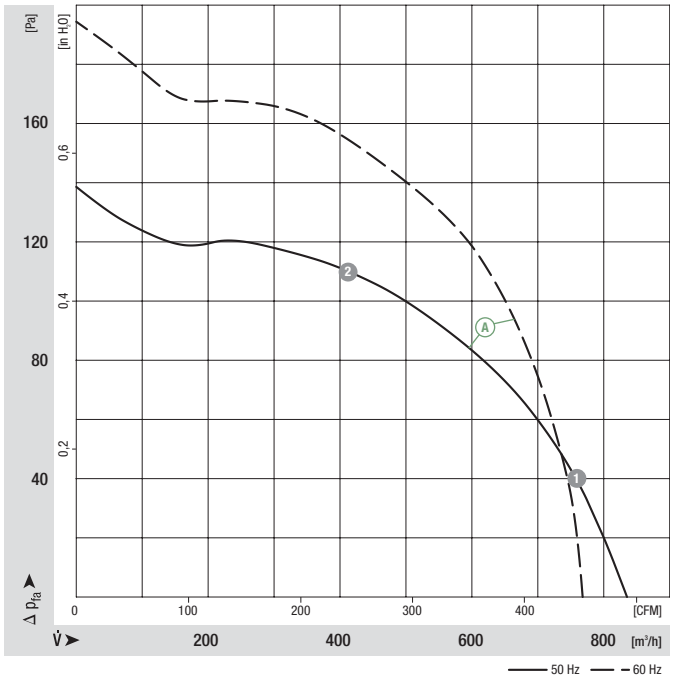
- **Material:** Housing: Galvanised sheet steel
  Impeller: Galvanised sheet steel
  Rotor: Partially cast in aluminium
- **Direction of rotation:** Counter-clockwise, seen on rotor
- **Type of protection:** IP 44
- **Insulation class:** "B"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Design:** Standard external-rotor motor mounted via brackets on one side
- **Bearings:** Maintenance-free ball bearings

Nominal data

Type	Motor	Curve	Nominal voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Sound pressure level	Min. back pressure	Perm. amb. temp.	Electr. connection
			VAC	Hz	m³/h	rpm	W	A	µF/VDB	dB(A)	Pa	°C	p. 596 f.
D4E 146	M4E 068-CF	Ⓐ	1~ 230	50	835	1000	100	0.44	2.0/450	55	0	-25 to +50	A1)
			1~ 230	60	765	950	116	0.51	2.0/450	53	0	-25 to +50	

subject to alterations

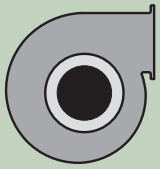
Curves



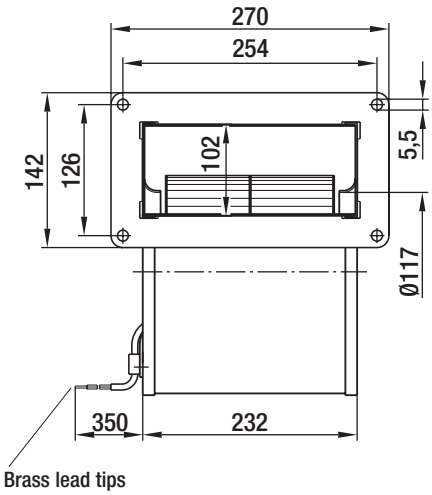
	n [rpm]	P_1 [W]	I [A]
Ⓐ 1	1180	88	0.39
Ⓐ 2	1390	65	0.29

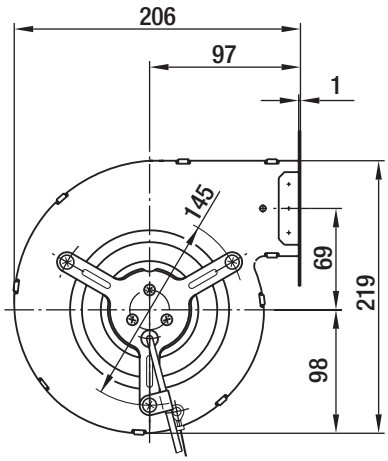
ebmpapst

- **Motor protection:** TOP wired internally
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 60335-1, CE
- **Approvals:** CCC



Centrifugal blower without flange	Centrifugal blower with flange	Mass of centrifugal blower kg
D4E 146-AA07 -02	D4E 146-AA07 -22	3.5





AC centrifugal blowers

dual inlet, Ø 160

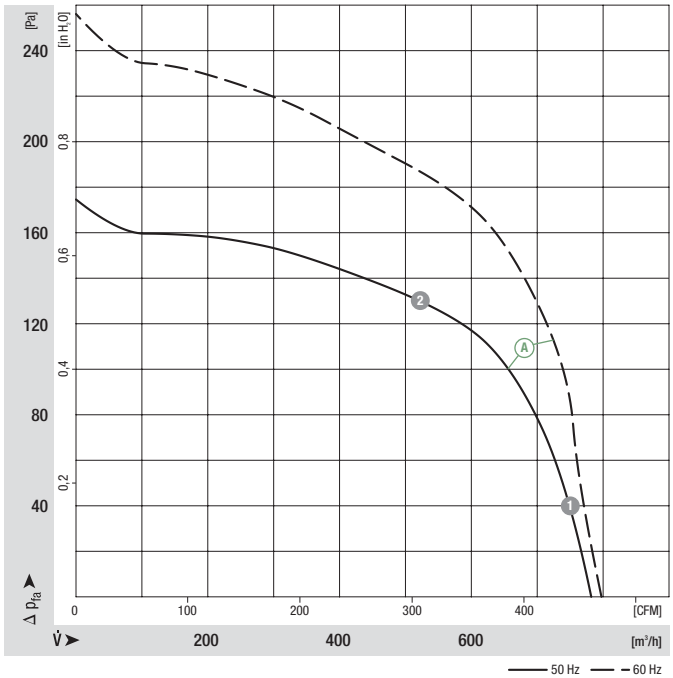
- **Material:** Housing: Galvanised sheet steel
  Impeller: Galvanised sheet steel
  Rotor: Partially cast in aluminium
- **Direction of rotation:** Counter-clockwise, seen on rotor
- **Type of protection:** IP 44
- **Insulation class:** "B"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Design:** Standard external-rotor motor mounted via brackets on one side
- **Bearings:** Maintenance-free ball bearings

Nominal data

Type	Motor	Curve	Nominal voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Sound pressure level	Min. back pressure	Perm. amb. temp.	Electr. connection
			VAC	Hz	m³/h	rpm	W	A	µF/VDB	dB(A)	Pa	°C	p. 596 f.
D4E 160	M4E 068-DF	Ⓐ	1~ 230	50	780	1200	117	0.51	3.0 / 450	58	0	-25 to +55	A1)
			1~ 230	60	820	1200	140	0.62	3.0 / 450	58	0	-25 to +40	

subject to alterations

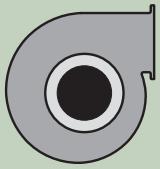
Curves



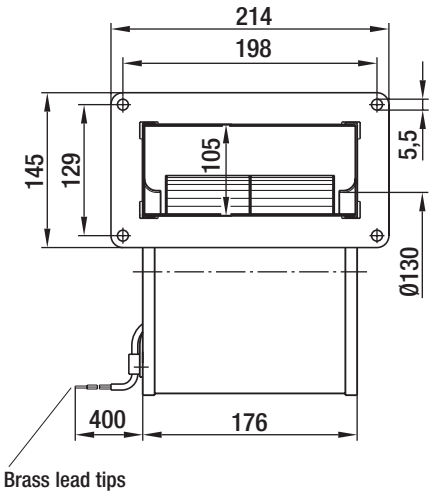
	n [rpm]	P_1 [W]	I [A]
Ⓐ 1	1230	114	0.50
Ⓐ 2	1360	93	0.41

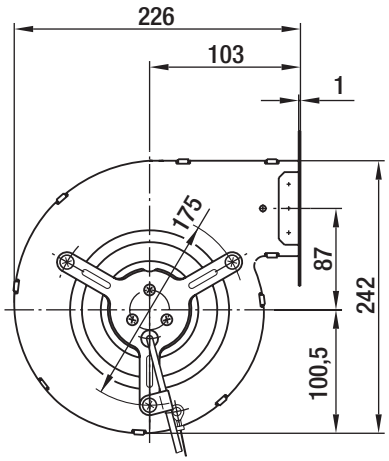
ebmpapst

- **Motor protection:** TOP wired internally
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 60335-1, CE
- **Approvals:** CCC



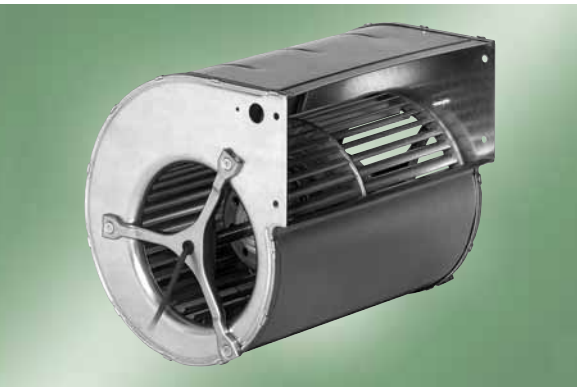
Centrifugal blower without flange	Centrifugal blower with flange	Mass of centrifugal blower kg
D4E 160-DA01 -02	D4E 160-DA01 -22	4.3





AC centrifugal blowers

dual inlet, Ø 160

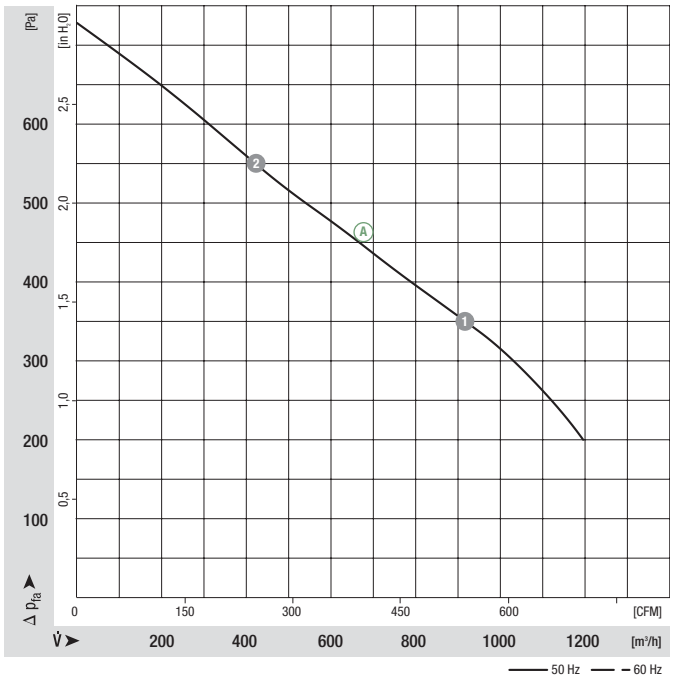


- **Material:** Housing: Galvanised sheet steel
  Impeller: Galvanised sheet steel
  Rotor: Partially cast in aluminium
- **Direction of rotation:** Counter-clockwise, seen on rotor (opposite cable exit)
- **Type of protection:** IP 20
- **Insulation class:** "F"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Design:** EW motor anti-vibration mounted on both sides
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Sound pressure level	Min. back pressure	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VAC**	**Hz**	**m³/h**	**rpm**	**W**	**A**	**µF/VDB**	**dB(A)**	**Pa**	**°C**	p. 596 f.
D2E 160	M2E 074-FA	Ⓐ	1~ 230	50	1195	1850	410	1.80	10.0 / 400	64	200	-25 to +40	A1)

subject to alterations

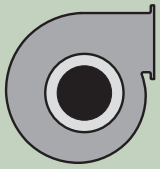
Curves



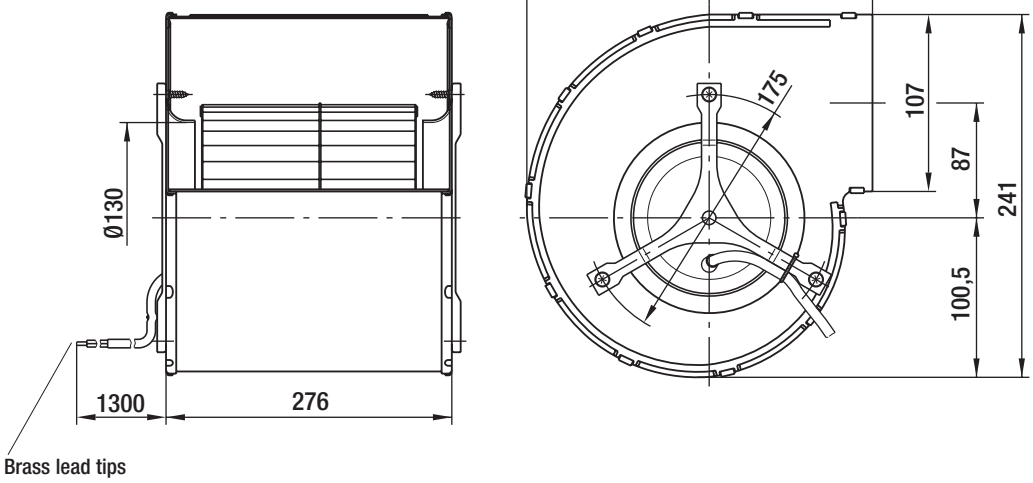
	n [rpm]	P_1 [W]	I [A]
Ⓐ ❶	2265	380	1.67
Ⓐ ❷	2520	338	1.50

ebmpapst

- **Motor protection:** TOP wired internally
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 60335-1, CE
- **Approvals:** CCC, GOST

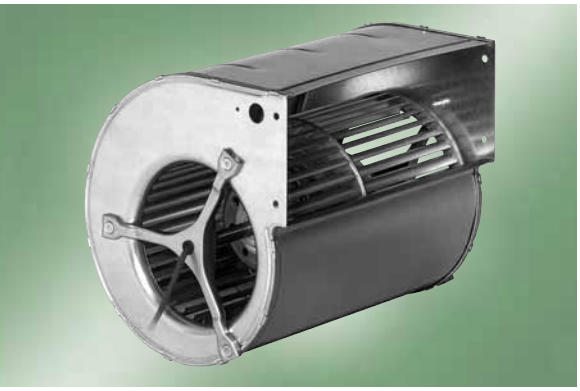


Centrifugal blower without flange	Centrifugal blower with flange	Mass of centrifugal blower kg
D2E 160-AB01 -06	—	5.7



AC centrifugal blowers

dual inlet, Ø 160

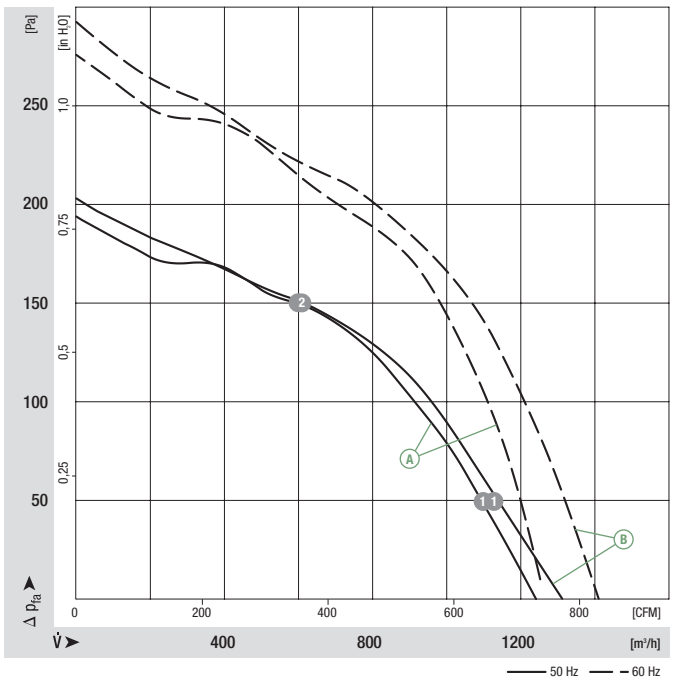


- **Material:** Housing: Galvanised sheet steel
  Impeller: Galvanised sheet steel
  Rotor: Partially cast in aluminium
- **Direction of rotation:** Counter-clockwise, seen on rotor (opposite cable exit)
- **Type of protection:** IP 44
- **Insulation class:** "B"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Design:** EW motor anti-vibration mounted on both sides
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Sound pressure level	Min. back pressure	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VAC**	**Hz**	**m³/h**	**rpm**	**W**	**A**	**µF/VDB**	**dB(A)**	**Pa**	**°C**	p. 596 f.
D4E 160	M4E 068-EC	Ⓐ	1~ 230 1~ 230	50 60	1240 1250	1300 1350	180 245	0.79 1.07	5.0 / 400 5.0 / 400	63 64	0 10	-25 to +65 -25 to +30	A1)
D4E 160	M4E 068-GA	Ⓑ	1~ 230 1~ 230	50 60	1310 1410	1350 1450	185 270	0.81 1.18	6.0 / 400 6.0 / 400	64 67	0 0	-25 to +70 -25 to +40	A1)

subject to alterations

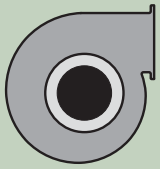
Curves



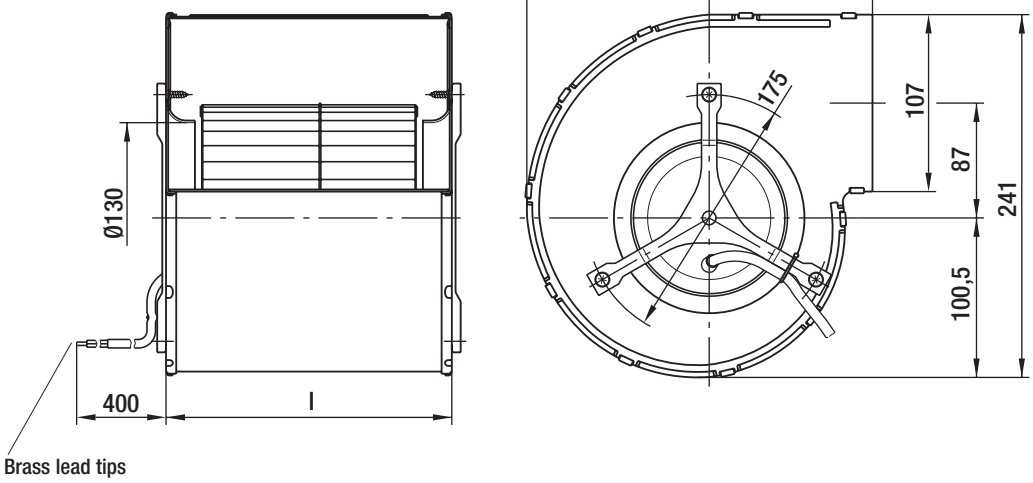
	n [rpm]	P_1 [W]	I [A]
Ⓐ 1	1355	153	0.67
Ⓐ 2	1445	100	0.43
Ⓑ 1	1400	154	0.68
Ⓑ 2	1460	103	0.46

ebmpapst

- **Motor protection:** TOP wired internally
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 60335-1, CE
- **Approvals:** Ⓑ CCC, GOST
- **Options:** With flange



Centrifugal blower without flange	Centrifugal blower with flange	Mass of centrifugal blower kg	Dimensions l
D4E 160-EG06 -05	—	4.5	232.0
D4E 160-FH12 -05	—	5.9	276.0



AC centrifugal blowers

dual inlet, Ø 180

- **Material:** Housing: Galvanised sheet steel
  Impeller: Galvanised sheet steel
  Rotor: Partially cast in aluminium
- **Direction of rotation:** Counter-clockwise, seen on rotor (opposite cable exit)
- **Type of protection:** IP 54
- **Insulation class:** "B"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Design:** EW motor anti-vibration mounted on both sides
- **Bearings:** Maintenance-free ball bearings

Nominal data

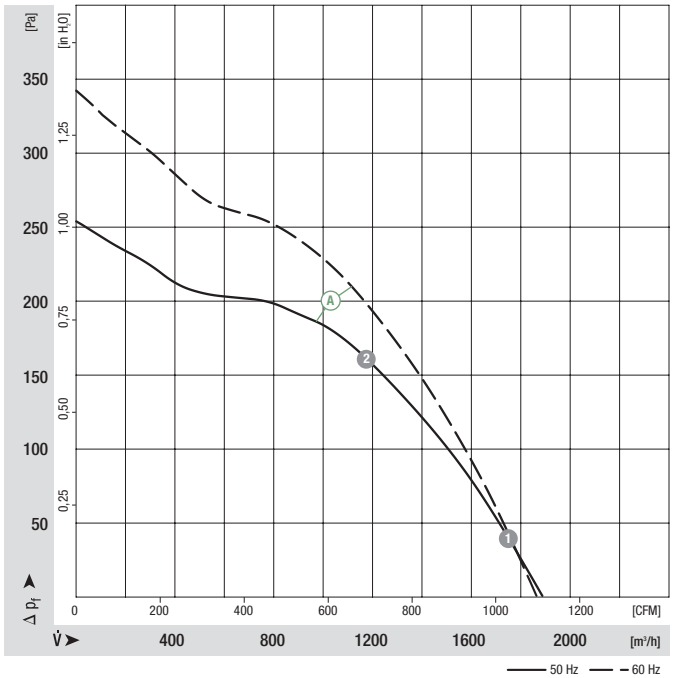
Type	Motor	Curve	Nominal voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Sound pressure level	Min. back pressure	Perm. amb. temp.	Electr. connection
			VAC	Hz	m³/h	rpm	W	A	µF/VDB	dB(A)	Pa	°C	p. 596 f.
D4D 180 (1)(2)	M4D 068-GA	Ⓐ	3~ 230/400	50	1880	1050	290	0.92/0.53	—	62	0	-25 to +55	C1)/C2)
			3~ 230/400	60	1860	1030	360	1.04/0.60	—	62	0	-25 to +30	

subject to alterations

(1) data collected via exhaust duct (step diffuser, 1 m length)

(2) 230 VAC Δ / 400 VAC Y

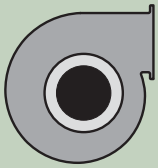
Curves

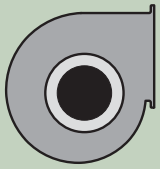


	n [rpm]	P_1 [W]	I [A]
Ⓐ 1	1100	260	0.83/0.48
Ⓐ 2	1275	175	0.56/0.32

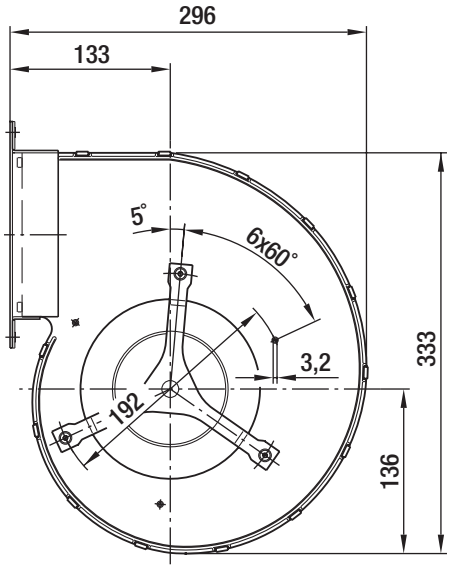
ebmpapst

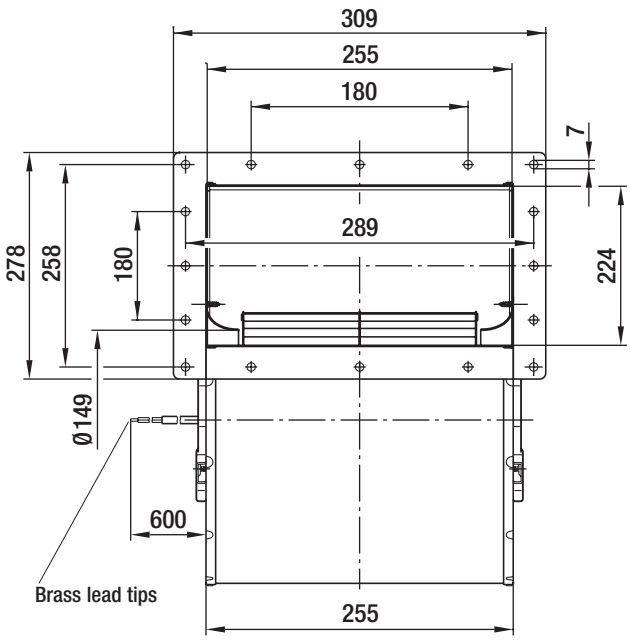
- **Motor protection:** Without thermal protection
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 60335-1, CE
- **Approvals:** CCC





Centrifugal blower with flange	Radial blower with flange (large)	Mass of centrifugal blower kg
—	D4D 180-CB01 -02	9.5





Guard grille p. 555
Electr. connections p. 596 f.

AC centrifugal blowers

dual inlet, Ø 180

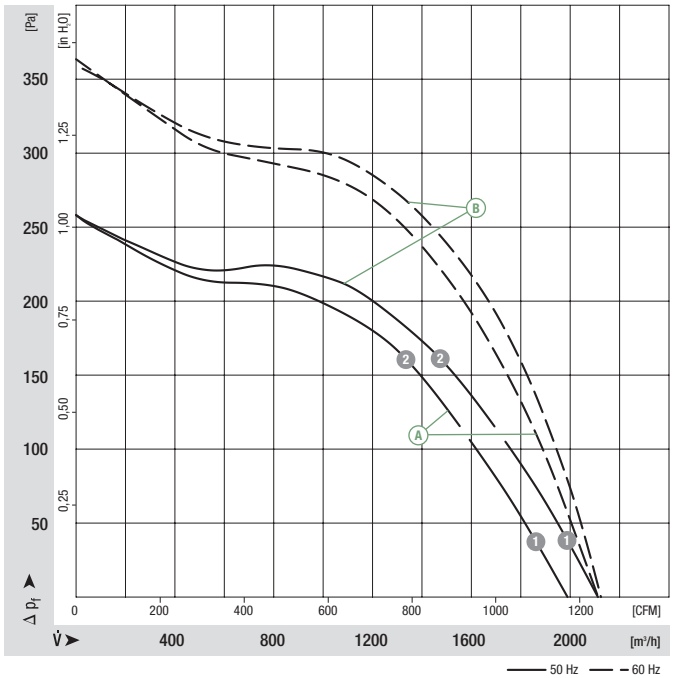
- **Material:** Housing: Galvanised sheet steel
  Impeller: Galvanised sheet steel
  Rotor: Partially cast in aluminium
- **Direction of rotation:** Counter-clockwise, seen on rotor (opposite cable exit)
- **Type of protection:** IP 54
- **Insulation class:** "B"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Design:** EW motor anti-vibration mounted on both sides
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Sound pressure level	Min. back pressure	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VAC**	**Hz**	**m³/h**	**rpm**	**W**	**A**	**µF/VDB**	**dB(A)**	**Pa**	**°C**	p. 596 f.
D4E 180	M4E 068-LA	Ⓐ	1~ 230 1~ 230	50 60	1900 2040	1300 1360	360 460	1.58 2.02	10.0/400 10.0/400	65 66	0 0	-25 to +65 -25 to +40	A1)
D4E 180 (1)	M4E 068-LA	Ⓑ	1~ 230 1~ 230	50 60	2110 2125	1250 1280	380 495	1.68 2.16	10.0/400 10.0/400	64 64	0 0	-25 to +60 -25 to +35	A1)

subject to alterations

(1) data collected via exhaust duct (step diffuser, length 1 m)

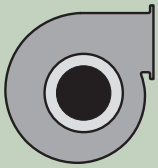
Curves

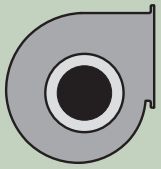


	n [rpm]	P_1 [W]	I [A]
Ⓐ 1	1350	310	1.36
Ⓐ 2	1400	240	1.07
Ⓑ 1	1300	360	1.60
Ⓑ 2	1385	270	1.20

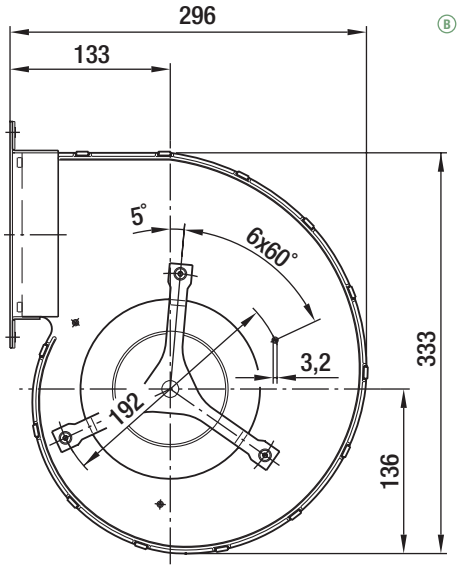
ebmpapst

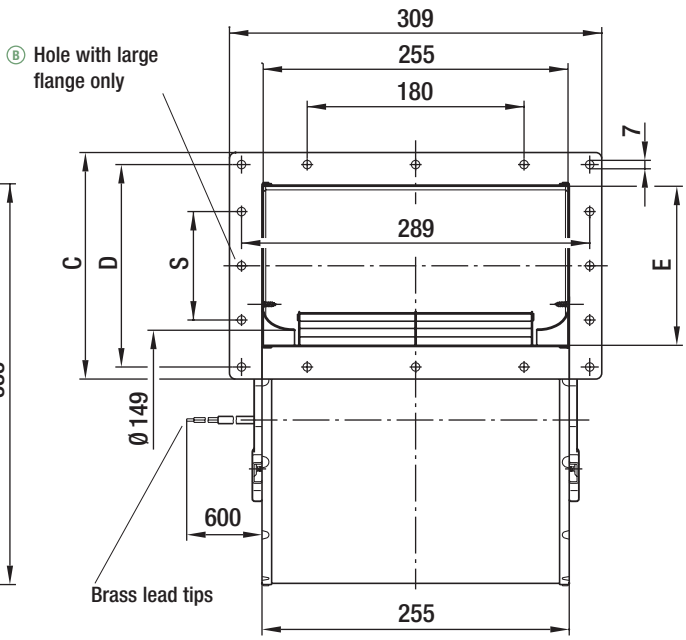
- **Motor protection:** TOP wired internally
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 60335-1, CE
- **Approvals:** CCC, Ⓐ also GOST





Centrifugal blower with flange	Centrifugal blower with flange (large)	Mass of centrifugal blower kg	Dimensions C	D	E	S
D4E 180-BA02 -02	—	11.0	188.0	168.0	134.0	90.0
—	D4E 180-CA02 -02	10.8	278.0	258.0	224.0	180.0





Guard grille p. 555
Capacitor p. 560 f.
Electr. connections p. 596 f.

AC centrifugal blowers

dual inlet, Ø 200

- **Material:** Housing: Galvanised sheet steel
  Impeller: Galvanised sheet steel
  Rotor: Partially cast in aluminium
- **Direction of rotation:** Counter-clockwise, seen on rotor (opposite cable exit)
- **Type of protection:** IP 54
- **Insulation class:** "B"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Design:** EW motor anti-vibration mounted on both sides
- **Bearings:** Maintenance-free ball bearings

Nominal data

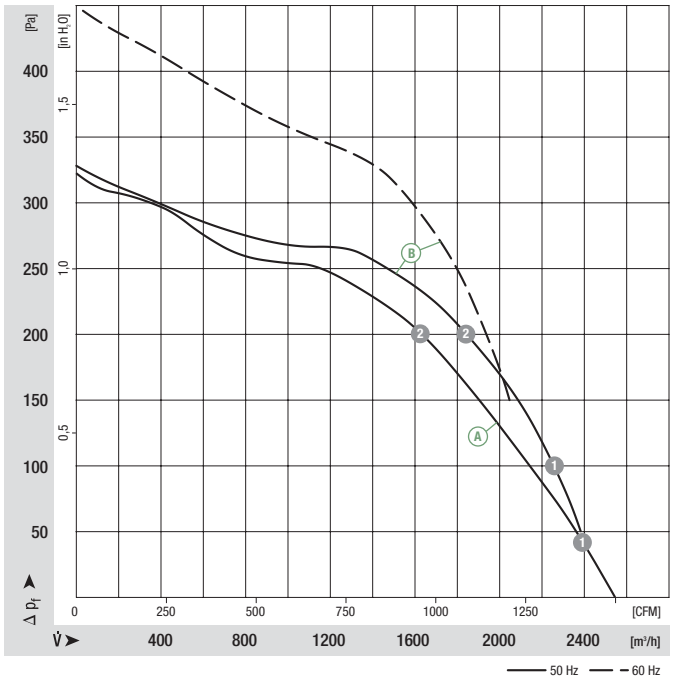
Type	Motor	Curve	Nominal voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Sound pressure level	Min. back pressure	Perm. amb. temp.	Electr. connection
			VAC	Hz	m³/h	rpm	W	A	µF/VDB	dB(A)	Pa	°C	p. 596 f.
D4D 200 (1)(2)	M4D 068-LA	Ⓐ	3~ 230/400	50	2550	1080	480	1.54/0.89	—	63	0	-25 to +30	C1)/C2)
D4E 200 (1)	M4E 068-LA	Ⓑ	1~ 230 1~ 230	50 60	2380 2050	1100 1250	490 525	2.15 2.30	10.0 / 400 10.0 / 400	60 60	50 150	-25 to +40 -25 to +40	A1)

subject to alterations

(1) data collected via exhaust duct (step diffuser, 1 m length)

(2) 230 VAC Δ / 400 VAC Y

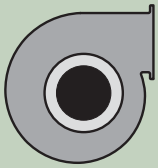
Curves

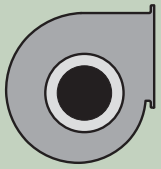


	n [rpm]	P_1 [W]	I [A]
Ⓐ 1	1125	425	1.36/0.79
Ⓐ 2	1260	310	1.00/0.58
Ⓑ 1	1185	445	1.95
Ⓑ 2	1300	350	1.55

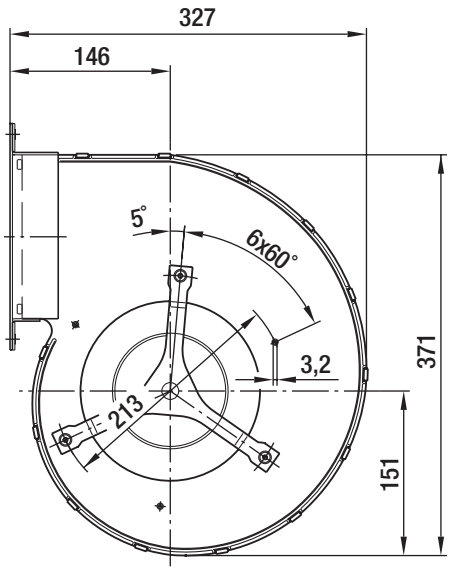
ebmpapst

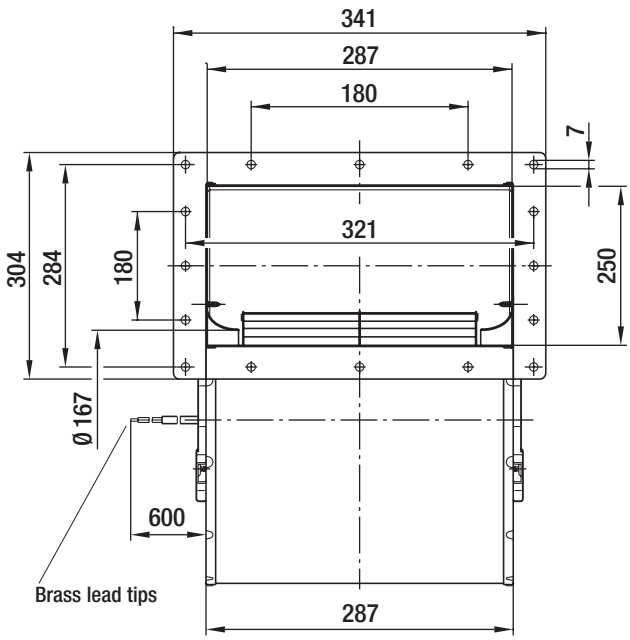
- **Motor protection:** Ⓐ without TOP, Ⓑ TOP wired internally
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 60335-1, CE
- **Approvals:** CCC





Centrifugal blower with flange	Centrifugal blower with flange (large)	Mass of centrifugal blower kg
—	D4D 200-CA01 -02	12.0
—	D4E 200-CA02 -02	11.9





AC centrifugal blowers

dual inlet, Ø 225

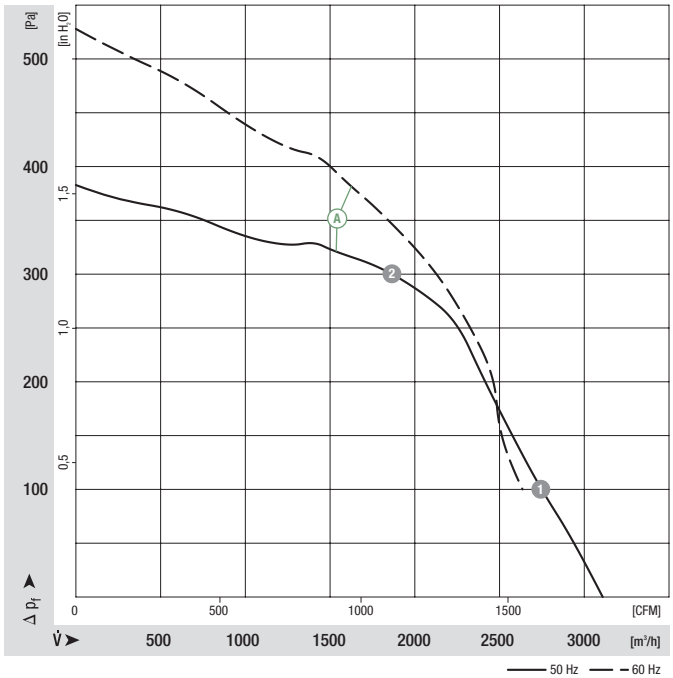
- **Material:** Housing: Galvanised sheet steel
  Impeller: Galvanised sheet steel
  Rotor: Partially cast in aluminium
- **Direction of rotation:** Counter-clockwise, seen on rotor (opposite cable exit)
- **Type of protection:** IP 22
- **Insulation class:** "B"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Design:** EW motor anti-vibration mounted on both sides
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Sound pressure level	Min. back pressure	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VAC**	**Hz**	**m³/h**	**rpm**	**W**	**A**	**µF/VDB**	**dB(A)**	**Pa**	**°C**	p. 596 f.
D4D 225(1)(2)	M4D 074-LA	Ⓐ	3~ 230/400	50	2980	1000	680	1.99/1.15	—	64	0	-25 to +45	C1)/C2)
			3~ 230/400	60	2430	1050	700	2.17/1.25	—	62	100	-25 to +35	

subject to alterations

(1) data collected via exhaust duct (step diffuser, 1 m length) (2) 230 VAC Δ / 400 VAC Y

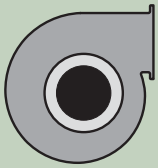
Curves

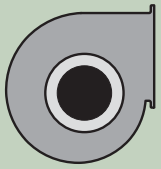


	n [rpm]	P_1 [W]	I [A]
Ⓐ 1	1110	600	1.75/1.02
Ⓐ 2	1300	385	1.13/0.66

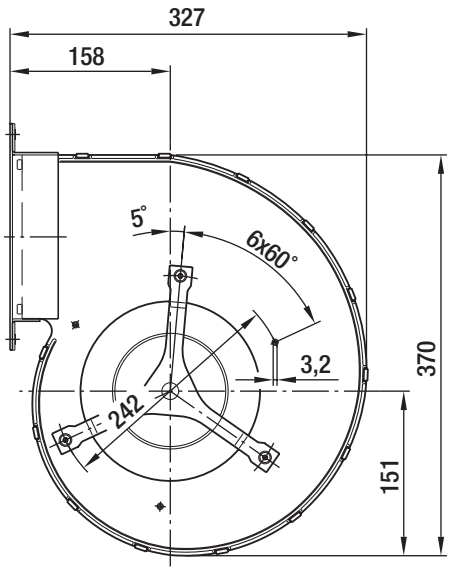
ebmpapst

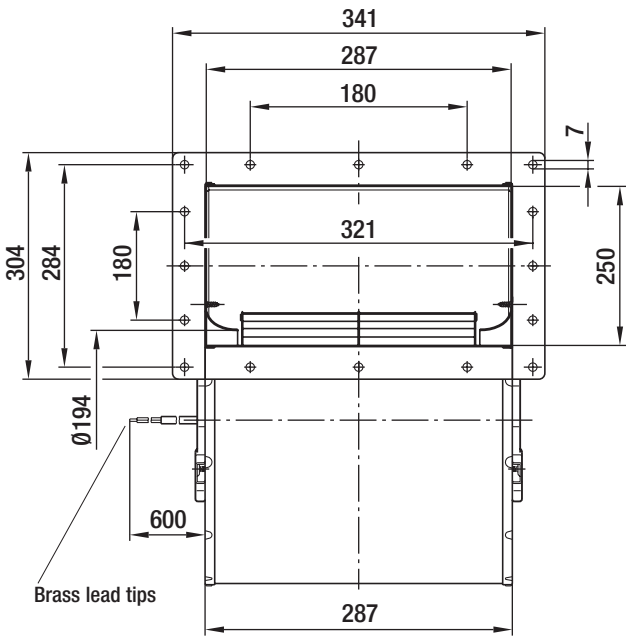
- **Motor protection:** Without thermal protection
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 60335-1, CE
- **Approvals:** CCC





Centrifugal blower with flange	Centrifugal blower with flange (large)	Mass of centrifugal blower kg
—	D4D 225-CC01 -02	12.5





Guard grille p. 555
Electr. connections p. 596 f.

AC centrifugal blowers

dual inlet, Ø 225

- **Material:** Housing: Galvanised sheet steel
  Impeller: Galvanised sheet steel
  Rotor: Partially cast in aluminium
- **Direction of rotation:** Counter-clockwise, seen on rotor (opposite cable exit)
- **Type of protection:** Ⓐ Ⓑ IP 22, Ⓒ IP 54
- **Insulation class:** "B"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Design:** EW motor anti-vibration mounted on both sides
- **Bearings:** Maintenance-free ball bearings

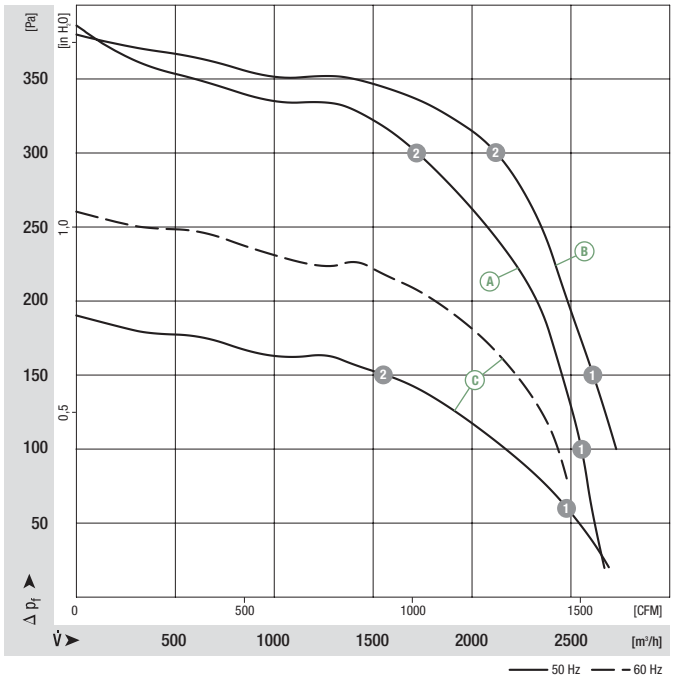
Nominal data

Type	Motor	Curve	Nominal voltage	Frequency	Air flow	Speed/rpm	Power input	Current draw	Capacitor	Sound pressure level	Min. back pressure	Perm. amb. temp.	Electr. connection
			VAC	Hz	m³/h	rpm	W	A	µF/VDB	dB(A)	Pa	°C	p. 596 f.
D4E 225	M4E 074-LA	Ⓐ	1~ 230	50	2600	1100	700	3.05	25.0 / 400	67	20	-25 to +40	A1)
D4E 225 (1)	M4E 074-LA	Ⓑ	1~ 230	50	2650	1150	650	2.84	25.0 / 400	65	100	-25 to +40	A1)
D6E 225 (1)	M6E 068-LA	Ⓒ	1~ 230 1~ 230	50 60	2680 2480	800 900	365 410	1.60 1.80	10.0 / 450 10.0 / 450	59 59	20 80	-25 to +40 -25 to +40	A1)

subject to alterations

(1) data collected via exhaust duct (step diffuser, length 1 m)

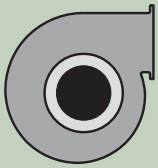
Curves

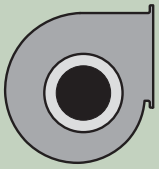


	n [rpm]	P_1 [W]	I [A]
Ⓐ 1	1200	660	2.88
Ⓐ 2	1370	480	2.13
Ⓑ 1	1170	680	2.98
Ⓑ 2	1300	550	2.44
Ⓒ 1	850	330	1.45
Ⓒ 2	940	245	1.08

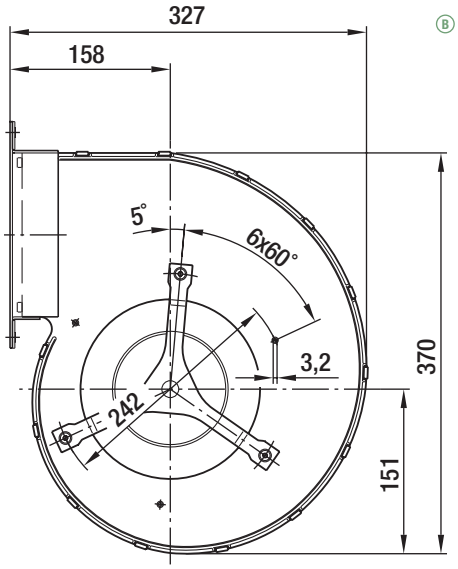
ebmpapst

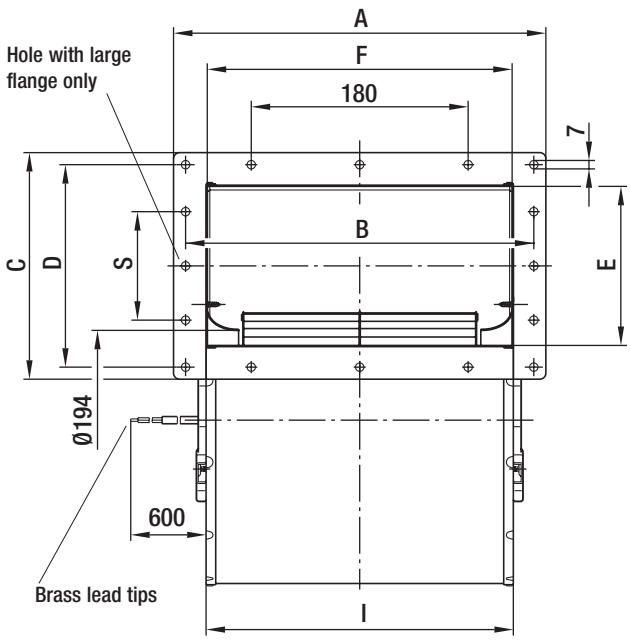
- **Motor protection:** TOP wired internally
- **Cable exit:** Variable
- **Protection class:** I
- **Capacitor:** Ⓐ Ⓑ FPU (P2) acc. to IEC 252
- **Product conforming to standards:** EN 60335-1, CE
- **Approvals:** Ⓐ Ⓑ CCC, Ⓑ GOST





Centrifugal blower with flange	Centrifugal blower with flange (large)	Mass of centrifugal blower kg	Dimensions A	B	C	D	E	F	I	S
D4E 225-BC01 -02	—	12.1	341.0	321.0	200.0	180.0	146.0	287.0	287.0	90.0
—	D4E 225-CC01 -02	12.4	341.0	321.0	304.0	284.0	250.0	287.0	287.0	180.0
—	D6E 225-FB07 -02	12.5	387.0	367.0	304.0	284.0	250.0	333.0	333.0	180.0





Guard grille p. 555
Capacitor p. 560 f.
Electr. connections p. 596 f.

AC centrifugal blowers

dual inlet, Ø 225

- **Material:** Housing: Galvanised sheet steel
  Impeller: Galvanised sheet steel
  Rotor: Cast in aluminium
- **Direction of rotation:** Counter-clockwise, seen on rotor (on cable exit)
- **Type of protection:** IP 20 (acc. to EN 60527)
- **Insulation class:** "F"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Design:** EW motor anti-vibration mounted on both sides
- **Bearings:** Maintenance-free ball bearings

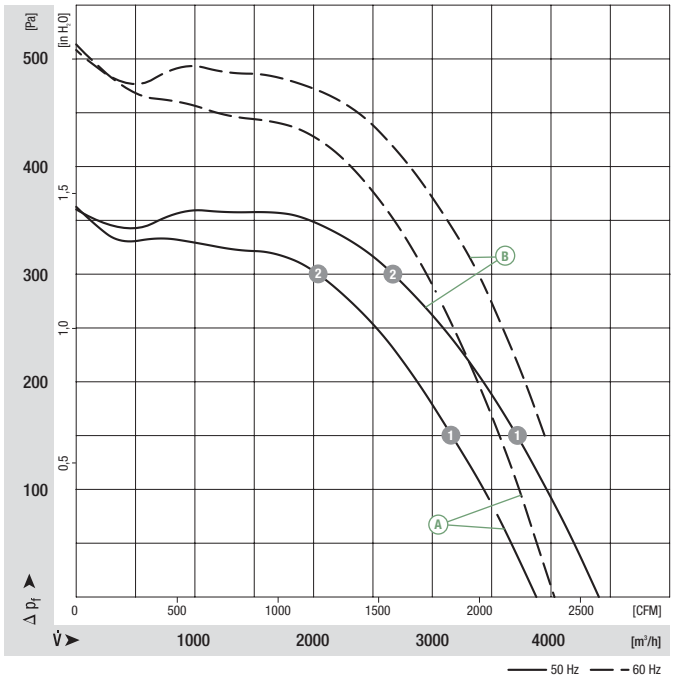
Nominal data

Type	Motor	Curve	Nominal voltage VAC	Frequency Hz	Speed/rpm (1) rpm	Max. power input (1) W	Max. current draw (1) A	Capacitor µF/VDB	Min. back pressure Pa	Perm. amb. temp. °C	Electr. connection p. 596 f.
D4D 225	M4D 094-LA	Ⓐ	3~ 400 Y	50	1300	950	1.82	—	0	-40 to +85	D1)
			3~ 400 Y	60	1350	1320	2.40	—	0	-40 to +40	
D4D 225 (2)	M4D 094-LA	Ⓑ	3~ 400 Y	50	1230	1140	2.10	—	0	-40 to +70	D1)
			3~ 400 Y	60	1360	1280	2.30	—	150	-40 to +50	

subject to alterations

(1) Nominal data in operating point with maximum load (2) Data collected via exhaust duct (step diffuser, 1 m length)

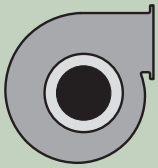
Curves

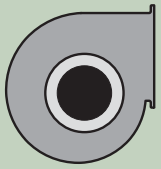


	n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]
Ⓐ 1	1360	717	1.50	69
Ⓐ 2	1420	454	1.18	63
Ⓑ 1	1320	877	1.70	72
Ⓑ 2	1390	589	1.31	65

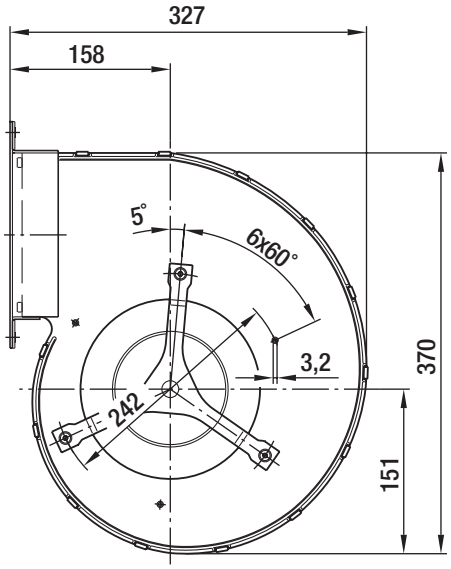
ebmpapst

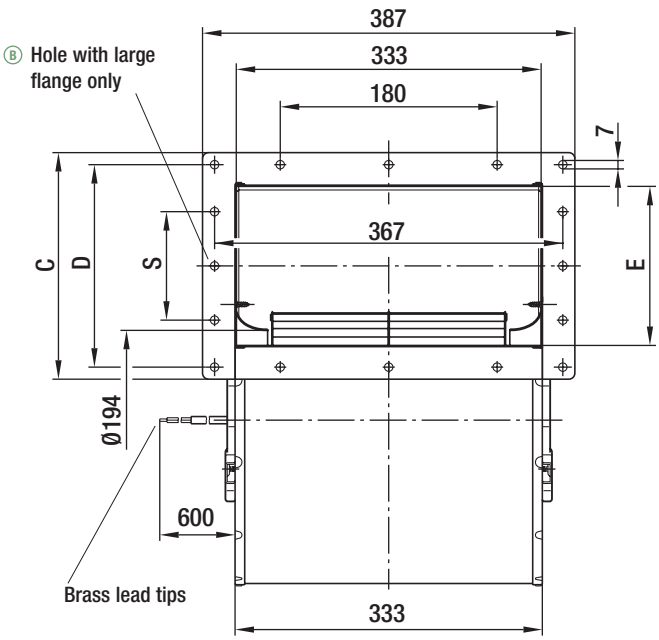
- **Motor protection:** Design with thermal overload protector
- **Cable exit:** Axial
- **Protection class:** I (acc. to EN 61800-5-1)
- **Product conforming to standard:** CE
- **Approvals:** Ⓐ GOST
- **Options:** 400 VAC △/Y for two speed steps available on request, mounting brackets on request





Centrifugal blower with flange	Centrifugal blower with flange (large)	Mass of centrifugal blower kg	Dimensions C	D	E	S
D4D 225-FH02 -01	—	15.6	200.0	180.0	146.0	90.0
—	D4D 225-GH02 -01	15.6	304.0	284.0	250.0	180.0





Guard grille p. 555
Electr. connections p. 596 f.

AC centrifugal blowers

dual inlet, Ø 225

- **Material:** Housing: Galvanised sheet steel
  Impeller: Galvanised sheet steel
  Rotor: Cast in aluminium
- **Direction of rotation:** Counter-clockwise, seen on rotor (on cable exit)
- **Type of protection:** IP 20 (acc. to EN 60527)
- **Insulation class:** "F"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Design:** EW motor anti-vibration mounted on both sides
- **Bearings:** Maintenance-free ball bearings

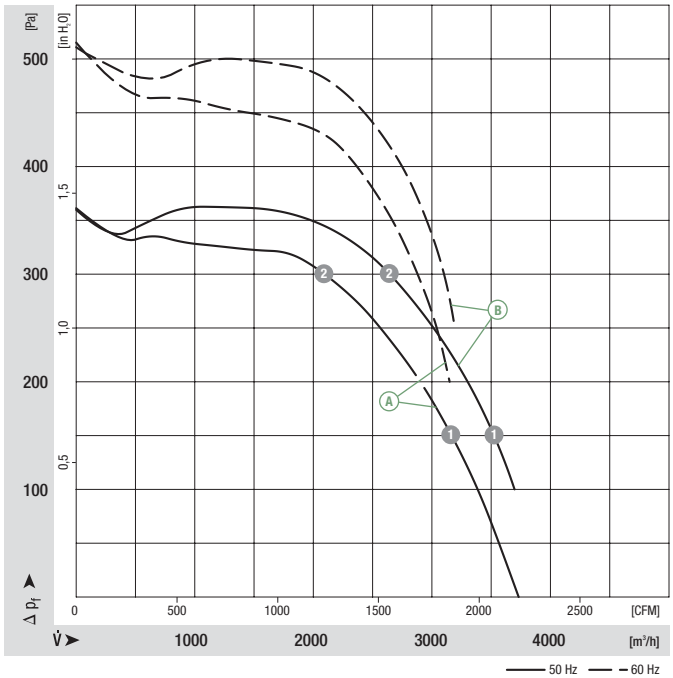
Nominal data

Type	Motor	Curve	Nominal voltage	Frequency	Speed/rpm (1)	Max. power input (1)	Max. current draw (1)	Capacitor	Min. back pressure	Perm. amb. temp.	Electr. connection
			VAC	Hz	rpm	W	A	µF/VDB	Pa	°C	p. 596 f.
D4E 225	M4E 094-LA	Ⓐ	1~ 230	50	1230	1060	5.38	10.0/450	0	-40 to +55	A2a)
			1~ 230	60	1410	1085	5.24	10.0/500	200	-40 to +45	
D4E 225 (2)	M4E 094-LA	Ⓑ	1~ 230	50	1230	1060	5.38	10.0/450	100	-40 to +55	A2a)
			1~ 230	60	1370	1120	5.40	10.0/500	250	-40 to +45	

subject to alterations

(1) Nominal data in operating point with maximum load (2) Data collected via exhaust duct (step diffuser, 1 m length)

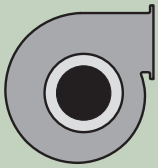
Curves

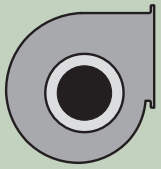


	n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]
Ⓐ 1	1330	802	4.16	69
Ⓐ 2	1410	530	3.08	63
Ⓑ 1	1270	947	4.81	71
Ⓑ 2	1380	652	3.52	65

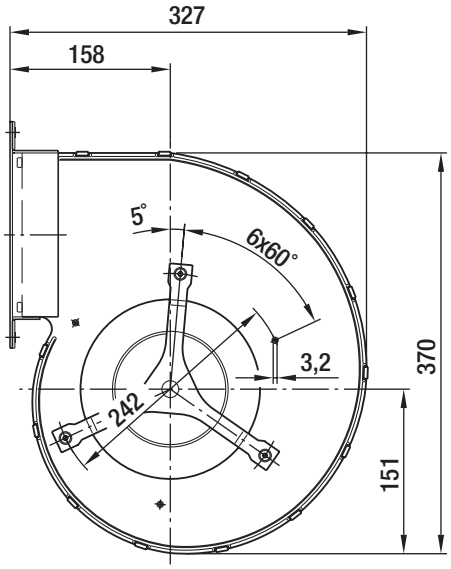
ebmpapst

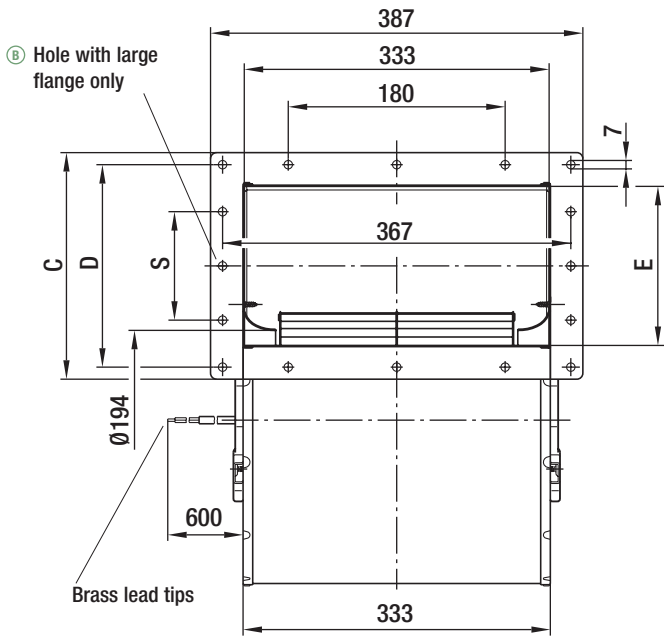
- **Motor protection:** Design with thermal overload protector
- **Cable exit:** Axial
- **Protection class:** I (acc. to EN 61800-5-1)
- **Product conforming to standard:** CE
- **Approvals:** Ⓐ GOST
- **Options:** Mounting brackets on request





Centrifugal blower with flange	Centrifugal blower with flange (large)	Mass of centrifugal blower kg	Dimensions C	D	E	S
D4E 225-EH01 -01	—	16.7	200.0	180.0	146.0	90.0
—	D4E 225-DH01 -01	16.7	304.0	284.0	250.0	180.0





AC centrifugal blowers

dual inlet, Ø 240

- **Material:** Housing: Galvanised sheet steel
  Impeller: Galvanised sheet steel
  Rotor: Cast in aluminium
- **Direction of rotation:** Counter-clockwise, seen on rotor (on cable exit)
- **Type of protection:** IP 20 (acc. to EN 60527)
- **Insulation class:** "F"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Design:** EW motor anti-vibration mounted on both sides
- **Bearings:** Maintenance-free ball bearings

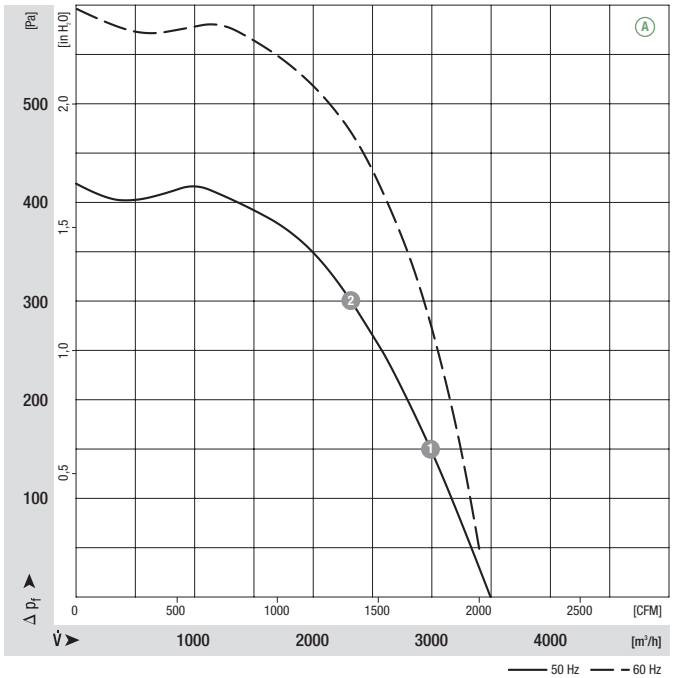
Nominal data

Type	Motor	Curve	Nominal voltage	Frequency	Speed/rpm (1)	Max. power input (1)	Max. current draw (1)	Capacitor	Min. back pressure	Perm. amb. temp.	Electr. connection
			VAC	Hz	rpm	W	A	µF/VDB	Pa	°C	p. 596 f.
D4E 240	M4E 094-IF	Ⓐ	1~ 230	50	1300	1020	4.45	25.0/400	0	-40 to +50	A2a)
			1~ 230	60	1310	1320	5.75	25.0/400	50	-40 to +55	

subject to alterations

(1) Nominal data in operating point with maximum load

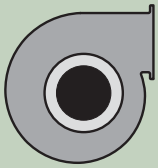
Curves

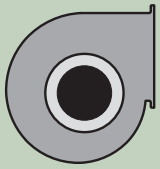


	n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]
Ⓐ 1	1345	849	3.80	73
Ⓐ 2	1390	692	3.10	70

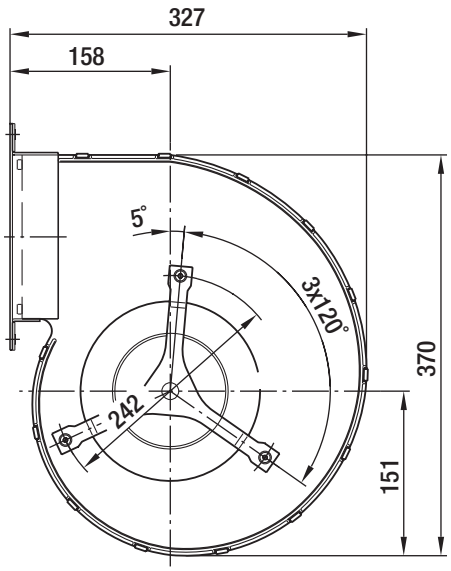
ebmpapst

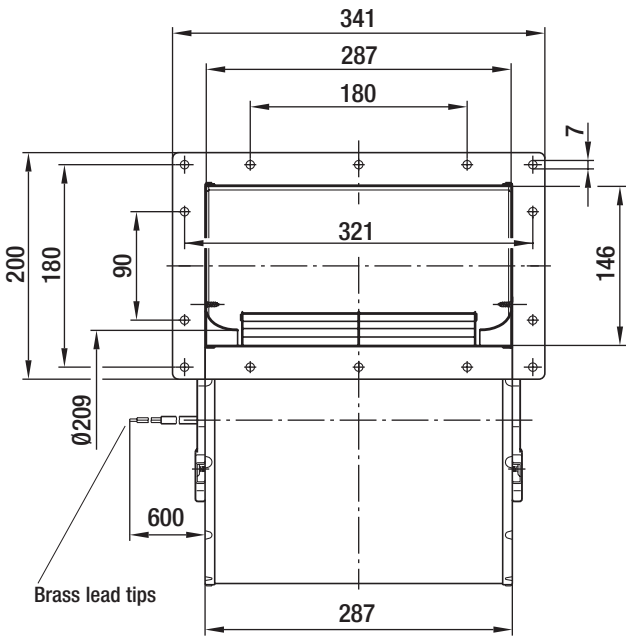
- **Motor protection:** Design with thermal overload protector
- **Cable exit:** Axial
- **Protection class:** I (acc. to EN 61800-5-1)
- **Product conforming to standard:** CE
- **Options:** Mounting brackets on request





Centrifugal blower with flange	Centrifugal blower with flange (large)	Mass of centrifugal blower kg
D4E 240-BA01 -01	—	15.3

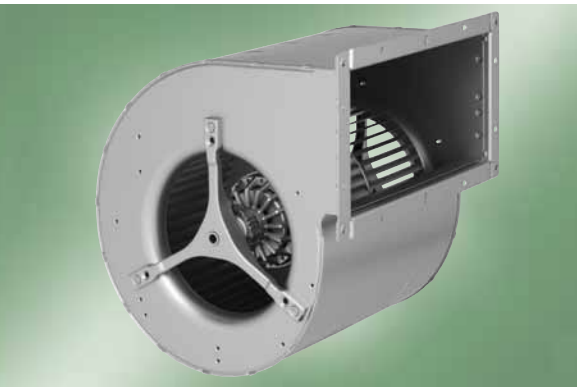




Guard grille p. 555
Capacitor p. 560 f.
Electr. connections p. 596 f.

AC centrifugal blowers

dual inlet, Ø 250



- **Material:** Housing: Galvanised sheet steel
  Impeller: Galvanised sheet steel
  Rotor: Cast in aluminium
- **Direction of rotation:** Counter-clockwise, seen on rotor (on cable exit)
- **Type of protection:** IP 20 (acc. to EN 60527)
- **Insulation class:** "F"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Design:** EW motor anti-vibration mounted on both sides
- **Bearings:** Maintenance-free ball bearings

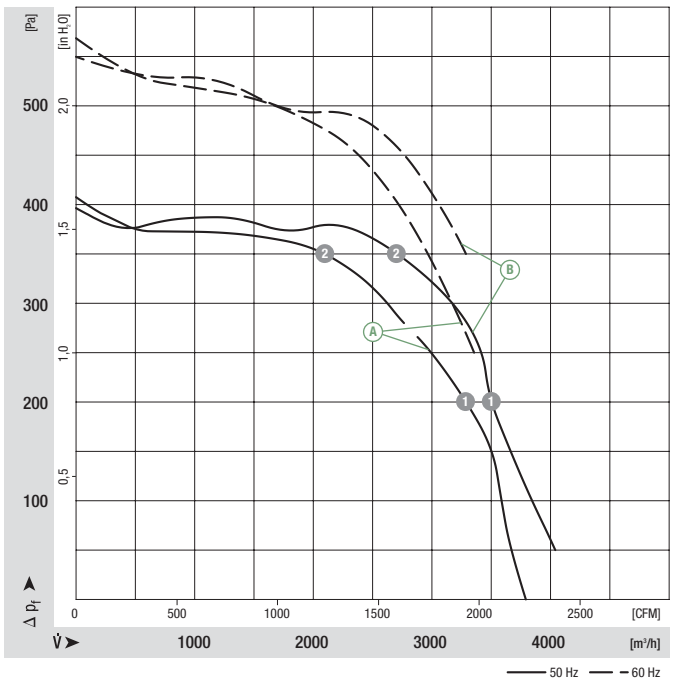
Nominal data

Type	Motor	Curve	Nominal voltage VAC	Frequency Hz	Speed/rpm (1) rpm	Max. power input (1) W	Max. current draw (1) A	Capacitor µF/VDB	Min. back pressure Pa	Perm. amb. temp. °C	Electr. connection p. 596 f.
D4D 250	M4D 094-LA	Ⓐ	3~ 400 Y	50	1240	1140	2.10	—	0	-40 to +60	D1)
			3~ 400 Y	60	1410	1210	2.20	—	250	-40 to +45	
D4D 250 (2)	M4D 094-LA	Ⓑ	3~ 400 Y	50	1200	1270	2.30	—	50	-40 to +45	D1)
			3~ 400 Y	60	1410	1270	2.20	—	350	-40 to +45	

subject to alterations

(1) Nominal data in operating point with maximum load (2) Data collected via exhaust duct (step diffuser, 1 m length)

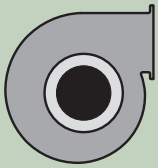
Curves

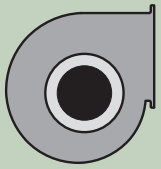


	n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]
Ⓐ 1	1320	875	1.73	71
Ⓐ 2	1410	481	1.21	65
Ⓑ 1	1280	1001	1.89	72
Ⓑ 2	1370	675	1.43	69

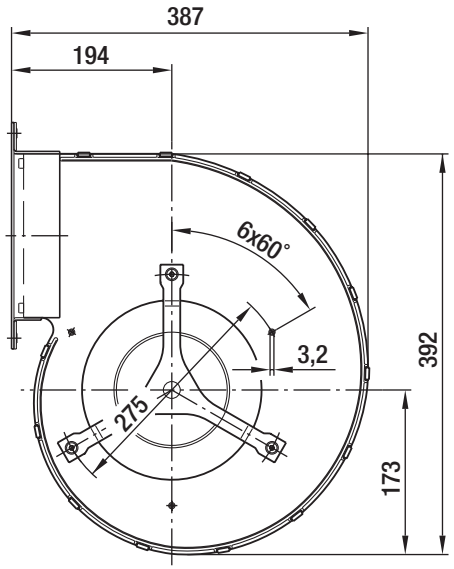
ebmpapst

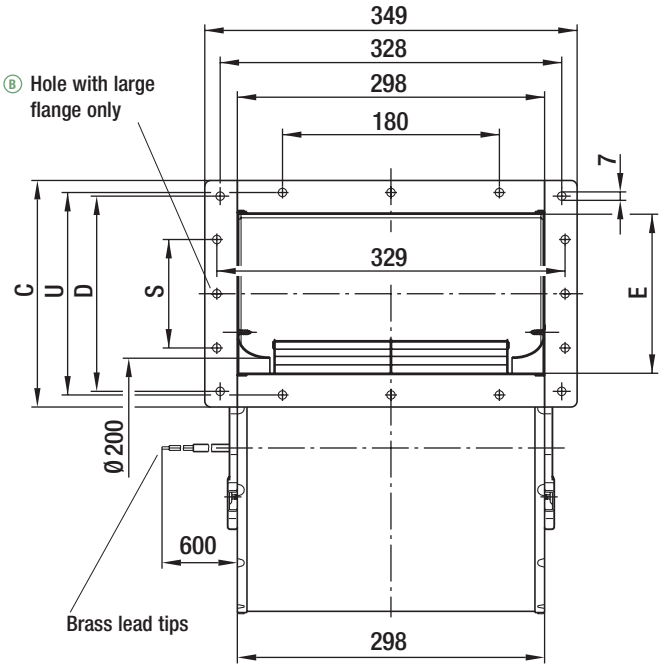
- **Motor protection:** Design with thermal overload protector
- **Cable exit:** Axial
- **Protection class:** I (acc. to EN 61800-5-1)
- **Product conforming to standard:** CE
- **Options:** 400 VAC Δ/Y for two speed steps available on request, mounting brackets on request





Centrifugal blower with flange	Centrifugal blower with flange (large)	Mass of centrifugal blower kg	Dimensions C	D	E	S	U
D4D 250-BA02 -01	—	16.7	218.0	190.0	167.0	90.0	198.0
—	D4D 250-CA02 -01	16.7	313.0	285.0	262.0	180.0	293.0

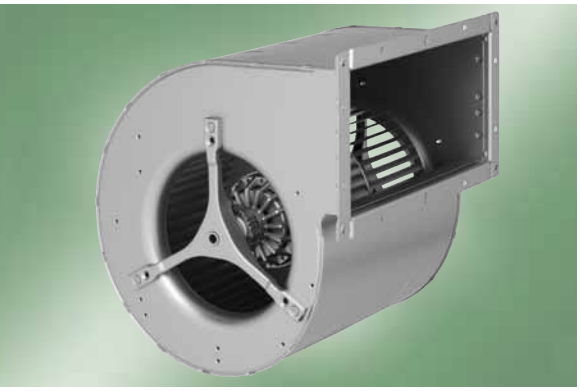




Guard grille p. 555
Electr. connections p. 596 f.

AC centrifugal blowers

dual inlet, Ø 250



- **Material:** Housing: Galvanised sheet steel
  Impeller: Galvanised sheet steel
  Rotor: Cast in aluminium
- **Direction of rotation:** Counter-clockwise, seen on rotor (on cable exit)
- **Type of protection:** IP 20 (acc. to EN 60527)
- **Insulation class:** "F"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Design:** EW motor anti-vibration mounted on both sides
- **Bearings:** Maintenance-free ball bearings

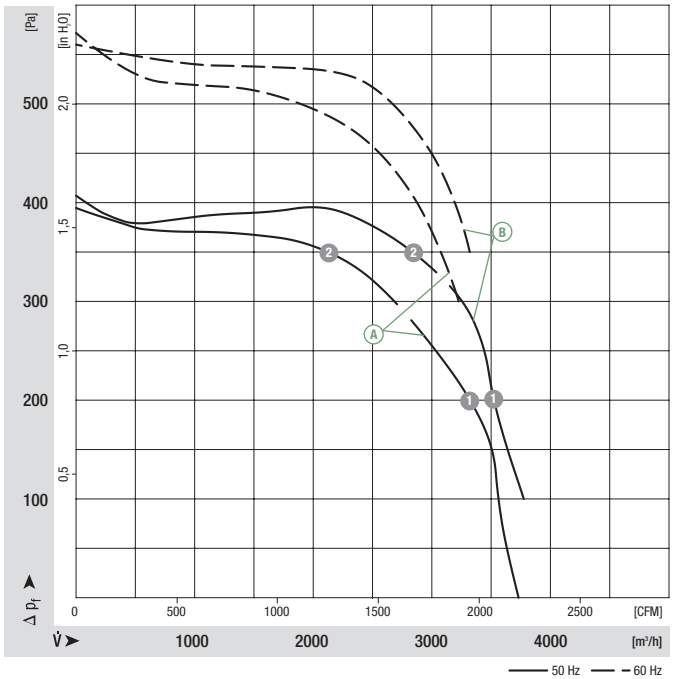
Nominal data

Type	Motor	Curve	Nominal voltage VAC	Frequency Hz	Speed/rpm (1) rpm	Max. power input (1) W	Max. current draw (1) A	Capacitor µF/VDB	Min. back pressure Pa	Perm. amb. temp. °C	Electr. connection
											p. 596 f.
D4E 250	M4E 094-LA	Ⓐ	1~ 230	50	1210	1240	6.00	14.0/500	0	-40 to +40	A2a)
			1~ 230	60	1460	1230	5.54	14.0/500	300	-40 to +45	
D4E 250 (2)	M4E 094-LA	Ⓑ	1~ 230	50	1200	1250	6.00	14.0/500	100	-40 to +40	A2a)
			1~ 230	60	1400	1285	5.90	14.0/500	350	-40 to +40	

subject to alterations

(1) Nominal data in operating point with maximum load (2) Data collected via exhaust duct (step diffuser, 1 m length)

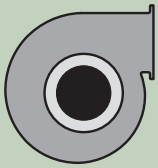
Curves

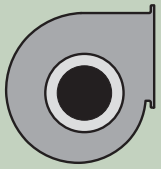


	n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]
Ⓐ 1	1320	975	4.74	71
Ⓐ 2	1400	665	3.50	65
Ⓑ 1	1270	1100	5.31	72
Ⓑ 2	1370	788	3.94	69

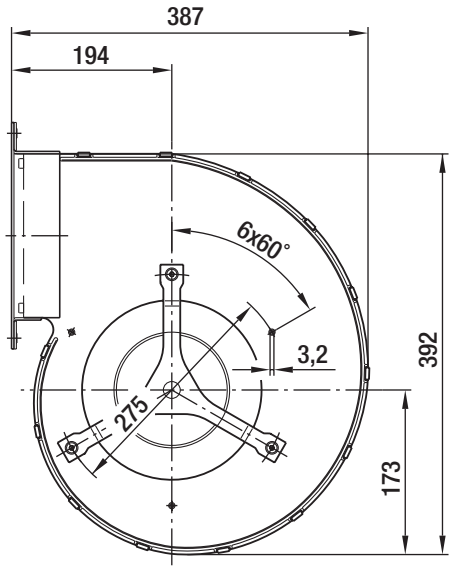
ebmpapst

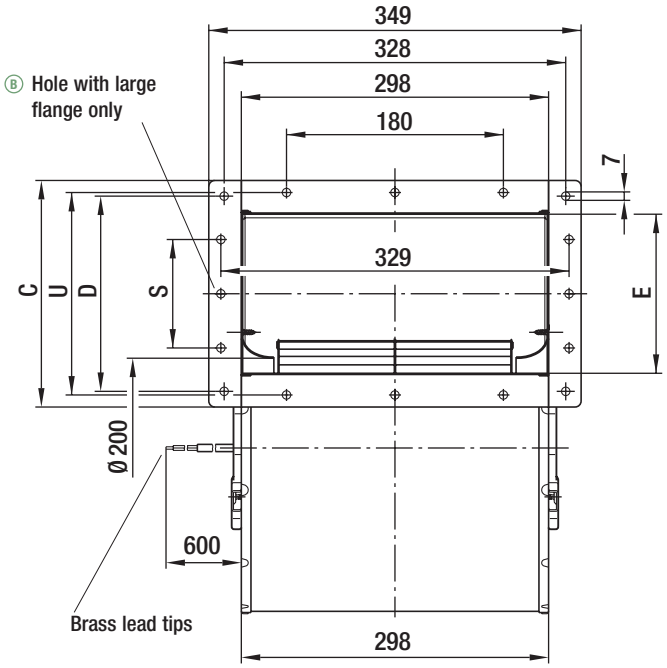
- **Motor protection:** Design with thermal overload protector
- **Cable exit:** Axial
- **Protection class:** I (acc. to EN 61800-5-1)
- **Product conforming to standard:** CE
- **Approvals:** Ⓑ GOST
- **Options:** Mounting brackets on request





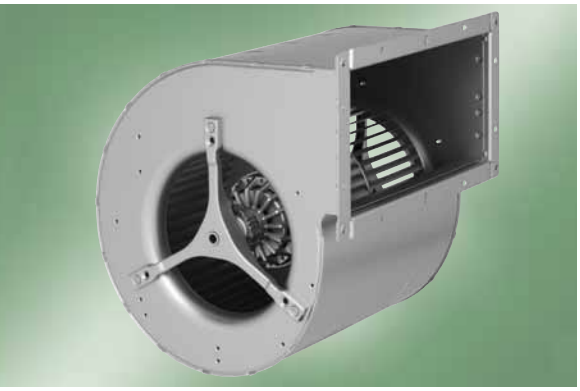
Centrifugal blower with flange	Centrifugal blower with flange (large)	Mass of centrifugal blower kg	Dimensions C	D	E	S	U
D4E 250-BA01 -01	—	16.3	218.0	190.0	167.0	90.0	198.0
—	D4E 250-CA01 -01	16.3	313.0	285.0	262.0	180.0	293.0





AC centrifugal blowers

dual inlet, Ø 250



- **Material:** Housing: Galvanised sheet steel
  Impeller: Galvanised sheet steel
  Rotor: Cast in aluminium
- **Direction of rotation:** Counter-clockwise, seen on rotor (on cable exit)
- **Type of protection:** IP 20 (acc. to EN 60527)
- **Insulation class:** "F"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Design:** EW motor anti-vibration mounted on both sides
- **Bearings:** Maintenance-free ball bearings

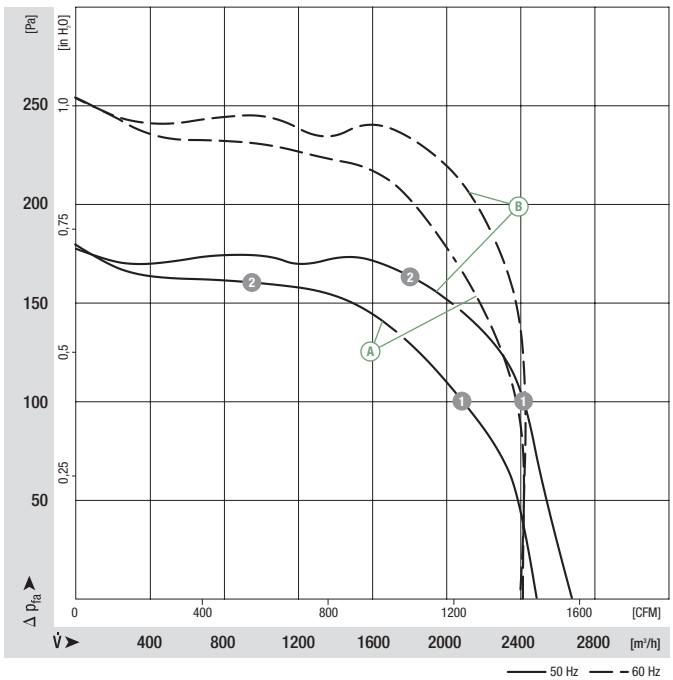
Nominal data

Type	Motor	Curve	Nominal voltage VAC	Frequency Hz	Speed/rpm (1) rpm	Max. power input (1) W	Max. current draw (1) A	Capacitor µF/VDB	Min. back pressure Pa	Perm. amb. temp. °C	Electr. connection
											p. 596 f.
D6E 250	M6E 094-HA	Ⓐ	1~ 230	50	800	400	1.85	10.0/400	0	-40 to +80	A2a)
			1~ 230	60	770	480	2.15	10.0/450	0	-40 to +80	
D6E 250 (2)	M6E 094-HA	Ⓑ	1~ 230	50	680	470	2.20	10.0/400	0	-40 to +70	A2a)
			1~ 230	60	580	500	2.30	10.0/450	0	-40 to +55	

subject to alterations

(1) Nominal data in operating point with maximum load (2) Data collected via exhaust duct (step diffuser, 1 m length)

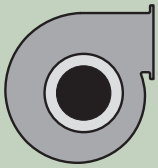
Curves

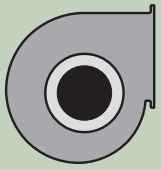


	n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]
Ⓐ 1	890	318	1.51	59
Ⓐ 2	940	244	1.25	53
Ⓑ 1	830	375	1.74	65
Ⓑ 2	900	304	1.45	57

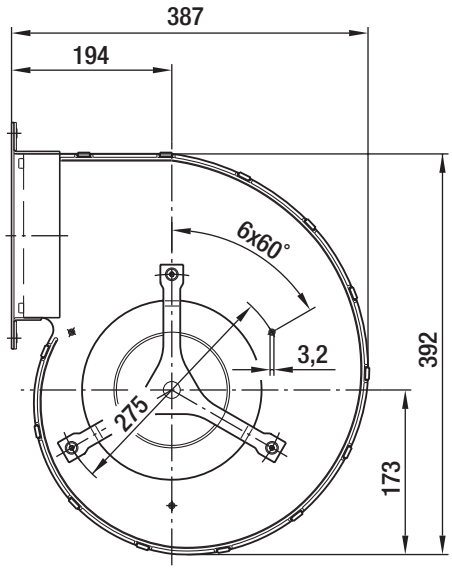
ebmpapst

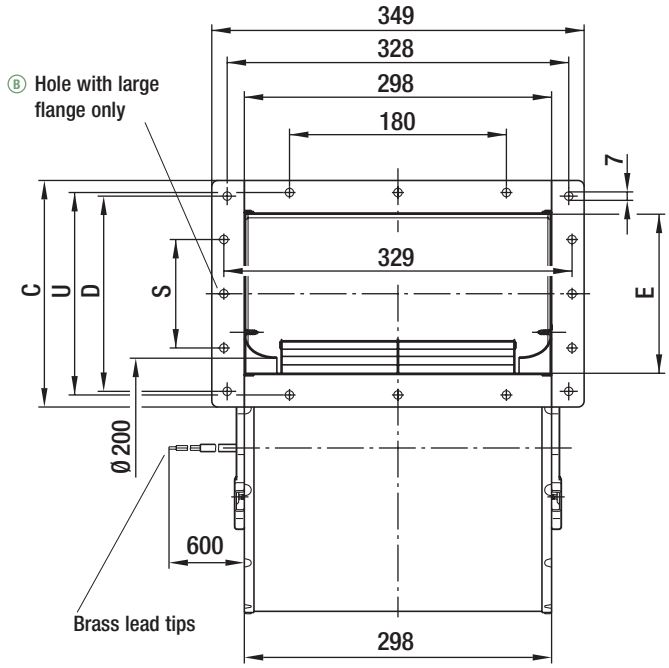
- **Motor protection:** Design with thermal overload protector
- **Cable exit:** Axial
- **Protection class:** I (acc. to EN 61800-5-1)
- **Product conforming to standard:** CE
- **Options:** Mounting brackets on request

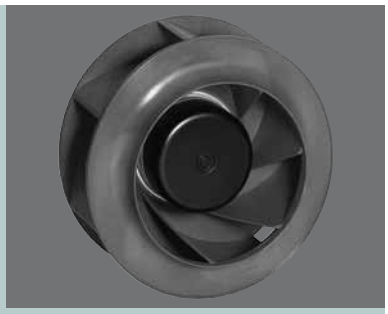


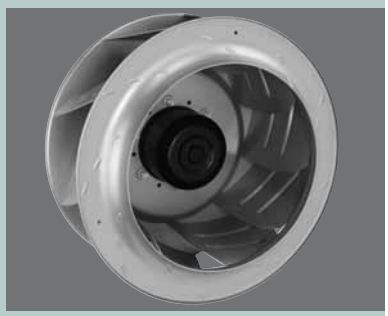


Centrifugal blower with flange	Centrifugal blower with flange (large)	Mass of centrifugal blower kg	Dimensions C	D	E	S	U
D6E 250-BA01 -01	—	14.4	218.0	190.0	167.0	90.0	198.0
—	D6E 250-CA01 -01	14.4	313.0	285.0	262.0	180.0	293.0









EC centrifugal fans backward curved

	EC centrifugal fans with plastic impeller, 24 / 48 VDC	Ø 120 - Ø 250	222
	EC centrifugal fans with sheet steel impeller, 24 / 48 VDC	Ø 250 - Ø 280	240
	EC centrifugal fans with aluminium impeller, 24 / 48 VDC	Ø 310 - Ø 400	246
	EC centrifugal fans with plastic impeller, line-fed	Ø 133 - Ø 250	262
	EC centrifugal fans with sheet steel impeller, line-fed	Ø 250 - Ø 280	296
	EC centrifugal fans with aluminium impeller, line-fed	Ø 310 - Ø 630	316

EC centrifugal fans

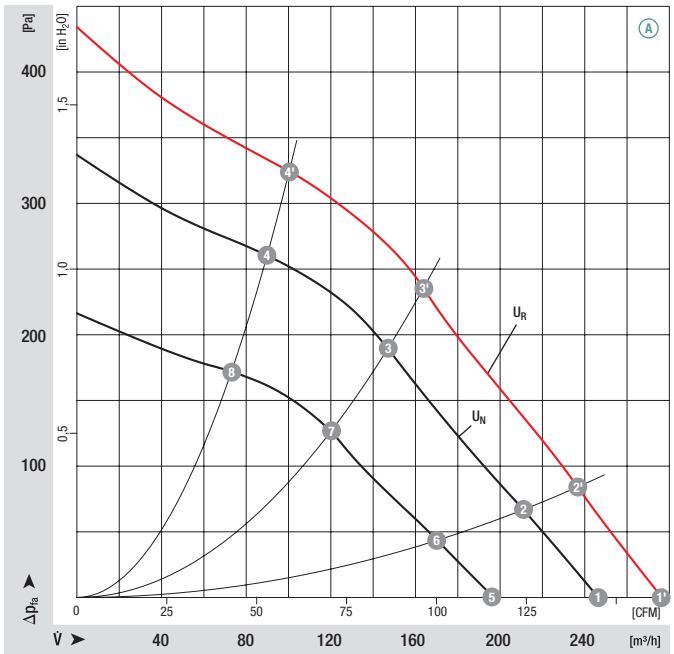
backward curved, Ø 120

- **Material:** Impeller: PA plastic 6.6, fibreglass-reinforced
  Rotor: Galvanised
- **Number of blades:** 9
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 20
- **Insulation class:** "B"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage	Voltage range	Air flow	Speed/rpm	Power input	Current draw	Sound pressure level	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VDC**	**VDC**	**m³/h**	**rpm**	**W**	**A**	**dB(A)**	**°C**	p. 600
R1G 120	M1G 045-BE	Ⓐ	24	16-28	250	4060	26	1.20	62	-25 to +50	G)
R1G 120	M1G 045-BE	Ⓐ	48	36-57	250	4060	26	0.60	62	-25 to +50	G)

subject to alterations

Curves

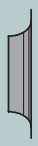


	n [rpm]	P_1 [W]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1'	4520	36	65	—
Ⓐ 2'	4500	36	64	27
Ⓐ 3'	4540	36	61	45
Ⓐ 4'	4750	32	64	39
Ⓐ 1	4060	26	62	—
Ⓐ 2	4000	26	61	27
Ⓐ 3	4050	26	58	45
Ⓐ 4	4200	23	61	39
Ⓐ 5	3270	14	56	—
Ⓐ 6	3250	14	55	27
Ⓐ 7	3280	14	53	45
Ⓐ 8	3400	13	56	39

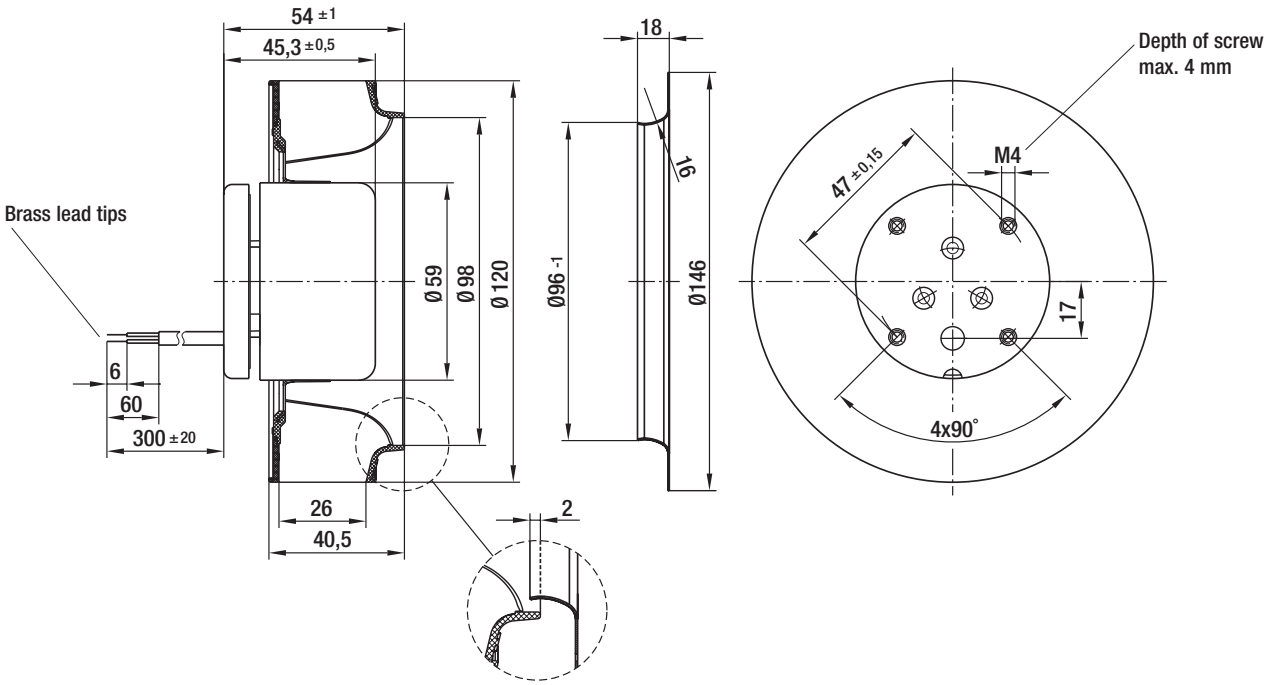
ebmpapst

- **Technical features:**
- Control input 0-10 VDC / PWM
- **Cable exit:** Axial
- **Protection class:** I
- **Product conforming to standard:** EN 60950-1
- **Approvals:** Ⓐ (48 VDC) CCC

- Tach output
- Reverse polarity and locked-rotor protection



Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle (long)
R1G 120-AD13 -02	0.5	96120-2-4013
R1G 120-AD11 -02	0.5	96120-2-4013



EC centrifugal fans

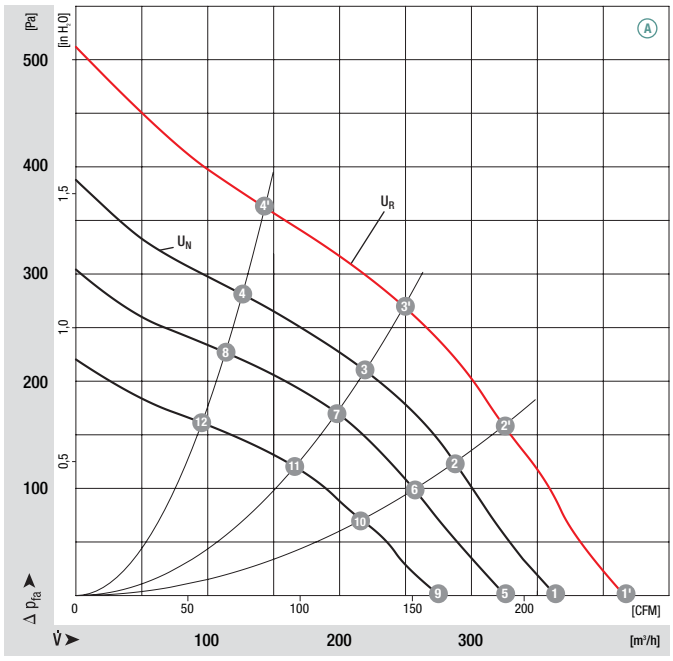
backward curved, Ø 133

- **Material:** Impeller: PA plastic 6.6, fibreglass-reinforced
  Rotor: Galvanised
- **Number of blades:** 7
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 20
- **Insulation class:** "B"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage	Voltage range	Air flow	Speed/rpm	Power input	Current draw	Sound pressure level	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VDC**	**VDC**	**m³/h**	**rpm**	**W**	**A**	**dB(A)**	**°C**	p. 600
R1G 133	M1G 055-BD	Ⓐ	24	16-28	360	3900	28	1.30	63	-25 to +60	G)
R1G 133	M1G 055-BD	Ⓐ	48	36-57	360	3900	28	0.70	63	-25 to +60	G)

subject to alterations

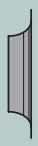
Curves



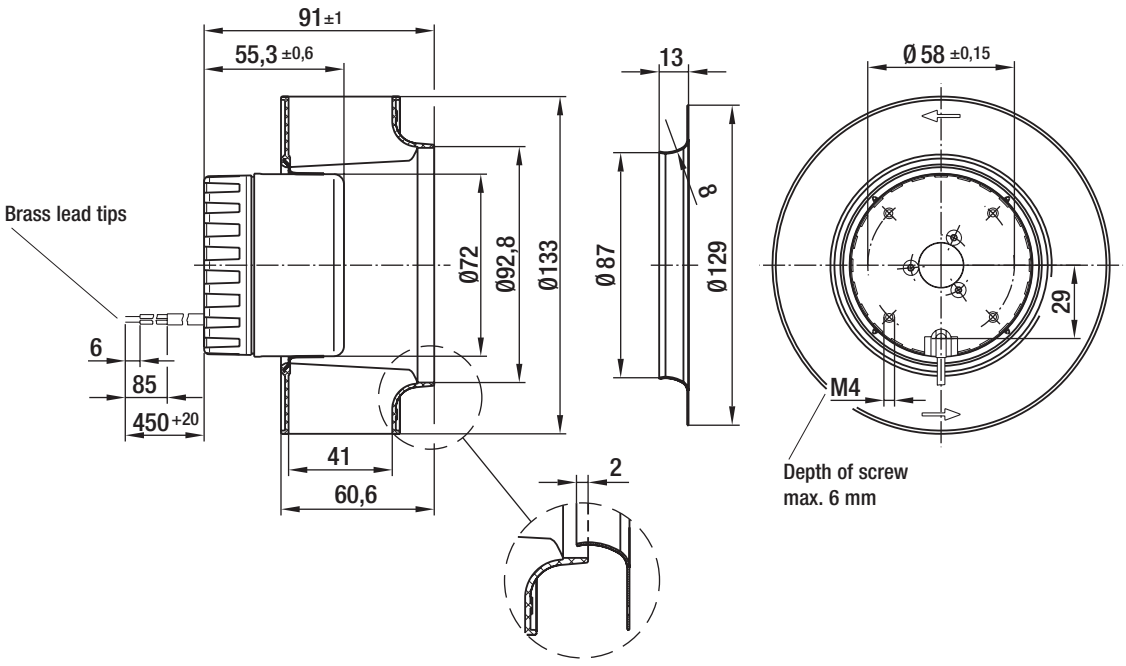
	n [rpm]	P_1 [W]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1'	4450	39	74	—
Ⓐ 2'	4250	44	60	45
Ⓐ 3'	4270	44	59	56
Ⓐ 4'	4380	41	61	44
Ⓐ 1	3900	28	63	—
Ⓐ 2	3770	31	58	45
Ⓐ 3	3770	31	56	56
Ⓐ 4	3850	29	58	44
Ⓐ 5	3500	20	59	—
Ⓐ 6	3380	23	55	45
Ⓐ 7	3400	23	53	56
Ⓐ 8	3450	21	55	44
Ⓐ 9	2970	13	55	—
Ⓐ 10	2860	15	51	45
Ⓐ 11	2880	15	49	56
Ⓐ 12	2930	14	51	44

ebmpapst

- **Technical features:**
  - Control input 0-10 VDC / PWM
  - Tach output
  - Reverse polarity and locked-rotor protection
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-2
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standard:** EN 60950-1
- **Approvals:** UL, CSA, Ⓐ (48 VDC) with CCC



Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle (long)
R1G 133-AA17 -02	0.7	09566-2-4013
R1G 133-AA65 -02	0.7	09566-2-4013



EC centrifugal fans

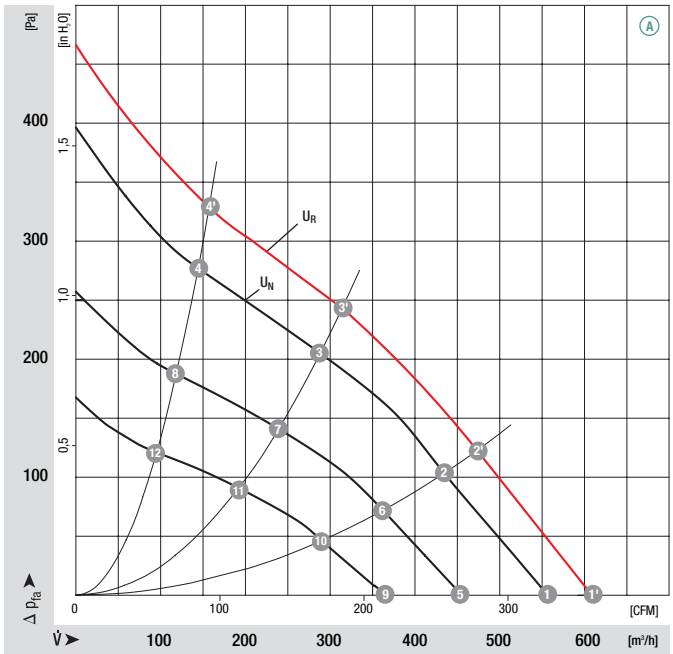
backward curved, Ø 175

- **Material:** Impeller: PA plastic 6.6, fibreglass-reinforced
  Rotor: Galvanised
- **Number of blades:** 7
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 22
- **Insulation class:** "B"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage	Voltage range	Air flow	Speed/rpm	Power input	Current draw	Sound pressure level	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VDC**	**VDC**	**m³/h**	**rpm**	**W**	**A**	**dB(A)**	**°C**	p. 600
R1G 175	M1G 055-BD	Ⓐ	24	16-28	565	3100	34	1.60	65	-25 to +60	G)
R1G 175	M1G 055-BD	Ⓐ	48	36-57	565	3100	34	1.00	65	-25 to +60	G)

subject to alterations

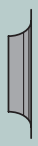
Curves



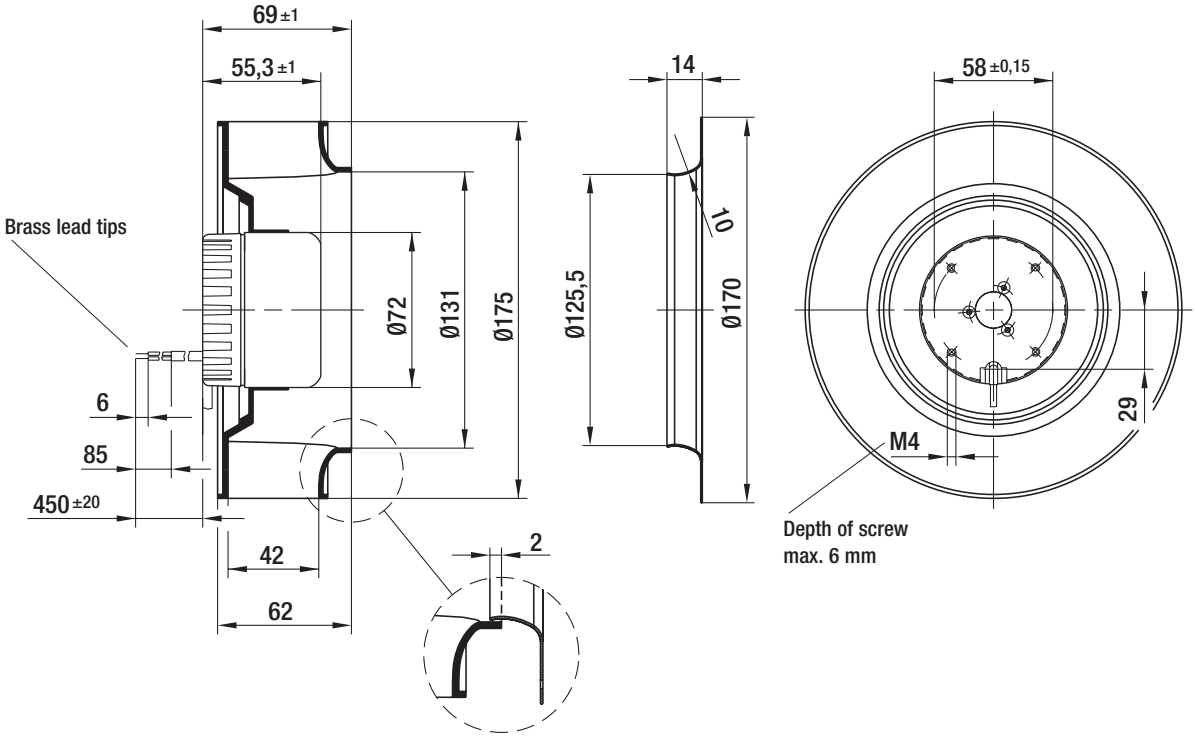
	n [rpm]	P_1 [W]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1'	3390	46	67	—
Ⓐ 2'	3200	51	60	49
Ⓐ 3'	3170	51	58	58
Ⓐ 4'	3300	51	66	39
Ⓐ 1	3100	34	65	—
Ⓐ 2	2910	39	58	49
Ⓐ 3	2880	39	56	58
Ⓐ 4	3010	37	64	39
Ⓐ 5	2520	20	60	—
Ⓐ 6	2430	22	54	51
Ⓐ 7	2390	23	51	58
Ⓐ 8	2470	21	60	39
Ⓐ 9	2050	12	56	—
Ⓐ 10	1950	13	50	51
Ⓐ 11	1920	13	56	58
Ⓐ 12	1990	12	53	40

ebmpapst

- **Technical features:**
  - Control input 0-10 VDC / PWM
  - Tach output
  - Reverse polarity and locked-rotor protection
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-2
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standard:** EN 60950-1
- **Approvals:** UL, CSA, Ⓐ (48 VDC) with VDE, CCC



Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle (long)
R1G 175-AB63 -02	0.7	09576-2-4013
R1G 175-AB41 -02	0.7	09576-2-4013



EC centrifugal fan

backward curved, Ø 175

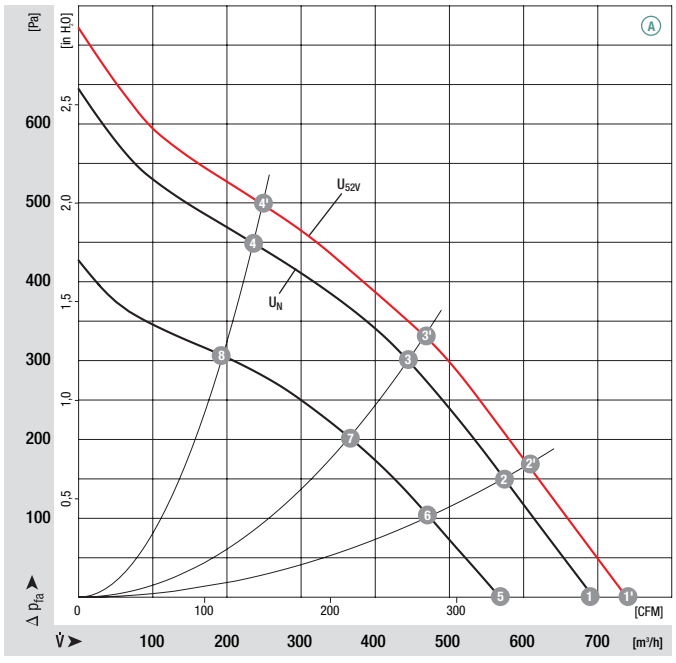
- **Material:** Impeller: PA plastic 6.6, fibreglass-reinforced
  Rotor: Coated in black, with cooling holes
- **Number of blades:** 7
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 22
- **Insulation class:** "B"
- **Mounting position:** Any
- **Condensate discharges:** Rotor-side
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data

Type	Motor	Curve	Nominal voltage	Voltage range	Air flow	Speed/rpm	Power input	Current draw	Sound pressure level	Perm. amb. temp.	Electr. connection
			VDC	VDC	m³/h	rpm	W	A	dB(A)	°C	p. 600
R1G 175	M1G 055-CF	Ⓐ	48	36-52	695	4000	75	1.75	72	-25 to +40	G)

subject to alterations

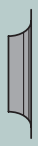
Curves



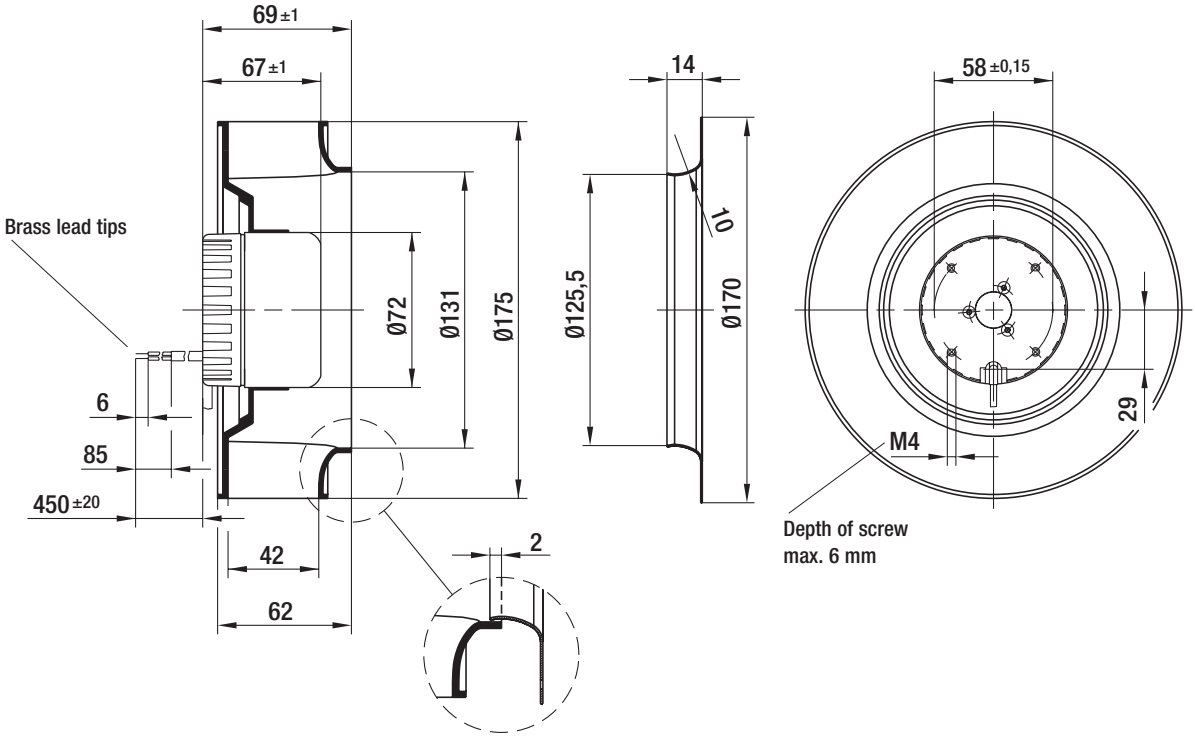
	n [rpm]	P_1 [W]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1'	4250	88	73	—
Ⓐ 2'	4130	93	71	39
Ⓐ 3'	4050	96	67	55
Ⓐ 4'	4130	93	72	43
Ⓐ 1	4000	75	72	—
Ⓐ 2	3920	80	69	39
Ⓐ 3	3880	83	66	55
Ⓐ 4	3920	80	71	43
Ⓐ 5	3290	42	67	—
Ⓐ 6	3250	45	64	39
Ⓐ 7	3160	47	62	55
Ⓐ 8	3250	46	66	43

ebmpapst

- **Technical features:**
  - Control input 0-10 VDC / PWM
  - Tach output
  - Reverse polarity and locked-rotor protection
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-2
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standard:** EN 60950-1
- **Approvals:** CCC



Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle (long)
R1G 175-AF29 -04	1.0	09576-2-4013



EC centrifugal fans

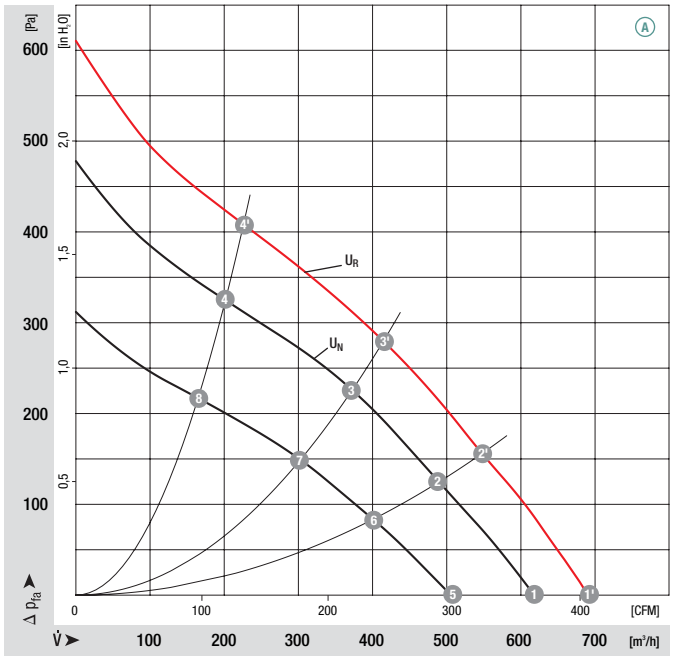
backward curved, Ø 190

- **Material:** Impeller: PA plastic 6.6, fibreglass-reinforced
  Rotor: Coated in black
- **Number of blades:** 7
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** Ⓐ (24 VDC) IP 20, Ⓐ (48 VDC) IP 22
- **Insulation class:** "B"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage	Voltage range	Air flow	Speed/rpm	Power input	Current draw	Sound pressure level	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VDC**	**VDC**	**m³/h**	**rpm**	**W**	**A**	**dB(A)**	**°C**	p. 600
R1G 190	M1G 055-CF	Ⓐ	24	16-28	620	2950	51	2.30	68	-25 to +40	G)
R1G 190	M1G 055-CF	Ⓐ	48	36-57	620	2950	51	1.20	68	-25 to +40	G)

subject to alterations

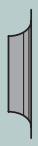
Curves



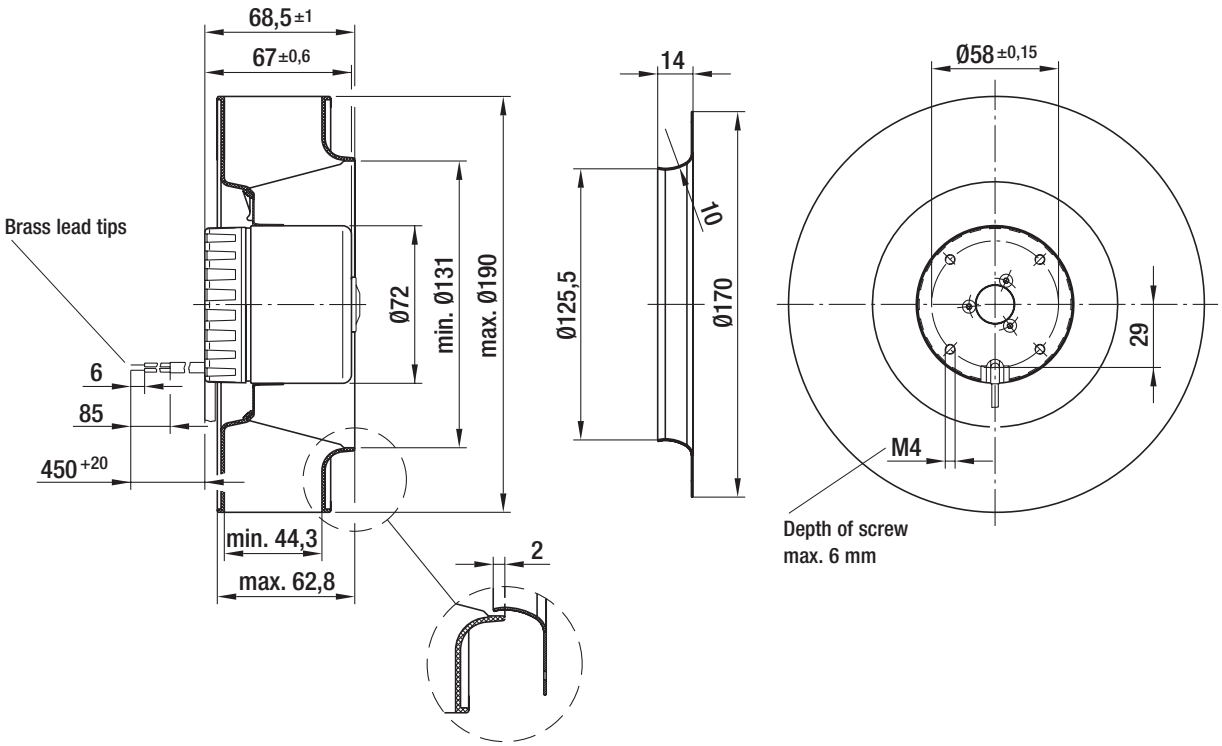
	n [rpm]	P_1 [W]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1'	3300	71	70	—
Ⓐ 2'	3200	75	66	45
Ⓐ 3'	3160	77	63	53
Ⓐ 4'	3290	72	67	42
Ⓐ 1	2950	51	68	—
Ⓐ 2	2870	54	63	45
Ⓐ 3	2830	56	60	53
Ⓐ 4	2940	51	63	42
Ⓐ 5	2390	28	62	—
Ⓐ 6	2340	30	58	45
Ⓐ 7	2320	31	54	53
Ⓐ 8	2390	28	58	42

ebmpapst

- **Technical features:**
  - Control input 0-10 VDC / PWM
  - Tach output
  - Reverse polarity and locked-rotor protection
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-2
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standard:** EN 60950-1
- **Approvals:** UL, CSA, Ⓐ (48 VDC) with CCC



Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle (long)
R1G 190-AB27 -02	1.0	09576-2-4013
R1G 190-AB25 -02	1.0	09576-2-4013



EC centrifugal fans

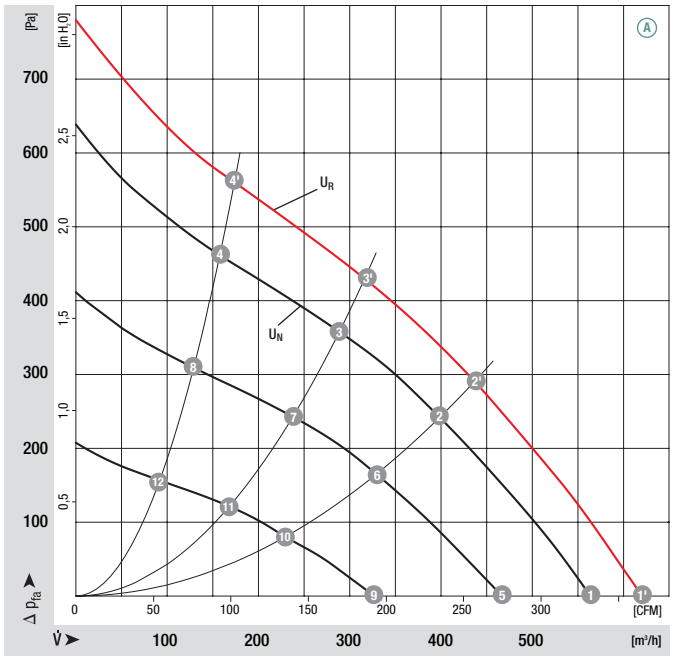
backward curved, Ø 190

- **Material:** Impeller: PA plastic 6.6, fibreglass-reinforced
  Rotor: Coated in black
- **Number of blades:** 7
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 42
- **Insulation class:** "B"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage	Voltage range	Air flow	Speed/rpm	Power input	Current draw	Sound pressure level	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VDC**	**VDC**	**m³/h**	**rpm**	**W**	**A**	**dB(A)**	**°C**	p. 600
R1G 190	M1G 074-BF	Ⓐ	24	16-28	560	3250	80	3.70	68	-25 to +60	G)
R1G 190	M1G 074-BF	Ⓐ	48	36-57	545	3200	71	1.65	68	-25 to +60	G)

subject to alterations

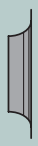
Curves (established at 24 VDC)



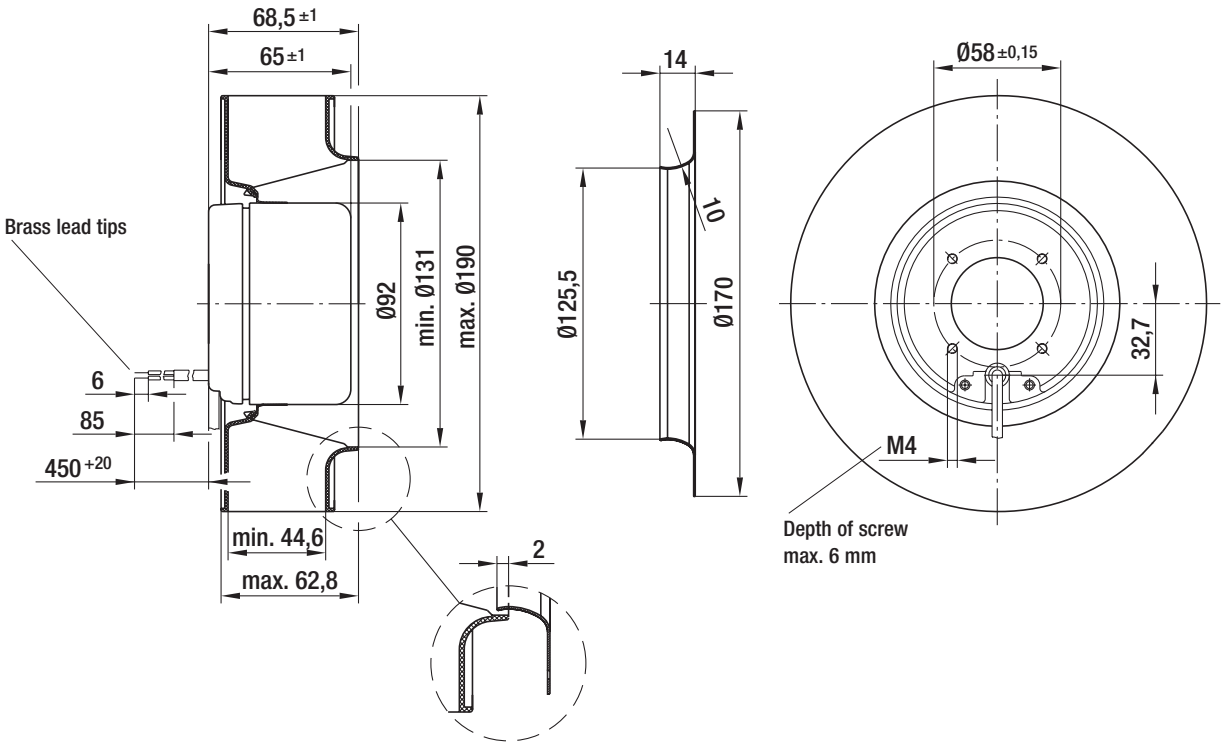
	n [rpm]	P_1 [W]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1'	3580	106	71	—
Ⓐ 2'	3590	105	66	41
Ⓐ 3'	3630	103	65	45
Ⓐ 4'	3770	97	69	33
Ⓐ 1	3250	80	68	—
Ⓐ 2	3275	80	64	42
Ⓐ 3	3300	79	63	45
Ⓐ 4	3400	74	66	34
Ⓐ 5	2700	47	65	—
Ⓐ 6	2710	47	59	41
Ⓐ 7	2740	45	58	44
Ⓐ 8	2795	42	61	33
Ⓐ 9	1910	19	60	—
Ⓐ 10	1910	20	51	39
Ⓐ 11	1940	19	49	43
Ⓐ 12	1985	18	52	33

ebmpapst

- **Technical features:**
  - Control input 0-10 VDC / PWM
  - Tach output
  - Reverse polarity and locked-rotor protection
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-2
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standard:** EN 60950-1
- **Approvals:** UL, CSA, Ⓐ (48 VDC) with CCC



Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle (long)
R1G 190-AC37 -52	1.3	09576-2-4013
R1G 190-AC11 -52	1.3	09576-2-4013



EC centrifugal fans

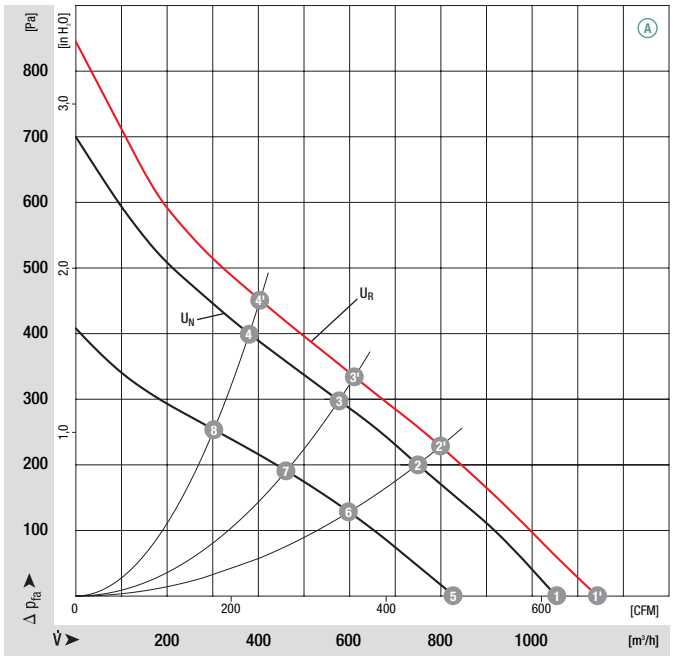
backward curved, Ø 220

- **Material:** Impeller: PA plastic 6.6, fibreglass-reinforced
  Rotor: Coated in black
- **Number of blades:** 11
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 42
- **Insulation class:** "B"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage	Voltage range	Air flow	Speed/rpm	Power input	Current draw	Sound pressure level	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VDC**	**VDC**	**m³/h**	**rpm**	**W**	**A**	**dB(A)**	**°C**	p. 600
R1G 220	M1G 074-BF	Ⓐ	24	16-28	1055	3150	106	5.00	76	-25 to +60	G)
R1G 220	M1G 074-BF	Ⓐ	48	36-57	1015	3100	100	2.40	73	-25 to +60	G)

subject to alterations

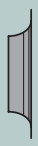
Curves (established at 24 VDC)



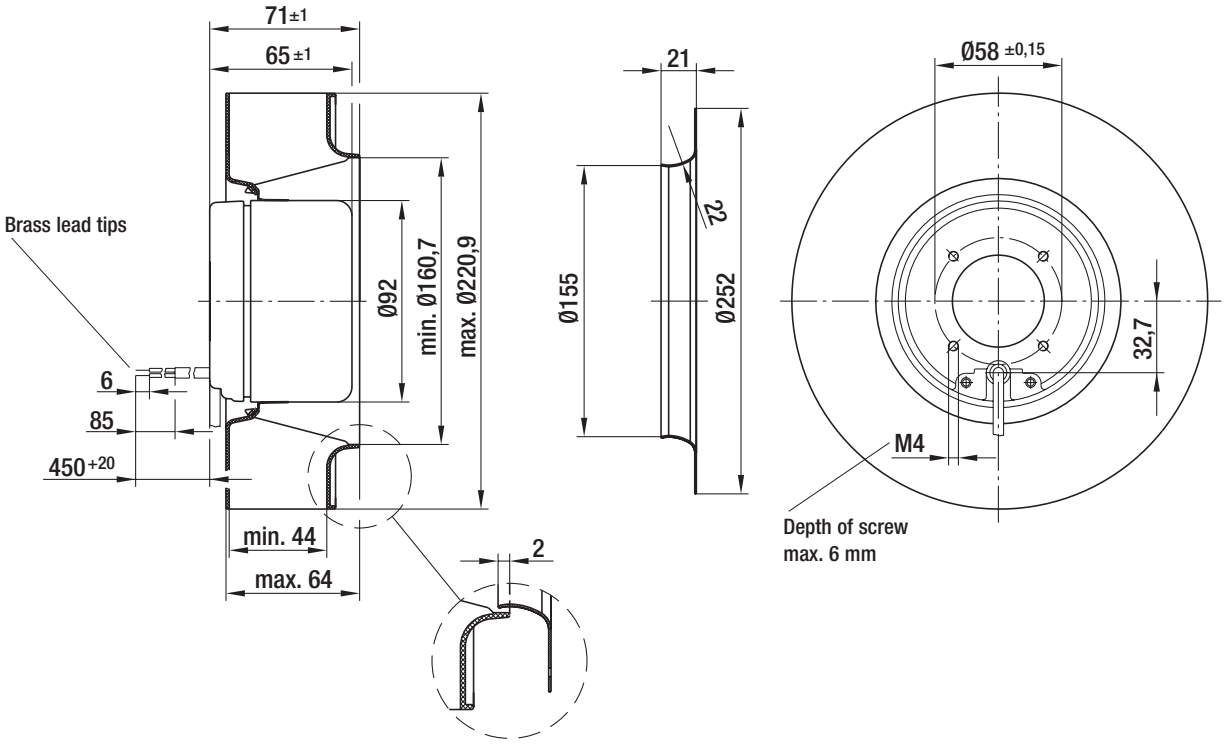
	n [rpm]	P_1 [W]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1'	3400	128	78	—
Ⓐ 2'	3200	132	69	53
Ⓐ 3'	3050	135	67	55
Ⓐ 4'	3000	137	71	46
Ⓐ 1	3150	106	76	—
Ⓐ 2	3010	110	68	53
Ⓐ 3	2870	112	65	55
Ⓐ 4	2800	113	69	46
Ⓐ 5	2470	50	70	—
Ⓐ 6	2360	54	63	53
Ⓐ 7	2300	57	59	55
Ⓐ 8	2250	59	63	46

ebmpapst

- **Technical features:**
  - Control input 0-10 VDC / PWM
  - Tach output
  - Reverse polarity and locked-rotor protection
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-2
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standard:** EN 60950-1
- **Approvals:** UL, CSA, Ⓐ (48 VDC) with CCC



Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle (long)
R1G 220-AB35 -52	1.4	09609-2-4013
R1G 220-AB73 -52	1.4	09609-2-4013



EC centrifugal fans

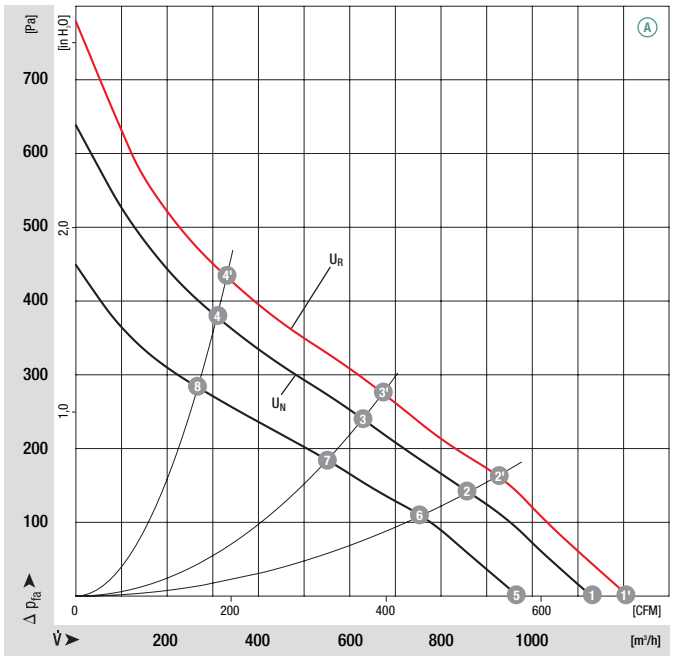
backward curved, Ø 225

- **Material:** Impeller: PA plastic 6.6, fibreglass-reinforced
  Rotor: Coated in black
- **Number of blades:** 7
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 42
- **Insulation class:** "B"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage	Voltage range	Air flow	Speed/rpm	Power input	Current draw	Sound pressure level	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VDC**	**VDC**	**m³/h**	**rpm**	**W**	**A**	**dB(A)**	**°C**	p. 600
R1G 225	M1G 074-BF	Ⓐ	24	16-28	1125	2600	100	4.60	67	-25 to +60	G)
R1G 225	M1G 074-BF	Ⓐ	48	36-57	1130	2700	95	2.20	67	-25 to +60	G)

subject to alterations

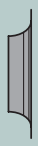
Curves (established at 48 VDC)



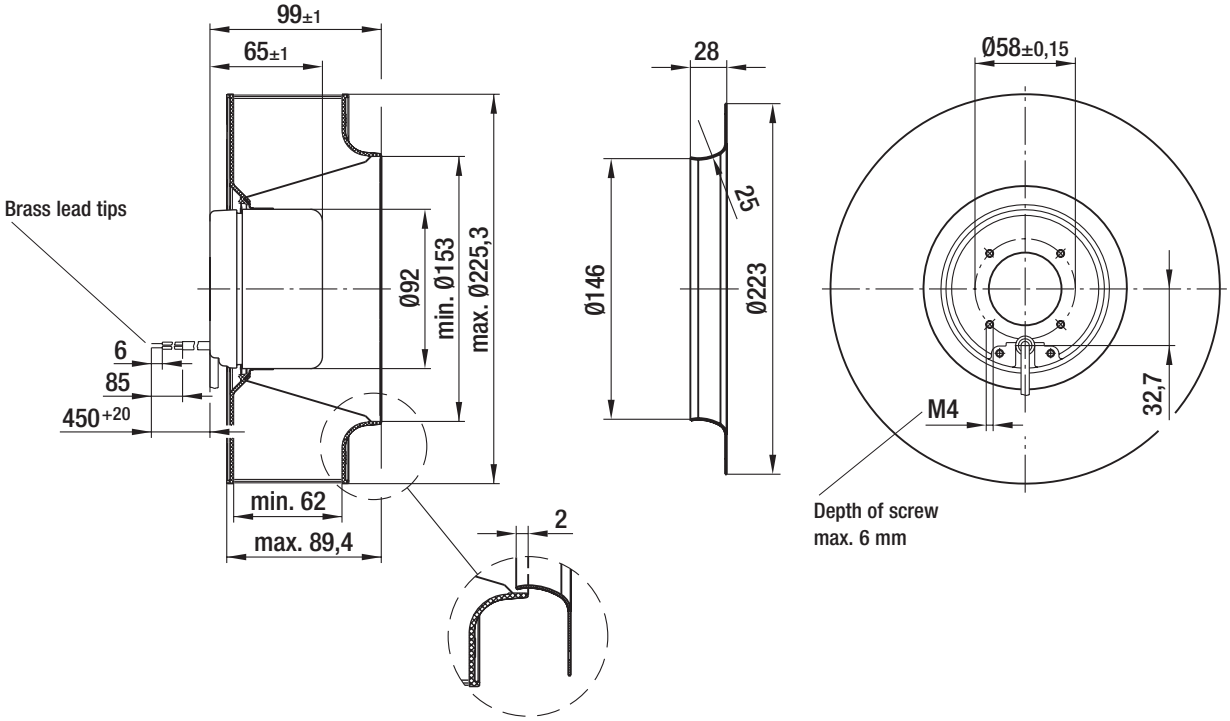
	n [rpm]	P_1 [W]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1'	2780	112	69	—
Ⓐ 2'	2610	116	64	48
Ⓐ 3'	2570	117	62	57
Ⓐ 4'	2780	112	66	42
Ⓐ 1	2700	95	67	—
Ⓐ 2	2450	93	63	48
Ⓐ 3	2400	94	60	57
Ⓐ 4	2610	91	64	42
Ⓐ 5	2230	59	63	—
Ⓐ 6	2150	63	58	48
Ⓐ 7	2100	64	56	57
Ⓐ 8	2230	58	58	42

ebmpapst

- **Technical features:**
  - Control input 0-10 VDC / PWM
  - Tach output
  - Reverse polarity and locked-rotor protection
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-2
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standard:** EN 60950-1
- **Approvals:** UL, CSA, Ⓐ (48 VDC) with CCC



Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle (long)
R1G 225-AF07 -52	1.5	96358-2-4013
R1G 225-AF11 -52	1.5	96358-2-4013



Inlet nozzle p. 550
Electr. connection p. 600

EC centrifugal fans

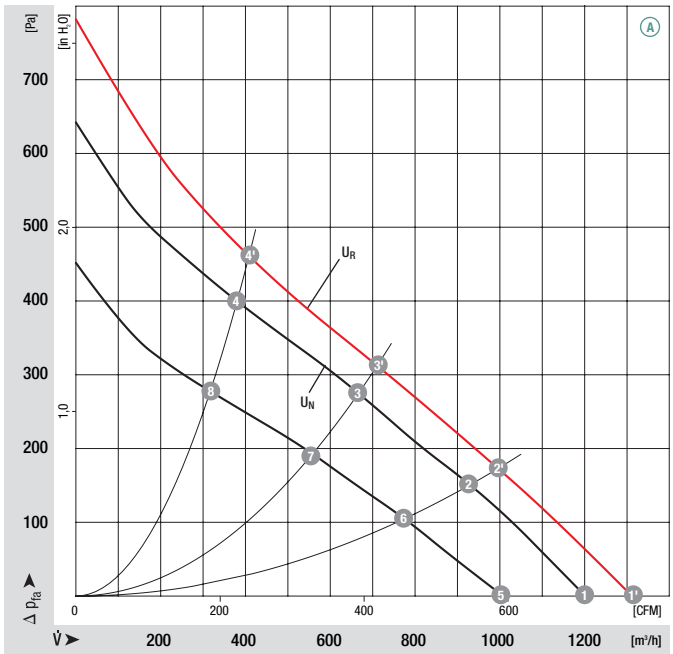
backward curved, Ø 250

- **Material:** Impeller: PA plastic 6.6, fibreglass-reinforced
  Rotor: Coated in black
- **Number of blades:** 11
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 42
- **Insulation class:** "B"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage	Voltage range	Air flow	Speed/rpm	Power input	Current draw	Sound pressure level	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VDC**	**VDC**	**m³/h**	**rpm**	**W**	**A**	**dB(A)**	**°C**	p. 600
R1G 250	M1G 074-CF	Ⓐ	24	16-28	1140	2540	93	4.30	73	-25 to +60	G)
R1G 250	M1G 074-CF	Ⓐ	48	36-57	1200	2600	105	2.55	72	-25 to +60	G)

subject to alterations

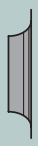
Curves (established at 48 VDC)



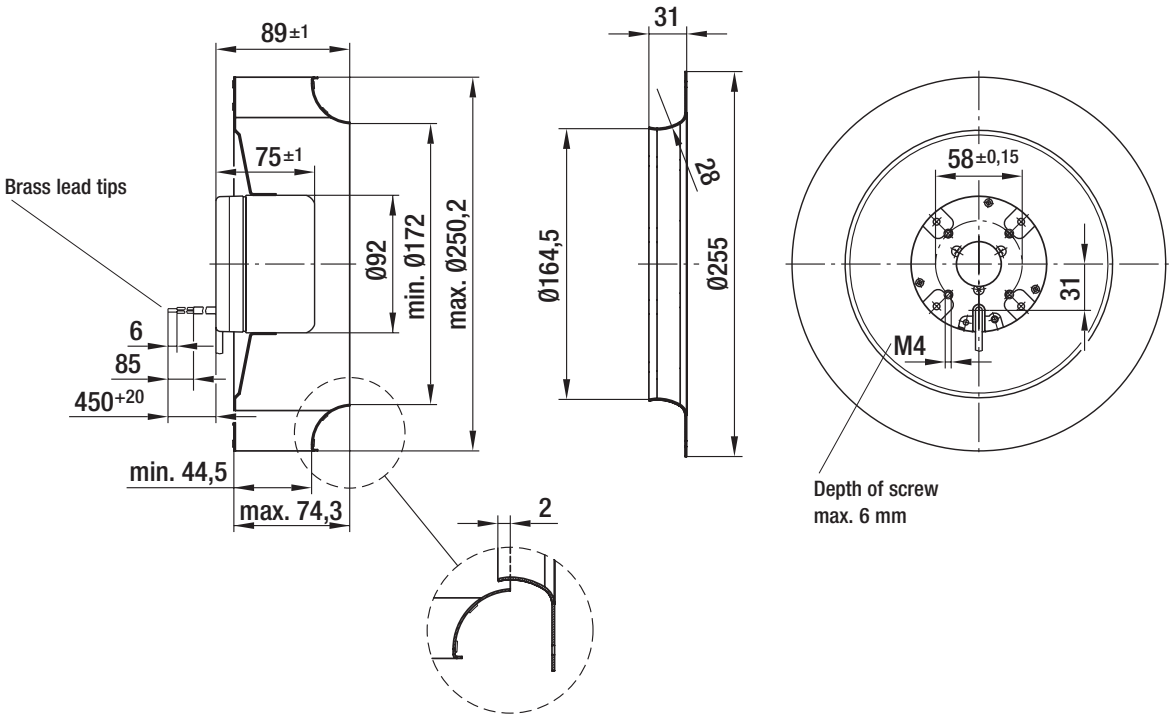
	n [rpm]	P_1 [W]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1'	2870	134	75	—
Ⓐ 2'	2610	139	68	55
Ⓐ 3'	2530	140	63	58
Ⓐ 4'	2650	138	66	48
Ⓐ 1	2600	105	72	—
Ⓐ 2	2440	114	66	55
Ⓐ 3	2360	116	62	58
Ⓐ 4	2490	112	64	48
Ⓐ 5	2190	59	68	—
Ⓐ 6	2020	67	62	55
Ⓐ 7	2020	70	57	58
Ⓐ 8	2070	66	59	48

ebmpapst

- **Technical features:**
  - Control input 0-10 VDC / PWM
  - Tach output
  - Reverse polarity and locked-rotor protection
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-2
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standard:** EN 60950-1
- **Approvals:** UL, CSA, Ⓐ (48 VDC) with CCC



Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle (long)
R1G 250-AQ21 -52	2.0	96359-2-4013
R1G 250-AQ37 -52	2.0	96359-2-4013



EC centrifugal fan

backward curved, Ø 250

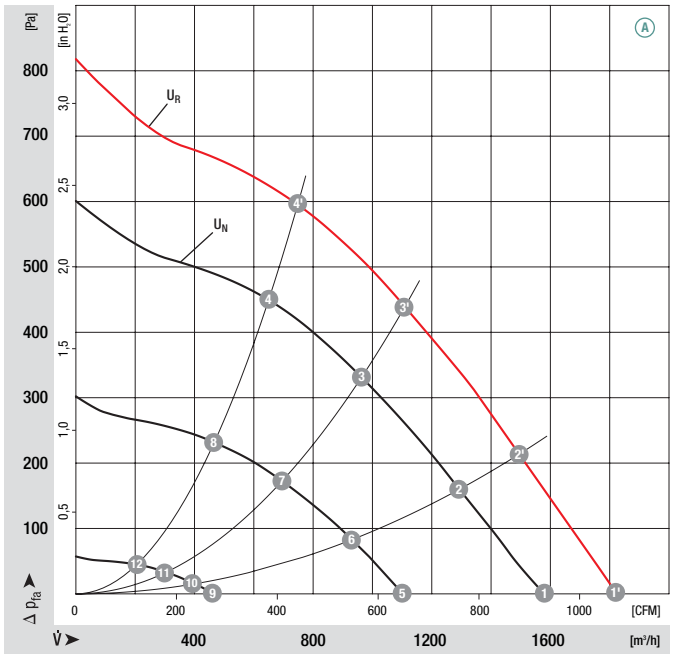
- **Material:** Impeller: Sheet steel
  Rotor: Coated in black
- **Number of blades:** 11
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 42
- **Insulation class:** "B"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data

Type	Motor	Curve	Nominal voltage	Voltage range	Air flow	Speed/rpm	Power input	Current draw	Sound pressure level	Perm. amb. temp.	Electr. connection
			VDC	VDC	m³/h	rpm	W	A	dB(A)	°C	p. 600
R3G 250	M3G 084-CA	Ⓐ	48	36-57	1580	2645	135	2.80	72	-25 to +60	G)

subject to alterations

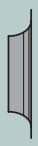
Curves



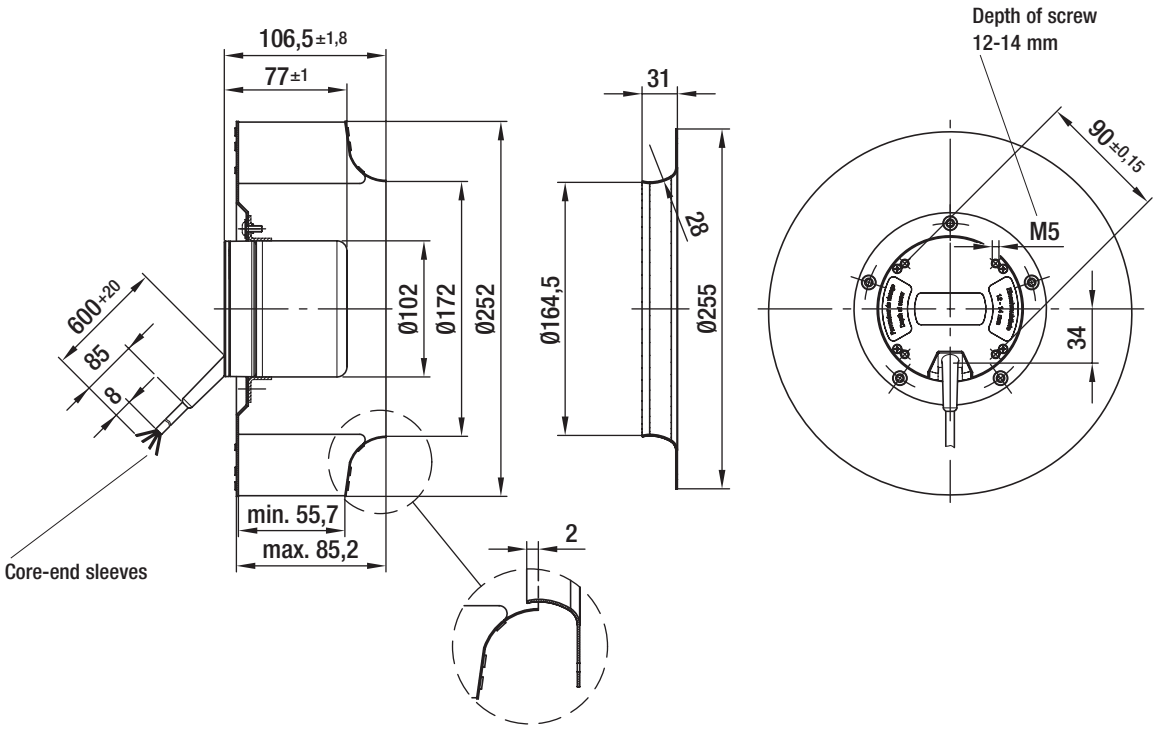
	n [rpm]	P_1 [W]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1'	3055	207	75	—
Ⓐ 2'	2990	256	70	45
Ⓐ 3'	2970	274	68	60
Ⓐ 4'	2980	270	71	55
Ⓐ 1	2645	135	72	—
Ⓐ 2	2600	166	67	45
Ⓐ 3	2580	182	64	60
Ⓐ 4	2590	177	66	55
Ⓐ 5	1900	56	66	—
Ⓐ 6	1875	69	59	45
Ⓐ 7	1870	73	56	60
Ⓐ 8	1870	72	58	55
Ⓐ 9	835	9	48	—
Ⓐ 10	830	10	44	45
Ⓐ 11	830	11	43	60
Ⓐ 12	830	10	35	55

ebmpapst

- **Technical features:**
  - Control input 0-10 VDC / PWM
  - Tach output
  - Over-temperature protected motor
  - Reverse polarity and locked-rotor protection
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-2
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standard:** EN 60950-1
- **Approvals:** UL, CSA, CCC

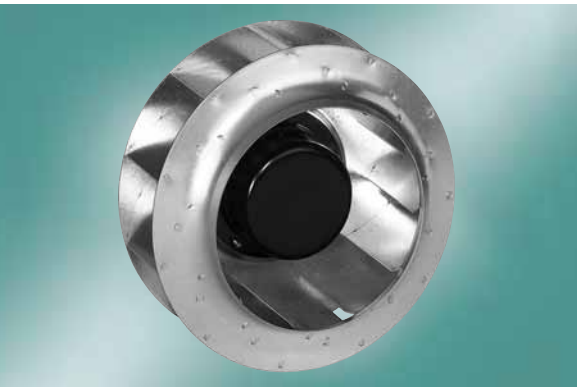


Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle (long)
R3G 250-AD62 -30	3.0	96359-2-4013



EC centrifugal fans

backward curved, Ø 280

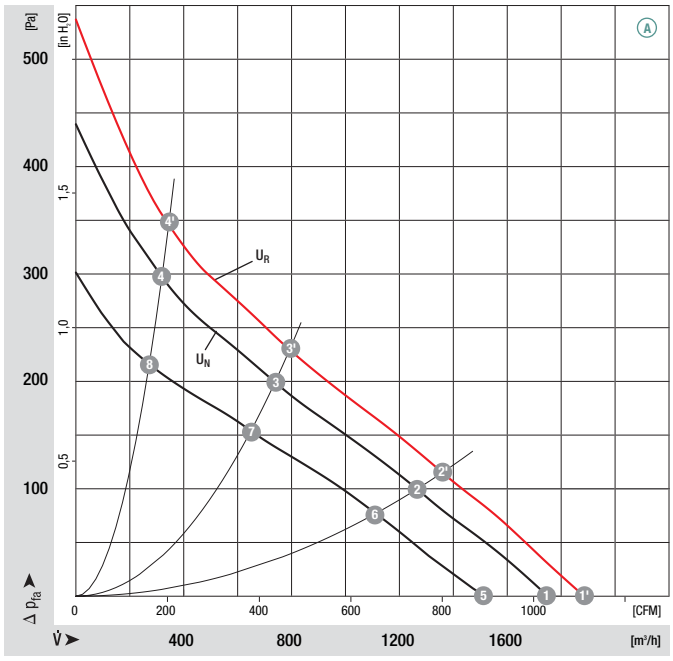


- **Material:** Impeller: Sheet steel
  Rotor: Coated in black
- **Number of blades:** 11
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 42
- **Insulation class:** "B"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage	Voltage range	Air flow	Speed/rpm	Power input	Current draw	Sound pressure level	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VDC**	**VDC**	**m³/h**	**rpm**	**W**	**A**	**dB(A)**	**°C**	p. 600
R1G 280	M1G 074-CF	Ⓐ	24	16-28	1750	1710	95	4.60	71	-25 to +60	G)
R1G 280	M1G 074-CF	Ⓐ	48	36-57	1750	1710	95	2.30	71	-25 to +60	G)

subject to alterations

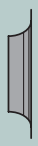
Curves



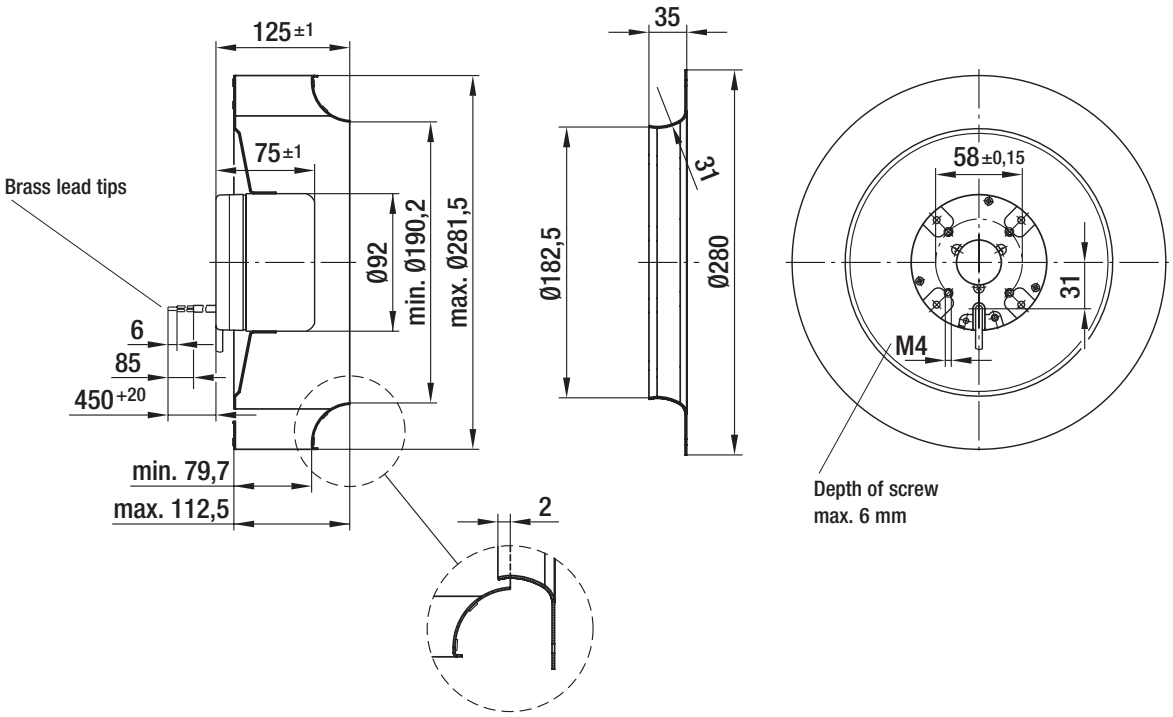
	n [rpm]	P_1 [W]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1'	1840	118	72	—
Ⓐ 2'	1650	127	64	55
Ⓐ 3'	1670	126	62	55
Ⓐ 4'	1950	114	67	31
Ⓐ 1	1710	95	71	—
Ⓐ 2	1550	100	63	55
Ⓐ 3	1560	100	59	55
Ⓐ 4	1810	91	64	31
Ⓐ 5	1470	60	67	—
Ⓐ 6	1360	68	60	55
Ⓐ 7	1370	67	55	55
Ⓐ 8	1530	56	59	31

ebmpapst

- **Technical features:**
  - Control input 0-10 VDC / PWM
  - Tach output
  - Reverse polarity and locked-rotor protection
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-2
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standard:** EN 60950-1
- **Approvals:** UL, CSA, Ⓐ (48 VDC) with CCC



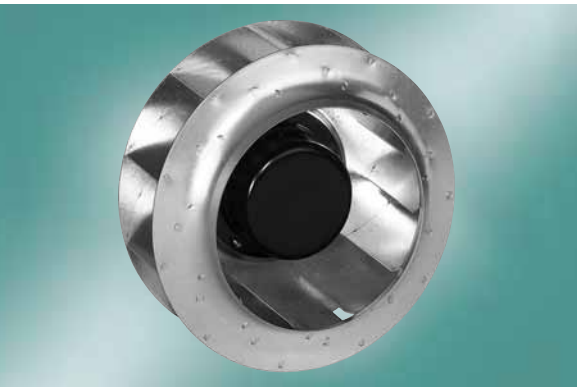
Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle (long)
R1G 280-AE45 -52	2.8	96360-2-4013
R1G 280-AE47 -52	2.8	96360-2-4013



General information
AC centrifugal, backward
AC centrifugal, forward
EC centrifugal, backward
EC centrifugal, backward for clean rooms
EC centrifugal, forward
EC-SYSTEMS
Accessories
Technology
Contacts

EC centrifugal fan

backward curved, Ø 280



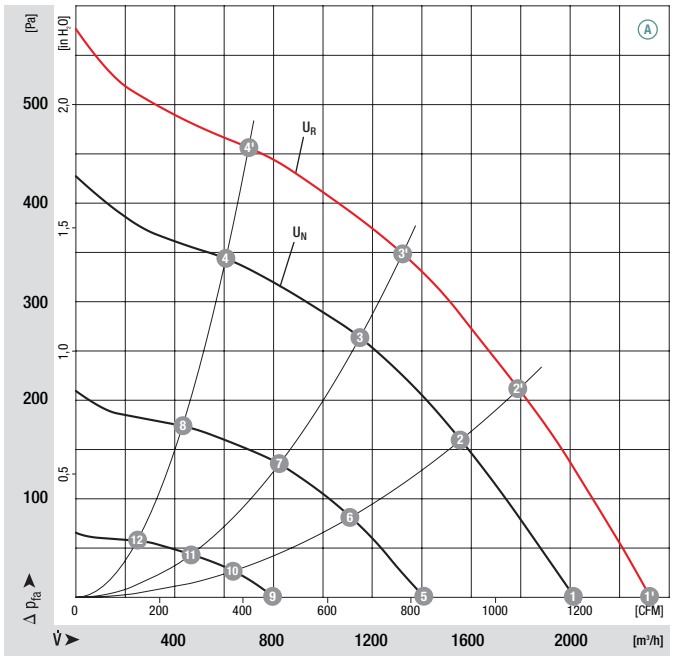
- **Material:** Impeller: Sheet steel
  Rotor: Coated in black
- **Number of blades:** 11
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 42
- **Insulation class:** "B"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data

Type	Motor	Curve	Nominal voltage	Voltage range	Air flow	Speed/rpm	Power input	Current draw	Sound pressure level	Perm. amb. temp.	Electr. connection
			VDC	VDC	m³/h	rpm	W	A	dB(A)	°C	p. 600
R3G 280	M3G 084-CA	Ⓐ	48	36-57	2020	1965	123	2.60	70	-25 to +60	G)

subject to alterations

Curves

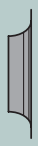


	n [rpm]	P_1 [W]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1'	2265	187	72	—
Ⓐ 2'	2185	243	68	53
Ⓐ 3'	2165	258	65	60
Ⓐ 4'	2230	213	69	50
Ⓐ 1	1965	123	70	—
Ⓐ 2	1905	160	65	53
Ⓐ 3	1885	171	61	60
Ⓐ 4	1940	140	66	50
Ⓐ 5	1390	46	63	—
Ⓐ 6	1365	61	58	53
Ⓐ 7	1360	65	53	60
Ⓐ 8	1380	53	55	50
Ⓐ 9	800	12	53	—
Ⓐ 10	790	15	48	53
Ⓐ 11	785	15	42	60
Ⓐ 12	795	13	41	50

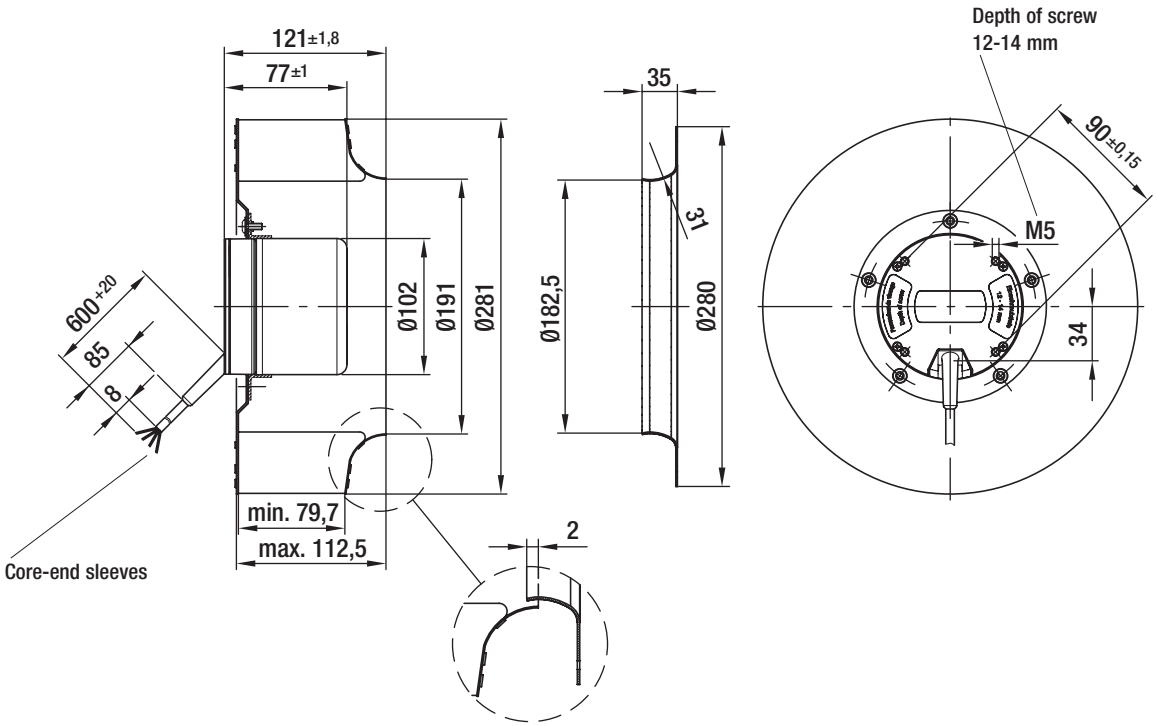
ebmpapst

- **Technical features:**
  - Control input 0-10 VDC / PWM
  - Tach output
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-2
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standard:** EN 60950-1
- **Approvals:** UL, CSA

- Over-temperature protected motor
- Reverse polarity and locked-rotor protection



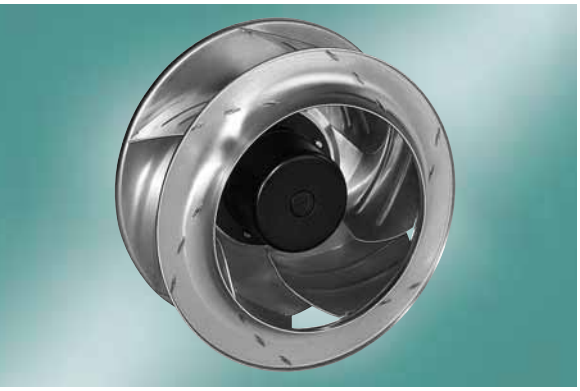
Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle (long)
R3G 280-AC66 -30	3.3	96360-2-4013



Inlet nozzle p. 550
Electr. connection p. 600

EC centrifugal fans

backward curved, 3-D, Ø 310

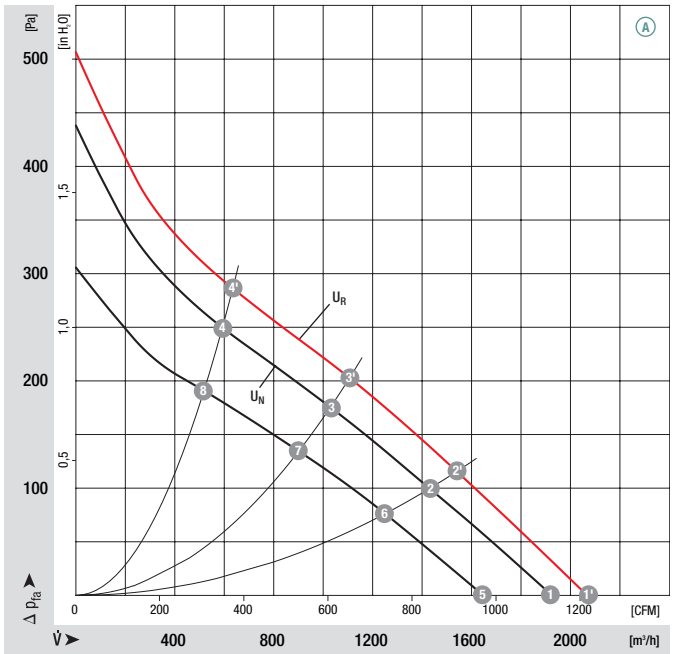


- **Material:** Impeller: Sheet aluminium, laser-welded
  Rotor: Coated in black
- **Number of blades:** 6
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 42
- **Insulation class:** "B"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage	Voltage range	Air flow	Speed/rpm	Power input	Current draw	Sound pressure level	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VDC**	**VDC**	**m³/h**	**rpm**	**W**	**A**	**dB(A)**	**°C**	p. 600
R1G 310	M1G 074-CF	Ⓐ	24	16-28	1910	1600	90	4.20	64	-25 to +45	G)
R1G 310	M1G 074-CF	Ⓐ	48	36-57	1910	1600	90	2.20	64	-25 to +45	G)

subject to alterations

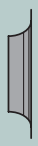
Curves (established with long inlet nozzle)



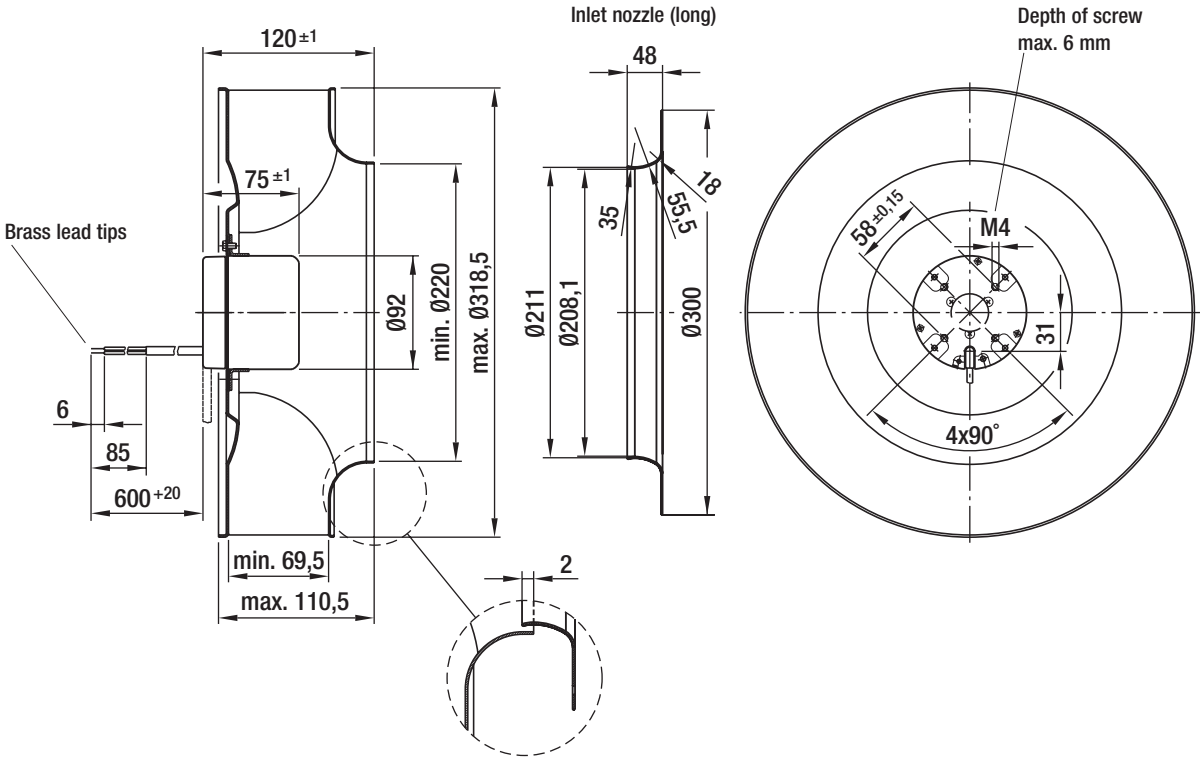
	n [rpm]	P_1 [W]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1'	1720	113	66	—
Ⓐ 2'	1540	122	60	62
Ⓐ 3'	1490	124	59	67
Ⓐ 4'	1560	121	63	50
Ⓐ 1	1600	90	64	—
Ⓐ 2	1430	96	58	62
Ⓐ 3	1390	99	58	67
Ⓐ 4	1450	96	61	50
Ⓐ 5	1150	69	60	—
Ⓐ 6	1260	65	55	62
Ⓐ 7	1230	67	54	67
Ⓐ 8	1270	65	58	50

ebmpapst

- **Technical features:**
  - Control input 0-10 VDC / PWM
  - Tach output
  - Reverse polarity and locked-rotor protection
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-2
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standard:** EN 60950-1
- **Approvals:** UL, CSA, Ⓐ (48 VDC) with CCC

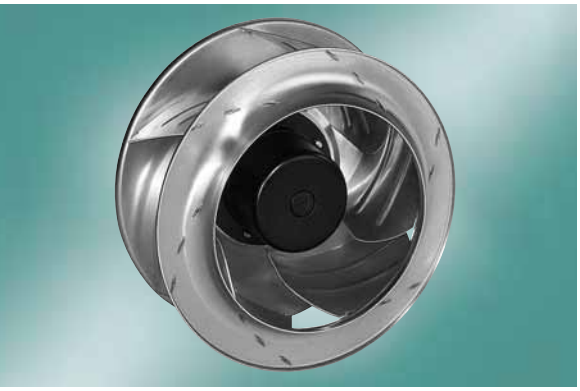


Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle (long)	Inlet nozzle (short)
R1G 310-AD19 -52	2.6	31050-2-4013	31051-2-4013
R1G 310-AD33 -52	2.6	31050-2-4013	31051-2-4013



EC centrifugal fan

backward curved, 3-D, Ø 310

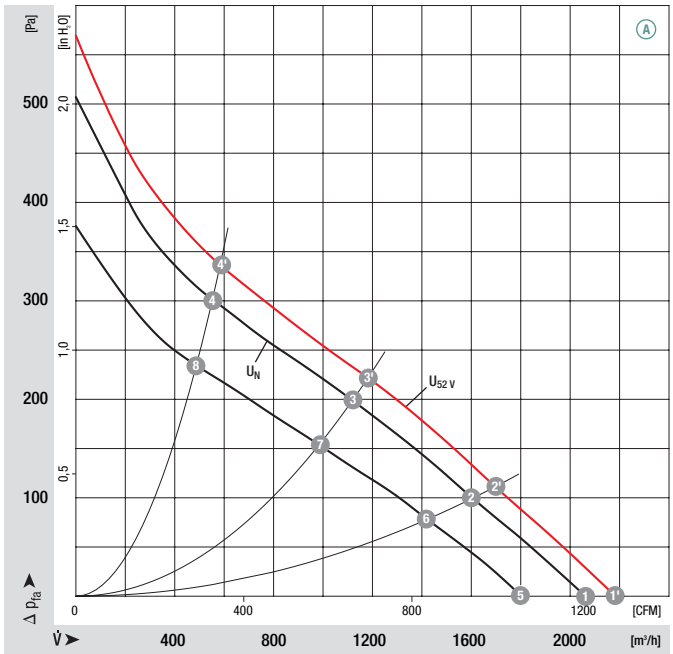


- **Material:** Impeller: Sheet aluminium, laser-welded
  Rotor: Coated in black
- **Number of blades:** 6
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 42
- **Insulation class:** "B"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage	Voltage range	Air flow	Speed/rpm	Power input	Current draw	Sound pressure level	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VDC**	**VDC**	**m³/h**	**rpm**	**W**	**A**	**dB(A)**	**°C**	p. 600
R1G 310	M1G 074-CF	Ⓐ	48	36-52	2100	1800	120	3.00	67	-25 to +40	G)

subject to alterations

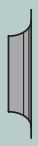
Curves (established with long inlet nozzle)



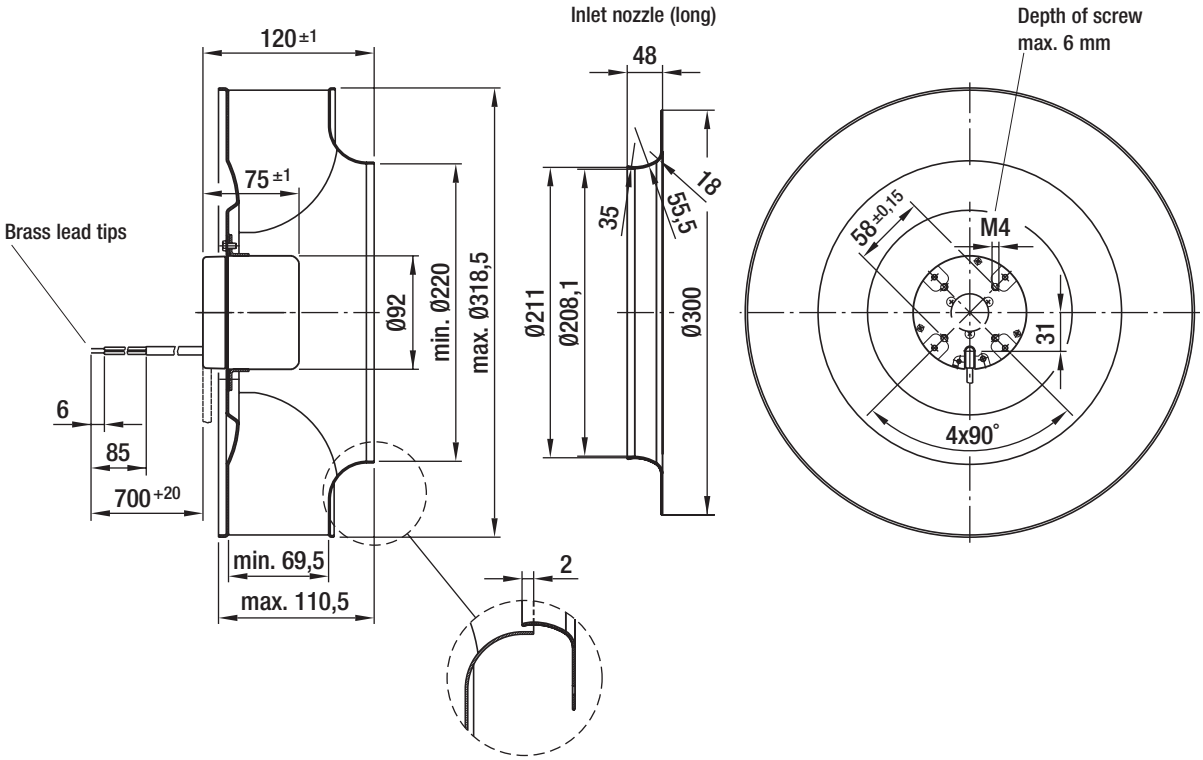
	n [rpm]	P_1 [W]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1'	1895	130	67	—
Ⓐ 2'	1720	140	64	59
Ⓐ 3'	1610	147	60	67
Ⓐ 4'	1635	146	65	48
Ⓐ 1	1800	120	67	—
Ⓐ 2	1610	118	62	59
Ⓐ 3	1530	122	58	67
Ⓐ 4	1570	120	63	48
Ⓐ 5	1570	74	63	—
Ⓐ 6	1430	80	58	59
Ⓐ 7	1350	82	54	67
Ⓐ 8	1400	80	60	48

ebmpapst

- **Technical features:**
  - Control input 0-10 VDC / PWM
  - Tach output
  - Reverse polarity and locked-rotor protection
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-2
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standard:** EN 60950-1
- **Approvals:** UL, CSA, CCC

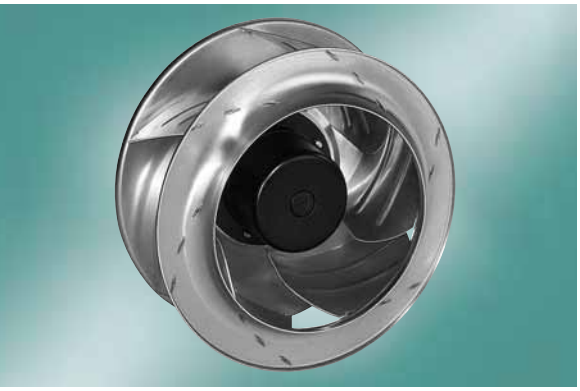


Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle (long)	Inlet nozzle (short)
R1G 310-AD17 -11	2.6	31050-2-4013	31051-2-4013



EC centrifugal fan

backward curved, 3-D, Ø 310



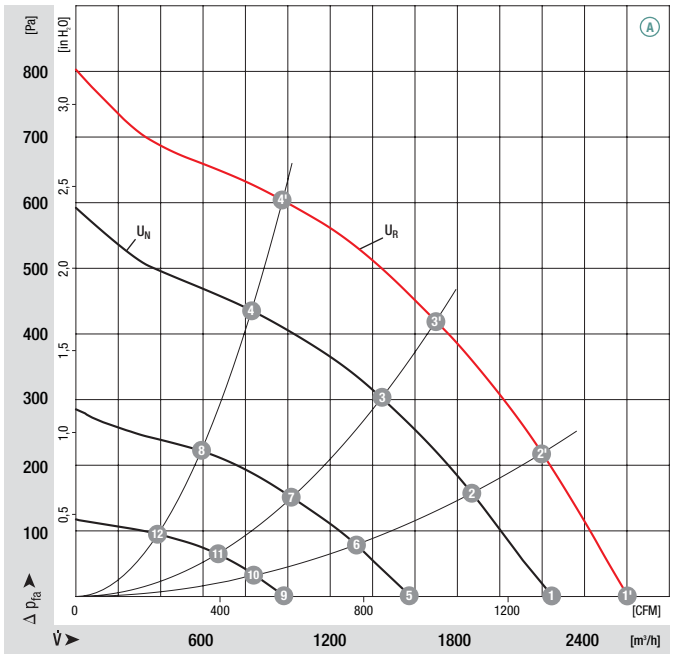
- **Material:** Impeller: Sheet aluminium, laser-welded
  Rotor: Coated in black
- **Number of blades:** 6
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 42
- **Insulation class:** "B"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data

Type	Motor	Curve	Nominal voltage	Voltage range	Air flow	Speed/rpm	Power input	Current draw	Sound pressure level	Perm. amb. temp.	Electr. connection
			VDC	VDC	m³/h	rpm	W	A	dB(A)	°C	p. 600
R3G 310	M3G 084-FA	Ⓐ	48	36-57	2230	2000	190	4.00	71	-25 to +60	G)

subject to alterations

Curves (established with long inlet nozzle)

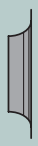


	n [rpm]	P_1 [W]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1'	2395	271	74	—
Ⓐ 2'	2345	325	71	47
Ⓐ 3'	2320	362	70	60
Ⓐ 4'	2330	350	74	54
Ⓐ 1	2070	178	71	—
Ⓐ 2	2035	211	67	47
Ⓐ 3	2015	234	65	60
Ⓐ 4	2025	227	70	54
Ⓐ 5	1445	66	61	—
Ⓐ 6	1430	79	59	47
Ⓐ 7	1420	88	57	60
Ⓐ 8	1420	85	62	54
Ⓐ 9	930	23	50	—
Ⓐ 10	925	26	48	47
Ⓐ 11	920	29	47	60
Ⓐ 12	920	28	51	54

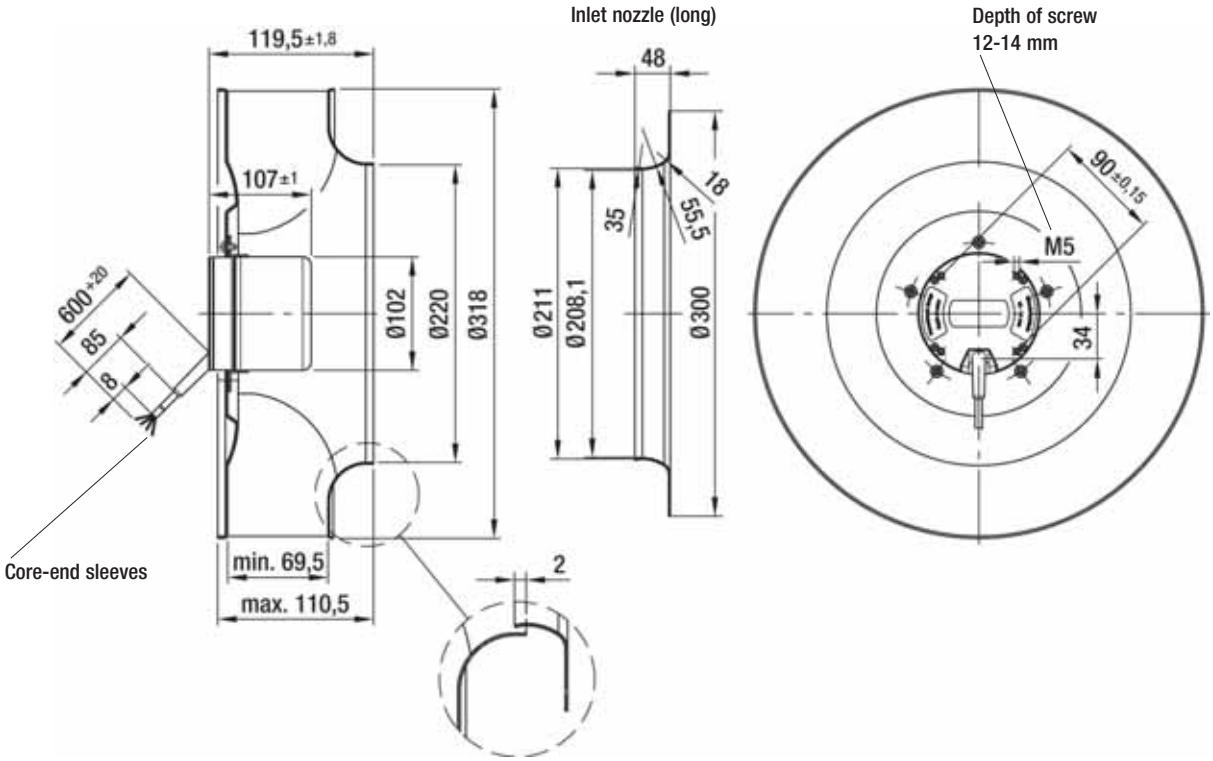
ebmpapst

- **Technical features:**
  - Control input 0-10 VDC / PWM
  - Tach output
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-2
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standard:** EN 60950-1
- **Approvals:** UL, CSA, CCC

- Over-temperature protected motor
- Reverse polarity and locked-rotor protection

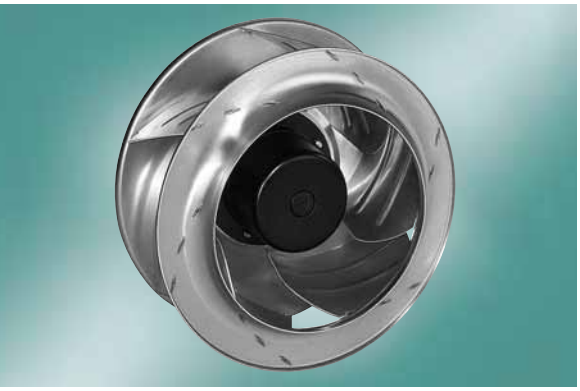


Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle (long)	Inlet nozzle (short)
R3G 310-AN12 -30	4.2	31050-2-4013	31051-2-4013



EC centrifugal fan

backward curved, 3-D, Ø 310



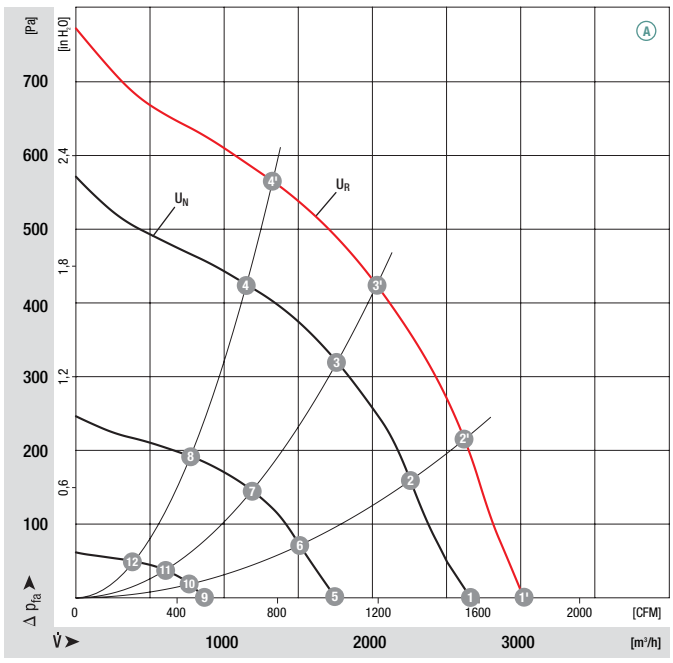
- **Material:** Impeller: Sheet aluminium, laser-welded
  Rotor: Coated in black
- **Number of blades:** 6
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 42
- **Insulation class:** "B"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data

Type	Motor	Curve	Nominal voltage	Voltage range	Air flow	Speed/rpm	Power input	Current draw	Sound pressure level	Perm. amb. temp.	Electr. connection
			VDC	VDC	m³/h	rpm	W	A	dB(A)	°C	p. 600
R3G 310	M3G 084-FA	Ⓐ	48	36-57	2620	1930	208	4.35	69	-25 to +60	G)

subject to alterations

Curves (established with long inlet nozzle)

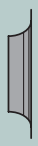


	n [rpm]	P_1 [W]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1'	2230	317	72	—
Ⓐ 2'	2190	373	69	50
Ⓐ 3'	2150	415	66	66
Ⓐ 4'	2175	390	67	63
Ⓐ 1	1930	208	69	—
Ⓐ 2	1900	248	65	50
Ⓐ 3	1870	274	62	66
Ⓐ 4	1890	257	61	63
Ⓐ 5	1290	69	59	—
Ⓐ 6	1280	80	57	50
Ⓐ 7	1270	90	55	66
Ⓐ 8	1280	85	54	63
Ⓐ 9	660	14	47	—
Ⓐ 10	660	15	46	50
Ⓐ 11	655	17	44	66
Ⓐ 12	655	16	44	63

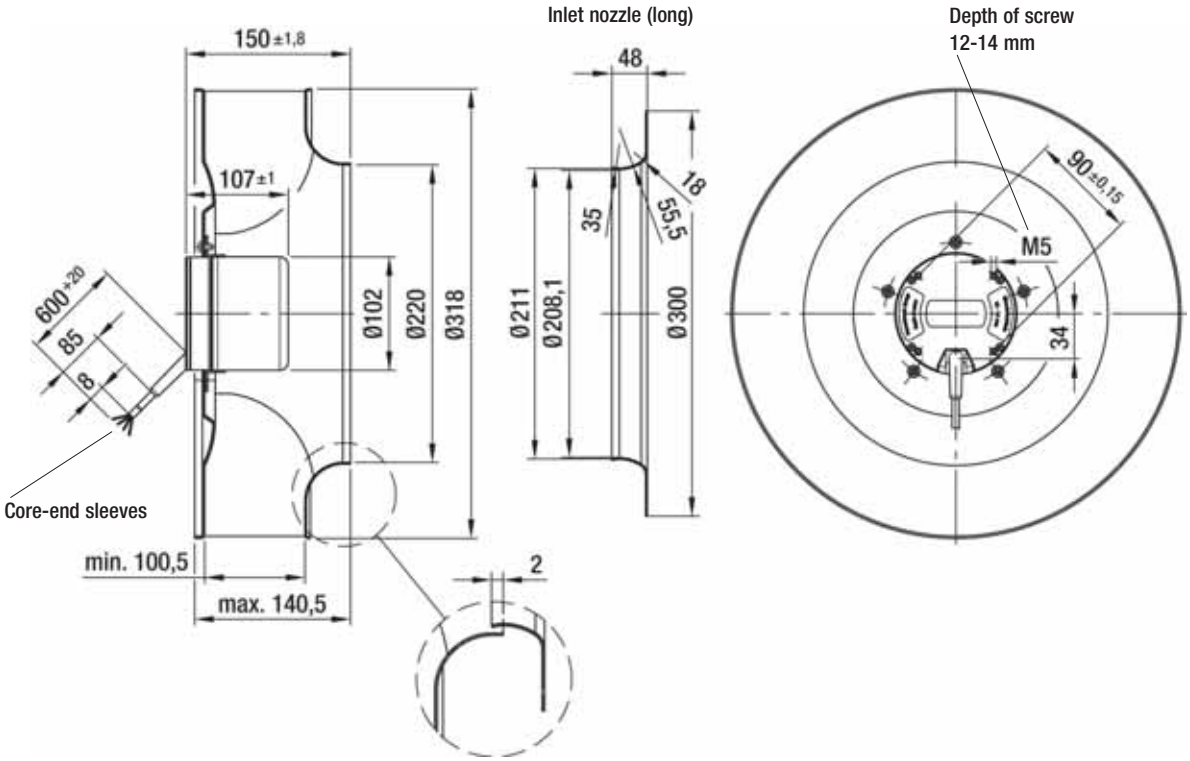
ebmpapst

- **Technical features:**
  - Control input 0-10 VDC / PWM
  - Tach output
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-2
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standard:** EN 60950-1
- **Approvals:** UL, CSA, CCC

- Over-temperature protected motor
- Reverse polarity and locked-rotor protection



Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle (long)	Inlet nozzle (short)
R3G 310-AL09 -30	4.4	31050-2-4013	31051-2-4013



EC centrifugal fan

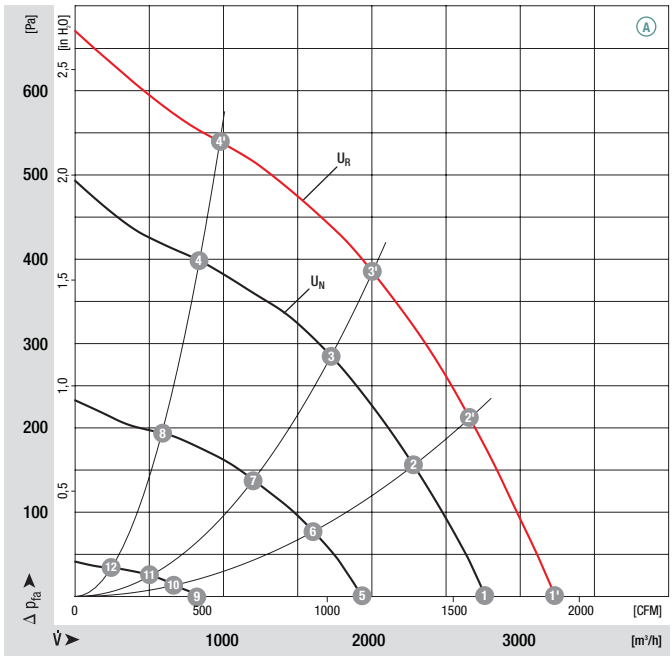
backward curved, 3-D, Ø 355

- **Material:** Impeller: Sheet aluminium, laser-welded
  Rotor: Coated in black
- **Number of blades:** 6
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 42
- **Insulation class:** "B"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage	Voltage range	Air flow	Speed/rpm	Power input	Current draw	Sound pressure level	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VDC**	**VDC**	**m³/h**	**rpm**	**W**	**A**	**dB(A)**	**°C**	p. 600
R3G 355	M3G 084-FA	Ⓐ	48	36-57	2790	1560	178	3.70	69	-25 to +60	G)

subject to alterations

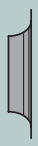
Curves (established with long inlet nozzle)



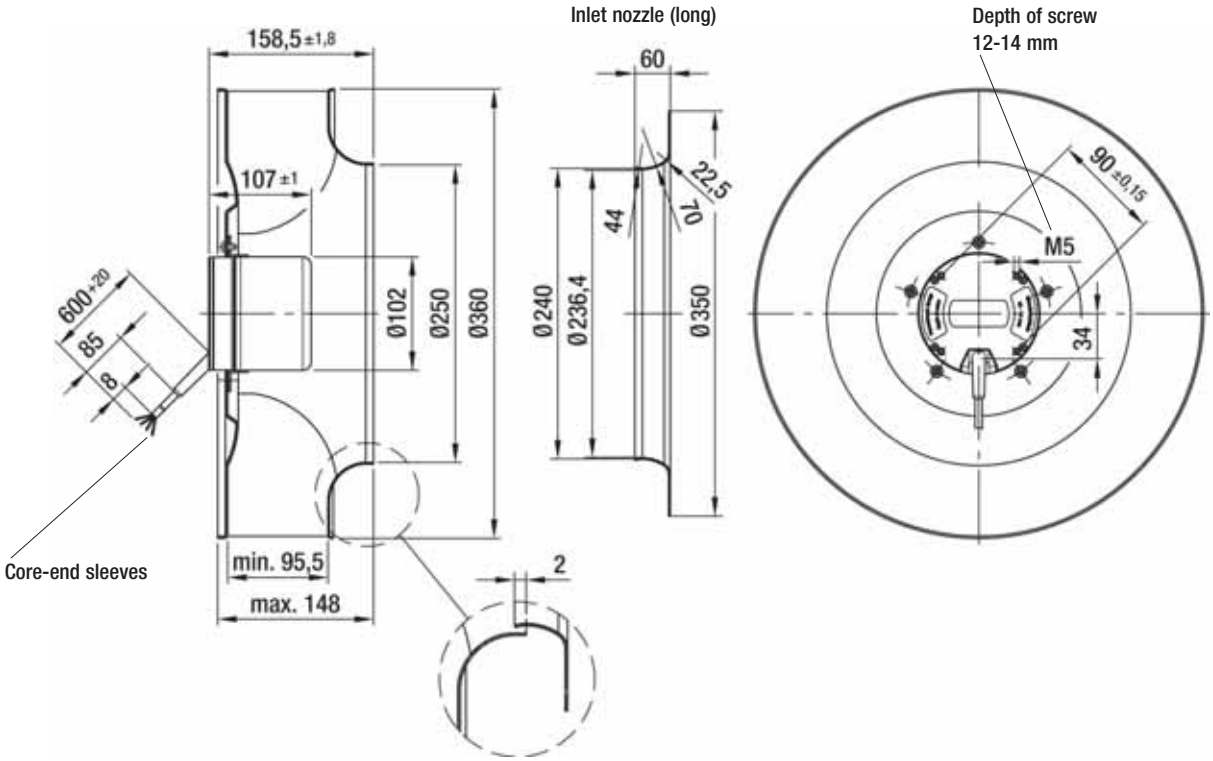
	n [rpm]	P_1 [W]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1'	1800	272	73	—
Ⓐ 2'	1740	333	67	53
Ⓐ 3'	1725	355	67	65
Ⓐ 4'	1770	307	70	49
Ⓐ 1	1560	178	69	—
Ⓐ 2	1515	220	63	53
Ⓐ 3	1500	236	63	65
Ⓐ 4	1530	208	65	49
Ⓐ 5	1088	64	60	—
Ⓐ 6	1065	79	56	53
Ⓐ 7	1055	85	54	65
Ⓐ 8	1070	75	56	49
Ⓐ 9	470	9	44	—
Ⓐ 10	450	10	42	53
Ⓐ 11	450	11	40	65
Ⓐ 12	455	10	40	49

ebmpapst

- **Technical features:**
  - Control input 0-10 VDC / PWM
  - Tach output
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-2
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standard:** EN 60950-1
- **Approvals:** UL, CSA, CCC
- Over-temperature protected motor
- Reverse polarity and locked-rotor protection



Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle (long)	Inlet nozzle (short)
R3G 355-AM08-30	4.6	35560-2-4013	35561-2-4013



EC centrifugal fan

backward curved, 3-D, Ø 355

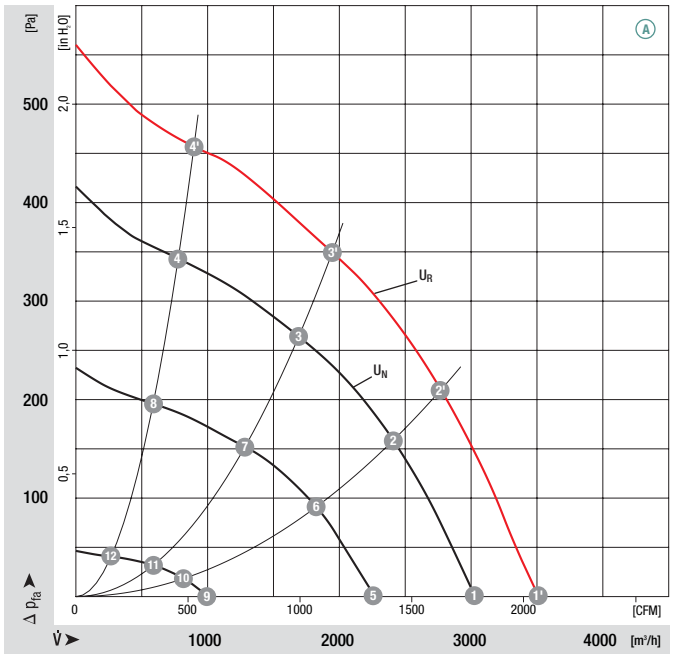
- **Material:** Impeller: Sheet aluminium, laser-welded
  Rotor: Coated in black
- **Number of blades:** 6
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 42
- **Insulation class:** "B"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data

Type	Motor	Curve	Nominal voltage	Voltage range	Air flow	Speed/rpm	Power input	Current draw	Sound pressure level	Perm. amb. temp.	Electr. connection
			VDC	VDC	m³/h	rpm	W	A	dB(A)	°C	p. 600
R3G 355	M3G 084-FA	Ⓐ	48	36-57	3030	1410	168	3.50	66	-25 to +60	G)

subject to alterations

Curves (established with long inlet nozzle)

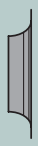


	n [rpm]	P_1 [W]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1'	1630	257	70	—
Ⓐ 2'	1575	317	64	62
Ⓐ 3'	1570	321	63	66
Ⓐ 4'	1610	270	67	47
Ⓐ 1	1410	168	66	—
Ⓐ 2	1370	207	60	62
Ⓐ 3	1365	212	59	66
Ⓐ 4	1400	177	63	47
Ⓐ 5	1065	75	58	—
Ⓐ 6	1045	93	55	62
Ⓐ 7	1040	96	55	66
Ⓐ 8	1060	79	56	47
Ⓐ 9	485	11	37	—
Ⓐ 10	480	12	35	62
Ⓐ 11	480	13	34	66
Ⓐ 12	480	11	35	47

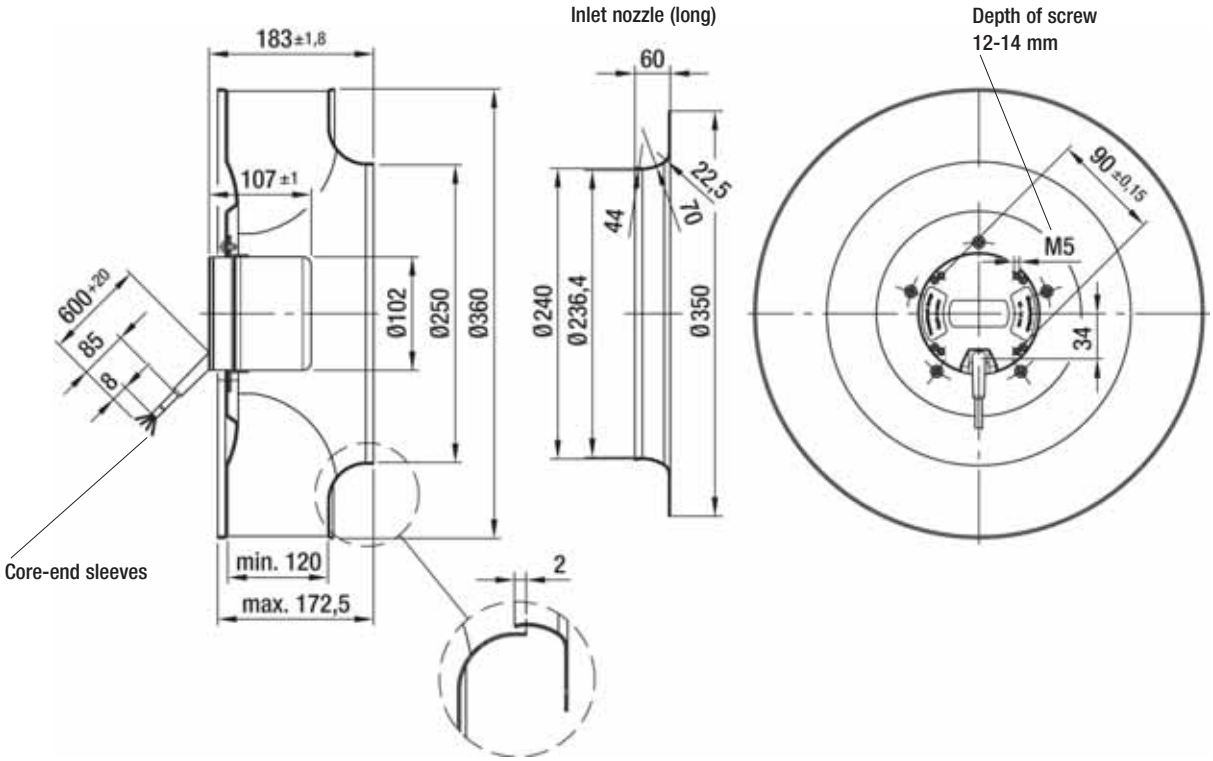
ebmpapst

- **Technical features:**
  - Control input 0-10 VDC / PWM
  - Tach output
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-2
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standard:** EN 60950-1
- **Approvals:** UL, CSA, CCC

- Over-temperature protected motor
- Reverse polarity and locked-rotor protection



Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle (long)	Inlet nozzle (short)
R3G 355-AN18 -30	4.8	35560-2-4013	35561-2-4013



EC centrifugal fan

backward curved, 3-D, Ø 400

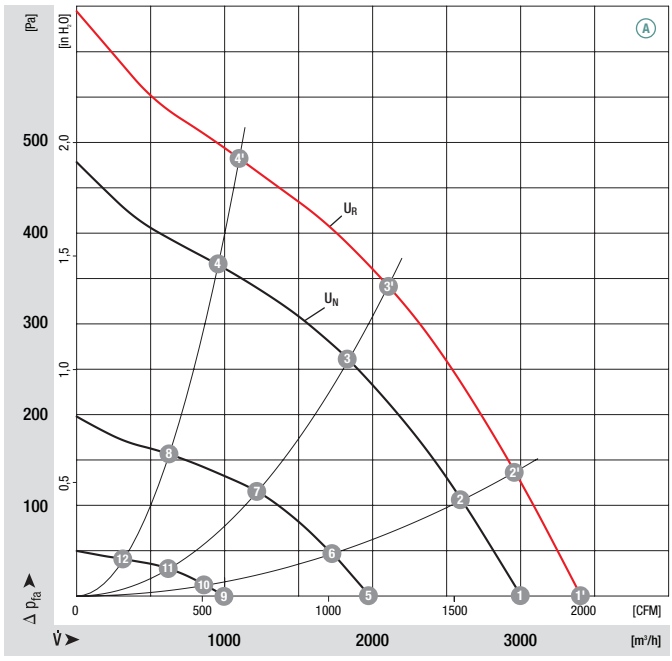
- **Material:** Impeller: Sheet aluminium, joined by tabs
  Rotor: Coated in black
- **Number of blades:** 6
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 42
- **Insulation class:** "B"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data

Type	Motor	Curve	Nominal voltage	Voltage range	Air flow	Speed/rpm	Power input	Current draw	Sound pressure level	Perm. amb. temp.	Electr. connection
			VDC	VDC	m³/h	rpm	W	A	dB(A)	°C	p. 600
R3G 400	M3G 084-FA	Ⓐ	48	36-57	3000	1290	200	4.20	65	-25 to +60	G)

subject to alterations

Curves

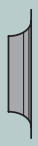


		n [rpm]	P_1 [W]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ	1'	1480	307	69	—
Ⓐ	2'	1450	340	68	44
Ⓐ	3'	1440	353	62	68
Ⓐ	4'	1480	309	67	55
Ⓐ	1	1290	200	65	—
Ⓐ	2	1270	224	64	44
Ⓐ	3	1260	234	59	68
Ⓐ	4	1285	204	62	55
Ⓐ	5	850	59	56	—
Ⓐ	6	840	67	54	44
Ⓐ	7	835	71	51	68
Ⓐ	8	850	62	53	55
Ⓐ	9	435	11	43	—
Ⓐ	10	435	12	41	44
Ⓐ	11	430	13	38	68
Ⓐ	12	435	12	39	55

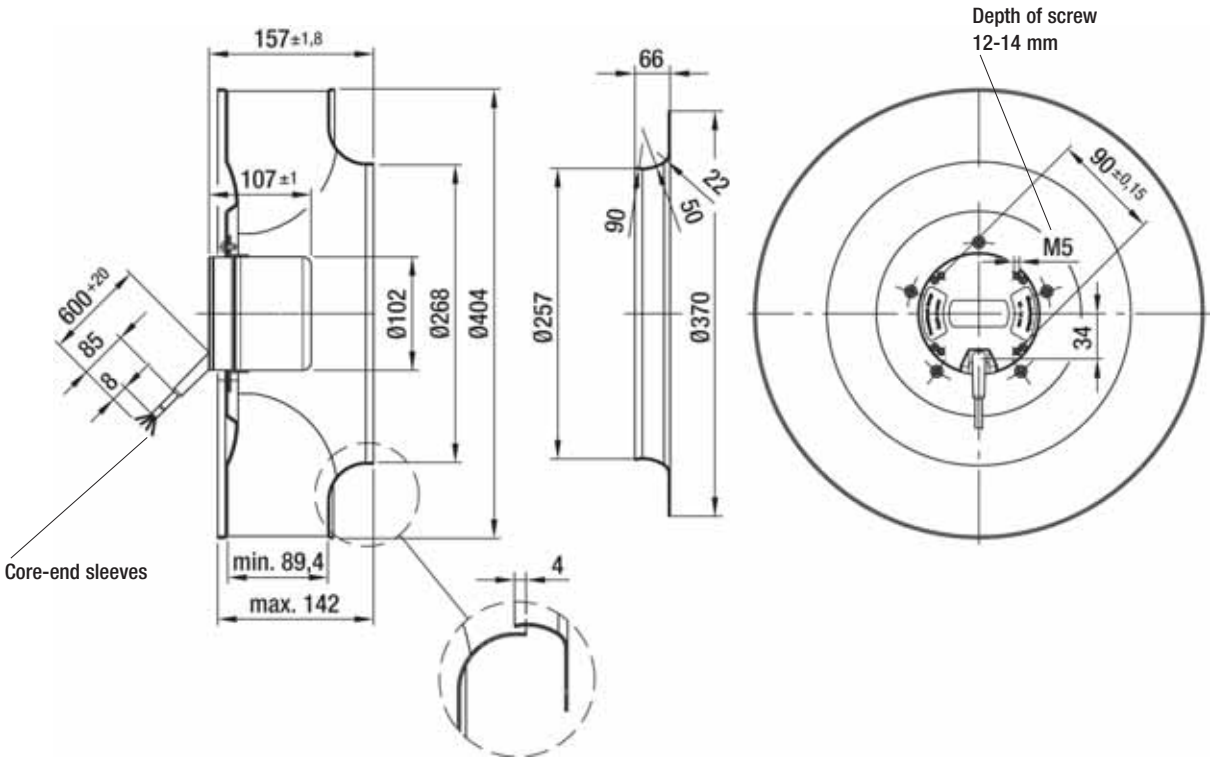
ebmpapst

- **Technical features:**
  - Control input 0-10 VDC / PWM
  - Tach output
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-2
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standard:** EN 60950-1
- **Approvals:** UL, CSA, CCC

- Over-temperature protected motor
- Reverse polarity and locked-rotor protection



Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle (long)
R3G 400-AD20 -30	5.0	54476-2-4013



EC centrifugal fan

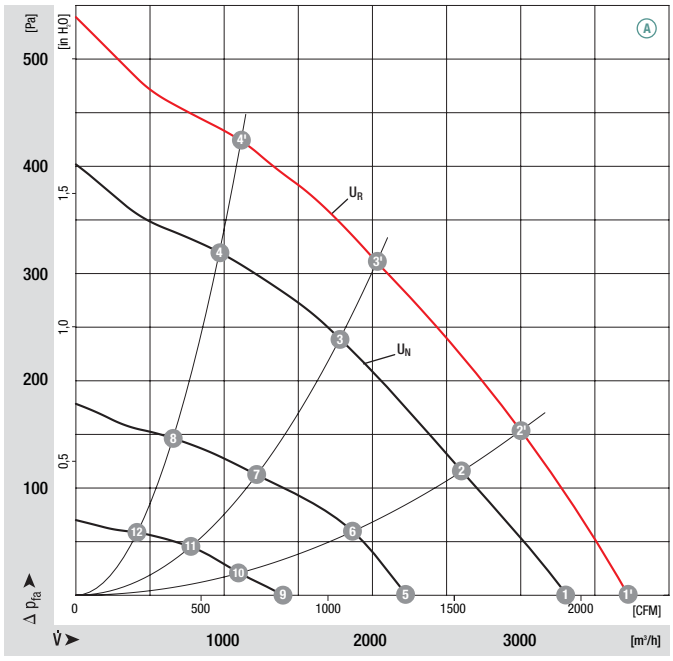
backward curved, 3-D, Ø 400

- **Material:** Impeller: Sheet aluminium, joined by tabs
  Rotor: Coated in black
- **Number of blades:** 6
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 42
- **Insulation class:** "B"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage	Voltage range	Air flow	Speed/rpm	Power input	Current draw	Sound pressure level	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VDC**	**VDC**	**m³/h**	**rpm**	**W**	**A**	**dB(A)**	**°C**	p. 600
R3G 400	M3G 084-FA	Ⓐ	48	36-57	3300	1160	192	3.90	63	-25 to +60	G)

subject to alterations

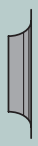
Curves



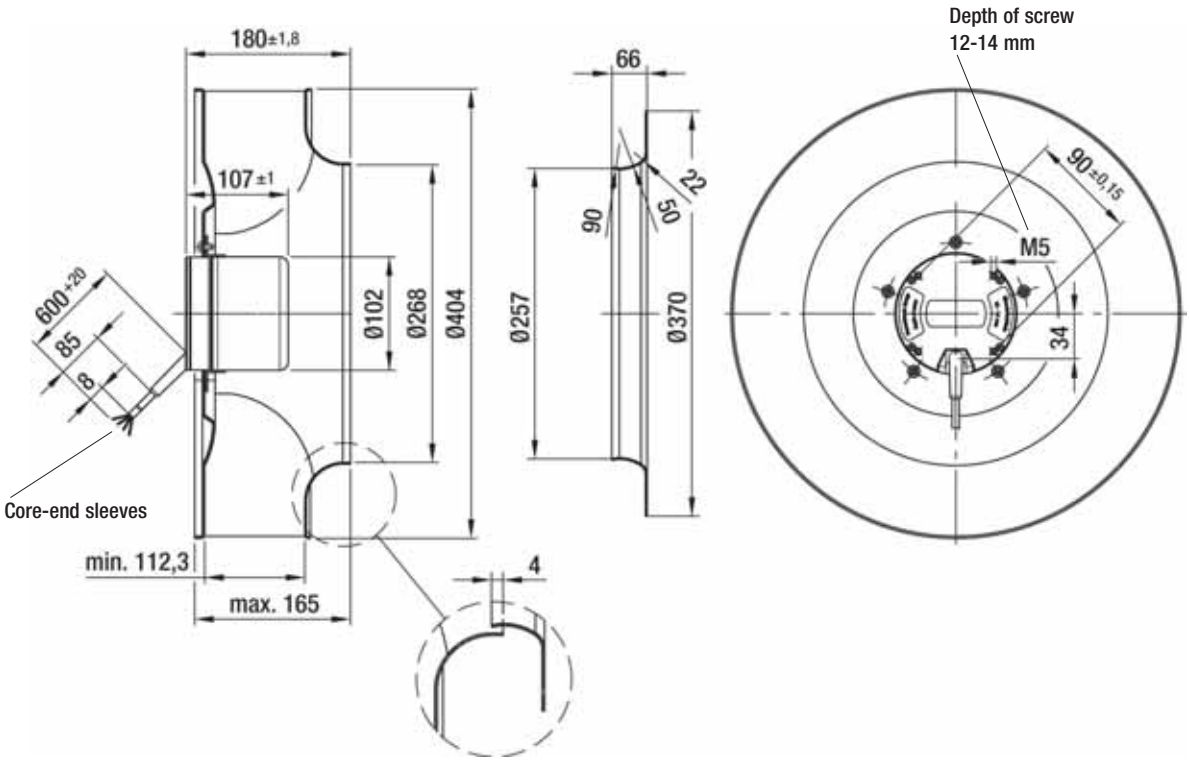
	n [rpm]	P_1 [W]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1'	1325	287	69	—
Ⓐ 2'	1300	340	66	43
Ⓐ 3'	1300	335	64	62
Ⓐ 4'	1345	268	68	53
Ⓐ 1	1160	192	63	—
Ⓐ 2	1140	227	62	43
Ⓐ 3	1140	210	59	62
Ⓐ 4	1170	177	63	53
Ⓐ 5	795	62	57	—
Ⓐ 6	784	74	56	43
Ⓐ 7	780	69	56	62
Ⓐ 8	795	59	56	53
Ⓐ 9	500	15	49	—
Ⓐ 10	500	19	48	43
Ⓐ 11	500	21	48	62
Ⓐ 12	505	18	49	53

ebmpapst

- **Technical features:**
  - Control input 0-10 VDC / PWM
  - Tach output
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-2
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standard:** EN 60950-1
- **Approvals:** UL, CSA, CCC
- Over-temperature protected motor
- Reverse polarity and locked-rotor protection



Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle (long)
R3G 400-AC13 -30	5.3	54476-2-4013



EC centrifugal fan

backward curved, Ø 133

- **Material:** Impeller: PA plastic 6.6, fibreglass-reinforced
  Rotor: Galvanised
  Electronics enclosure: Die-cast aluminium
- **Number of blades:** 7
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 44
- **Insulation class:** "B"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

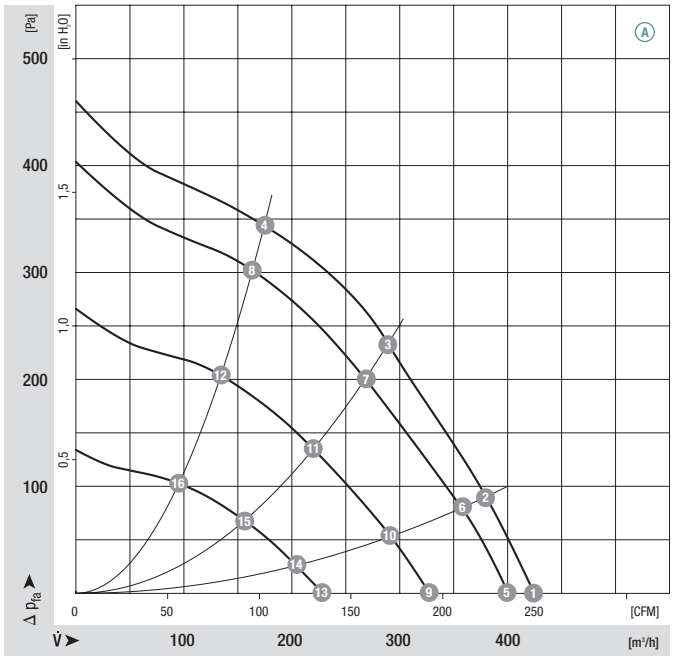
Nominal data

Type	Motor	Curve	Nominal voltage	Frequency	Speed/rpm	Max. power input(1)	Max. current draw(1)	Perm. amb. temp.	Electr. connection
			VAC	Hz	rpm	W	A	°C	p. 601
R3G 133	M3G 055-BD	Ⓐ	1~ 115	50/60	4350	50	0.80	-25 to +60	H1)

subject to alterations

(1) Nominal data in operating point with maximum load and 115 VAC

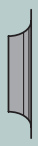
Curves



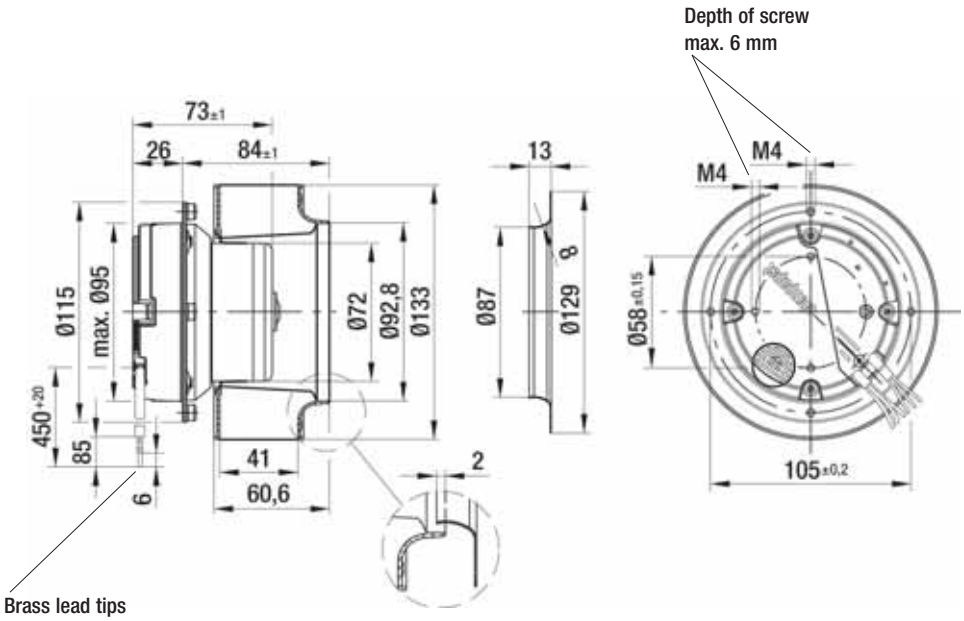
	n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1	4350	37	0.55	75	—
Ⓐ 2	4310	41	0.60	74	39
Ⓐ 3	4260	46	0.70	61	61
Ⓐ 4	4340	41	0.60	60	45
Ⓐ 5	4150	34	0.60	78	—
Ⓐ 6	4090	36	0.60	69	31
Ⓐ 7	4010	39	0.60	58	52
Ⓐ 8	4080	34	0.60	58	47
Ⓐ 9	3390	20	0.40	67	—
Ⓐ 10	3350	22	0.40	58	30
Ⓐ 11	3300	23	0.40	53	53
Ⓐ 12	3350	22	0.40	53	46
Ⓐ 13	2370	10	0.20	52	—
Ⓐ 14	2360	11	0.20	49	30
Ⓐ 15	2350	11	0.20	45	56
Ⓐ 16	2370	11	0.20	44	46

ebmpapst

- **Technical features:**
  - Control input 0-10 VDC / PWM
  - Output 10 VDC max. 1.1 mA
  - Tach output
  - Locked-rotor protection
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-1
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 60950-1
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 60335-1, CE
- **Approvals:** GOST; VDE, UL, CSA, CCC are applied for



Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle (long)
R3G 133-AE17 -02	1.0	09566-2-4013



EC centrifugal fan

backward curved, Ø 133

- **Material:** Impeller: PA plastic 6.6, fibreglass-reinforced
  Rotor: Galvanised
  Electronics enclosure: Die-cast aluminium
- **Number of blades:** 7
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 44
- **Insulation class:** "B"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

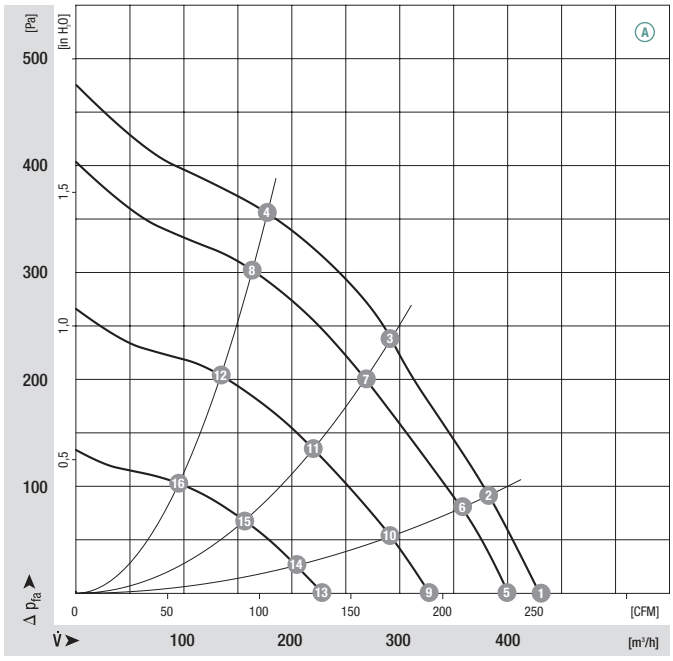
Nominal data

Type	Motor	Curve	Nominal voltage	Frequency	Speed/rpm	Max. power input(1)	Max. current draw(1)	Perm. amb. temp.	Electr. connection
			VAC	Hz	rpm	W	A	°C	p. 601
R3G 133	M3G 055-BD	Ⓐ	1~ 230	50/60	4480	52	0.40	-25 to +60	H1)

subject to alterations

(1) Nominal data in operating point with maximum load and 230 VAC

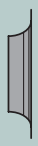
Curves



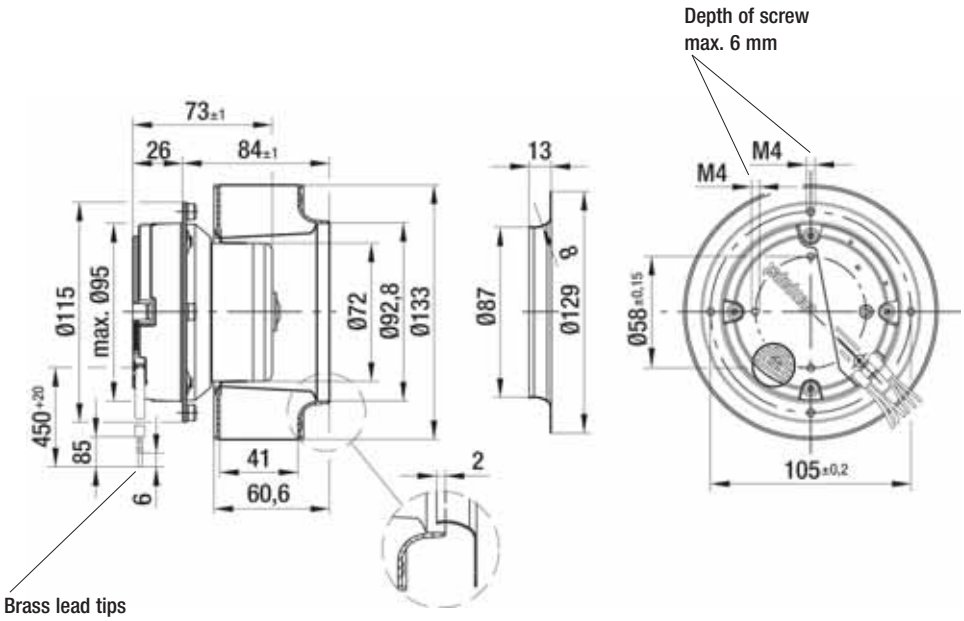
		n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ	1	4480	43	0.30	75	—
Ⓐ	2	4450	46	0.35	74	31
Ⓐ	3	4390	49	0.40	61	51
Ⓐ	4	4460	45	0.35	60	46
Ⓐ	5	4150	34	0.30	78	—
Ⓐ	6	4090	36	0.30	69	31
Ⓐ	7	4010	39	0.30	58	52
Ⓐ	8	4080	34	0.30	58	47
Ⓐ	9	3390	20	0.20	67	—
Ⓐ	10	3350	22	0.20	58	30
Ⓐ	11	3300	23	0.20	53	53
Ⓐ	12	3350	22	0.20	53	46
Ⓐ	13	2370	10	0.10	52	—
Ⓐ	14	2360	11	0.10	49	30
Ⓐ	15	2350	11	0.10	45	56
Ⓐ	16	2370	11	0.10	44	46

ebmpapst

- **Technical features:**
  - Control input 0-10 VDC / PWM
  - Output 10 VDC max. 1.1 mA
  - Tach output
  - Locked-rotor protection
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-1
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 60950-1
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 60335-1, CE
- **Approvals:** GOST; VDE, UL, CSA, CCC are applied for



Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle (long)
R3G 133-AE07 -02	1.0	09566-2-4013



EC centrifugal fan

backward curved, Ø 175

- **Material:** Impeller: PA plastic 6.6, fibreglass-reinforced
  Rotor: Galvanised
  Electronics enclosure: Die-cast aluminium
- **Number of blades:** 7
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 44
- **Insulation class:** "B"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

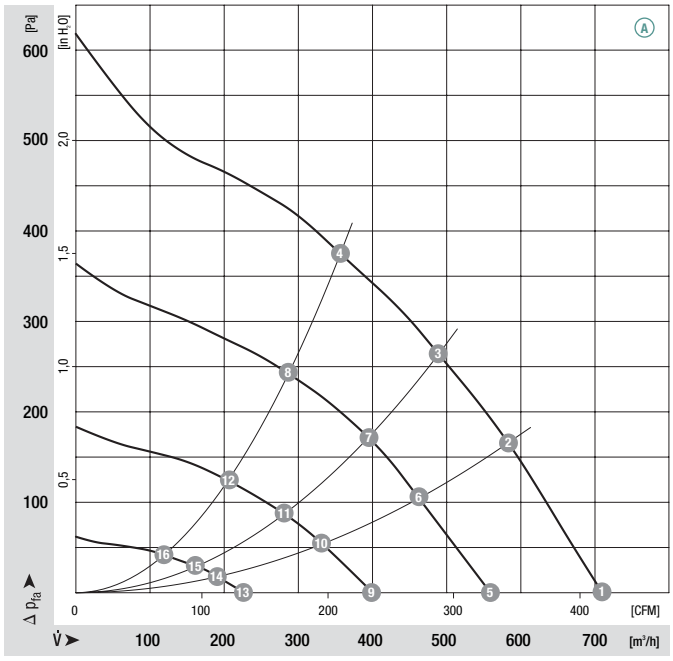
Nominal data

Type	Motor	Curve	Nominal voltage	Frequency	Speed/rpm	Max. power input(1)	Max. current draw(1)	Perm. amb. temp.	Electr. connection
			VAC	Hz	rpm	W	A	°C	p. 601
R3G 175	M3G 055-CF	Ⓐ	1~ 115	50/60	3970	90	1.30	-25 to +60	H1)

subject to alterations

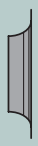
(1) Nominal data in operating point with maximum load and 115 VAC

Curves

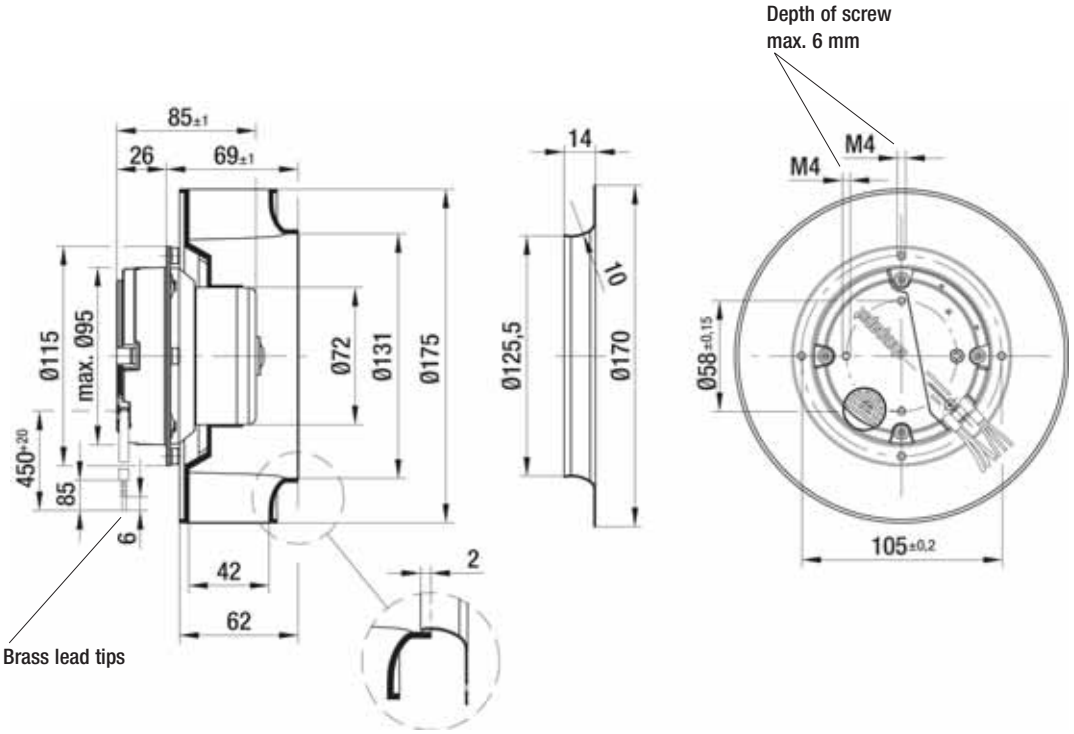


	n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1	3970	72	1.10	72	—
Ⓐ 2	3870	81	1.20	67	45
Ⓐ 3	3810	85	1.20	66	57
Ⓐ 4	3790	88	1.30	65	52
Ⓐ 5	3180	38	0.60	65	—
Ⓐ 6	3110	45	0.70	61	39
Ⓐ 7	3120	46	0.70	58	53
Ⓐ 8	3110	47	0.70	56	51
Ⓐ 9	2270	17	0.30	59	—
Ⓐ 10	2240	20	0.35	54	38
Ⓐ 11	2240	20	0.35	50	51
Ⓐ 12	2240	21	0.35	50	50
Ⓐ 13	1310	6	0.10	45	—
Ⓐ 14	1295	7	0.10	40	40
Ⓐ 15	1285	7	0.10	37	53
Ⓐ 16	1290	7	0.10	35	54

- **Technical features:**
  - Control input 0-10 VDC / PWM
  - Output 10 VDC max. 1.1 mA
  - Tach output
  - Locked-rotor protection
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-1
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 60950-1
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 60335-1, CE
- **Approvals:** GOST; VDE, UL, CSA, CCC are applied for



Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle (long)
R3G 175-AF25 -02	1.2	09576-2-4013



EC centrifugal fan

backward curved, Ø 175

- **Material:** Impeller: PA plastic 6.6, fibreglass-reinforced
  Rotor: Galvanised
  Electronics enclosure: Die-cast aluminium
- **Number of blades:** 7
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 44
- **Insulation class:** "B"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

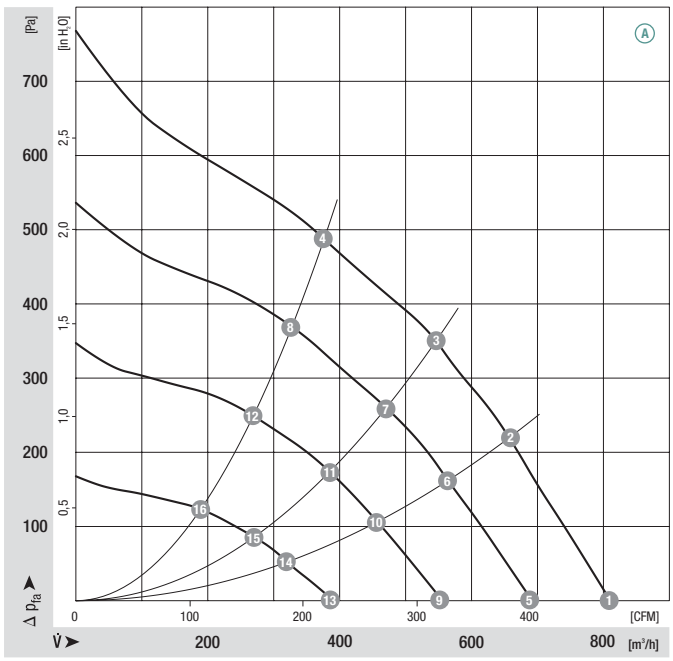
Nominal data

Type	Motor	Curve	Nominal voltage	Frequency	Speed/rpm	Max. power input(1)	Max. current draw(1)	Perm. amb. temp.	Electr. connection
			VAC	Hz	rpm	W	A	°C	p. 601
R3G 175	M3G 055-CF	Ⓐ	1~ 230	50/60	4460	120	1.00	-25 to +60	H1)

subject to alterations

(1) Nominal data in operating point with maximum load and 230 VAC

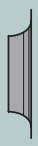
Curves



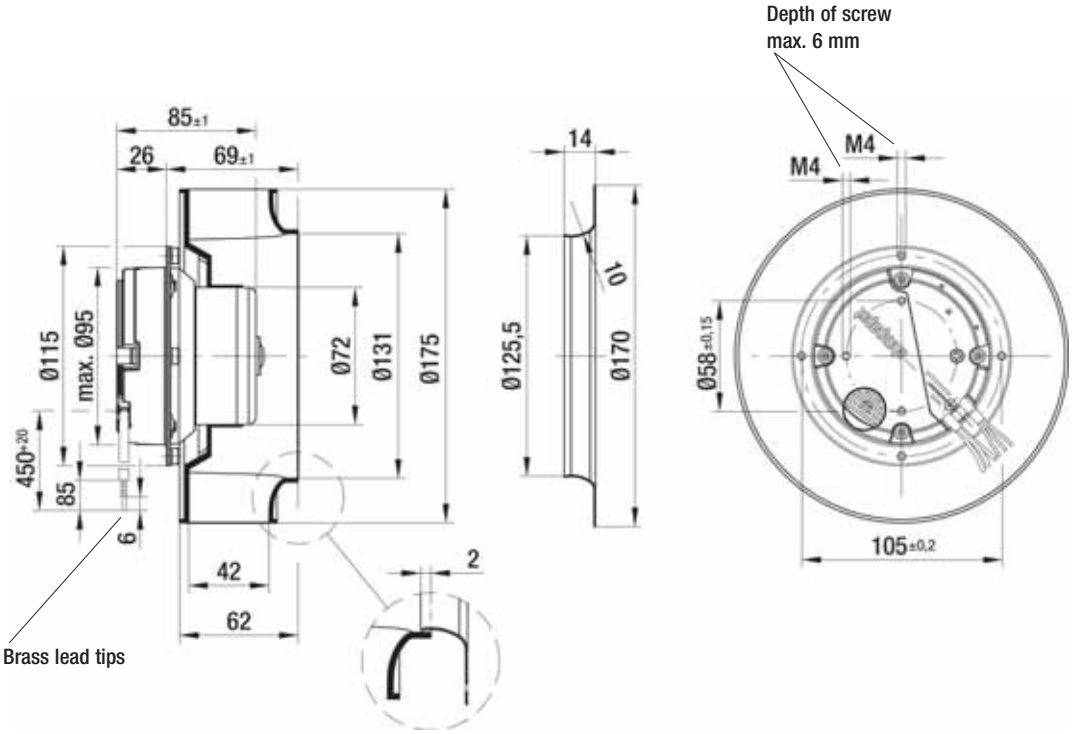
	n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1	4460	100	0.75	76	—
Ⓐ 2	4350	112	0.80	69	57
Ⓐ 3	4300	115	0.85	66	68
Ⓐ 4	4260	118	0.85	68	60
Ⓐ 5	3800	65	0.50	71	—
Ⓐ 6	3730	72	0.55	65	56
Ⓐ 7	3710	76	0.55	74	66
Ⓐ 8	3710	78	0.60	64	60
Ⓐ 9	3110	37	0.30	66	—
Ⓐ 10	3070	42	0.30	60	51
Ⓐ 11	3060	44	0.35	58	61
Ⓐ 12	3040	45	0.35	59	58
Ⓐ 13	2170	17	0.15	59	—
Ⓐ 14	2150	18	0.15	54	40
Ⓐ 15	2150	18	0.15	50	51
Ⓐ 16	2130	19	0.15	50	48

ebmpapst

- **Technical features:**
  - Control input 0-10 VDC / PWM
  - Output 10 VDC max. 1.1 mA
  - Tach output
  - Locked-rotor protection
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-1
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 60950-1
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 60335-1, CE
- **Approvals:** VDE, UL, CSA, CCC, GOST are applied for



Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle (long)
R3G 175-AF19 -02	1.2	09576-2-4013



EC centrifugal fan

backward curved, Ø 190

- **Material:** Impeller: PA plastic 6.6, fibreglass-reinforced
  Rotor: Galvanised
  Electronics enclosure: Die-cast aluminium
- **Number of blades:** 7
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 44
- **Insulation class:** "B"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

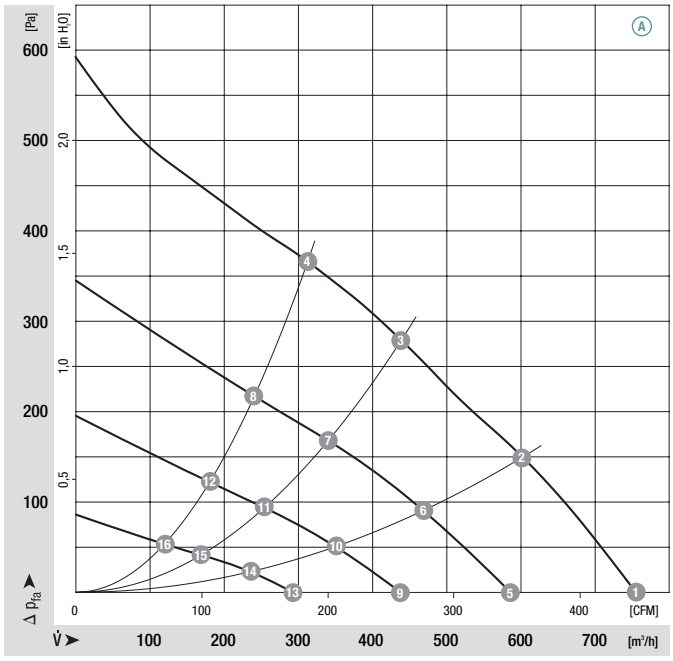
Nominal data

Type	Motor	Curve	Nominal voltage	Frequency	Speed/rpm	Max. power input(1)	Max. current draw(1)	Perm. amb. temp.	Electr. connection
			VAC	Hz	rpm	W	A	°C	p. 601
R3G 190	M3G 055-CF	Ⓐ	1~ 115	50/60	3370	87	1.40	-25 to +60	H1)

subject to alterations

(1) Nominal data in operating point with maximum load and 115 VAC

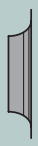
Curves



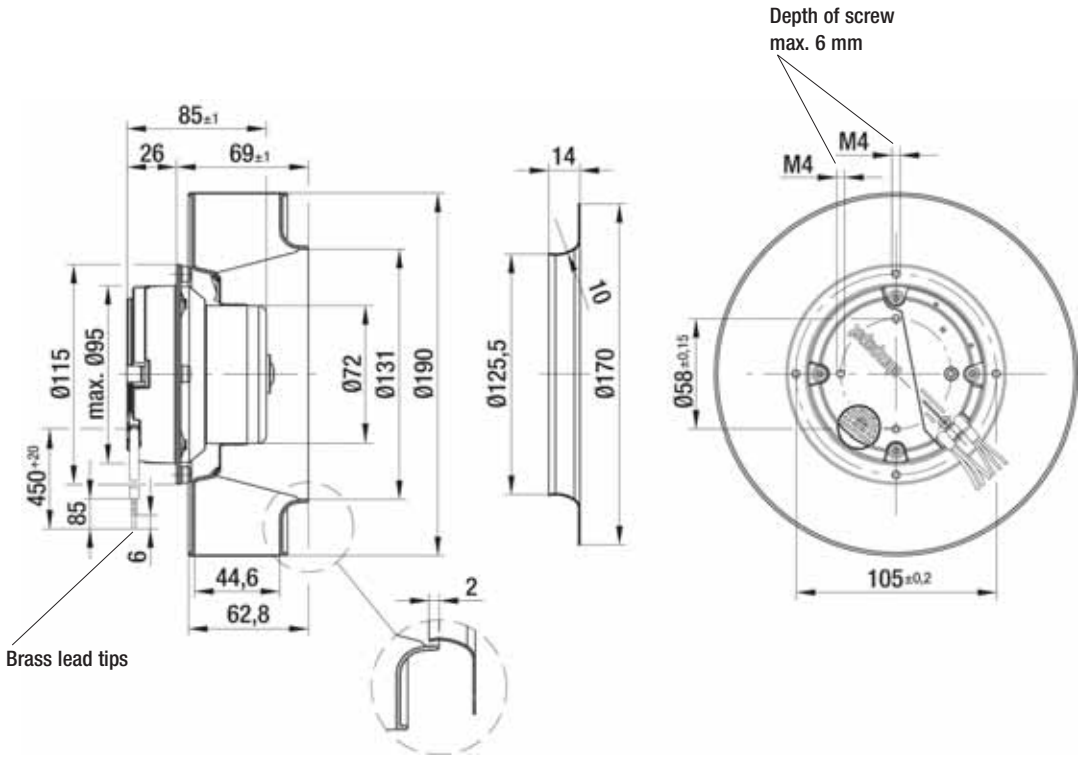
	n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1	3370	76	1.10	70	—
Ⓐ 2	3250	81	1.20	64	44
Ⓐ 3	3220	84	1.20	63	55
Ⓐ 4	3190	85	1.30	60	55
Ⓐ 5	2715	42	0.70	64	—
Ⓐ 6	2690	46	0.70	63	43
Ⓐ 7	2670	48	0.80	58	54
Ⓐ 8	2655	49	0.80	56	56
Ⓐ 9	2310	27	0.40	61	—
Ⓐ 10	2285	29	0.50	56	42
Ⓐ 11	2265	31	0.50	55	52
Ⓐ 12	2260	32	0.50	52	53
Ⓐ 13	1780	15	0.20	58	—
Ⓐ 14	1760	16	0.30	52	35
Ⓐ 15	1750	17	0.30	48	43
Ⓐ 16	1745	17	0.30	45	44

ebmpapst

- **Technical features:**
  - Control input 0-10 VDC / PWM
  - Output 10 VDC max. 1.1 mA
  - Tach output
  - Locked-rotor protection
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-1
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 60950-1
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 60335-1, CE
- **Approvals:** VDE, UL, CSA, CCC, GOST are applied for



Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle (long)
R3G 190-AB15 -02	1.3	09576-2-4013



Inlet nozzle p. 550
Electr. connection p. 601

EC centrifugal fan

backward curved, Ø 190

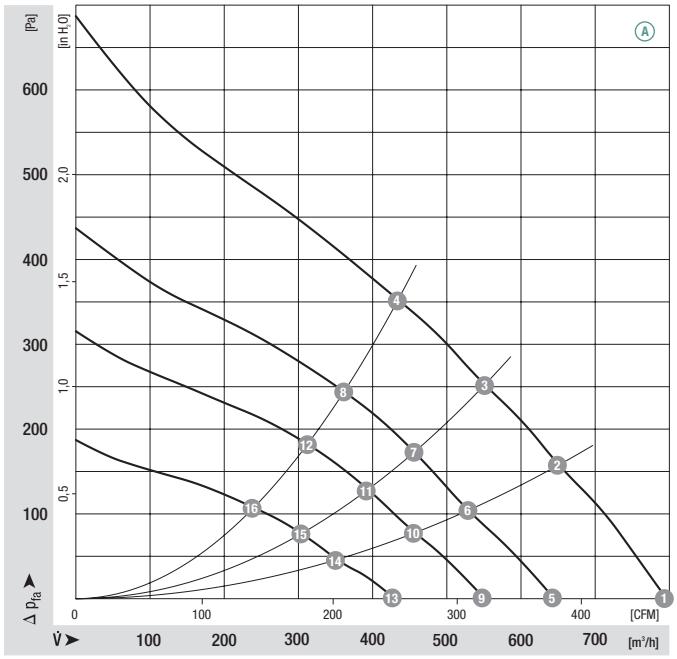
- **Material:** Impeller: PA plastic 6.6, fibreglass-reinforced
  Rotor: Galvanised
  Electronics enclosure: Die-cast aluminium
- **Number of blades:** 7
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 44
- **Insulation class:** "B"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage	Frequency	Speed/rpm	Max. power input(1)	Max. current draw(1)	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VAC**	**Hz**	**rpm**	**W**	**A**	**°C**	p. 601
R3G 190	M3G 055-CF	Ⓐ	1~ 230	50/60	3570	105	0.90	-25 to +60	H1)

subject to alterations

(1) Nominal data in operating point with maximum load and 230 VAC

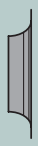
Curves



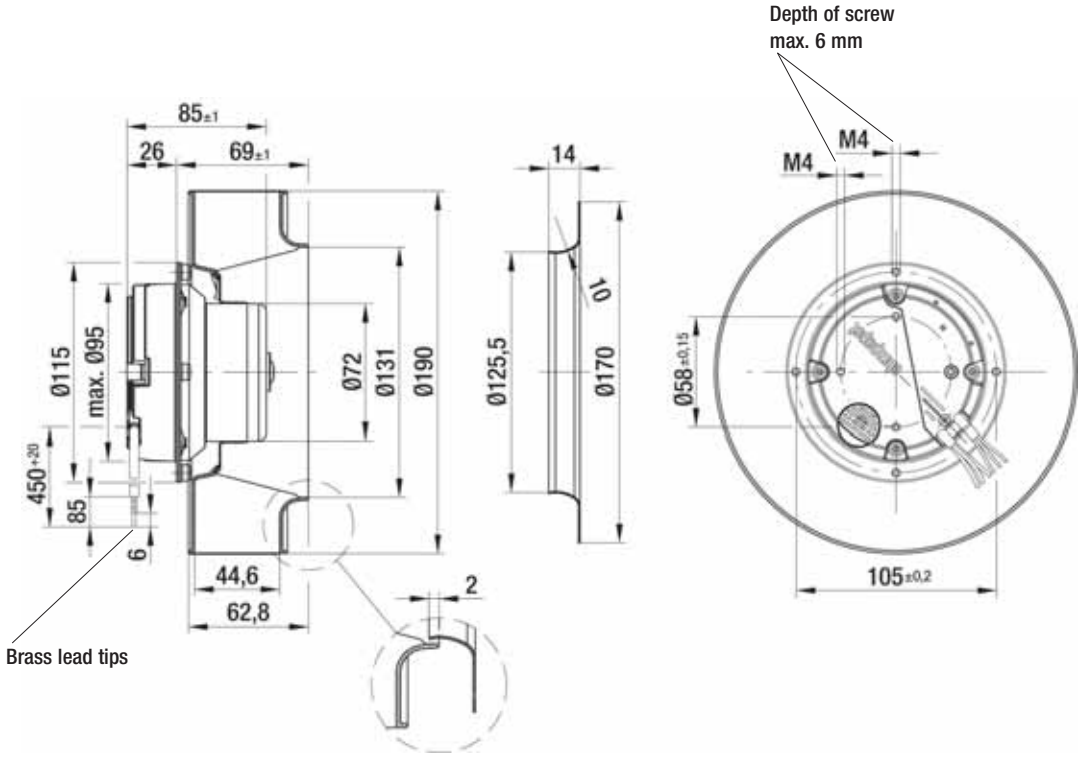
	n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1	3570	90	0.65	72	—
Ⓐ 2	3490	96	0.70	66	47
Ⓐ 3	3440	101	0.75	64	57
Ⓐ 4	3410	102	0.75	62	59
Ⓐ 5	2950	51	0.40	65	—
Ⓐ 6	2880	55	0.40	62	44
Ⓐ 7	2860	58	0.45	60	55
Ⓐ 8	2840	60	0.45	57	58
Ⓐ 9	2510	33	0.25	62	—
Ⓐ 10	2480	36	0.30	58	43
Ⓐ 11	2470	39	0.30	57	53
Ⓐ 12	2450	40	0.30	54	56
Ⓐ 13	1940	18	0.15	57	—
Ⓐ 14	1920	19	0.15	54	37
Ⓐ 15	1900	20	0.15	51	46
Ⓐ 16	1890	22	0.15	47	48

ebmpapst

- **Technical features:**
  - Control input 0-10 VDC / PWM
  - Output 10 VDC max. 1.1 mA
  - Tach output
  - Locked-rotor protection
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-1
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 60950-1
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 60335-1, CE
- **Approvals:** VDE, UL, CSA, CCC, GOST are applied for



Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle (long)
R3G 190-AB23 -02	1.3	09576-2-4013



EC centrifugal fan

backward curved, Ø 190

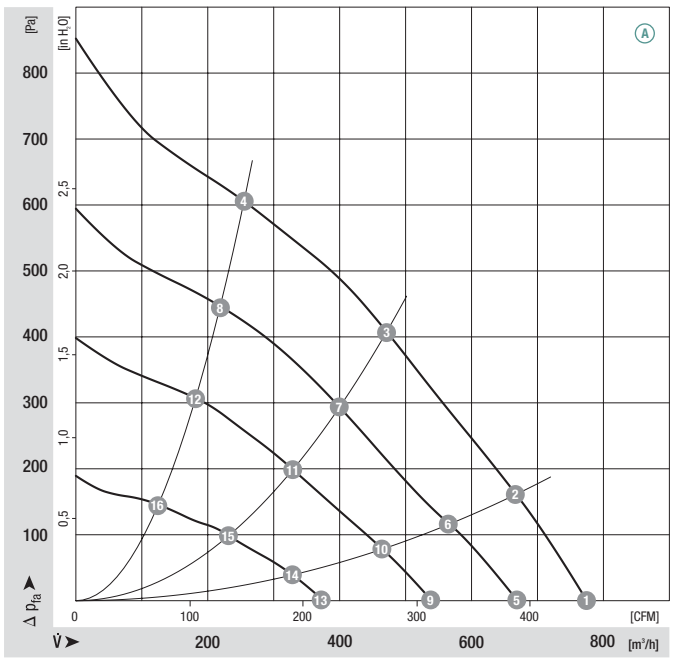
- **Material:** Impeller: PA plastic 6.6, fibreglass-reinforced
  Rotor: Galvanised
  Electronics enclosure: Die-cast aluminium
- **Number of blades:** 7
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 44
- **Insulation class:** "B"
- **Mounting position:** Shaft horizontal or rotor on top; rotor on bottom on request
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage range	Frequency	Speed/rpm	Max. power input(1)	Max. current draw(1)	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VAC**	**Hz**	**rpm**	**W**	**A**	**°C**	p. 603
R3G 190	M3G 074-BF	Ⓐ	1~ 100-130	50/60	3960	170	2.50	-25 to +60	J1)

subject to alterations

(1) Nominal data in operating point with maximum load and 115 VAC

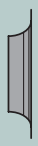
Curves



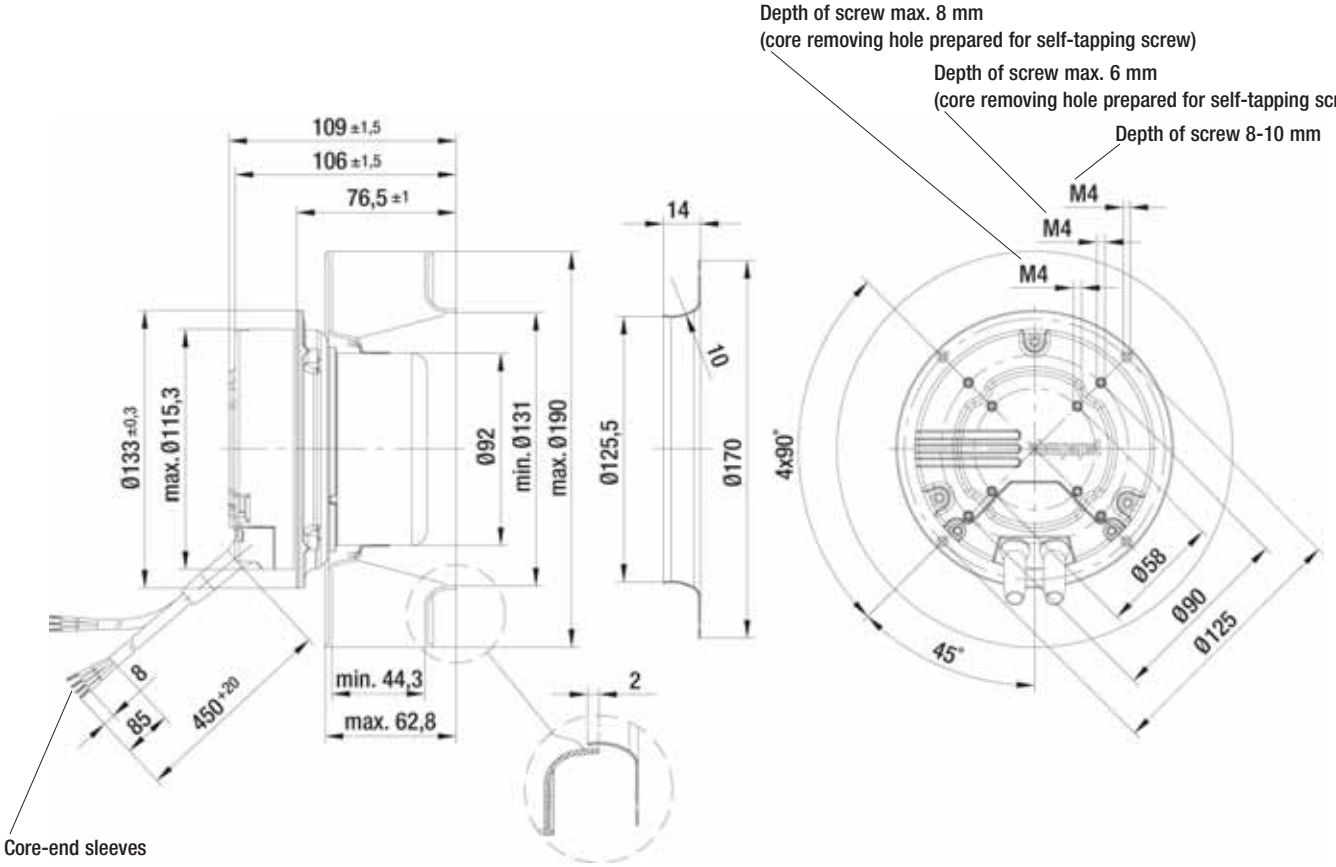
	n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1	3960	146	1.80	73	—
Ⓐ 2	3940	149	1.90	71	32
Ⓐ 3	3900	156	2.00	68	48
Ⓐ 4	4000	147	1.90	69	43
Ⓐ 5	3430	94	1.20	70	—
Ⓐ 6	3370	95	1.30	66	31
Ⓐ 7	3310	99	1.30	64	47
Ⓐ 8	3420	95	1.30	64	41
Ⓐ 9	2830	58	0.80	64	—
Ⓐ 10	2790	59	0.80	62	28
Ⓐ 11	2720	58	0.80	58	45
Ⓐ 12	2830	57	0.80	60	39
Ⓐ 13	1960	24	0.40	58	—
Ⓐ 14	1950	25	0.40	56	23
Ⓐ 15	1910	25	0.40	50	37
Ⓐ 16	1940	24	0.40	50	31

ebmpapst

- **Technical features:**
  - PFC (passive)
  - Control input 0-10 VDC / PWM
  - Output 10 VDC max. 1.1 mA
  - Tach output
  - Over-temperature protected electronics / motor
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-1
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 60950-1
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 60335-1, EN 61800-5-1, EN 60950-1, CE
- **Approvals:** UL, CSA, CCC, GOST are applied for



Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle (long)
R3G 190-AF60 -01	1.8	09576-2-4013



EC centrifugal fan

backward curved, Ø 190

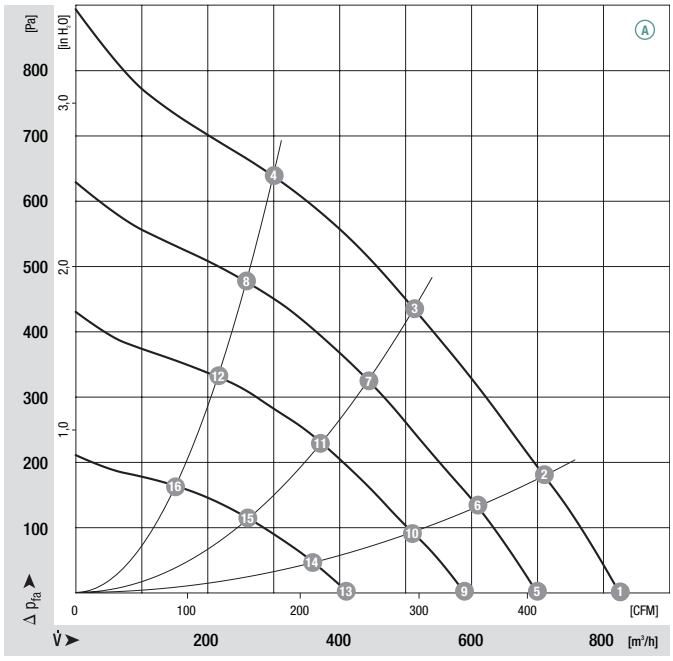
- **Material:** Impeller: PA plastic 6.6, fibreglass-reinforced
  Rotor: Galvanised
  Electronics enclosure: Die-cast aluminium
- **Number of blades:** 7
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 44
- **Insulation class:** "B"
- **Mounting position:** Shaft horizontal or rotor on top; rotor on bottom on request
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage range	Frequency	Speed/rpm	Max. power input(1)	Max. current draw(1)	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VAC**	**Hz**	**rpm**	**W**	**A**	**°C**	p. 603
R3G 190	M3G 074-BF	Ⓐ	1~ 200-277	50/60	4050	156	1.15	-25 to +60	J1)

subject to alterations

(1) Nominal data in operating point with maximum load and 230 VAC

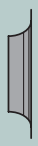
Curves



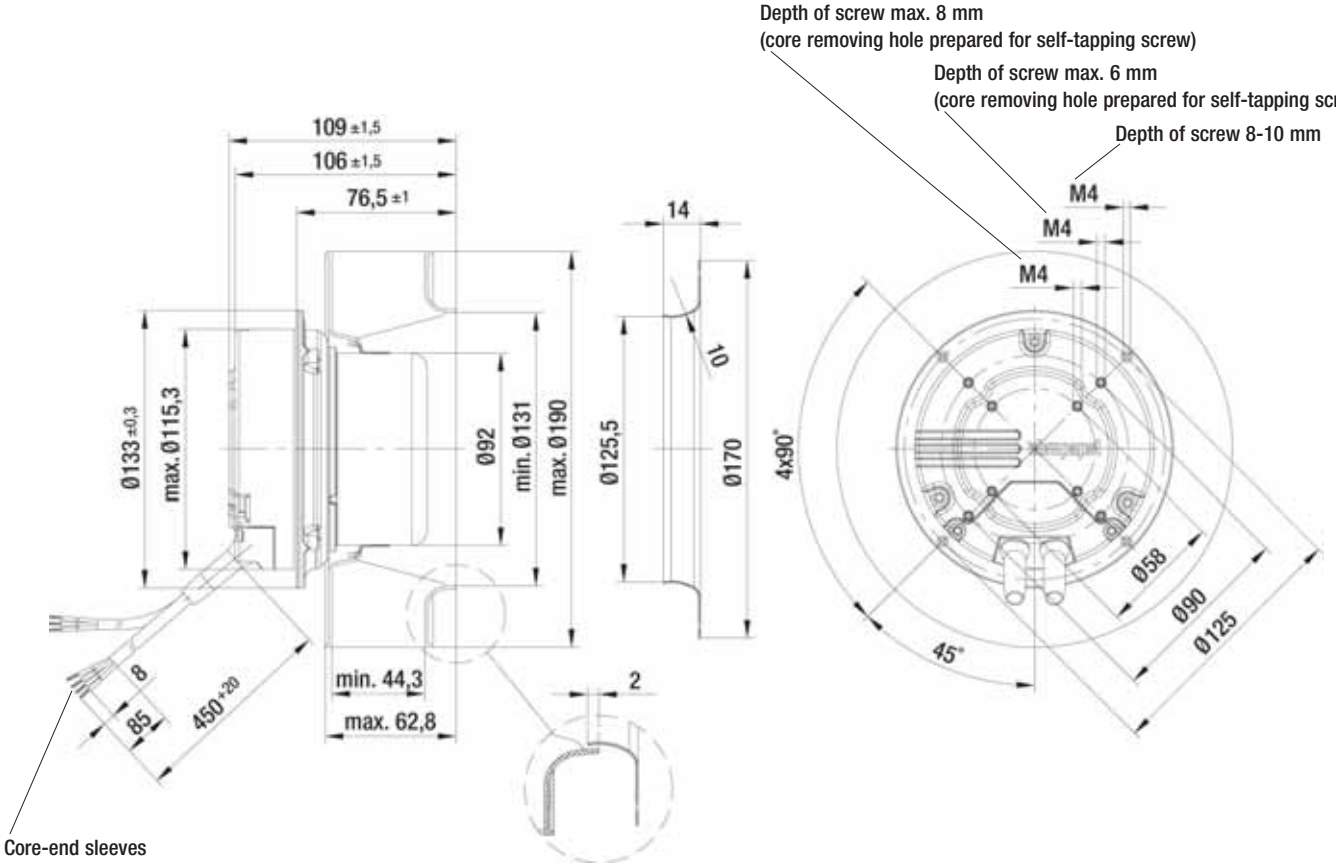
		n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ	1	4050	149	1.10	74	—
Ⓐ	2	4040	156	1.10	72	35
Ⓐ	3	4010	155	1.10	69	52
Ⓐ	4	4090	142	1.00	69	43
Ⓐ	5	3490	101	0.70	70	—
Ⓐ	6	3460	104	0.70	68	33
Ⓐ	7	3250	103	0.70	65	51
Ⓐ	8	3535	96	0.70	65	41
Ⓐ	9	2925	62	0.50	66	—
Ⓐ	10	2915	63	0.50	64	33
Ⓐ	11	2900	63	0.50	60	52
Ⓐ	12	2930	60	0.50	61	42
Ⓐ	13	2040	27	0.20	59	—
Ⓐ	14	2050	27	0.20	56	33
Ⓐ	15	2040	27	0.20	51	51
Ⓐ	16	2060	26	0.20	51	39

ebmpapst

- **Technical features:**
  - PFC (passive)
  - Control input 0-10 VDC / PWM
  - Output 10 VDC max. 1.1 mA
  - Tach output
  - Over-temperature protected electronics / motor
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-1
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 60950-1
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 60335-1, EN 61800-5-1, EN 60950-1, CE
- **Approvals:** UL, CSA; CCC, GOST are applied for



Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle (long)
R3G 190-AF50 -01	1.8	09576-2-4013



EC centrifugal fan

backward curved, Ø 220

- **Material:** Impeller: PA plastic 6.6, fibreglass-reinforced
  Rotor: Galvanised
  Electronics enclosure: Die-cast aluminium
- **Number of blades:** 11
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 44
- **Insulation class:** "B"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

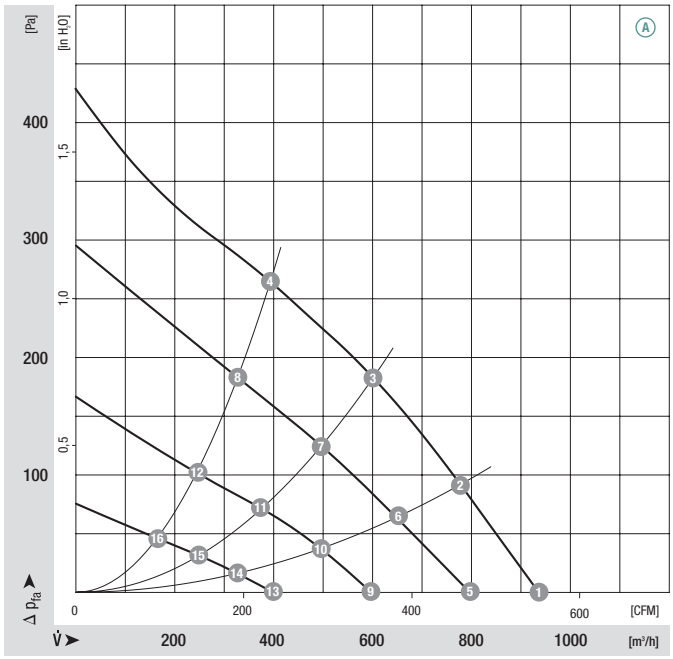
Nominal data

Type	Motor	Curve	Nominal voltage	Frequency	Speed/rpm	Max. power input(1)	Max. current draw(1)	Perm. amb. temp.	Electr. connection
			VAC	Hz	rpm	W	A	°C	p. 601
R3G 220	M3G 055-CF	Ⓐ	1~ 115	50/60	2620	75	1.10	-25 to +60	H1)

subject to alterations

(1) Nominal data in operating point with maximum load and 115 VAC

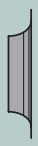
Curves



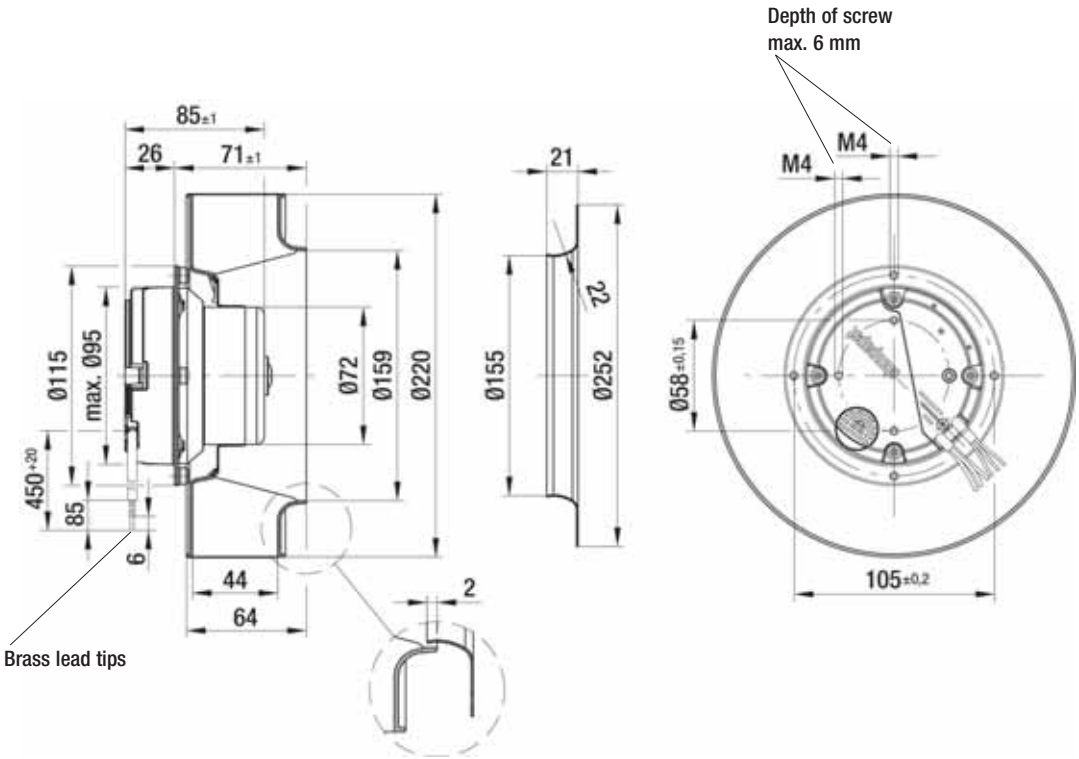
	n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1	2620	55	0.80	69	—
Ⓐ 2	2480	64	1.00	67	55
Ⓐ 3	2370	71	1.00	59	63
Ⓐ 4	2450	66	1.00	63	47
Ⓐ 5	2340	40	0.60	67	—
Ⓐ 6	2260	48	0.70	64	53
Ⓐ 7	2200	53	0.80	57	62
Ⓐ 8	2250	51	0.80	59	47
Ⓐ 9	1890	22	0.40	64	—
Ⓐ 10	1820	27	0.40	60	48
Ⓐ 11	1790	30	0.50	52	60
Ⓐ 12	1820	28	0.40	55	45
Ⓐ 13	1180	8	0.20	56	—
Ⓐ 14	1150	9	0.20	52	34
Ⓐ 15	1130	10	0.20	42	44
Ⓐ 16	1150	10	0.20	43	33

ebmpapst

- **Technical features:**
  - Control input 0-10 VDC / PWM
  - Output 10 VDC max. 1.1 mA
  - Tach output
  - Locked-rotor protection
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-1
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 60950-1
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 60335-1, CE
- **Approvals:** VDE, UL, CSA, CCC, GOST are applied for



Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle (long)
R3G 220-AD21 -02	1.4	09609-2-4013



EC centrifugal fan

backward curved, Ø 220

- **Material:** Impeller: PA plastic 6.6, fibreglass-reinforced
  Rotor: Galvanised
  Electronics enclosure: Die-cast aluminium
- **Number of blades:** 11
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 44
- **Insulation class:** "B"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

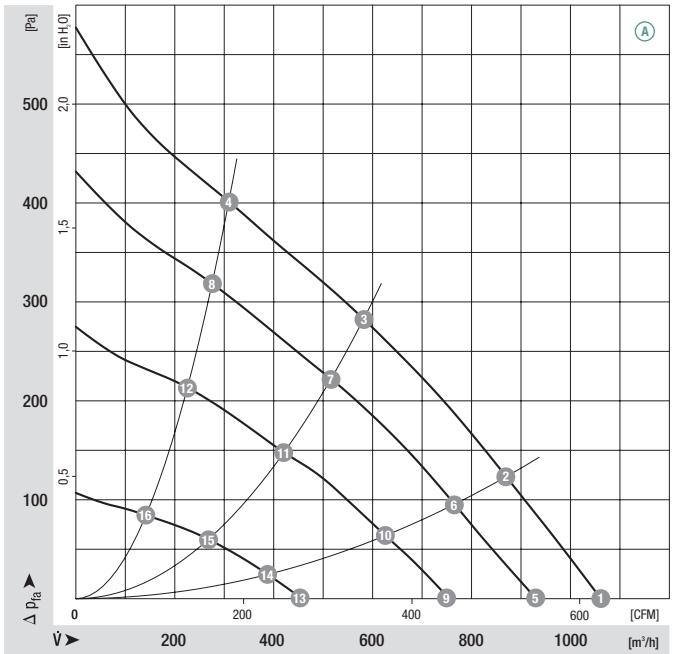
Nominal data

Type	Motor	Curve	Nominal voltage	Frequency	Speed/rpm	Max. power input(1)	Max. current draw(1)	Perm. amb. temp.	Electr. connection
			VAC	Hz	rpm	W	A	°C	p. 601
R3G 220	M3G 055-CF	Ⓐ	1~ 230	50/60	3030	105	0.80	-25 to +60	H1)

subject to alterations

(1) Nominal data in operating point with maximum load and 230 VAC

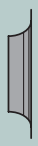
Curves



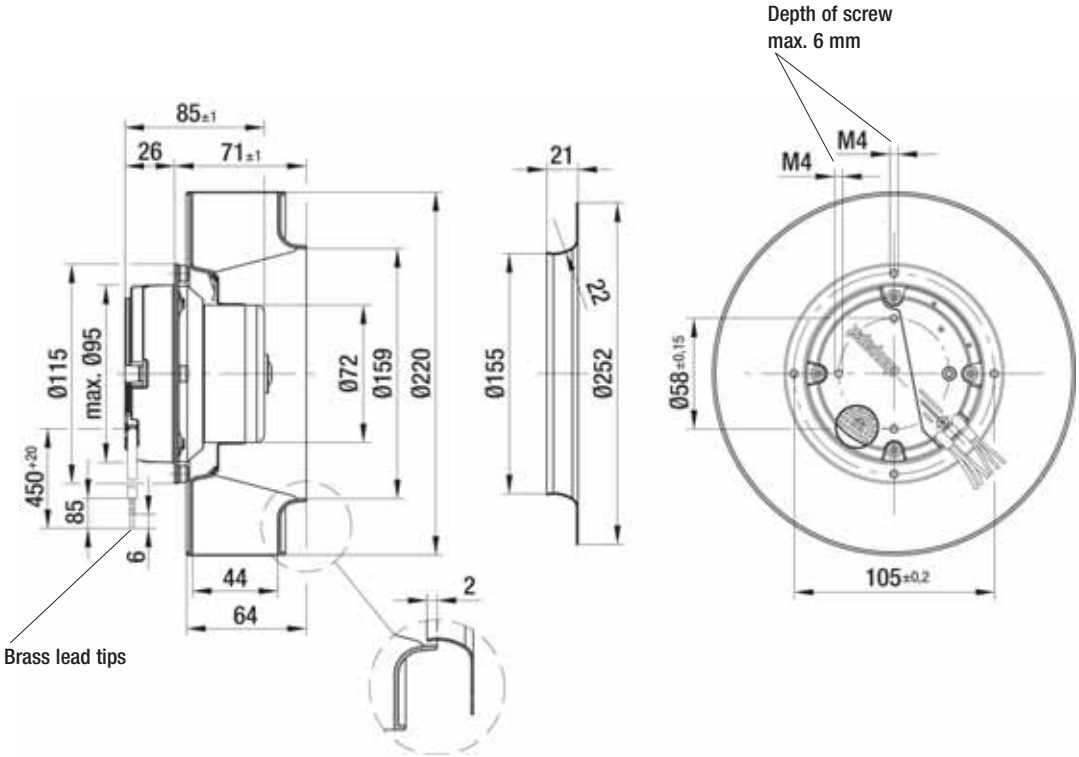
	n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1	3030	80	0.60	71	—
Ⓐ 2	2880	93	0.70	68	57
Ⓐ 3	2750	102	0.75	62	64
Ⓐ 4	2800	99	0.75	66	48
Ⓐ 5	2660	54	0.40	69	—
Ⓐ 6	2540	64	0.50	66	56
Ⓐ 7	2450	73	0.55	59	64
Ⓐ 8	2500	70	0.55	63	48
Ⓐ 9	2150	30	0.25	65	—
Ⓐ 10	2070	36	0.30	62	54
Ⓐ 11	2010	41	0.30	55	62
Ⓐ 12	2060	39	0.30	57	48
Ⓐ 13	1340	10	0.10	58	—
Ⓐ 14	1310	12	0.10	55	38
Ⓐ 15	1280	13	0.10	48	48
Ⓐ 16	1300	13	0.10	45	36

ebmpapst

- **Technical features:**
  - Control input 0-10 VDC / PWM
  - Output 10 VDC max. 1.1 mA
  - Tach output
  - Locked-rotor protection
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-1
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 60950-1
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 60335-1, CE
- **Approvals:** UL, CSA, CCC, GOST are applied for



Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle (long)
R3G 220-AD17 -02	1.4	09609-2-4013



Inlet nozzle p. 550
Electr. connection p. 601

EC centrifugal fan

backward curved, Ø 220

- **Material:** Impeller: PA plastic 6.6, fibreglass-reinforced
  Rotor: Galvanised
  Electronics enclosure: Die-cast aluminium
- **Number of blades:** 11
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 44
- **Insulation class:** "B"
- **Mounting position:** Shaft horizontal or rotor on top; rotor on bottom on request
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

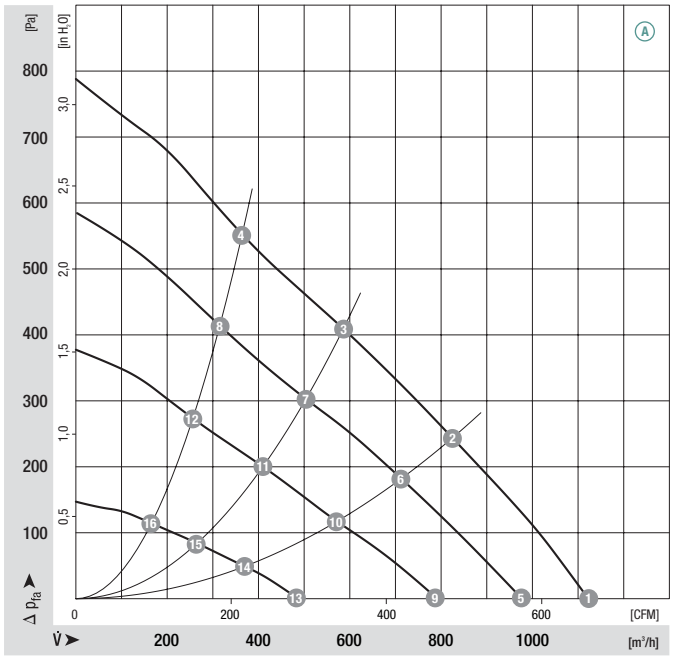
Nominal data

Type	Motor	Curve	Nominal voltage range	Frequency	Speed/rpm	Max. power input(1)	Max. current draw(1)	Perm. amb. temp.	Electr. connection
			VAC	Hz	rpm	W	A	°C	p. 603
R3G 220	M3G 074-CF	Ⓐ	1~ 100-130	50/60	3590	160	2.50	-25 to +60	J1)

subject to alterations

(1) Nominal data in operating point with maximum load and 115 VAC

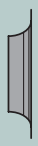
Curves



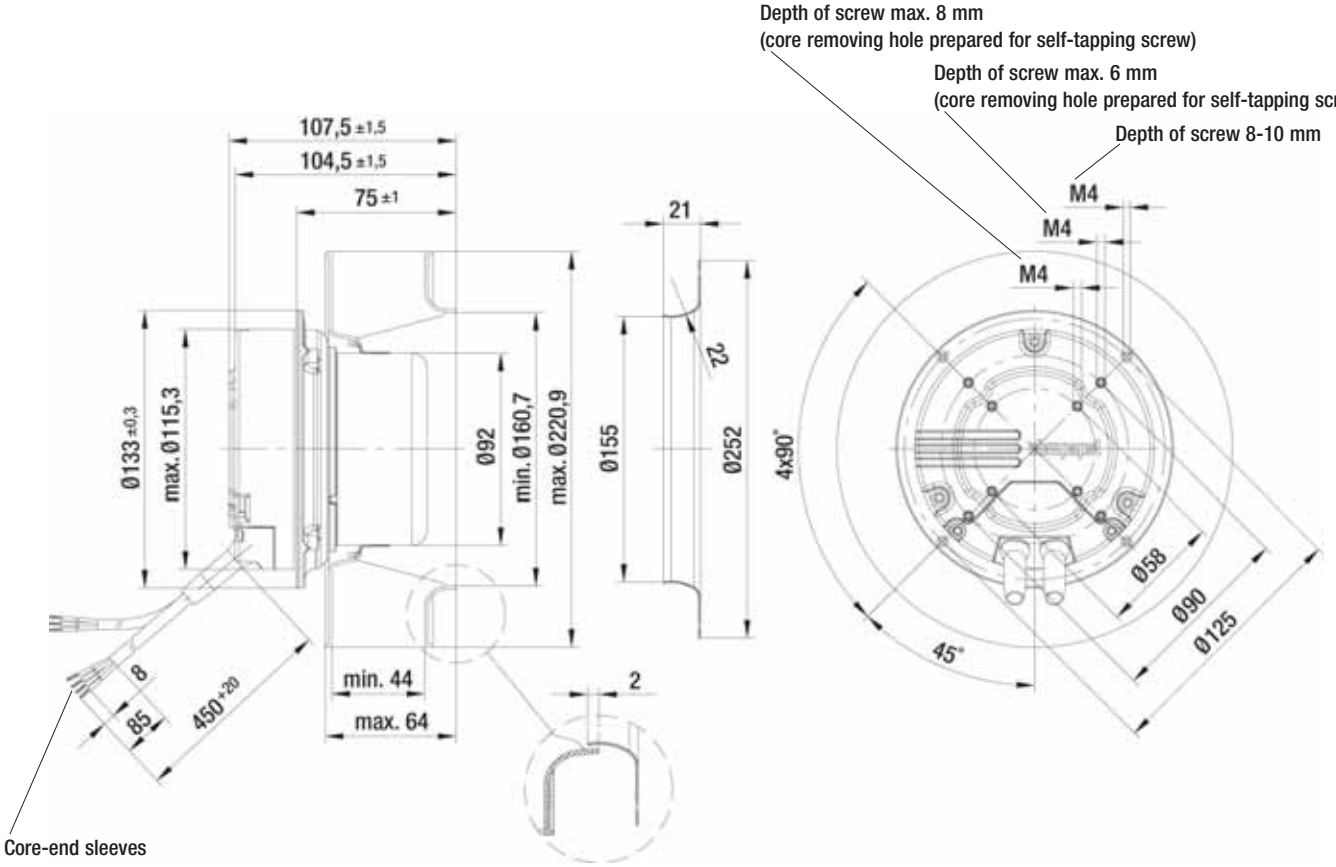
	n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1	3590	158	2.00	74	—
Ⓐ 2	3360	164	2.10	70	47
Ⓐ 3	3260	160	2.00	66	58
Ⓐ 4	3330	164	2.10	71	47
Ⓐ 5	3110	106	1.40	72	—
Ⓐ 6	2890	110	1.40	66	45
Ⓐ 7	2810	108	1.40	62	54
Ⓐ 8	2870	114	1.50	66	44
Ⓐ 9	2510	62	0.90	68	—
Ⓐ 10	2350	60	0.80	62	43
Ⓐ 11	2280	60	0.80	56	52
Ⓐ 12	2330	61	0.90	60	44
Ⓐ 13	1590	21	0.30	60	—
Ⓐ 14	1520	23	0.30	52	31
Ⓐ 15	1470	21	0.30	46	42
Ⓐ 16	1500	21	0.30	50	34

ebmpapst

- **Technical features:**
  - PFC (passive)
  - Control input 0-10 VDC / PWM
  - Output 10 VDC max. 1.1 mA
  - Tach output
  - Over-temperature protected electronics / motor
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-1
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 60950-1
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 60335-1, EN 61800-5-1, EN 60950-1, CE
- **Approvals:** UL, CSA, CCC, GOST are applied for



Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle (long)
R3G 220-AE70 -01	2.2	09609-2-4013



EC centrifugal fan

backward curved, Ø 220

- **Material:** Impeller: PA plastic 6.6, fibreglass-reinforced
  Rotor: Galvanised
  Electronics enclosure: Die-cast aluminium
- **Number of blades:** 11
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 44
- **Insulation class:** "B"
- **Mounting position:** Shaft horizontal or rotor on top; rotor on bottom on request
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

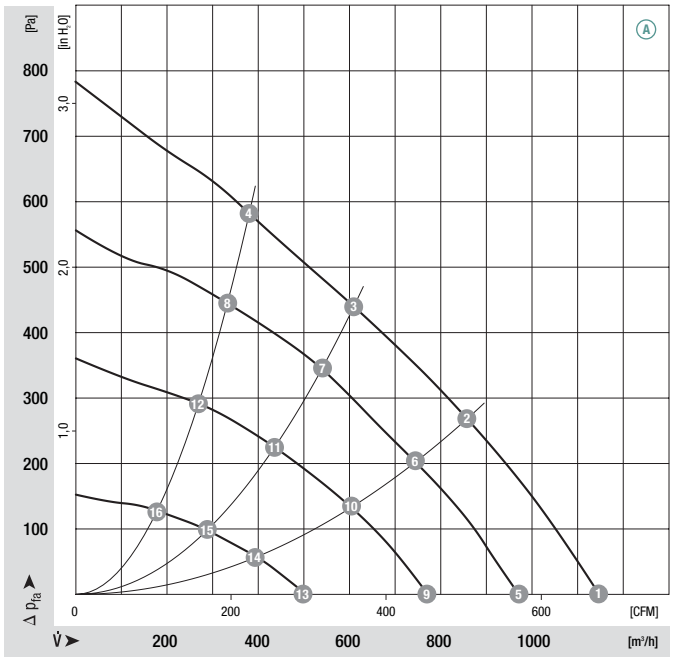
Nominal data

Type	Motor	Curve	Nominal voltage range	Frequency	Speed/rpm	Max. power input(1)	Max. current draw(1)	Perm. amb. temp.	Electr. connection
			VAC	Hz	rpm	W	A	°C	p. 603
R3G 220	M3G 074-CF	Ⓐ	1~ 200-277	50/60	3560	170	1.20	-25 to +60	J1)

subject to alterations

(1) Nominal data in operating point with maximum load and 230 VAC

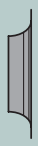
Curves



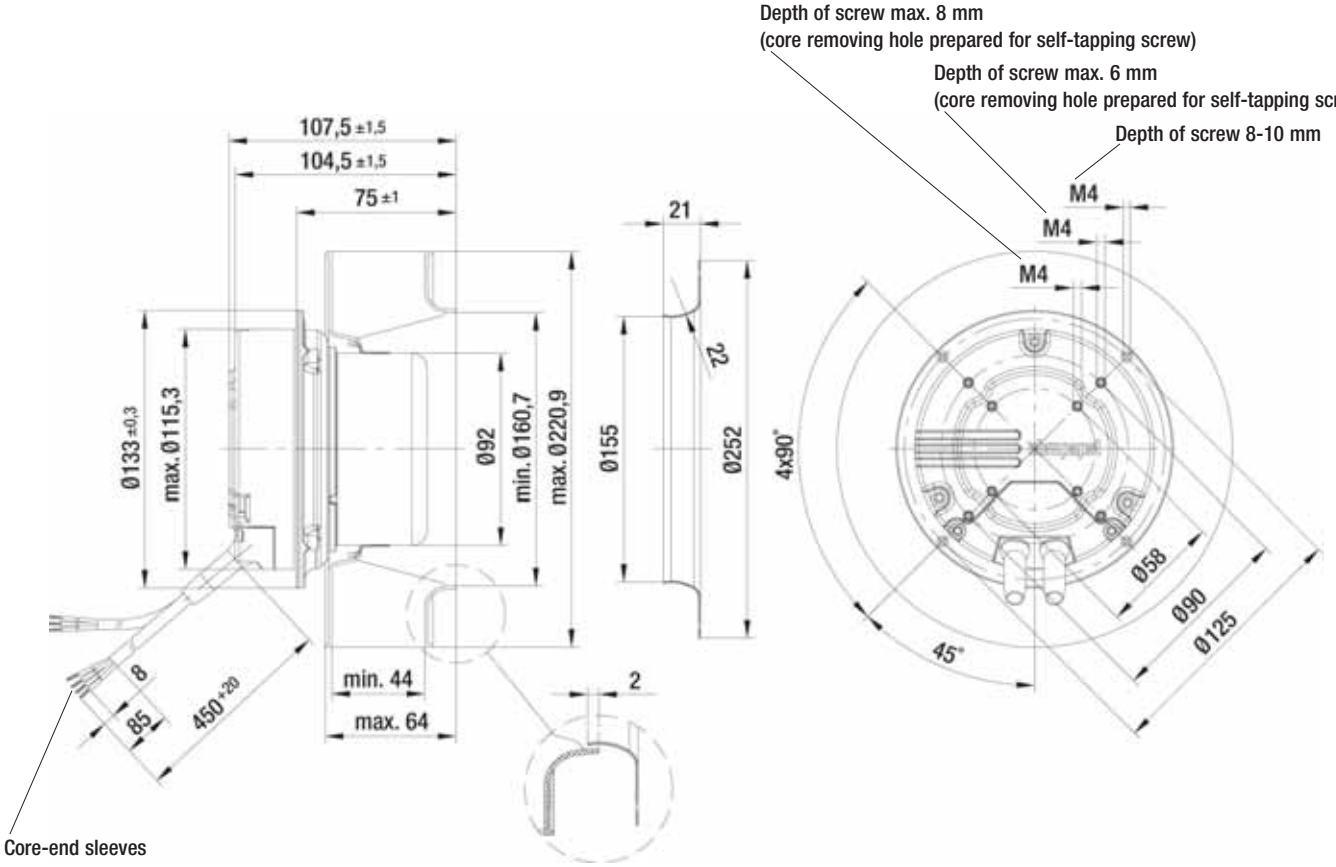
	n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1	3560	151	1.10	76	—
Ⓐ 2	3400	172	1.20	70	51
Ⓐ 3	3320	166	1.20	67	53
Ⓐ 4	3440	173	1.20	71	44
Ⓐ 5	3080	103	0.80	71	—
Ⓐ 6	3010	120	0.90	67	49
Ⓐ 7	3000	123	0.90	63	53
Ⓐ 8	3035	117	0.90	67	43
Ⓐ 9	2500	62	0.50	67	—
Ⓐ 10	2435	66	0.50	63	46
Ⓐ 11	2430	69	0.50	58	52
Ⓐ 12	2455	71	0.50	61	41
Ⓐ 13	1625	23	0.20	60	—
Ⓐ 14	1595	24	0.20	54	49
Ⓐ 15	1595	26	0.20	48	52
Ⓐ 16	1605	24	0.20	51	45

ebmpapst

- **Technical features:**
  - PFC (passive)
  - Control input 0-10 VDC / PWM
  - Output 10 VDC max. 1.1 mA
  - Tach output
  - Over-temperature protected electronics / motor
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-1
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 60950-1
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 60335-1, EN 61800-5-1, EN 60950-1, CE
- **Approvals:** UL, CSA; CCC, GOST are applied for



Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle (long)
R3G 220-AE50 -01	2.2	09609-2-4013



EC centrifugal fan

backward curved, Ø 225

- **Material:** Impeller: PA plastic 6.6, fibreglass-reinforced
  Rotor: Galvanised
  Electronics enclosure: Die-cast aluminium
- **Number of blades:** 7
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 44
- **Insulation class:** "B"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

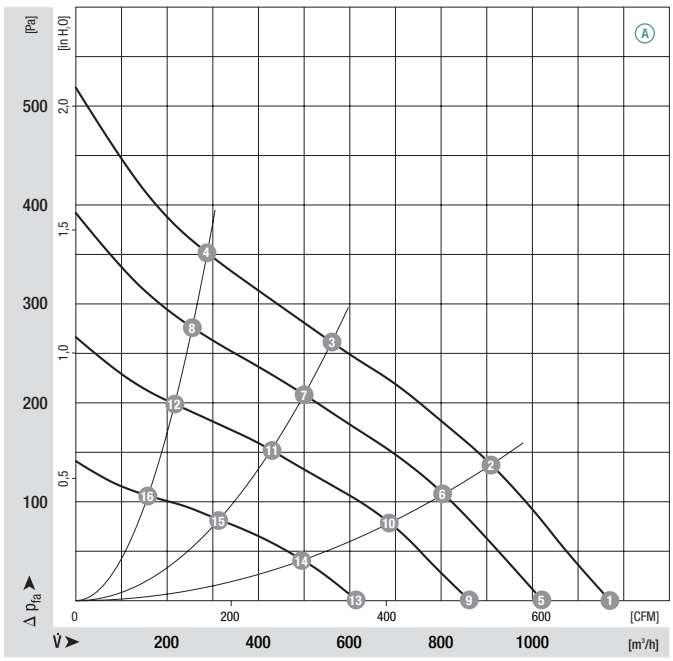
Nominal data

Type	Motor	Curve	Nominal voltage	Frequency	Speed/rpm	Max. power input(1)	Max. current draw(1)	Perm. amb. temp.	Electr. connection
			VAC	Hz	rpm	W	A	°C	p. 601
R3G 225	M3G 055-CF	Ⓐ	1~ 230	50/60	2500	95	0.75	-25 to +60	H1)

subject to alterations

(1) Nominal data in operating point with maximum load and 230 VAC

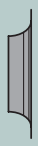
Curves



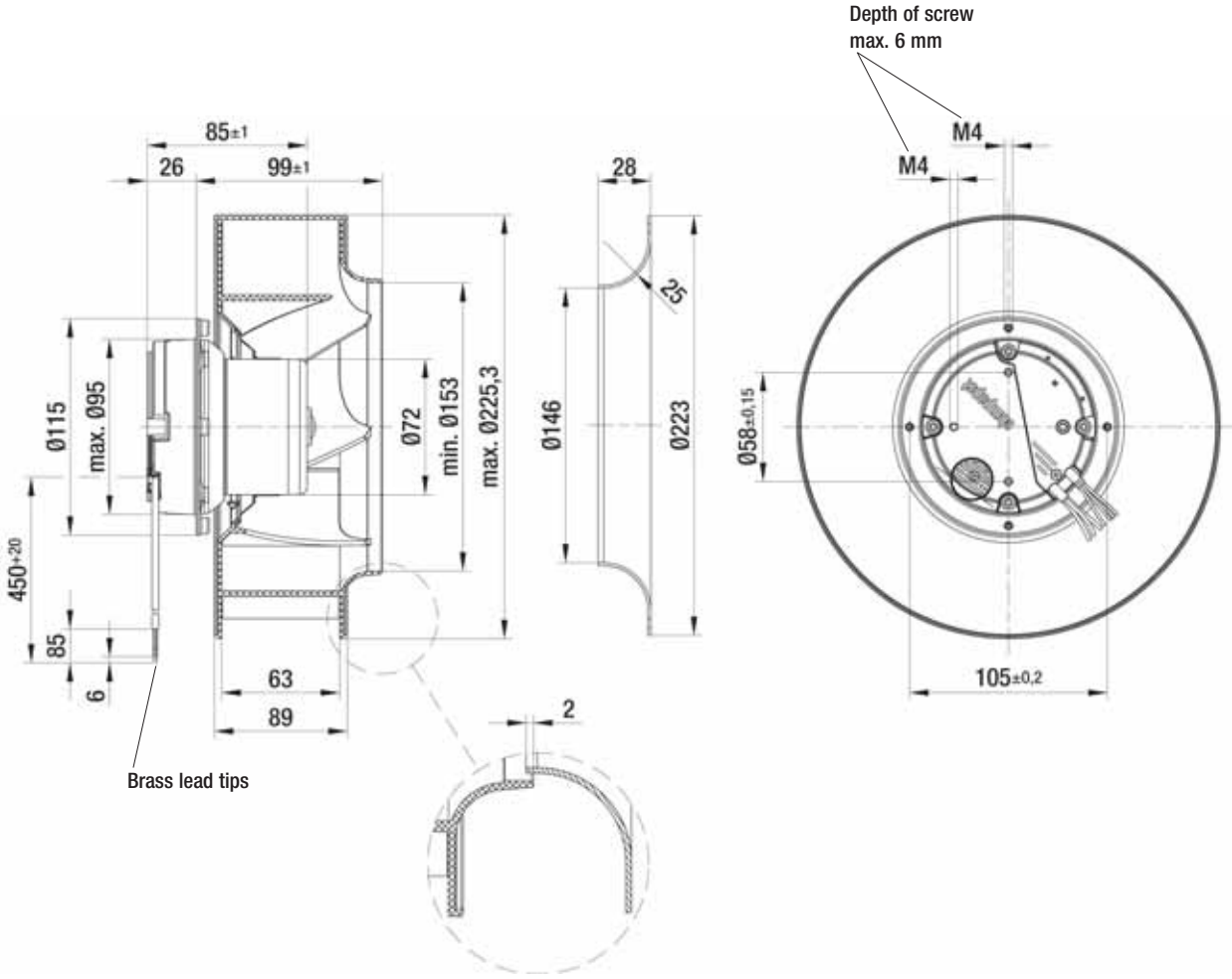
	n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1	2500	80	0.60	69	—
Ⓐ 2	2380	88	0.65	62	60
Ⓐ 3	2290	94	0.70	57	61
Ⓐ 4	2410	84	0.65	62	45
Ⓐ 5	2190	56	0.45	66	—
Ⓐ 6	2110	61	0.45	60	61
Ⓐ 7	2050	66	0.50	54	61
Ⓐ 8	2140	60	0.45	60	45
Ⓐ 9	1830	34	0.25	62	—
Ⓐ 10	1790	38	0.30	57	60
Ⓐ 11	1750	41	0.30	51	61
Ⓐ 12	1810	36	0.30	54	44
Ⓐ 13	1350	16	0.15	56	—
Ⓐ 14	1320	17	0.15	50	50
Ⓐ 15	1290	19	0.15	45	53
Ⓐ 16	1330	16	0.15	45	39

ebmpapst

- **Technical features:**
  - Control input 0-10 VDC / PWM
  - Output 10 VDC max. 1.1 mA
  - Tach output
  - Locked-rotor protection
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-1
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 60950-1
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 60335-1, CE
- **Approvals:** UL, CSA, CCC, GOST are applied for

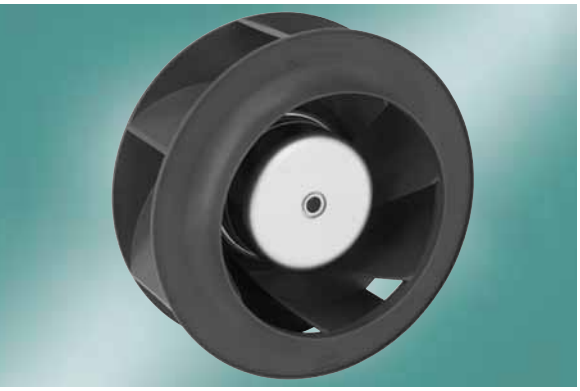


Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle (long)
R3G 225-AE11 -02	1.5	96358-2-4013



EC centrifugal fan

backward curved, Ø 225



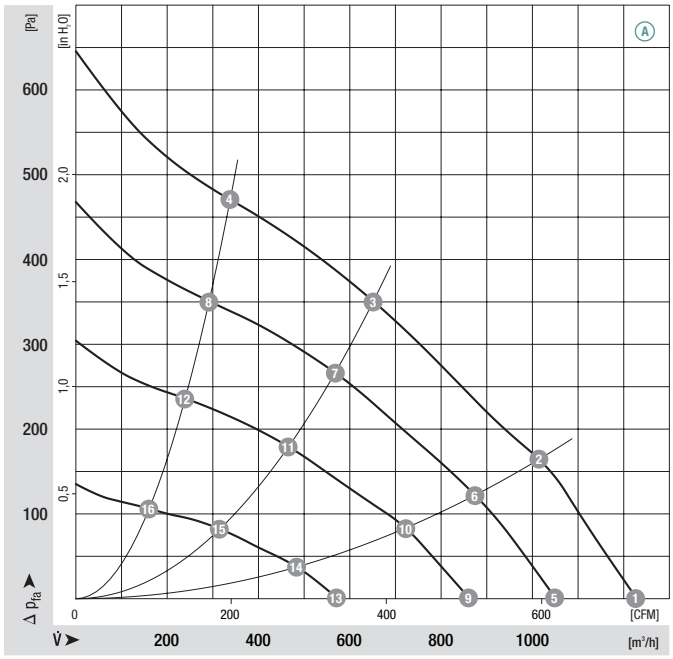
- **Material:** Impeller: PA plastic 6.6, fibreglass-reinforced
  Rotor: Galvanised
  Electronics enclosure: Die-cast aluminium
- **Number of blades:** 7
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 44
- **Insulation class:** "B"
- **Mounting position:** Shaft horizontal or rotor on top; rotor on bottom on request
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage range	Frequency	Speed/rpm	Max. power input(1)	Max. current draw(1)	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VAC**	**Hz**	**rpm**	**W**	**A**	**°C**	p. 603
R3G 225	M3G 074-CF	Ⓐ	1~ 100-130	50/60	2850	160	2.20	-25 to +60	J1)

subject to alterations

(1) Nominal data in operating point with maximum load and 115 VAC

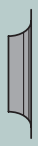
Curves



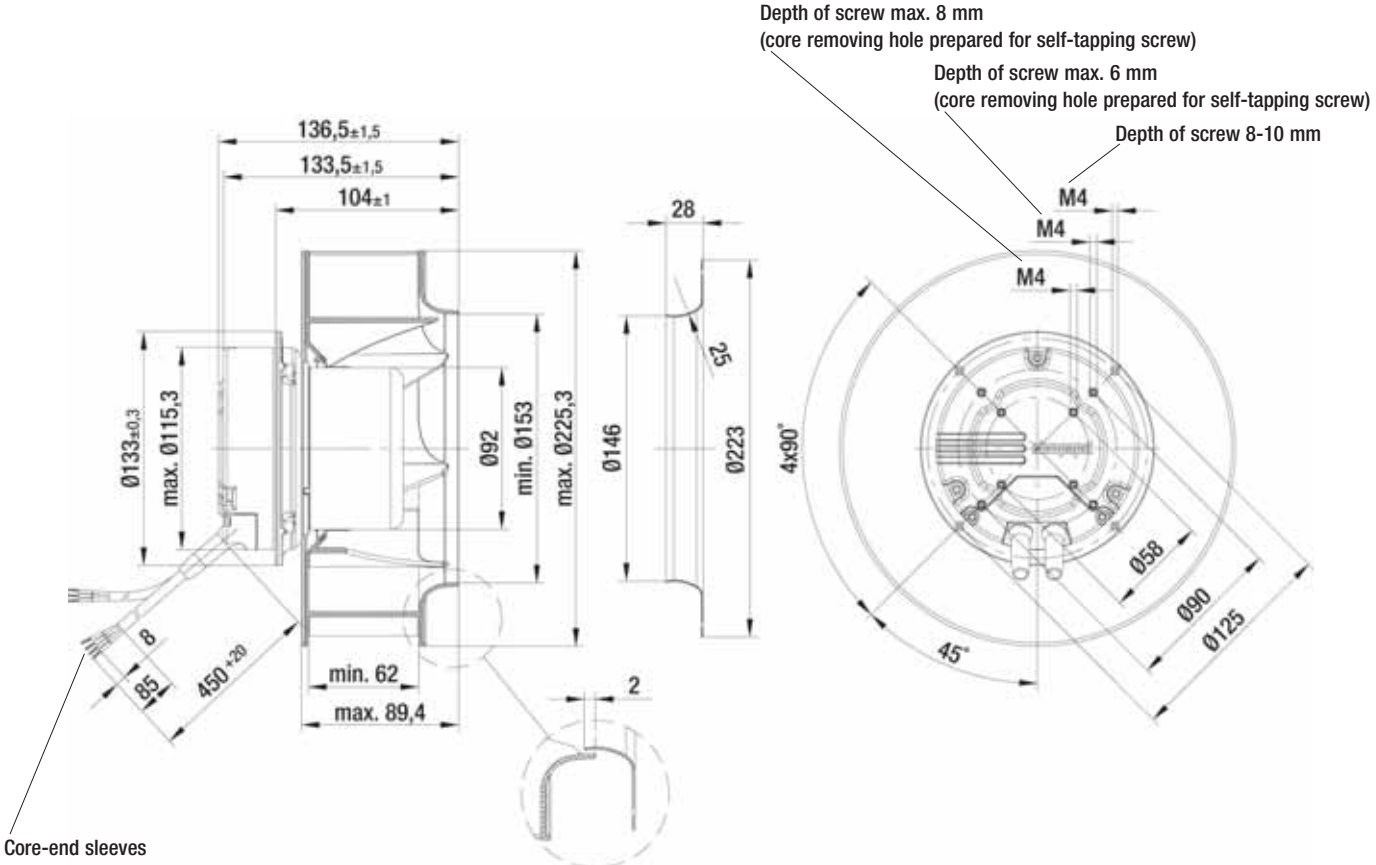
	n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1	2850	131	1.70	70	—
Ⓐ 2	2800	149	1.90	67	50
Ⓐ 3	2760	155	2.00	62	59
Ⓐ 4	2845	136	1.70	66	45
Ⓐ 5	2460	84	1.10	67	—
Ⓐ 6	2420	95	1.30	63	50
Ⓐ 7	2410	102	1.30	59	58
Ⓐ 8	2460	91	1.20	63	44
Ⓐ 9	2020	51	0.70	63	—
Ⓐ 10	1990	58	0.80	61	46
Ⓐ 11	1980	60	0.80	54	56
Ⓐ 12	2010	52	0.70	57	42
Ⓐ 13	1350	20	0.30	56	—
Ⓐ 14	1340	21	0.30	52	37
Ⓐ 15	1340	23	0.40	44	45
Ⓐ 16	1350	21	0.30	35	32

ebmpapst

- **Technical features:**
  - PFC (passive)
  - Control input 0-10 VDC / PWM
  - Output 10 VDC max. 1.1 mA
  - Tach output
  - Over-temperature protected electronics / motor
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-1
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 60950-1
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 60335-1, EN 61800-5-1, EN 60950-1, CE
- **Approvals:** UL, CSA, CCC, GOST are applied for

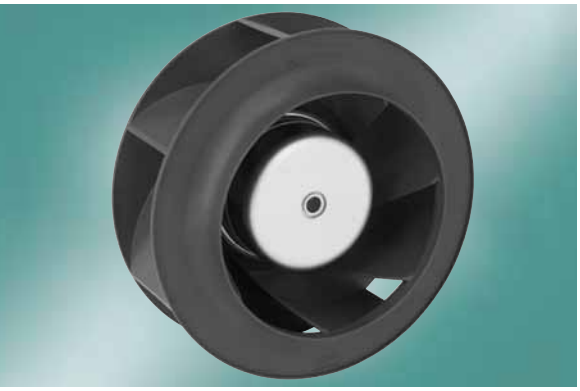


Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle (long)
R3G 225-AH71 -01	2.3	96358-2-4013



EC centrifugal fan

backward curved, Ø 225



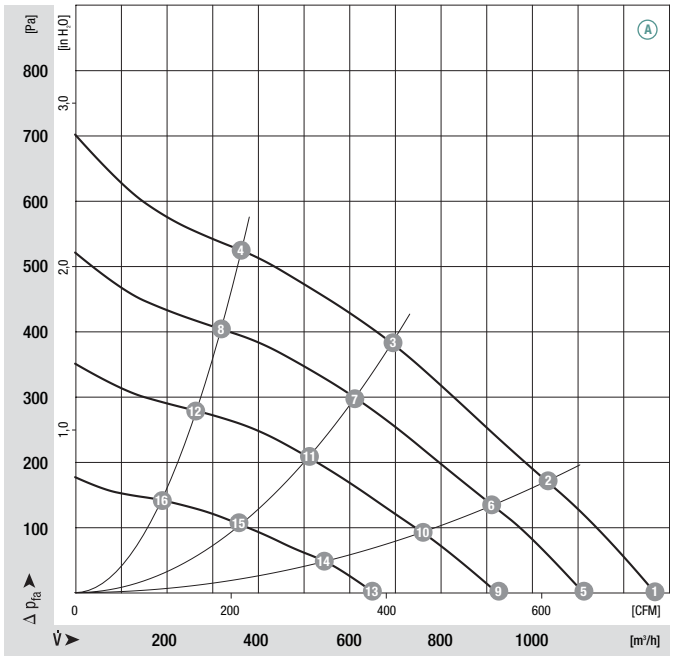
- **Material:** Impeller: PA plastic 6.6, fibreglass-reinforced
  Rotor: Galvanised
  Electronics enclosure: Die-cast aluminium
- **Number of blades:** 7
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 44
- **Insulation class:** "B"
- **Mounting position:** Shaft horizontal or rotor on top; rotor on bottom on request
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage range	Frequency	Speed/rpm	Max. power input(1)	Max. current draw(1)	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VAC**	**Hz**	**rpm**	**W**	**A**	**°C**	p. 603
R3G 225	M3G 074-CF	Ⓐ	1~ 200-277	50/60	3010	165	1.20	-25 to +60	J1)

subject to alterations

(1) Nominal data in operating point with maximum load and 230 VAC

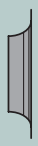
Curves



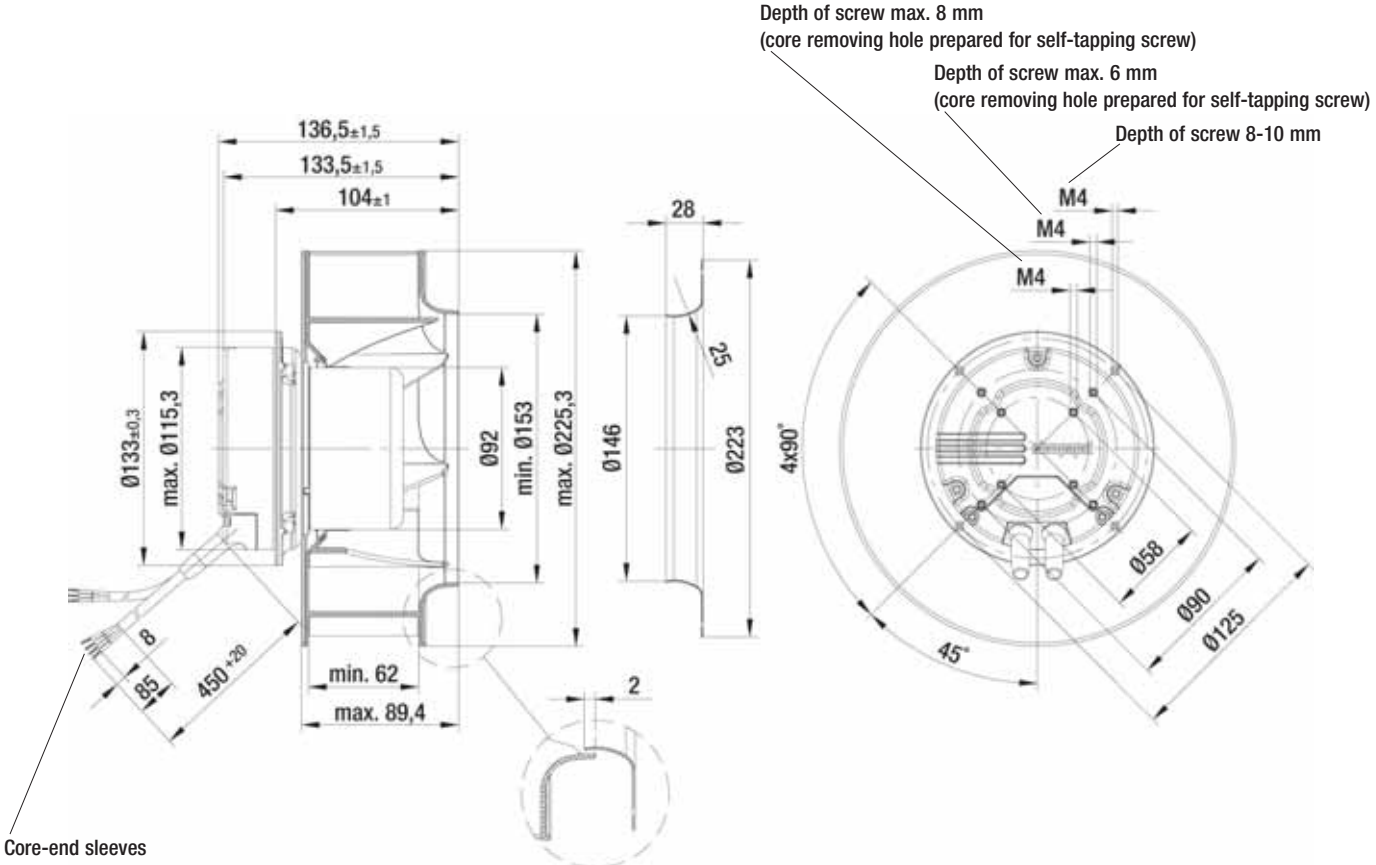
		n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ	1	3010	139	1.00	71	—
Ⓐ	2	2930	153	1.10	67	43
Ⓐ	3	2900	162	1.20	63	52
Ⓐ	4	2970	148	1.10	68	39
Ⓐ	5	2640	97	0.70	68	—
Ⓐ	6	2600	105	0.80	64	44
Ⓐ	7	2570	116	0.90	60	57
Ⓐ	8	2605	100	0.80	65	43
Ⓐ	9	2190	59	0.50	65	—
Ⓐ	10	2150	67	0.50	61	46
Ⓐ	11	2135	71	0.60	55	56
Ⓐ	12	2160	62	0.50	59	44
Ⓐ	13	1540	27	0.20	61	—
Ⓐ	14	1530	29	0.20	53	43
Ⓐ	15	1520	31	0.30	47	55
Ⓐ	16	1530	28	0.20	50	42

ebmpapst

- **Technical features:**
  - PFC (passive)
  - Control input 0-10 VDC / PWM
  - Output 10 VDC max. 1.1 mA
  - Tach output
  - Over-temperature protected electronics / motor
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-1
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 60950-1
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 60335-1, EN 61800-5-1, EN 60950-1, CE
- **Approvals:** UL, CSA; CCC, GOST are applied for



Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle (long)
R3G 225-AH54 -01	2.3	96358-2-4013



EC centrifugal fan

backward curved, Ø 250

- **Material:** Impeller: PA plastic 6.6, fibreglass-reinforced
  Rotor: Galvanised
  Electronics enclosure: Die-cast aluminium
- **Number of blades:** 7
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 44
- **Insulation class:** "B"
- **Mounting position:** Shaft horizontal or rotor on top; rotor on bottom on request
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

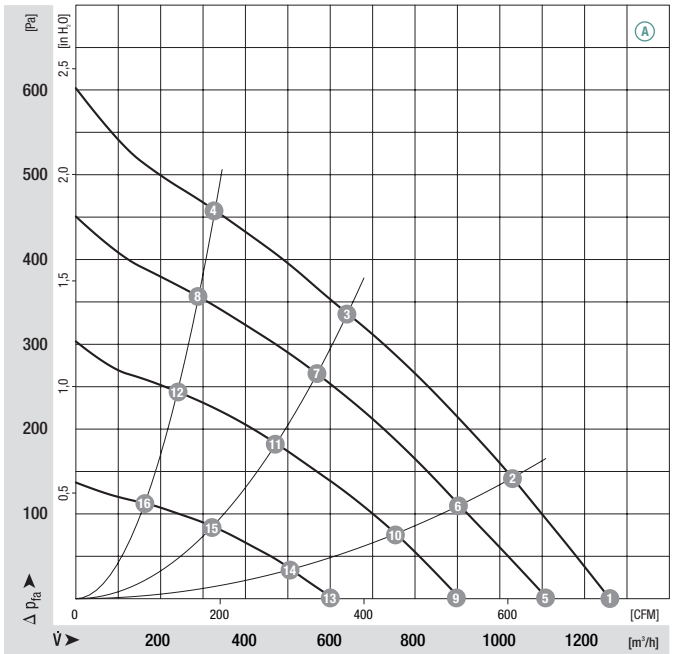
Nominal data

Type	Motor	Curve	Nominal voltage range	Frequency	Speed/rpm	Max. power input(1)	Max. current draw(1)	Perm. amb. temp.	Electr. connection
			VAC	Hz	rpm	W	A	°C	p. 603
R3G 250	M3G 074-CF	Ⓐ	1~ 100-130	50/60	2630	145	1.90	-25 to +60	J1)

subject to alterations

(1) Nominal data in operating point with maximum load and 115 VAC

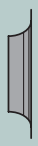
Curves



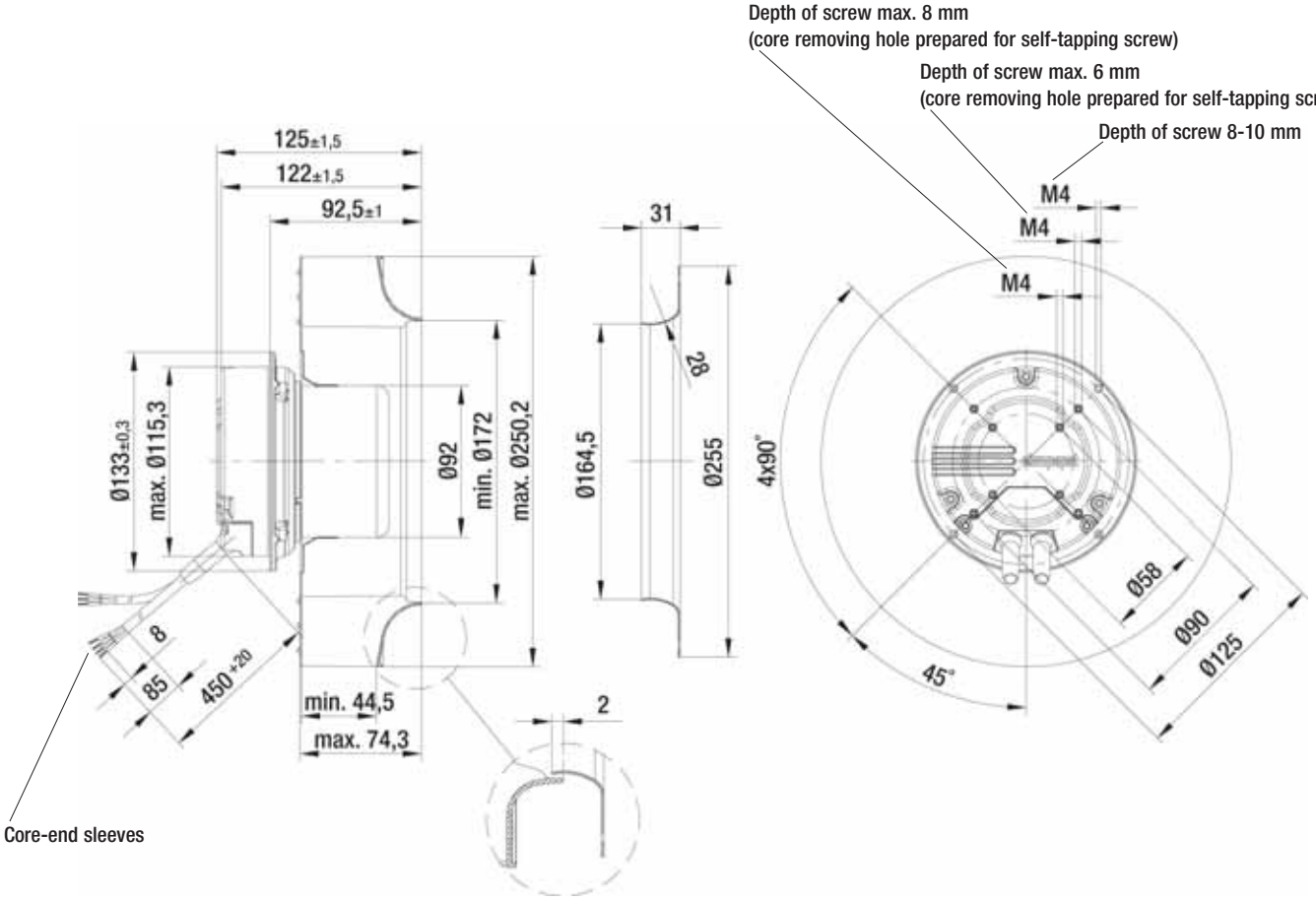
		n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ	1	2630	106	1.40	70	—
Ⓐ	2	2540	127	1.60	66	57
Ⓐ	3	2480	140	1.80	61	60
Ⓐ	4	2560	125	1.60	67	47
Ⓐ	5	2315	72	1.00	68	—
Ⓐ	6	2240	90	1.20	63	54
Ⓐ	7	2200	99	1.40	59	60
Ⓐ	8	2260	87	1.20	63	46
Ⓐ	9	1900	43	0.70	66	—
Ⓐ	10	1870	55	0.80	60	51
Ⓐ	11	1835	60	0.90	53	58
Ⓐ	12	1860	53	0.80	58	43
Ⓐ	13	1290	18	0.30	58	—
Ⓐ	14	1275	21	0.40	52	40
Ⓐ	15	1250	22	0.40	44	49
Ⓐ	16	1270	19	0.30	48	37

ebmpapst

- **Technical features:**
  - PFC (passive)
  - Control input 0-10 VDC / PWM
  - Output 10 VDC max. 1.1 mA
  - Tach output
  - Over-temperature protected electronics / motor
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-1
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 60950-1
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 60335-1, EN 61800-5-1, EN 60950-1, CE
- **Approvals:** UL, CSA, CCC, GOST are applied for



Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle (long)
R3G 250-AH74 -01	2.5	96359-2-4013



EC centrifugal fan

backward curved, Ø 250

- **Material:** Impeller: PA plastic 6.6, fibreglass-reinforced
  Rotor: Galvanised
  Electronics enclosure: Die-cast aluminium
- **Number of blades:** 7
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 44
- **Insulation class:** "B"
- **Mounting position:** Shaft horizontal or rotor on top; rotor on bottom on request
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

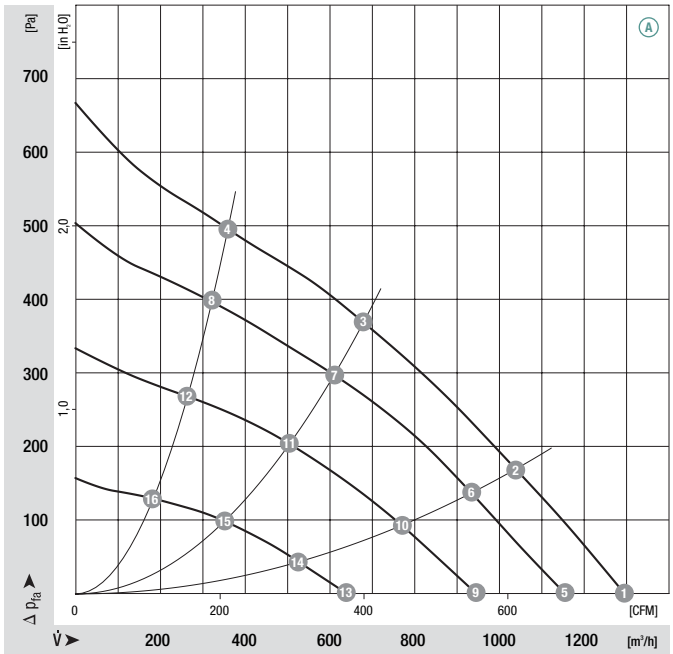
Nominal data

Type	Motor	Curve	Nominal voltage range	Frequency	Speed/rpm	Max. power input(1)	Max. current draw(1)	Perm. amb. temp.	Electr. connection
			VAC	Hz	rpm	W	A	°C	p. 603
R3G 250	M3G 074-CF	Ⓐ	1~ 200-277	50/60	2760	160	1.20	-25 to +60	J1)

subject to alterations

(1) Nominal data in operating point with maximum load and 230 VAC

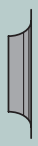
Curves



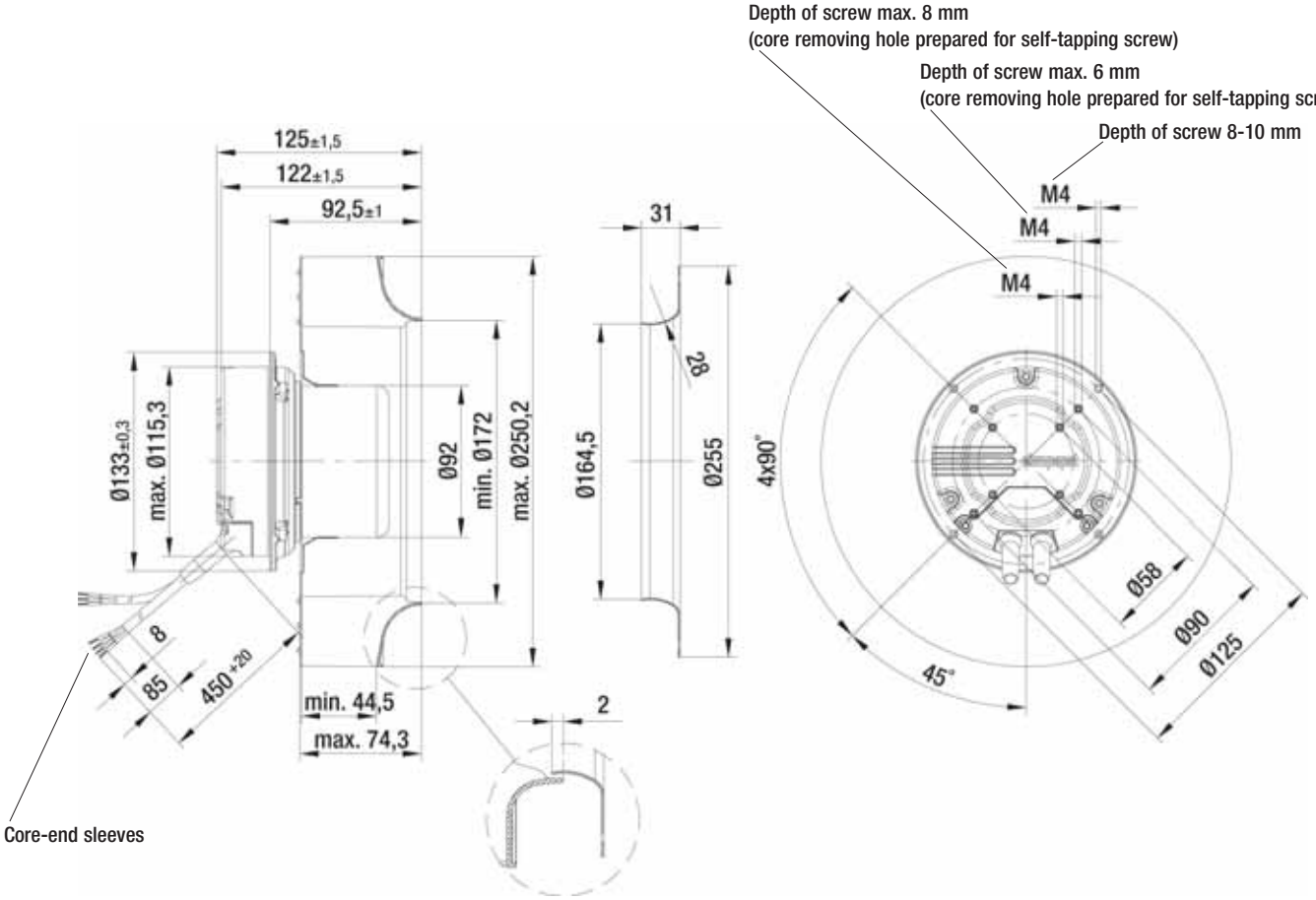
		n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ	1	2760	123	0.90	71	—
Ⓐ	2	2660	148	1.10	66	54
Ⓐ	3	2600	162	1.20	62	57
Ⓐ	4	2680	147	1.10	68	42
Ⓐ	5	2460	88	0.70	68	—
Ⓐ	6	2380	106	0.80	63	53
Ⓐ	7	2340	116	0.90	59	57
Ⓐ	8	2400	105	0.80	65	42
Ⓐ	9	2000	53	0.40	65	—
Ⓐ	10	1960	62	0.50	60	54
Ⓐ	11	1940	69	0.50	55	58
Ⓐ	12	1965	61	0.50	59	42
Ⓐ	13	1380	22	0.20	58	—
Ⓐ	14	1360	25	0.20	52	50
Ⓐ	15	1350	28	0.25	47	57
Ⓐ	16	1360	25	0.20	50	43

ebmpapst

- **Technical features:**
  - PFC (passive)
  - Control input 0-10 VDC / PWM
  - Output 10 VDC max. 1.1 mA
  - Tach output
  - Over-temperature protected electronics / motor
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-1
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 60950-1
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 60335-1, EN 61800-5-1, EN 60950-1, CE
- **Approvals:** UL, CSA; CCC, GOST are applied for

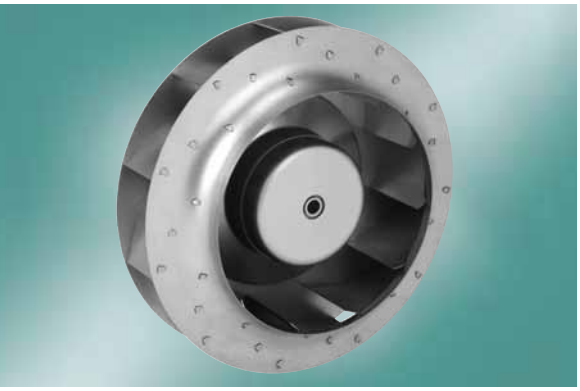


Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle (long)
R3G 250-AH52 -01	2.5	96359-2-4013



EC centrifugal fan

backward curved, Ø 250



- **Material:** Impeller: Sheet steel, galvanised
  Rotor: Galvanised
  Electronics enclosure: Die-cast aluminium
- **Number of blades:** 11
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 44
- **Insulation class:** "B"
- **Mounting position:** Shaft horizontal or rotor on top; rotor on bottom on request
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

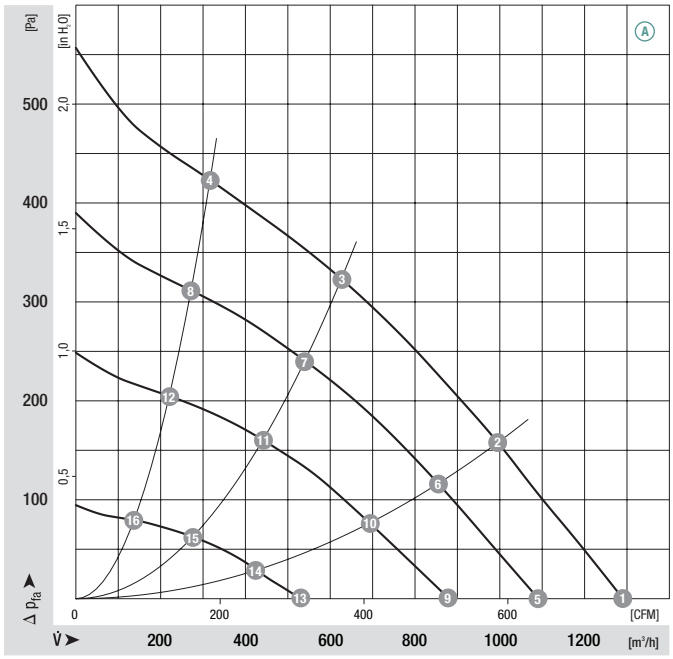
Nominal data

Type	Motor	Curve	Nominal voltage range	Frequency	Speed/rpm	Max. power input(1)	Max. current draw(1)	Perm. amb. temp.	Electr. connection
			VAC	Hz	rpm	W	A	°C	p. 603
R3G 250	M3G 074-CF	Ⓐ	1~ 100-130	50/60	2490	125	1.80	-25 to +60	J1)

subject to alterations

(1) Nominal data in operating point with maximum load and 115 VAC

Curves

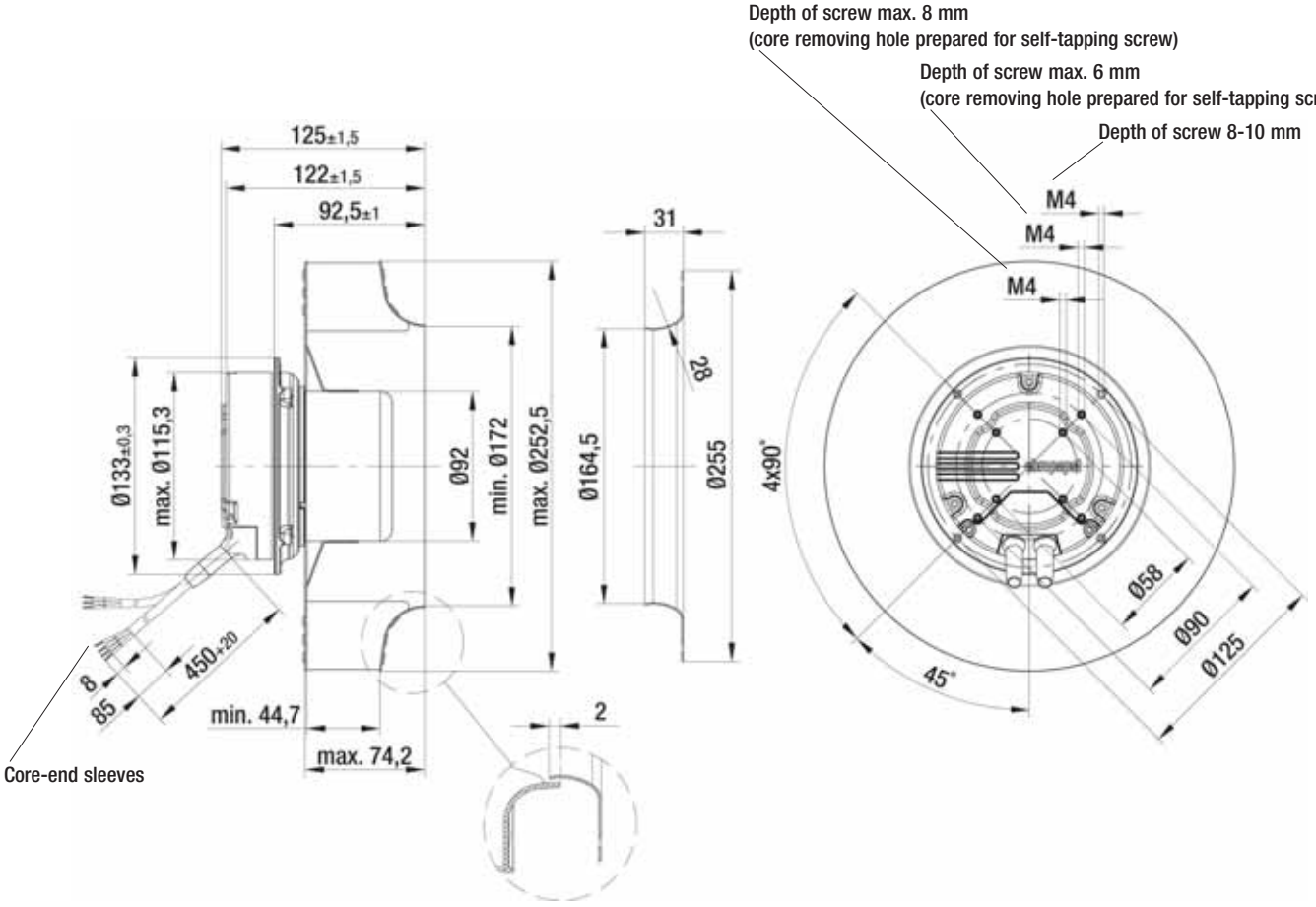


	n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1	2490	97	1.30	72	—
Ⓐ 2	2380	119	1.60	66	62
Ⓐ 3	2330	123	1.60	60	64
Ⓐ 4	2410	110	1.40	67	47
Ⓐ 5	2110	60	0.80	71	—
Ⓐ 6	2040	78	1.00	63	58
Ⓐ 7	2010	79	1.10	58	64
Ⓐ 8	2070	71	1.00	64	45
Ⓐ 9	1700	35	0.50	66	—
Ⓐ 10	1660	44	0.60	58	56
Ⓐ 11	1650	47	0.70	52	59
Ⓐ 12	1670	39	0.60	58	43
Ⓐ 13	1040	11	0.20	57	—
Ⓐ 14	1030	14	0.20	50	40
Ⓐ 15	1030	15	0.20	41	46
Ⓐ 16	1040	13	0.20	44	31

ebmpapst

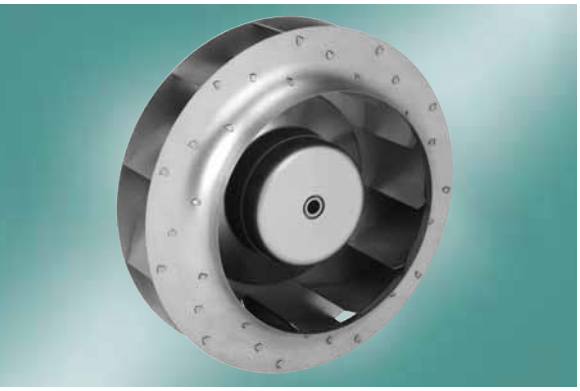
- **Technical features:**
  - PFC (passive)
  - Control input 0-10 VDC / PWM
  - Output 10 VDC max. 1.1 mA
  - Tach output
  - Over-temperature protected electronics / motor
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-1
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 60950-1
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 60335-1, EN 61800-5-1, EN 60950-1, CE
- **Approvals:** UL, CSA, CCC, GOST are applied for

Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle (long)
R3G 250-AL75 -01	2.9	96359-2-4013



EC centrifugal fan

backward curved, Ø 250



- **Material:** Impeller: Sheet steel, galvanised
  Rotor: Galvanised
  Electronics enclosure: Die-cast aluminium
- **Number of blades:** 11
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 44
- **Insulation class:** "B"
- **Mounting position:** Shaft horizontal or rotor on top; rotor on bottom on request
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

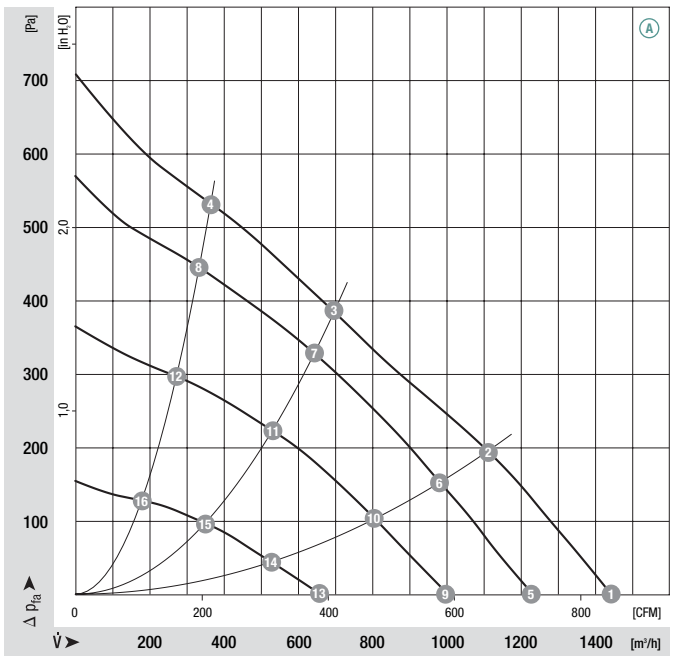
Nominal data

Type	Motor	Curve	Nominal voltage range	Frequency	Speed/rpm	Max. power input(1)	Max. current draw(1)	Perm. amb. temp.	Electr. connection
			VAC	Hz	rpm	W	A	°C	p. 603
R3G 250	M3G 074-CF	Ⓐ	1~ 200-277	50/60	2800	175	1.30	-25 to +60	J1)

subject to alterations

(1) Nominal data in operating point with maximum load and 230 VAC

Curves

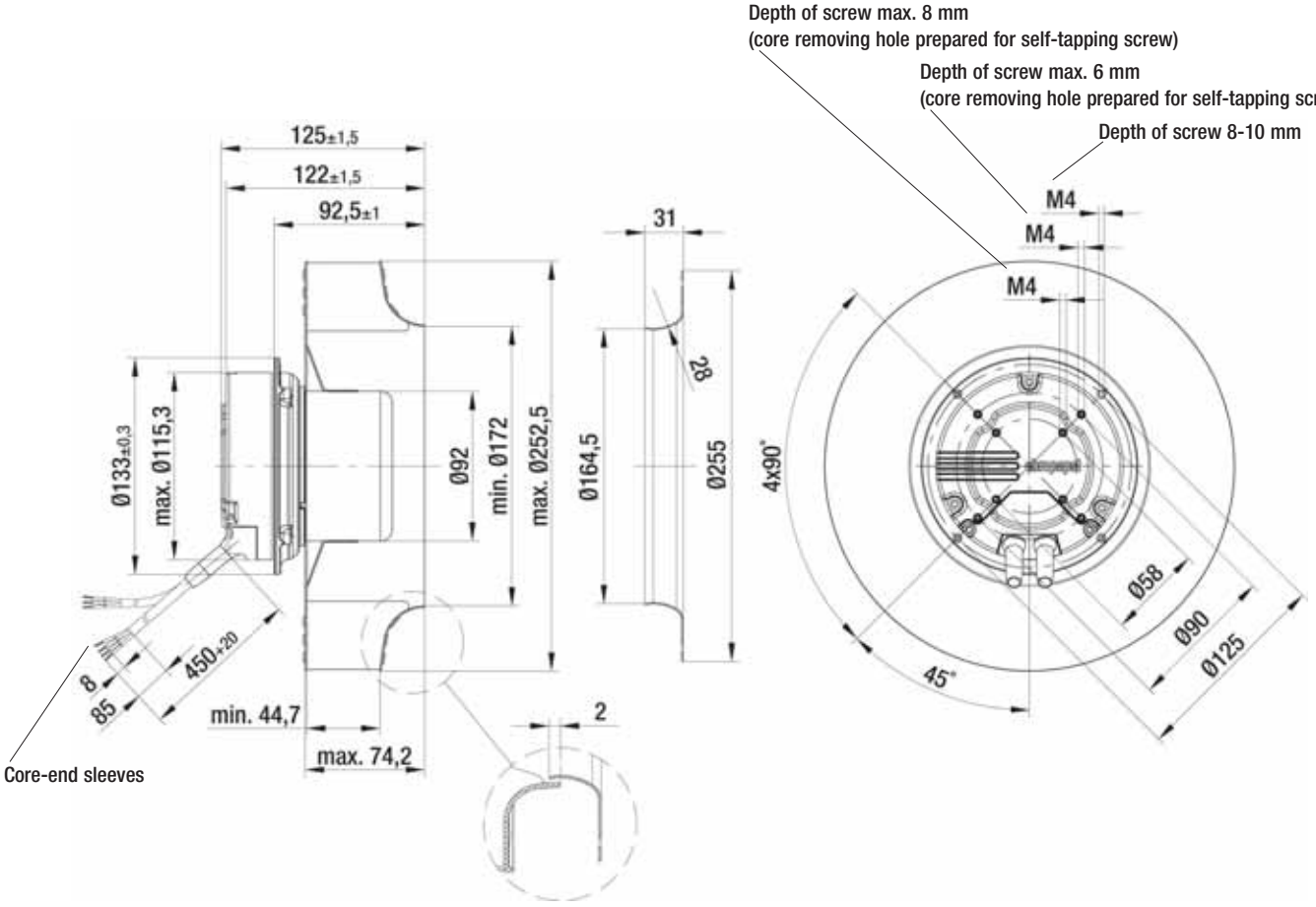


	n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1	2800	142	1.10	74	—
Ⓐ 2	2650	164	1.25	69	53
Ⓐ 3	2570	164	1.25	63	59
Ⓐ 4	2720	154	1.20	72	44
Ⓐ 5	2550	104	0.80	71	—
Ⓐ 6	2470	124	1.00	66	53
Ⓐ 7	2440	134	1.00	61	58
Ⓐ 8	2510	123	0.90	69	44
Ⓐ 9	2080	62	0.50	67	—
Ⓐ 10	2025	74	0.60	62	54
Ⓐ 11	2020	78	0.60	56	60
Ⓐ 12	2050	70	0.60	62	43
Ⓐ 13	1370	24	0.20	59	—
Ⓐ 14	1340	27	0.20	53	51
Ⓐ 15	1330	28	0.20	46	57
Ⓐ 16	1340	25	0.20	51	44

ebmpapst

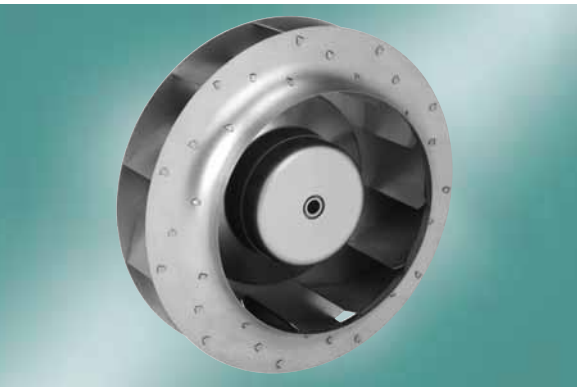
- **Technical features:**
  - PFC (passive)
  - Control input 0-10 VDC / PWM
  - Output 10 VDC max. 1.1 mA
  - Tach output
  - Over-temperature protected electronics / motor
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-1
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 60950-1
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 60335-1, EN 61800-5-1, EN 60950-1, CE
- **Approvals:** UL, CSA; CCC, GOST are applied for

Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle (long)
R3G 250-AL54 -01	2.9	96359-2-4013



EC centrifugal fan

backward curved, Ø 250



- **Material:** Impeller: Sheet steel, galvanised
  Rotor: Galvanised
  Electronics enclosure: Die-cast aluminium
- **Number of blades:** 11
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 44
- **Insulation class:** "B"
- **Mounting position:** Shaft horizontal or rotor on top; rotor on bottom on request
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

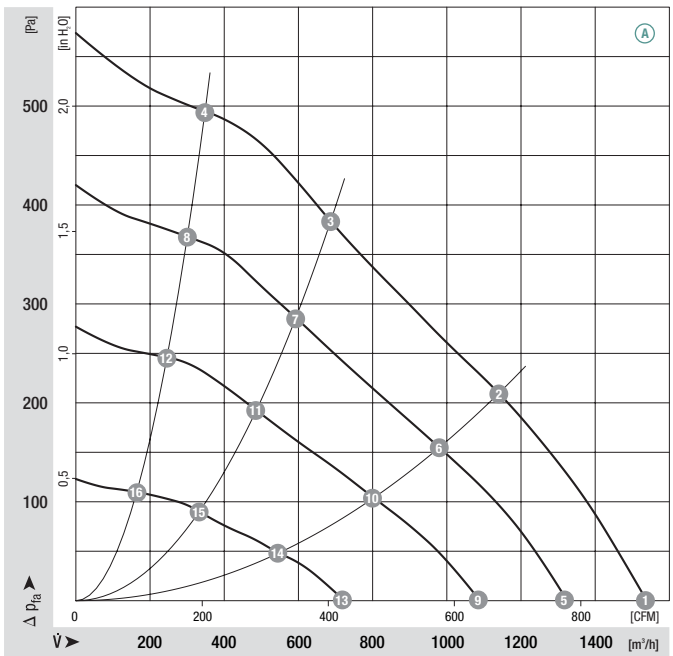
Nominal data

Type	Motor	Curve	Nominal voltage range	Frequency	Speed/rpm	Max. power input (1)	Max. current draw (1)	Perm. amb. temp.	Electr. connection
			VAC	Hz	rpm	W	A	°C	p. 603
R3G 250	M3G 074-CF	Ⓐ	1~ 100-130	50/60	2570	170	2.20	-25 to +60	J1)

subject to alterations

(1) Nominal data in operating point with maximum load and 115 VAC

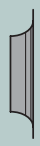
Curves



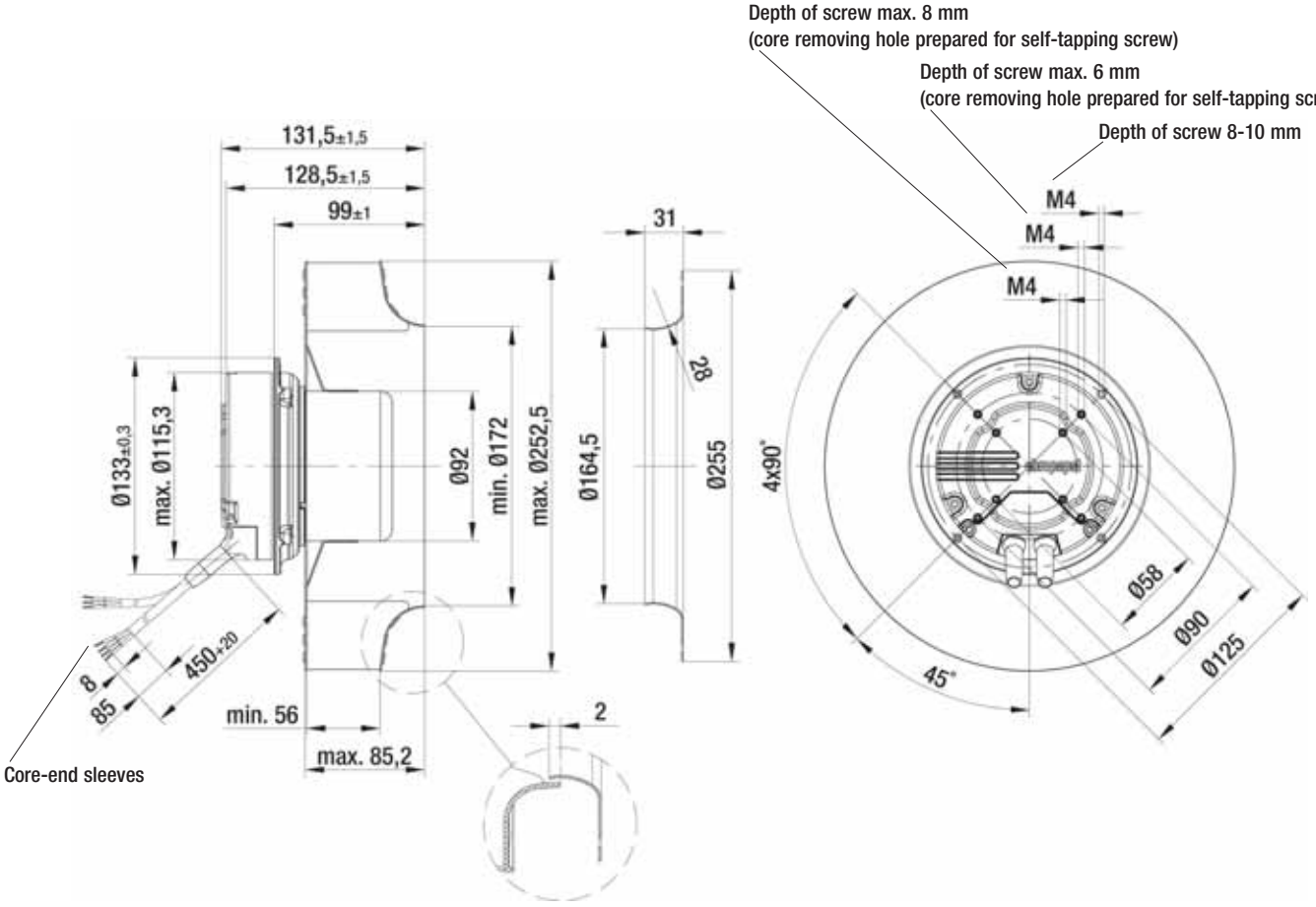
	n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1	2570	147	1.90	73	—
Ⓐ 2	2440	167	2.10	66	62
Ⓐ 3	2420	166	2.10	62	63
Ⓐ 4	2580	147	1.90	69	44
Ⓐ 5	2220	106	1.30	71	—
Ⓐ 6	2100	108	1.40	64	60
Ⓐ 7	2090	110	1.50	60	58
Ⓐ 8	2220	93	1.20	65	45
Ⓐ 9	1820	59	0.80	69	—
Ⓐ 10	1730	67	0.90	60	54
Ⓐ 11	1720	66	0.90	54	55
Ⓐ 12	1810	59	0.80	60	39
Ⓐ 13	1220	23	0.30	62	—
Ⓐ 14	1180	27	0.40	52	43
Ⓐ 15	1180	25	0.40	44	46
Ⓐ 16	1210	23	0.30	48	30

ebmpapst

- **Technical features:**
  - PFC (passive)
  - Control input 0-10 VDC / PWM
  - Output 10 VDC max. 1.1 mA
  - Tach output
  - Over-temperature protected electronics / motor
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-1
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 60950-1
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 60335-1, EN 61800-5-1, EN 60950-1, CE
- **Approvals:** UL, CSA, CCC, GOST are applied for

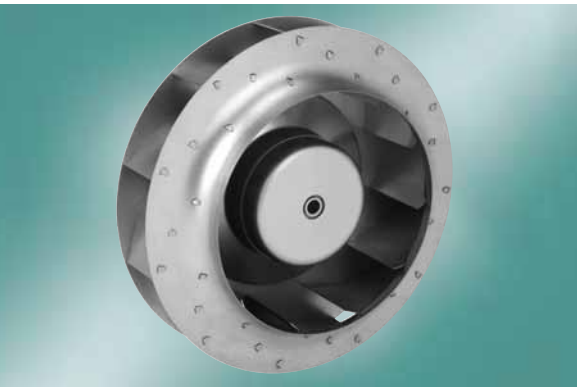


Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle (long)
R3G 250-AM70-01	3.0	96359-2-4013



EC centrifugal fan

backward curved, Ø 250



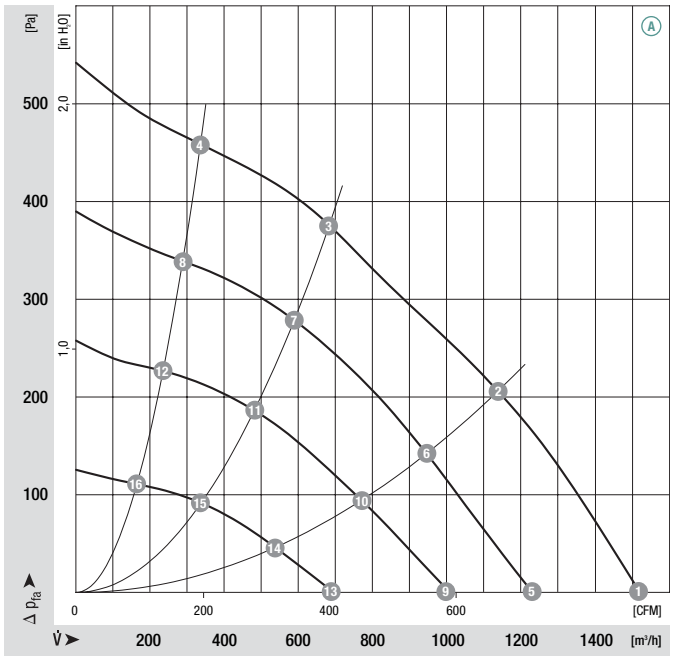
- **Material:** Impeller: Sheet steel, galvanised
  Rotor: Galvanised
  Electronics enclosure: Die-cast aluminium
- **Number of blades:** 11
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 44
- **Insulation class:** "B"
- **Mounting position:** Shaft horizontal or rotor on top; rotor on bottom on request
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage range	Frequency	Speed/rpm	Max. power input (1)	Max. current draw (1)	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VAC**	**Hz**	**rpm**	**W**	**A**	**°C**	p. 603
R3G 250	M3G 074-CF	Ⓐ	1~ 200-277	50/60	2510	178	1.40	-25 to +60	J1)

subject to alterations

(1) Nominal data in operating point with maximum load and 230 VAC

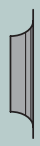
Curves



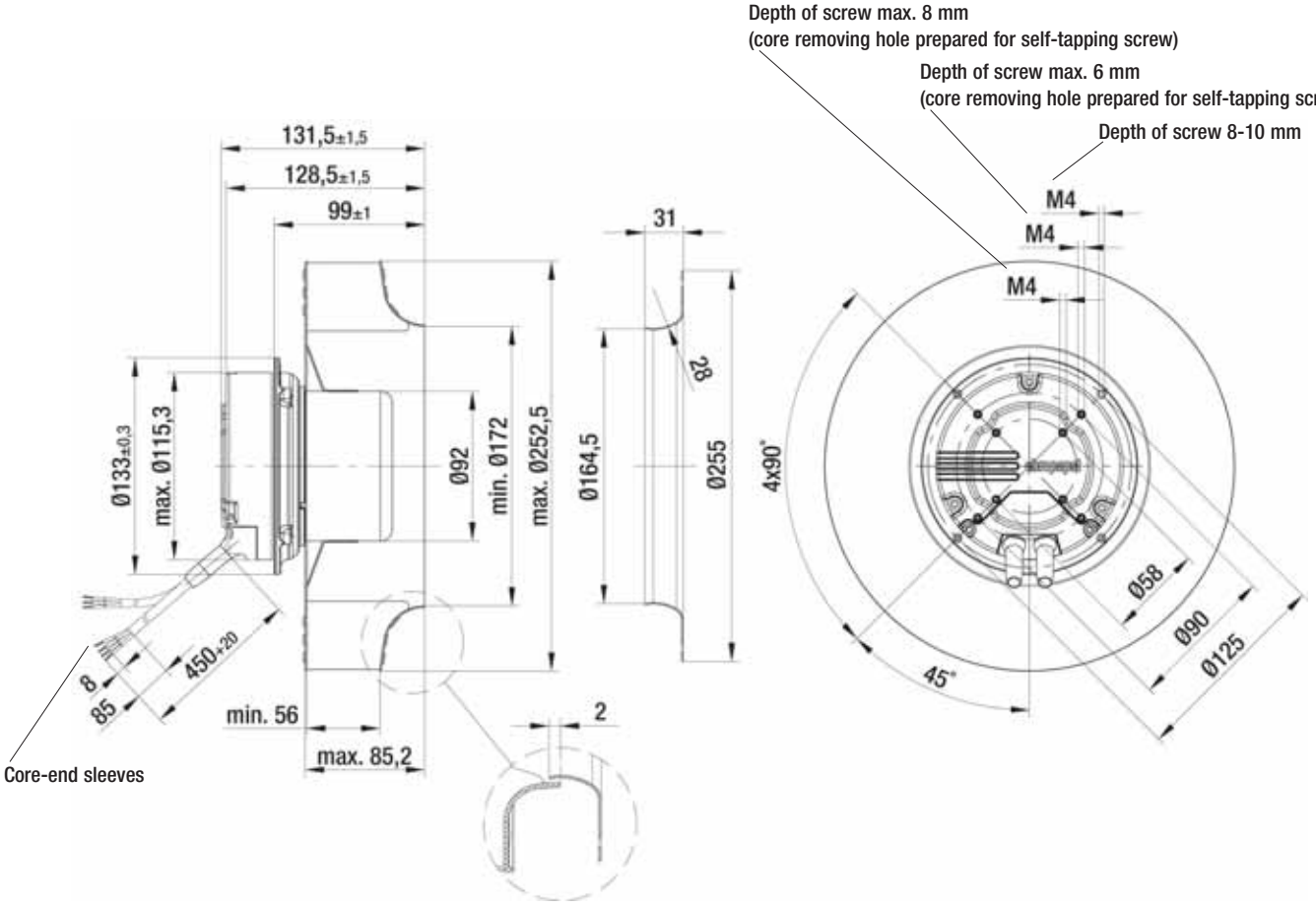
	n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1	2510	140	1.00	73	—
Ⓐ 2	2450	166	1.20	66	53
Ⓐ 3	2440	172	1.20	62	56
Ⓐ 4	2520	143	1.00	68	41
Ⓐ 5	2170	99	0.75	69	—
Ⓐ 6	2140	112	0.90	64	52
Ⓐ 7	2130	115	0.90	59	54
Ⓐ 8	2170	95	0.80	63	40
Ⓐ 9	1770	55	0.40	66	—
Ⓐ 10	1750	67	0.50	58	52
Ⓐ 11	1750	67	0.50	54	53
Ⓐ 12	1765	59	0.50	59	39
Ⓐ 13	1230	26	0.20	59	—
Ⓐ 14	1240	27	0.30	51	50
Ⓐ 15	1220	29	0.30	45	56
Ⓐ 16	1240	27	0.30	48	43

ebmpapst

- **Technical features:**
  - PFC (passive)
  - Control input 0-10 VDC / PWM
  - Output 10 VDC max. 1.1 mA
  - Tach output
  - Over-temperature protected electronics / motor
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-1
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 60950-1
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 60335-1, EN 61800-5-1, EN 60950-1, CE
- **Approvals:** UL, CSA; CCC, GOST are applied for



Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle (long)
R3G 250-AM50-01	3.0	96359-2-4013



EC centrifugal fan

backward curved, Ø 250

- **Material:** Impeller: Sheet steel, galvanised
  Rotor: Coated in black
  Electronics enclosure: Die-cast aluminium
- **Number of blades:** 11
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 54
- **Insulation class:** "B"
- **Mounting position:** Shaft horizontal or rotor on top; rotor on bottom on request
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

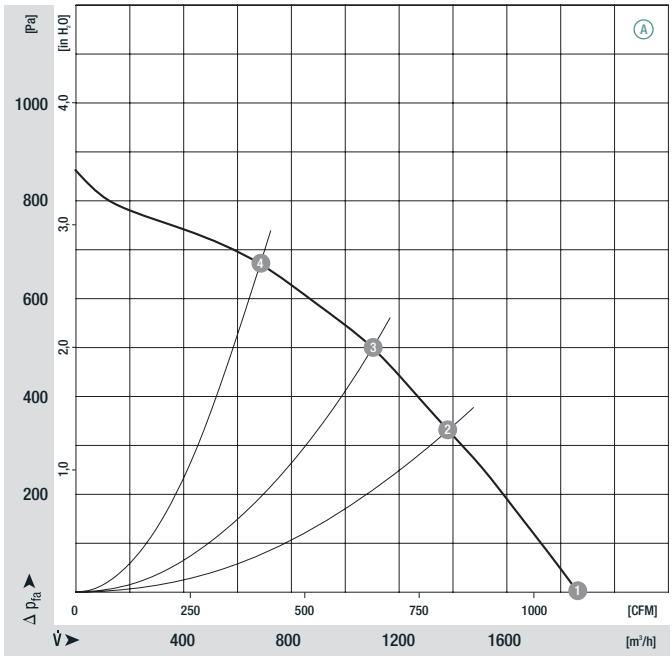
Nominal data

Type	Motor	Curve	Nominal voltage range	Frequency	Speed/rpm	Max. power input (1)	Max. current draw (1)	Perm. amb. temp.	Electr. connection
			VAC	Hz	rpm	W	A	°C	p. 605
R3G 250	M3G 084-DF	Ⓐ	1~ 100-130	50/60	3240	350	4.20	-25 to +60	K1)

subject to alterations

(1) Nominal data in operating point with maximum load and 115 VAC

Curves

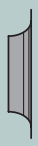


	n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1	3240	267	3.30	77	—
Ⓐ 2	3160	339	4.10	73	54
Ⓐ 3	3165	350	4.20	71	58
Ⓐ 4	3210	314	3.80	73	52

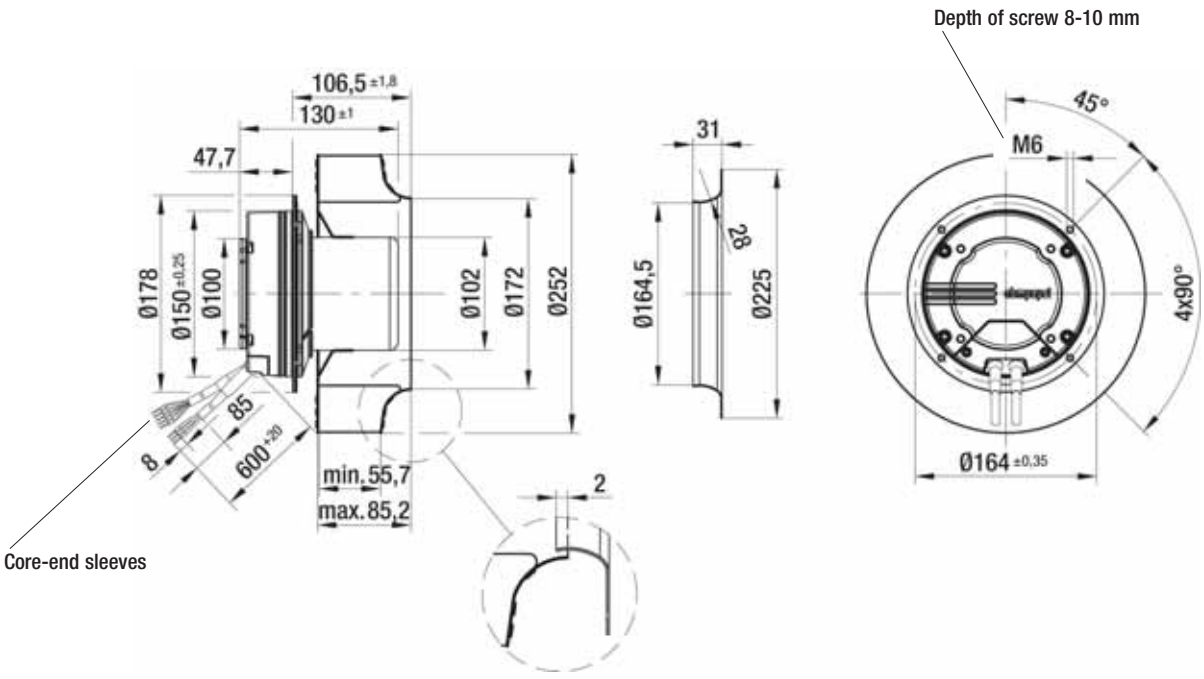
ebmpapst

- **Technical features:**
  - PFC (passive)
  - Control input 0-10 VDC / PWM
  - Output 10 VDC max. 1.1 mA
  - Alarm relay
  - Over-temperature protected electronics / motor
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-2
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 61800-5-1
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 61800-5-1, CE
- **Approvals:** UL, CSA, CCC, GOST are applied for

Mass of centrifugal fan



Centrifugal fan	kg	Inlet nozzle (long)
R3G 250-AK29 -81	4.5	96359-2-4013



EC centrifugal fan

backward curved, Ø 250

- **Material:** Impeller: Sheet steel, galvanised
  Rotor: Coated in black
  Electronics enclosure: Die-cast aluminium
- **Number of blades:** 11
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 54
- **Insulation class:** "B"
- **Mounting position:** Shaft horizontal or rotor on top; rotor on bottom on request
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

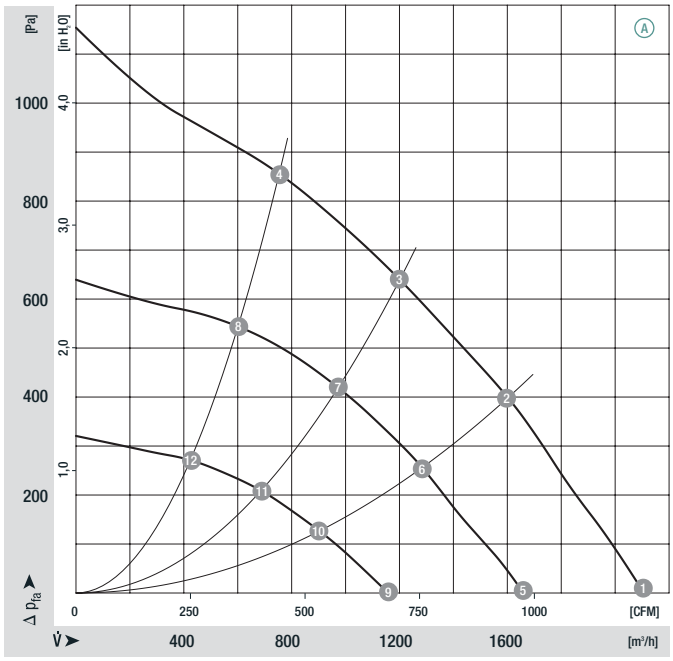
Nominal data

Type	Motor	Curve	Nominal voltage range	Frequency	Speed/rpm	Max. power input (1)	Max. current draw (1)	Perm. amb. temp.	Electr. connection
			VAC	Hz	rpm	W	A	°C	p. 605
R3G 250	M3G 084-DF	Ⓐ	1~ 200-277	50/60	3580	485	3.00	-25 to +60	K1)

subject to alterations

(1) Nominal data in operating point with maximum load and 230 VAC

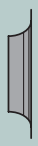
Curves



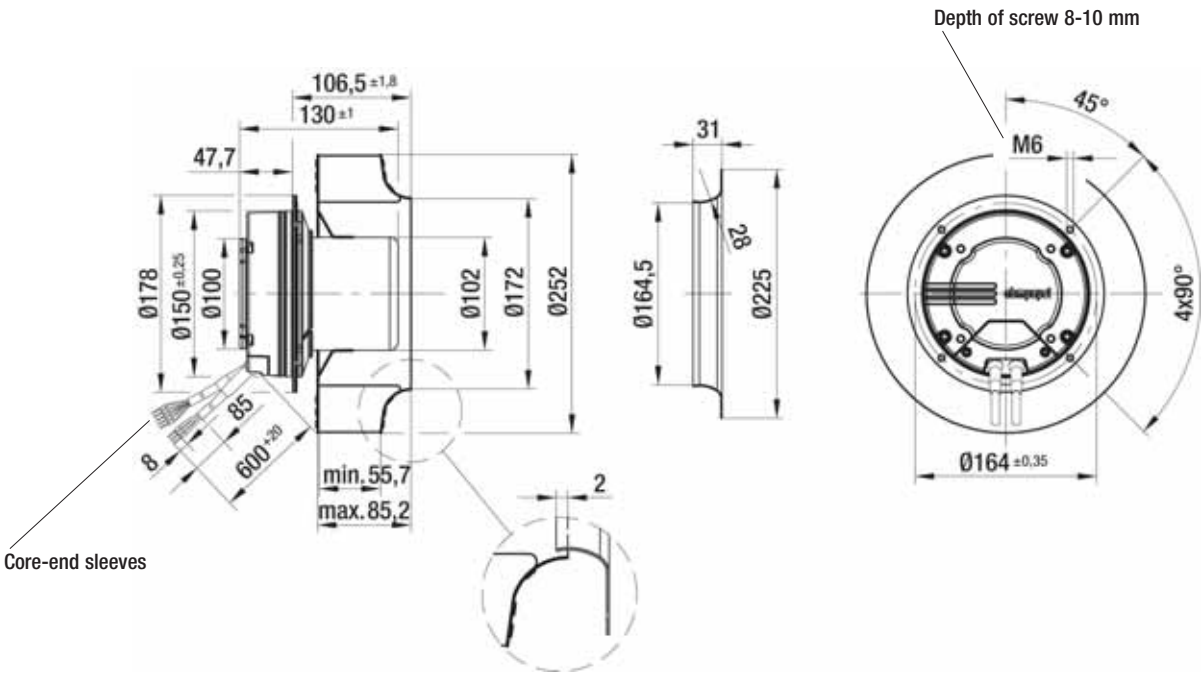
	n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1	3580	380	2.30	80	—
Ⓐ 2	3460	465	3.00	77	53
Ⓐ 3	3460	485	3.00	74	58
Ⓐ 4	3520	440	2.40	76	50
Ⓐ 5	2830	193	1.20	75	—
Ⓐ 6	2830	245	1.50	70	53
Ⓐ 7	2830	260	1.60	69	58
Ⓐ 8	2830	225	1.40	69	50
Ⓐ 9	2000	80	0.50	68	—
Ⓐ 10	2000	100	0.60	62	53
Ⓐ 11	2000	106	0.70	59	58
Ⓐ 12	2000	94	0.60	60	50

ebmpapst

- **Technical features:**
  - PFC (passive)
  - Control input 0-10 VDC / PWM
  - Output 10 VDC max. 1.1 mA
  - Alarm relay
  - Over-temperature protected electronics / motor
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-2
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 61800-5-1
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 61800-5-1, CE
- **Approvals:** UL, CSA; CCC, GOST are applied for

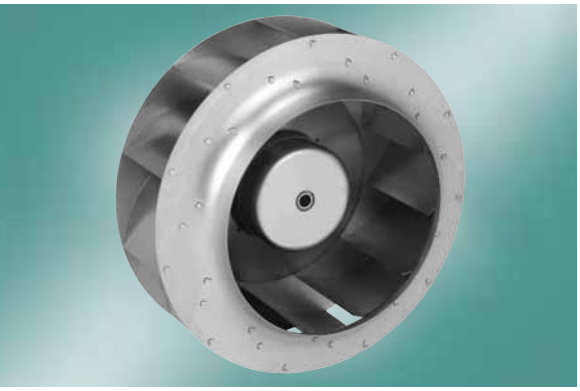


Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle (long)
R3G 250-AK41 -71	4.5	96359-2-4013



EC centrifugal fan

backward curved, Ø 280



- **Material:** Impeller: Sheet steel, galvanised
  Rotor: Galvanised
  Electronics enclosure: Die-cast aluminium
- **Number of blades:** 11
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 44
- **Insulation class:** "B"
- **Mounting position:** Shaft horizontal or rotor on top; rotor on bottom on request
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

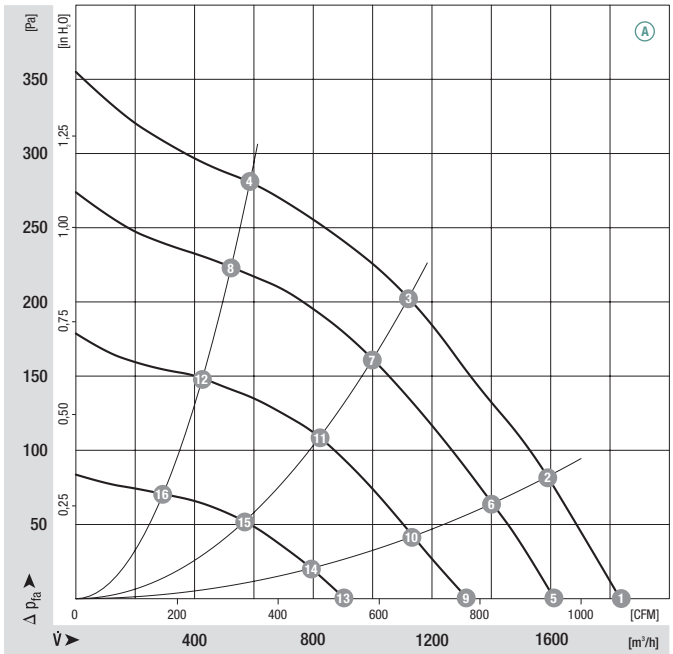
Nominal data

Type	Motor	Curve	Nominal voltage range	Frequency	Speed/rpm	Max. power input (1)	Max. current draw (1)	Perm. amb. temp.	Electr. connection
			VAC	Hz	rpm	W	A	°C	p. 603
R3G 280	M3G 074-CF	Ⓐ	1~ 100-130	50/60	1750	145	1.90	-25 to +60	J1)

subject to alterations

(1) Nominal data in operating point with maximum load and 115 VAC

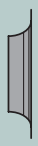
Curves



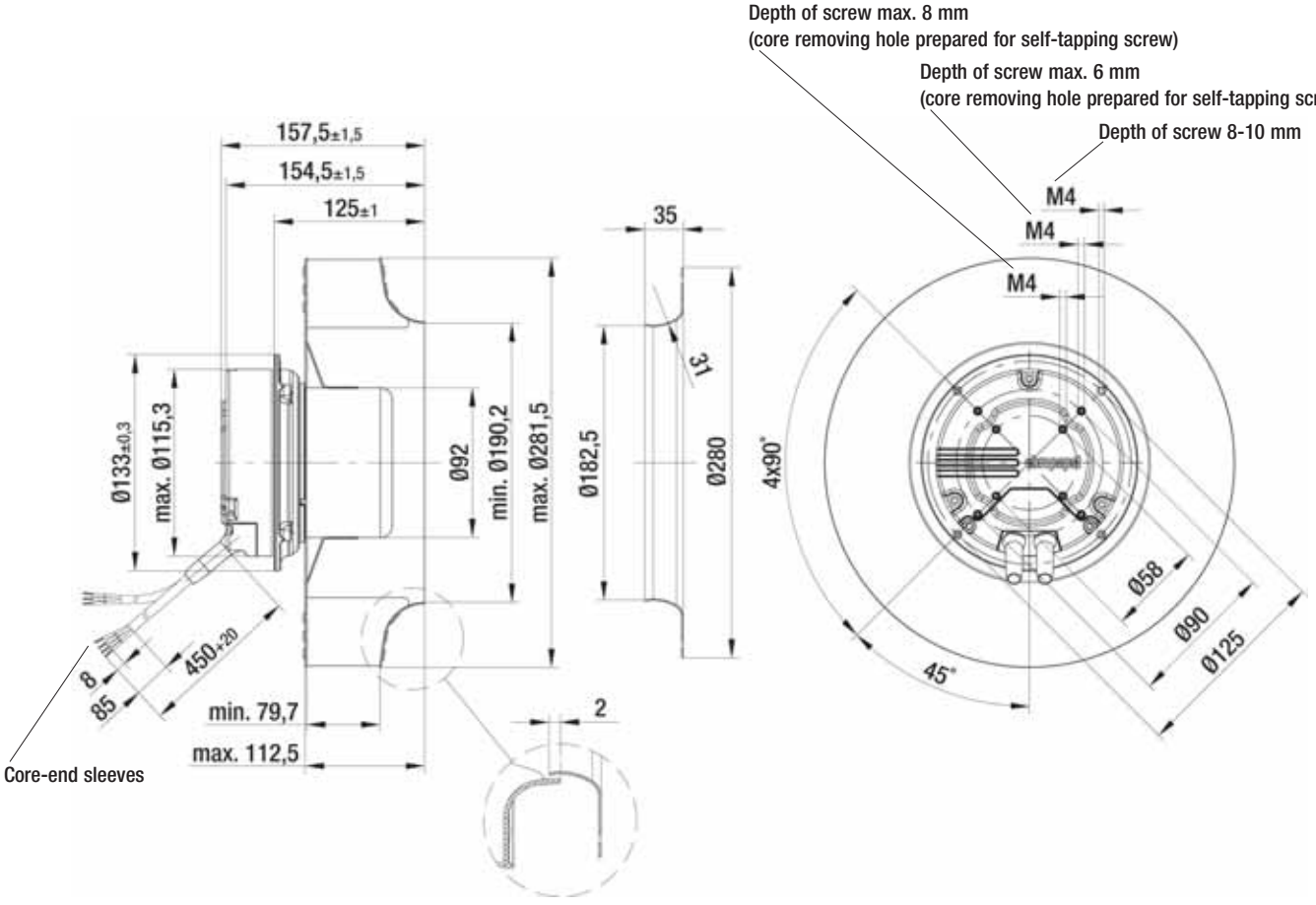
		n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ	1	1750	107	1.40	70	—
Ⓐ	2	1710	123	1.60	63	51
Ⓐ	3	1675	138	1.80	59	67
Ⓐ	4	1720	119	1.50	60	53
Ⓐ	5	1550	73	1.00	66	—
Ⓐ	6	1530	89	1.20	61	49
Ⓐ	7	1500	99	1.30	56	66
Ⓐ	8	1540	86	1.10	57	52
Ⓐ	9	1280	45	0.60	62	—
Ⓐ	10	1250	51	0.70	55	45
Ⓐ	11	1230	58	0.80	51	62
Ⓐ	12	1260	50	0.70	52	49
Ⓐ	13	880	18	0.30	57	—
Ⓐ	14	870	21	0.30	51	36
Ⓐ	15	870	23	0.40	46	51
Ⓐ	16	880	20	0.30	40	39

ebmpapst

- **Technical features:**
  - PFC (passive)
  - Control input 0-10 VDC / PWM
  - Output 10 VDC max. 1.1 mA
  - Tach output
  - Over-temperature protected electronics / motor
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-1
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 60950-1
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 60335-1, EN 61800-5-1, EN 60950-1, CE
- **Approvals:** UL, CSA, CCC, GOST are applied for

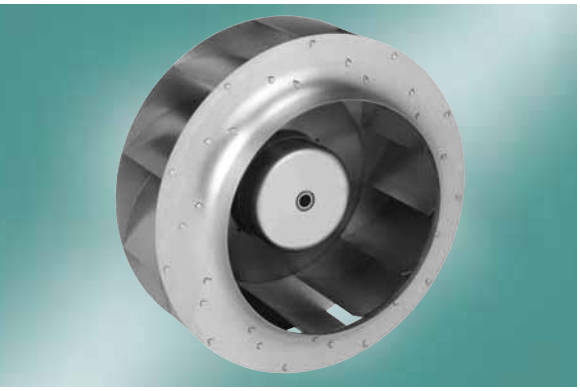


Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle (long)
R3G 280-AA75 -01	3.2	96360-2-4013



EC centrifugal fan

backward curved, Ø 280



- **Material:** Impeller: Sheet steel, galvanised
  Rotor: Galvanised
  Electronics enclosure: Die-cast aluminium
- **Number of blades:** 11
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 44
- **Insulation class:** "B"
- **Mounting position:** Shaft horizontal or rotor on top; rotor on bottom on request
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

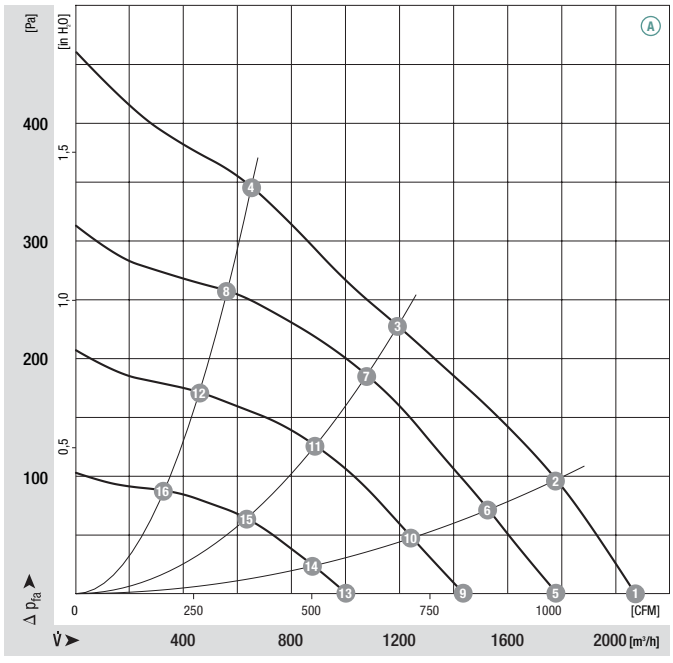
Nominal data

Type	Motor	Curve	Nominal voltage range	Frequency	Speed/rpm	Max. power input (1)	Max. current draw (1)	Perm. amb. temp.	Electr. connection
			VAC	Hz	rpm	W	A	°C	p. 603
R3G 280	M3G 074-CF	Ⓐ	1~ 200-277	50/60	2000	170	1.30	-25 to +60	J1)

subject to alterations

(1) Nominal data in operating point with maximum load and 230 VAC

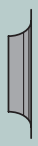
Curves



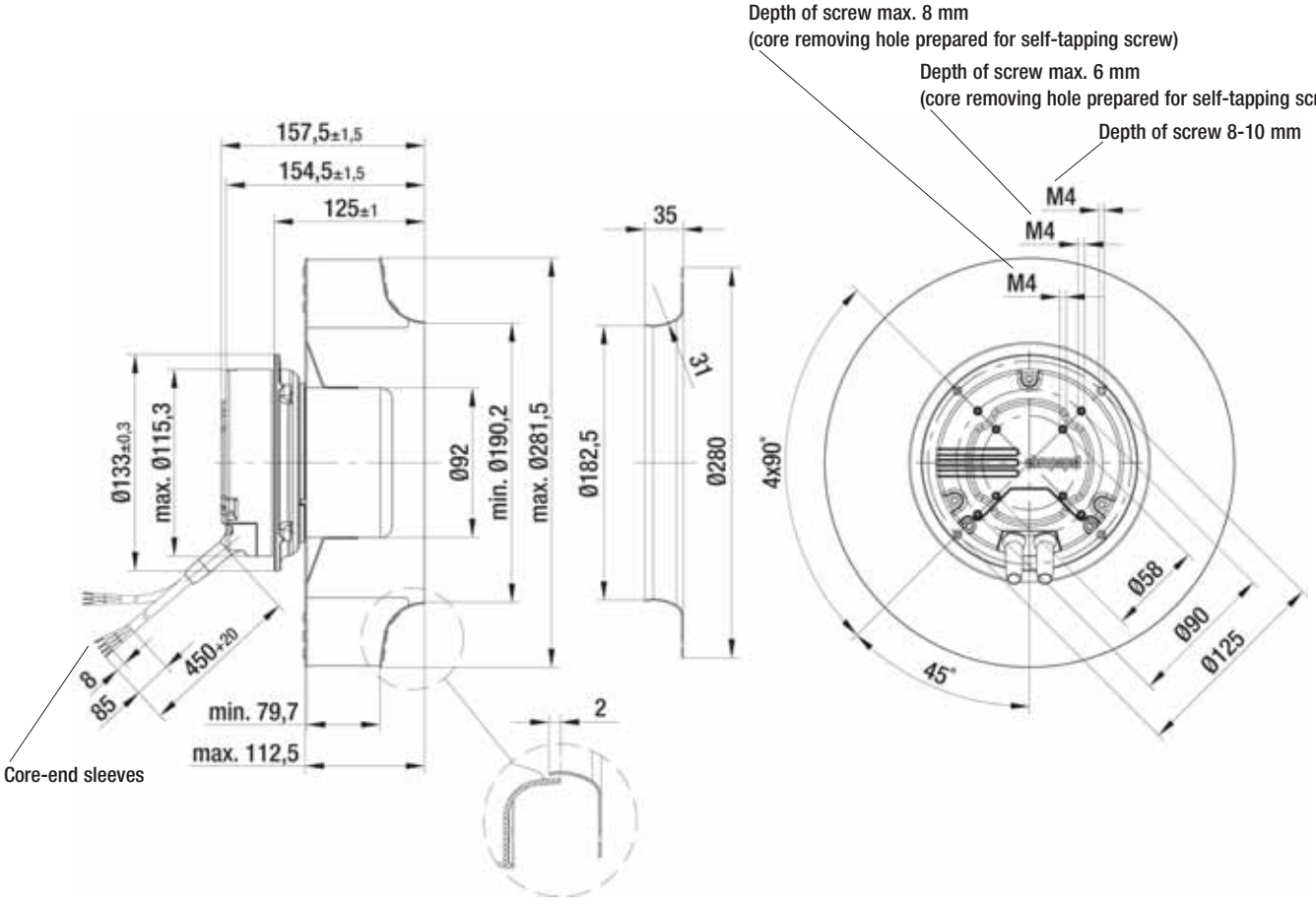
	n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1	2000	145	1.10	72	—
Ⓐ 2	1920	168	1.20	67	48
Ⓐ 3	1790	170	1.20	61	60
Ⓐ 4	1930	161	1.10	62	50
Ⓐ 5	1680	89	0.70	69	—
Ⓐ 6	1660	113	0.90	64	46
Ⓐ 7	1625	123	1.00	57	61
Ⓐ 8	1660	104	0.80	58	50
Ⓐ 9	1380	55	0.50	65	—
Ⓐ 10	1350	61	0.50	60	49
Ⓐ 11	1340	72	0.60	53	60
Ⓐ 12	1360	61	0.50	53	50
Ⓐ 13	980	24	0.20	58	—
Ⓐ 14	970	28	0.30	54	47
Ⓐ 15	960	32	0.30	48	60
Ⓐ 16	970	27	0.30	44	51

ebmpapst

- **Technical features:**
  - PFC (passive)
  - Control input 0-10 VDC / PWM
  - Output 10 VDC max. 1.1 mA
  - Tach output
  - Over-temperature protected electronics / motor
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-1
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 60950-1
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 60335-1, EN 61800-5-1, EN 60950-1, CE
- **Approvals:** UL, CSA; CCC, GOST are applied for



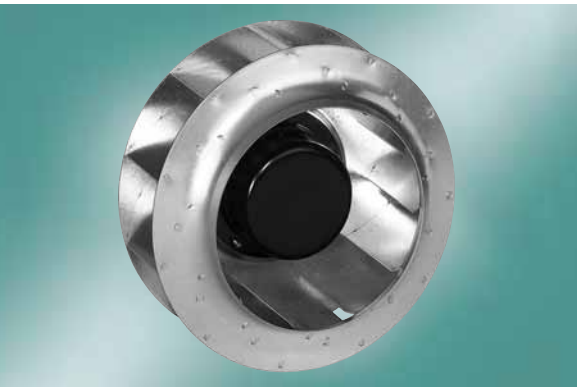
Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle (long)
R3G 280-AA52 -01	3.2	96360-2-4013



Inlet nozzle p. 550 f.
Electr. connection p. 603

EC centrifugal fan

backward curved, Ø 280



- **Material:** Impeller: Sheet steel, galvanised
  Rotor: Coated in black
  Electronics enclosure: Die-cast aluminium
- **Number of blades:** 11
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 54
- **Insulation class:** "B"
- **Mounting position:** Shaft horizontal or rotor on top; rotor on bottom on request
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

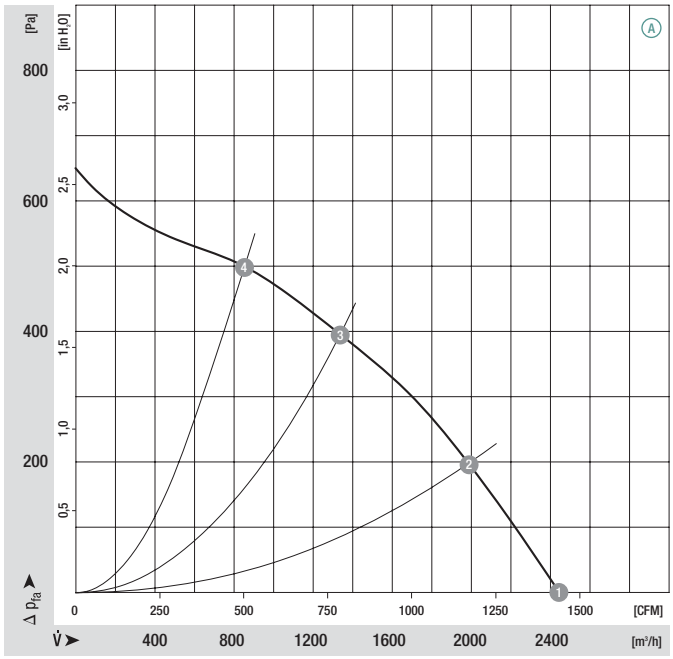
Nominal data

Type	Motor	Curve	Nominal voltage range	Frequency	Speed/rpm	Max. power input (1)	Max. current draw (1)	Perm. amb. temp.	Electr. connection
			VAC	Hz	rpm	W	A	°C	p. 605
R3G 280	M3G 084-DF	Ⓐ	1~ 100-130	50/60	2420	350	4.20	-25 to +60	K1)

subject to alterations

(1) Nominal data in operating point with maximum load and 115 VAC

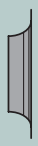
Curves



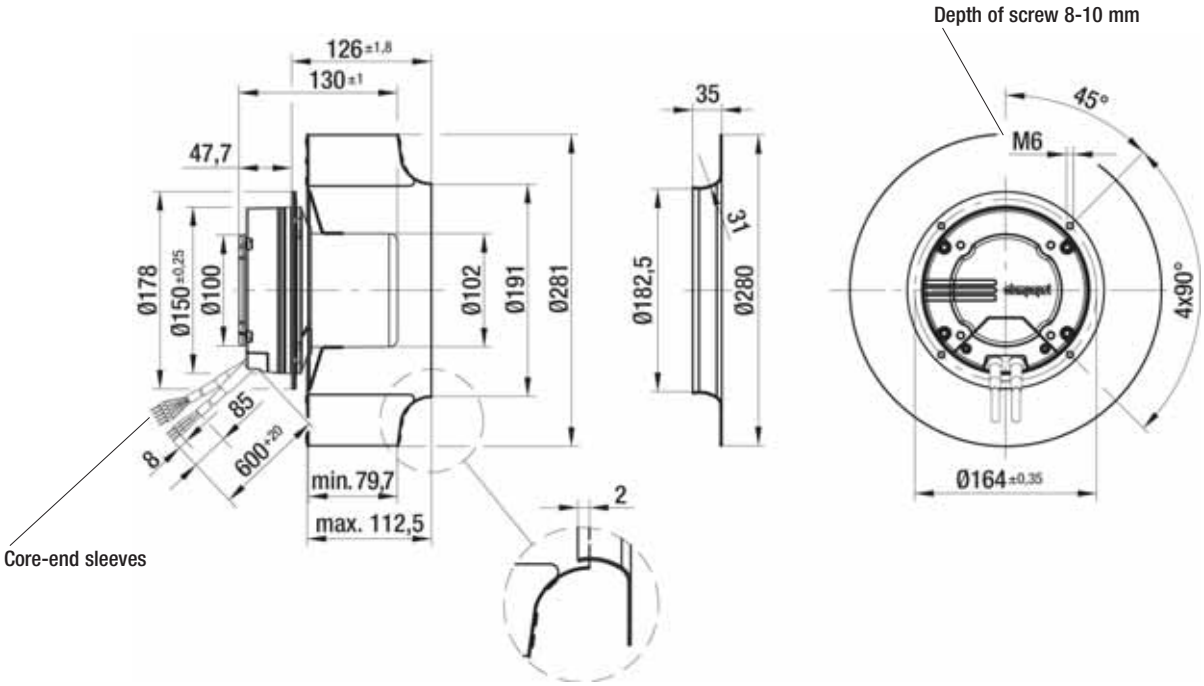
	n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1	2420	270	3.30	77	—
Ⓐ 2	2360	324	3.90	73	50
Ⓐ 3	2320	350	4.20	69	60
Ⓐ 4	2395	298	3.70	71	48

ebmpapst

- **Technical features:**
  - PFC (passive)
  - Control input 0-10 VDC / PWM
  - Output 10 VDC max. 1.1 mA
  - Alarm relay
  - Over-temperature protected electronics / motor
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-2
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 61800-5-1
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 61800-5-1, CE
- **Approvals:** UL, CSA

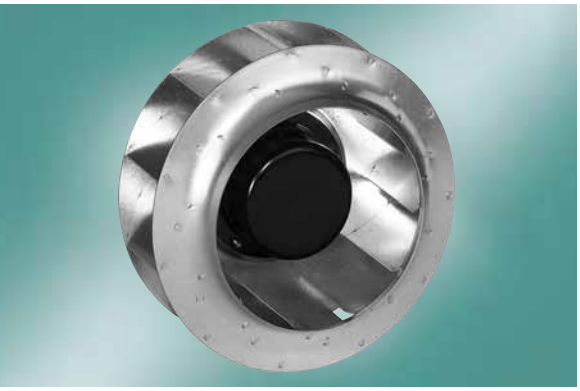


Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle (long)
R3G 280-AF23 -81	5.0	96360-2-4013



EC centrifugal fan

backward curved, Ø 280



- **Material:** Impeller: Sheet steel, galvanised
  Rotor: Coated in black
  Electronics enclosure: Die-cast aluminium
- **Number of blades:** 11
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 54
- **Insulation class:** "B"
- **Mounting position:** Shaft horizontal or rotor on top; rotor on bottom on request
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

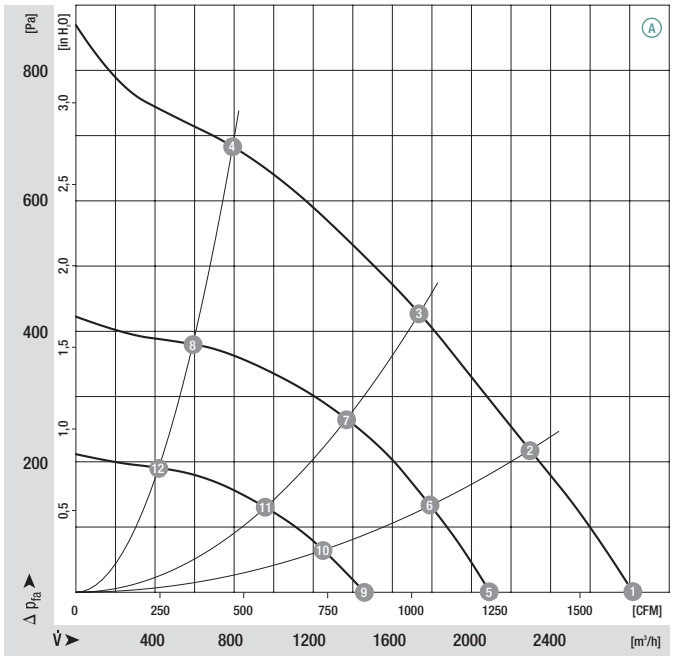
Nominal data

Type	Motor	Curve	Nominal voltage range	Frequency	Speed/rpm	Max. power input (1)	Max. current draw (1)	Perm. amb. temp.	Electr. connection
			VAC	Hz	rpm	W	A	°C	p. 605
R3G 280	M3G 084-DF	Ⓐ	1~ 200-277	50/60	2600	455	2.80	-25 to +40	K1)

subject to alterations

(1) Nominal data in operating point with maximum load and 230 VAC

Curves

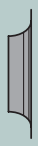


	n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1	2760	355	2.20	80	—
Ⓐ 2	2670	400	2.50	77	48
Ⓐ 3	2660	425	2.60	73	60
Ⓐ 4	2740	386	2.30	75	45
Ⓐ 5	2050	150	1.00	74	—
Ⓐ 6	2050	206	1.10	71	48
Ⓐ 7	2050	232	1.40	67	60
Ⓐ 8	2050	196	1.20	67	45
Ⓐ 9	1460	65	0.40	67	—
Ⓐ 10	1460	80	0.50	64	48
Ⓐ 11	1460	88	0.60	58	60
Ⓐ 12	1460	70	0.50	57	45

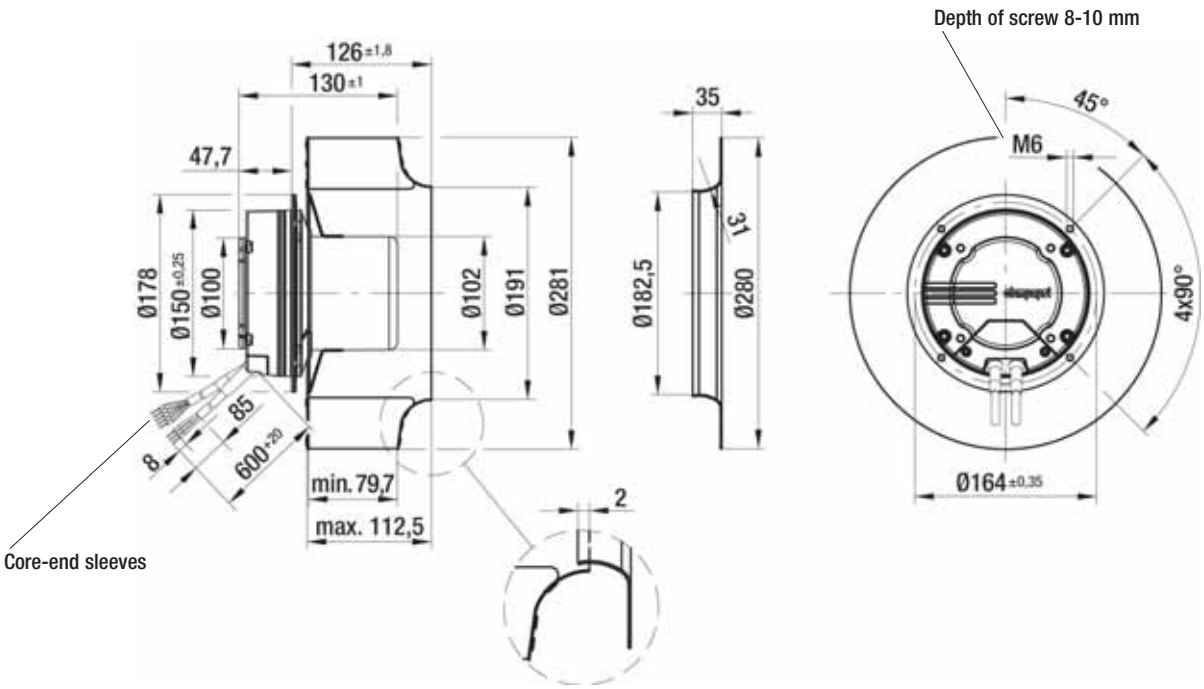
ebmpapst

- **Technical features:**
  - PFC (passive)
  - Control input 0-10 VDC / PWM
  - Output 10 VDC max. 1.1 mA
  - Alarm relay
  - Over-temperature protected electronics / motor
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-2
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 61800-5-1
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 61800-5-1, CE
- **Approvals:** VDE, UL, CSA; CCC, GOST are applied for

Mass of centrifugal fan

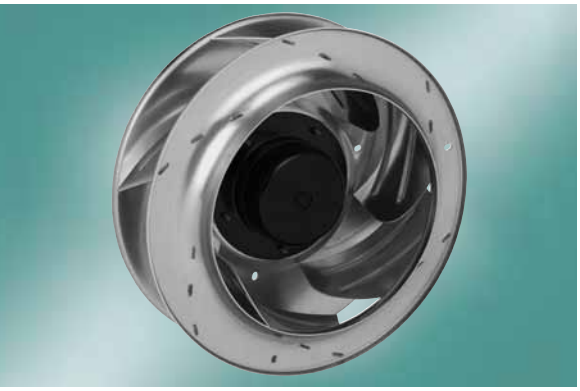


Centrifugal fan	kg	Inlet nozzle (long)
R3G 280-AF35 -71	5.0	96360-2-4013



EC centrifugal fan

backward curved, 3-D, Ø 310



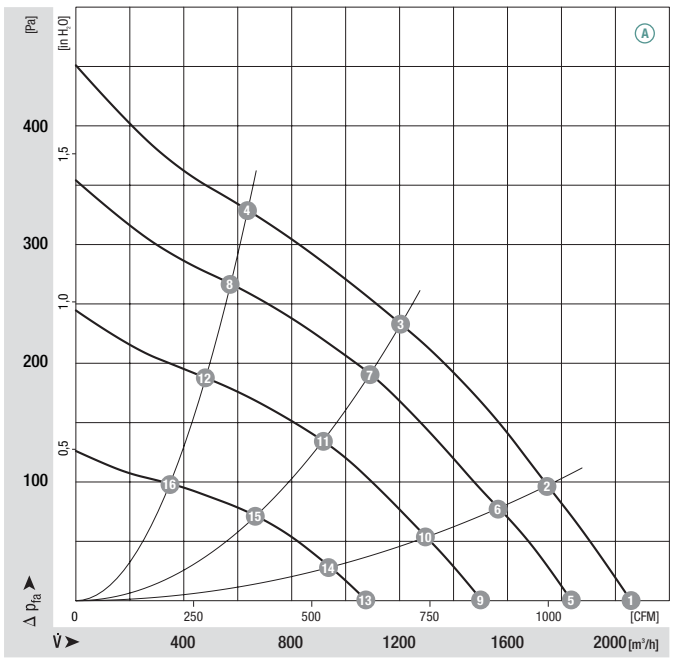
- **Material:** Impeller: Sheet aluminium, laser-welded
  Rotor: Galvanised
  Electronics enclosure: Die-cast aluminium
- **Number of blades:** 6
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 44
- **Insulation class:** "B"
- **Mounting position:** Shaft horizontal or rotor on top; rotor on bottom on request
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage range	Frequency	Speed/rpm	Max. power input (1)	Max. current draw (1)	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VAC**	**Hz**	**rpm**	**W**	**A**	**°C**	p. 603
R3G 310	M3G 074-CF	Ⓐ	1~ 100-130	50/60	1700	160	2.10	-25 to +60	J1)

subject to alterations

(1) Nominal data in operating point with maximum load and 115 VAC

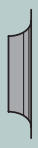
Curves (established with long inlet nozzle)



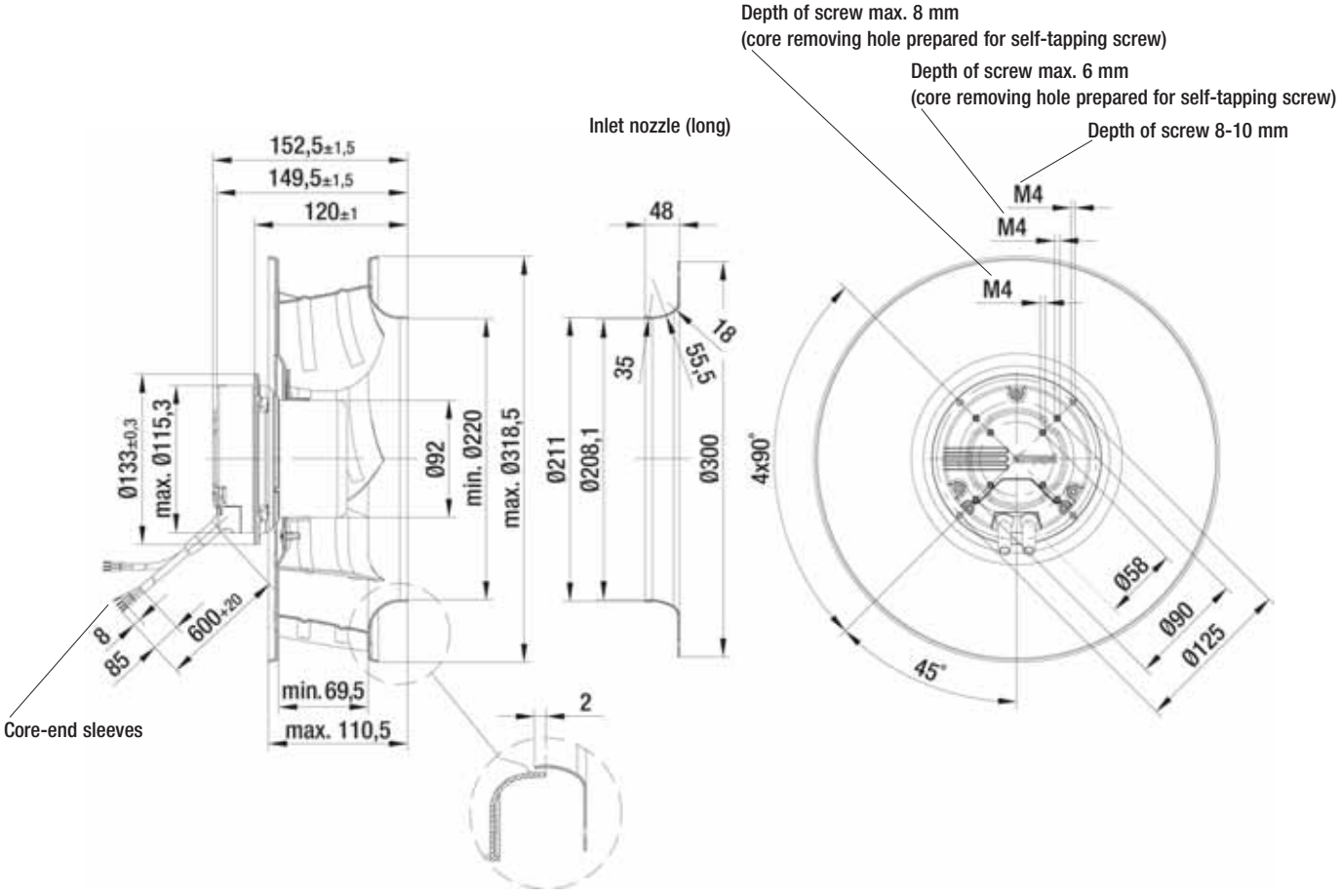
	n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1	1700	111	1.50	65	—
Ⓐ 2	1640	133	1.70	62	64
Ⓐ 3	1600	152	1.90	58	75
Ⓐ 4	1630	140	1.80	60	55
Ⓐ 5	1530	80	1.10	62	—
Ⓐ 6	1480	98	1.30	60	63
Ⓐ 7	1450	110	1.50	55	75
Ⓐ 8	1470	103	1.40	58	58
Ⓐ 9	1270	50	0.70	58	—
Ⓐ 10	1240	61	0.80	55	57
Ⓐ 11	1220	68	0.90	52	73
Ⓐ 12	1230	64	0.90	53	54
Ⓐ 13	920	22	0.40	49	—
Ⓐ 14	900	26	0.40	46	49
Ⓐ 15	890	30	0.50	43	64
Ⓐ 16	900	28	0.40	45	48

ebmpapst

- **Technical features:**
  - PFC (passive)
  - Control input 0-10 VDC / PWM
  - Output 10 VDC max. 1.1 mA
  - Tach output
  - Over-temperature protected electronics / motor
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-1
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 60950-1
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 60335-1, EN 61800-5-1, EN 60950-1, CE
- **Approvals:** UL, CSA, CCC, GOST are applied for

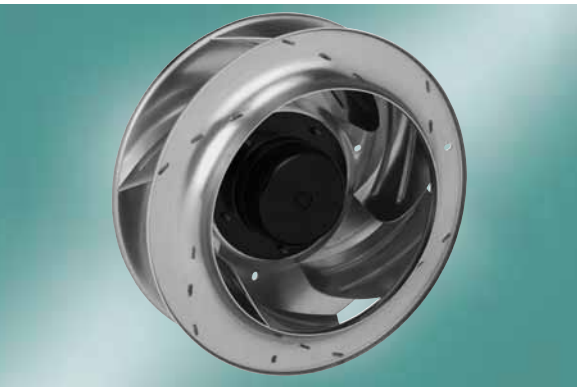


Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle (long)	Inlet nozzle (short)
R3G 310-A075 -01	3.1	31050-2-4013	31051-2-4013



EC centrifugal fan

backward curved, 3-D, Ø 310



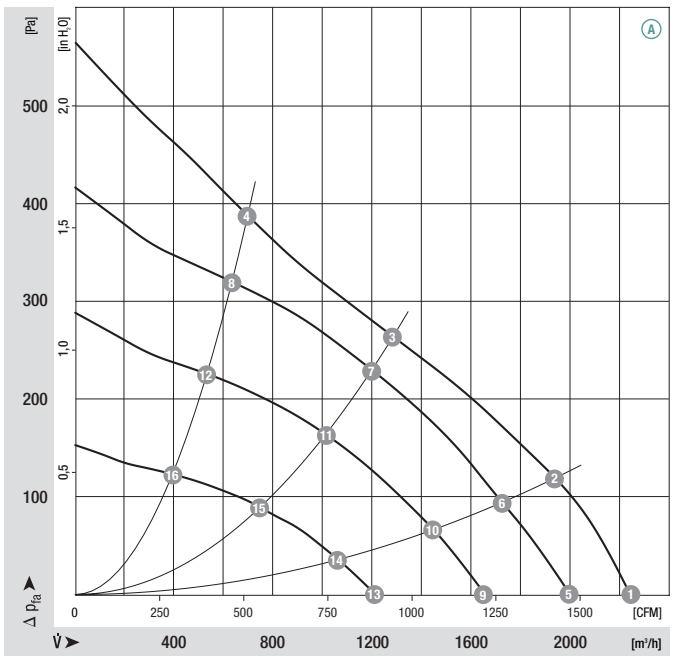
- **Material:** Impeller: Sheet aluminium, laser-welded
  Rotor: Galvanised
  Electronics enclosure: Die-cast aluminium
- **Number of blades:** 6
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 44
- **Insulation class:** "B"
- **Mounting position:** Shaft horizontal or rotor on top; rotor on bottom on request
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage range	Frequency	Speed/rpm	Max. power input (1)	Max. current draw (1)	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VAC**	**Hz**	**rpm**	**W**	**A**	**°C**	p. 603
R3G 310	M3G 074-CF	Ⓐ	1~ 200-277	50/60	1925	173	1.30	-25 to +60	J1)

subject to alterations

(1) Nominal data in operating point with maximum load and 230 VAC

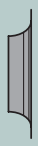
Curves (established with long inlet nozzle)



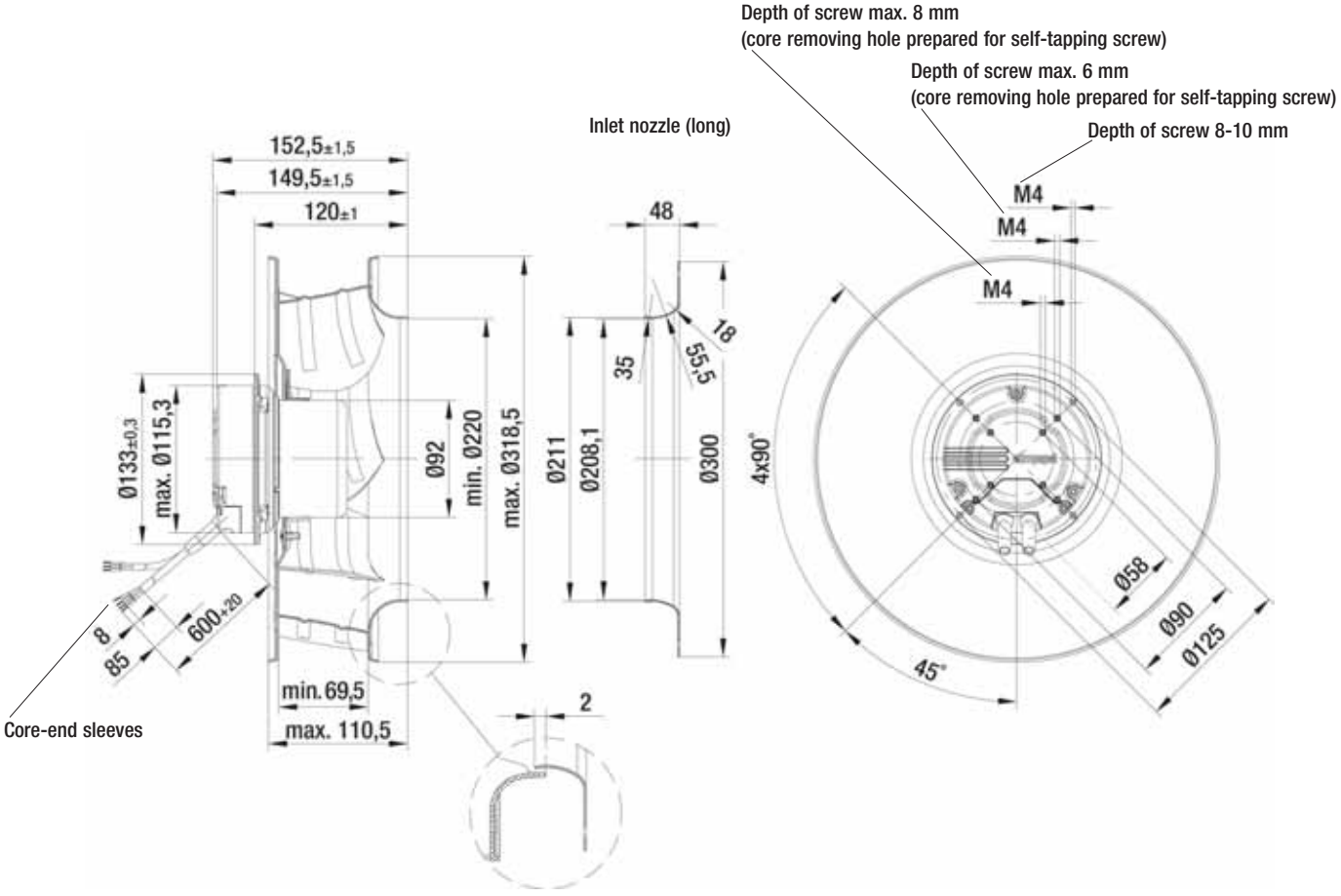
		n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ	1	1925	150	1.10	67	—
Ⓐ	2	1840	174	1.20	65	61
Ⓐ	3	1700	172	1.20	59	71
Ⓐ	4	1790	174	1.20	62	55
Ⓐ	5	1670	100	0.80	64	—
Ⓐ	6	1615	128	1.00	61	60
Ⓐ	7	1590	139	1.00	55	71
Ⓐ	8	1610	134	1.00	60	53
Ⓐ	9	1400	60	0.50	59	—
Ⓐ	10	1360	76	0.60	57	60
Ⓐ	11	1340	85	0.70	54	73
Ⓐ	12	1355	81	0.70	56	54
Ⓐ	13	1030	28	0.30	51	—
Ⓐ	14	1010	35	0.30	49	59
Ⓐ	15	990	40	0.30	45	72
Ⓐ	16	1000	38	0.30	47	53

ebmpapst

- **Technical features:**
  - PFC (passive)
  - Control input 0-10 VDC / PWM
  - Output 10 VDC max. 1.1 mA
  - Tach output
  - Over-temperature protected electronics / motor
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-1
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 60950-1
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 60335-1, EN 61800-5-1, EN 60950-1, CE
- **Approvals:** UL, CSA; CCC, GOST are applied for



Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle (long)	Inlet nozzle (short)
R3G 310-A052 -01	3.1	31050-2-4013	31051-2-4013



EC centrifugal fan

backward curved, 3-D, Ø 310

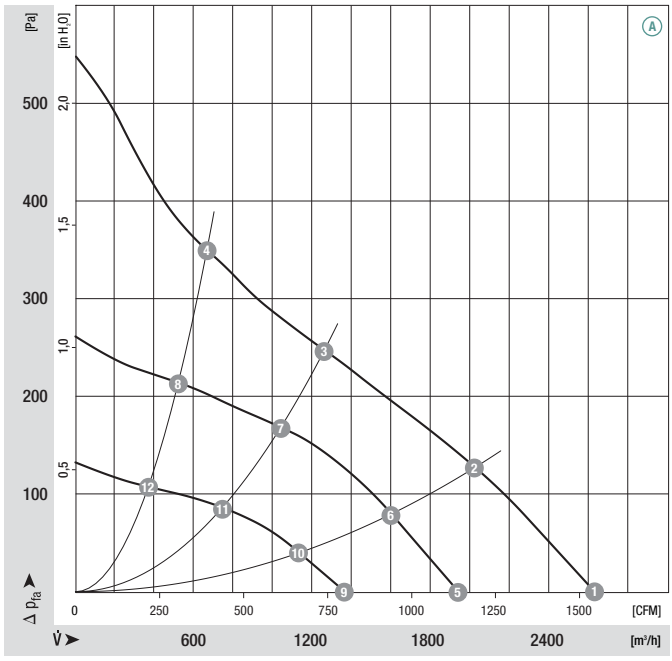
- **Material:** Impeller: Sheet aluminium, laser-welded
  Rotor: Galvanised
  Electronics enclosure: Die-cast aluminium
- **Number of blades:** 6
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 44
- **Insulation class:** "B"
- **Mounting position:** Shaft horizontal or rotor on top; rotor on bottom on request
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage range	Frequency	Speed/rpm	Max. power input (1)	Max. current draw (1)	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VAC**	**Hz**	**rpm**	**W**	**A**	**°C**	p. 603
R3G 310	M3G 074-CF	Ⓐ	1~ 200-277	50/60	1770	175	1.30	-25 to +60	J1)

subject to alterations

(1) Nominal data in operating point with maximum load and 230 VAC

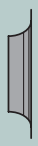
Curves (established with long inlet nozzle)



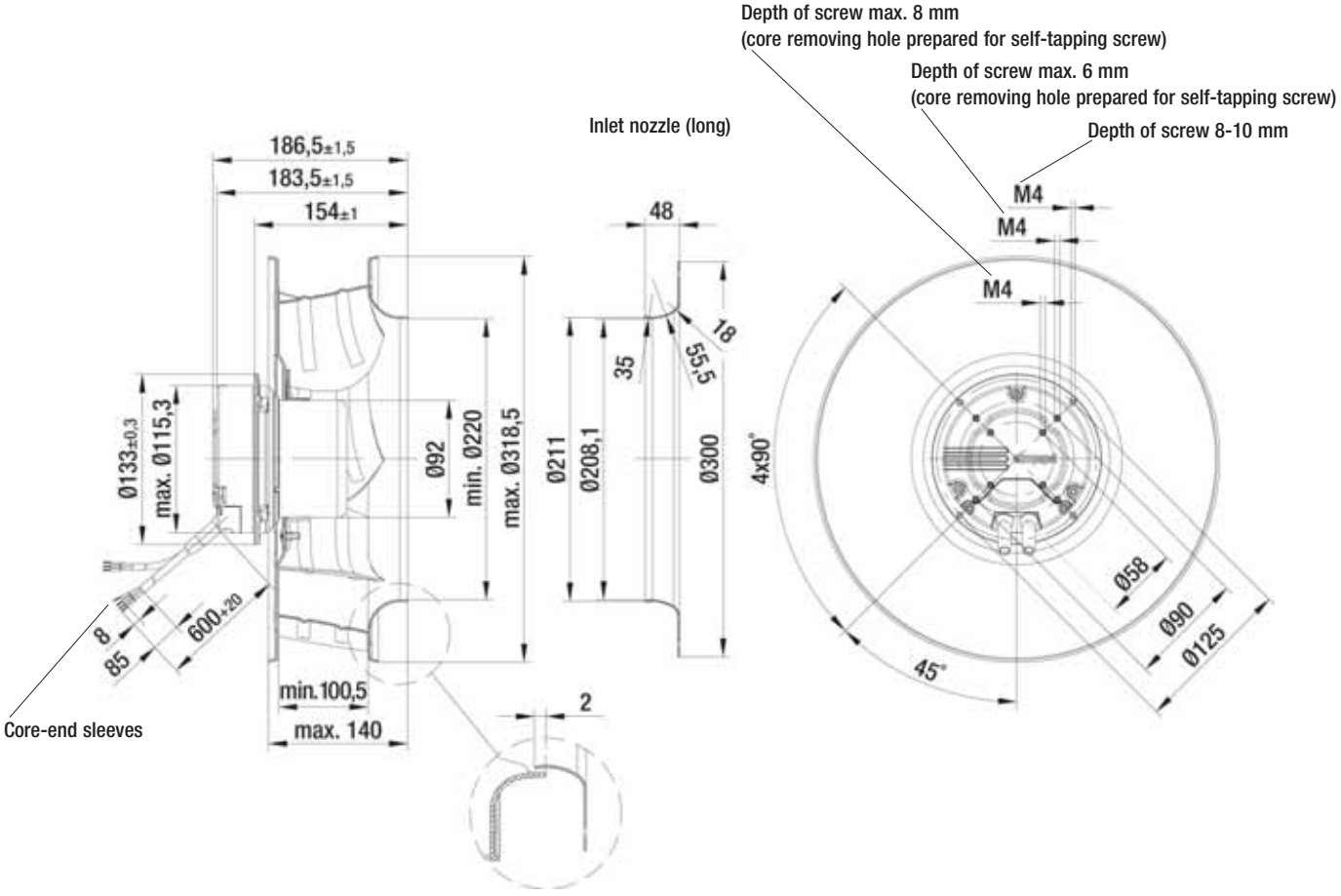
	n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1	1770	170	1.25	65	—
Ⓐ 2	1570	170	1.30	60	59
Ⓐ 3	1510	167	1.30	58	65
Ⓐ 4	1630	169	1.20	62	49
Ⓐ 5	1300	73	0.60	56	—
Ⓐ 6	1270	88	0.70	54	59
Ⓐ 7	1250	100	0.80	54	65
Ⓐ 8	1280	84	0.70	56	48
Ⓐ 9	930	29	0.30	48	—
Ⓐ 10	910	37	0.30	45	56
Ⓐ 11	900	40	0.35	45	67
Ⓐ 12	910	34	0.30	46	47

ebmpapst

- **Technical features:**
  - PFC (passive)
  - Control input 0-10 VDC / PWM
  - Output 10 VDC max. 1.1 mA
  - Tach output
  - Over-temperature protected electronics / motor
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-1
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 60950-1
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 60335-1, EN 61800-5-1, EN 60950-1, CE
- **Approvals:** UL, CSA; CCC, GOST are applied for



Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle (long)	Inlet nozzle (short)
R3G 310-AP52 -01	3.2	31050-2-4013	31051-2-4013



EC centrifugal fans and modules

backward curved, 3-D, Ø 310

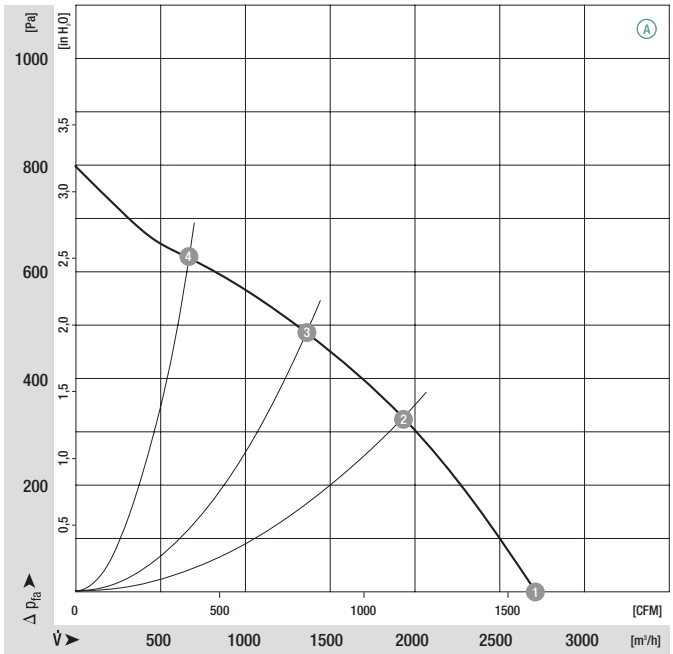
- **Material:** Support bracket: Steel, coated in black
  Support plate: Sheet aluminium, spacer profiles: Aluminium
  Impeller: Sheet aluminium, laser-welded
  Rotor: Coated in black
  Electronics enclosure: Die-cast aluminium
- **Number of blades:** 6
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 54
- **Insulation class:** "B"
- **Mounting position:** Shaft horizontal or rotor on top; rotor on bottom on request
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage range	Frequency	Speed/rpm	Max. power input (1)	Max. current draw (1)	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VAC**	**Hz**	**rpm**	**W**	**A**	**°C**	p. 605
***3G 310**	M3G 084-DF	Ⓐ	1~ 100-130	50/60	2300	350	4.20	-25 to +60	K1)

subject to alterations

(1) Nominal data in operating point with maximum load and 115 VAC

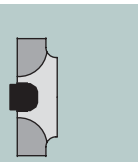
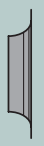
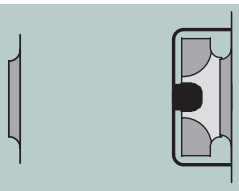
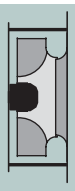
Curves (established with long inlet nozzle)



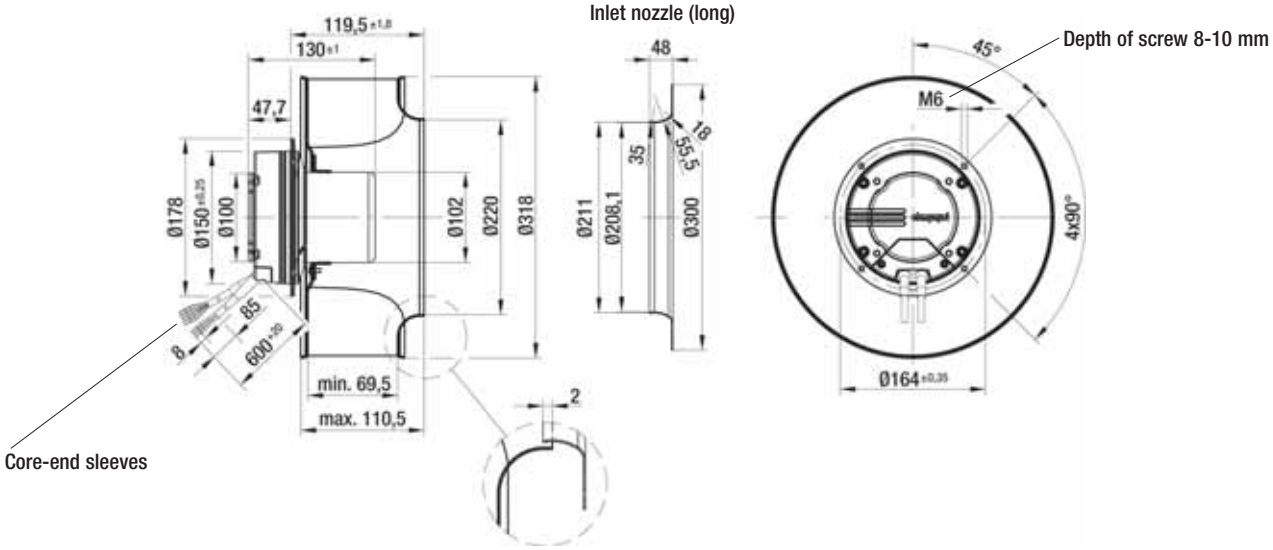
	n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1	2300	262	3.30	75	—
Ⓐ 2	2190	338	4.10	69	64
Ⓐ 3	2180	350	4.20	71	67
Ⓐ 4	2260	307	3.70	70	52

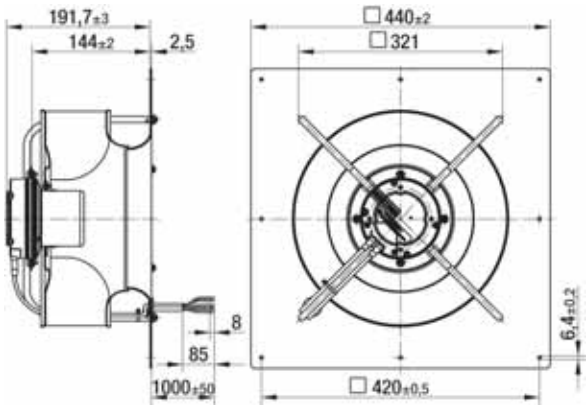
ebmpapst

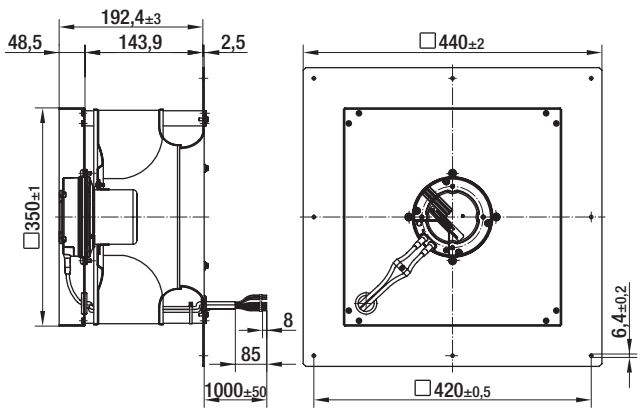
- **Technical features:**
  - PFC (passive)
  - Control input 0-10 VDC / PWM
  - Output 10 VDC max. 1.1 mA
  - Alarm relay
  - Over-temperature protected electronics / motor
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-2
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 61800-5-1
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 61800-5-1, CE
- **Approvals:** VDE, UL, CSA, CCC, GOST are applied for

Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle (long)	Inlet nozzle (short)	Centrifugal module w. support bracket	Mass of centrifugal module with support bracket kg	Centrifugal module with support plate	Mass of centrifugal module with support plate kg
R3G 310-AJ23 -81	4.4	31050-2-4013	31051-2-4013	**K3G 310-AJ23 -82**	7.3	**K3G 310-AJ23 -81**	7.0







Inlet nozzle p. 550 f.
Guard grille p. 553
Electr. connection p. 605

EC centrifugal fans and modules

backward curved, 3-D, Ø 310

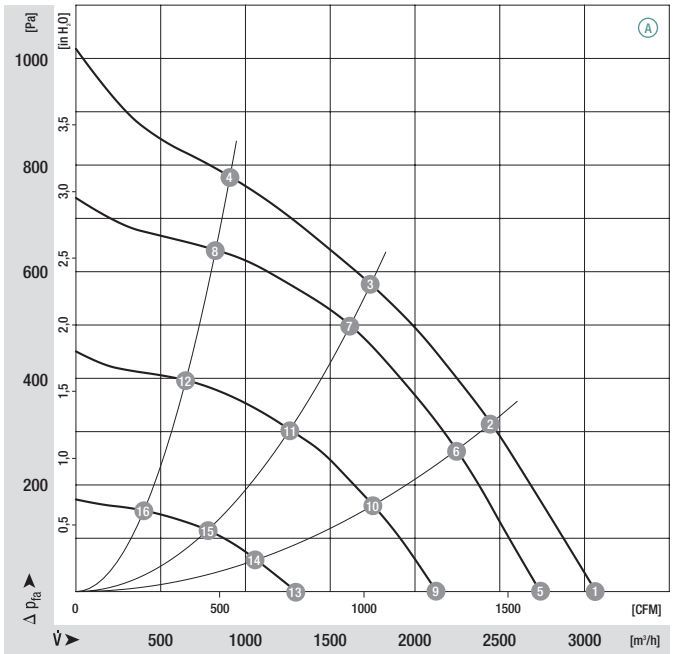
- **Material:** Support bracket: Steel, coated in black
  Support plate: Sheet aluminium, spacer profiles: Aluminium
  Impeller: Sheet aluminium, laser-welded
  Rotor: Coated in black
  Electronics enclosure: Die-cast aluminium
- **Number of blades:** 6
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 54
- **Insulation class:** "B"
- **Mounting position:** Shaft horizontal or rotor on top; rotor on bottom on request
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage range	Frequency	Speed/rpm	Max. power input (1)	Max. current draw (1)	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VAC**	**Hz**	**rpm**	**W**	**A**	**°C**	p. 605
***3G 310**	M3G 084-DF	Ⓐ	1~ 200-277	50/60	2590	505	3.10	-25 to +60	K1)

subject to alterations

(1) Nominal data in operating point with maximum load and 230 VAC

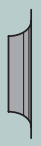
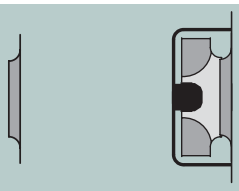
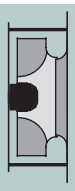
Curves (established with long inlet nozzle)



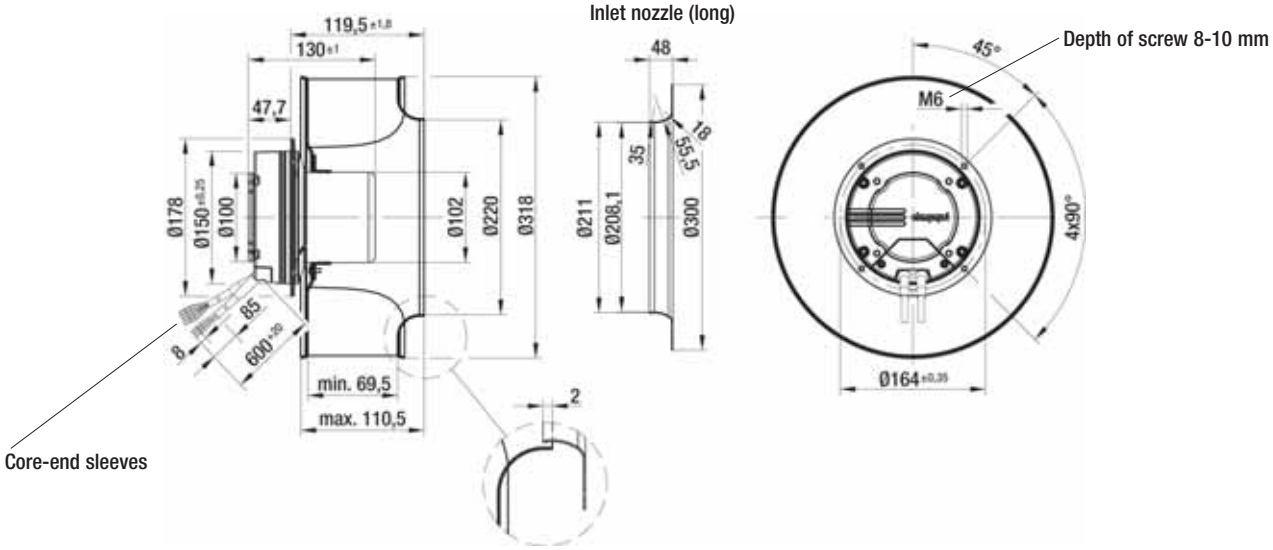
		n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ	1	2590	380	2.30	78	—
Ⓐ	2	2500	470	2.80	74	63
Ⓐ	3	2470	505	3.00	73	67
Ⓐ	4	2530	460	2.70	74	52
Ⓐ	5	2320	274	1.60	75	—
Ⓐ	6	2320	370	2.20	71	63
Ⓐ	7	2320	410	2.40	71	67
Ⓐ	8	2320	362	2.10	71	52
Ⓐ	9	1810	137	0.90	69	—
Ⓐ	10	1810	175	1.10	65	63
Ⓐ	11	1810	198	1.20	64	67
Ⓐ	12	1810	180	1.10	64	52
Ⓐ	13	1110	42	0.30	55	—
Ⓐ	14	1110	54	0.40	52	63
Ⓐ	15	1110	57	0.40	52	67
Ⓐ	16	1110	54	0.40	52	52

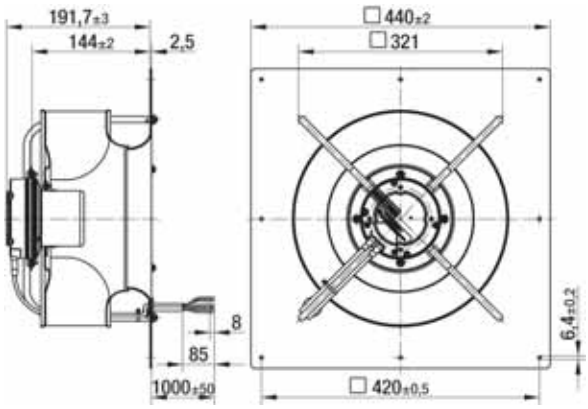
ebmpapst

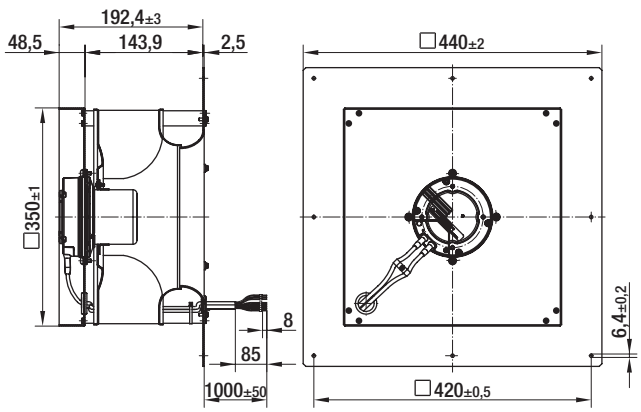
- **Technical features:**
  - PFC (passive)
  - Control input 0-10 VDC / PWM
  - Output 10 VDC max. 1.1 mA
  - Alarm relay
  - Over-temperature protected electronics / motor
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-2
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 61800-5-1
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 61800-5-1, CE
- **Approvals:** UL, CSA; VDE, CCC, GOST are applied for

Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle (long)	Inlet nozzle (short)	Centrifugal module w. support bracket	Mass of centrifugal module with support bracket kg	Centrifugal module with support plate	Mass of centrifugal module with support plate kg
R3G 310-AJ40 -71	4.4	31050-2-4013	31051-2-4013	**K3G 310-AJ40 -72**	7.3	**K3G 310-AJ40 -71**	7.0







Inlet nozzle p. 550 f.
Guard grille p. 553
Electr. connection p. 605

EC centrifugal fans and modules

backward curved, 3-D, Ø 310

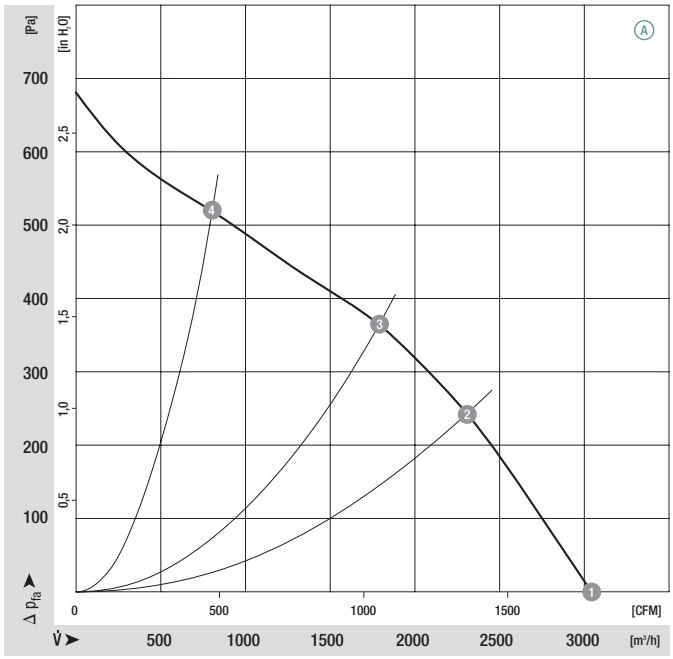
- **Material:** Support bracket: Steel, coated in black
  Support plate: Sheet aluminium, spacer profiles: Aluminium
  Impeller: Sheet aluminium, laser-welded
  Rotor: Coated in black
  Electronics enclosure: Die-cast aluminium
- **Number of blades:** 6
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 54
- **Insulation class:** "B"
- **Mounting position:** Shaft horizontal or rotor on top; rotor on bottom on request
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage range	Frequency	Speed/rpm	Max. power input (1)	Max. current draw (1)	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VAC**	**Hz**	**rpm**	**W**	**A**	**°C**	p. 605
***3G 310**	M3G 084-DF	Ⓐ	1~ 100-130	50/60	2080	350	4.20	-25 to +60	K1)

subject to alterations

(1) Nominal data in operating point with maximum load and 115 VAC

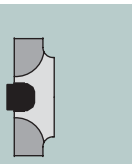
Curves (established with long inlet nozzle)



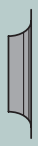
	n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1	2080	274	3.40	71	—
Ⓐ 2	1980	338	4.10	68	63
Ⓐ 3	1950	350	4.20	66	67
Ⓐ 4	2035	301	3.70	69	52

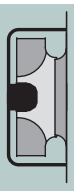
ebmpapst

- **Technical features:**
  - PFC (passive)
  - Control input 0-10 VDC / PWM
  - Output 10 VDC max. 1.1 mA
  - Alarm relay
  - Over-temperature protected electronics / motor
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-2
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 61800-5-1
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 61800-5-1, CE
- **Approvals:** VDE, UL, CSA, CCC, GOST are applied for

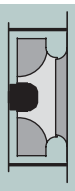


Mass of centrifugal fan



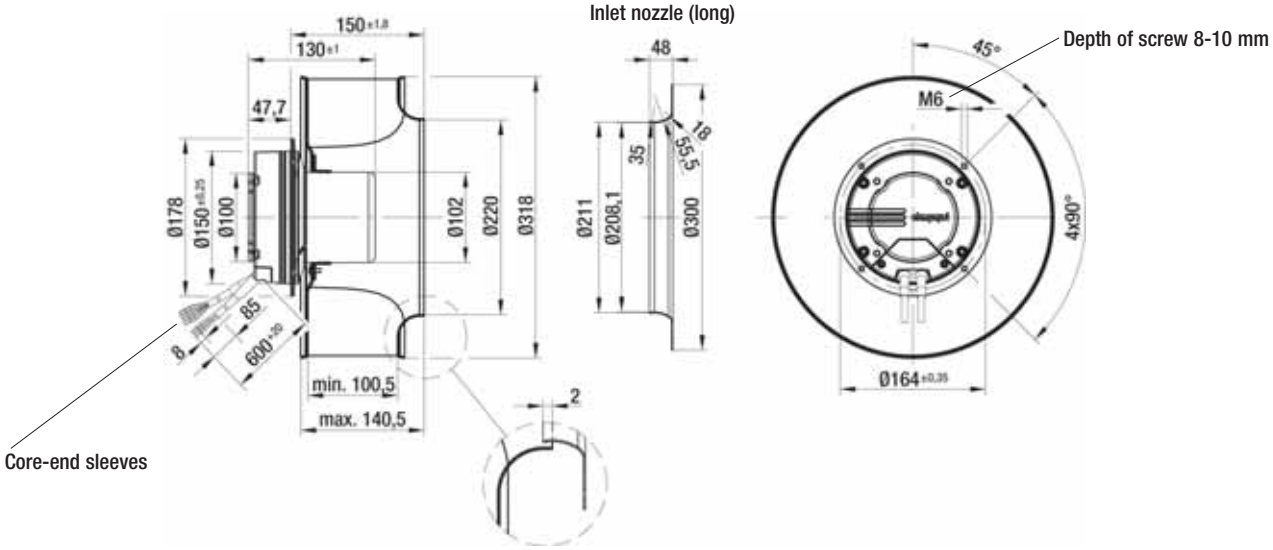


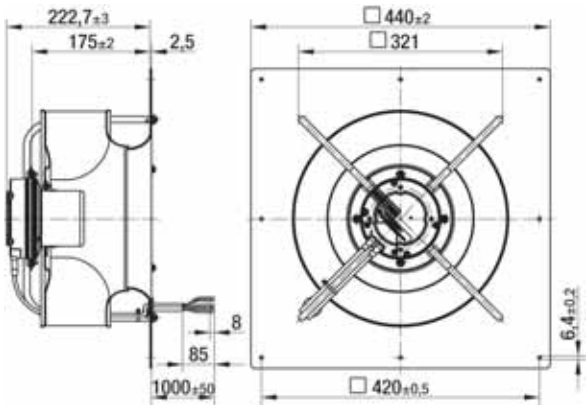
Mass of centrifugal module with support bracket

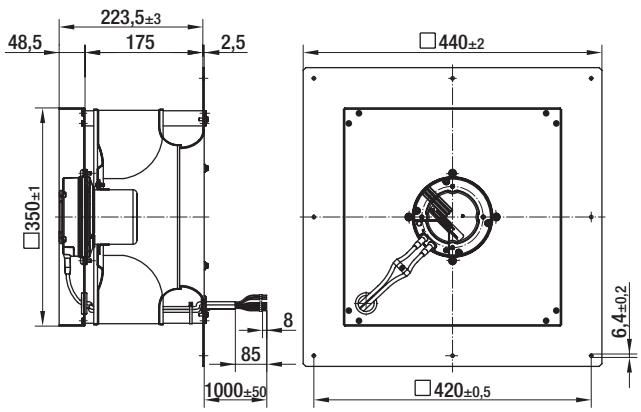


Mass of centrifugal module with support plate

Centrifugal fan	kg	Inlet nozzle (long)	Inlet nozzle (short)	Centrifugal module w. support bracket	kg	Centrifugal module with support plate	kg
R3G 310-AI01 -81	4.5	31050-2-4013	31051-2-4013	**K3G 310-AI01 -82**	7.6	**K3G 310-AI01 -81**	7.1







Inlet nozzle p. 550 f.
Guard grille p. 553
Electr. connection p. 605

EC centrifugal fans and modules

backward curved, 3-D, Ø 310

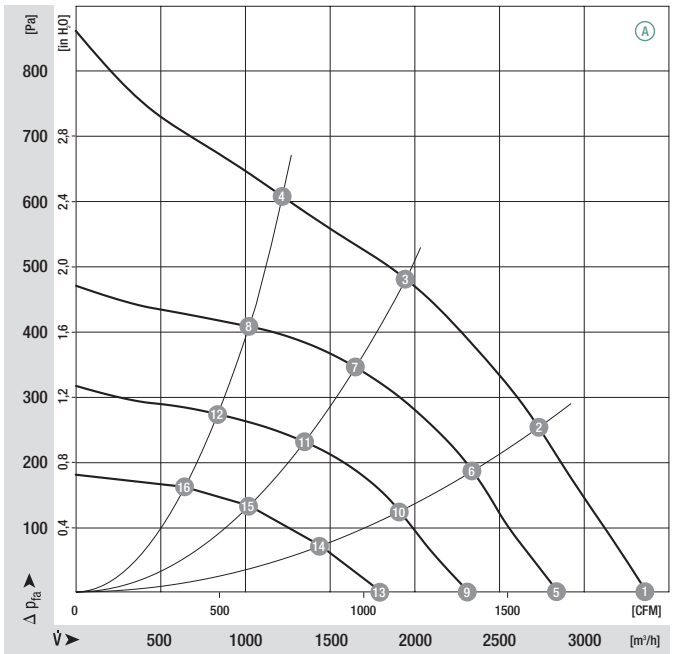
- **Material:** Support bracket: Steel, coated in black
  Support plate: Sheet aluminium, spacer profiles: Aluminium
  Impeller: Sheet aluminium, laser-welded
  Rotor: Coated in black
  Electronics enclosure: Die-cast aluminium
- **Number of blades:** 6
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 54
- **Insulation class:** "B"
- **Mounting position:** Shaft horizontal or rotor on top; rotor on bottom on request
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage range	Frequency	Speed/rpm	Max. power input (1)	Max. current draw (1)	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VAC**	**Hz**	**rpm**	**W**	**A**	**°C**	p. 605
***3G 310**	M3G 084-DF	Ⓐ	1~ 200-277	50/60	2300	480	3.10	-25 to +60	K1)

subject to alterations

(1) Nominal data in operating point with maximum load and 230 VAC

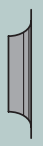
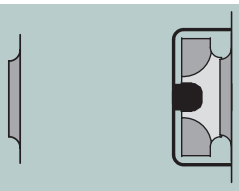
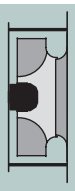
Curves (established with long inlet nozzle)



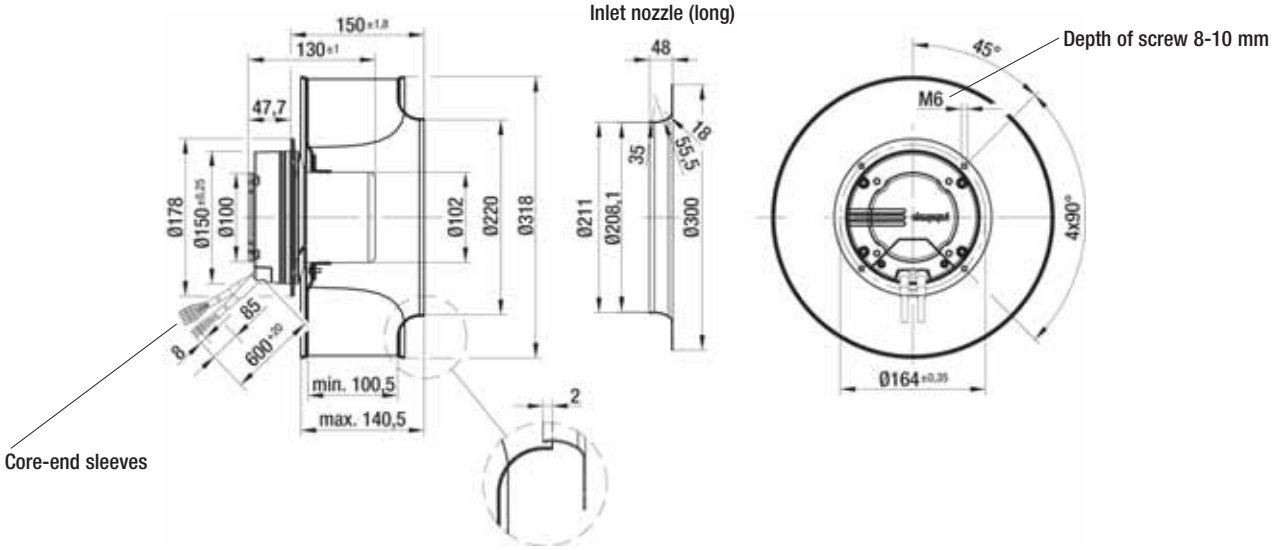
	n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1	2300	370	2.35	75	—
Ⓐ 2	2215	445	2.85	71	62
Ⓐ 3	2170	480	3.10	68	67
Ⓐ 4	2220	448	2.85	70	56
Ⓐ 5	1900	210	1.30	69	—
Ⓐ 6	1900	284	1.70	66	62
Ⓐ 7	1900	312	1.80	63	67
Ⓐ 8	1900	278	1.70	66	56
Ⓐ 9	1560	124	0.80	63	—
Ⓐ 10	1560	158	1.00	61	62
Ⓐ 11	1560	175	1.10	57	67
Ⓐ 12	1560	158	1.00	61	56
Ⓐ 13	1200	57	0.40	56	—
Ⓐ 14	1200	73	0.50	54	62
Ⓐ 15	1200	80	0.50	53	67
Ⓐ 16	1200	70	0.50	53	56

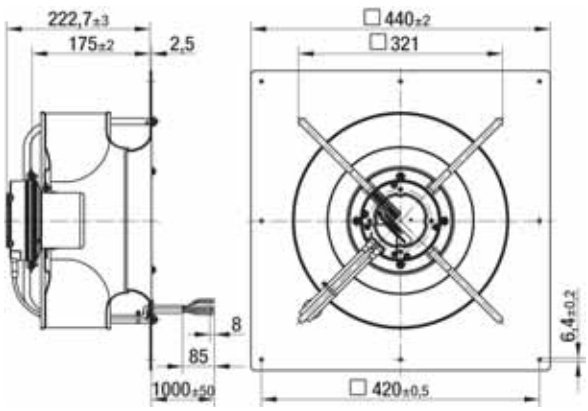
ebmpapst

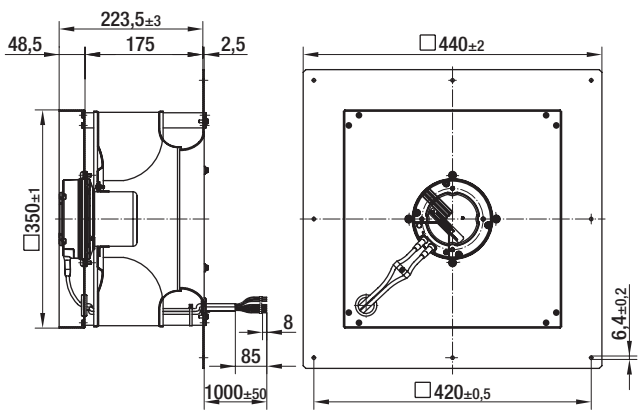
- **Technical features:**
  - PFC (passive)
  - Control input 0-10 VDC / PWM
  - Output 10 VDC max. 1.1 mA
  - Alarm relay
  - Over-temperature protected electronics / motor
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-2
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 61800-5-1
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 61800-5-1, CE
- **Approvals:** UL, CSA; VDE, CCC, GOST are applied for

Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle (long)	Inlet nozzle (short)	Centrifugal module w. support bracket	Mass of centrifugal module with support bracket kg	Centrifugal module with support plate	Mass of centrifugal module with support plate kg
R3G 310-AI39 -71	4.5	31050-2-4013	31051-2-4013	**K3G 310-AI39 -72**	7.6	**K3G 310-AI39 -71**	7.1







Inlet nozzle p. 550 f.
Guard grille p. 553
Electr. connection p. 605

EC centrifugal fans and modules

backward curved, 3-D, Ø 355

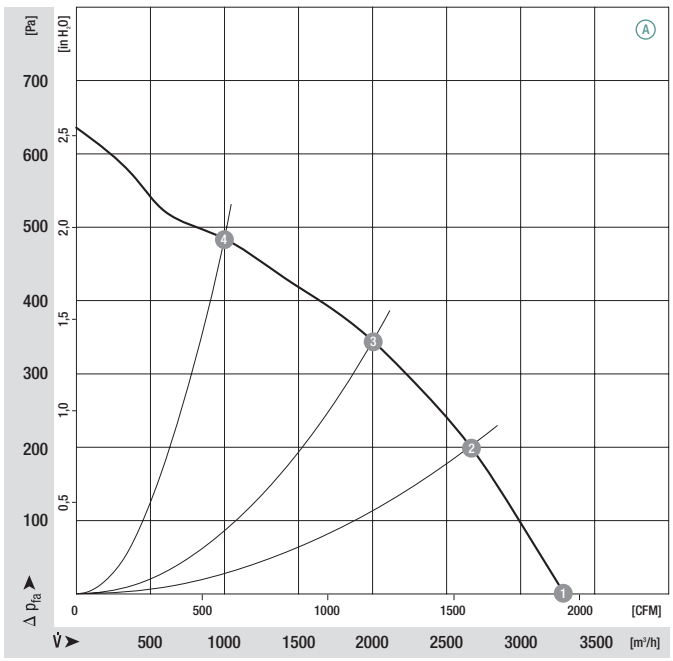
- **Material:** Support bracket: Steel, coated in black
  Support plate: Sheet aluminium, spacer profiles: Aluminium
  Impeller: Sheet aluminium, laser-welded
  Rotor: Coated in black
  Electronics enclosure: Die-cast aluminium
- **Number of blades:** 6
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 54
- **Insulation class:** "B"
- **Mounting position:** Shaft horizontal or rotor on top; rotor on bottom on request
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage range	Frequency	Speed/rpm	Max. power input (1)	Max. current draw (1)	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VAC**	**Hz**	**rpm**	**W**	**A**	**°C**	p. 605
***3G 355**	M3G 084-FA	Ⓐ	1~ 100-130	50/60	1730	355	4.10	-25 to +60	K1)

subject to alterations

(1) Nominal data in operating point with maximum load and 115 VAC

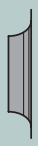
Curves (established with long inlet nozzle)

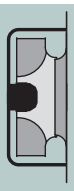
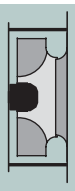


	n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1	1730	278	3.20	74	—
Ⓐ 2	1675	338	3.90	69	58
Ⓐ 3	1650	355	4.20	66	70
Ⓐ 4	1700	310	3.60	68	60

ebmpapst

- **Technical features:**
  - PFC (passive)
  - Control input 0-10 VDC / PWM
  - Output 10 VDC max. 1.1 mA
  - Alarm relay
  - Over-temperature protected electronics / motor
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-2
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 61800-5-1
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 61800-5-1, CE
- **Approvals:** UL, CSA; VDE, CCC, GOST are applied for



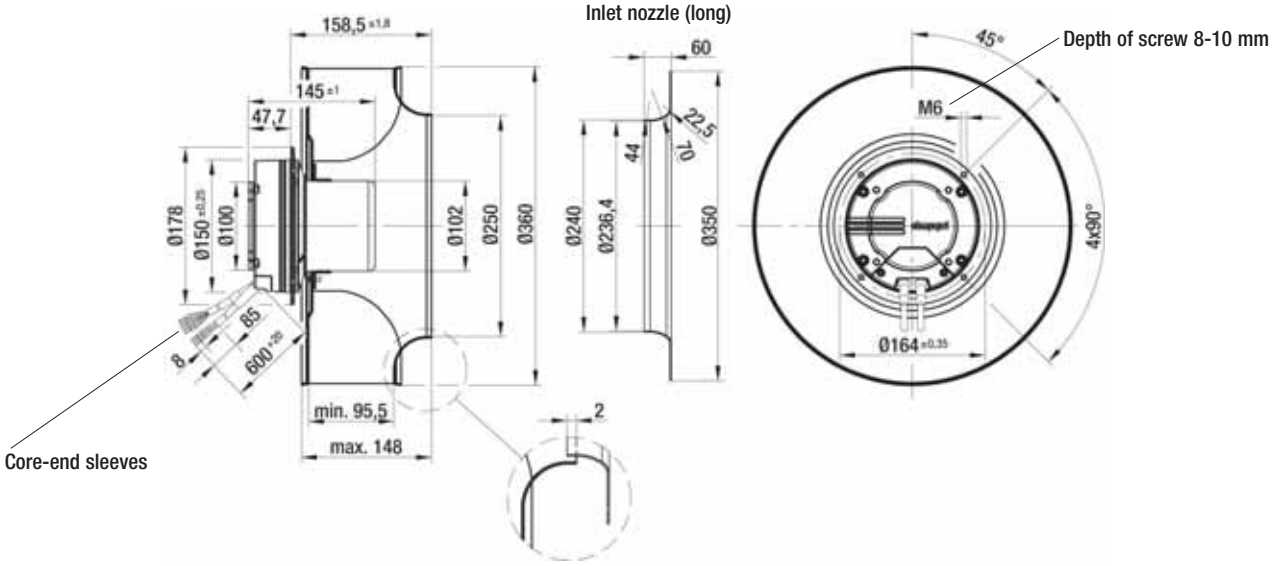



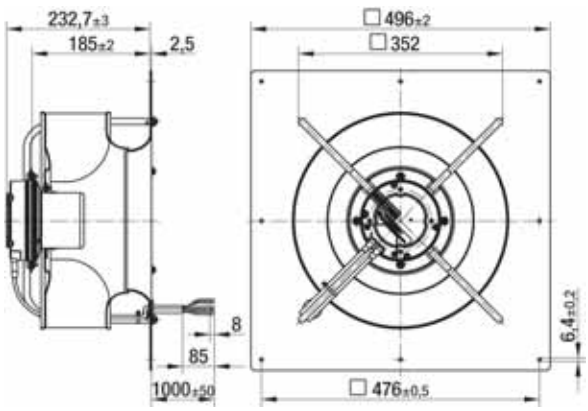
Centrifugal fan	kg	Inlet nozzle (long)	Inlet nozzle (short)	Centrifugal module w. support bracket	kg	Centrifugal module with support plate	kg
R3G 355-AM36-81	5.7	35560-2-4013	35561-2-4013	**K3G 355-AM36-82**	9.2	**K3G 355-AM36-81**	8.8

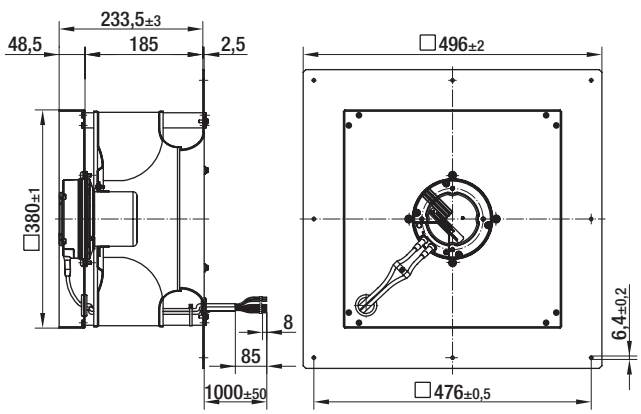
Mass of centrifugal fan

Mass of centrifugal module with support bracket

Mass of centrifugal module with support plate







Inlet nozzle p. 550 f.
Electr. connection p. 605

EC centrifugal fans and modules

backward curved, 3-D, Ø 355

- **Material:** Support bracket: Steel, coated in black
  Support plate: Sheet aluminium, spacer profiles: Aluminium
  Impeller: Sheet aluminium, laser-welded
  Rotor: Coated in black
  Electronics enclosure: Die-cast aluminium
- **Number of blades:** 6
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 54
- **Insulation class:** "B"
- **Mounting position:** Shaft horizontal or rotor on top; rotor on bottom on request
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

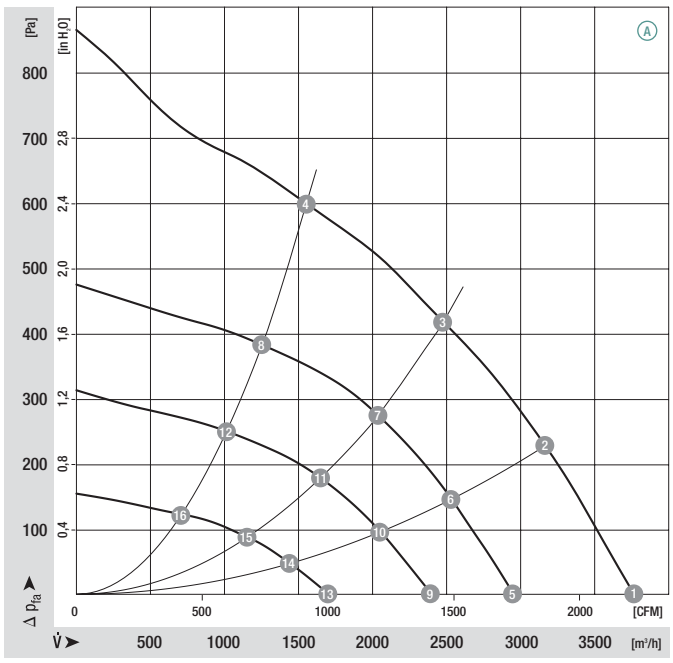
Nominal data

Type	Motor	Curve	Nominal voltage range	Frequency	Speed/rpm	Max. power input (1)	Max. current draw (1)	Perm. amb. temp.	Electr. connection
			VAC	Hz	rpm	W	A	°C	p. 605
*3G 355	M3G 084-FA	Ⓐ	1~ 200-277	50/60	1970	500	3.15	-25 to +60	K1)

subject to alterations

(1) Nominal data in operating point with maximum load and 230 VAC

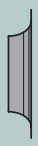
Curves (established with long inlet nozzle)

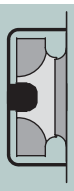
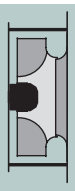


	n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1	1970	390	2.50	77	—
Ⓐ 2	1920	469	2.95	73	56
Ⓐ 3	1880	500	3.15	69	70
Ⓐ 4	1925	476	3.00	71	62
Ⓐ 5	1580	200	1.20	71	—
Ⓐ 6	1580	260	1.50	67	56
Ⓐ 7	1580	290	1.70	64	70
Ⓐ 8	1580	265	1.60	64	62
Ⓐ 9	1280	110	0.70	65	—
Ⓐ 10	1280	144	0.90	61	56
Ⓐ 11	1280	157	1.00	58	70
Ⓐ 12	1280	132	0.80	59	62
Ⓐ 13	910	44	0.30	55	—
Ⓐ 14	910	57	0.40	52	56
Ⓐ 15	910	62	0.40	49	70
Ⓐ 16	910	48	0.40	50	62

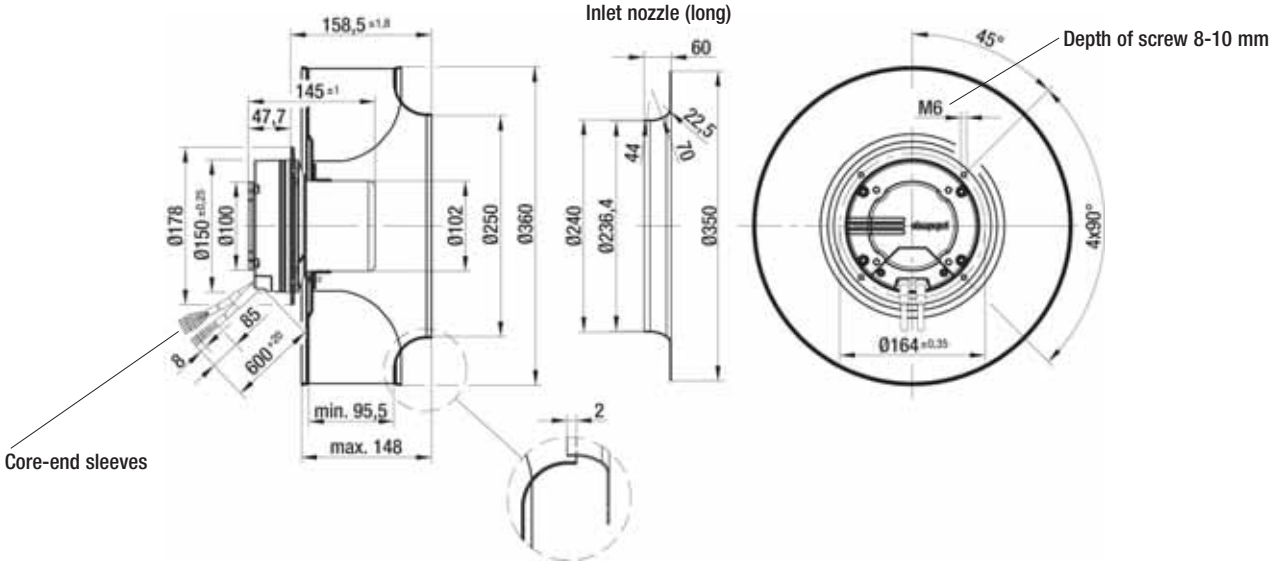
ebmpapst

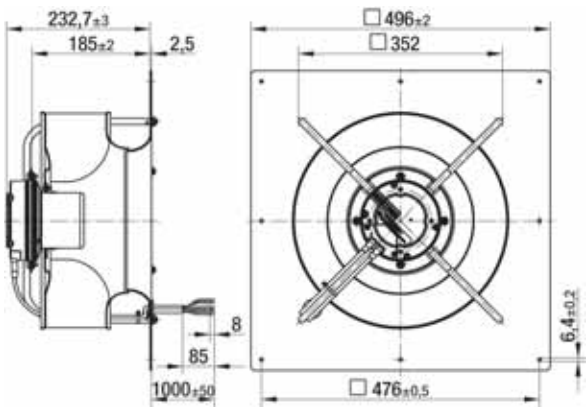
- **Technical features:**
  - PFC (passive)
  - Control input 0-10 VDC / PWM
  - Output 10 VDC max. 1.1 mA
  - Alarm relay
  - Over-temperature protected electronics / motor
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-2
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 61800-5-1
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 61800-5-1, CE
- **Approvals:** UL, CSA; VDE, CCC, GOST are applied for

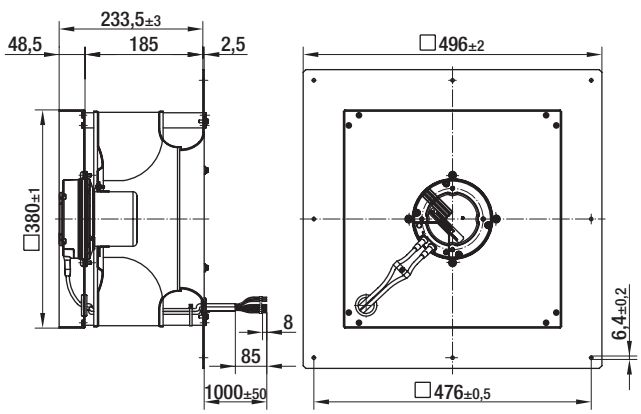


Centrifugal fan	kg	Inlet nozzle (long)	Inlet nozzle (short)	Centrifugal module w. support bracket	kg	Centrifugal module with support plate	kg
R3G 355-AM29-71	5.7	35560-2-4013	35561-2-4013	**K3G 355-AM29-72**	9.2	**K3G 355-AM29-71**	8.8







EC centrifugal fans and modules

backward curved, 3-D, Ø 355

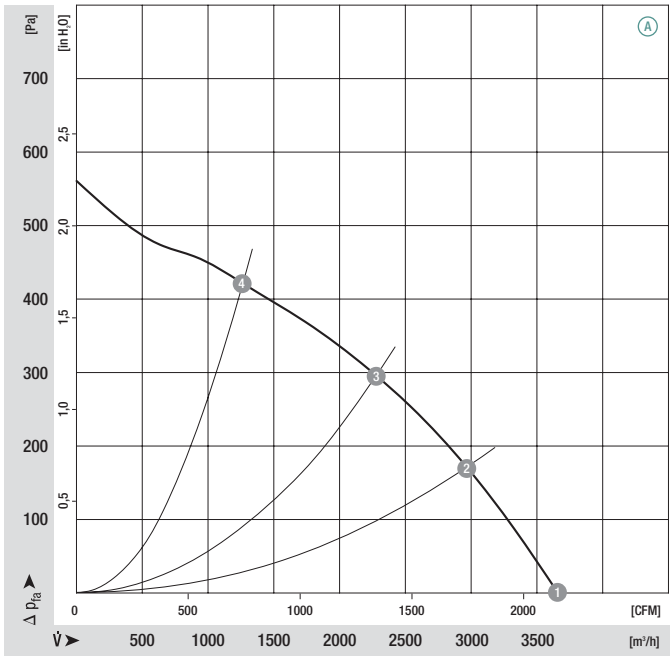
- **Material:** Support bracket: Steel, coated in black
  Support plate: Sheet aluminium, spacer profiles: Aluminium
  Impeller: Sheet aluminium, laser-welded
  Rotor: Coated in black
  Electronics enclosure: Die-cast aluminium
- **Number of blades:** 6
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 54
- **Insulation class:** "B"
- **Mounting position:** Shaft horizontal or rotor on top; rotor on bottom on request
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage range	Frequency	Speed/rpm	Max. power input (1)	Max. current draw (1)	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VAC**	**Hz**	**rpm**	**W**	**A**	**°C**	p. 605
***3G 355**	M3G 084-FA	Ⓐ	1~ 100-130	50/60	1630	350	4.20	-25 to +60	K1)

subject to alterations

(1) Nominal data in operating point with maximum load and 115 VAC

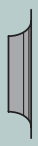
Curves (established with long inlet nozzle)

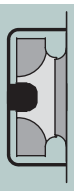
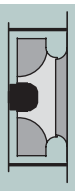


	n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1	1630	283	3.50	72	—
Ⓐ 2	1580	344	4.00	68	58
Ⓐ 3	1570	350	4.20	64	68
Ⓐ 4	1605	319	3.90	67	57

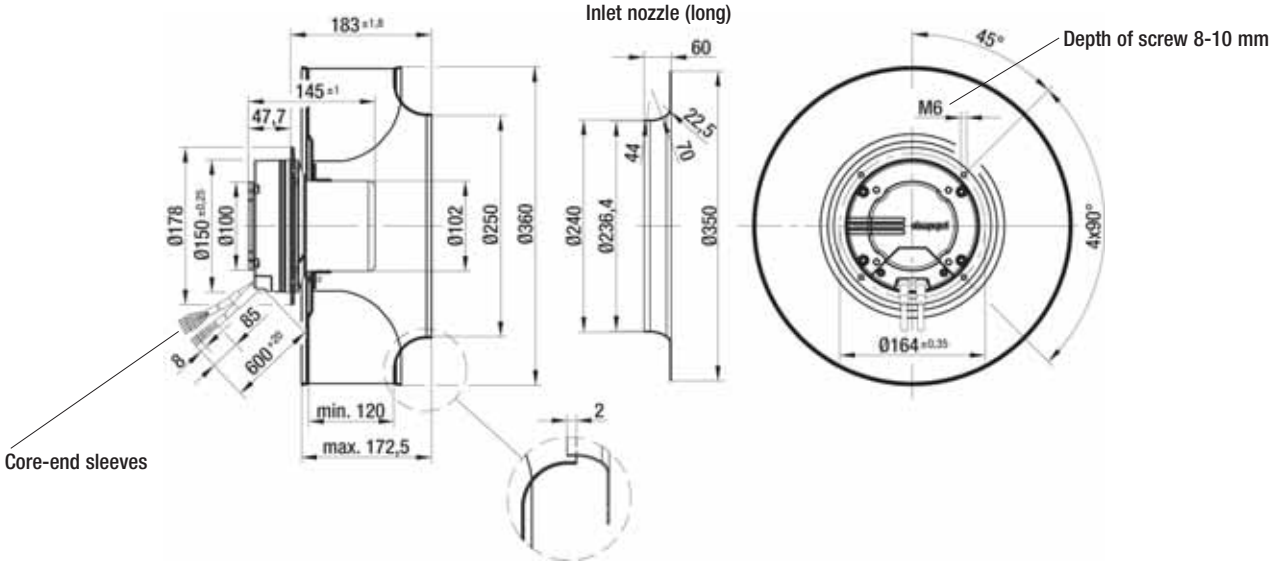
ebmpapst

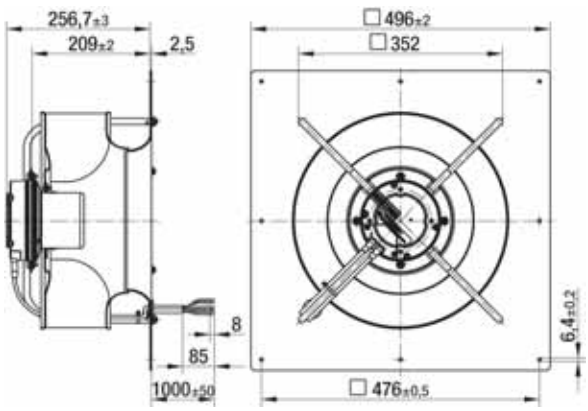
- **Technical features:**
  - PFC (passive)
  - Control input 0-10 VDC / PWM
  - Output 10 VDC max. 1.1 mA
  - Alarm relay
  - Over-temperature protected electronics / motor
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-2
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 61800-5-1
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 61800-5-1, CE
- **Approvals:** UL, CSA, VDE, CCC, GOST are applied for

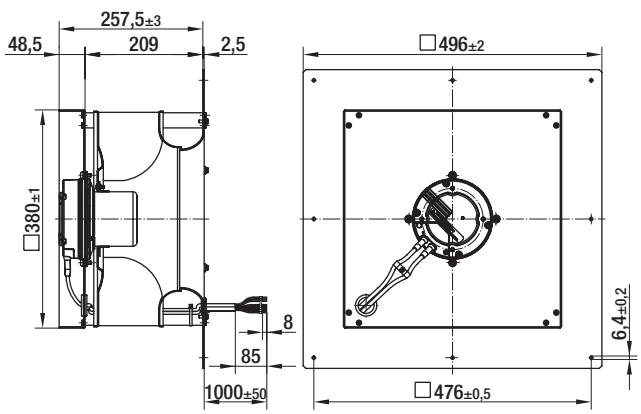


Centrifugal fan	kg	Inlet nozzle (long)	Inlet nozzle (short)	Centrifugal module w. support bracket	kg	Centrifugal module with support plate	kg
R3G 355-AN37 -81	5.8	35560-2-4013	35561-2-4013	**K3G 355-AN37 -82**	10.0	**K3G 355-AN37 -81**	9.0







EC centrifugal fans and modules

backward curved, 3-D, Ø 355

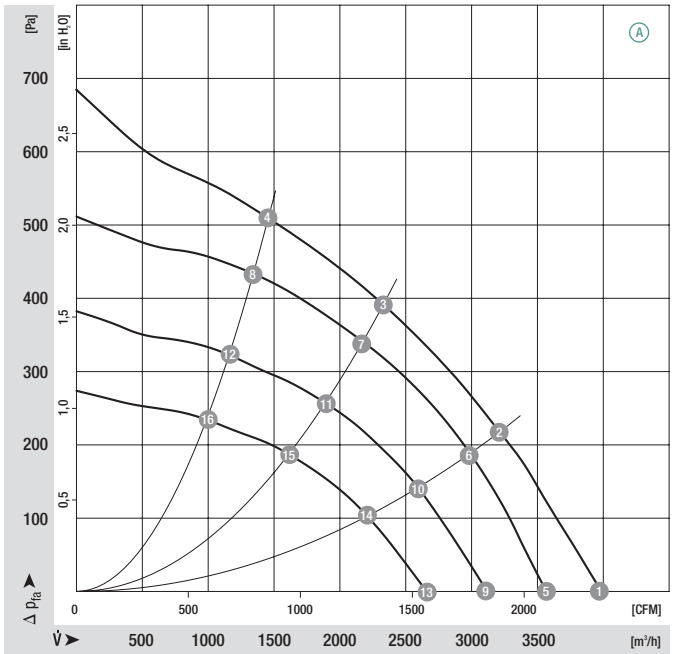
- **Material:** Support bracket: Steel, coated in black
  Support plate: Sheet aluminium, spacer profiles: Aluminium
  Impeller: Sheet aluminium, laser-welded
  Rotor: Coated in black
  Electronics enclosure: Die-cast aluminium
- **Number of blades:** 6
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 54
- **Insulation class:** "B"
- **Mounting position:** Shaft horizontal or rotor on top; rotor on bottom on request
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage range	Frequency	Speed/rpm	Max. power input (1)	Max. current draw (1)	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VAC**	**Hz**	**rpm**	**W**	**A**	**°C**	p. 605
***3G 355**	M3G 084-FA	Ⓐ	1~ 200-277	50/60	1770	450	2.90	-25 to +60	K1)

subject to alterations

(1) Nominal data in operating point with maximum load and 230 VAC

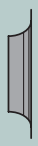
Curves (established with long inlet nozzle)

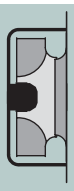
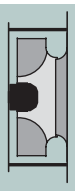


	n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1	1770	362	2.30	73	—
Ⓐ 2	1720	434	2.75	68	58
Ⓐ 3	1710	450	2.90	64	68
Ⓐ 4	1745	412	2.60	67	57
Ⓐ 5	1620	270	1.60	73	—
Ⓐ 6	1620	360	2.10	67	58
Ⓐ 7	1620	375	2.20	63	68
Ⓐ 8	1620	335	2.00	65	57
Ⓐ 9	1400	182	1.10	67	—
Ⓐ 10	1400	235	1.40	64	58
Ⓐ 11	1400	247	1.50	59	68
Ⓐ 12	1400	218	1.30	62	57
Ⓐ 13	1200	120	0.80	62	—
Ⓐ 14	1200	152	1.00	59	58
Ⓐ 15	1200	160	1.00	56	68
Ⓐ 16	1200	140	0.90	57	57

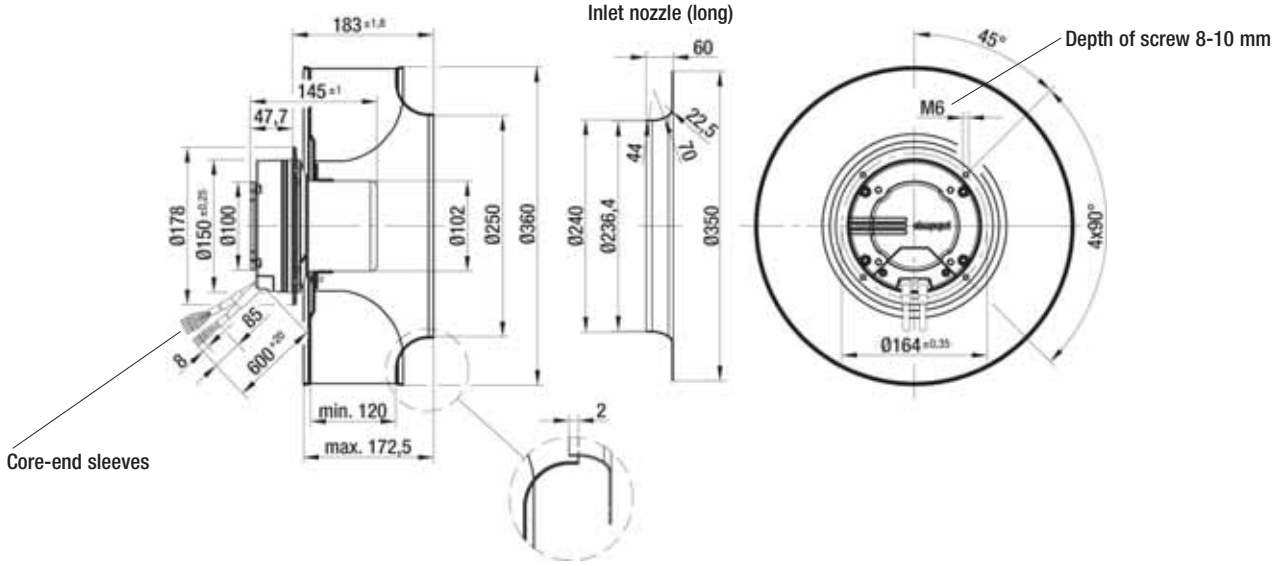
ebmpapst

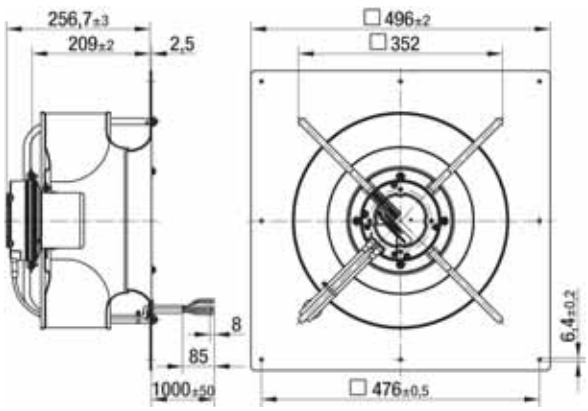
- **Technical features:**
  - PFC (passive)
  - Control input 0-10 VDC / PWM
  - Output 10 VDC max. 1.1 mA
  - Alarm relay
  - Over-temperature protected electronics / motor
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-2
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 61800-5-1
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 61800-5-1, CE
- **Approvals:** UL, CSA; VDE, CCC, GOST are applied for

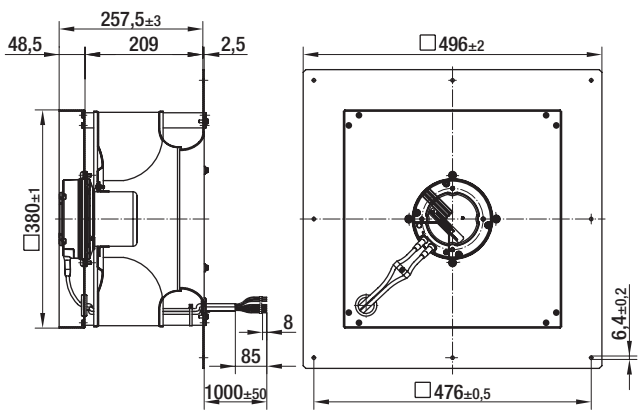


Centrifugal fan	kg	Inlet nozzle (long)	Inlet nozzle (short)	Centrifugal module w. support bracket	kg	Centrifugal module with support plate	kg
R3G 355-AN04 -71	5.8	35560-2-4013	35561-2-4013	**K3G 355-AN04 -72**	10.0	**K3G 355-AN04 -71**	9.0

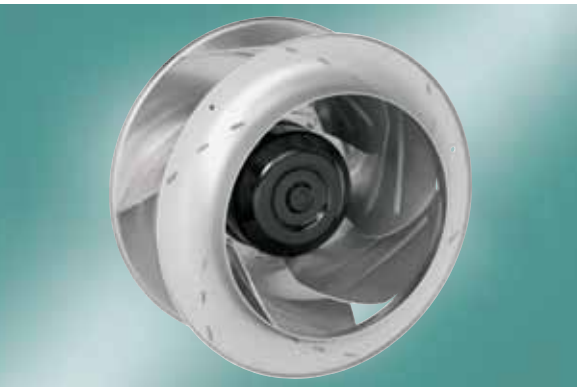






EC centrifugal fans and modules

backward curved, 3-D, Ø 355



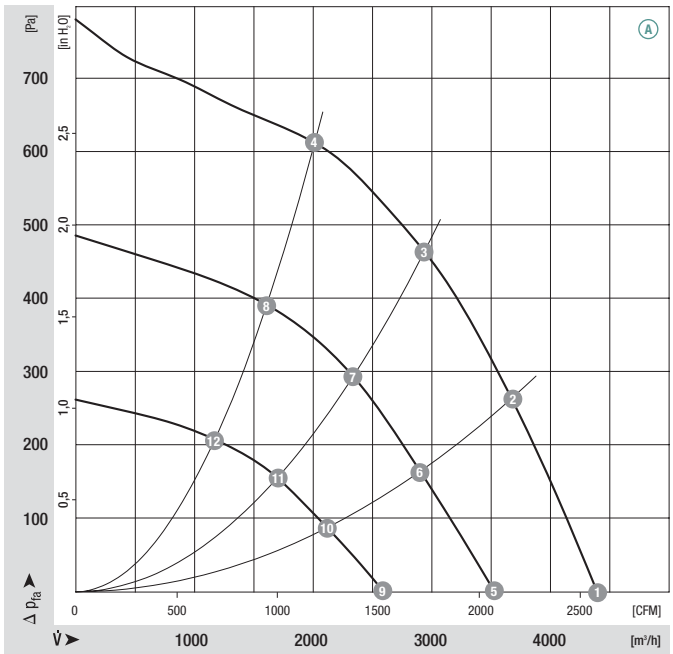
- **Material:** Support bracket: Steel, coated in black
  Support plate: Galvanised sheet steel, spacer profiles: Aluminium
  Impeller: Sheet aluminium, laser-welded
  Rotor: Coated in black
  Electronics enclosure: Die-cast aluminium
- **Number of blades:** 6
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 54 (acc. to EN 60529)
- **Insulation class:** "F"
- **Mounting position:** Shaft horizontal or rotor on bottom; rotor on top on request
- **Condensate discharges:** Rotor-side
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage range	Frequency	Speed/rpm	Max. power input (1)	Max. current draw (1)	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VAC**	**Hz**	**rpm**	**kW**	**A**	**°C**	p. 607
***3G 355**	M3G 112-EA	Ⓐ	1~ 200-277	50/60	2035	0.74	3.34	-25 to +60	L1)

subject to alterations

(1) Nominal data in operating point with maximum load and 230 VAC

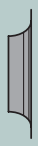
Curves (established with long inlet nozzle)

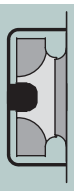
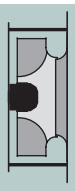


	n [rpm]	P_1 [kW]	I [A]	Lw_A [dB(A)]	η_{tL} [%]
Ⓐ 1	2035	0.57	2.60	84	—
Ⓐ 2	2035	0.69	3.10	81	52
Ⓐ 3	2035	0.74	3.30	78	64
Ⓐ 4	2035	0.70	3.10	82	61
Ⓐ 5	1585	0.28	1.30	76	—
Ⓐ 6	1580	0.32	1.50	73	52
Ⓐ 7	1580	0.34	1.60	71	71
Ⓐ 8	1580	0.33	1.50	73	68
Ⓐ 9	1150	0.12	0.60	67	—
Ⓐ 10	1145	0.14	0.70	64	54
Ⓐ 11	1140	0.15	0.70	63	74
Ⓐ 12	1145	0.14	0.60	64	72

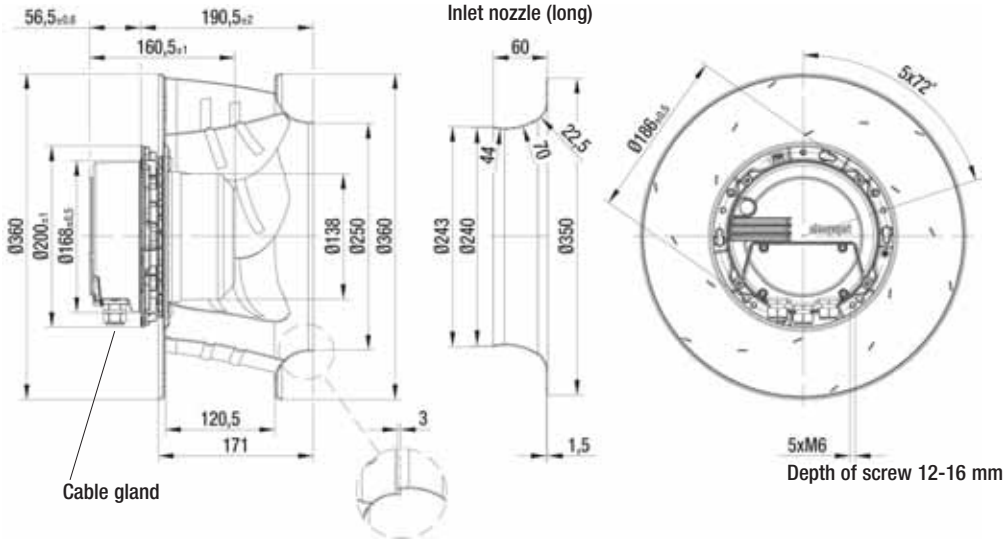
ebmpapst

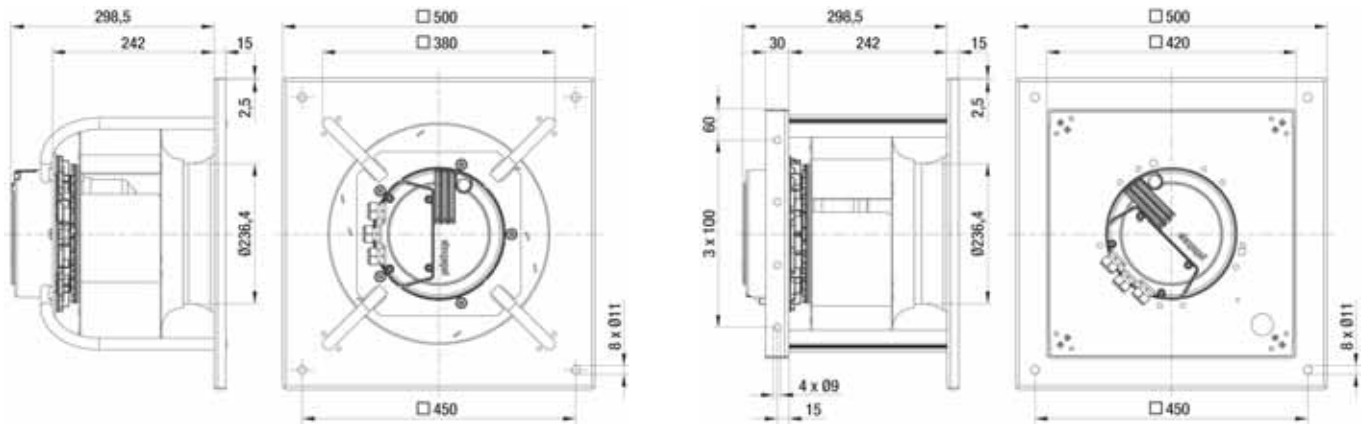
- **Technical features:**
  - PFC (active)
  - Integrated PID controller
  - Control input 0-10 VDC / PWM
  - Input for sensor 0-10 V or 4-20 mA
  - Slave output 0-10 V max. 3 mA
  - Output 20 VDC (±20 %) max. 50 mA
  - Output 10 VDC (+10 %) max. 10 mA
  - RS485 ebmBUS
  - Alarm relay
  - Line undervoltage detection
  - Motor current limitation
  - Electronics / motor overtemperature protection
  - Locked-rotor protection
  - Soft start
- **EMC:** Interference emission acc. to EN 61000-6-4 (industrial environment)
  Interference immunity acc. to EN 61000-6-2 (industrial environment)
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 61800-5-1
- **Connection leads:** Via terminal strip
- **Protection class:** I (acc. to EN 61800-5-1)
- **Product conforming to standard:** CE
- **Approvals:** VDE, UL, CSA, CCC, GOST are applied for



Centrifugal fan	kg	Inlet nozzle (long)	Inlet nozzle (short)	Centrifugal module w. support bracket	kg	Centrifugal module with support plate	kg
R3G 355-AI52 -11	7.3	35560-2-4013	35561-2-4013	**K3G 355-AI52 -12**	15.8	**K3G 355-AI52 -11**	18.6

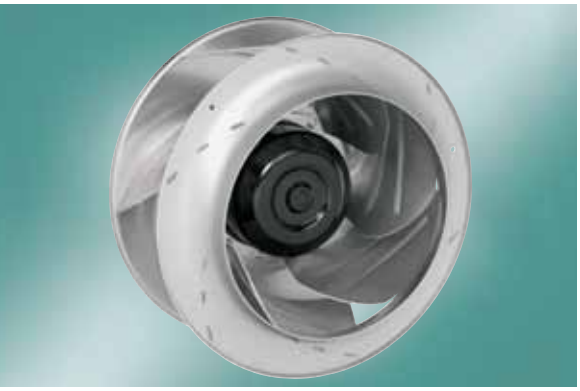




Inlet nozzle p. 550 f.
Electr. connection p. 607

EC centrifugal fans and modules

backward curved, 3-D, Ø 355



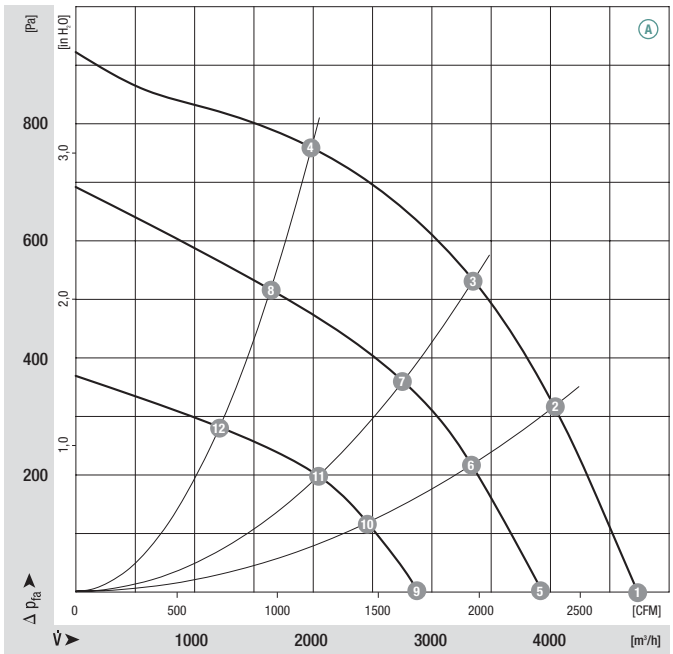
- **Material:** Support bracket: Steel, coated in black
  Support plate: Galvanised sheet steel, spacer profiles: Aluminium
  Impeller: Sheet aluminium, laser-welded
  Rotor: Coated in black
  Electronics enclosure: Die-cast aluminium
- **Number of blades:** 6
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 54 (acc. to EN 60529)
- **Insulation class:** "F"
- **Mounting position:** Shaft horizontal or rotor on bottom; rotor on top on request
- **Condensate discharges:** Rotor-side
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage range	Frequency	Speed/rpm	Max. power input (1)	Max. current draw (1)	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VAC**	**Hz**	**rpm**	**kW**	**A**	**°C**	p. 607
***3G 355**	M3G 112-EA	Ⓐ	3~ 200-240	50/60	2215	0.94	3.00	-25 to +60	L2)

subject to alterations

(1) Nominal data in operating point with maximum load and 200 VAC

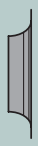
Curves (established with long inlet nozzle)

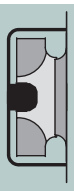
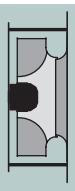


	n [rpm]	P_1 [kW]	I [A]	Lw_A [dB(A)]	η_{tL} [%]
Ⓐ 1	2205	0.70	2.50	87	—
Ⓐ 2	2215	0.88	2.80	83	48
Ⓐ 3	2215	0.94	3.00	80	59
Ⓐ 4	2215	0.85	2.70	85	53
Ⓐ 5	1825	0.38	1.50	82	—
Ⓐ 6	1805	0.47	1.70	77	52
Ⓐ 7	1790	0.49	1.80	73	65
Ⓐ 8	1800	0.46	1.90	77	58
Ⓐ 9	1335	0.17	0.70	72	—
Ⓐ 10	1315	0.20	0.80	68	57
Ⓐ 11	1315	0.21	0.90	65	69
Ⓐ 12	1310	0.19	0.80	67	60

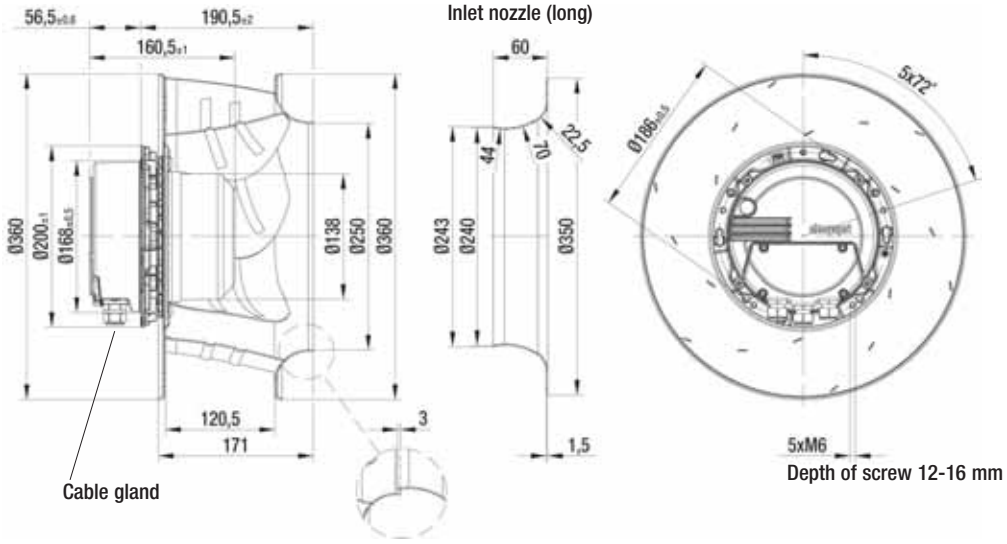
ebmpapst

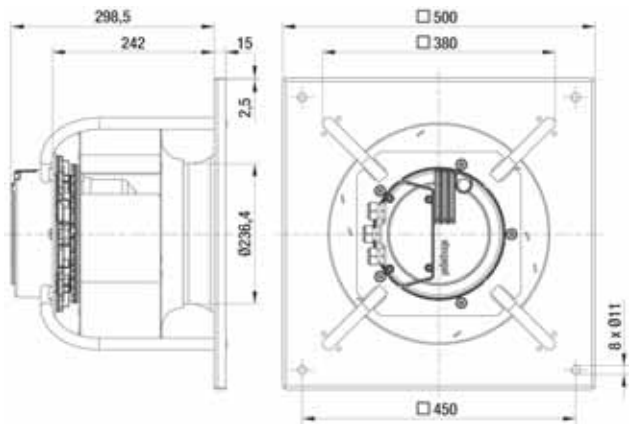
- **Technical features:**
  - PFC (passive)
  - Integrated PID controller
  - Control input 0-10 VDC / PWM
  - Input for sensor 0-10 V or 4-20 mA
  - Slave output 0-10 V max. 3 mA
  - Output 20 VDC (±20 %) max. 50 mA
  - Output 10 VDC (+10 %) max. 10 mA
  - RS485 ebmBUS
  - Alarm relay
  - Line undervoltage / phase failure detection
  - Motor current limitation
  - Electronics / motor overtemperature protection
  - Locked-rotor protection
  - Soft start
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-2
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 61800-5-1
- **Connection leads:** Via terminal strip
- **Protection class:** I (acc. to EN 61800-5-1)
- **Product conforming to standard:** CE
- **Approvals:** VDE, UL, CSA, CCC, GOST are applied for

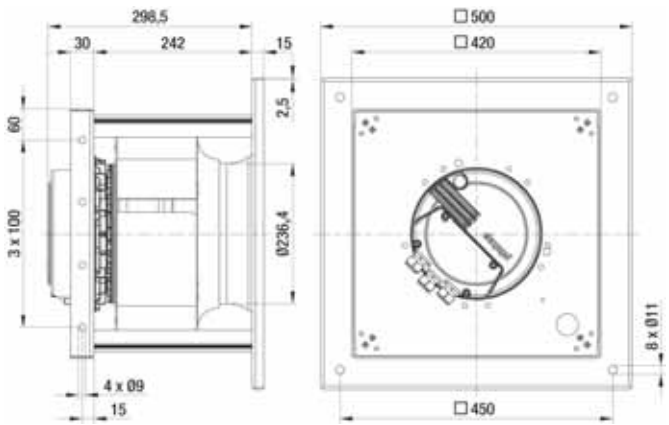


Centrifugal fan	kg	Inlet nozzle (long)	Inlet nozzle (short)	Centrifugal module w. support bracket	kg	Centrifugal module with support plate	kg
	Mass of centrifugal fan				Mass of centrifugal module with support bracket		Mass of centrifugal module with support plate
R3G 355-AI62 -06	7.3	35560-2-4013	35561-2-4013	**K3G 355-AI62 -07**	15.8	**K3G 355-AI62 -06**	18.6

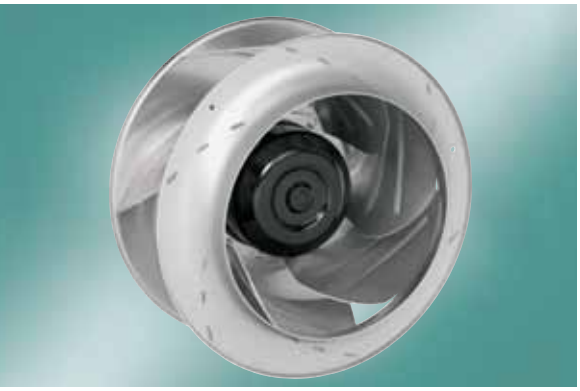






EC centrifugal fans and modules

backward curved, 3-D, Ø 355



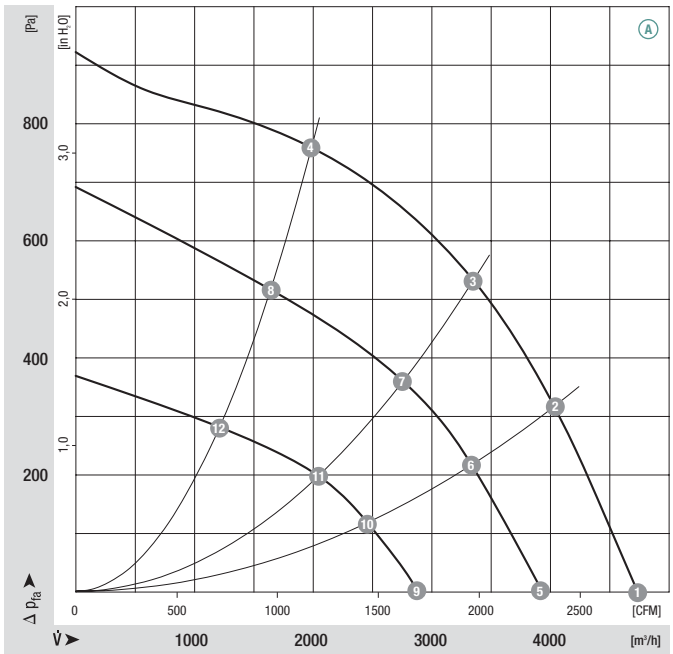
- **Material:** Support bracket: Steel, coated in black
  Support plate: Galvanised sheet steel, spacer profiles: Aluminium
  Impeller: Sheet aluminium, laser-welded
  Rotor: Coated in black
  Electronics enclosure: Die-cast aluminium
- **Number of blades:** 6
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 54 (acc. to EN 60529)
- **Insulation class:** "F"
- **Mounting position:** Shaft horizontal or rotor on bottom; rotor on top on request
- **Condensate discharges:** Rotor-side
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage range	Frequency	Speed/rpm	Max. power input (1)	Max. current draw (1)	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VAC**	**Hz**	**rpm**	**kW**	**A**	**°C**	p. 607
***3G 355**	M3G 112-EA	Ⓐ	3~ 380-480	50/60	2215	0.94	1.50	-25 to +60	L2)

subject to alterations

(1) Nominal data in operating point with maximum load and 400 VAC

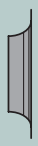
Curves (established with long inlet nozzle)

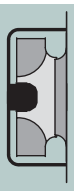
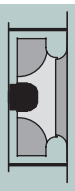


	n [rpm]	P_1 [kW]	I [A]	Lw_A [dB(A)]	η_{tL} [%]
Ⓐ 1	2205	0.70	1.30	87	—
Ⓐ 2	2215	0.88	1.40	83	48
Ⓐ 3	2215	0.94	1.50	80	59
Ⓐ 4	2215	0.85	1.40	85	53
Ⓐ 5	1825	0.38	0.70	82	—
Ⓐ 6	1805	0.47	0.90	77	52
Ⓐ 7	1790	0.49	0.90	73	65
Ⓐ 8	1800	0.46	0.90	77	58
Ⓐ 9	1335	0.17	0.40	72	—
Ⓐ 10	1315	0.20	0.40	68	57
Ⓐ 11	1315	0.21	0.40	65	69
Ⓐ 12	1310	0.19	0.40	67	60

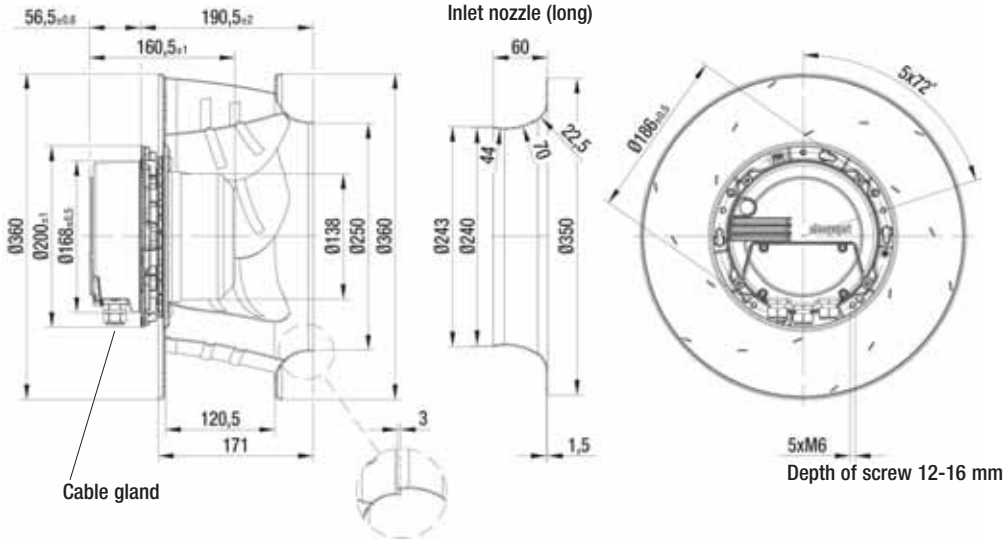
ebmpapst

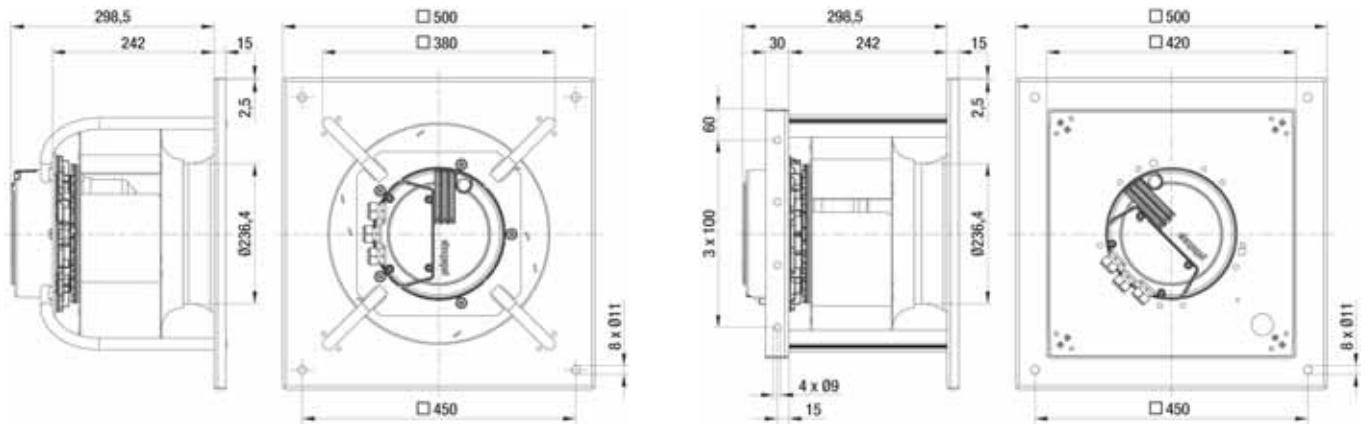
- **Technical features:**
  - PFC (passive)
  - Integrated PID controller
  - Control input 0-10 VDC / PWM
  - Input for sensor 0-10 V or 4-20 mA
  - Slave output 0-10 V max. 3 mA
  - Output 20 VDC (±20 %) max. 50 mA
  - Output 10 VDC (+10 %) max. 10 mA
  - RS485 ebmBUS
  - Alarm relay
  - Line undervoltage / phase failure detection
  - Motor current limitation
  - Electronics / motor overtemperature protection
  - Locked-rotor protection
  - Soft start
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-2
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 61800-5-1
- **Connection leads:** Via terminal strip
- **Protection class:** I (acc. to EN 61800-5-1)
- **Product conforming to standard:** CE
- **Approvals:** VDE, UL, CSA, CCC, GOST are applied for



Centrifugal fan	kg	Inlet nozzle (long)	Inlet nozzle (short)	Centrifugal module w. support bracket	kg	Centrifugal module with support plate	kg
	Mass of centrifugal fan				Mass of centrifugal module with support bracket		Mass of centrifugal module with support plate
R3G 355-AI56 -01	7.3	35560-2-4013	35561-2-4013	**K3G 355-AI56 -02**	15.8	**K3G 355-AI56 -01**	18.6





EC centrifugal fans and modules

backward curved, 3-D, Ø 400

- **Material:** Support bracket: Steel, coated in black
  Support plate: Sheet aluminium, spacer profiles: Aluminium
  Impeller: Sheet aluminium, joined by tabs
  Rotor: Coated in black
  Electronics enclosure: Die-cast aluminium
- **Number of blades:** 6
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 54
- **Insulation class:** "B"
- **Mounting position:** Shaft horizontal or rotor on top; rotor on bottom on request
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

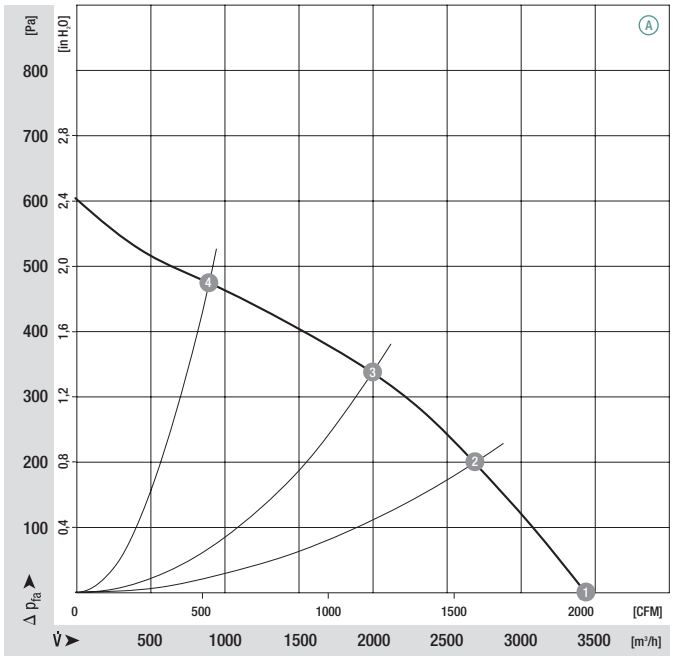
Nominal data

Type	Motor	Curve	Nominal voltage range	Frequency	Speed/rpm	Max. power input (1)	Max. current draw (1)	Perm. amb. temp.	Electr. connection
			VAC	Hz	rpm	W	A	°C	p. 605
*3G 400	M3G 084-FA	Ⓐ	1~ 100-130	50/60	1460	350	4.20	-25 to +60	K1)

subject to alterations

(1) Nominal data in operating point with maximum load and 115 VAC

Curves

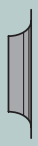


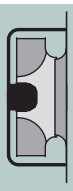
	n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1	1460	299	3.60	73	—
Ⓐ 2	1415	346	4.10	66	58
Ⓐ 3	1415	350	4.20	62	70
Ⓐ 4	1465	298	3.60	66	60

ebmpapst

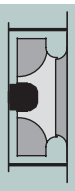
- **Technical features:**
  - PFC (passive)
  - Control input 0-10 VDC / PWM
  - Output 10 VDC max. 1.1 mA
  - Alarm relay
  - Over-temperature protected electronics / motor
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-2
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 61800-5-1
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 61800-5-1, CE
- **Approvals:** VDE, UL, CSA, CCC, GOST are applied for

Mass of centrifugal fan



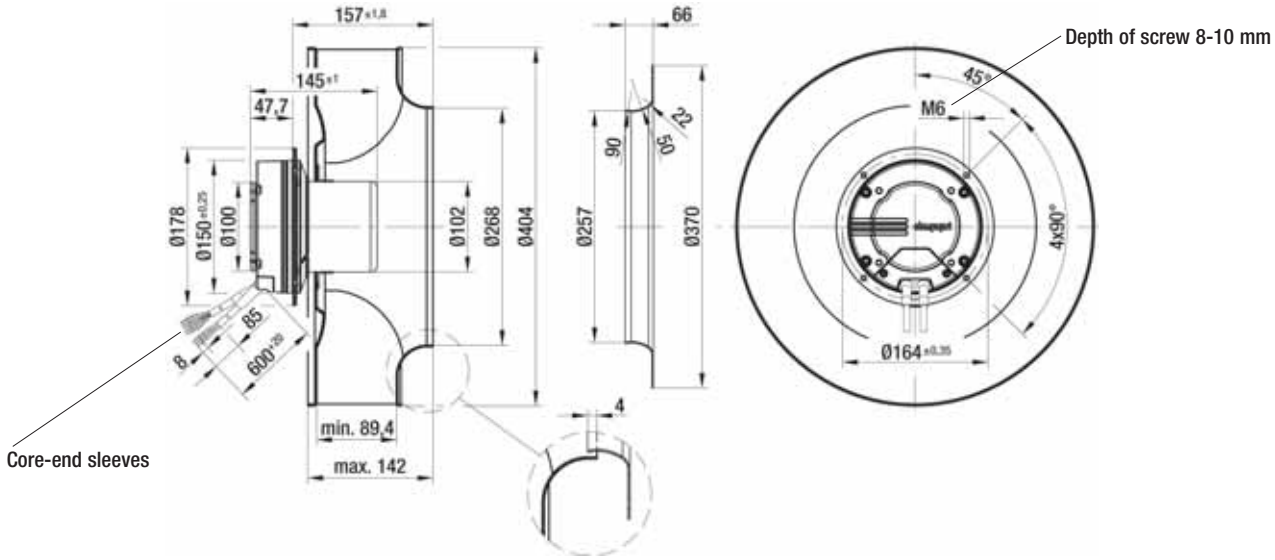


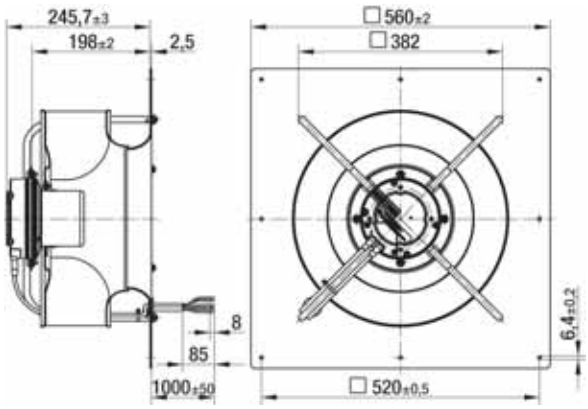
Mass of centrifugal module with support bracket

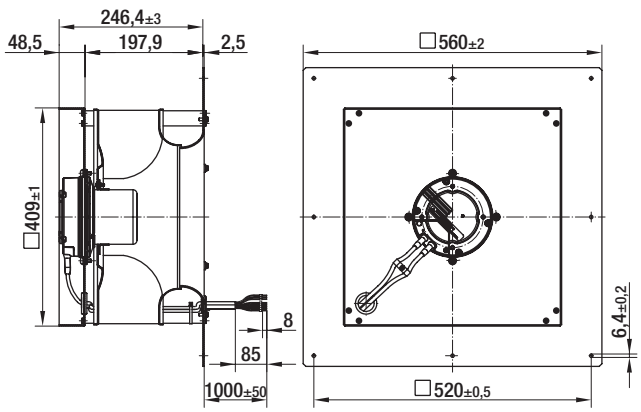


Mass of centrifugal module with support plate

Centrifugal fan	kg	Inlet nozzle (long)	Centrifugal module w. support bracket	kg	Centrifugal module with support plate	kg
R3G 400-AD42 -81	6.1	54476-2-4013	**K3G 400-AD42 -82**	10.7	**K3G 400-AD42 -81**	9.9







Inlet nozzle p. 550 f.
Guard grille p. 553
Electr. connection p. 605

EC centrifugal fans and modules

backward curved, 3-D, Ø 400

- **Material:** Support bracket: Steel, coated in black
  Support plate: Sheet aluminium, spacer profiles: Aluminium
  Impeller: Sheet aluminium, joined by tabs
  Rotor: Coated in black
  Electronics enclosure: Die-cast aluminium
- **Number of blades:** 6
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 54
- **Insulation class:** "B"
- **Mounting position:** Shaft horizontal or rotor on top; rotor on bottom on request
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

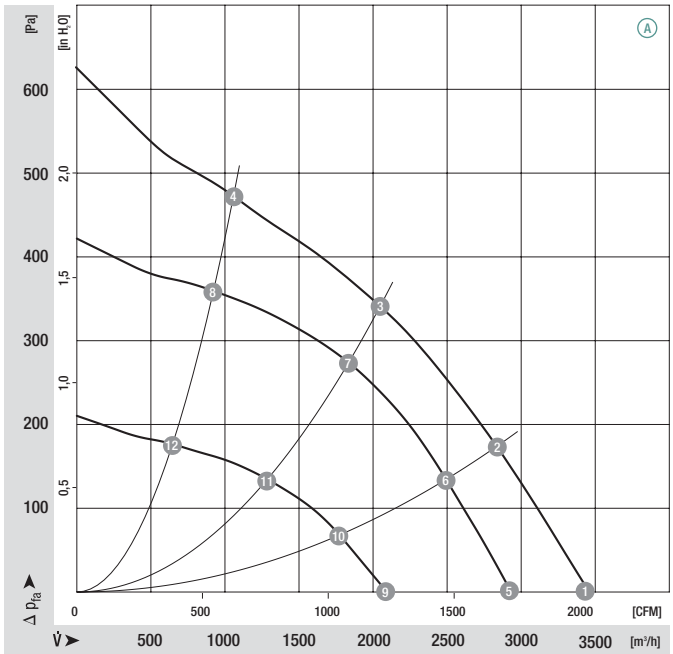
Nominal data

Type	Motor	Curve	Nominal voltage range	Frequency	Speed/rpm	Max. power input (1)	Max. current draw (1)	Perm. amb. temp.	Electr. connection
			VAC	Hz	rpm	W	A	°C	p. 605
*3G 400	M3G 084-FA	Ⓐ	1~ 200-277	50/60	1460	360	2.20	-25 to +60	K1)

subject to alterations

(1) Nominal data in operating point with maximum load and 230 VAC

Curves

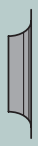


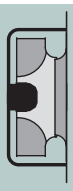
		n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ	1	1460	302	1.85	72	—
Ⓐ	2	1425	344	2.10	67	48
Ⓐ	3	1420	360	2.20	63	67
Ⓐ	4	1460	309	1.90	67	55
Ⓐ	5	1270	195	1.20	68	—
Ⓐ	6	1270	235	1.40	64	53
Ⓐ	7	1270	250	1.50	61	67
Ⓐ	8	1270	205	1.30	63	54
Ⓐ	9	900	74	0.50	60	—
Ⓐ	10	900	90	0.60	56	53
Ⓐ	11	900	90	0.60	52	67
Ⓐ	12	900	77	0.50	44	54

ebmpapst

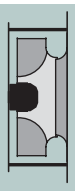
- **Technical features:**
  - PFC (passive)
  - Control input 0-10 VDC / PWM
  - Output 10 VDC max. 1.1 mA
  - Alarm relay
  - Over-temperature protected electronics / motor
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-2
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 61800-5-1
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 61800-5-1, CE
- **Approvals:** UL, CSA, CCC; VDE, GOST are applied for

Mass of centrifugal fan



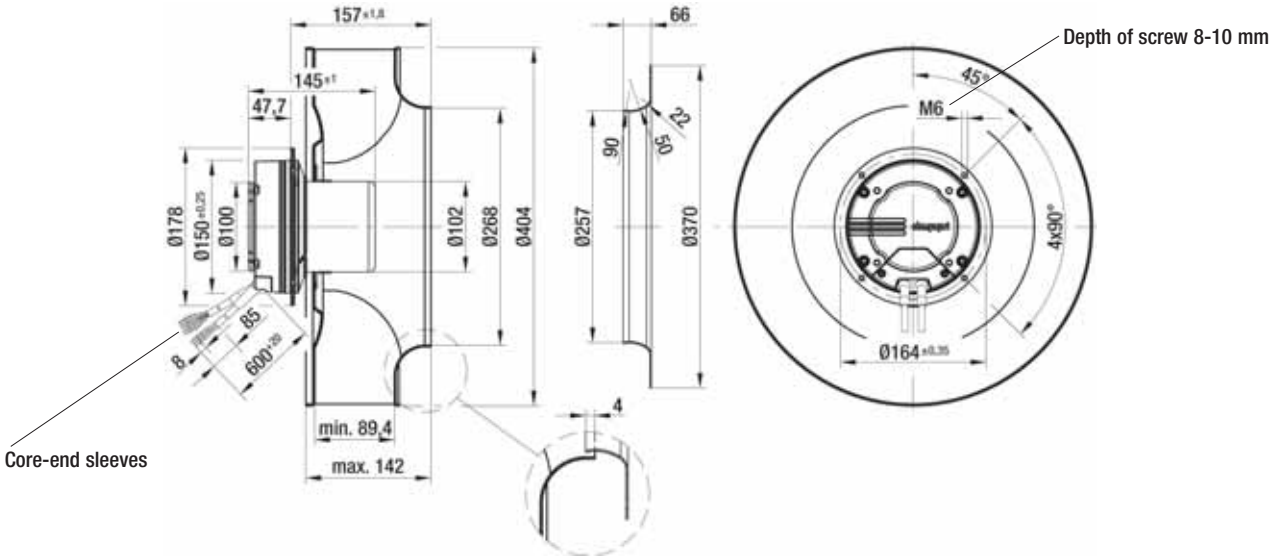


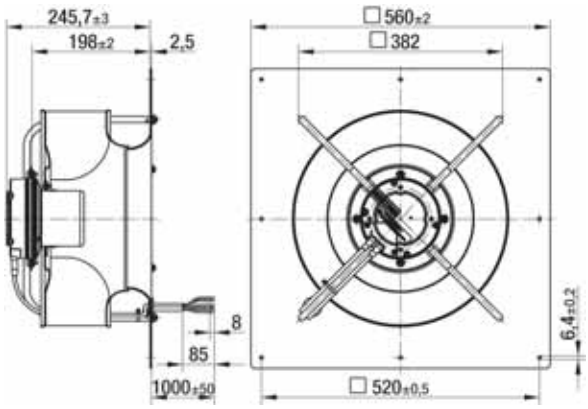
Mass of centrifugal module with support bracket

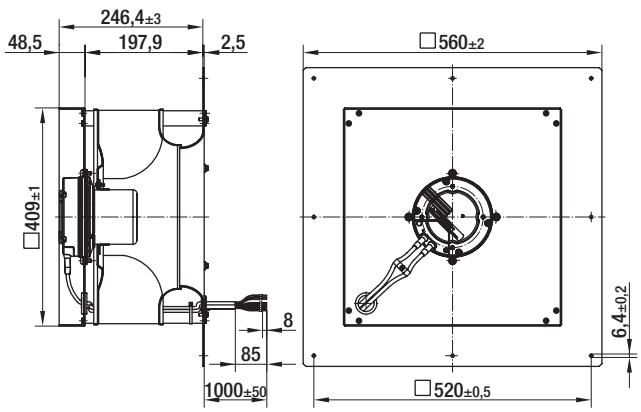


Mass of centrifugal module with support plate

Centrifugal fan	kg	Inlet nozzle (long)	Centrifugal module w. support bracket	kg	Centrifugal module with support plate	kg
R3G 400-AD32 -71	6.1	54476-2-4013	**K3G 400-AD32 -72**	10.7	**K3G 400-AD32 -71**	9.9







Inlet nozzle p. 550 f.
Guard grille p. 553
Electr. connection p. 605

EC centrifugal fans and modules

backward curved, 3-D, Ø 400

- **Material:** Support bracket: Steel, coated in black
  Support plate: Sheet aluminium, spacer profiles: Aluminium
  Impeller: Sheet aluminium, joined by tabs
  Rotor: Coated in black
  Electronics enclosure: Die-cast aluminium
- **Number of blades:** 6
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 54
- **Insulation class:** "B"
- **Mounting position:** Shaft horizontal or rotor on top; rotor on bottom on request
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

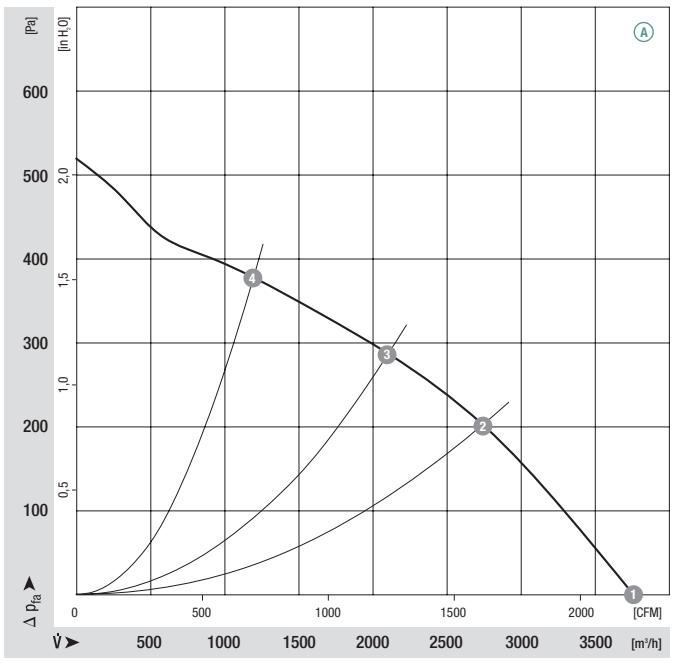
Nominal data

Type	Motor	Curve	Nominal voltage range	Frequency	Speed/rpm	Max. power input (1)	Max. current draw (1)	Perm. amb. temp.	Electr. connection
			VAC	Hz	rpm	W	A	°C	p. 605
*3G 400	M3G 084-FA	Ⓐ	1~ 100-130	50/60	1320	325	3.90	-25 to +60	K1)

subject to alterations

(1) Nominal data in operating point with maximum load and 115 VAC

Curves

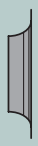


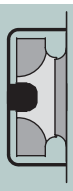
	n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1	1320	275	3.40	72	—
Ⓐ 2	1275	317	3.80	66	60
Ⓐ 3	1285	325	3.90	63	70
Ⓐ 4	1320	285	3.50	66	57

ebmpapst

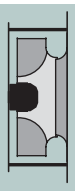
- **Technical features:**
  - PFC (passive)
  - Control input 0-10 VDC / PWM
  - Output 10 VDC max. 1.1 mA
  - Alarm relay
  - Over-temperature protected electronics / motor
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-2
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 61800-5-1
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 61800-5-1, CE
- **Approvals:** VDE, UL, CSA, CCC, GOST are applied for

Mass of centrifugal fan



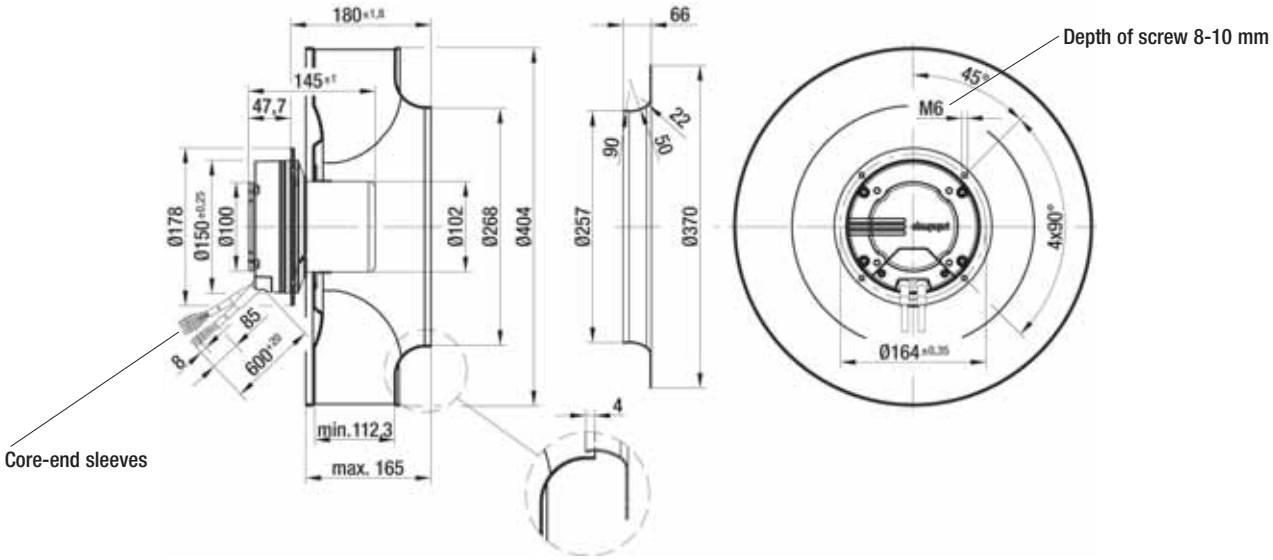


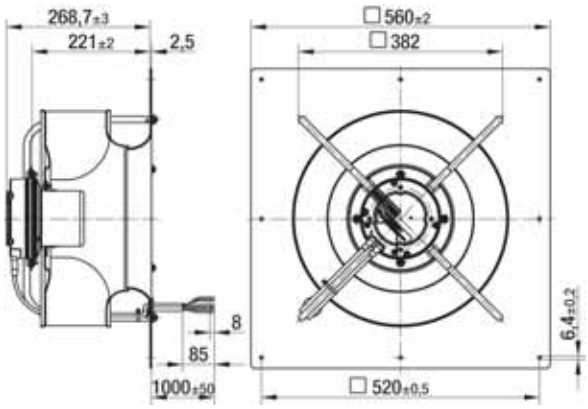
Mass of centrifugal module with support bracket

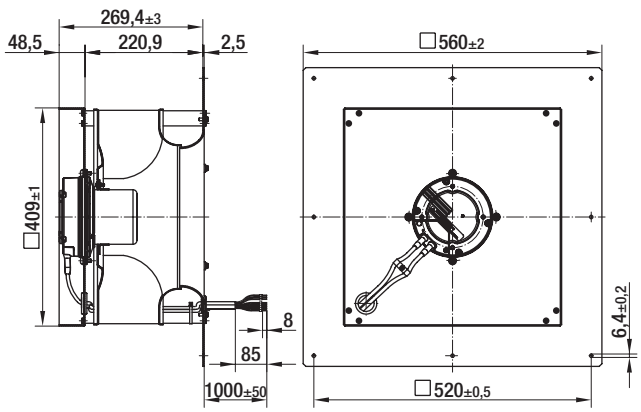


Mass of centrifugal module with support plate

Centrifugal fan	kg	Inlet nozzle (long)	Centrifugal module w. support bracket	kg	Centrifugal module with support plate	kg
R3G 400-AC42 -81	6.2	54476-2-4013	**K3G 400-AC42 -82**	11.0	**K3G 400-AC42 -81**	10.0







EC centrifugal fans and modules

backward curved, 3-D, Ø 400

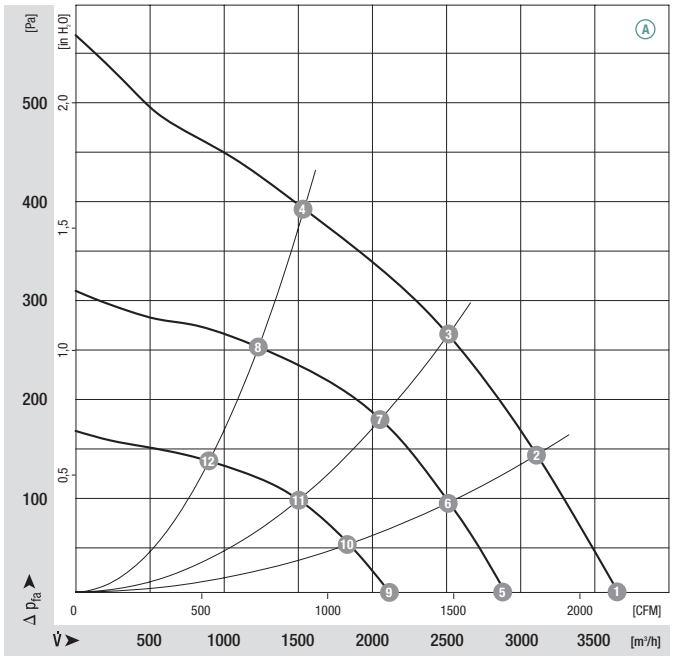
- **Material:** Support bracket: Steel, coated in black
  Support plate: Sheet aluminium, spacer profiles: Aluminium
  Impeller: Sheet aluminium, joined by tabs
  Rotor: Coated in black
  Electronics enclosure: Die-cast aluminium
- **Number of blades:** 6
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 54
- **Insulation class:** "B"
- **Mounting position:** Shaft horizontal or rotor on top; rotor on bottom on request
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage range	Frequency	Speed/rpm	Max. power input (1)	Max. current draw (1)	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VAC**	**Hz**	**rpm**	**W**	**A**	**°C**	p. 605
***3G 400**	M3G 084-FA	Ⓐ	1~ 200-277	50/60	1365	355	2.20	-25 to +60	K1)

subject to alterations

(1) Nominal data in operating point with maximum load and 230 VAC

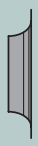
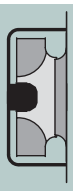
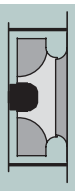
Curves



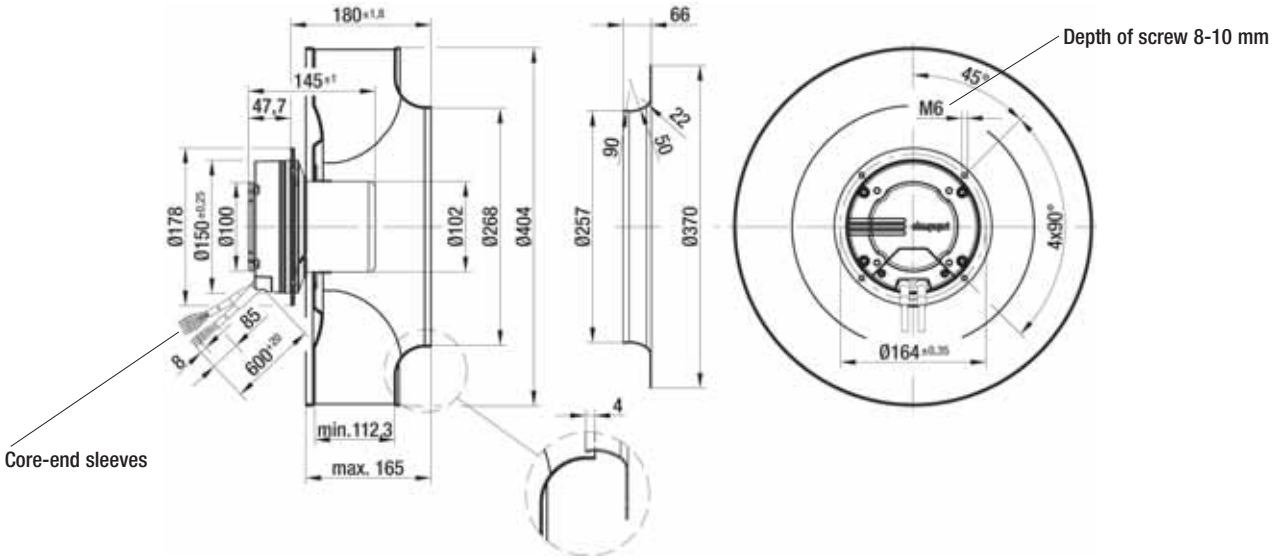
	n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1	1365	306	1.90	72	—
Ⓐ 2	1335	339	2.05	70	48
Ⓐ 3	1320	355	2.20	65	64
Ⓐ 4	1350	324	2.00	68	54
Ⓐ 5	1080	152	0.95	67	—
Ⓐ 6	1080	180	1.10	63	48
Ⓐ 7	1080	195	1.20	60	64
Ⓐ 8	1080	165	1.00	61	54
Ⓐ 9	790	59	0.35	60	—
Ⓐ 10	790	70	0.45	56	48
Ⓐ 11	790	76	0.45	52	64
Ⓐ 12	790	65	0.40	53	54

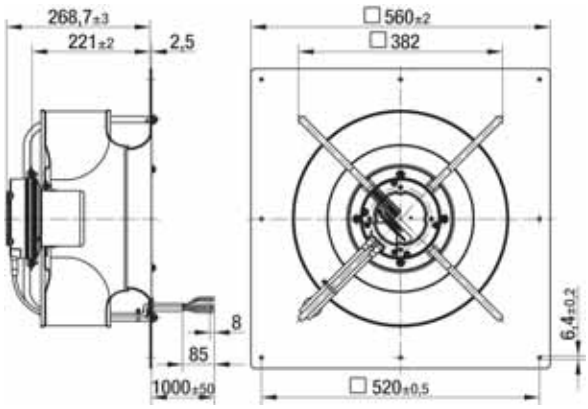
ebmpapst

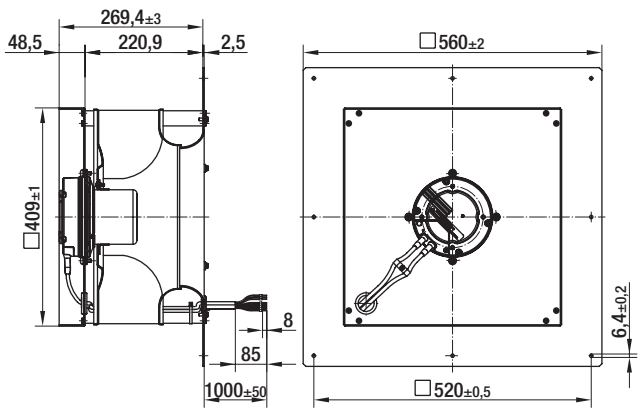
- **Technical features:**
  - PFC (passive)
  - Control input 0-10 VDC / PWM
  - Output 10 VDC max. 1.1 mA
  - Alarm relay
  - Over-temperature protected electronics / motor
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-2
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 61800-5-1
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 61800-5-1, CE
- **Approvals:** UL, CSA; VDE, CCC, GOST are applied for

Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle (long)	Centrifugal module w. support bracket	Mass of centrifugal module with support bracket kg	Centrifugal module with support plate	Mass of centrifugal module with support plate kg
R3G 400-AC28 -71	6.2	54476-2-4013	**K3G 400-AC28 -72**	11.0	**K3G 400-AC28 -71**	10.0







Inlet nozzle p. 550 f.
Guard grille p. 553
Electr. connection p. 605

EC centrifugal fans and modules

backward curved, 3-D, Ø 400

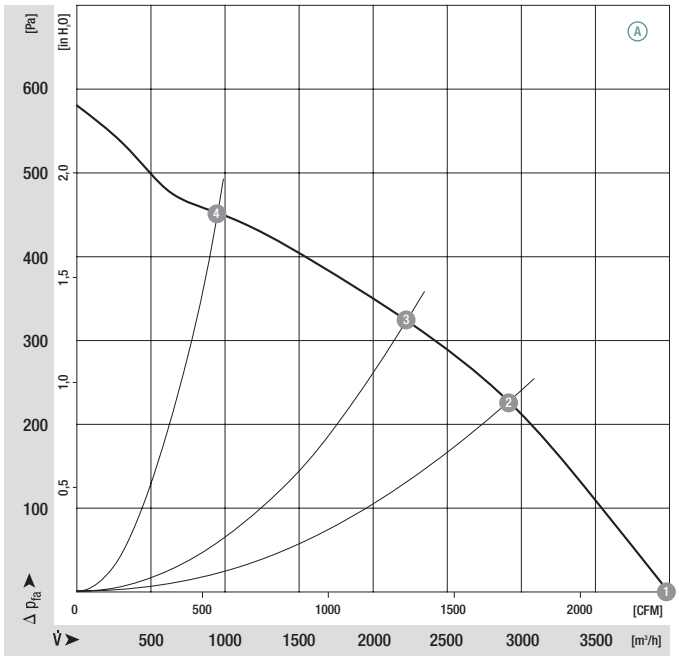
- **Material:** Support bracket: Steel, coated in black
  Support plate: Sheet aluminium, spacer profiles: Aluminium
  Impeller: Sheet aluminium, joined by tabs
  Rotor: Coated in black
  Electronics enclosure: Die-cast aluminium
- **Number of blades:** 6
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 54
- **Insulation class:** "B"
- **Mounting position:** Shaft horizontal or rotor on top; rotor on bottom on request
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage range	Frequency	Speed/rpm	Max. power input (1)	Max. current draw (1)	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VAC**	**Hz**	**rpm**	**W**	**A**	**°C**	p. 605
***3G 400**	M3G 084-FA	Ⓐ	1~ 100-130	50/60	1400	380	4.50	-25 to +40	K1)

subject to alterations

(1) Nominal data in operating point with maximum load and 115 VAC

Curves

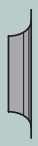


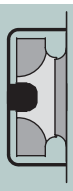
	n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1	1400	328	3.90	74	—
Ⓐ 2	1360	381	4.50	68	59
Ⓐ 3	1365	380	4.50	65	68
Ⓐ 4	1420	317	3.80	69	55

ebmpapst

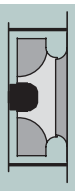
- **Technical features:**
  - PFC (passive)
  - Control input 0-10 VDC / PWM
  - Output 10 VDC max. 1.1 mA
  - Alarm relay
  - Over-temperature protected electronics / motor
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-2
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 61800-5-1
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 61800-5-1, CE
- **Approvals:** VDE, UL, CSA, CCC, GOST are applied for

Mass of centrifugal fan



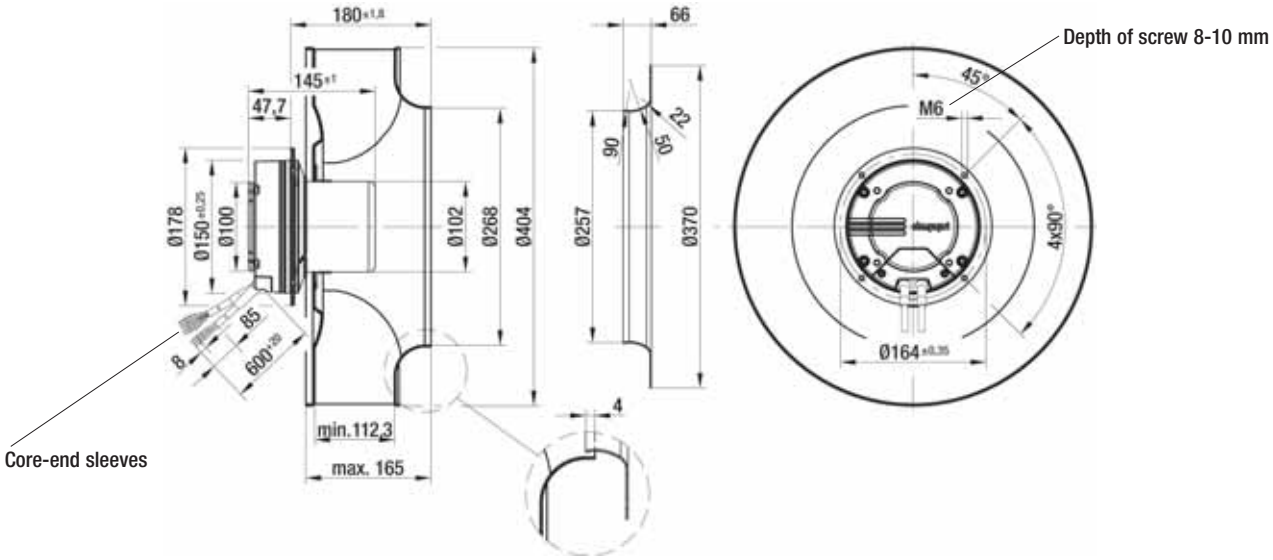


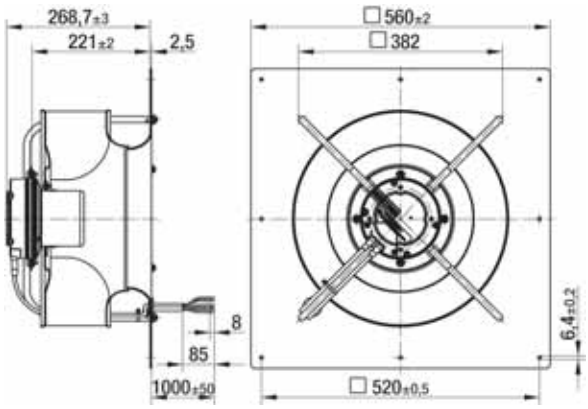
Mass of centrifugal module with support bracket

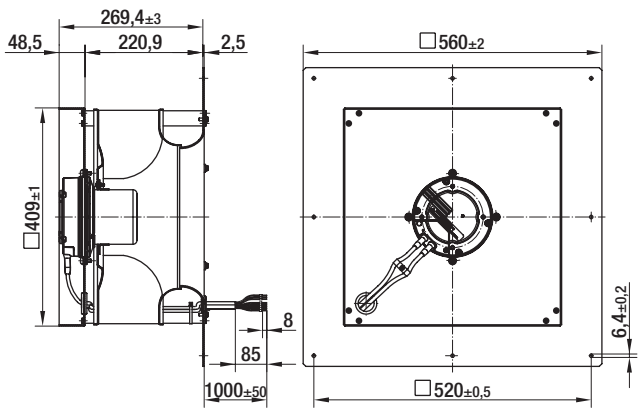


Mass of centrifugal module with support plate

Centrifugal fan	kg	Inlet nozzle (long)	Centrifugal module w. support bracket	kg	Centrifugal module with support plate	kg
R3G 400-AC15 -81	6.2	54476-2-4013	**K3G 400-AC15 -82**	11.0	**K3G 400-AC15 -81**	10.0







EC centrifugal fans and modules

backward curved, 3-D, Ø 400

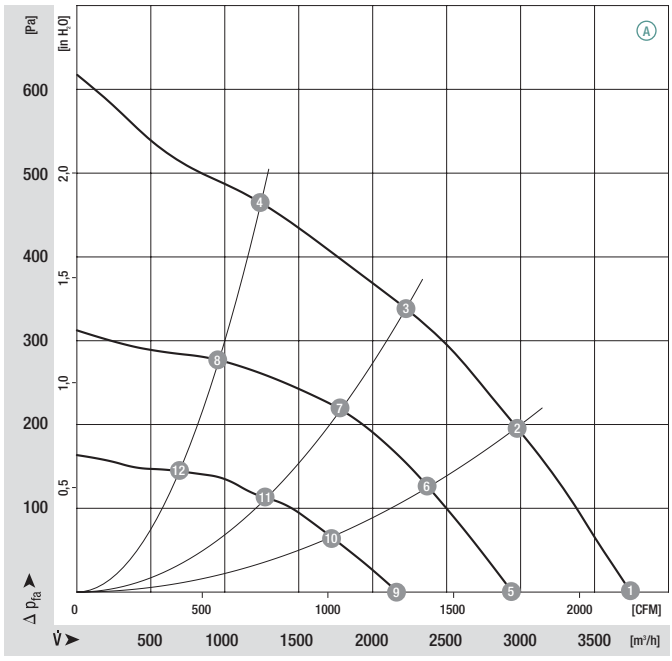
- **Material:** Support bracket: Steel, coated in black
  Support plate: Sheet aluminium, spacer profiles: Aluminium
  Impeller: Sheet aluminium, joined by tabs
  Rotor: Coated in black
  Electronics enclosure: Die-cast aluminium
- **Number of blades:** 6
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 54
- **Insulation class:** "B"
- **Mounting position:** Shaft horizontal or rotor on top; rotor on bottom on request
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage range	Frequency	Speed/rpm	Max. power input (1)	Max. current draw (1)	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VAC**	**Hz**	**rpm**	**W**	**A**	**°C**	p. 605
***3G 400**	M3G 084-FA	Ⓐ	1~ 200-277	50/60	1410	410	2.50	-25 to +40	K1)

subject to alterations

(1) Nominal data in operating point with maximum load and 230 VAC

Curves

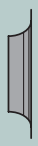


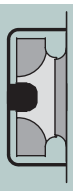
	n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1	1410	359	2.20	74	—
Ⓐ 2	1370	401	2.45	69	51
Ⓐ 3	1375	410	2.50	66	64
Ⓐ 4	1420	352	2.15	71	54
Ⓐ 5	1110	161	1.00	68	—
Ⓐ 6	1110	120	0.80	63	51
Ⓐ 7	1110	194	1.20	59	64
Ⓐ 8	1110	151	1.00	61	54
Ⓐ 9	800	69	0.50	60	—
Ⓐ 10	800	80	0.50	56	51
Ⓐ 11	800	78	0.50	52	64
Ⓐ 12	800	55	0.40	53	54

ebmpapst

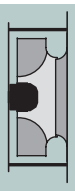
- **Technical features:**
  - PFC (passive)
  - Control input 0-10 VDC / PWM
  - Output 10 VDC max. 1.1 mA
  - Alarm relay
  - Over-temperature protected electronics / motor
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-2
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 61800-5-1
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 61800-5-1, CE
- **Approvals:** UL, CSA; VDE, CCC, GOST are applied for

Mass of centrifugal fan



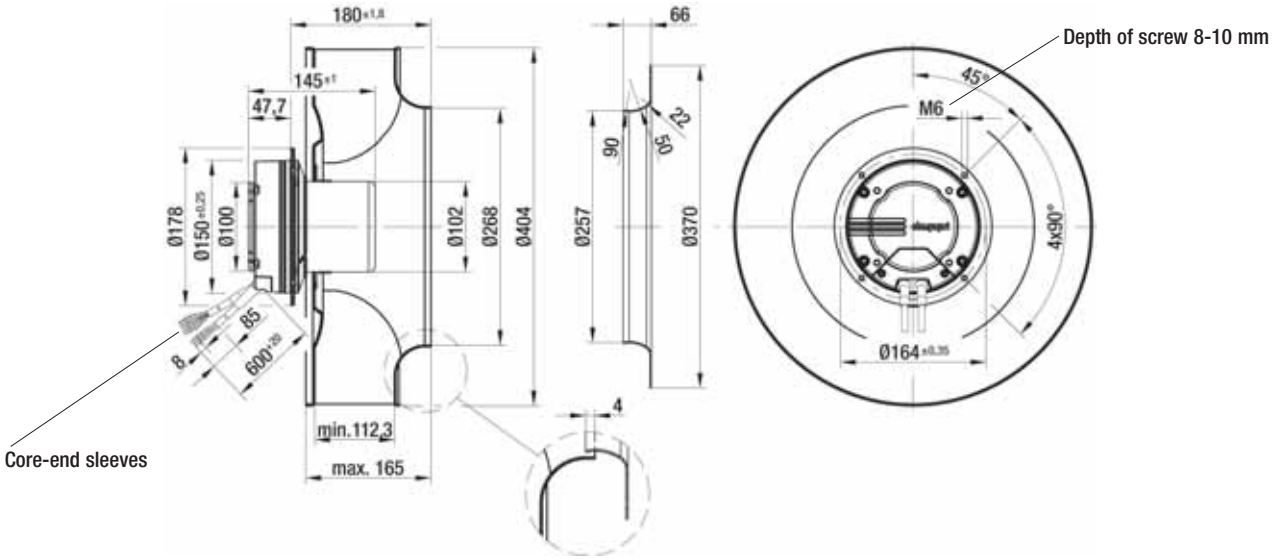


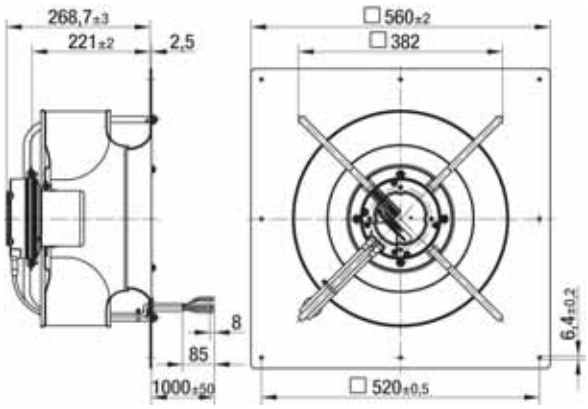
Mass of centrifugal module with support bracket

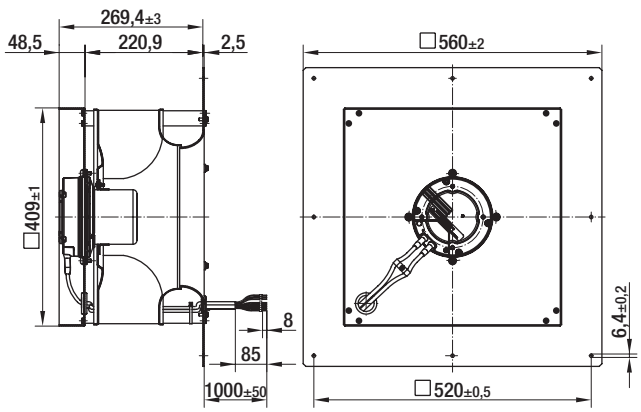


Mass of centrifugal module with support plate

Centrifugal fan	kg	Inlet nozzle (long)	Centrifugal module w. support bracket	kg	Centrifugal module with support plate	kg
R3G 400-AC32 -71	6.2	54476-2-4013	**K3G 400-AC32 -72**	11.0	**K3G 400-AC32 -71**	10.0







EC centrifugal fans and modules

backward curved, 3-D, Ø 400

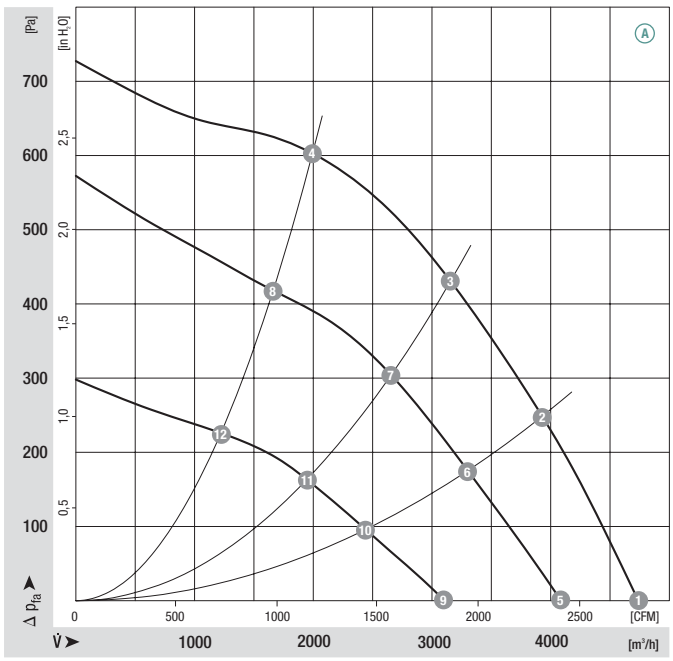
- **Material:** Support bracket: Steel, coated in black
  Support plate: Galvanised sheet steel, spacer profiles: Aluminium
  Impeller: Sheet aluminium, joined by tabs
  Rotor: Coated in black
  Electronics enclosure: Die-cast aluminium
- **Number of blades:** 6
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 54 (acc. to EN 60529)
- **Insulation class:** "F"
- **Mounting position:** Shaft horizontal or rotor on bottom; rotor on top on request
- **Condensate discharges:** Rotor-side
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage range	Frequency	Speed/rpm	Max. power input (1)	Max. current draw (1)	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VAC**	**Hz**	**rpm**	**kW**	**A**	**°C**	p. 607
***3G 400**	M3G 112-EA	Ⓐ	1~ 200-277	50/60	1720	0.76	3.40	-25 to +60	L1)

subject to alterations

(1) Nominal data in operating point with maximum load and 230 VAC

Curves

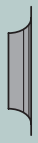


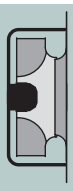
	n [rpm]	P_1 [kW]	I [A]	Lw_A [dB(A)]	η_{tL} [%]
Ⓐ 1	1720	0.60	2.70	84	—
Ⓐ 2	1725	0.72	3.20	80	51
Ⓐ 3	1720	0.76	3.40	75	62
Ⓐ 4	1725	0.68	3.00	79	59
Ⓐ 5	1455	0.35	1.60	79	—
Ⓐ 6	1430	0.39	1.80	74	54
Ⓐ 7	1425	0.40	1.80	71	69
Ⓐ 8	1435	0.37	1.70	73	62
Ⓐ 9	1045	0.15	0.70	68	—
Ⓐ 10	1030	0.16	0.70	65	60
Ⓐ 11	1030	0.16	0.80	63	74
Ⓐ 12	1040	0.15	0.70	64	67

ebmpapst

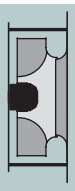
- **Technical features:**
  - PFC (active)
  - Integrated PID controller
  - Control input 0-10 VDC / PWM
  - Input for sensor 0-10 V or 4-20 mA
  - Slave output 0-10 V max. 3 mA
  - Output 20 VDC (±20 %) max. 50 mA
  - Output 10 VDC (+10 %) max. 10 mA
  - RS485 ebmBUS
  - Alarm relay
  - Line undervoltage detection
  - Motor current limitation
  - Electronics / motor overtemperature protection
  - Locked-rotor protection
  - Soft start
- **EMC:** Interference emission acc. to EN 61000-6-4 (industrial environment)
  Interference immunity acc. to EN 61000-6-2 (industrial environment)
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 61800-5-1
- **Connection leads:** Via terminal strip
- **Protection class:** I (acc. to EN 61800-5-1)
- **Product conforming to standard:** CE
- **Approvals:** VDE, UL, CSA, CCC, GOST are applied for

Mass of centrifugal fan



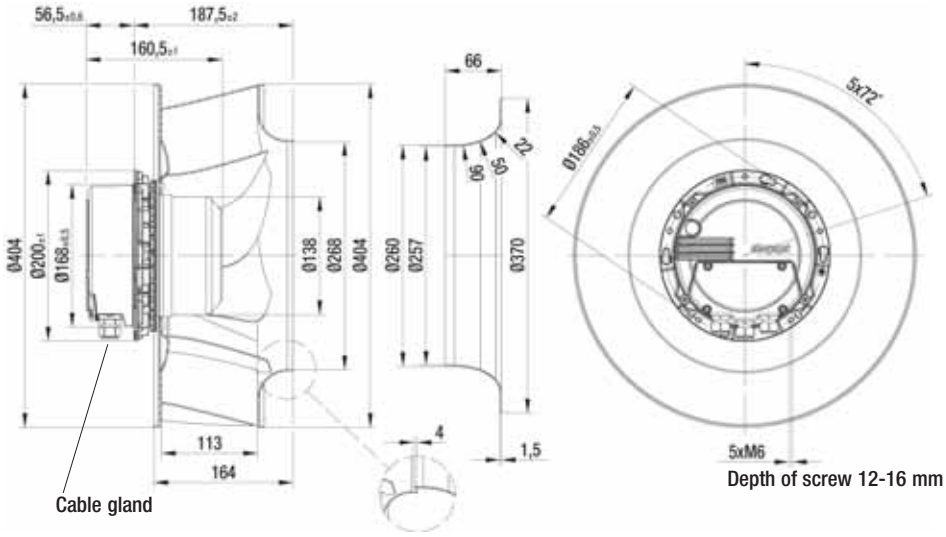


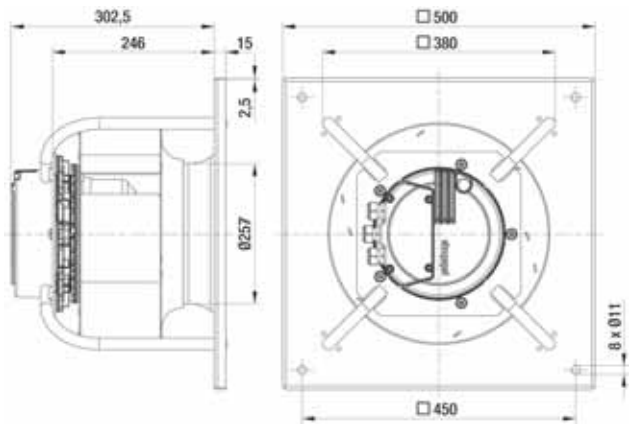
Mass of centrifugal module with support bracket

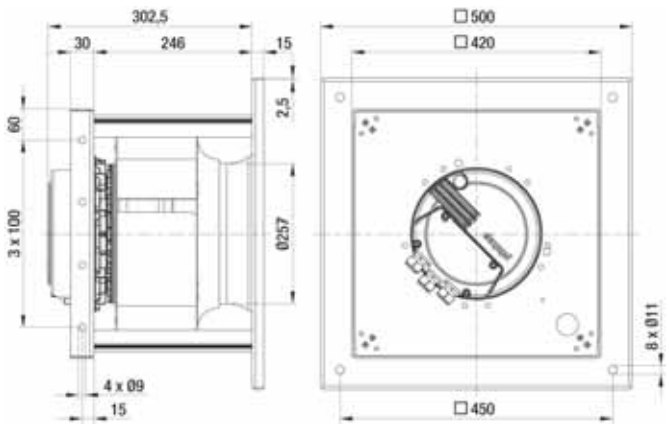


Mass of centrifugal module with support plate

Centrifugal fan	kg	Inlet nozzle (long)	Centrifugal module w. support bracket	kg	Centrifugal module with support plate	kg
R3G 400-AM56-11	7.7	54476-2-4013	**K3G 400-AM56-12**	16.2	**K3G 400-AM56-11**	19.0







Inlet nozzle p. 550 f.
Guard grille p. 553
Electr. connection p. 607

EC centrifugal fans and modules

backward curved, 3-D, Ø 400

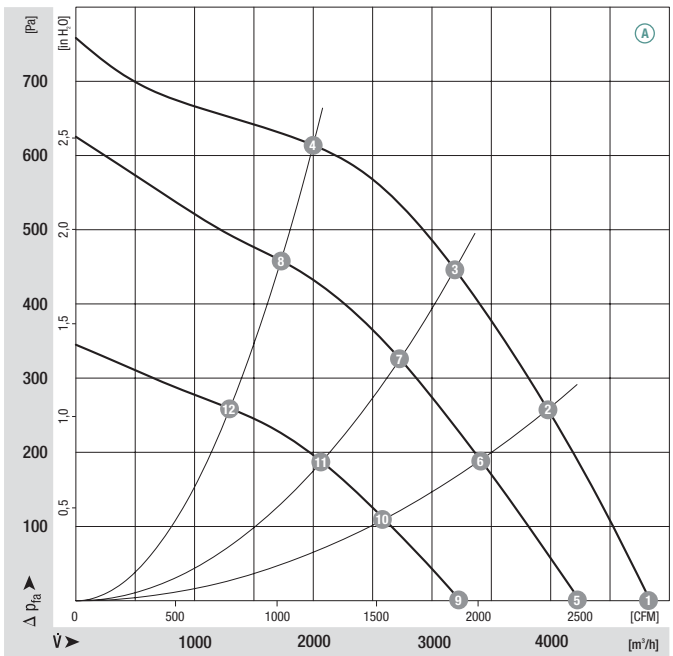
- **Material:** Support bracket: Steel, coated in black
  Support plate: Galvanised sheet steel, spacer profiles: Aluminium
  Impeller: Sheet aluminium, joined by tabs
  Rotor: Coated in black
  Electronics enclosure: Die-cast aluminium
- **Number of blades:** 6
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 54 (acc. to EN 60529)
- **Insulation class:** "F"
- **Mounting position:** Shaft horizontal or rotor on bottom; rotor on top on request
- **Condensate discharges:** Rotor-side
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage range	Frequency	Speed/rpm	Max. power input (1)	Max. current draw (1)	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VAC**	**Hz**	**rpm**	**kW**	**A**	**°C**	p. 607
***3G 400**	M3G 112-EA	Ⓐ	3~ 200-240	50/60	1755	0.77	2.60	-25 to +60	L2)

subject to alterations

(1) Nominal data in operating point with maximum load and 200 VAC

Curves

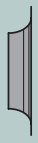


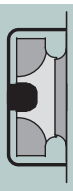
		n [rpm]	P_1 [kW]	I [A]	Lw_A [dB(A)]	η_{tL} [%]
Ⓐ	1	1755	0.63	2.20	84	—
Ⓐ	2	1760	0.75	2.50	80	51
Ⓐ	3	1760	0.77	2.60	75	62
Ⓐ	4	1760	0.72	2.40	79	56
Ⓐ	5	1510	0.40	1.60	80	—
Ⓐ	6	1470	0.42	1.60	74	54
Ⓐ	7	1465	0.43	1.60	72	69
Ⓐ	8	1485	0.41	1.60	74	65
Ⓐ	9	1100	0.17	0.80	70	—
Ⓐ	10	1090	0.18	0.80	65	62
Ⓐ	11	1085	0.18	0.80	64	78
Ⓐ	12	1095	0.18	0.80	66	71

ebmpapst

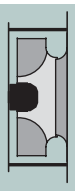
- **Technical features:**
  - PFC (passive)
  - Integrated PID controller
  - Control input 0-10 VDC / PWM
  - Input for sensor 0-10 V or 4-20 mA
  - Slave output 0-10 V max. 3 mA
  - Output 20 VDC (±20 %) max. 50 mA
  - Output 10 VDC (+10 %) max. 10 mA
  - RS485 ebmBUS
  - Alarm relay
  - Line undervoltage / phase failure detection
  - Motor current limitation
  - Electronics / motor overtemperature protection
  - Locked-rotor protection
  - Soft start
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-2
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 61800-5-1
- **Connection leads:** Via terminal strip
- **Protection class:** I (acc. to EN 61800-5-1)
- **Product conforming to standard:** CE
- **Approvals:** VDE, UL, CSA, CCC, GOST are applied for

Mass of centrifugal fan



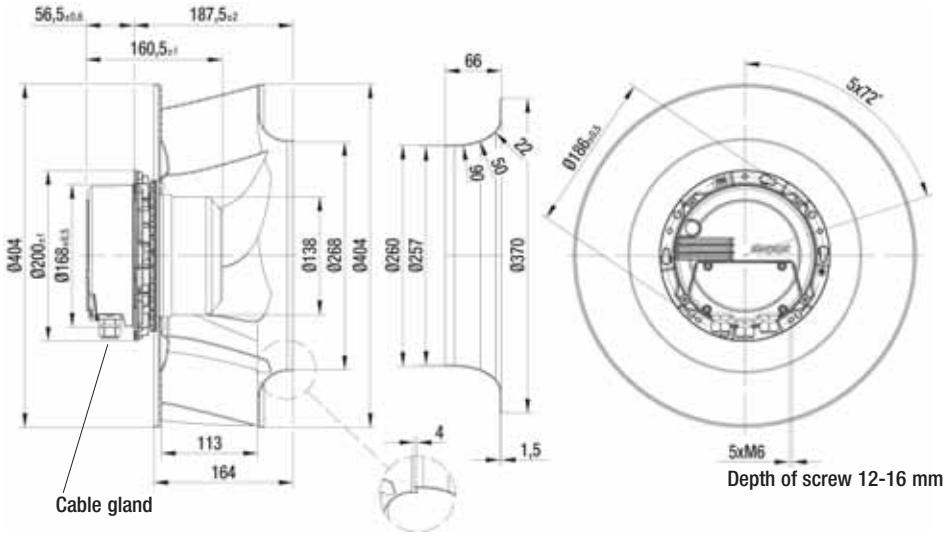


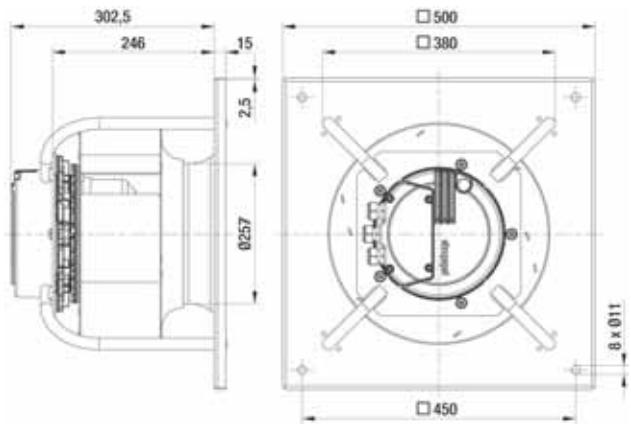
Mass of centrifugal module with support bracket

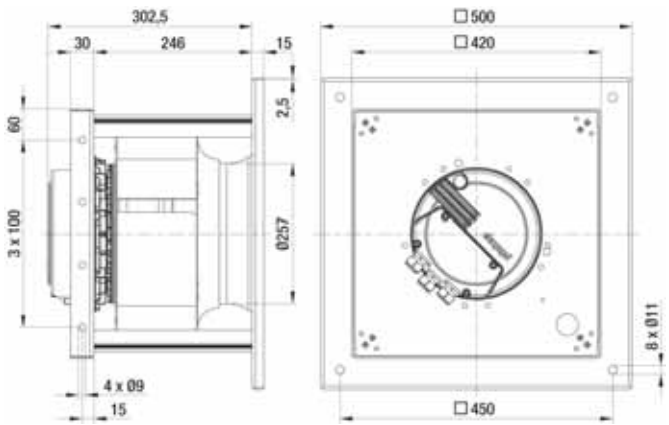


Mass of centrifugal module with support plate

Centrifugal fan	kg	Inlet nozzle (long)	Centrifugal module w. support bracket	kg	Centrifugal module with support plate	kg
R3G 400-AM61 -06	7.7	54476-2-4013	**K3G 400-AM61 -07**	16.2	**K3G 400-AM61 -06**	19.0







Inlet nozzle p. 550 f.
Guard grille p. 553
Electr. connection p. 607

EC centrifugal fans and modules

backward curved, 3-D, Ø 400

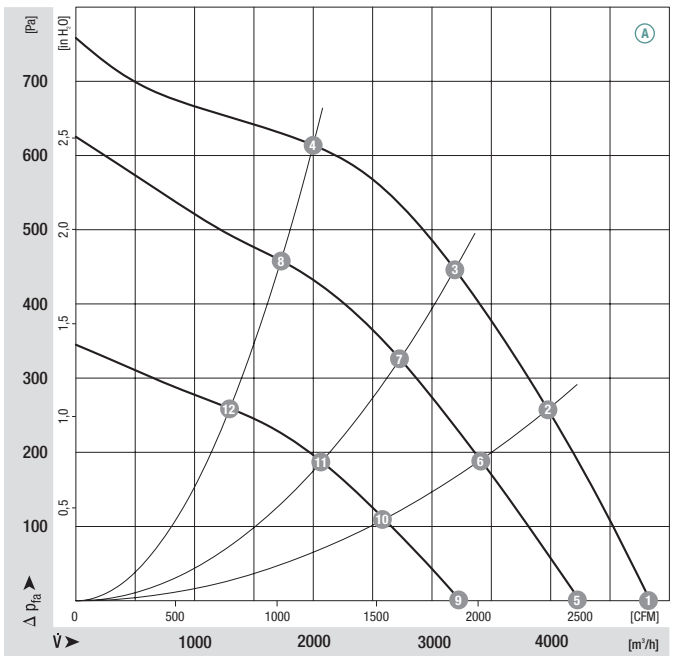
- **Material:** Support bracket: Steel, coated in black
  Support plate: Galvanised sheet steel, spacer profiles: Aluminium
  Impeller: Sheet aluminium, joined by tabs
  Rotor: Coated in black
  Electronics enclosure: Die-cast aluminium
- **Number of blades:** 6
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 54 (acc. to EN 60529)
- **Insulation class:** "F"
- **Mounting position:** Shaft horizontal or rotor on bottom; rotor on top on request
- **Condensate discharges:** Rotor-side
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage range	Frequency	Speed/rpm	Max. power input (1)	Max. current draw (1)	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VAC**	**Hz**	**rpm**	**kW**	**A**	**°C**	p. 607
***3G 400**	M3G 112-EA	Ⓐ	3~ 380-480	50/60	1755	0.77	1.30	-25 to +60	L2)

subject to alterations

(1) Nominal data in operating point with maximum load and 400 VAC

Curves

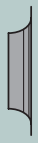


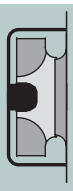
		n [rpm]	P_1 [kW]	I [A]	Lw_A [dB(A)]	η_{tL} [%]
Ⓐ	1	1755	0.63	1.10	84	—
Ⓐ	2	1760	0.75	1.30	80	51
Ⓐ	3	1760	0.77	1.30	75	62
Ⓐ	4	1760	0.72	1.20	79	56
Ⓐ	5	1510	0.40	0.80	80	—
Ⓐ	6	1470	0.42	0.80	74	54
Ⓐ	7	1465	0.43	0.80	72	69
Ⓐ	8	1485	0.41	0.80	74	65
Ⓐ	9	1100	0.17	0.40	70	—
Ⓐ	10	1090	0.18	0.40	65	62
Ⓐ	11	1085	0.18	0.40	64	78
Ⓐ	12	1095	0.18	0.40	66	71

ebmpapst

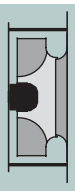
- **Technical features:**
  - PFC (passive)
  - Integrated PID controller
  - Control input 0-10 VDC / PWM
  - Input for sensor 0-10 V or 4-20 mA
  - Slave output 0-10 V max. 3 mA
  - Output 20 VDC (±20 %) max. 50 mA
  - Output 10 VDC (+10 %) max. 10 mA
  - RS485 ebmBUS
  - Alarm relay
  - Line undervoltage / phase failure detection
  - Motor current limitation
  - Electronics / motor overtemperature protection
  - Locked-rotor protection
  - Soft start
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-2
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 61800-5-1
- **Connection leads:** Via terminal strip
- **Protection class:** I (acc. to EN 61800-5-1)
- **Product conforming to standard:** CE
- **Approvals:** VDE, UL, CSA, CCC, GOST are applied for

Mass of centrifugal fan



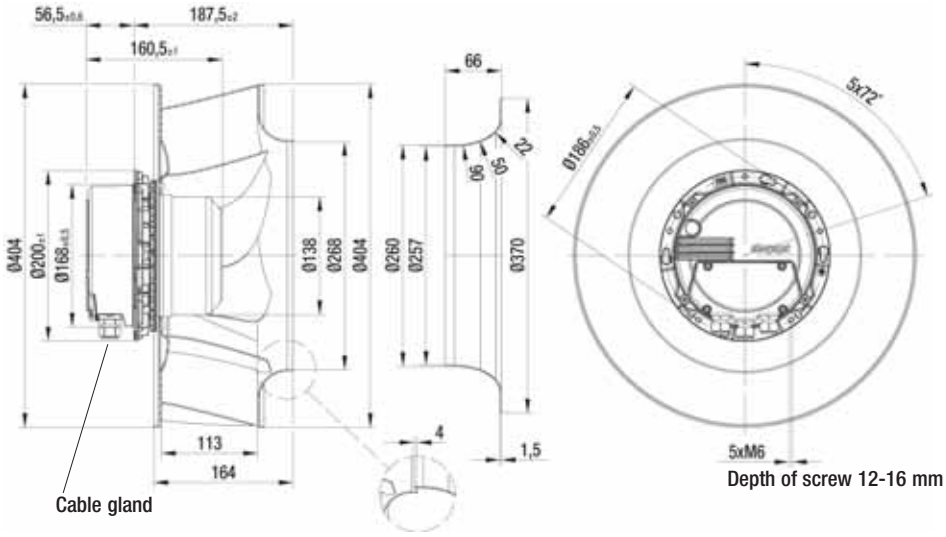


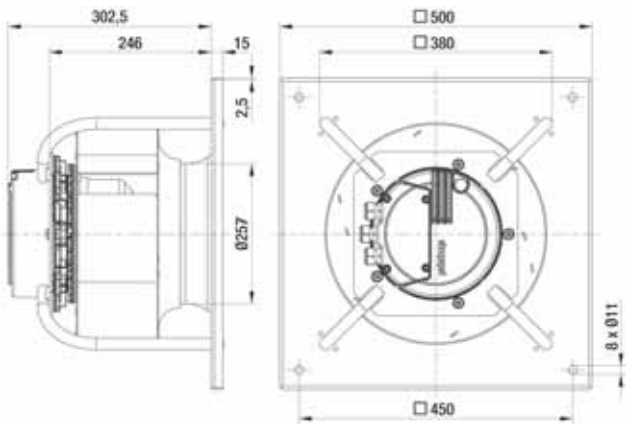
Mass of centrifugal module with support bracket

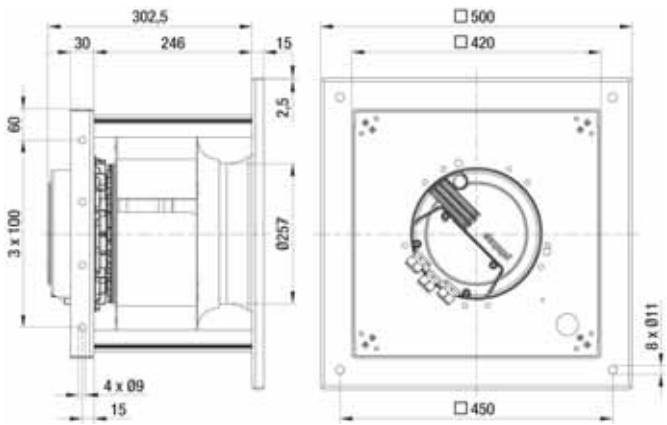


Mass of centrifugal module with support plate

Centrifugal fan	kg	Inlet nozzle (long)	Centrifugal module w. support bracket	kg	Centrifugal module with support plate	kg
R3G 400-AM55-01	7.7	54476-2-4013	**K3G 400-AM55-02**	16.2	**K3G 400-AM55-01**	19.0







Inlet nozzle p. 550 f.
Guard grille p. 553
Electr. connection p. 607

EC centrifugal fans and modules

backward curved, 3-D, Ø 450

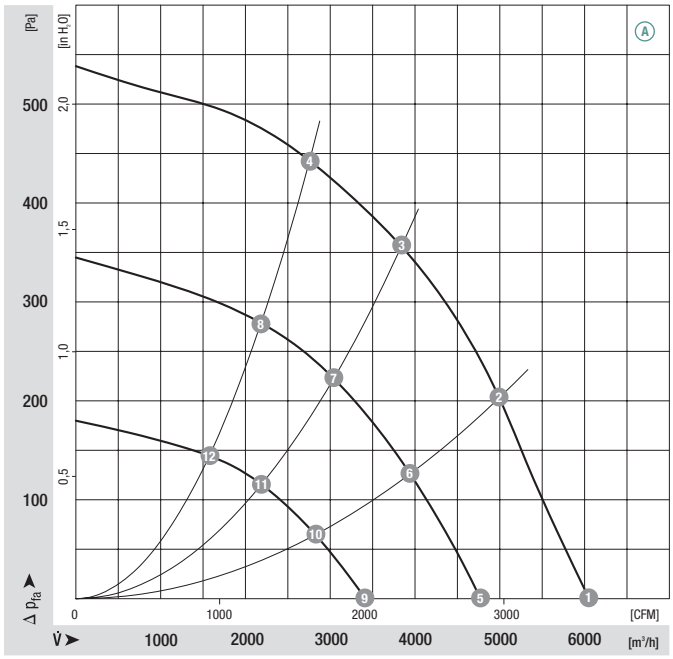
- **Material:** Support bracket: Steel, coated in black
  Support plate: Galvanised sheet steel, spacer profiles: Aluminium
  Impeller: Sheet aluminium, welded
  Rotor: Coated in black
  Electronics enclosure: Die-cast aluminium
- **Number of blades:** 6
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 54 (acc. to EN 60529)
- **Insulation class:** "F"
- **Mounting position:** Shaft horizontal or rotor on bottom; rotor on top on request
- **Condensate discharges:** Rotor-side
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage range	Frequency	Speed/rpm	Max. power input (1)	Max. current draw (1)	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VAC**	**Hz**	**rpm**	**kW**	**A**	**°C**	p. 607
***3G 450**	M3G 112-GA	Ⓐ	1~ 200-277	50/60	1365	0.64	2.90	-25 to +60	L1)

subject to alterations

(1) Nominal data in operating point with maximum load and 230 VAC

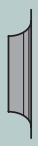
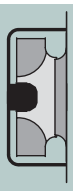
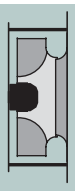
Curves



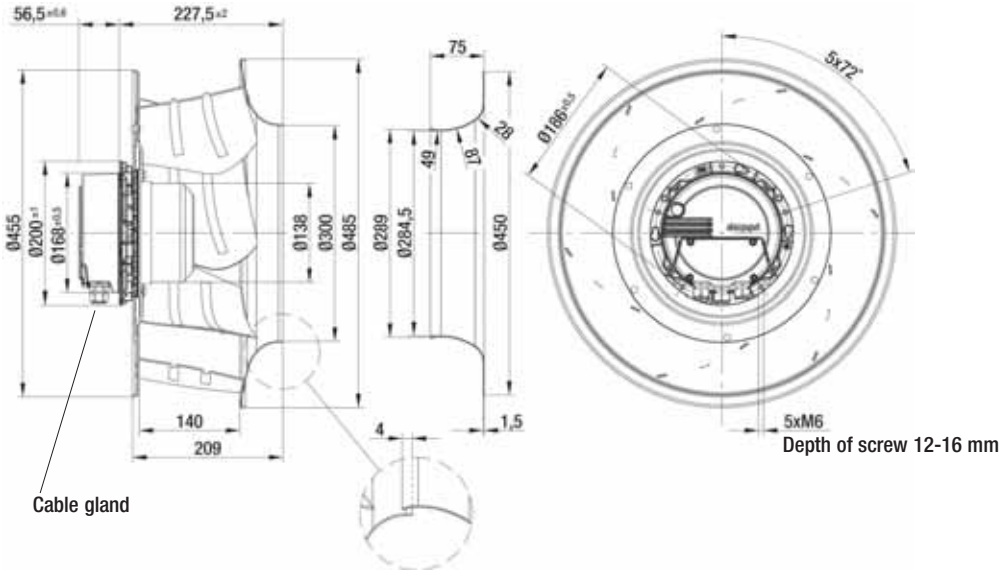
	n [rpm]	P_1 [kW]	I [A]	Lw_A [dB(A)]	η_{tL} [%]
Ⓐ 1	1365	0.48	2.20	80	—
Ⓐ 2	1345	0.60	2.70	75	57
Ⓐ 3	1330	0.64	2.90	71	66
Ⓐ 4	1340	0.62	2.80	73	60
Ⓐ 5	1065	0.23	1.10	74	—
Ⓐ 6	1065	0.29	1.40	68	58
Ⓐ 7	1055	0.32	1.50	66	66
Ⓐ 8	1060	0.30	1.40	67	61
Ⓐ 9	760	0.10	0.50	65	—
Ⓐ 10	760	0.12	0.60	59	57
Ⓐ 11	760	0.13	0.60	58	68
Ⓐ 12	760	0.12	0.60	59	63

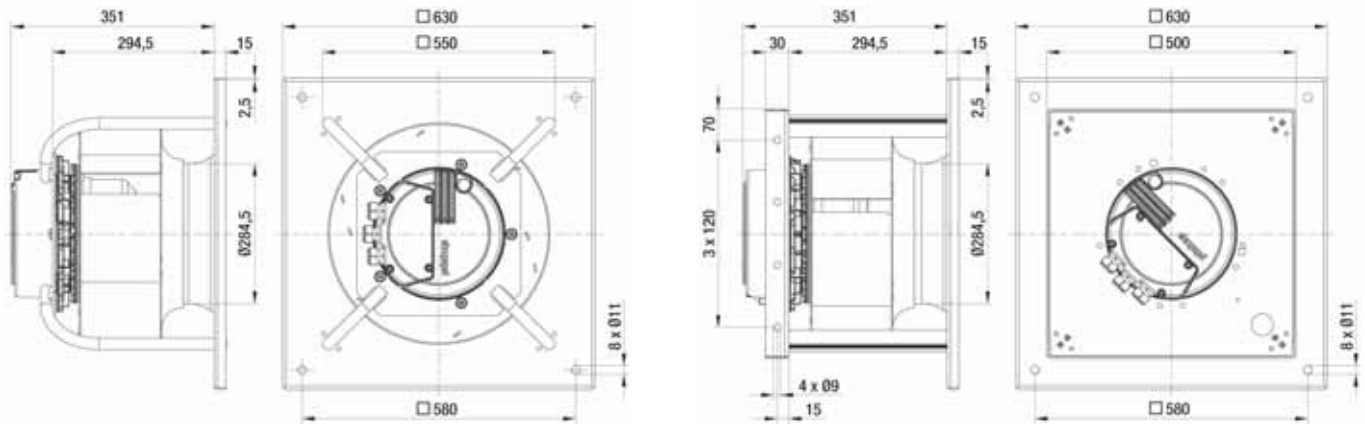
ebmpapst

- **Technical features:**
  - PFC (active)
  - Integrated PID controller
  - Control input 0-10 VDC / PWM
  - Input for sensor 0-10 V or 4-20 mA
  - Slave output 0-10 V max. 3 mA
  - Output 20 VDC (±20 %) max. 50 mA
  - Output 10 VDC (+10 %) max. 10 mA
  - RS485 ebmBUS
  - Alarm relay
  - Line undervoltage detection
  - Motor current limitation
  - Electronics / motor overtemperature protection
  - Locked-rotor protection
  - Soft start
- **EMC:** Interference emission acc. to EN 61000-6-4 (industrial environment)
  Interference immunity acc. to EN 61000-6-2 (industrial environment)
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 61800-5-1
- **Connection leads:** Via terminal strip
- **Protection class:** I (acc. to EN 61800-5-1)
- **Product conforming to standard:** CE
- **Approvals:** VDE, UL, CSA, CCC, GOST are applied for

Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle (long)	Centrifugal module w. support bracket	Mass of centrifugal module with support bracket kg	Centrifugal module with support plate	Mass of centrifugal module with support plate kg
R3G 450-AG33 -11	12.1	63045-2-4013	**K3G 450-AG33 -12**	22.2	**K3G 450-AG33 -11**	26.0





Inlet nozzle p. 550 f.
Guard grille p. 553
Electr. connection p. 607

EC centrifugal fans and modules

backward curved, 3-D, Ø 450

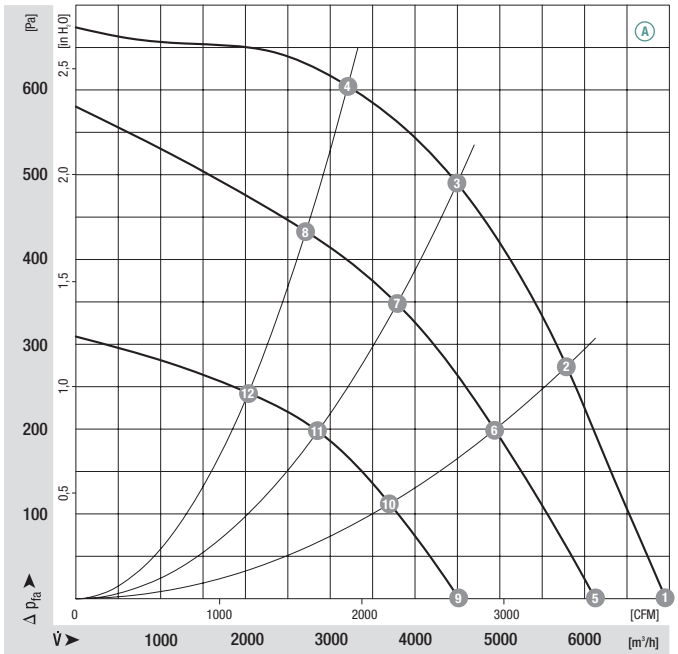
- **Material:** Support bracket: Steel, coated in black
  Support plate: Galvanised sheet steel, spacer profiles: Aluminium
  Impeller: Sheet aluminium, welded
  Rotor: Coated in black
  Electronics enclosure: Die-cast aluminium
- **Number of blades:** 6
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 54 (acc. to EN 60529)
- **Insulation class:** "F"
- **Mounting position:** Shaft horizontal or rotor on bottom; rotor on top on request
- **Condensate discharges:** Rotor-side
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage range	Frequency	Speed/rpm	Max. power input (1)	Max. current draw (1)	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VAC**	**Hz**	**rpm**	**kW**	**A**	**°C**	p. 607
***3G 450**	M3G 112-GA	Ⓐ	3~ 200-240	50/60	1560	1.01	3.20	-25 to +60	L2)

subject to alterations

(1) Nominal data in operating point with maximum load and 200 VAC

Curves

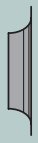


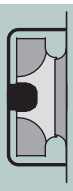
	n [rpm]	P_1 [kW]	I [A]	Lw_A [dB(A)]	η_{tL} [%]
Ⓐ 1	1560	0.69	2.30	83	—
Ⓐ 2	1555	0.91	2.90	78	58
Ⓐ 3	1555	1.01	3.20	74	67
Ⓐ 4	1560	0.96	3.10	77	60
Ⓐ 5	1345	0.43	1.60	80	—
Ⓐ 6	1315	0.53	2.00	73	60
Ⓐ 7	1300	0.58	2.00	70	71
Ⓐ 8	1315	0.54	1.90	72	62
Ⓐ 9	985	0.19	0.80	71	—
Ⓐ 10	970	0.22	0.90	65	62
Ⓐ 11	965	0.25	1.00	62	75
Ⓐ 12	970	0.23	0.90	64	67

ebmpapst

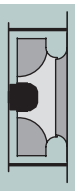
- **Technical features:**
  - PFC (passive)
  - Integrated PID controller
  - Control input 0-10 VDC / PWM
  - Input for sensor 0-10 V or 4-20 mA
  - Slave output 0-10 V max. 3 mA
  - Output 20 VDC (±20 %) max. 50 mA
  - Output 10 VDC (+10 %) max. 10 mA
  - RS485 ebmBUS
  - Alarm relay
  - Line undervoltage / phase failure detection
  - Motor current limitation
  - Electronics / motor overtemperature protection
  - Locked-rotor protection
  - Soft start
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-2
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 61800-5-1
- **Connection leads:** Via terminal strip
- **Protection class:** I (acc. to EN 61800-5-1)
- **Product conforming to standard:** CE
- **Approvals:** VDE, UL, CSA, CCC, GOST are applied for

Mass of centrifugal fan



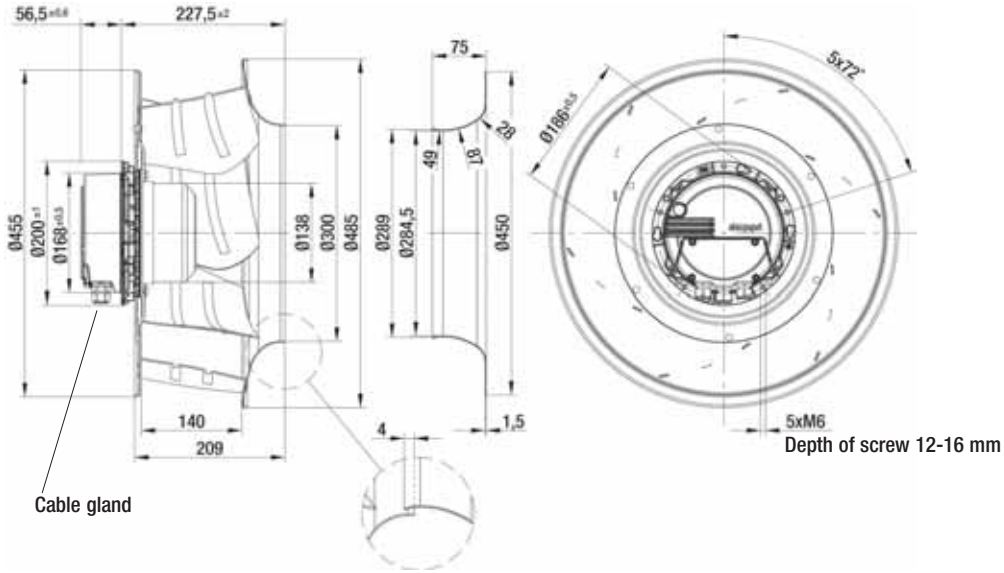


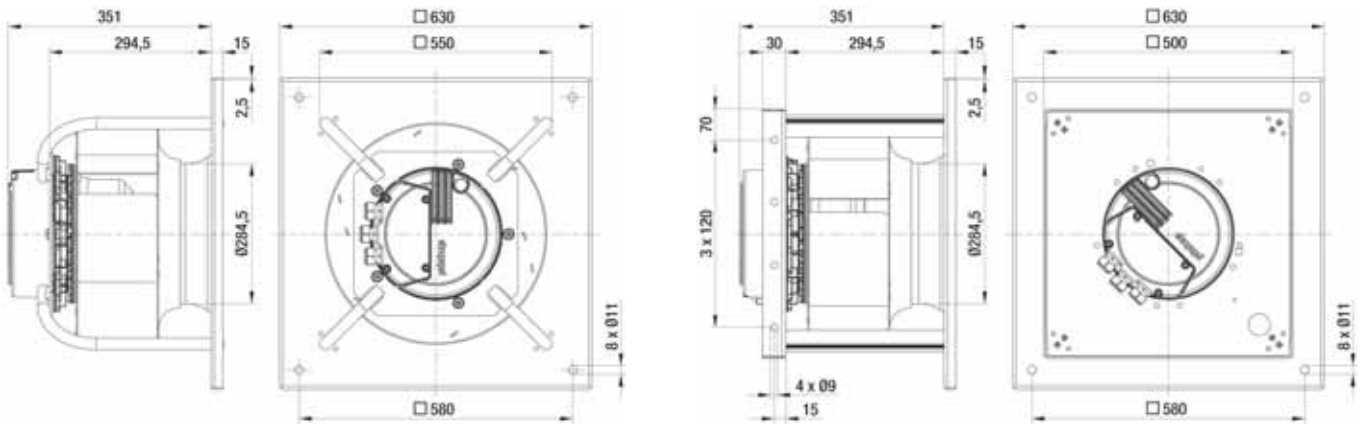
Mass of centrifugal module with support bracket



Mass of centrifugal module with support plate

Centrifugal fan	kg	Inlet nozzle (long)	Centrifugal module w. support bracket	kg	Centrifugal module with support plate	kg
R3G 450-AG38 -06	12.1	63045-2-4013	**K3G 450-AG38 -07**	22.2	**K3G 450-AG38 -06**	26.0





EC centrifugal fans and modules

backward curved, 3-D, Ø 450

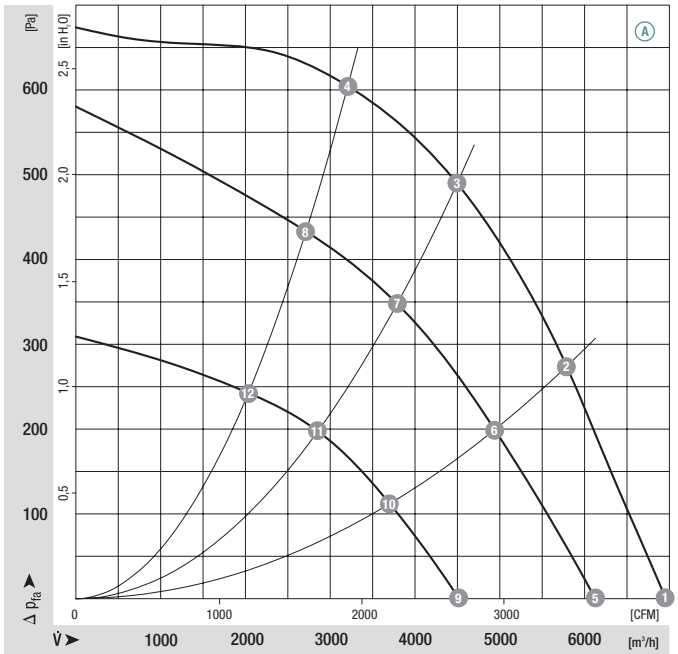
- **Material:** Support bracket: Steel, coated in black
  Support plate: Galvanised sheet steel, spacer profiles: Aluminium
  Impeller: Sheet aluminium, welded
  Rotor: Coated in black
  Electronics enclosure: Die-cast aluminium
- **Number of blades:** 6
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 54 (acc. to EN 60529)
- **Insulation class:** "F"
- **Mounting position:** Shaft horizontal or rotor on bottom; rotor on top on request
- **Condensate discharges:** Rotor-side
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage range	Frequency	Speed/rpm	Max. power input (1)	Max. current draw (1)	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VAC**	**Hz**	**rpm**	**kW**	**A**	**°C**	p. 607
***3G 450**	M3G 112-GA	Ⓐ	3~ 380-480	50/60	1560	1.01	1.60	-25 to +60	L2)

subject to alterations

(1) Nominal data in operating point with maximum load and 400 VAC

Curves

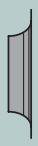


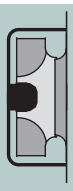
	n [rpm]	P_1 [kW]	I [A]	Lw_A [dB(A)]	η_{tL} [%]
Ⓐ 1	1560	0.69	1.10	83	—
Ⓐ 2	1555	0.91	1.50	78	58
Ⓐ 3	1555	1.01	1.60	74	67
Ⓐ 4	1560	0.96	1.50	77	60
Ⓐ 5	1345	0.43	0.80	80	—
Ⓐ 6	1315	0.53	1.00	73	60
Ⓐ 7	1300	0.58	1.00	70	71
Ⓐ 8	1315	0.54	1.00	72	62
Ⓐ 9	985	0.19	0.40	71	—
Ⓐ 10	970	0.22	0.50	65	62
Ⓐ 11	965	0.25	0.50	62	75
Ⓐ 12	970	0.23	0.50	64	67

ebmpapst

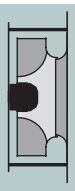
- **Technical features:**
  - PFC (passive)
  - Integrated PID controller
  - Control input 0-10 VDC / PWM
  - Input for sensor 0-10 V or 4-20 mA
  - Slave output 0-10 V max. 3 mA
  - Output 20 VDC (±20 %) max. 50 mA
  - Output 10 VDC (+10 %) max. 10 mA
  - RS485 ebmBUS
  - Alarm relay
  - Line undervoltage / phase failure detection
  - Motor current limitation
  - Electronics / motor overtemperature protection
  - Locked-rotor protection
  - Soft start
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-2
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 61800-5-1
- **Connection leads:** Via terminal strip
- **Protection class:** I (acc. to EN 61800-5-1)
- **Product conforming to standard:** CE
- **Approvals:** VDE, UL, CSA, CCC, GOST are applied for

Mass of centrifugal fan



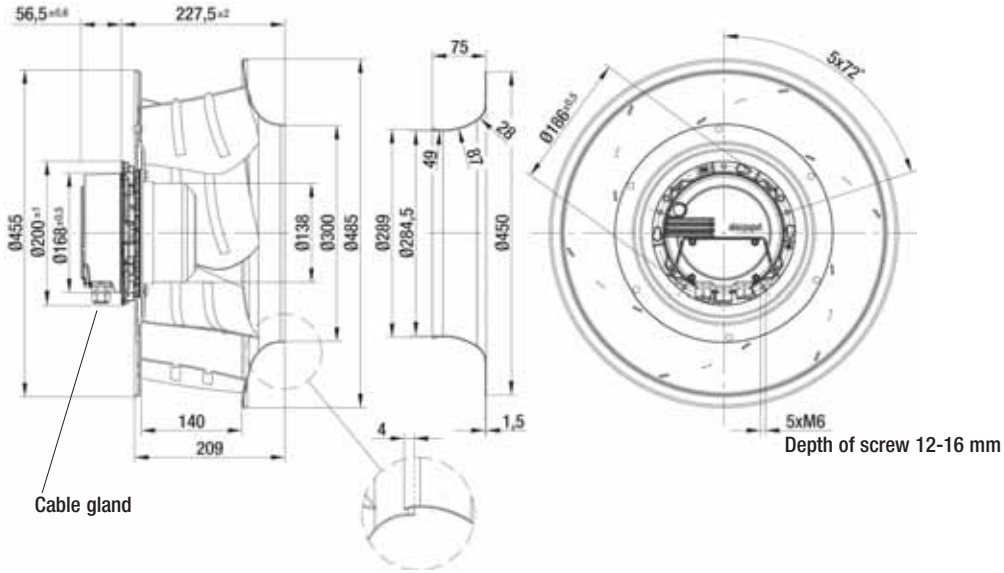


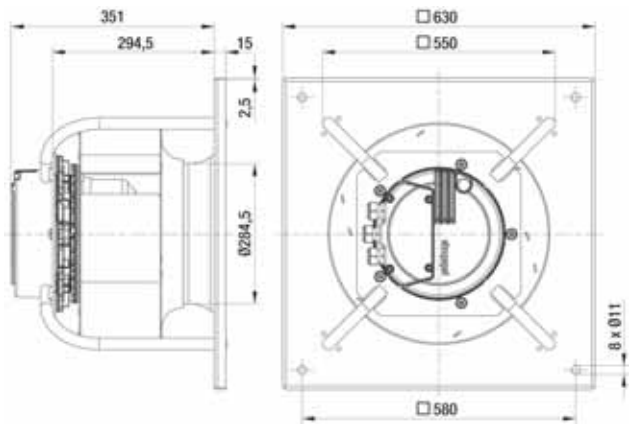
Mass of centrifugal module with support bracket

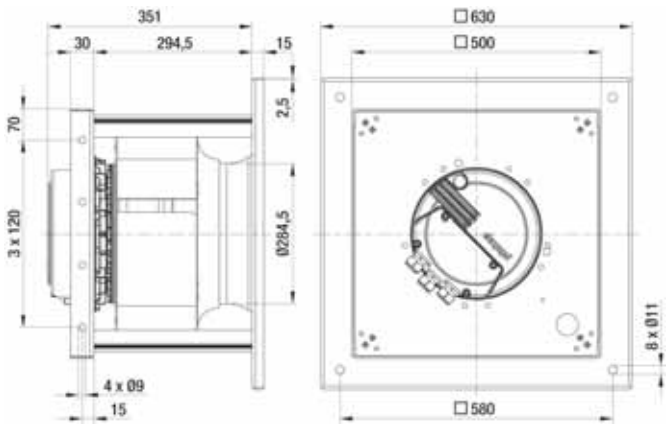


Mass of centrifugal module with support plate

Centrifugal fan	kg	Inlet nozzle (long)	Centrifugal module w. support bracket	kg	Centrifugal module with support plate	kg
R3G 450-AG33 -01	12.1	63045-2-4013	**K3G 450-AG33 -02**	22.2	**K3G 450-AG33 -01**	26.0







Inlet nozzle p. 550 f.
Guard grille p. 553
Electr. connection p. 607

EC centrifugal fans and modules

backward curved, 3-D, Ø 450

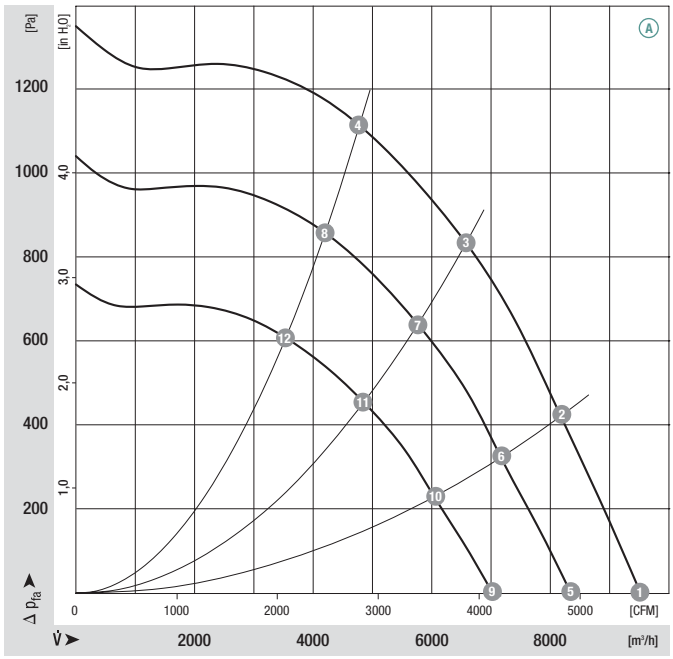
- **Material:** Support bracket: Steel, coated in black
  Support plate: Galvanised sheet steel, spacer profiles: Aluminium
  Impeller: Sheet aluminium, welded
  Rotor: Coated in black
  Electronics enclosure: Die-cast aluminium
- **Number of blades:** 6
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 54 (acc. to EN 60529)
- **Insulation class:** "F"
- **Mounting position:** Shaft horizontal or rotor on bottom; rotor on top on request
- **Condensate discharges:** Rotor-side
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage range	Frequency	Speed/rpm	Max. power input (1)	Max. current draw (1)	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VAC**	**Hz**	**rpm**	**kW**	**A**	**°C**	p. 608
***3G 450**	M3G 150-FF	Ⓐ	3~ 200-240	50/60	2165	2.63	9.80	-25 to +50	M)

subject to alterations

(1) Nominal data in operating point with maximum load and 200 VAC

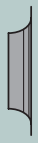
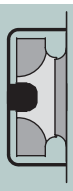
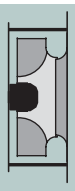
Curves



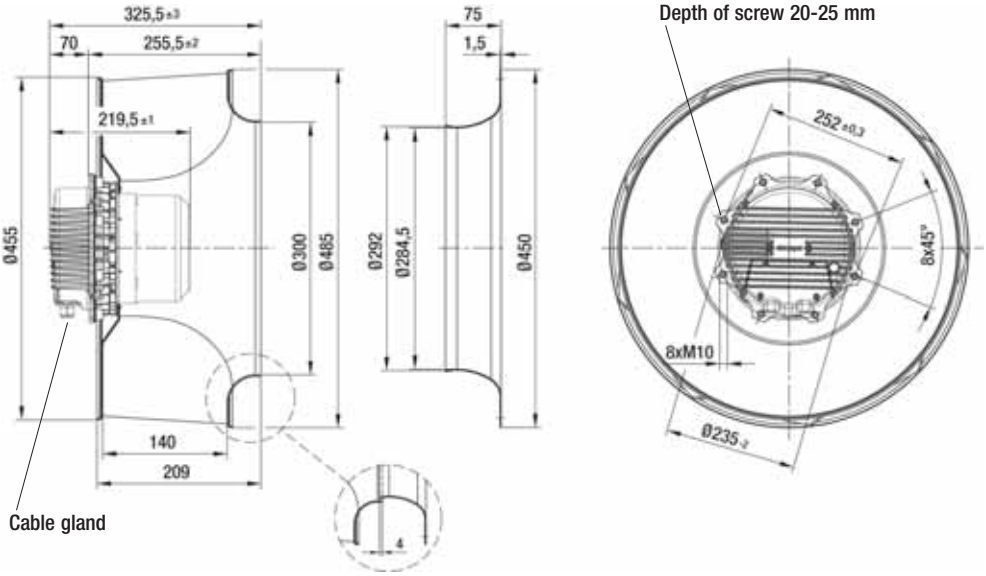
	n [rpm]	P_1 [kW]	I [A]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1	2165	1.85	6.60	83	—
Ⓐ 2	2165	2.33	8.70	81	51
Ⓐ 3	2165	2.59	9.80	78	68
Ⓐ 4	2165	2.57	9.80	79	64
Ⓐ 5	1900	1.25	4.30	79	—
Ⓐ 6	1900	1.59	5.90	77	52
Ⓐ 7	1900	1.74	6.60	75	68
Ⓐ 8	1900	1.74	6.60	75	64
Ⓐ 9	1600	0.75	2.60	71	—
Ⓐ 10	1600	0.95	3.50	72	52
Ⓐ 11	1600	1.04	3.90	70	68
Ⓐ 12	1600	1.04	3.90	71	64

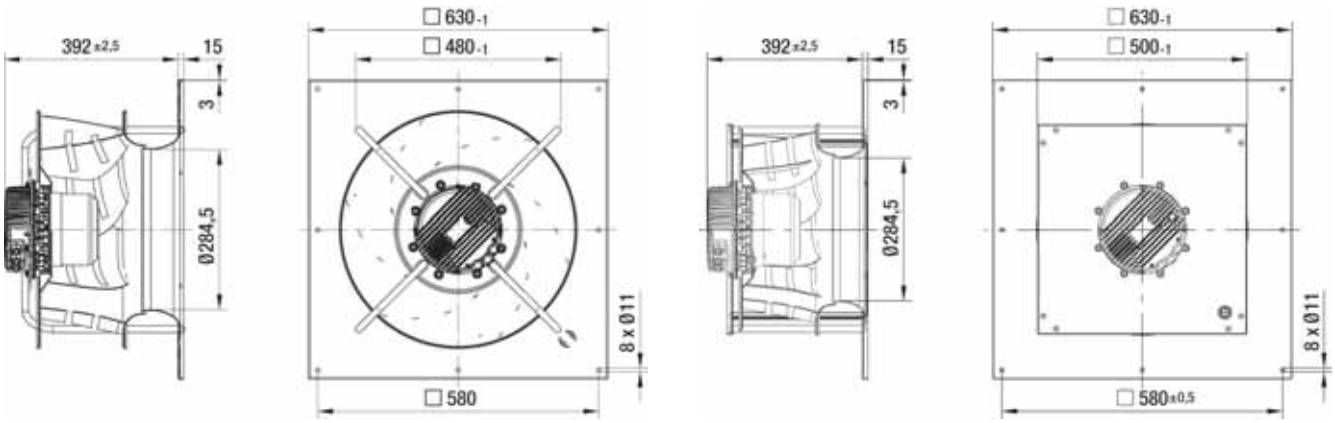
ebmpapst

- **Technical features:**
  - PFC (passive)
  - Integrated PID controller
  - Control input 0-10 VDC / PWM
  - Input for sensor 0-10 V or 4-20 mA
  - Slave output 0-10 V max. 3 mA
  - Output 20 VDC (±20 %) max. 50 mA
  - Output 10 VDC (+10 %) max. 10 mA
  - RS485 ebmBUS
  - Alarm relay
  - Line undervoltage / phase failure detection
  - Motor current limitation
  - Electronics / motor overtemperature protection
  - Locked-rotor protection
  - Soft start
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-2
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 61800-5-1
- **Connection leads:** Via terminal strip
- **Protection class:** I (acc. to EN 61800-5-1)
- **Product conforming to standard:** CE
- **Approvals:** UL, CSA, GOST

Centrifugal fan	kg	Inlet nozzle (long)	Centrifugal module w. support bracket	kg	Centrifugal module with support plate	kg
R3G 450-AT14 -13	21.0	63045-2-4013	**K3G 450-AT14 -20**	36.5	**K3G 450-AT14 -13**	38.5





Inlet nozzle p. 550 f.
Guard grille p. 553
Electr. connection p. 608

EC centrifugal fans and modules

backward curved, 3-D, Ø 450

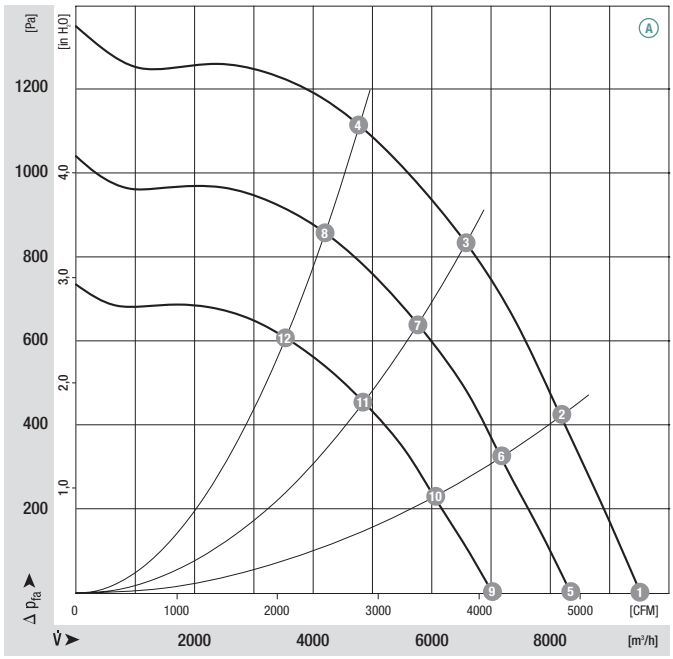
- **Material:** Support bracket: Steel, coated in black
  Support plate: Galvanised sheet steel, spacer profiles: Aluminium
  Impeller: Sheet aluminium, welded
  Rotor: Coated in black
  Electronics enclosure: Die-cast aluminium
- **Number of blades:** 6
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 54 (acc. to EN 60529)
- **Insulation class:** "F"
- **Mounting position:** Shaft horizontal or rotor on bottom; rotor on top on request
- **Condensate discharges:** Rotor-side
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage range	Frequency	Speed/rpm	Max. power input (1)	Max. current draw (1)	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VAC**	**Hz**	**rpm**	**kW**	**A**	**°C**	p. 608
***3G 450**	M3G 150-FF	Ⓐ	3~ 380-480	50/60	2165	2.63	4.90	-25 to +50	M)

subject to alterations

(1) Nominal data in operating point with maximum load and 400 VAC

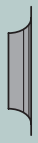
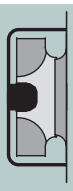
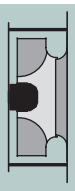
Curves



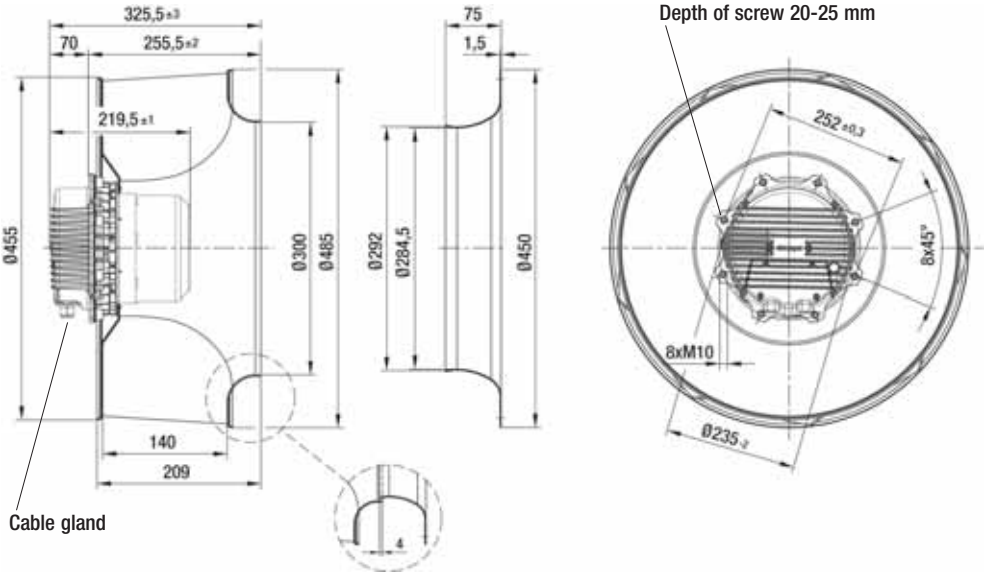
	n [rpm]	P_1 [kW]	I [A]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1	2165	1.85	3.30	83	—
Ⓐ 2	2165	2.33	4.40	81	51
Ⓐ 3	2165	2.59	4.90	78	68
Ⓐ 4	2165	2.57	4.90	79	64
Ⓐ 5	1900	1.25	2.20	79	—
Ⓐ 6	1900	1.59	3.00	77	52
Ⓐ 7	1900	1.74	3.30	75	68
Ⓐ 8	1900	1.74	3.30	75	64
Ⓐ 9	1600	0.75	1.30	71	—
Ⓐ 10	1600	0.95	1.80	72	52
Ⓐ 11	1600	1.04	2.00	70	68
Ⓐ 12	1600	1.04	2.00	71	64

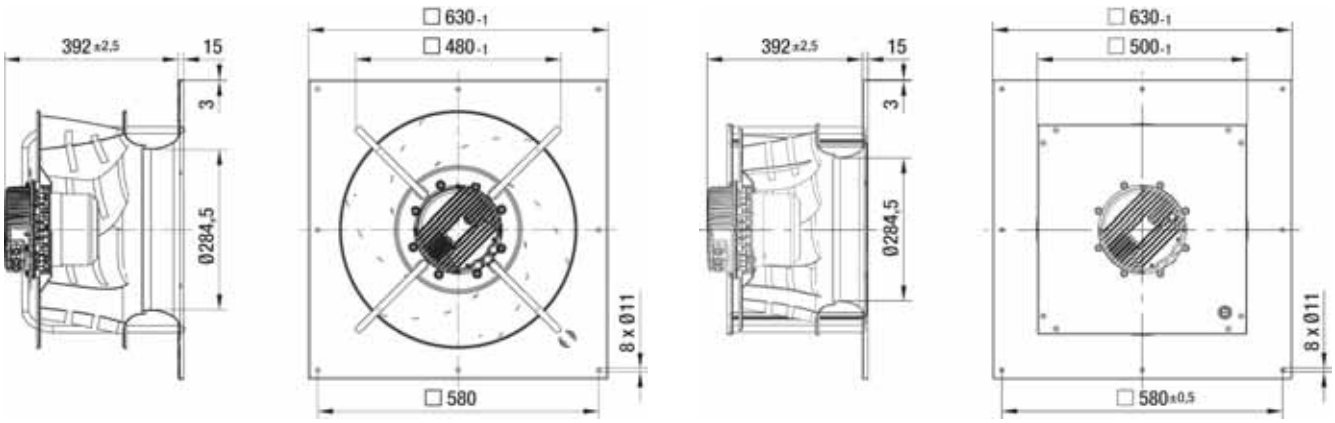
ebmpapst

- **Technical features:**
  - PFC (passive)
  - Integrated PID controller
  - Control input 0-10 VDC / PWM
  - Input for sensor 0-10 V or 4-20 mA
  - Slave output 0-10 V max. 3 mA
  - Output 20 VDC (±20 %) max. 50 mA
  - Output 10 VDC (+10 %) max. 10 mA
  - RS485 ebmBUS
  - Alarm relay
  - Line undervoltage / phase failure detection
  - Motor current limitation
  - Electronics / motor overtemperature protection
  - Locked-rotor protection
  - Soft start
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-2
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 61800-5-1
- **Connection leads:** Via terminal strip
- **Protection class:** I (acc. to EN 61800-5-1)
- **Product conforming to standard:** CE
- **Approvals:** VDE, UL, CSA, GOST

Centrifugal fan	kg	Inlet nozzle (long)	Centrifugal module w. support bracket	kg	Centrifugal module with support plate	kg
R3G 450-AT09 -03	21.0	63045-2-4013	**K3G 450-AT09 -10**	36.5	**K3G 450-AT09 -03**	38.5





EC centrifugal fan

backward curved, 3-D, Ø 500

- **Material:** Impeller: Sheet aluminium, welded
  Rotor: Coated in black
  Electronics enclosure: Die-cast aluminium
- **Number of blades:** 9
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 54
- **Insulation class:** "B"
- **Mounting position:** Shaft horizontal or rotor on top; rotor on bottom on request
- **Condensate discharges:** Rotor-side
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

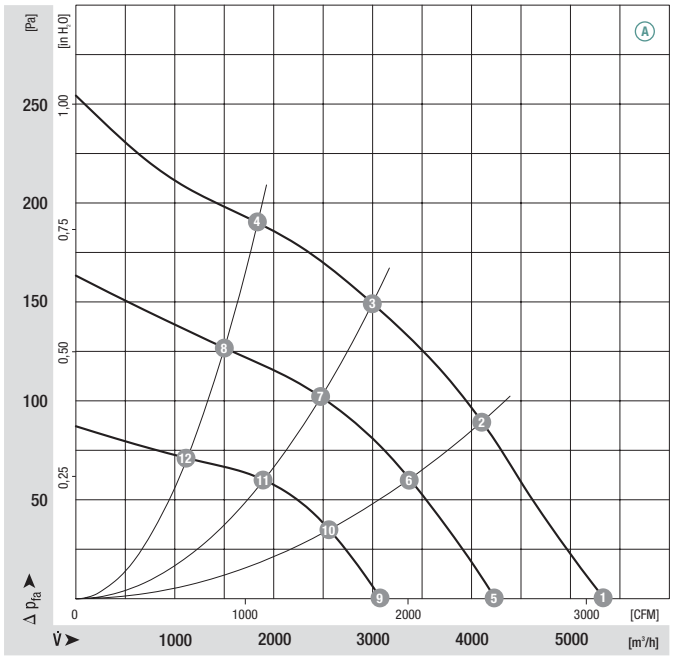
Nominal data

Type	Motor	Curve	Nominal voltage range	Frequency	Speed/rpm	Max. power input (1)	Max. current draw (1)	Perm. amb. temp.	Electr. connection
			VAC	Hz	rpm	W	A	°C	p. 605
*3G 500	M3G 084-FA	Ⓐ	1~ 200-277	50/60	810	265	1.60	-25 to +40	K1)

subject to alterations

(1) Nominal data in operating point with maximum load and 230 VAC

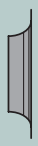
Curves



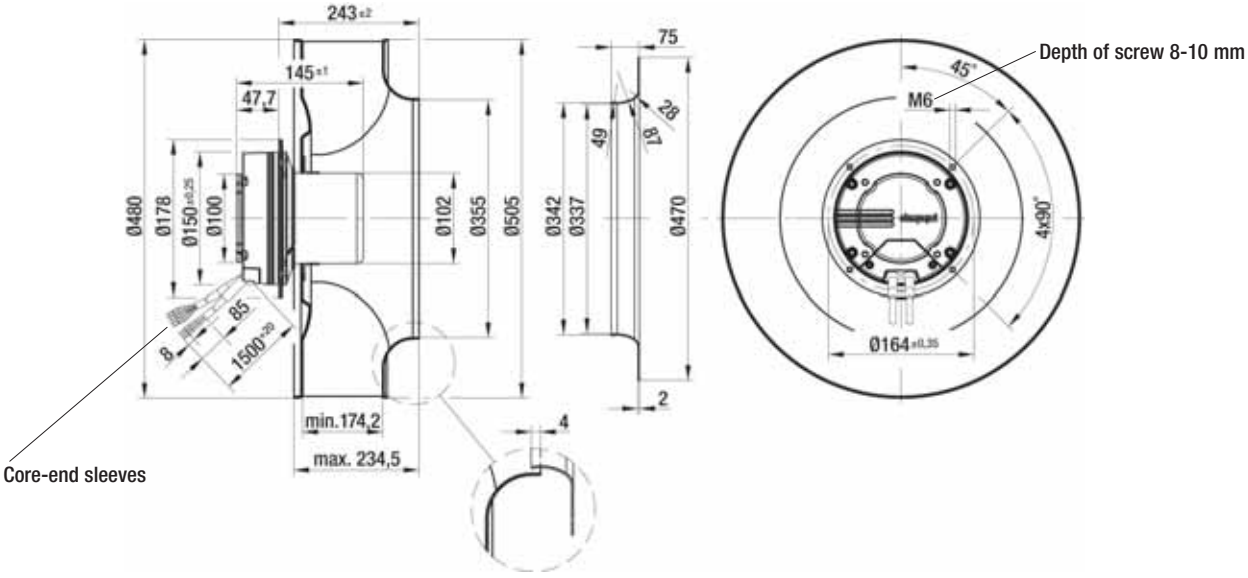
	n [rpm]	P_1 [W]	I [A]	Lw_A [dB(A)]	η_{tL} [%]
Ⓐ 1	810	211	1.30	72	—
Ⓐ 2	765	244	1.50	63	56
Ⓐ 3	750	265	1.60	59	61
Ⓐ 4	780	232	1.40	61	49
Ⓐ 5	645	100	0.70	65	14
Ⓐ 6	635	130	0.80	58	57
Ⓐ 7	625	137	0.90	55	63
Ⓐ 8	650	115	0.80	58	50
Ⓐ 9	465	42	0.30	56	14
Ⓐ 10	475	58	0.40	51	59
Ⓐ 11	475	64	0.40	48	66
Ⓐ 12	485	52	0.40	52	49

ebmpapst

- **Technical features:**
  - PFC (passive)
  - Control input 0-10 VDC / PWM
  - Output 10 VDC max. 1.1 mA
  - Alarm relay
  - Over-temperature protected electronics / motor
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-2
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 61800-5-1
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 61800-5-1, CE
- **Approvals:** UL, CSA; VDE, CCC, GOST are applied for



Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle (long)
R3G 500-AR34 -71	8.8	63072-2-4013



EC centrifugal fans and modules

backward curved, 3-D, Ø 500

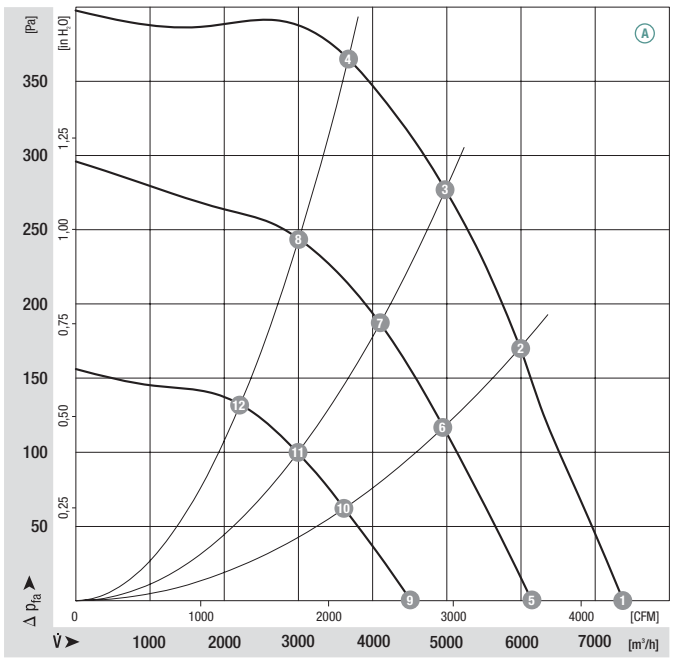
- **Material:** Support bracket: Steel, coated in black
  Support plate: Galvanised sheet steel, spacer profiles: Aluminium
  Impeller: Sheet aluminium, welded
  Rotor: Coated in black
  Electronics enclosure: Die-cast aluminium
- **Number of blades:** 9
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 54 (acc. to EN 60529)
- **Insulation class:** "F"
- **Mounting position:** Shaft horizontal or rotor on bottom; rotor on top on request
- **Condensate discharges:** Rotor-side
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage range	Frequency	Speed/rpm	Max. power input (1)	Max. current draw (1)	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VAC**	**Hz**	**rpm**	**kW**	**A**	**°C**	p. 607
***3G 500**	M3G 112-GA	Ⓐ	1~ 200-277	50/60	1125	0.71	3.20	-25 to +60	L1)

subject to alterations

(1) Nominal data in operating point with maximum load and 230 VAC

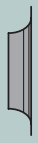
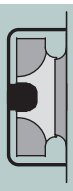
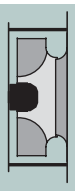
Curves



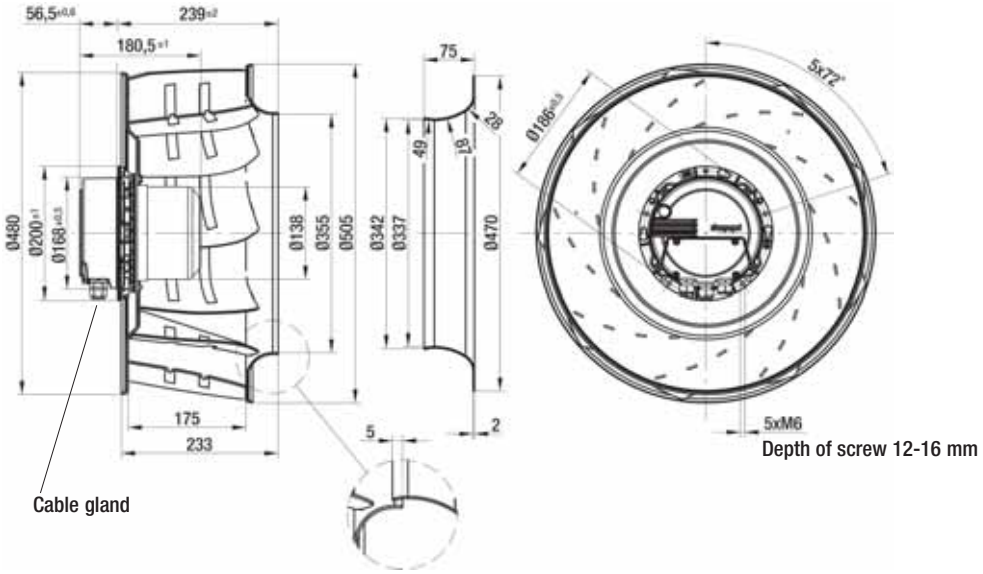
	n [rpm]	P_1 [kW]	I [A]	Lw_A [dB(A)]	η_{tL} [%]
Ⓐ 1	1125	0.54	2.40	81	—
Ⓐ 2	1110	0.66	3.00	74	59
Ⓐ 3	1100	0.71	3.20	70	69
Ⓐ 4	1110	0.69	3.10	70	66
Ⓐ 5	920	0.29	1.30	75	—
Ⓐ 6	905	0.35	1.60	69	64
Ⓐ 7	900	0.37	1.60	68	75
Ⓐ 8	900	0.36	1.60	68	75
Ⓐ 9	665	0.12	0.60	66	—
Ⓐ 10	650	0.12	0.70	60	65
Ⓐ 11	650	0.13	0.70	58	78
Ⓐ 12	655	0.14	0.70	57	82

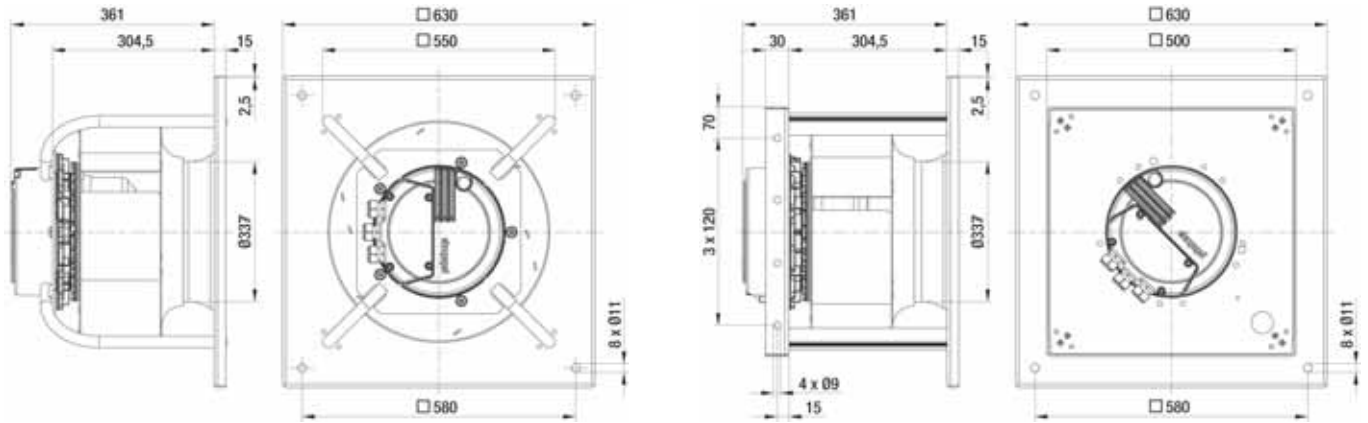
ebmpapst

- **Technical features:**
  - PFC (active)
  - Integrated PID controller
  - Control input 0-10 VDC / PWM
  - Input for sensor 0-10 V or 4-20 mA
  - Slave output 0-10 V max. 3 mA
  - Output 20 VDC (±20 %) max. 50 mA
  - Output 10 VDC (+10 %) max. 10 mA
  - RS485 ebmBUS
  - Alarm relay
  - Line undervoltage detection
  - Motor current limitation
  - Electronics / motor overtemperature protection
  - Locked-rotor protection
  - Soft start
- **EMC:** Interference emission acc. to EN 61000-6-4 (industrial environment)
  Interference immunity acc. to EN 61000-6-2 (industrial environment)
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 61800-5-1
- **Connection leads:** Via terminal strip
- **Protection class:** I (acc. to EN 61800-5-1)
- **Product conforming to standard:** CE
- **Approvals:** VDE, UL, CSA, CCC, GOST are applied for

Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle (long)	Centrifugal module w. support bracket	Mass of centrifugal module with support bracket kg	Centrifugal module with support plate	Mass of centrifugal module with support plate kg
R3G 500-AF32 -11	13.5	63072-2-4013	**K3G 500-AF32 -12**	24.3	**K3G 500-AF32 -11**	28.0





Inlet nozzle p. 550 f.
Guard grille p. 553
Electr. connection p. 607

EC centrifugal fans and modules

backward curved, 3-D, Ø 500

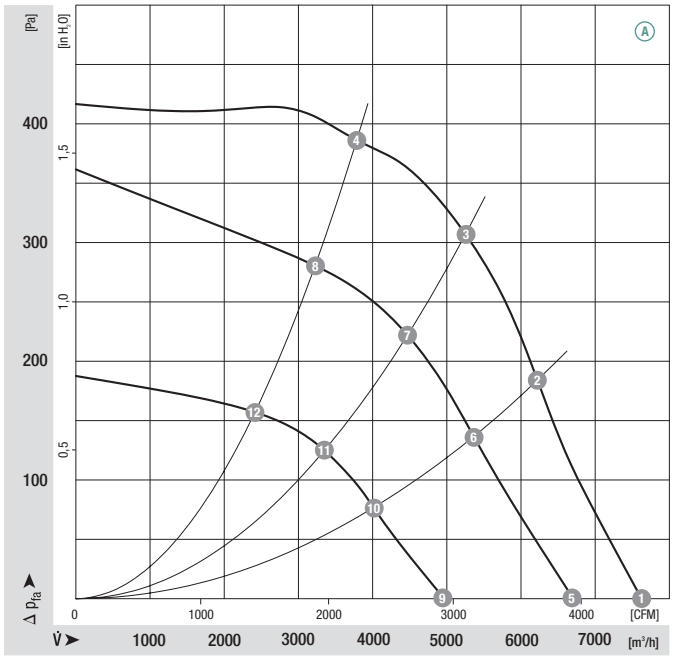
- **Material:** Support bracket: Steel, coated in black
  Support plate: Galvanised sheet steel, spacer profiles: Aluminium
  Impeller: Sheet aluminium, welded
  Rotor: Coated in black
  Electronics enclosure: Die-cast aluminium
- **Number of blades:** 9
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 54 (acc. to EN 60529)
- **Insulation class:** "F"
- **Mounting position:** Shaft horizontal or rotor on bottom; rotor on top on request
- **Condensate discharges:** Rotor-side
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage range	Frequency	Speed/rpm	Max. power input (1)	Max. current draw (1)	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VAC**	**Hz**	**rpm**	**kW**	**A**	**°C**	p. 607
***3G 500**	M3G 112-GA	Ⓐ	3~ 200-240	50/60	1160	0.82	2.90	-25 to +60	L2)

subject to alterations

(1) Nominal data in operating point with maximum load and 200 VAC

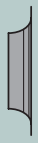
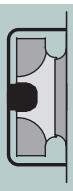
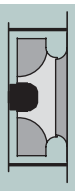
Curves



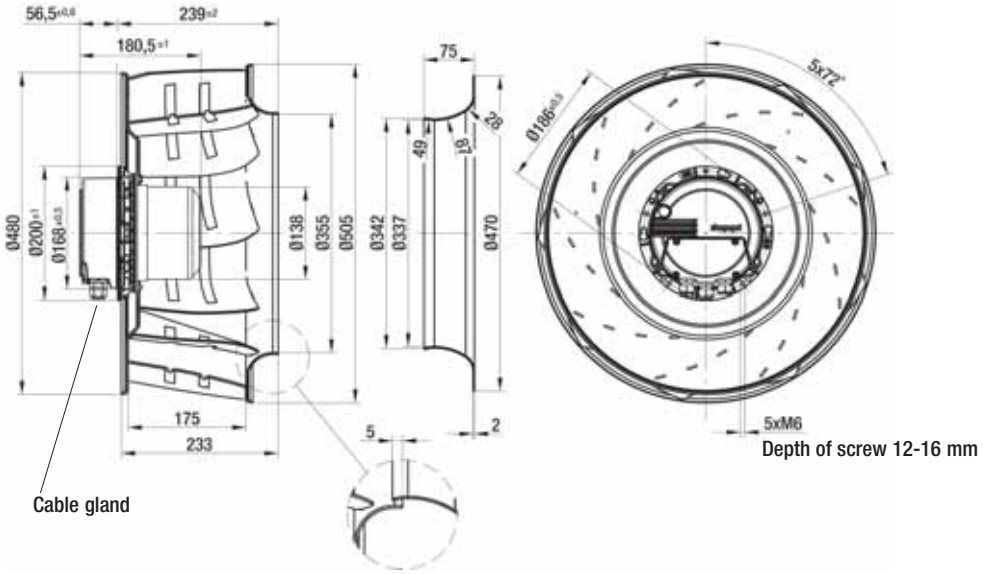
	n [rpm]	P_1 [kW]	I [A]	Lw_A [dB(A)]	η_{tL} [%]
Ⓐ 1	1160	0.57	2.10	83	—
Ⓐ 2	1160	0.74	2.60	75	58
Ⓐ 3	1160	0.82	2.90	72	69
Ⓐ 4	1160	0.76	2.70	71	66
Ⓐ 5	1005	0.36	1.50	78	—
Ⓐ 6	980	0.43	1.70	71	63
Ⓐ 7	970	0.45	1.80	68	76
Ⓐ 8	980	0.43	1.70	67	70
Ⓐ 9	735	0.15	0.70	69	—
Ⓐ 10	725	0.18	0.80	62	69
Ⓐ 11	720	0.20	0.90	60	82
Ⓐ 12	720	0.19	0.80	59	76

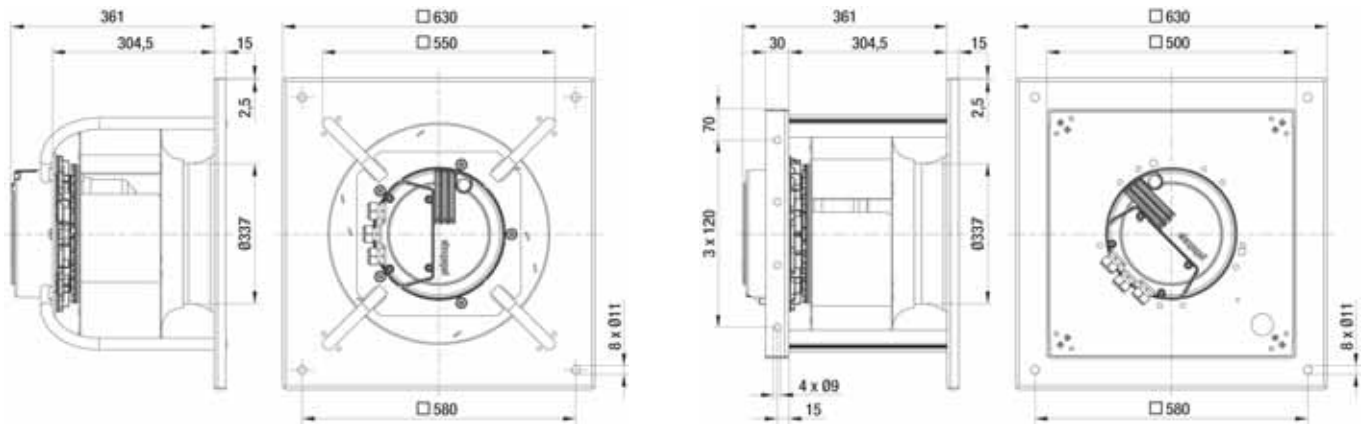
ebmpapst

- **Technical features:**
  - PFC (passive)
  - Integrated PID controller
  - Control input 0-10 VDC / PWM
  - Input for sensor 0-10 V or 4-20 mA
  - Slave output 0-10 V max. 3 mA
  - Output 20 VDC (±20 %) max. 50 mA
  - Output 10 VDC (+10 %) max. 10 mA
  - RS485 ebmBUS
  - Alarm relay
  - Line undervoltage / phase failure detection
  - Motor current limitation
  - Electronics / motor overtemperature protection
  - Locked-rotor protection
  - Soft start
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-2
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 61800-5-1
- **Connection leads:** Via terminal strip
- **Protection class:** I (acc. to EN 61800-5-1)
- **Product conforming to standard:** CE
- **Approvals:** VDE, UL, CSA, CCC, GOST are applied for

Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle (long)	Centrifugal module w. support bracket	Mass of centrifugal module with support bracket kg	Centrifugal module with support plate	Mass of centrifugal module with support plate kg
R3G 500-AF39 -06	13.5	63072-2-4013	**K3G 500-AF39 -07**	24.3	**K3G 500-AF39 -06**	28.0





Inlet nozzle p. 550 f.
Guard grille p. 553
Electr. connection p. 607

EC centrifugal fans and modules

backward curved, 3-D, Ø 500

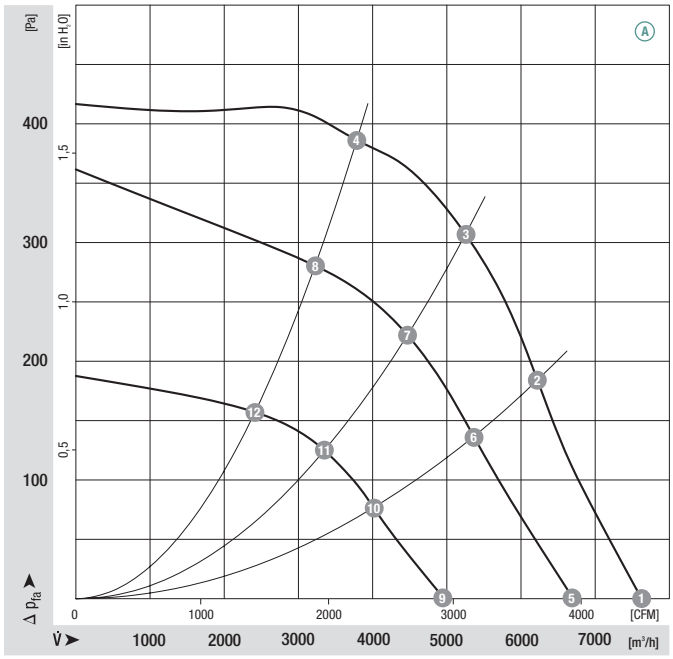
- **Material:** Support bracket: Steel, coated in black
  Support plate: Galvanised sheet steel, spacer profiles: Aluminium
  Impeller: Sheet aluminium, welded
  Rotor: Coated in black
  Electronics enclosure: Die-cast aluminium
- **Number of blades:** 9
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 54 (acc. to EN 60529)
- **Insulation class:** "F"
- **Mounting position:** Shaft horizontal or rotor on bottom; rotor on top on request
- **Condensate discharges:** Rotor-side
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage range	Frequency	Speed/rpm	Max. power input (1)	Max. current draw (1)	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VAC**	**Hz**	**rpm**	**kW**	**A**	**°C**	p. 607
***3G 500**	M3G 112-GA	Ⓐ	3~ 380-480	50/60	1160	0.82	1.50	-25 to +60	L2)

subject to alterations

(1) Nominal data in operating point with maximum load and 400 VAC

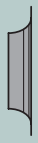
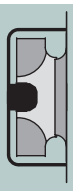
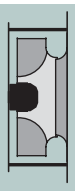
Curves



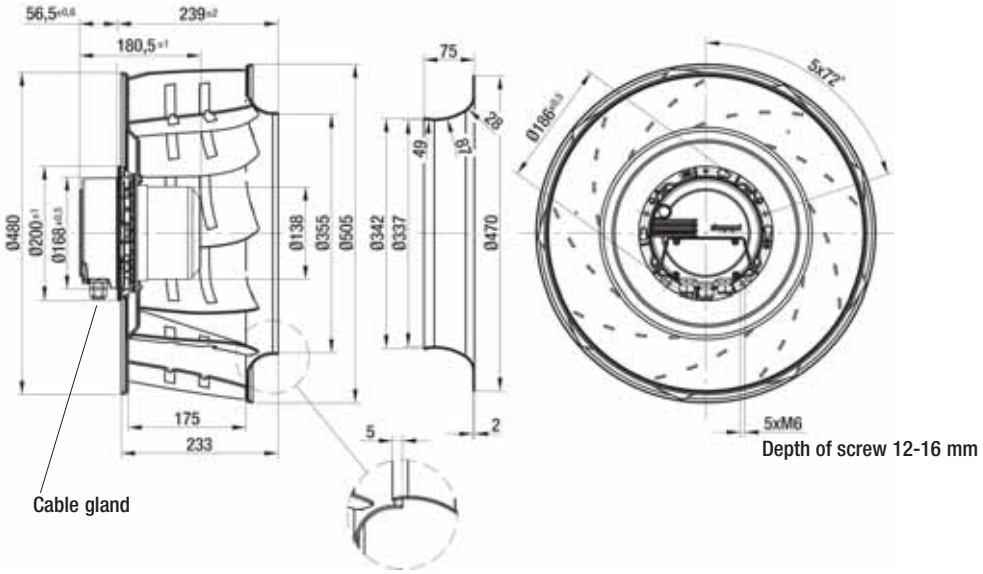
	n [rpm]	P_1 [kW]	I [A]	Lw_A [dB(A)]	η_{tL} [%]
Ⓐ 1	1160	0.57	1.10	83	—
Ⓐ 2	1160	0.74	1.30	75	58
Ⓐ 3	1160	0.82	1.50	72	69
Ⓐ 4	1160	0.76	1.40	71	66
Ⓐ 5	1005	0.36	0.70	78	—
Ⓐ 6	980	0.43	0.90	71	63
Ⓐ 7	970	0.45	0.90	68	76
Ⓐ 8	980	0.43	0.80	67	70
Ⓐ 9	735	0.15	0.40	69	—
Ⓐ 10	725	0.18	0.40	62	69
Ⓐ 11	720	0.20	0.40	60	82
Ⓐ 12	720	0.19	0.40	59	76

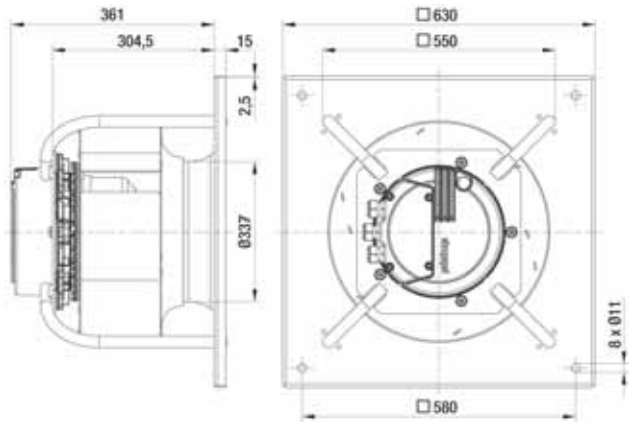
ebmpapst

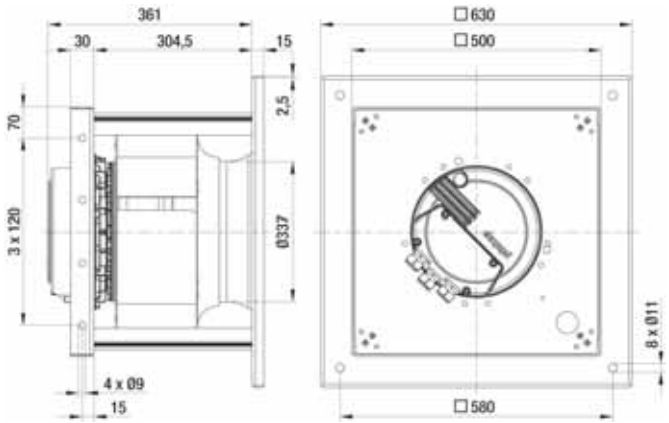
- **Technical features:**
  - PFC (passive)
  - Integrated PID controller
  - Control input 0-10 VDC / PWM
  - Input for sensor 0-10 V or 4-20 mA
  - Slave output 0-10 V max. 3 mA
  - Output 20 VDC (±20 %) max. 50 mA
  - Output 10 VDC (+10 %) max. 10 mA
  - RS485 ebmBUS
  - Alarm relay
  - Line undervoltage / phase failure detection
  - Motor current limitation
  - Electronics / motor overtemperature protection
  - Locked-rotor protection
  - Soft start
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-2
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 61800-5-1
- **Connection leads:** Via terminal strip
- **Protection class:** I (acc. to EN 61800-5-1)
- **Product conforming to standard:** CE
- **Approvals:** VDE, UL, CSA, CCC, GOST are applied for

Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle (long)	Centrifugal module w. support bracket	Mass of centrifugal module with support bracket kg	Centrifugal module with support plate	Mass of centrifugal module with support plate kg
R3G 500-AF34 -01	13.5	63072-2-4013	**K3G 500-AF34 -02**	24.3	**K3G 500-AF34 -01**	28.0







Inlet nozzle p. 550 f.
Guard grille p. 553
Electr. connection p. 607

EC centrifugal fans and modules

backward curved, 3-D, Ø 500

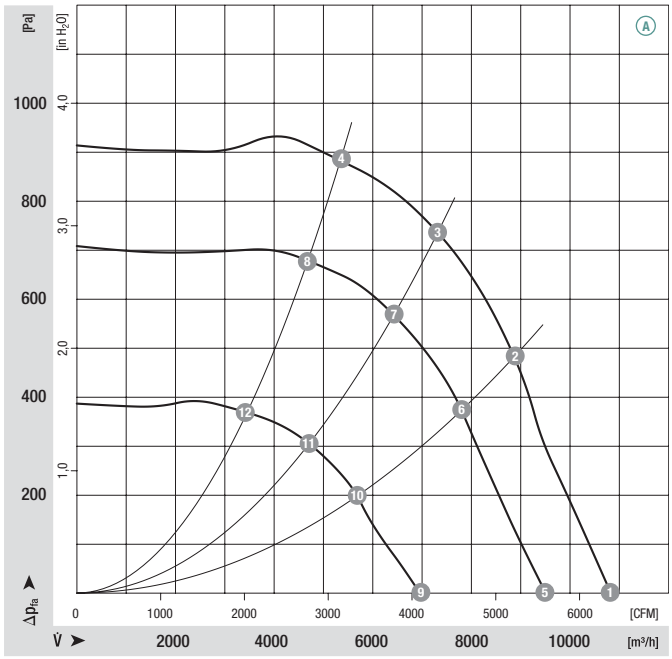
- **Material:** Support bracket: Steel, coated in black
  Support plate: Galvanised sheet steel, spacer profiles: Aluminium
  Impeller: Sheet aluminium, welded
  Rotor: Coated in black
  Electronics enclosure: Die-cast aluminium
- **Number of blades:** 9
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 54 (acc. to EN 60529)
- **Insulation class:** "F"
- **Mounting position:** Shaft horizontal or rotor on bottom; rotor on top on request
- **Condensate discharges:** Rotor-side
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage range	Frequency	Speed/rpm	Max. power input (1)	Max. current draw (1)	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VAC**	**Hz**	**rpm**	**kW**	**A**	**°C**	p. 608
***3G 500**	M3G 150-FF	Ⓐ	3~ 200-240	50/60	1700	2.80	8.50	-25 to +50	M)

subject to alterations

(1) Nominal data in operating point with maximum load and 200 VAC

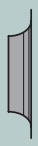
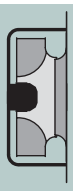
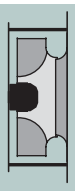
Curves



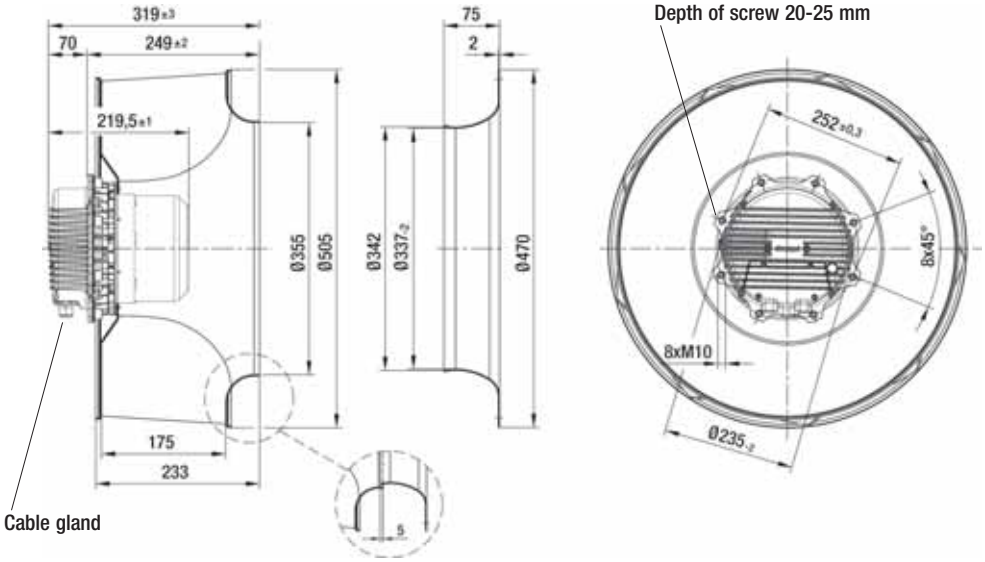
	n [rpm]	P_1 [kW]	I [A]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1	1700	1.85	5.80	82	—
Ⓐ 2	1700	2.50	7.80	79	57
Ⓐ 3	1700	2.65	8.20	78	65
Ⓐ 4	1700	2.40	7.20	77	58
Ⓐ 5	1500	1.30	4.20	78	—
Ⓐ 6	1500	1.70	5.20	75	60
Ⓐ 7	1500	1.75	5.40	74	65
Ⓐ 8	1500	1.65	5.20	74	61
Ⓐ 9	1100	0.57	2.20	69	—
Ⓐ 10	1100	0.70	2.60	67	56
Ⓐ 11	1100	0.75	2.60	66	63
Ⓐ 12	1100	0.70	2.60	65	56

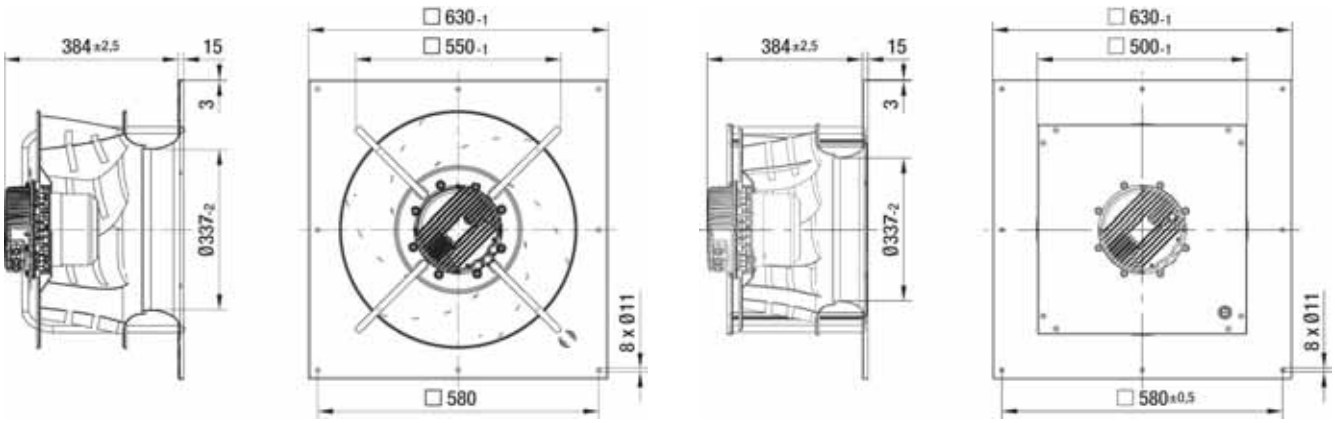
ebmpapst

- **Technical features:**
  - PFC (passive)
  - Integrated PID controller
  - Control input 0-10 VDC / PWM
  - Input for sensor 0-10 V or 4-20 mA
  - Slave output 0-10 V max. 3 mA
  - Output 20 VDC (±20 %) max. 50 mA
  - Output 10 VDC (+10 %) max. 10 mA
  - RS485 ebmBUS
  - Alarm relay
  - Line undervoltage / phase failure detection
  - Motor current limitation
  - Electronics / motor overtemperature protection
  - Locked-rotor protection
  - Soft start
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-2
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 61800-5-1
- **Connection leads:** Via terminal strip
- **Protection class:** I (acc. to EN 61800-5-1)
- **Product conforming to standard:** CE
- **Approvals:** UL, CSA, GOST

Centrifugal fan	kg	Inlet nozzle (long)	Centrifugal module w. support bracket	kg	Centrifugal module with support plate	kg
R3G 500-AG10 -13	22.0	63072-2-4013	**K3G 500-AG10 -20**	38.5	**K3G 500-AG10 -13**	41.0





EC centrifugal fans and modules

backward curved, 3-D, Ø 500

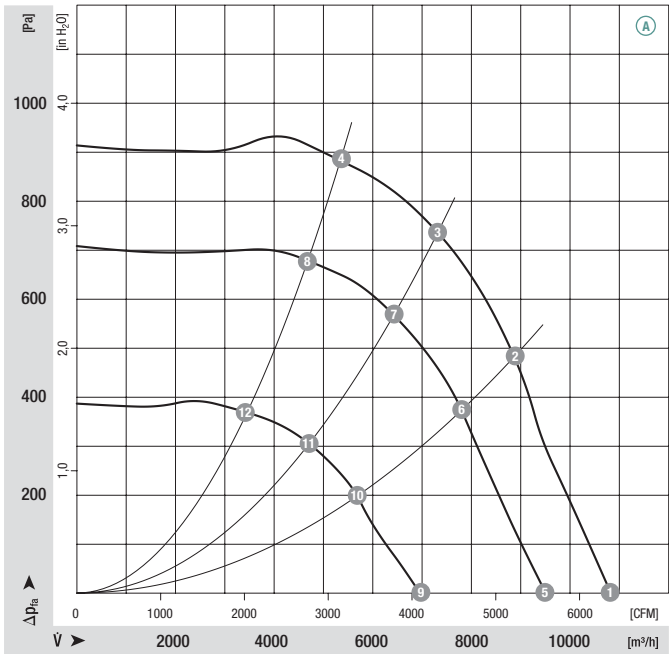
- **Material:** Support bracket: Steel, coated in black
  Support plate: Galvanised sheet steel, spacer profiles: Aluminium
  Impeller: Sheet aluminium, welded
  Rotor: Coated in black
  Electronics enclosure: Die-cast aluminium
- **Number of blades:** 9
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 54 (acc. to EN 60529)
- **Insulation class:** "F"
- **Mounting position:** Shaft horizontal or rotor on bottom; rotor on top on request
- **Condensate discharges:** Rotor-side
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage range	Frequency	Speed/rpm	Max. power input (1)	Max. current draw (1)	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VAC**	**Hz**	**rpm**	**kW**	**A**	**°C**	p. 608
***3G 500**	M3G 150-FF	Ⓐ	3~ 380-480	50/60	1700	2.70	4.30	-25 to +60	M)

subject to alterations

(1) Nominal data in operating point with maximum load and 400 VAC

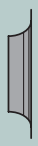
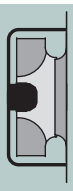
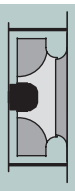
Curves



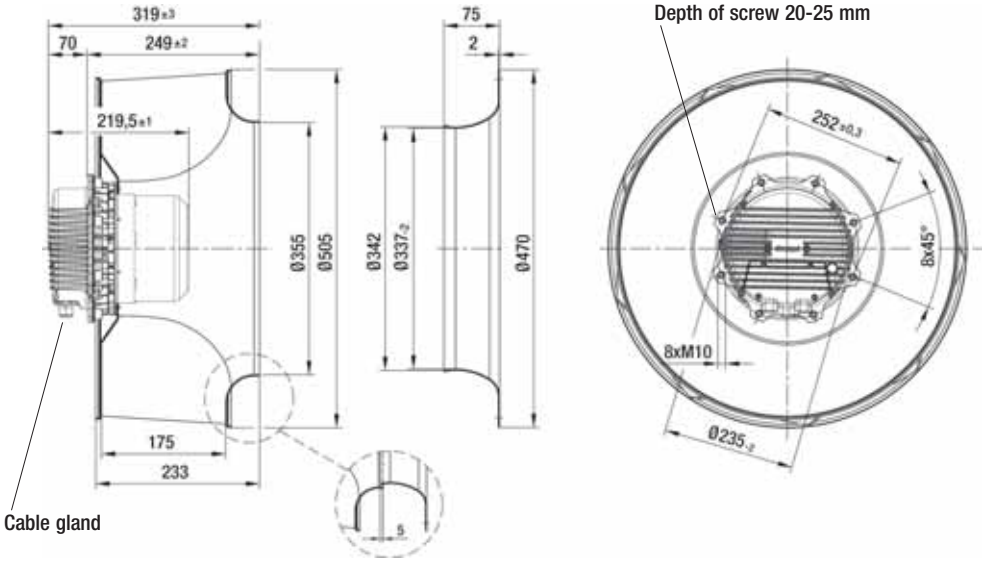
	n [rpm]	P_1 [kW]	I [A]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1	1700	1.85	2.90	82	—
Ⓐ 2	1700	2.50	3.90	79	57
Ⓐ 3	1700	2.65	4.10	78	65
Ⓐ 4	1700	2.40	3.60	77	58
Ⓐ 5	1500	1.30	2.10	78	—
Ⓐ 6	1500	1.70	2.60	75	60
Ⓐ 7	1500	1.75	2.70	74	65
Ⓐ 8	1500	1.65	2.60	74	61
Ⓐ 9	1100	0.57	1.10	69	—
Ⓐ 10	1100	0.70	1.30	67	56
Ⓐ 11	1100	0.75	1.30	66	63
Ⓐ 12	1100	0.70	1.30	65	56

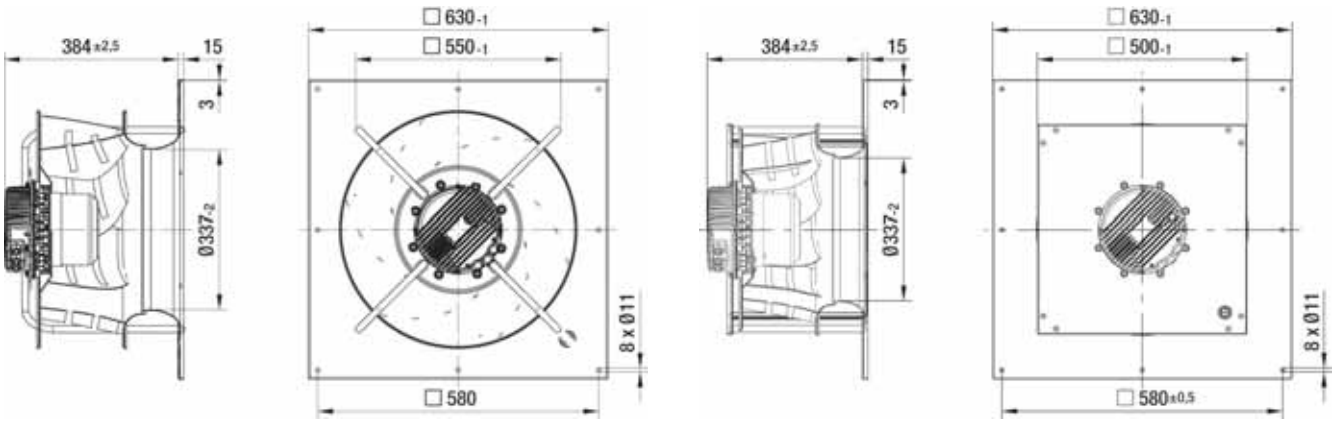
ebmpapst

- **Technical features:**
  - PFC (passive)
  - Integrated PID controller
  - Control input 0-10 VDC / PWM
  - Input for sensor 0-10 V or 4-20 mA
  - Slave output 0-10 V max. 3 mA
  - Output 20 VDC (±20 %) max. 50 mA
  - Output 10 VDC (+10 %) max. 10 mA
  - RS485 ebmBUS
  - Alarm relay
  - Line undervoltage / phase failure detection
  - Motor current limitation
  - Electronics / motor overtemperature protection
  - Locked-rotor protection
  - Soft start
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-2
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 61800-5-1
- **Connection leads:** Via terminal strip
- **Protection class:** I (acc. to EN 61800-5-1)
- **Product conforming to standard:** CE
- **Approvals:** VDE, UL, CSA, GOST

Centrifugal fan	kg	Inlet nozzle (long)	Centrifugal module w. support bracket	kg	Centrifugal module with support plate	kg
R3G 500-AG06 -03	22.0	63072-2-4013	**K3G 500-AG06 -10**	38.5	**K3G 500-AG06 -03**	41.0





Inlet nozzle p. 550 f.
Guard grille p. 553
Electr. connection p. 608

EC centrifugal fan

backward curved, 3-D, Ø 560

- **Material:** Impeller: Sheet aluminium, welded
  Rotor: Coated in black
  Electronics enclosure: Die-cast aluminium
- **Number of blades:** 9
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 54 (acc. to EN 60529)
- **Insulation class:** "F"
- **Mounting position:** Shaft horizontal or rotor on bottom; rotor on top on request
- **Condensate discharges:** Rotor-side
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

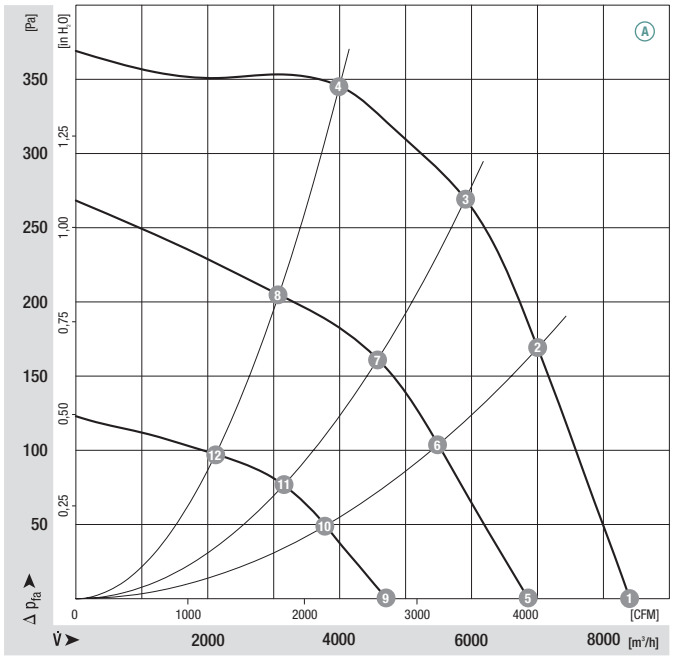
Nominal data

Type	Motor	Curve	Nominal voltage range	Frequency	Speed/rpm	Max. power input (1)	Max. current draw (1)	Perm. amb. temp.	Electr. connection
			VAC	Hz	rpm	kW	A	°C	p. 607
*3G 560	M3G 112-GA	Ⓐ	1~ 200-277	50/60	945	0.79	3.50	-25 to +60	L1)

subject to alterations

(1) Nominal data in operating point with maximum load and 230 VAC

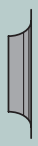
Curves



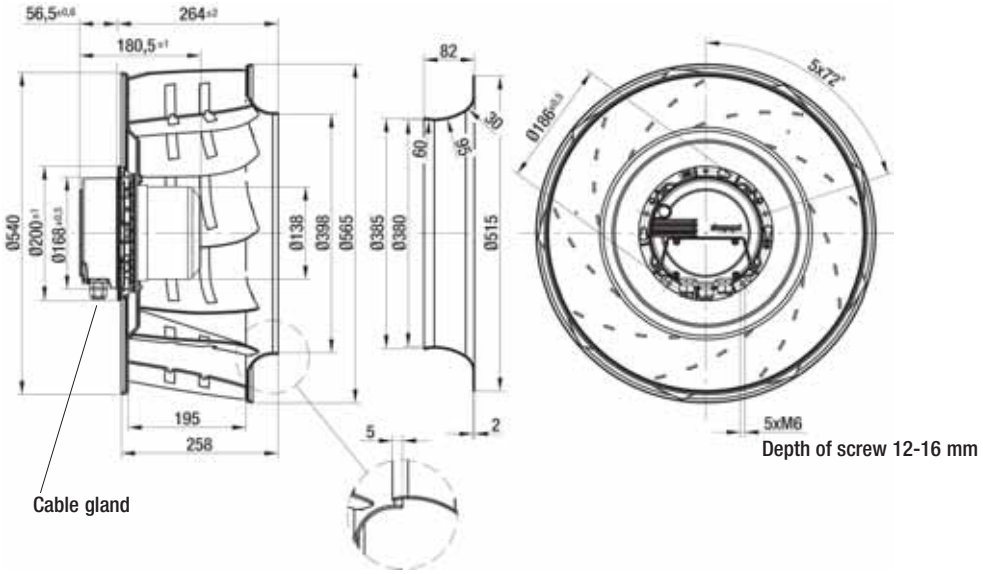
		n [rpm]	P_1 [kW]	I [A]	Lw_A [dB(A)]	η_{tL} [%]
Ⓐ	1	945	0.47	2.20	74	—
Ⓐ	2	945	0.69	3.10	71	70
Ⓐ	3	945	0.79	3.50	70	74
Ⓐ	4	945	0.71	3.20	71	66
Ⓐ	5	760	0.24	1.20	69	46
Ⓐ	6	735	0.31	1.40	67	77
Ⓐ	7	725	0.34	1.60	68	81
Ⓐ	8	740	0.31	1.40	64	64
Ⓐ	9	520	0.09	0.50	72	50
Ⓐ	10	505	0.11	0.60	60	82
Ⓐ	11	500	0.12	0.60	54	85
Ⓐ	12	505	0.11	0.60	54	71

ebmpapst

- **Technical features:**
  - PFC (active)
  - Integrated PID controller
  - Control input 0-10 VDC / PWM
  - Input for sensor 0-10 V or 4-20 mA
  - Slave output 0-10 V max. 3 mA
  - Output 20 VDC (±20 %) max. 50 mA
  - Output 10 VDC (+10 %) max. 10 mA
  - RS485 ebmBUS
  - Alarm relay
  - Line undervoltage detection
  - Motor current limitation
  - Electronics / motor overtemperature protection
  - Locked-rotor protection
  - Soft start
- **EMC:** Interference emission acc. to EN 61000-6-4 (industrial environment)
  Interference immunity acc. to EN 61000-6-2 (industrial environment)
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 61800-5-1
- **Connection leads:** Via terminal strip
- **Protection class:** I (acc. to EN 61800-5-1)
- **Product conforming to standard:** CE
- **Approvals:** VDE, UL, CSA, CCC, GOST are applied for



Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle (long)
R3G 560-AK32 -11	13.9	63071-2-4013



EC centrifugal fans and modules

backward curved, 3-D, Ø 560

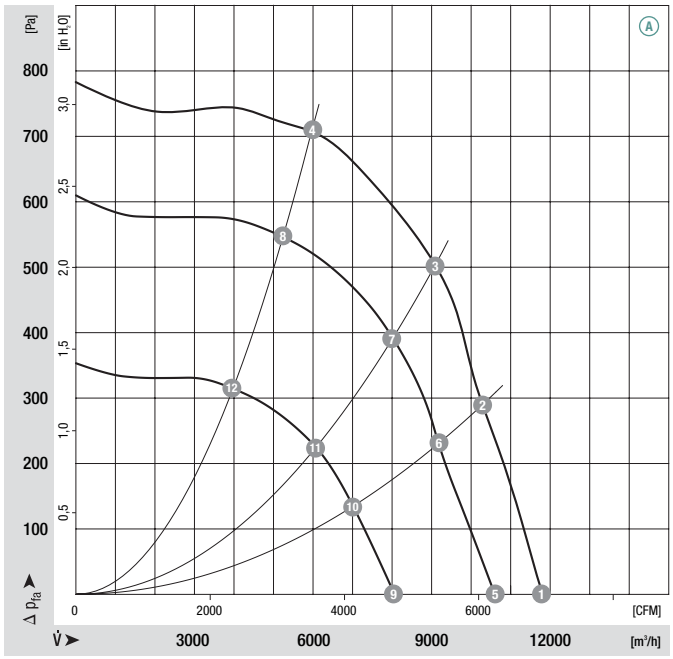
- **Material:** Support bracket: Steel, coated in black
  Support plate: Galvanised sheet steel, spacer profiles: Aluminium
  Impeller: Sheet aluminium, welded
  Rotor: Coated in black
  Electronics enclosure: Die-cast aluminium
- **Number of blades:** 9
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 54 (acc. to EN 60529)
- **Insulation class:** "F"
- **Mounting position:** Shaft horizontal or rotor on bottom; rotor on top on request
- **Condensate discharges:** Rotor-side
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage range	Frequency	Speed/rpm	Max. power input (1)	Max. current draw (1)	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VAC**	**Hz**	**rpm**	**kW**	**A**	**°C**	p. 608
***3G 560**	M3G 150-FF	Ⓐ	3~ 200-240	50/60	1350	2.30	7.00	-25 to +55	M)

subject to alterations

(1) Nominal data in operating point with maximum load and 200 VAC

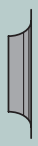
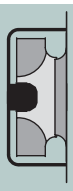
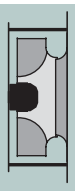
Curves



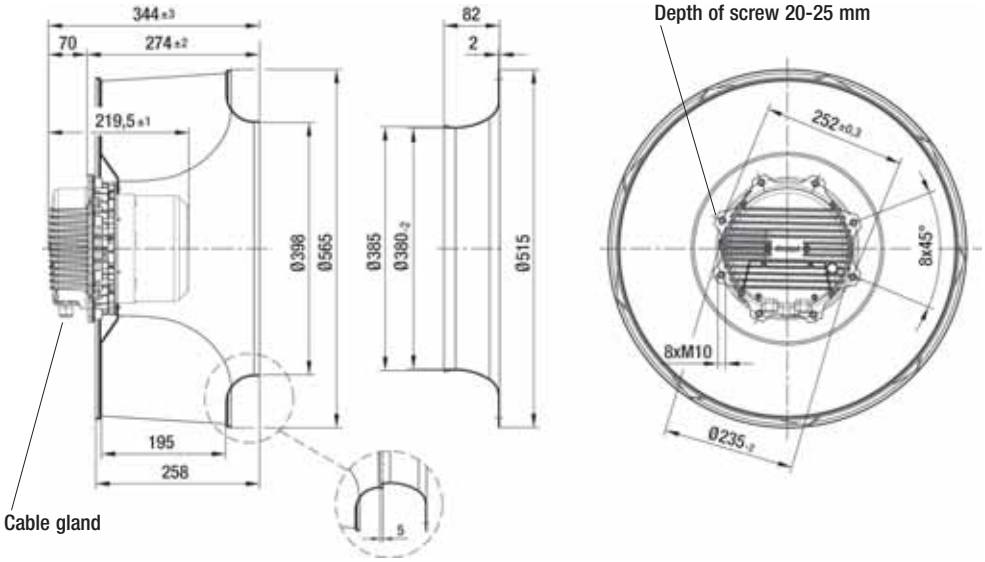
	n [rpm]	P_1 [kW]	I [A]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1	1350	1.33	4.40	78	—
Ⓐ 2	1350	1.90	5.80	77	60
Ⓐ 3	1350	2.15	6.80	74	68
Ⓐ 4	1350	2.10	4.40	74	63
Ⓐ 5	1200	0.90	3.20	75	—
Ⓐ 6	1200	1.30	4.20	73	60
Ⓐ 7	1200	1.55	5.00	71	68
Ⓐ 8	1200	1.43	4.60	71	62
Ⓐ 9	910	0.45	1.80	67	—
Ⓐ 10	910	0.60	2.20	65	60
Ⓐ 11	910	0.70	2.40	64	65
Ⓐ 12	910	0.65	2.40	64	63

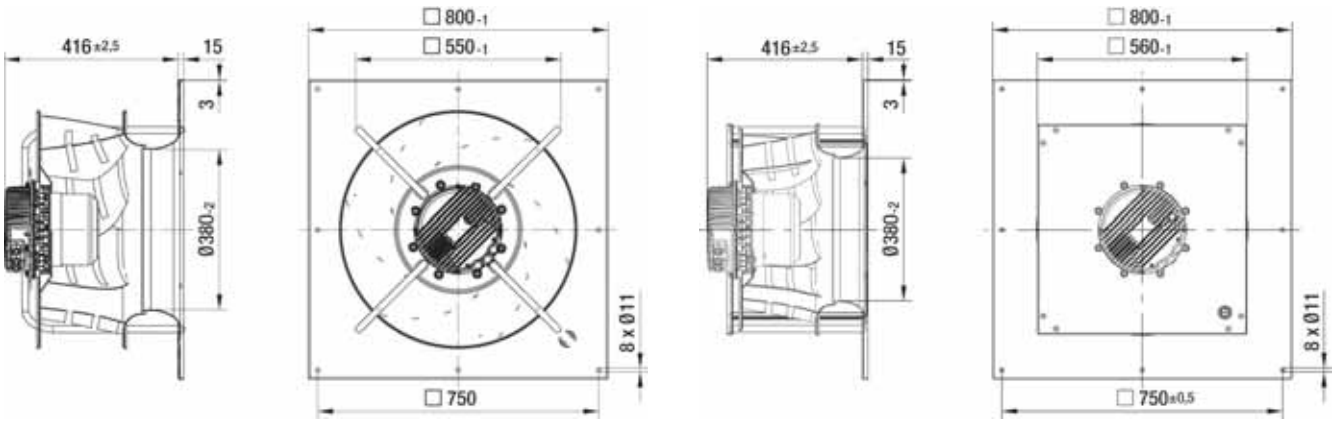
ebmpapst

- **Technical features:**
  - PFC (passive)
  - Integrated PID controller
  - Control input 0-10 VDC / PWM
  - Input for sensor 0-10 V or 4-20 mA
  - Slave output 0-10 V max. 3 mA
  - Output 20 VDC (±20 %) max. 50 mA
  - Output 10 VDC (+10 %) max. 10 mA
  - RS485 ebmBUS
  - Alarm relay
  - Line undervoltage / phase failure detection
  - Motor current limitation
  - Electronics / motor overtemperature protection
  - Locked-rotor protection
  - Soft start
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-2
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 61800-5-1
- **Connection leads:** Via terminal strip
- **Protection class:** I (acc. to EN 61800-5-1)
- **Product conforming to standard:** CE
- **Approvals:** UL, CSA, GOST

Centrifugal fan	kg	Inlet nozzle (long)	Centrifugal module w. support bracket	kg	Centrifugal module with support plate	kg
R3G 560-AG11 -13	23.5	63071-2-4013	**K3G 560-AG11 -20**	45.5	**K3G 560-AG11 -13**	48.5





EC centrifugal fans and modules

backward curved, 3-D, Ø 560

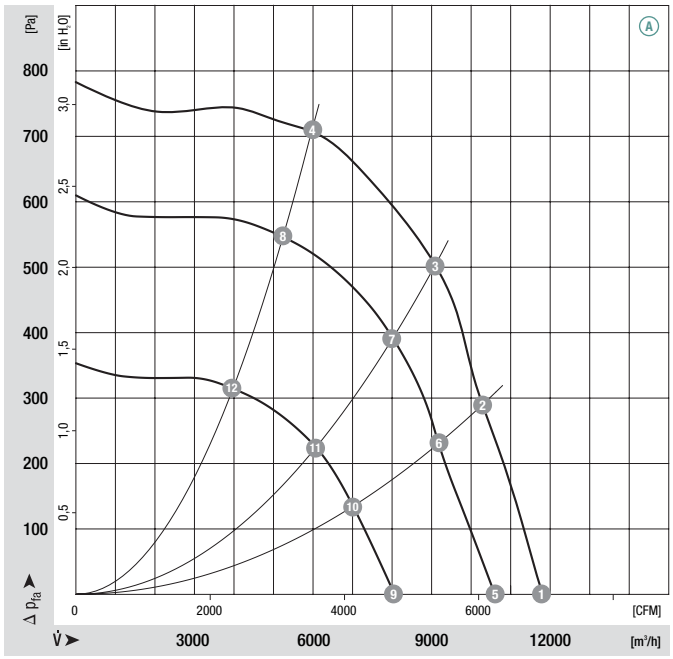
- **Material:** Support bracket: Steel, coated in black
  Support plate: Galvanised sheet steel, spacer profiles: Aluminium
  Impeller: Sheet aluminium, welded
  Rotor: Coated in black
  Electronics enclosure: Die-cast aluminium
- **Number of blades:** 9
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 54 (acc. to EN 60529)
- **Insulation class:** "F"
- **Mounting position:** Shaft horizontal or rotor on bottom; rotor on top on request
- **Condensate discharges:** Rotor-side
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage range	Frequency	Speed/rpm	Max. power input (1)	Max. current draw (1)	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VAC**	**Hz**	**rpm**	**kW**	**A**	**°C**	p. 608
***3G 560**	M3G 150-FF	Ⓐ	3~ 380-480	50/60	1350	2.30	3.60	-25 to +60	M)

subject to alterations

(1) Nominal data in operating point with maximum load and 400 VAC

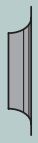
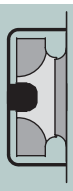
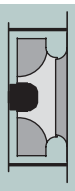
Curves



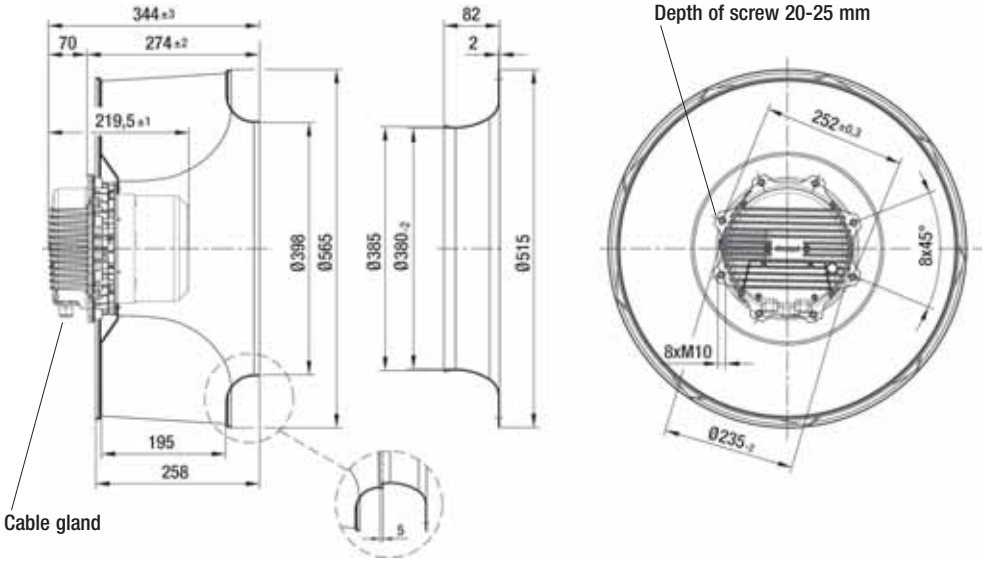
		n [rpm]	P_1 [kW]	I [A]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ	1	1350	1.33	2.20	78	—
Ⓐ	2	1350	1.90	2.90	77	60
Ⓐ	3	1350	2.15	3.40	74	68
Ⓐ	4	1350	2.10	2.20	74	63
Ⓐ	5	1200	0.90	1.60	75	—
Ⓐ	6	1200	1.30	2.10	73	60
Ⓐ	7	1200	1.55	2.50	71	68
Ⓐ	8	1200	1.43	2.30	71	62
Ⓐ	9	910	0.45	0.90	67	—
Ⓐ	10	910	0.60	1.10	65	60
Ⓐ	11	910	0.70	1.20	64	65
Ⓐ	12	910	0.65	1.20	64	63

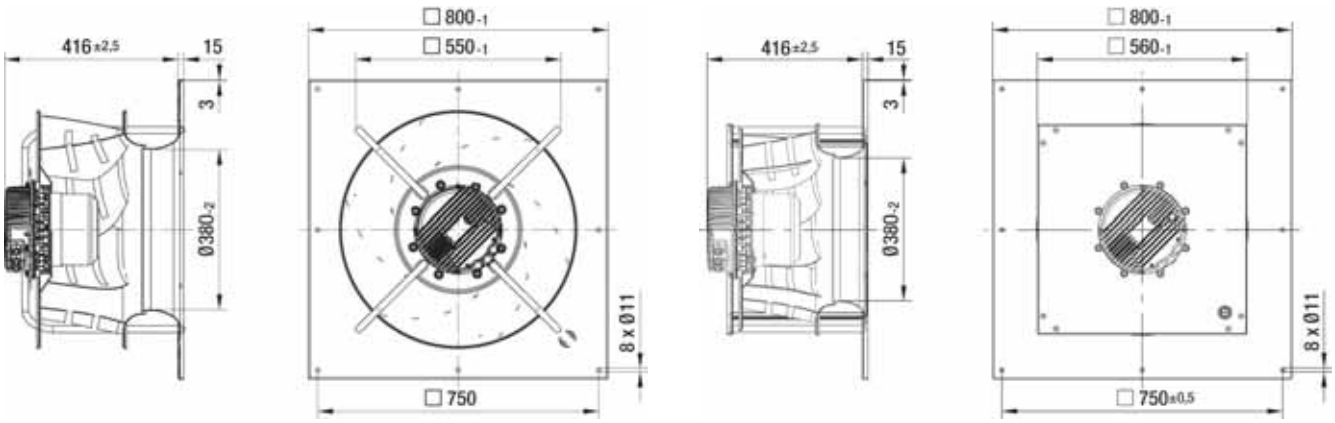
ebmpapst

- **Technical features:**
  - PFC (passive)
  - Integrated PID controller
  - Control input 0-10 VDC / PWM
  - Input for sensor 0-10 V or 4-20 mA
  - Slave output 0-10 V max. 3 mA
  - Output 20 VDC (±20 %) max. 50 mA
  - Output 10 VDC (+10 %) max. 10 mA
  - RS485 ebmBUS
  - Alarm relay
  - Line undervoltage / phase failure detection
  - Motor current limitation
  - Electronics / motor overtemperature protection
  - Locked-rotor protection
  - Soft start
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-2
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 61800-5-1
- **Connection leads:** Via terminal strip
- **Protection class:** I (acc. to EN 61800-5-1)
- **Product conforming to standard:** CE
- **Approvals:** VDE, UL, CSA, GOST

Centrifugal fan	kg	Inlet nozzle (long)	Centrifugal module w. support bracket	kg	Centrifugal module with support plate	kg
R3G 560-AG07 -03	23.5	63071-2-4013	**K3G 560-AG07 -10**	45.5	**K3G 560-AG07 -03**	48.5





Inlet nozzle p. 550 f.
Guard grille p. 553
Electr. connection p. 608

EC centrifugal fans and modules

backward curved, 3-D, Ø 560

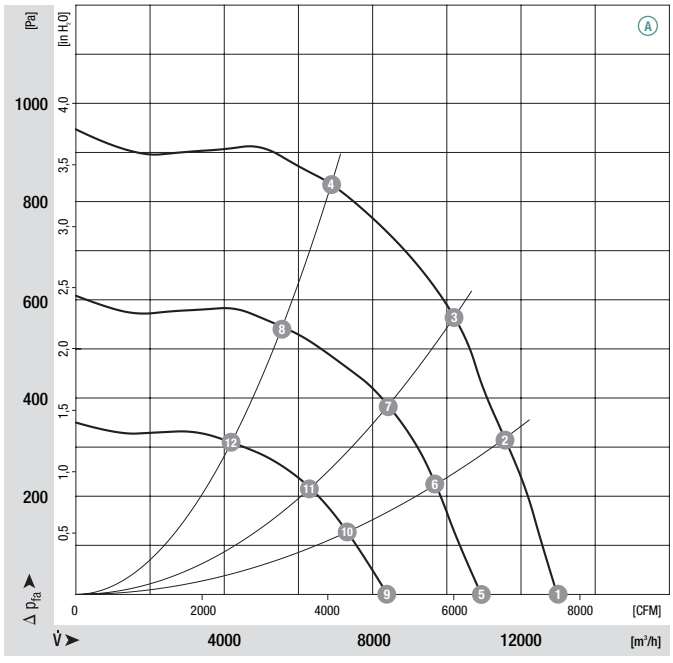
- **Material:** Support bracket: Steel, coated in black
  Support plate: Galvanised sheet steel, spacer profiles: Aluminium
  Impeller: Sheet aluminium, welded
  Rotor: Coated in black
  Electronics enclosure: Die-cast aluminium
- **Number of blades:** 9
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 54 (acc. to EN 60529)
- **Insulation class:** "F"
- **Mounting position:** Shaft horizontal or rotor on bottom; rotor on top on request
- **Condensate discharges:** Rotor-side
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage range	Frequency	Speed/rpm	Max. power input (1)	Max. current draw (1)	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VAC**	**Hz**	**rpm**	**kW**	**A**	**°C**	p. 608
***3G 560**	M3G 150-IF	Ⓐ	3~ 200-240	50/60	1510	2.90	9.20	-25 to +45	M)

subject to alterations

(1) Nominal data in operating point with maximum load and 200 VAC

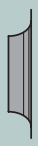
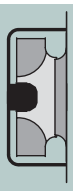
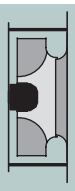
Curves



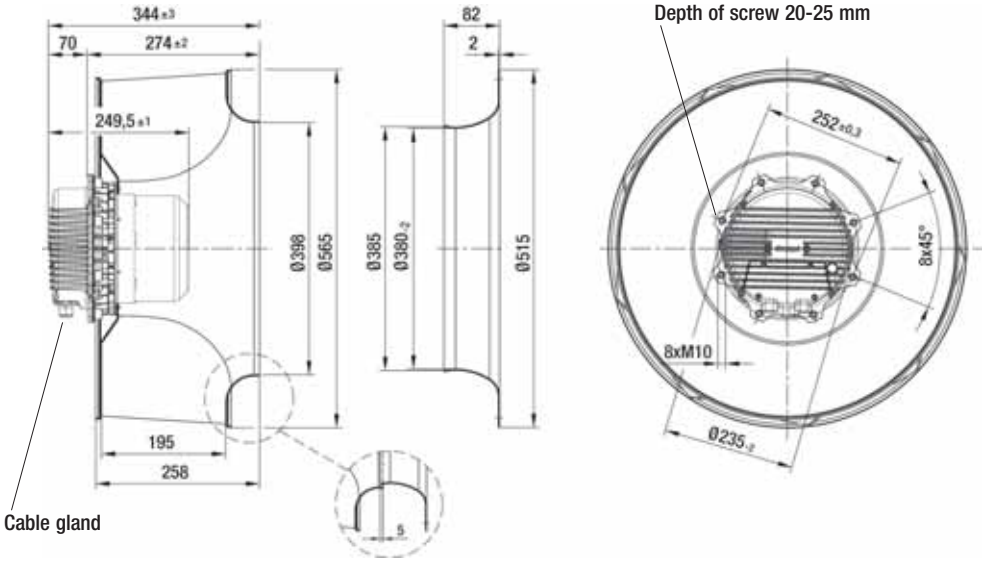
	n [rpm]	P_1 [kW]	I [A]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1	1510	1.90	6.00	81	—
Ⓐ 2	1510	2.47	7.60	80	52
Ⓐ 3	1510	3.05	9.20	77	67
Ⓐ 4	1510	2.85	8.80	76	64
Ⓐ 5	1200	0.90	3.20	75	—
Ⓐ 6	1200	1.30	4.20	73	60
Ⓐ 7	1200	1.55	5.00	71	68
Ⓐ 8	1200	1.43	4.60	71	62
Ⓐ 9	910	0.45	1.80	67	—
Ⓐ 10	910	0.60	2.20	65	60
Ⓐ 11	910	0.70	2.40	64	65
Ⓐ 12	910	0.65	2.40	64	63

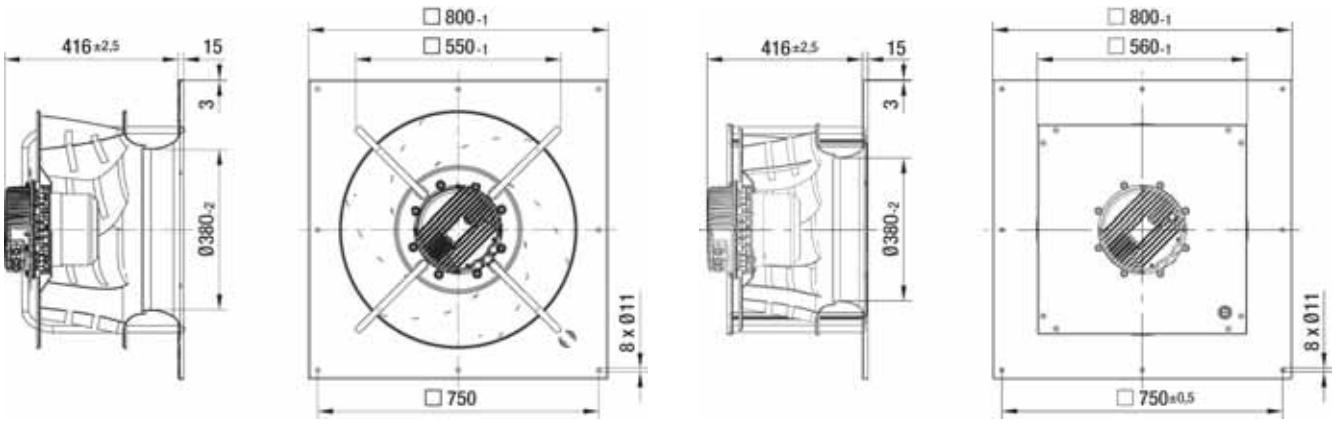
ebmpapst

- **Technical features:**
  - PFC (passive)
  - Integrated PID controller
  - Control input 0-10 VDC / PWM
  - Input for sensor 0-10 V or 4-20 mA
  - Slave output 0-10 V max. 3 mA
  - Output 20 VDC (±20 %) max. 50 mA
  - Output 10 VDC (+10 %) max. 10 mA
  - RS485 ebmBUS
  - Alarm relay
  - Line undervoltage / phase failure detection
  - Motor current limitation
  - Electronics / motor overtemperature protection
  - Locked-rotor protection
  - Soft start
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-2
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 61800-5-1
- **Connection leads:** Via terminal strip
- **Protection class:** I (acc. to EN 61800-5-1)
- **Product conforming to standard:** CE
- **Approvals:** UL, CSA, GOST

Centrifugal fan	kg	Inlet nozzle (long)	Centrifugal module w. support bracket	kg	Centrifugal module with support plate	kg
R3G 560-AH07 -13	27.5	63071-2-4013	**K3G 560-AH07 -20**	49.5	**K3G 560-AH07 -13**	52.5





EC centrifugal fans and modules

backward curved, 3-D, Ø 560

- **Material:** Support bracket: Steel, coated in black
  Support plate: Galvanised sheet steel, spacer profiles: Aluminium
  Impeller: Sheet aluminium, welded
  Rotor: Coated in black
  Electronics enclosure: Die-cast aluminium
- **Number of blades:** 9
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 54 (acc. to EN 60529)
- **Insulation class:** "F"
- **Mounting position:** Shaft horizontal or rotor on bottom; rotor on top on request
- **Condensate discharges:** Rotor-side
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

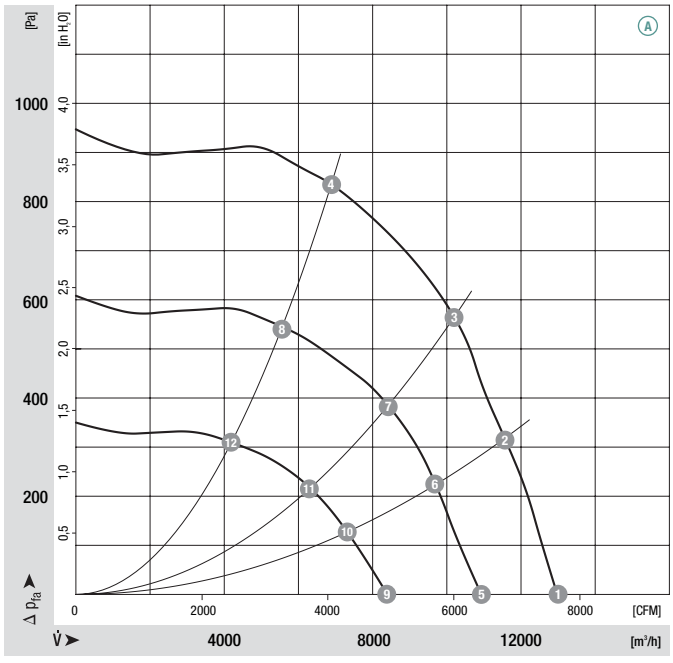
Nominal data

Type	Motor	Curve	Nominal voltage range	Frequency	Speed/rpm	Max. power input (1)	Max. current draw (1)	Perm. amb. temp.	Electr. connection
			VAC	Hz	rpm	kW	A	°C	p. 608
*3G 560	M3G 150-IF	Ⓐ	3~ 380-480	50/60	1510	3.10	4.90	-25 to +60	M)

subject to alterations

(1) Nominal data in operating point with maximum load and 400 VAC

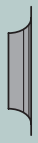
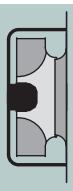
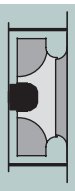
Curves



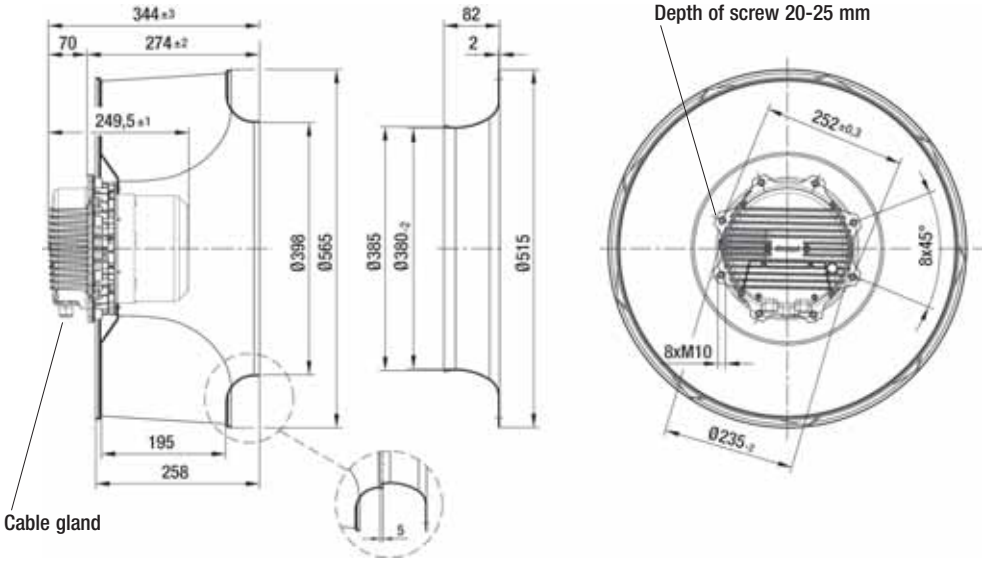
	n [rpm]	P_1 [kW]	I [A]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1	1510	1.90	3.00	81	—
Ⓐ 2	1510	2.47	3.80	80	52
Ⓐ 3	1510	3.05	4.60	77	67
Ⓐ 4	1510	2.85	4.40	76	64
Ⓐ 5	1200	0.90	1.60	75	—
Ⓐ 6	1200	1.30	2.10	73	60
Ⓐ 7	1200	1.55	2.50	71	68
Ⓐ 8	1200	1.43	2.30	71	62
Ⓐ 9	910	0.45	0.90	67	—
Ⓐ 10	910	0.60	1.10	65	60
Ⓐ 11	910	0.70	1.20	64	65
Ⓐ 12	910	0.65	1.20	64	63

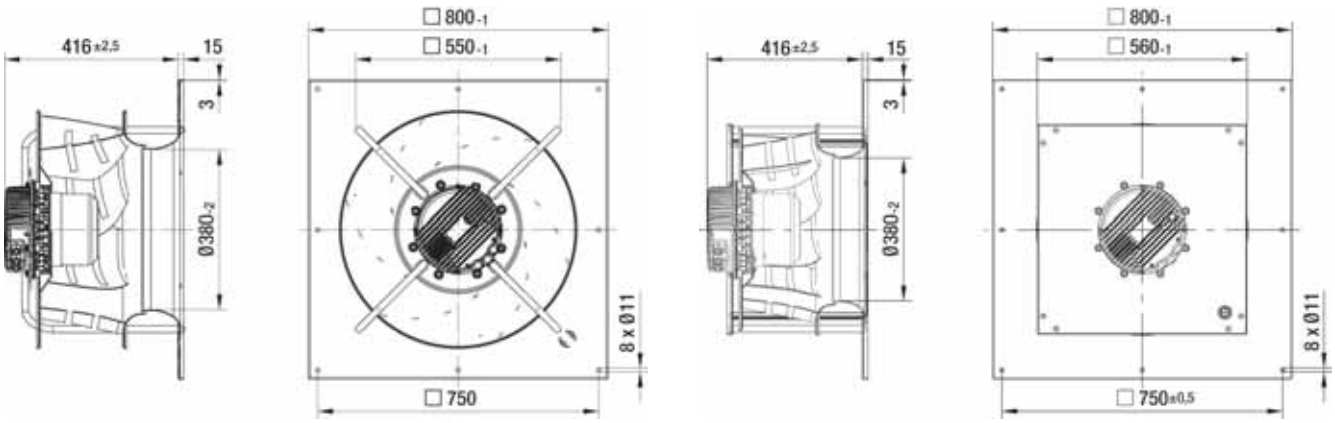
ebmpapst

- **Technical features:**
  - PFC (passive)
  - Integrated PID controller
  - Control input 0-10 VDC / PWM
  - Input for sensor 0-10 V or 4-20 mA
  - Slave output 0-10 V max. 3 mA
  - Output 20 VDC (±20 %) max. 50 mA
  - Output 10 VDC (+10 %) max. 10 mA
  - RS485 ebmBUS
  - Alarm relay
  - Line undervoltage / phase failure detection
  - Motor current limitation
  - Electronics / motor overtemperature protection
  - Locked-rotor protection
  - Soft start
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-2
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 61800-5-1
- **Connection leads:** Via terminal strip
- **Protection class:** I (acc. to EN 61800-5-1)
- **Product conforming to standard:** CE
- **Approvals:** VDE, UL, CSA, GOST

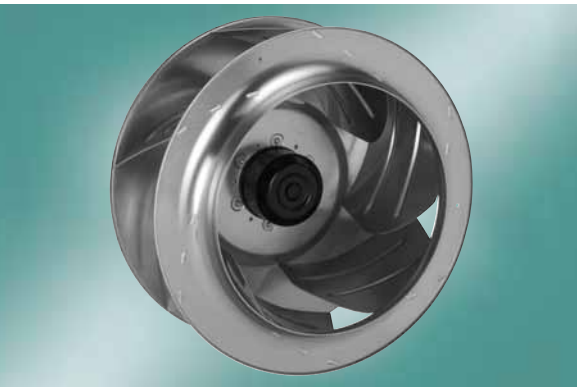
Centrifugal fan	kg	Inlet nozzle (long)	Centrifugal module w. support bracket	kg	Centrifugal module with support plate	kg
R3G 560-AH02 -03	27.5	63071-2-4013	K3G 560-AH02 -10	49.5	K3G 560-AH02 -03	52.5





EC centrifugal fan

backward curved, 3-D, Ø 630



- **Material:** Impeller: Sheet aluminium, welded
  Rotor: Coated in black
  Electronics enclosure: Die-cast aluminium
- **Number of blades:** 6
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 54 (acc. to EN 60529)
- **Insulation class:** "F"
- **Mounting position:** Shaft horizontal or rotor on bottom; rotor on top on request
- **Condensate discharges:** Rotor-side
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

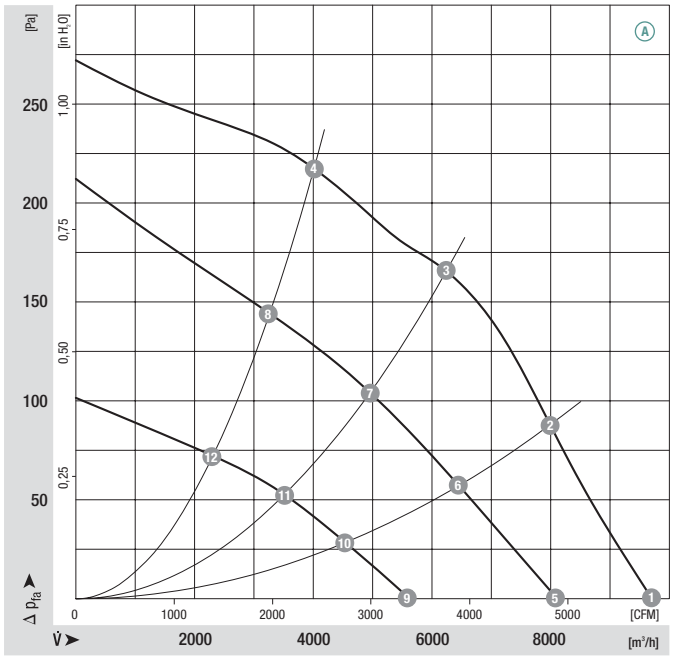
Nominal data

Type	Motor	Curve	Nominal voltage range	Frequency	Speed/rpm	Max. power input (1)	Max. current draw (1)	Perm. amb. temp.	Electr. connection
			VAC	Hz	rpm	kW	A	°C	p. 607
*3G 630	M3G 112-GA	Ⓐ	3~ 380-480	50/60	685	0.53	1.00	-25 to +60	L2)

subject to alterations

(1) Nominal data in operating point with maximum load and 400 VAC

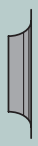
Curves



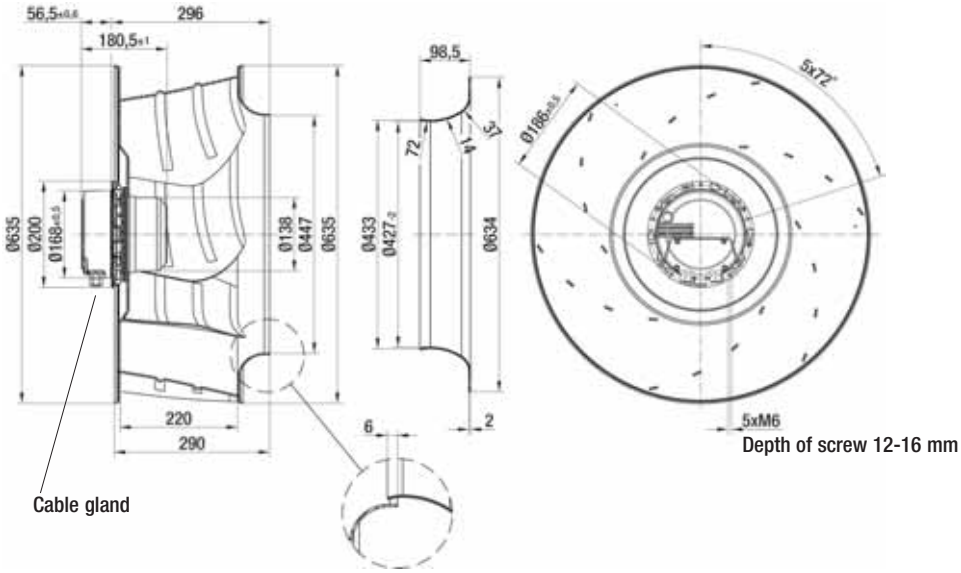
	n [rpm]	P_1 [kW]	I [A]	Lw_A [dB(A)]	η_{tL} [%]
Ⓐ 1	685	0.38	0.70	73	—
Ⓐ 2	685	0.47	0.90	67	57
Ⓐ 3	685	0.53	1.00	65	68
Ⓐ 4	685	0.48	0.90	64	61
Ⓐ 5	560	0.21	0.40	67	—
Ⓐ 6	545	0.23	0.50	61	61
Ⓐ 7	540	0.26	0.50	59	71
Ⓐ 8	550	0.24	0.50	58	65
Ⓐ 9	390	0.08	0.20	56	—
Ⓐ 10	385	0.09	0.20	52	63
Ⓐ 11	380	0.10	0.30	51	75
Ⓐ 12	390	0.10	0.30	49	66

ebmpapst

- **Technical features:**
  - PFC (passive)
  - Integrated PID controller
  - Control input 0-10 VDC / PWM
  - Input for sensor 0-10 V or 4-20 mA
  - Slave output 0-10 V max. 3 mA
  - Output 20 VDC (±20 %) max. 50 mA
  - Output 10 VDC (+10 %) max. 10 mA
  - RS485 ebmBUS
  - Alarm relay
  - Line undervoltage / phase failure detection
  - Motor current limitation
  - Electronics / motor overtemperature protection
  - Locked-rotor protection
  - Soft start
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-2
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 61800-5-1
- **Connection leads:** Via terminal strip
- **Protection class:** I (acc. to EN 61800-5-1)
- **Product conforming to standard:** CE
- **Approvals:** VDE, UL, CSA, CCC, GOST are applied for



Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle (long)
R3G 630-AF36 -01	14.7	63070-2-4013



EC centrifugal fans and modules

backward curved, 3-D, Ø 630

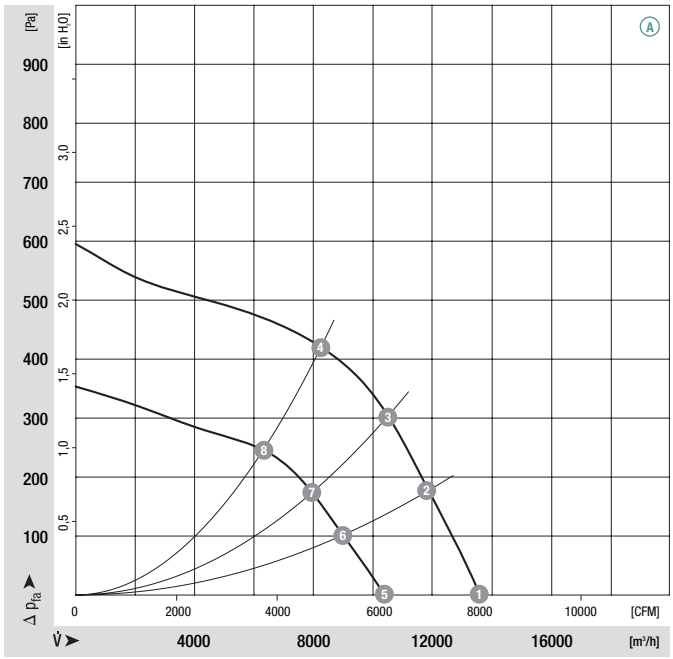
- **Material:** Support bracket: Steel, coated in black
  Support plate: Galvanised sheet steel, spacer profiles: Aluminium
  Impeller: Sheet aluminium, welded
  Rotor: Coated in black
  Electronics enclosure: Die-cast aluminium
- **Number of blades:** 6
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 54 (acc. to EN 60529)
- **Insulation class:** "F"
- **Mounting position:** Shaft horizontal or rotor on bottom; rotor on top on request
- **Condensate discharges:** Rotor-side
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage range	Frequency	Speed/rpm	Max. power input (1)	Max. current draw (1)	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VAC**	**Hz**	**rpm**	**kW**	**A**	**°C**	p. 608
***3G 630**	M3G 150-FF	Ⓐ	3~ 200-240	50/60	1000	1.70	5.30	-25 to +60	M)

subject to alterations

(1) Nominal data in operating point with maximum load and 200 VAC

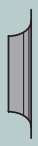
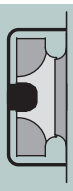
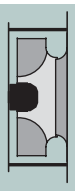
Curves



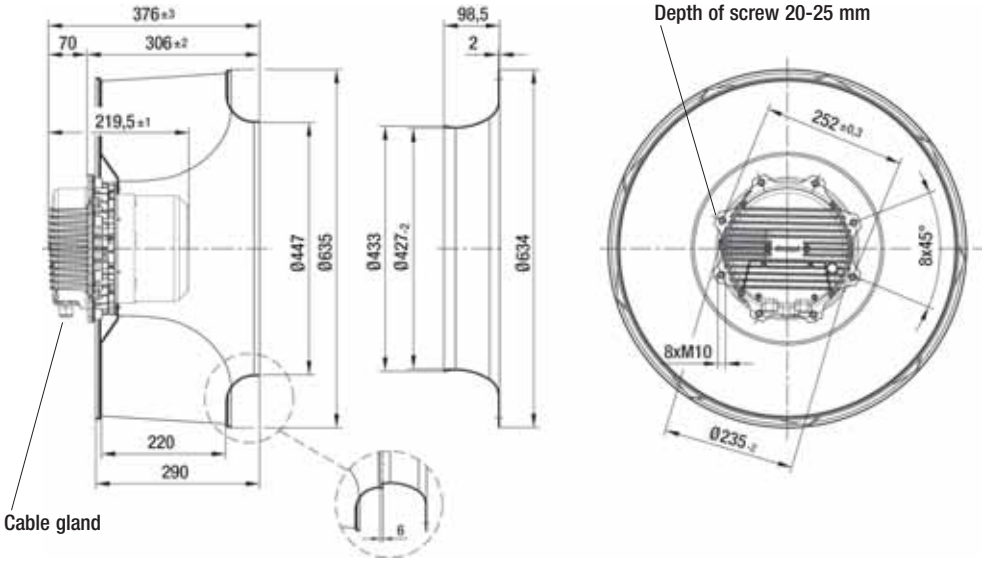
	n [rpm]	P_1 [kW]	I [A]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1	1000	1.10	3.60	74	—
Ⓐ 2	1000	1.40	4.60	71	54
Ⓐ 3	1000	1.65	5.00	70	66
Ⓐ 4	1000	1.70	5.20	70	64
Ⓐ 5	770	0.50	2.00	66	—
Ⓐ 6	770	0.65	2.40	64	54
Ⓐ 7	770	0.73	2.80	64	66
Ⓐ 8	770	0.77	2.80	64	64

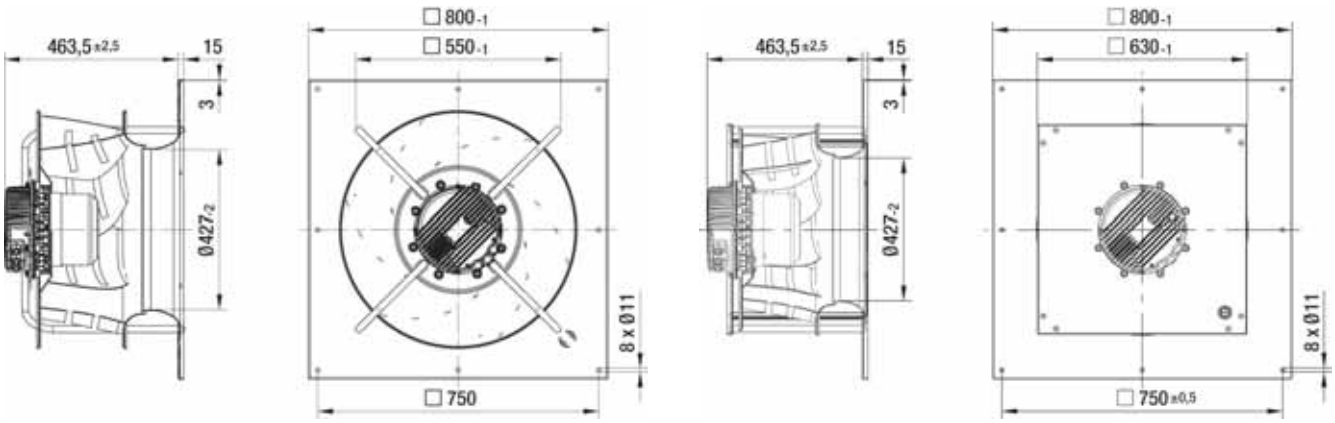
ebmpapst

- **Technical features:**
  - PFC (passive)
  - Integrated PID controller
  - Control input 0-10 VDC / PWM
  - Input for sensor 0-10 V or 4-20 mA
  - Slave output 0-10 V max. 3 mA
  - Output 20 VDC (±20 %) max. 50 mA
  - Output 10 VDC (+10 %) max. 10 mA
  - RS485 ebmBUS
  - Alarm relay
  - Line undervoltage / phase failure detection
  - Motor current limitation
  - Electronics / motor overtemperature protection
  - Locked-rotor protection
  - Soft start
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-2
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 61800-5-1
- **Connection leads:** Via terminal strip
- **Protection class:** I (acc. to EN 61800-5-1)
- **Product conforming to standard:** CE
- **Approvals:** UL, CSA, GOST

Centrifugal fan	kg	Inlet nozzle (long)	Centrifugal module w. support bracket	kg	Centrifugal module with support plate	kg
R3G 630-AA12 -13	24.5	63070-2-4013	**K3G 630-AA12 -20**	47.5	**K3G 630-AA12 -13**	52.0





Inlet nozzle p. 550 f.
Guard grille p. 553
Electr. connection p. 608

EC centrifugal fans and modules

backward curved, 3-D, Ø 630

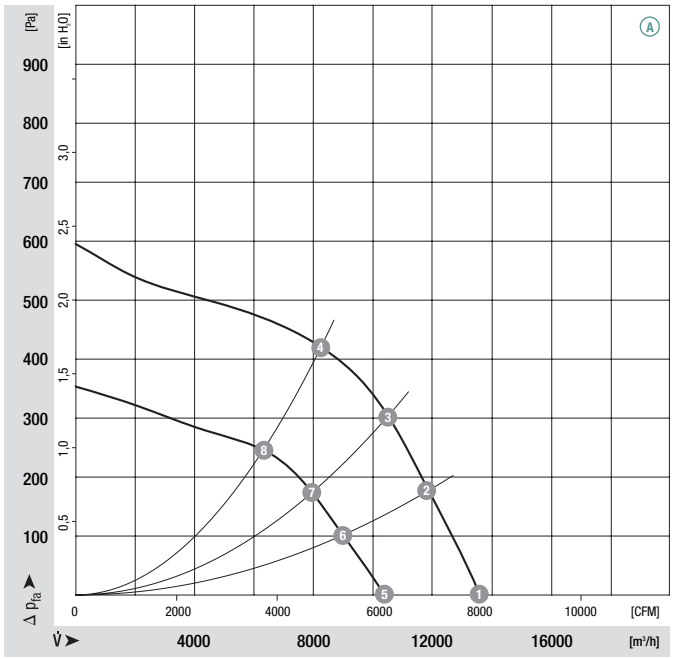
- **Material:** Support bracket: Steel, coated in black
  Support plate: Galvanised sheet steel, spacer profiles: Aluminium
  Impeller: Sheet aluminium, welded
  Rotor: Coated in black
  Electronics enclosure: Die-cast aluminium
- **Number of blades:** 6
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 54 (acc. to EN 60529)
- **Insulation class:** "F"
- **Mounting position:** Shaft horizontal or rotor on bottom; rotor on top on request
- **Condensate discharges:** Rotor-side
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage range	Frequency	Speed/rpm	Max. power input (1)	Max. current draw (1)	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VAC**	**Hz**	**rpm**	**kW**	**A**	**°C**	p. 608
***3G 630**	M3G 150-FF	Ⓐ	3~ 380-480	50/60	1000	1.70	2.80	-25 to +60	M)

subject to alterations

(1) Nominal data in operating point with maximum load and 400 VAC

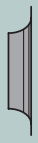
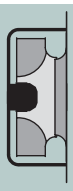
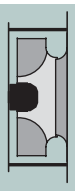
Curves



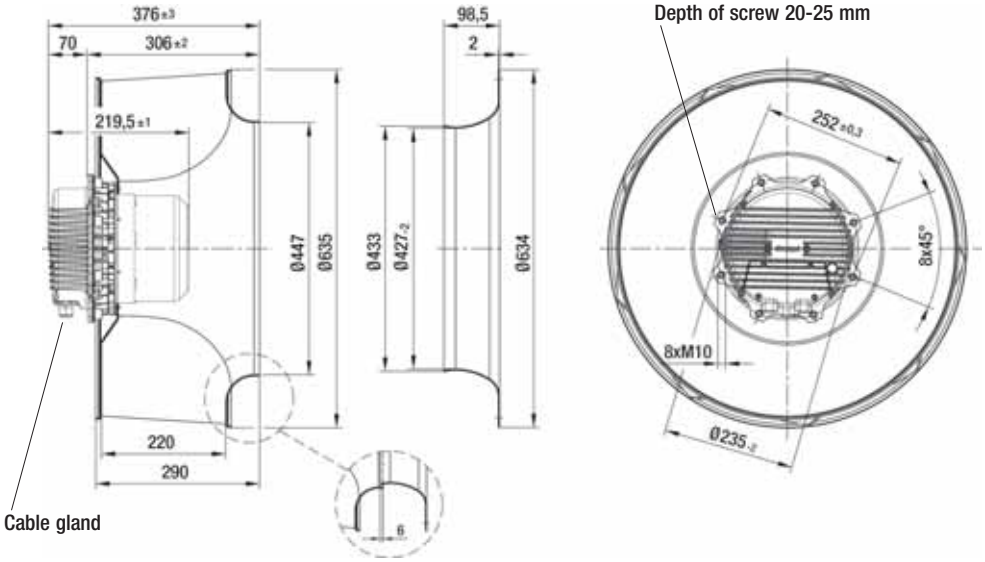
	n [rpm]	P_1 [kW]	I [A]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1	1000	1.10	1.80	74	—
Ⓐ 2	1000	1.40	2.30	71	54
Ⓐ 3	1000	1.65	2.50	70	66
Ⓐ 4	1000	1.70	2.60	70	64
Ⓐ 5	770	0.50	1.00	66	—
Ⓐ 6	770	0.65	1.20	64	54
Ⓐ 7	770	0.73	1.40	64	66
Ⓐ 8	770	0.77	1.40	64	64

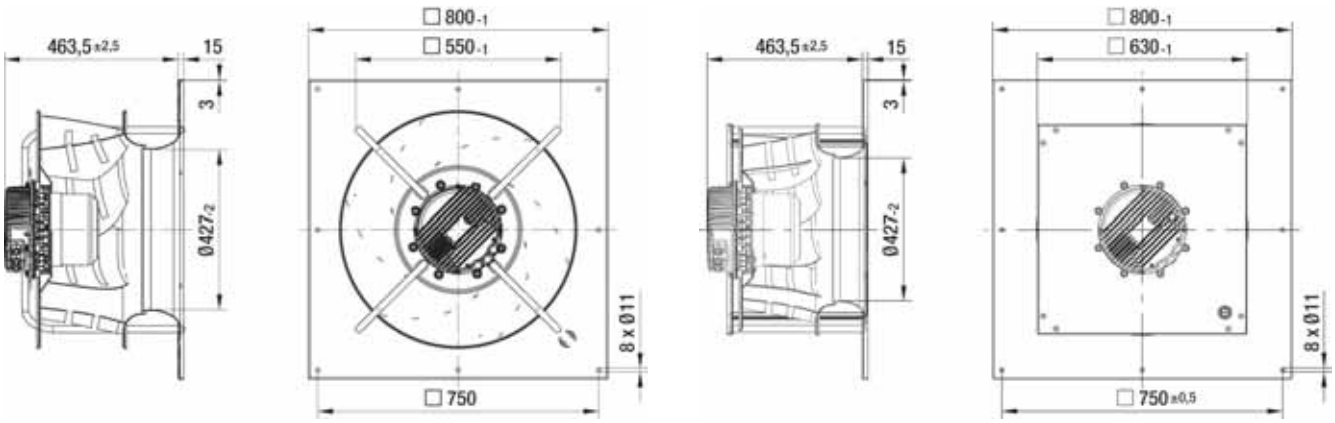
ebmpapst

- **Technical features:**
  - PFC (passive)
  - Integrated PID controller
  - Control input 0-10 VDC / PWM
  - Input for sensor 0-10 V or 4-20 mA
  - Slave output 0-10 V max. 3 mA
  - Output 20 VDC (±20 %) max. 50 mA
  - Output 10 VDC (+10 %) max. 10 mA
  - RS485 ebmBUS
  - Alarm relay
  - Line undervoltage / phase failure detection
  - Motor current limitation
  - Electronics / motor overtemperature protection
  - Locked-rotor protection
  - Soft start
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-2
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 61800-5-1
- **Connection leads:** Via terminal strip
- **Protection class:** I (acc. to EN 61800-5-1)
- **Product conforming to standard:** CE
- **Approvals:** VDE, UL, CSA, GOST

Centrifugal fan	kg	Inlet nozzle (long)	Centrifugal module w. support bracket	kg	Centrifugal module with support plate	kg
R3G 630-AA08 -03	24.5	63070-2-4013	**K3G 630-AA08 -10**	47.5	**K3G 630-AA08 -03**	52.0





Inlet nozzle p. 550 f.
Guard grille p. 553
Electr. connection p. 608

EC centrifugal fans and modules

backward curved, 3-D, Ø 630

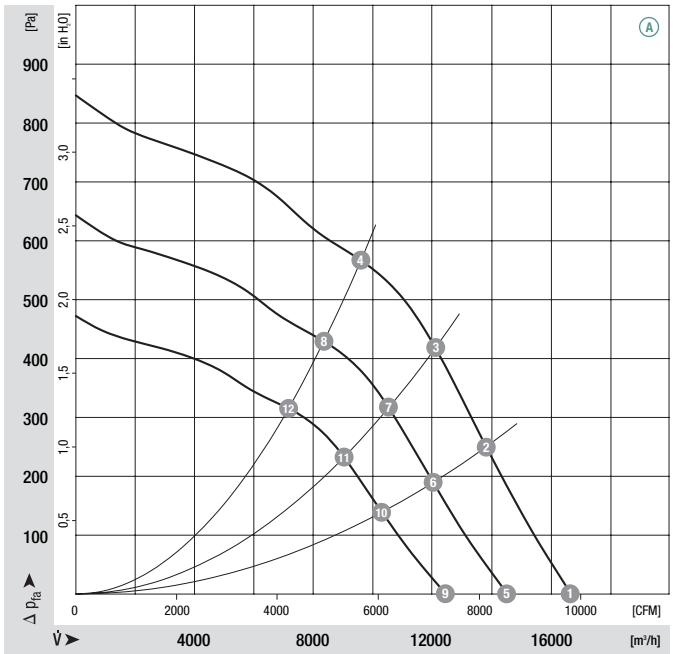
- **Material:** Support bracket: Steel, coated in black
  Support plate: Galvanised sheet steel, spacer profiles: Aluminium
  Impeller: Sheet aluminium, welded
  Rotor: Coated in black
  Electronics enclosure: Die-cast aluminium
- **Number of blades:** 6
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 54 (acc. to EN 60529)
- **Insulation class:** "F"
- **Mounting position:** Shaft horizontal or rotor on bottom; rotor on top on request
- **Condensate discharges:** Rotor-side
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage range	Frequency	Speed/rpm	Max. power input (1)	Max. current draw (1)	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VAC**	**Hz**	**rpm**	**kW**	**A**	**°C**	p. 608
***3G 630**	M3G 150-IF	Ⓐ	3~ 200-240	50/60	1200	2.80	8.40	-25 to +45	M)

subject to alterations

(1) Nominal data in operating point with maximum load and 200 VAC

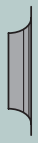
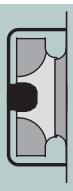
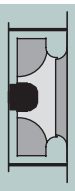
Curves



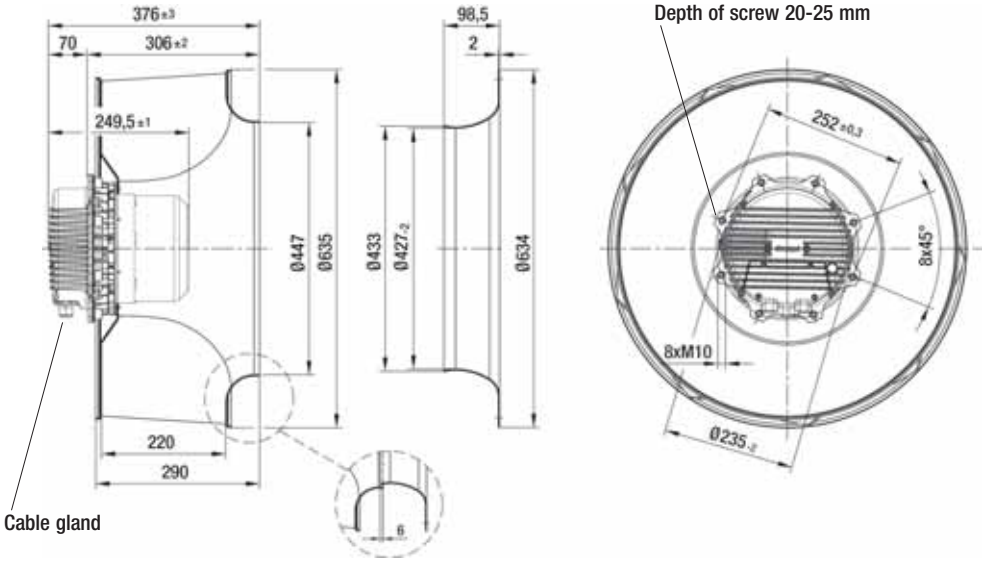
	n [rpm]	P_1 [kW]	I [A]	Lw_A [dB(A)]	η_{tL} [%]
Ⓐ 1	1200	1.95	5.90	88	—
Ⓐ 2	1200	2.44	7.40	83	52
Ⓐ 3	1200	2.70	8.20	82	64
Ⓐ 4	1200	2.80	8.40	82	64
Ⓐ 5	1050	1.29	4.00	85	—
Ⓐ 6	1050	1.61	4.80	80	52
Ⓐ 7	1050	1.78	5.40	79	64
Ⓐ 8	1050	1.83	5.60	79	64
Ⓐ 9	900	0.81	2.40	82	—
Ⓐ 10	900	1.01	3.00	77	52
Ⓐ 11	900	1.12	3.40	75	64
Ⓐ 12	900	1.15	3.40	75	64

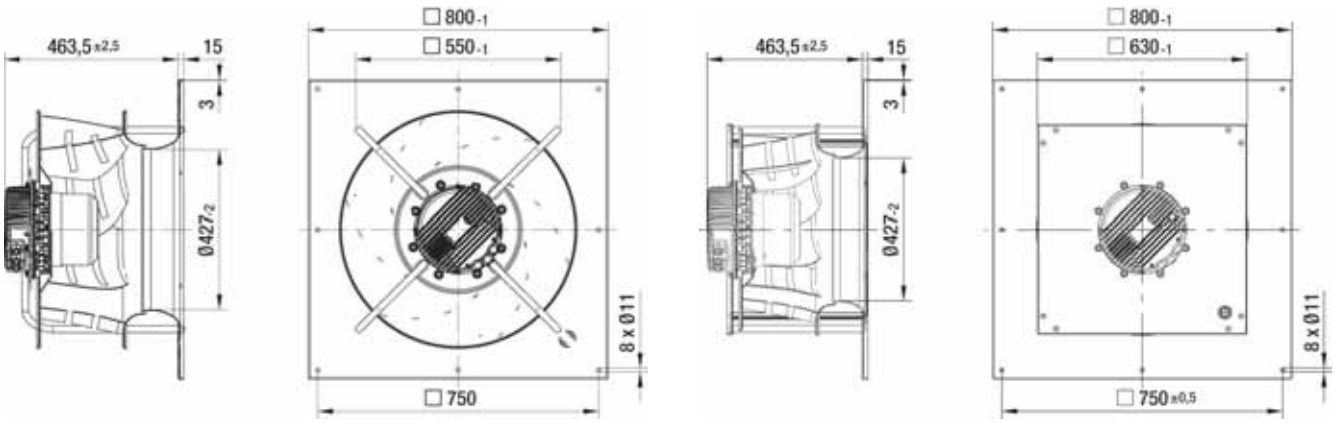
ebmpapst

- **Technical features:**
  - PFC (passive)
  - Integrated PID controller
  - Control input 0-10 VDC / PWM
  - Input for sensor 0-10 V or 4-20 mA
  - Slave output 0-10 V max. 3 mA
  - Output 20 VDC (±20 %) max. 50 mA
  - Output 10 VDC (+10 %) max. 10 mA
  - RS485 ebmBUS
  - Alarm relay
  - Line undervoltage / phase failure detection
  - Motor current limitation
  - Electronics / motor overtemperature protection
  - Locked-rotor protection
  - Soft start
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-2
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 61800-5-1
- **Connection leads:** Via terminal strip
- **Protection class:** I (acc. to EN 61800-5-1)
- **Product conforming to standard:** CE
- **Approvals:** UL, CSA, GOST

Centrifugal fan	kg	Inlet nozzle (long)	Centrifugal module w. support bracket	kg	Centrifugal module with support plate	kg
R3G 630-AB10 -13	28.5	63070-2-4013	**K3G 630-AB10 -20**	51.5	**K3G 630-AB10 -13**	56.0





Inlet nozzle p. 550 f.
Guard grille p. 553
Electr. connection p. 608

EC centrifugal fans and modules

backward curved, 3-D, Ø 630

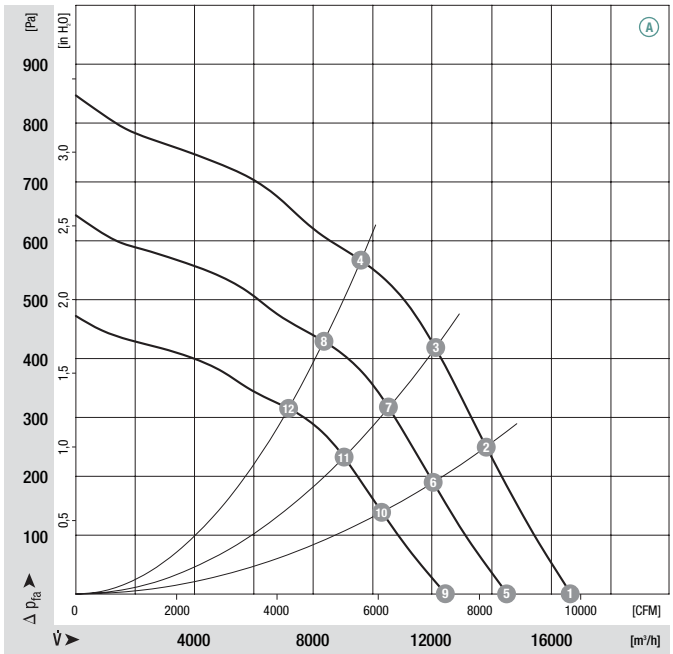
- **Material:** Support bracket: Steel, coated in black
  Support plate: Galvanised sheet steel, spacer profiles: Aluminium
  Impeller: Sheet aluminium, welded
  Rotor: Coated in black
  Electronics enclosure: Die-cast aluminium
- **Number of blades:** 6
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 54 (acc. to EN 60529)
- **Insulation class:** "F"
- **Mounting position:** Shaft horizontal or rotor on bottom; rotor on top on request
- **Condensate discharges:** Rotor-side
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage range	Frequency	Speed/rpm	Max. power input (1)	Max. current draw (1)	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VAC**	**Hz**	**rpm**	**kW**	**A**	**°C**	p. 608
***3G 630**	M3G 150-IF	Ⓐ	3~ 380-480	50/60	1200	2.80	4.20	-25 to +55	M)

subject to alterations

(1) Nominal data in operating point with maximum load and 400 VAC

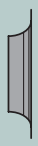
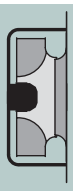
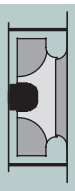
Curves



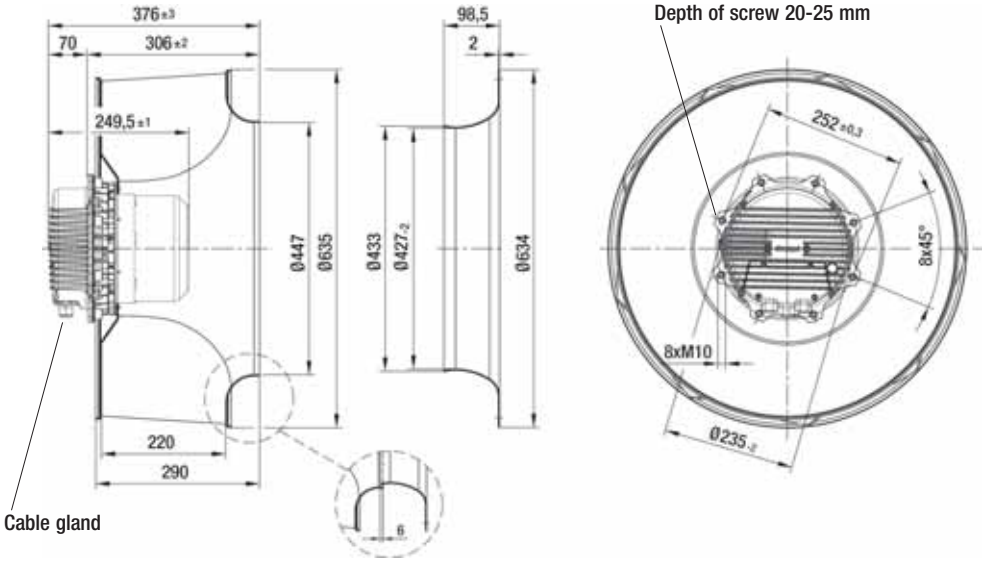
	n [rpm]	P_1 [kW]	I [A]	Lw_A [dB(A)]	η_{tL} [%]
Ⓐ 1	1200	1.95	3.00	88	—
Ⓐ 2	1200	2.44	3.70	83	52
Ⓐ 3	1200	2.70	4.10	82	64
Ⓐ 4	1200	2.80	4.20	82	64
Ⓐ 5	1050	1.29	2.00	85	—
Ⓐ 6	1050	1.61	2.40	80	52
Ⓐ 7	1050	1.78	2.70	79	64
Ⓐ 8	1050	1.83	2.80	79	64
Ⓐ 9	900	0.81	1.20	82	—
Ⓐ 10	900	1.01	1.50	77	52
Ⓐ 11	900	1.12	1.70	75	64
Ⓐ 12	900	1.15	1.70	75	64

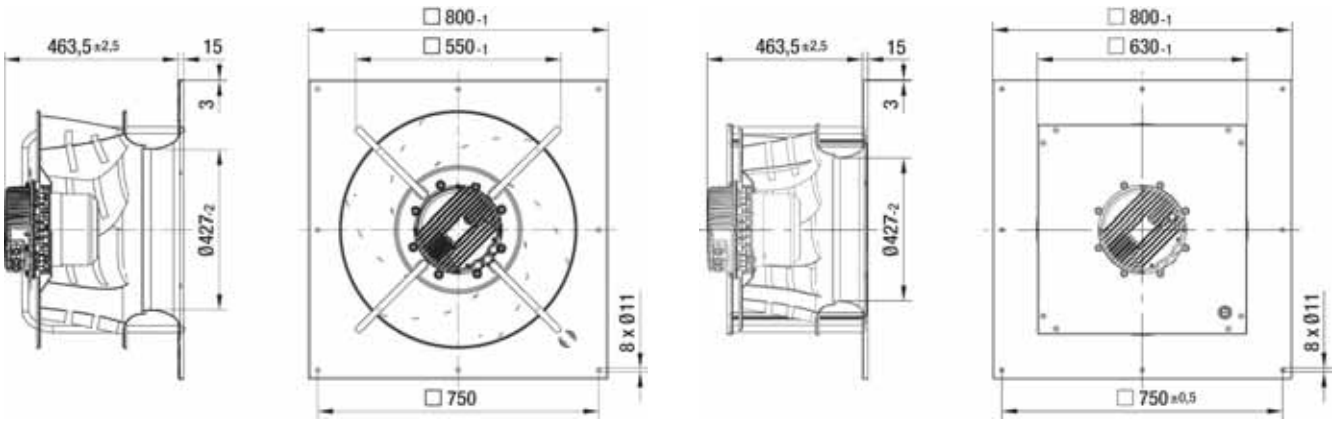
ebmpapst

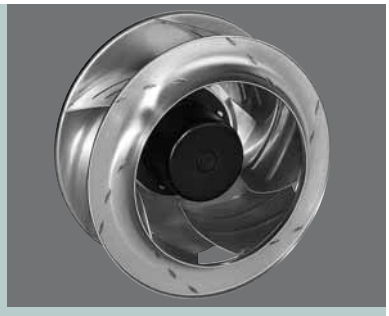
- **Technical features:**
  - PFC (passive)
  - Integrated PID controller
  - Control input 0-10 VDC / PWM
  - Input for sensor 0-10 V or 4-20 mA
  - Slave output 0-10 V max. 3 mA
  - Output 20 VDC (±20 %) max. 50 mA
  - Output 10 VDC (+10 %) max. 10 mA
  - RS485 ebmBUS
  - Alarm relay
  - Line undervoltage / phase failure detection
  - Motor current limitation
  - Electronics / motor overtemperature protection
  - Locked-rotor protection
  - Soft start
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-2
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 61800-5-1
- **Connection leads:** Via terminal strip
- **Protection class:** I (acc. to EN 61800-5-1)
- **Product conforming to standard:** CE
- **Approvals:** VDE, UL, CSA, GOST

Centrifugal fan	kg	Inlet nozzle (long)	Centrifugal module w. support bracket	kg	Centrifugal module with support plate	kg
R3G 630-AB06 -03	28.5	63070-2-4013	**K3G 630-AB06 -10**	51.5	**K3G 630-AB06 -03**	56.0





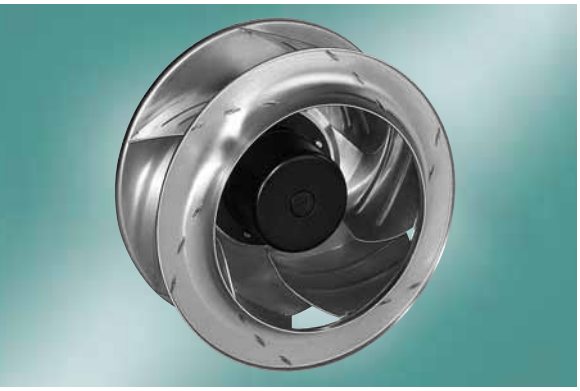


EC centrifugal fans for clean rooms backward curved

	EC centrifugal fans with aluminium impeller, line-fed	Ø 310 - Ø 450	406

EC centrifugal fans and modules

backward curved, 3-D, Ø 310, RS485, ebmBUS



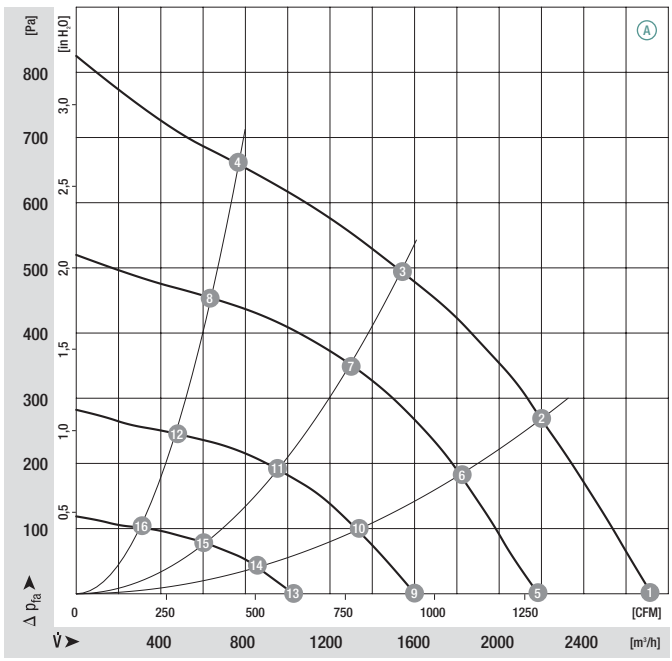
- **Material:** Support plate: Sheet aluminium, spacer profiles: Aluminium
  Impeller: Sheet aluminium, laser-welded
  Rotor: Coated in black
  Electronics enclosure: Die-cast aluminium
- **Number of blades:** 6
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 20
- **Insulation class:** "B"
- **Mounting position:** Shaft horizontal or rotor on top; rotor on bottom on request
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage range	Frequency	Speed/rpm	Max. power input (1)	Max. current draw (1)	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VAC**	**Hz**	**rpm**	**W**	**A**	**°C**	p. 606
***3G 310**	M3G 084-DF	Ⓐ	1~ 200-277	50/60	2340	370	1.70	-25 to +40	K2)

subject to alterations

(1) Nominal data in operating point with maximum load and 230 VAC

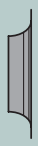
Curves (established with long inlet nozzle)

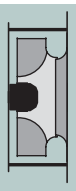


	n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1	2340	265	1.20	74	—
Ⓐ 2	2270	335	1.50	71	63
Ⓐ 3	2240	370	1.70	70	66
Ⓐ 4	2290	335	1.50	70	48
Ⓐ 5	1910	160	0.70	69	—
Ⓐ 6	1910	205	0.90	67	63
Ⓐ 7	1910	240	1.00	66	66
Ⓐ 8	1910	205	0.90	66	48
Ⓐ 9	1410	80	0.40	61	—
Ⓐ 10	1410	98	0.40	59	63
Ⓐ 11	1410	112	0.50	58	66
Ⓐ 12	1410	103	0.50	57	48
Ⓐ 13	910	40	0.20	50	—
Ⓐ 14	910	42	0.20	47	63
Ⓐ 15	910	46	0.20	47	66
Ⓐ 16	910	44	0.20	48	48

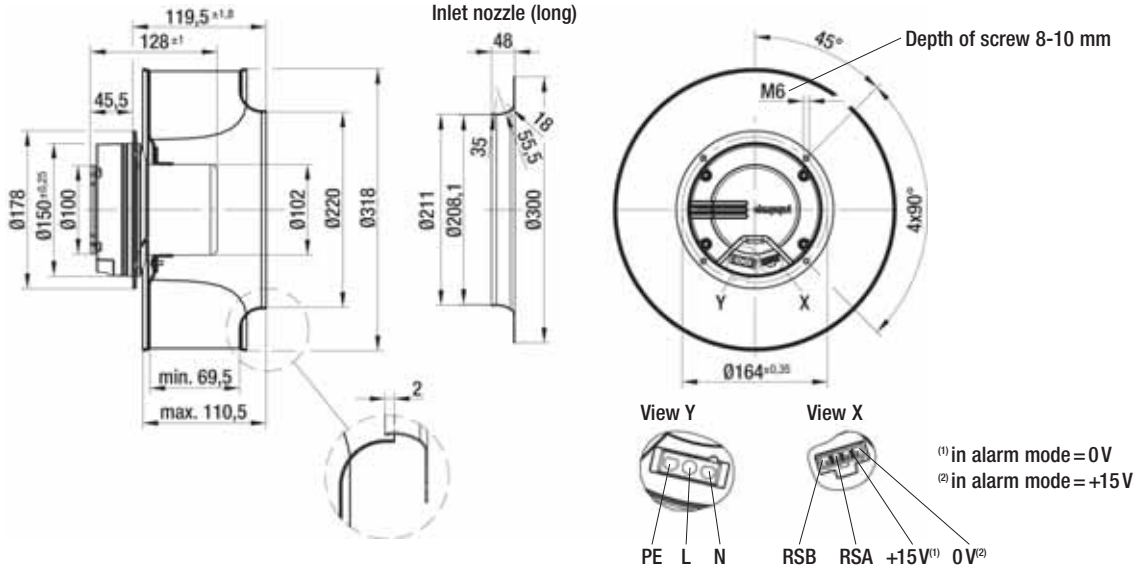
ebmpapst

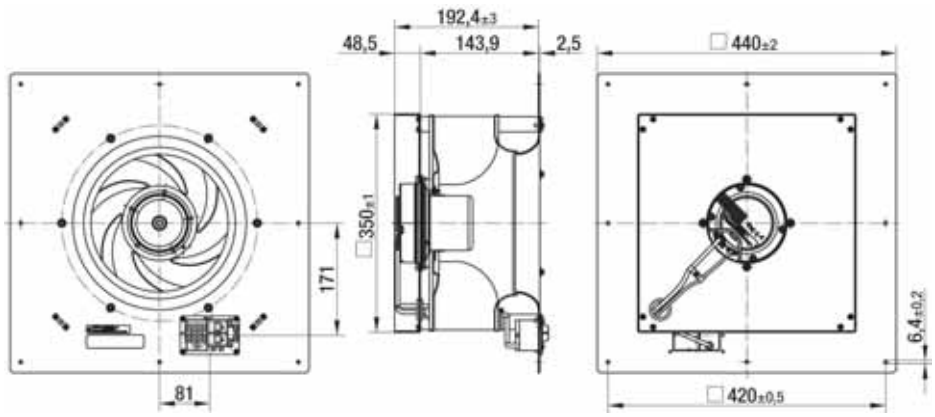
- **Technical features:**
  - PFC (active)
  - RS485 ebmBUS
  - Operation and alarm display: Reversible voltage output 0 V / +15 V (max. 50 mA)
  - Over-temperature protected electronics / motor
- **EMC:** Interference emission acc. to EN 61000-6-4 (industrial environment)
  Interference immunity acc. to EN 61000-6-2 (industrial environment)
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 61800-5-1
- **Electrical connection:** Via connection lead with plug (accessory)
- **Protection class:** I
- **Product conforming to standards:** EN 61800-5-1, CE
- **Approvals:** UL, CSA; VDE, CCC, GOST are applied for





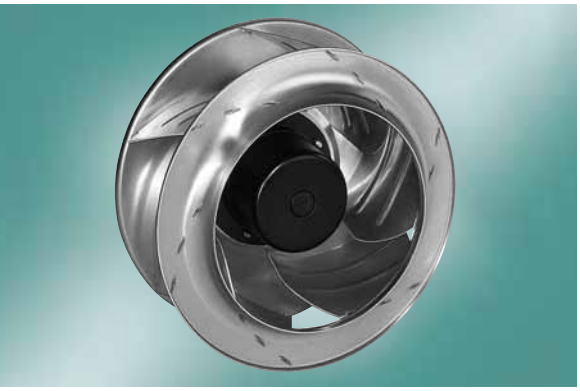
Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle (long)	Inlet nozzle (short)	Centrifugal module with support plate	Mass of centrifugal module with support plate kg
R3G 310-AJ38 -61	4.3	31050-2-4013	31051-2-4013	**K3G 310-AJ38 -61**	7.1





EC centrifugal fans and modules

backward curved, 3-D, Ø 310, RS485, ebmBUS



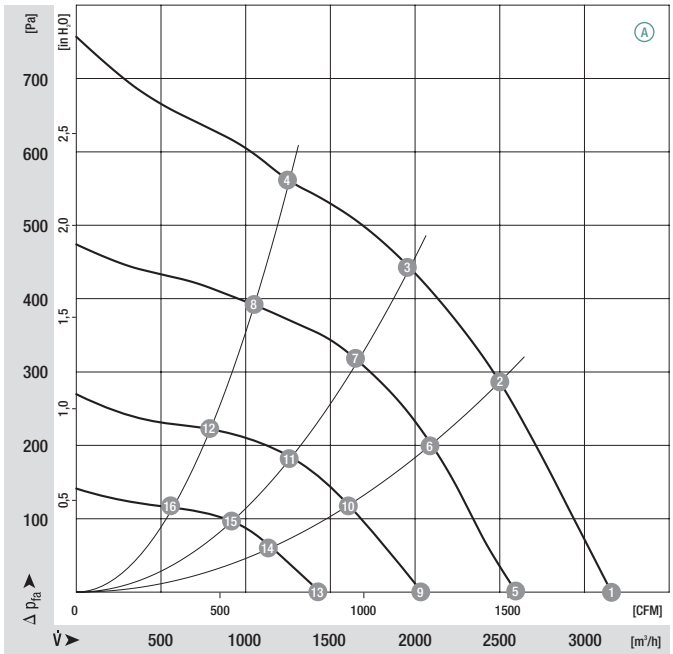
- **Material:** Support plate: Sheet aluminium, spacer profiles: Aluminium
  Impeller: Sheet aluminium, laser-welded
  Rotor: Coated in black
  Electronics enclosure: Die-cast aluminium
- **Number of blades:** 6
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 20
- **Insulation class:** "B"
- **Mounting position:** Shaft horizontal or rotor on top; rotor on bottom on request
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage range	Frequency	Speed/rpm	Max. power input (1)	Max. current draw (1)	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VAC**	**Hz**	**rpm**	**W**	**A**	**°C**	p. 606
***3G 310**	M3G 084-FA	Ⓐ	1~ 200-277	50/60	2200	455	2.00	-25 to +40	K2)

subject to alterations

(1) Nominal data in operating point with maximum load and 230 VAC

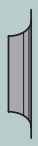
Curves (established with long inlet nozzle)

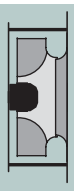


		n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ	1	2200	345	1.50	73	—
Ⓐ	2	2150	430	1.90	70	60
Ⓐ	3	2130	455	2.00	68	64
Ⓐ	4	2170	420	1.80	69	54
Ⓐ	5	1800	200	0.90	68	—
Ⓐ	6	1800	265	1.20	65	60
Ⓐ	7	1800	285	1.20	63	64
Ⓐ	8	1800	260	1.10	64	54
Ⓐ	9	1400	90	0.40	61	—
Ⓐ	10	1400	118	0.50	59	60
Ⓐ	11	1400	128	0.60	57	64
Ⓐ	12	1400	113	0.50	58	54
Ⓐ	13	1000	33	0.10	52	—
Ⓐ	14	1000	44	0.20	48	60
Ⓐ	15	1000	47	0.20	48	64
Ⓐ	16	1000	41	0.20	49	54

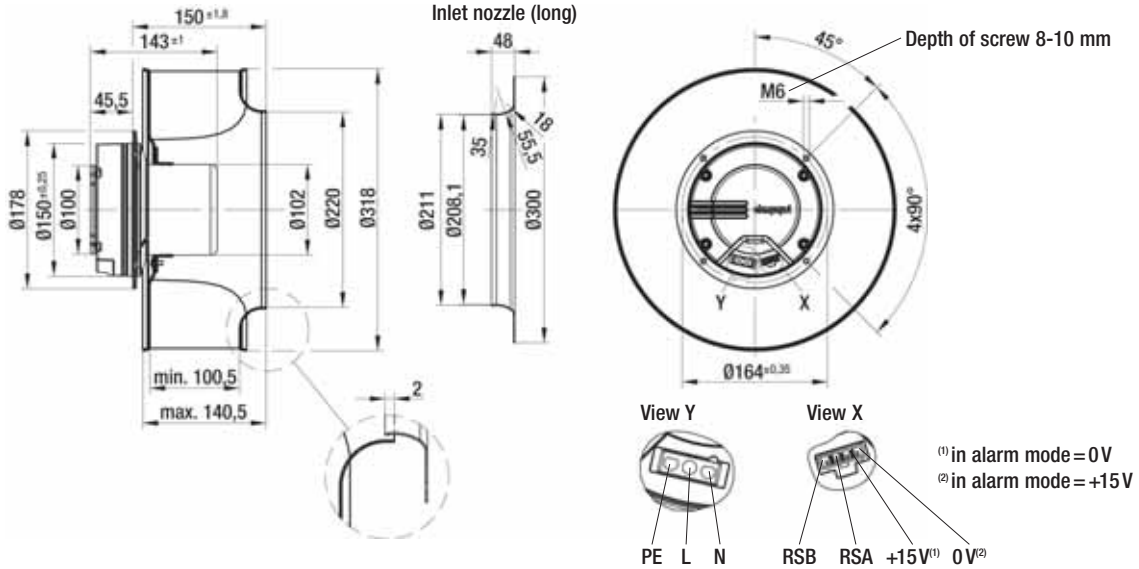
ebmpapst

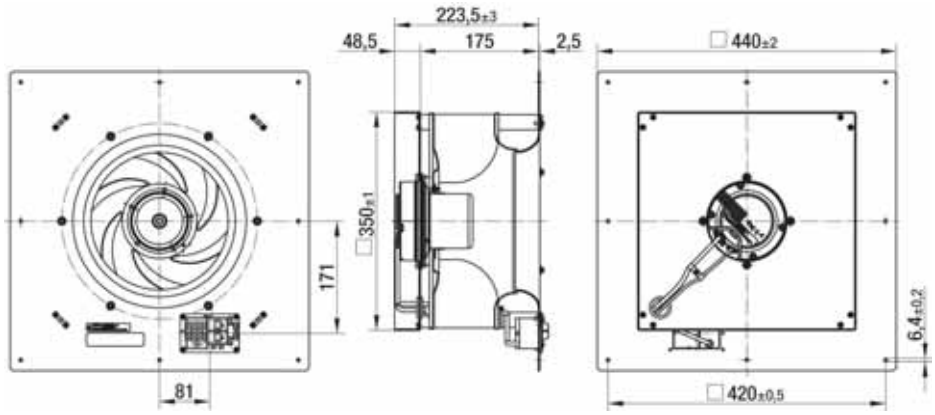
- **Technical features:**
  - PFC (active)
  - RS485 ebmBUS
  - Operation and alarm display: Reversible voltage output 0 V / +15 V (max. 50 mA)
  - Over-temperature protected electronics / motor
- **EMC:** Interference emission acc. to EN 61000-6-4 (industrial environment)
  Interference immunity acc. to EN 61000-6-2 (industrial environment)
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 61800-5-1
- **Electrical connection:** Via connection lead with plug (accessory)
- **Protection class:** I
- **Product conforming to standards:** EN 61800-5-1, CE
- **Approvals:** UL, CSA; VDE, CCC, GOST are applied for





Centrifugal fan	kg	Inlet nozzle (long)	Inlet nozzle (short)	Centrifugal module with support plate	kg
R3G 310-AL28 -61	5.4	31050-2-4013	31051-2-4013	K3G 310-AL28 -61	8.2





EC centrifugal fans and modules

backward curved, 3-D, Ø 355, RS485, ebmBUS

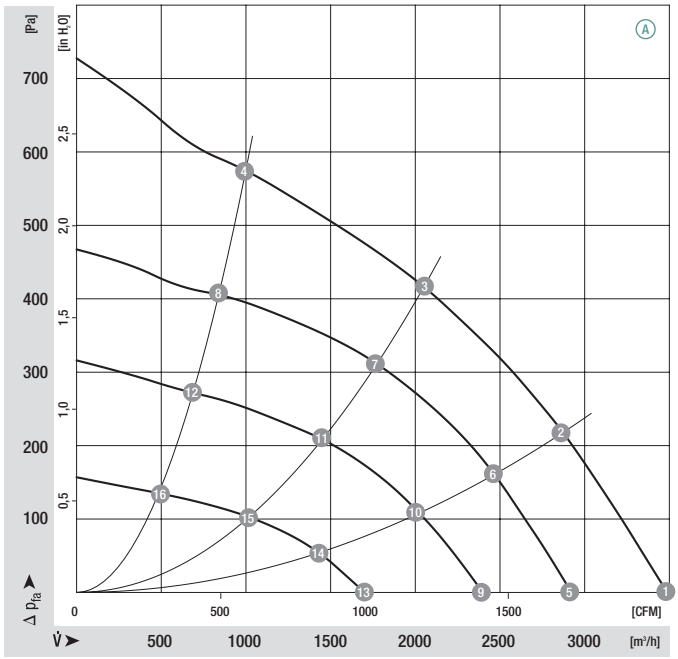
- **Material:** Support plate: Sheet aluminium, spacer profiles: Aluminium
  Impeller: Sheet aluminium, laser-welded
  Rotor: Coated in black
  Electronics enclosure: Die-cast aluminium
- **Number of blades:** 6
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 20
- **Insulation class:** "B"
- **Mounting position:** Shaft horizontal or rotor on top; rotor on bottom on request
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage range	Frequency	Speed/rpm	Max. power input (1)	Max. current draw (1)	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VAC**	**Hz**	**rpm**	**W**	**A**	**°C**	p. 606
***3G 355**	M3G 084-FA	Ⓐ	1~ 200-277	50/60	1840	430	1.90	-25 to +40	K2)

subject to alterations

(1) Nominal data in operating point with maximum load and 230 VAC

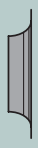
Curves (established with long inlet nozzle)

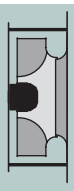


	n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1	1840	335	1.50	75	—
Ⓐ 2	1790	405	1.80	70	56
Ⓐ 3	1770	430	1.90	66	70
Ⓐ 4	1820	365	1.60	67	58
Ⓐ 5	1540	200	0.90	70	—
Ⓐ 6	1540	256	1.10	66	56
Ⓐ 7	1540	277	1.20	63	70
Ⓐ 8	1540	235	1.00	63	58
Ⓐ 9	1260	115	0.50	64	—
Ⓐ 10	1260	150	0.70	60	56
Ⓐ 11	1260	159	0.70	56	70
Ⓐ 12	1260	125	0.50	57	58
Ⓐ 13	890	55	0.20	55	—
Ⓐ 14	890	67	0.30	52	56
Ⓐ 15	890	70	0.30	49	70
Ⓐ 16	890	59	0.30	49	58

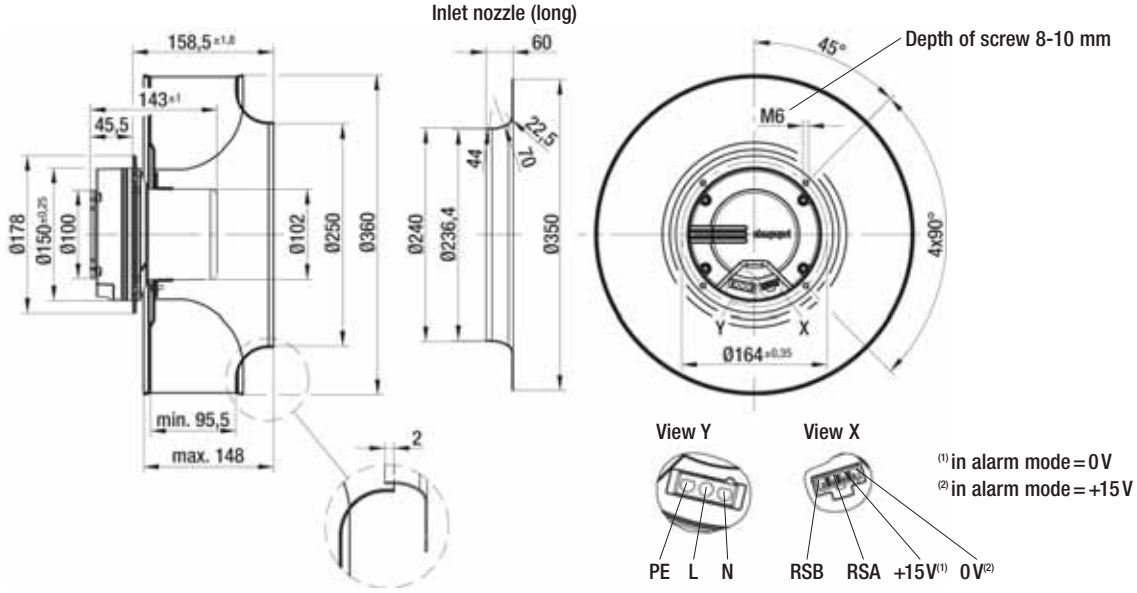
ebmpapst

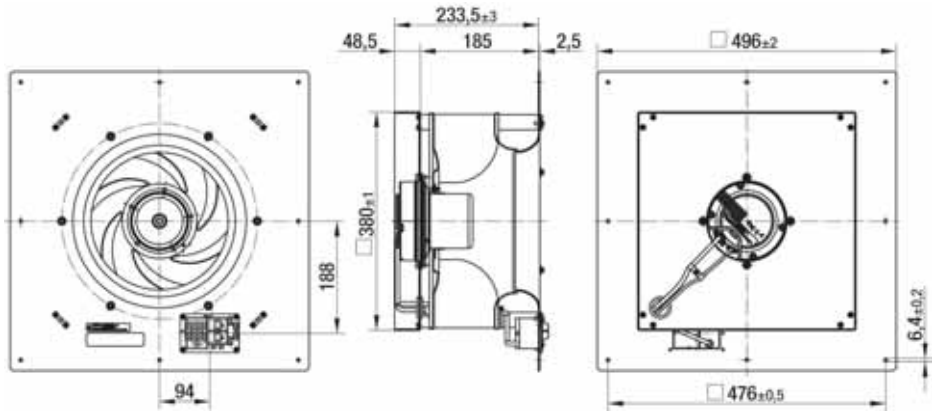
- **Technical features:**
  - PFC (active)
  - RS485 ebmBUS
  - Operation and alarm display: Reversible voltage output 0 V / +15 V (max. 50 mA)
  - Over-temperature protected electronics / motor
- **EMC:** Interference emission acc. to EN 61000-6-4 (industrial environment)
  Interference immunity acc. to EN 61000-6-2 (industrial environment)
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 61800-5-1
- **Electrical connection:** Via connection lead with plug (accessory)
- **Protection class:** I
- **Product conforming to standards:** EN 61800-5-1, CE
- **Approvals:** VDE, UL, CSA; CCC, GOST are applied for





Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle (long)	Inlet nozzle (short)	Centrifugal module with support plate	Mass of centrifugal module with support plate kg
R3G 355-AM14-61	5.4	35560-2-4013	35561-2-4013	**K3G 355-AM14-61**	8.7





Inlet nozzle p. 550 f.
Connection lead p. 559
Electr. connection p. 606

EC centrifugal fans and modules

backward curved, 3-D, Ø 355, RS485, ebmBUS

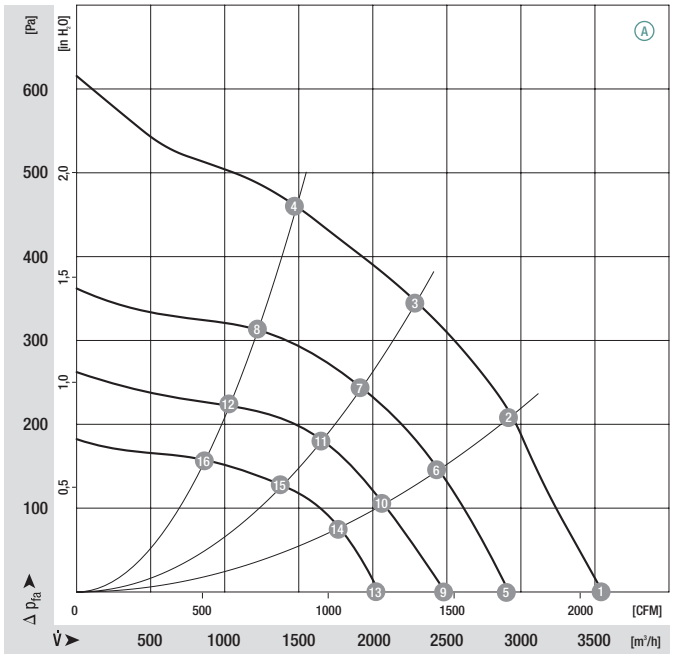
- **Material:** Support plate: Sheet aluminium, spacer profiles: Aluminium
  Impeller: Sheet aluminium, laser-welded
  Rotor: Coated in black
  Electronics enclosure: Die-cast aluminium
- **Number of blades:** 6
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 20
- **Insulation class:** "B"
- **Mounting position:** Shaft horizontal or rotor on top; rotor on bottom on request
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage range	Frequency	Speed/rpm	Max. power input (1)	Max. current draw (1)	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VAC**	**Hz**	**rpm**	**W**	**A**	**°C**	p. 606
***3G 355**	M3G 084-FA	Ⓐ	1~ 200-277	50/60	1710	395	1.80	-25 to +40	K2)

subject to alterations

(1) Nominal data in operating point with maximum load and 230 VAC

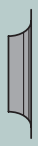
Curves (established with long inlet nozzle)

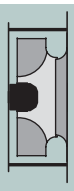


		n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ	1	1710	305	1.30	72	—
Ⓐ	2	1660	375	1.60	67	58
Ⓐ	3	1650	395	1.80	64	68
Ⓐ	4	1670	365	1.60	66	57
Ⓐ	5	1400	166	0.70	65	—
Ⓐ	6	1400	225	1.00	63	58
Ⓐ	7	1400	245	1.10	60	68
Ⓐ	8	1400	216	0.90	61	57
Ⓐ	9	1200	105	0.50	60	—
Ⓐ	10	1200	150	0.70	58	58
Ⓐ	11	1200	172	0.80	56	68
Ⓐ	12	1200	136	0.60	57	57
Ⓐ	13	1000	60	0.30	55	—
Ⓐ	14	1000	82	0.40	53	58
Ⓐ	15	1000	90	0.40	51	68
Ⓐ	16	1000	80	0.40	53	57

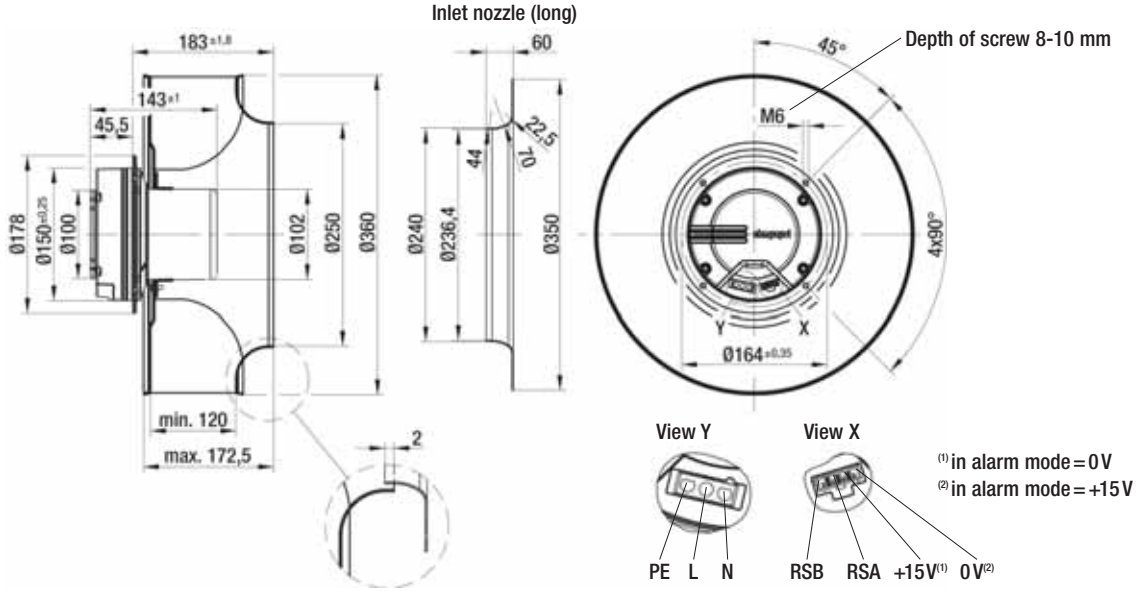
ebmpapst

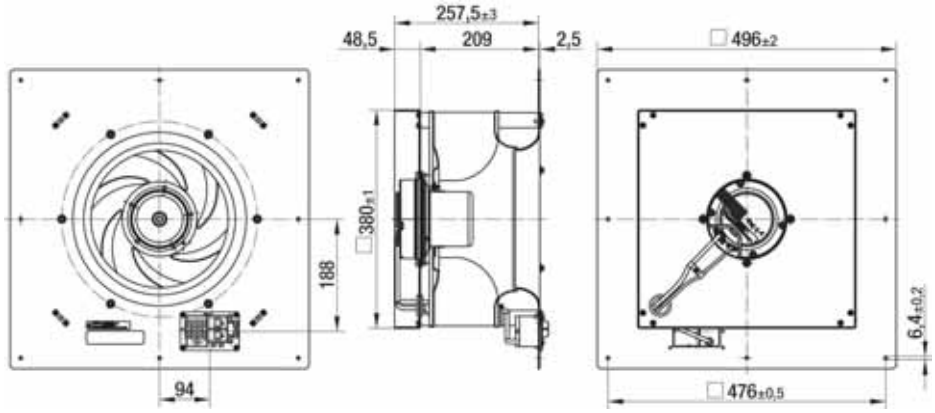
- **Technical features:**
  - PFC (active)
  - RS485 ebmBUS
  - Operation and alarm display: Reversible voltage output 0 V / +15 V (max. 50 mA)
  - Over-temperature protected electronics / motor
- **EMC:** Interference emission acc. to EN 61000-6-4 (industrial environment)
  Interference immunity acc. to EN 61000-6-2 (industrial environment)
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 61800-5-1
- **Electrical connection:** Via connection lead with plug (accessory)
- **Protection class:** I
- **Product conforming to standards:** EN 61800-5-1, CE
- **Approvals:** VDE, UL, CSA; CCC, GOST are applied for





Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle (long)	Inlet nozzle (short)	Centrifugal module with support plate	Mass of centrifugal module with support plate kg
R3G 355-AN31 -61	5.5	35560-2-4013	35561-2-4013	**K3G 355-AN31 -61**	8.9





Inlet nozzle p. 550 f.
Connection lead p. 559
Electr. connection p. 606

EC centrifugal fans and modules

backward curved, 3-D, Ø 400, RS485 ebmBUS

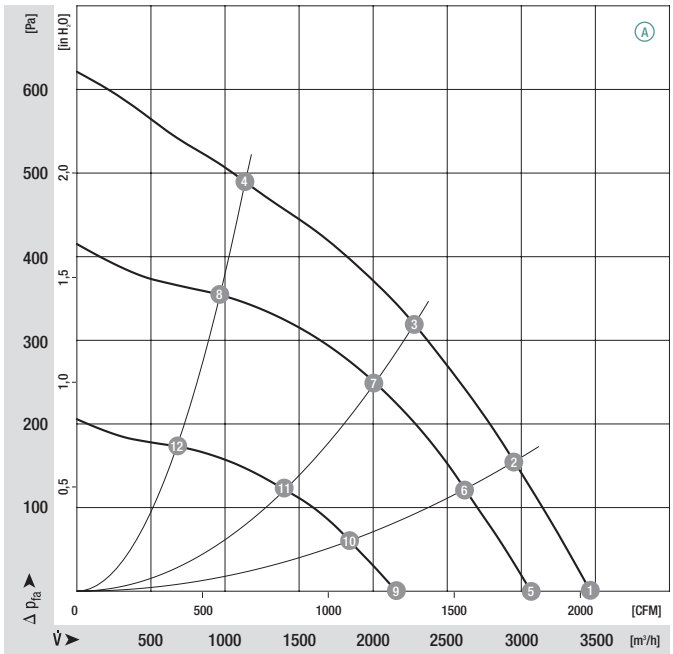
- **Material:** Support plate: Sheet aluminium, spacer profiles: Aluminium
  Impeller: Sheet aluminium, joined by tabs
  Rotor: Coated in black
  Electronics enclosure: Die-cast aluminium
- **Number of blades:** 6
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 20
- **Insulation class:** "B"
- **Mounting position:** Shaft horizontal or rotor on top; rotor on bottom on request
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage range	Frequency	Speed/rpm	Max. power input (1)	Max. current draw (1)	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VAC**	**Hz**	**rpm**	**W**	**A**	**°C**	p. 606
***3G 400**	M3G 084-FA	Ⓐ	1~ 200-277	50/60	1470	370	1.65	-25 to +40	K2)

subject to alterations

(1) Nominal data in operating point with maximum load and 230 VAC

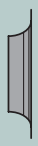
Curves

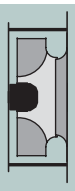


	n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1	1470	323	1.45	73	—
Ⓐ 2	1430	362	1.60	69	53
Ⓐ 3	1420	370	1.65	64	68
Ⓐ 4	1470	319	1.40	66	52
Ⓐ 5	1300	210	0.90	71	—
Ⓐ 6	1300	255	1.10	65	53
Ⓐ 7	1300	270	1.20	61	68
Ⓐ 8	1300	230	1.00	64	52
Ⓐ 9	910	90	0.40	61	—
Ⓐ 10	910	100	0.40	57	53
Ⓐ 11	910	108	0.50	53	68
Ⓐ 12	910	92	0.40	51	52

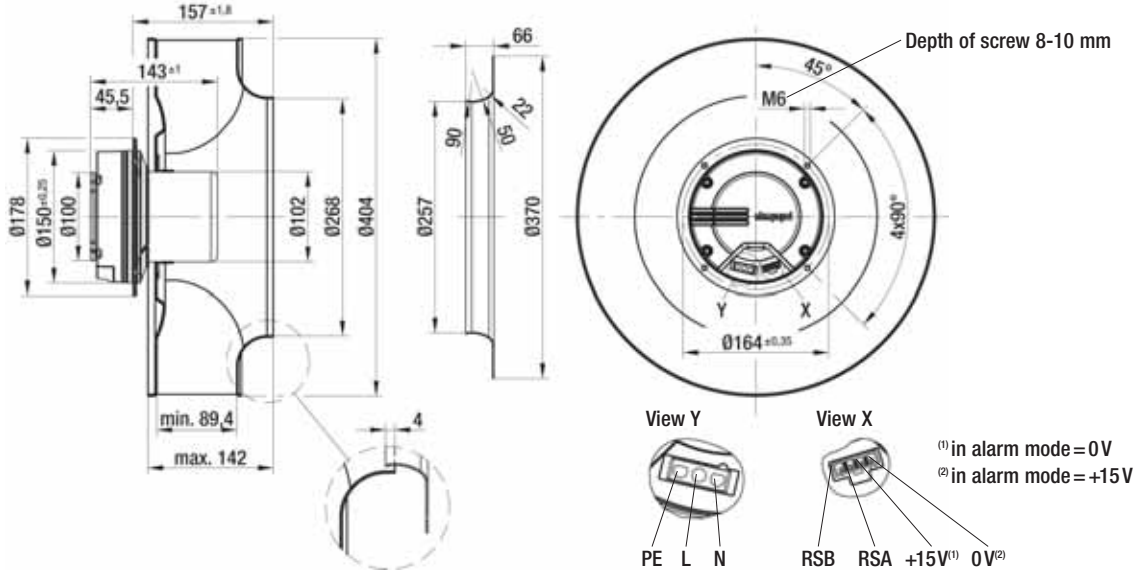
ebmpapst

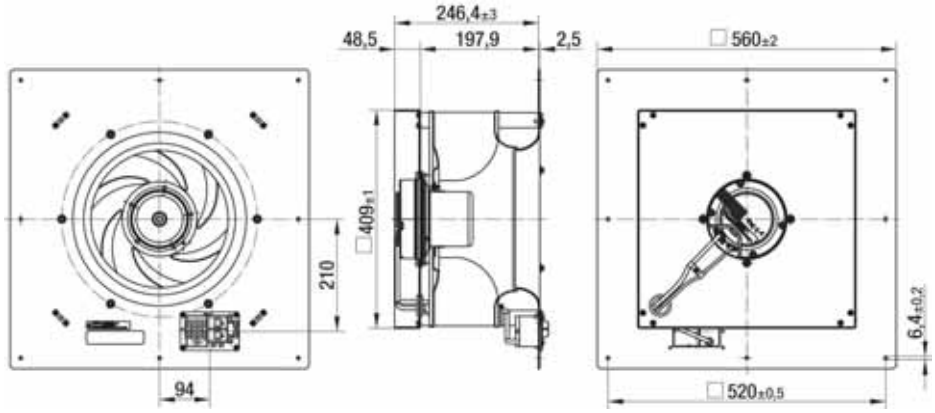
- **Technical features:**
  - PFC (active)
  - RS485 ebmBUS
  - Operation and alarm display: Reversible voltage output 0 V / +15 V (max. 50 mA)
  - Over-temperature protected electronics / motor
- **EMC:** Interference emission acc. to EN 61000-6-4 (industrial environment)
  Interference immunity acc. to EN 61000-6-2 (industrial environment)
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 61800-5-1
- **Electrical connection:** Via connection lead with plug (accessory)
- **Protection class:** I
- **Product conforming to standards:** EN 61800-5-1, CE
- **Approvals:** UL, CSA; VDE, CCC, GOST are applied for





Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle (long)	Centrifugal module with support plate	Mass of centrifugal module with support plate kg
R3G 400-AD27 -61	5.8	54476-2-4013	**K3G 400-AD27 -61**	9.8





Inlet nozzle p. 550 f. | Guard grille p. 553 | Connection lead p. 559 | Electr. connection p. 606

EC centrifugal fans and modules

backward curved, 3-D, Ø 400, RS485 ebmBUS

- **Material:** Support plate: Sheet aluminium, spacer profiles: Aluminium
  Impeller: Sheet aluminium, joined by tabs
  Rotor: Coated in black
  Electronics enclosure: Die-cast aluminium
- **Number of blades:** 6
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 20
- **Insulation class:** "B"
- **Mounting position:** Shaft horizontal or rotor on top; rotor on bottom on request
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

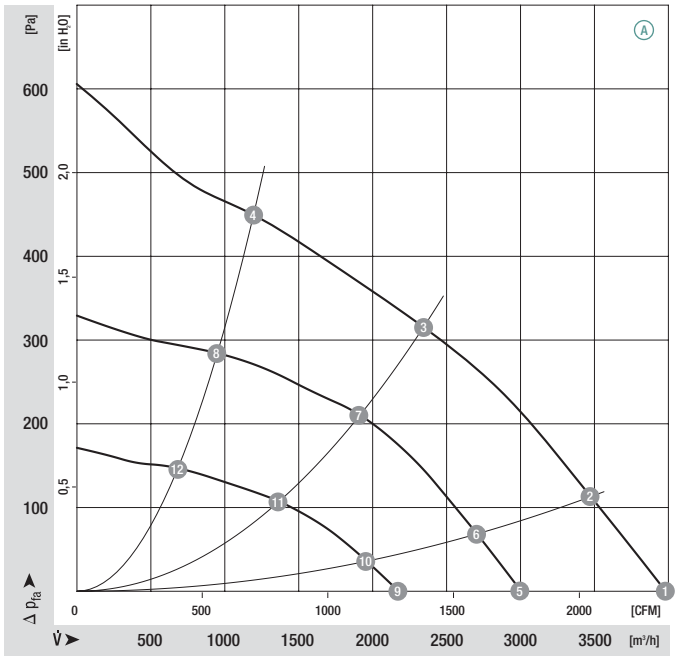
Nominal data

Type	Motor	Curve	Nominal voltage range	Frequency	Speed/rpm	Max. power input (1)	Max. current draw (1)	Perm. amb. temp.	Electr. connection
			VAC	Hz	rpm	W	A	°C	p. 606
*3G 400	M3G 084-FA	Ⓐ	1~ 200-277	50/60	1420	380	1.70	-25 to +40	K2)

subject to alterations

(1) Nominal data in operating point with maximum load and 230 VAC

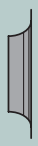
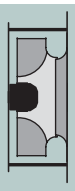
Curves



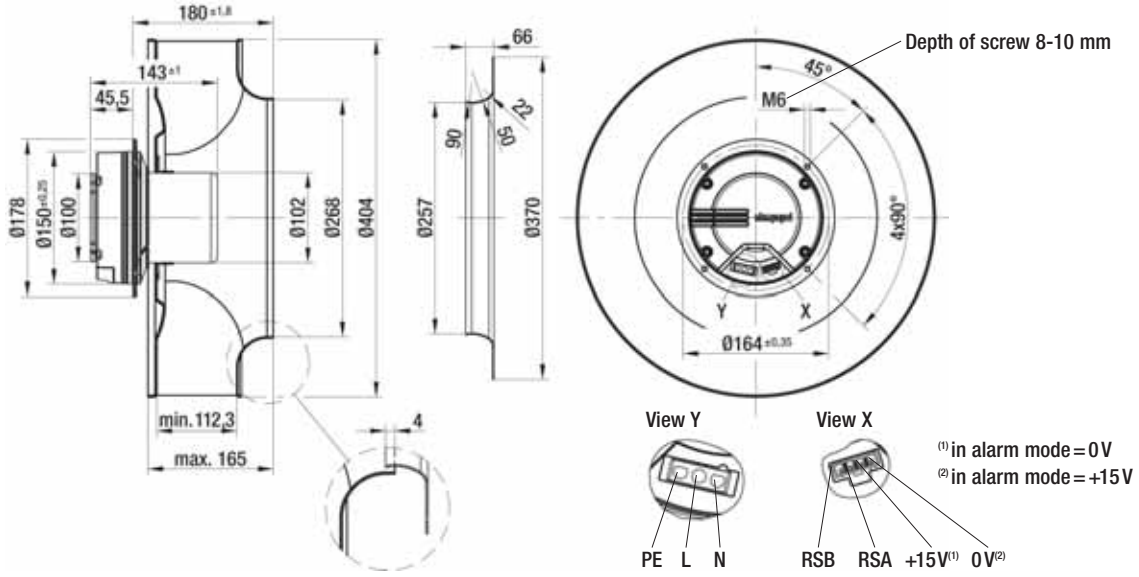
		n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ	1	1420	327	1.45	73	—
Ⓐ	2	1395	355	1.55	71	40
Ⓐ	3	1370	380	1.70	66	64
Ⓐ	4	1415	333	1.45	69	54
Ⓐ	5	1120	187	0.80	68	—
Ⓐ	6	1120	207	0.90	65	40
Ⓐ	7	1120	225	1.00	60	64
Ⓐ	8	1120	173	0.80	61	54
Ⓐ	9	800	85	0.40	60	—
Ⓐ	10	800	92	0.40	58	40
Ⓐ	11	800	97	0.40	53	64
Ⓐ	12	800	85	0.40	54	54

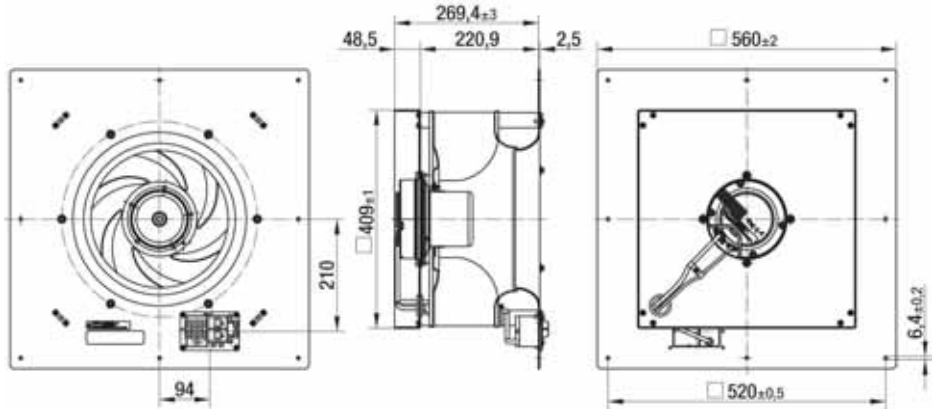
ebmpapst

- **Technical features:**
  - PFC (active)
  - RS485 ebmBUS
  - Operation and alarm display: Reversible voltage output 0 V / +15 V (max. 50 mA)
  - Over-temperature protected electronics / motor
- **EMC:** Interference emission acc. to EN 61000-6-4 (industrial environment)
  Interference immunity acc. to EN 61000-6-2 (industrial environment)
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 61800-5-1
- **Electrical connection:** Via connection lead with plug (accessory)
- **Protection class:** I
- **Product conforming to standards:** EN 61800-5-1, CE
- **Approvals:** UL, CSA; VDE, CCC, GOST are applied for

Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle (long)	Centrifugal module with support plate	Mass of centrifugal module with support plate kg
R3G 400-AC30 -61	5.9	54476-2-4013	**K3G 400-AC30 -61**	9.9





EC centrifugal fans and modules

backward curved, 3-D, Ø 450, RS485, ebmBUS

- **Material:** Support plate: Galvanised sheet steel, spacer profiles: Aluminium
  Impeller: Sheet aluminium, laser-welded
  Rotor: Coated in black
  Electronics enclosure: Die-cast aluminium
- **Number of blades:** 6
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 20 (acc. to EN 60529)
- **Insulation class:** "F"
- **Mounting position:** Shaft horizontal or rotor on top; rotor on bottom on request
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

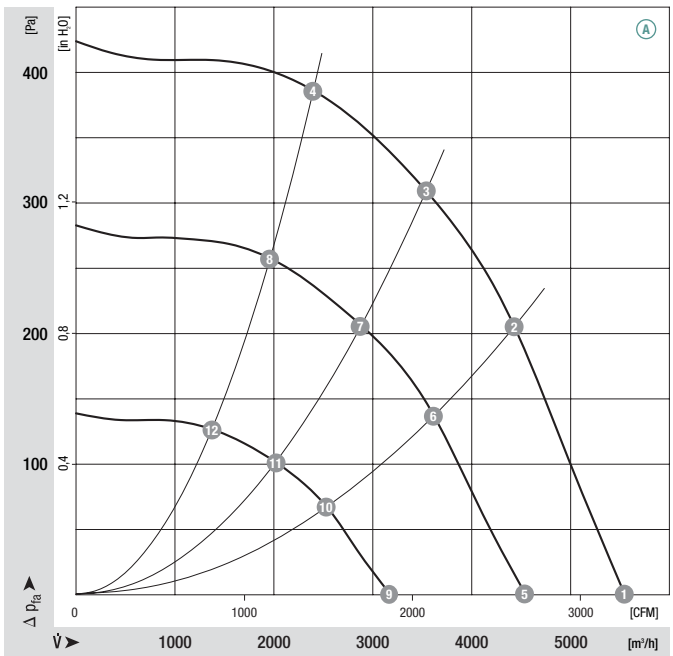
Nominal data

Type	Motor	Curve	Nominal voltage range	Frequency	Speed/rpm	Max. power input (1)	Max. current draw (1)	Perm. amb. temp.	Electr. connection
			VAC	Hz	rpm	kW	A	°C	p. 606
*3G 450	M3G 112-EA	Ⓐ	1~ 200-277	50/60	1225	0.50	2.20	-25 to +40	K2)

subject to alterations

(1) Nominal data in operating point with maximum load and 230 VAC

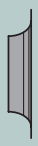
Curves

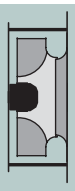


	n [rpm]	P_1 [kW]	I [A]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1	1225	0.35	1.50	68	—
Ⓐ 2	1225	0.49	2.10	64	65
Ⓐ 3	1225	0.50	2.20	64	67
Ⓐ 4	1225	0.47	2.10	63	62
Ⓐ 5	1000	0.19	0.80	63	—
Ⓐ 6	1000	0.26	1.20	59	65
Ⓐ 7	1000	0.28	1.20	59	67
Ⓐ 8	1000	0.26	1.10	57	62
Ⓐ 9	700	0.07	0.30	55	—
Ⓐ 10	700	0.09	0.40	49	65
Ⓐ 11	700	0.10	0.40	49	67
Ⓐ 12	700	0.09	0.40	48	62

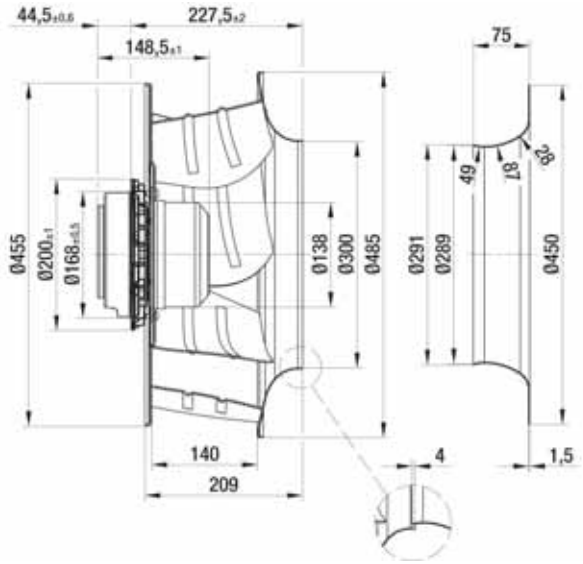
ebmpapst

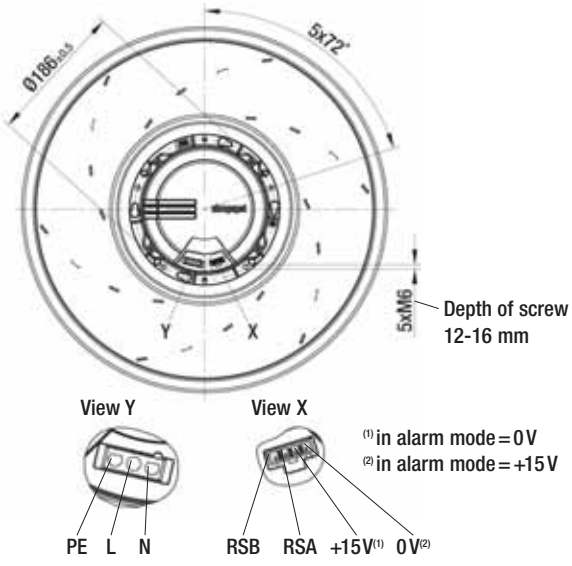
- **Technical features:**
  - PFC (active)
  - RS485 ebmBUS
  - Operation and alarm display: Reversible voltage output 0 V / +15 V (max. 50 mA)
  - Over-temperature protected electronics / motor
- **EMC:** Interference emission acc. to EN 61000-6-4 (industrial environment)
  Interference immunity acc. to EN 61000-6-2 (industrial environment)
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 61800-5-1
- **Electrical connection:** Via connection lead with plug (accessory)
- **Protection class:** I (acc. to EN 61800-5-1)
- **Product conforming to standard:** CE
- **Approvals:** UL, CSA, VDE, CCC, GOST are applied for

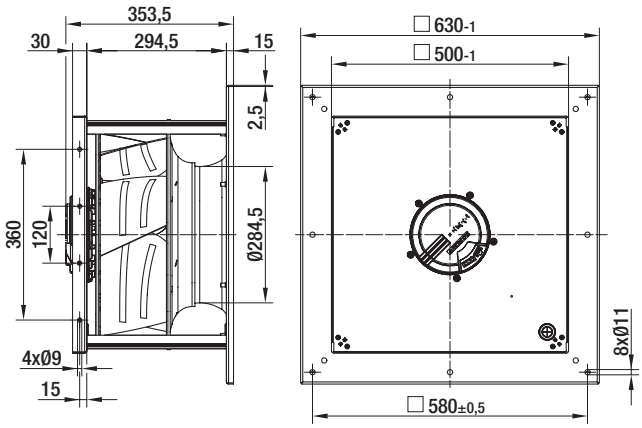


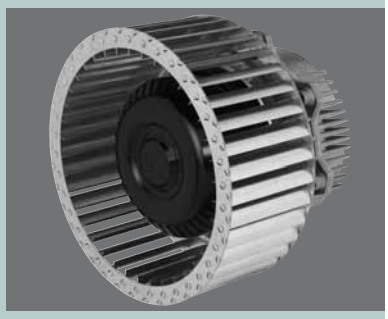


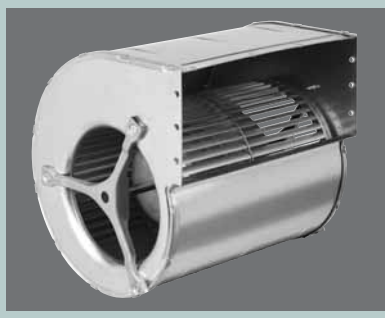
Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle (long)	Centrifugal module with support plate	Mass of centrifugal module with support plate kg
R3G 450-A051 -01	11.5	63045-2-4013	K3G 450-A051 -01	25.4









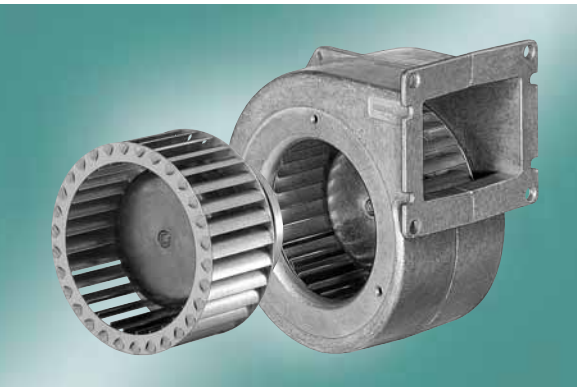


EC centrifugal fans and blowers forward curved

EC centrifugal fans and blowers, single inlet, 24 / 48 VDC	Ø 085 - Ø 160	422
EC centrifugal fans and blowers, single inlet, line-fed	Ø 108 - Ø 450	438
EC centrifugal blowers, dual inlet, 24 / 48 VDC	Ø 133 - Ø 160	502
EC centrifugal blowers, dual inlet, line-fed	Ø 146 - Ø 180	510

EC centrifugal fans and blowers

single inlet, Ø 085



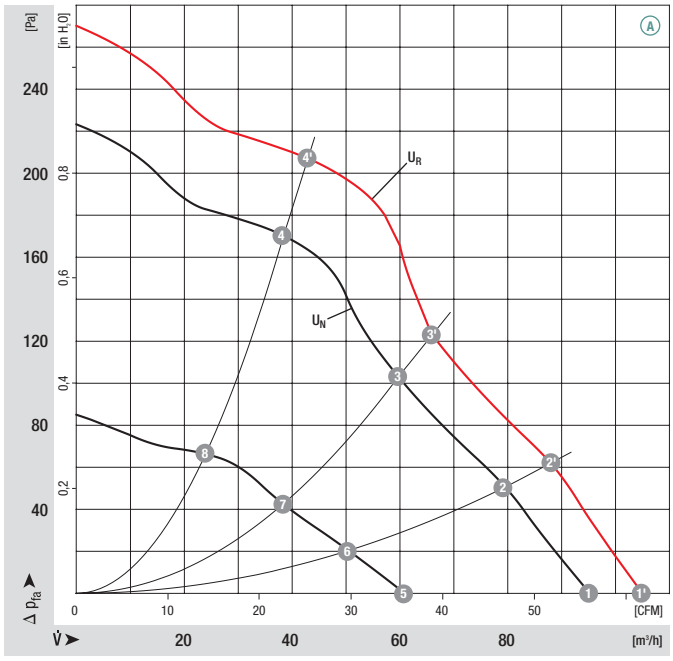
- **Material:** Housing: Die-cast aluminium
  Impeller: Hot-dip galvanised sheet steel
  Rotor: Galvanised
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 22
- **Insulation class:** "B"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data

Type	Motor	Curve	Nominal voltage	Voltage range	Air flow	Speed/rpm	Power input	Current draw	Sound pressure level	Min. back pressure	Perm. amb. temp.	Electr. connection
			VDC	VDC	m³/h	rpm	W	A	dB(A)	Pa	°C	p. 600
*1G 085	M1G 045-BE	Ⓐ	24	16-28	95	2850	14	0.64	57	0	-25 to +60	G)
*1G 085	M1G 045-BE	Ⓐ	48	36-57	95	2850	14	0.32	57	0	-25 to +60	G)

subject to alterations

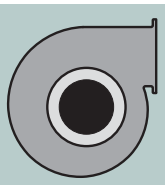
Curves



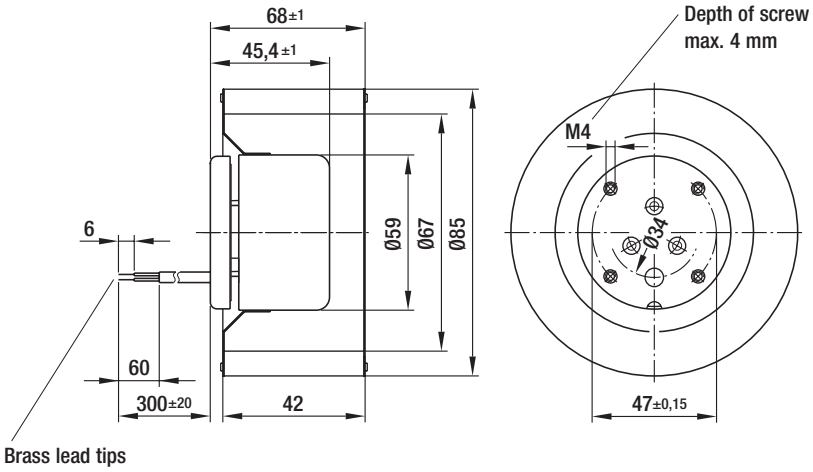
	n [rpm]	P_1 [W]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1'	3180	19	59	—
Ⓐ 2'	3300	16	57	28
Ⓐ 3'	3500	15	57	32
Ⓐ 4'	3800	12	57	37
Ⓐ 1	2850	14	57	—
Ⓐ 2	3000	12	55	28
Ⓐ 3	3180	11	55	32
Ⓐ 4	3400	9	54	37
Ⓐ 5	1890	5	46	—
Ⓐ 6	1970	4	44	25
Ⓐ 7	2070	4	44	30
Ⓐ 8	2170	3	42	33

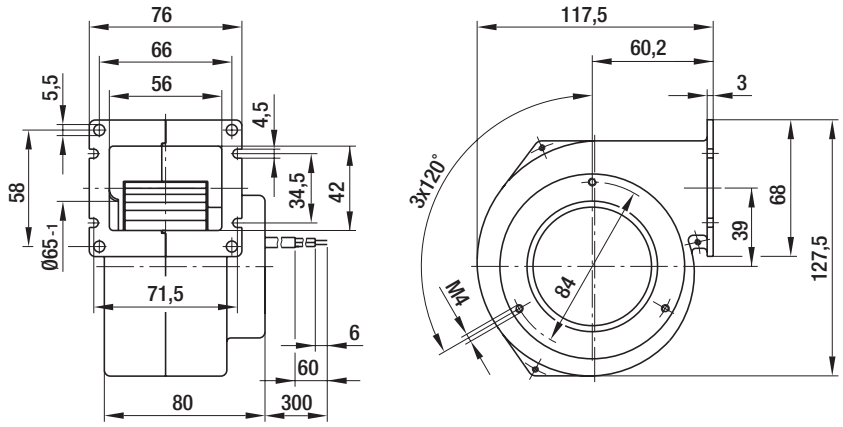
ebmpapst

- **Technical features:**
  - Control input 0-10 VDC / PWM
  - Tach output
  - Reverse polarity and locked-rotor protection
- **Cable exit:** Axial
- **Protection class:** I
- **Product conforming to standard:** EN 60950-1
- **Approvals:** Ⓐ (48 VDC) CCC



Centrifugal fan	Mass of centrifugal fan kg	Centrifugal blower with flange	Mass of centrifugal blower kg
R1G 085-AB05 -01	0.5	**G1G 085-AB05 -01**	0.8
R1G 085-AB07 -01	0.5	**G1G 085-AB07 -01**	0.8





EC centrifugal fans and blowers

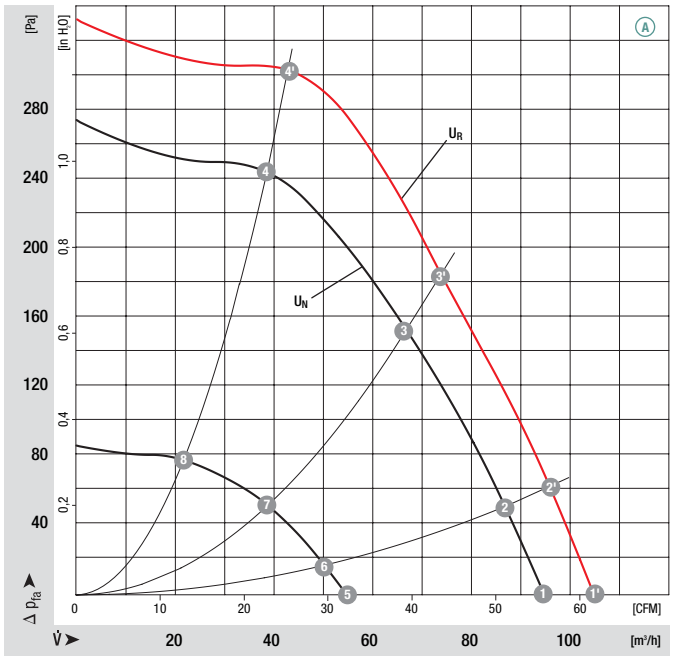
single inlet, Ø 097

- **Material:** Housing: Hot-dip galvanised sheet steel
  Impeller: Hot-dip galvanised sheet steel
  Rotor: Galvanised
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 22
- **Insulation class:** "B"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage	Voltage range	Air flow	Speed/rpm	Power input	Current draw	Sound pressure level	Min. back pressure	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VDC**	**VDC**	**m³/h**	**rpm**	**W**	**A**	**dB(A)**	**Pa**	**°C**	p. 600
***1G 097**	M1G 045-BE	Ⓐ	24	16-28	95	2650	16	0.75	59	0	-25 to +60	G)
***1G 097**	M1G 045-BE	Ⓐ	48	36-57	95	2650	16	0.38	59	0	-25 to +60	G)

subject to alterations

Curves

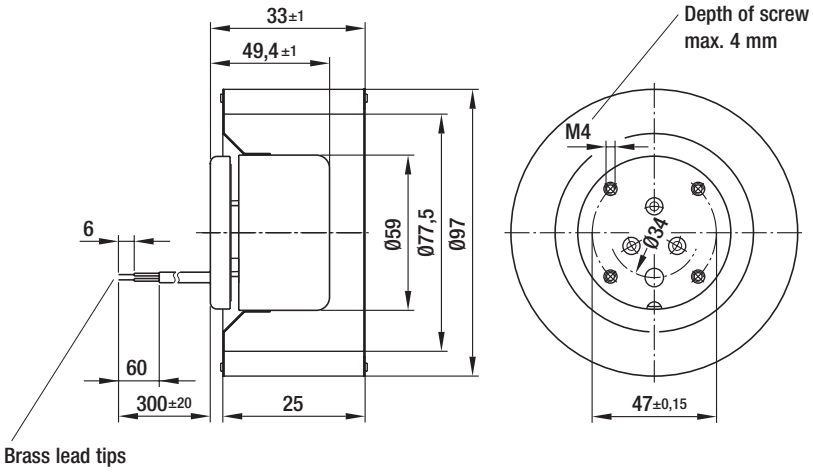


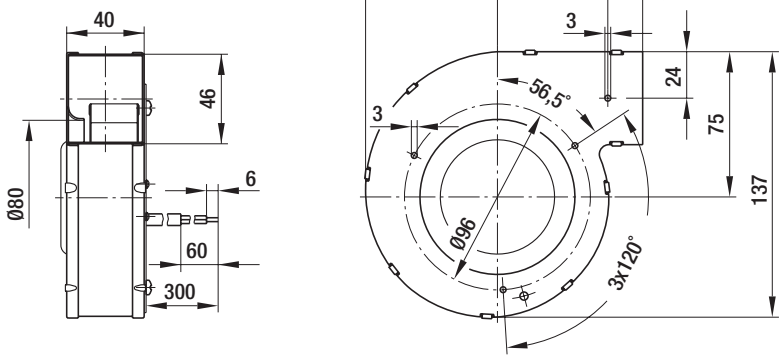
	n [rpm]	P_1 [W]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1'	2920	22	62	—
Ⓐ 2'	3030	21	61	41
Ⓐ 3'	3300	17	59	48
Ⓐ 4'	3700	13	58	48
Ⓐ 1	2650	16	59	—
Ⓐ 2	2730	15	58	41
Ⓐ 3	2960	13	56	48
Ⓐ 4	3290	10	55	48
Ⓐ 5	1615	4	45	—
Ⓐ 6	1650	4	45	38
Ⓐ 7	1745	4	43	46
Ⓐ 8	1880	3	42	47

ebmpapst

- **Technical features:**
  - Control input 0-10 VDC / PWM
  - Tach output
  - Reverse polarity and locked-rotor protection
- **Cable exit:** Axial
- **Protection class:** I
- **Product conforming to standard:** EN 60950-1
- **Approvals:** Ⓐ (48 VDC) CCC

Centrifugal fan	Mass of centrifugal fan kg	Centrifugal blower without flange	Mass of centrifugal blower kg
R1G 097-AA05 -01	0.5	G1G 097-AA05 -01	0.8
R1G 097-AA07 -01	0.5	G1G 097-AA07 -01	0.8

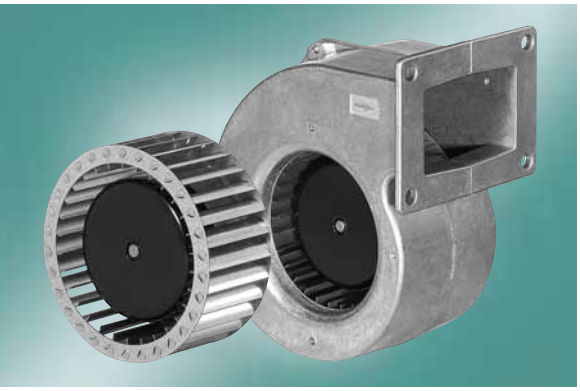




Inlet nozzle p. 552
Guard grille p. 554
Electr. connection p. 600

EC centrifugal fans and blowers

single inlet, Ø 108



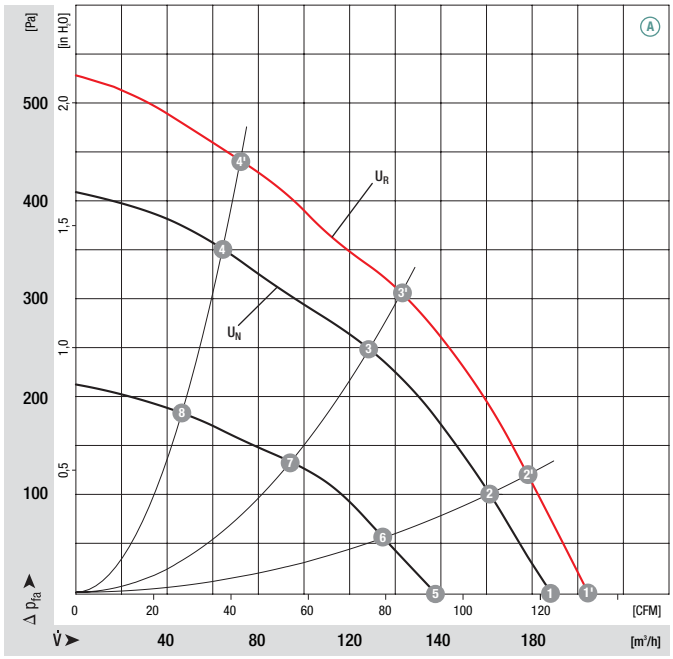
- **Material:** Housing: Die-cast aluminium
  Impeller: Hot-dip galvanised sheet steel
  Rotor: Coated in black
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 22
- **Insulation class:** "B"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data

Type	Motor	Curve	Nominal voltage	Voltage range	Air flow	Speed/rpm	Power input	Current draw	Sound pressure level	Min. back pressure	Perm. amb. temp.	Electr. connection
			VDC	VDC	m³/h	rpm	W	A	dB(A)	Pa	°C	p. 600
*1G 108	M1G 055-BD	Ⓐ	24	16-28	200	3000	42	2.00	65	0	-25 to +60	G)
*1G 108	M1G 055-BD	Ⓐ	48	36-57	200	3000	42	1.00	65	0	-25 to +60	G)

subject to alterations

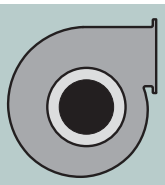
Curves



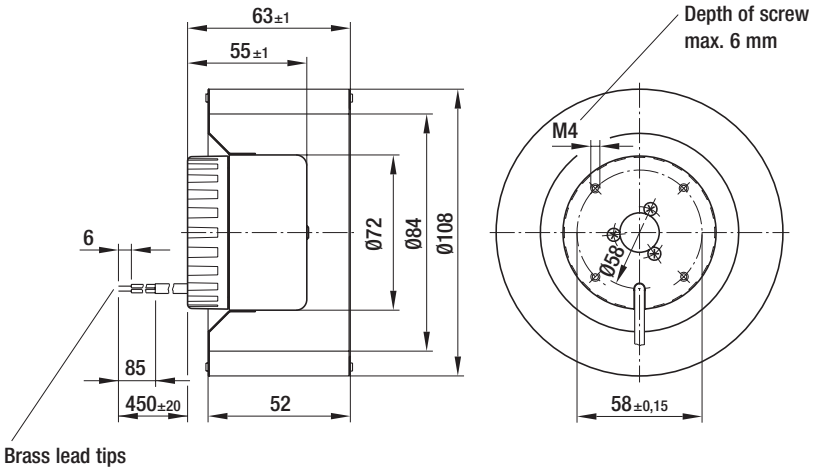
	n [rpm]	P_1 [W]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1'	3230	55	67	—
Ⓐ 2'	3410	52	66	33
Ⓐ 3'	3800	43	65	41
Ⓐ 4'	4100	35	64	33
Ⓐ 1	3000	42	65	—
Ⓐ 2	3140	40	64	33
Ⓐ 3	3420	32	63	41
Ⓐ 4	3690	26	63	33
Ⓐ 5	2300	20	61	—
Ⓐ 6	2380	17	58	33
Ⓐ 7	2550	14	55	41
Ⓐ 8	2720	11	55	33

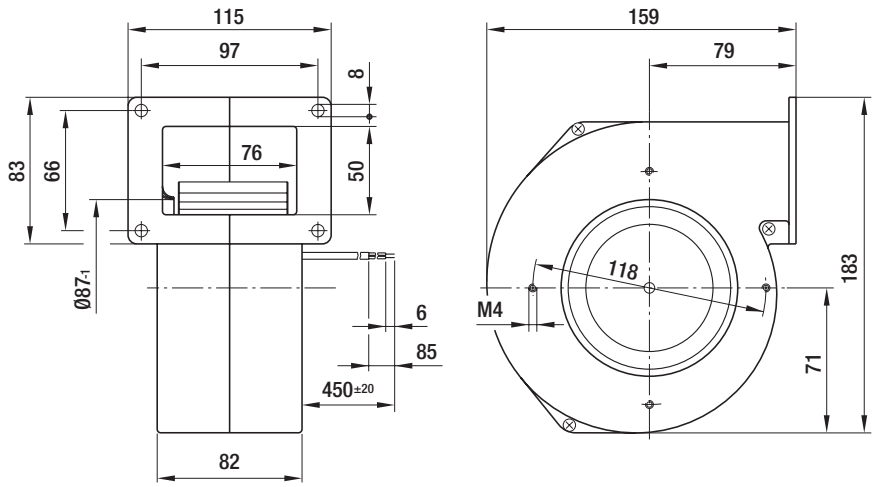
ebmpapst

- **Technical features:**
  - Control input 0-10 VDC / PWM
  - Tach output
  - Reverse polarity and locked-rotor protection
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-2
- **Cable exit:** Axial
- **Protection class:** I
- **Product conforming to standard:** EN 60950-1
- **Approvals:** Ⓐ (24 VDC) UL, CSA, Ⓐ (48 VDC) CCC



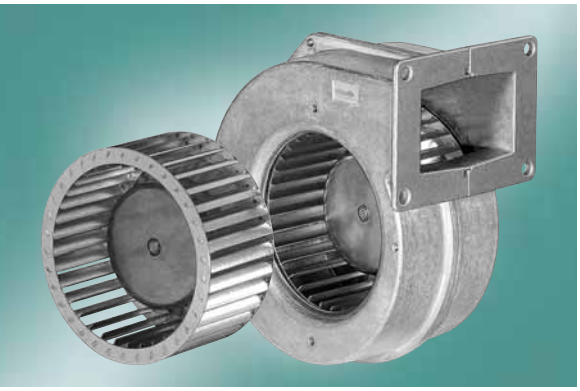
Centrifugal fan	Mass of centrifugal fan kg	Centrifugal blower with flange	Mass of centrifugal blower kg
R1G 108-AB17 -02	0.7	**G1G 108-AB17 -02**	1.4
R1G 108-AB41 -02	0.7	**G1G 108-AB41 -02**	1.4





EC centrifugal fans and blowers

single inlet, Ø 120



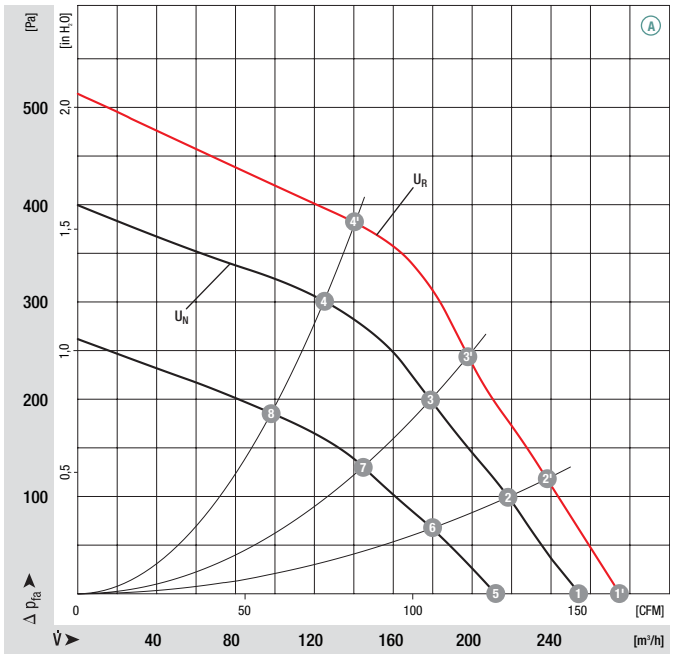
- **Material:** Housing: Die-cast aluminium
  Impeller: Hot-dip galvanised sheet steel
  Rotor: Galvanised
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 22
- **Insulation class:** "B"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data

Type	Motor	Curve	Nominal voltage	Voltage range	Air flow	Speed/rpm	Power input	Current draw	Sound pressure level	Min. back pressure	Perm. amb. temp.	Electr. connection
			VDC	VDC	m³/h	rpm	W	A	dB(A)	Pa	°C	p. 600
*1G 120	M1G 055-BD	Ⓐ	24	16-28	255	2200	40	1.90	62	0	-25 to +60	G)
*1G 120	M1G 055-BD	Ⓐ	48	36-57	255	2200	40	0.95	62	0	-25 to +60	G)

subject to alterations

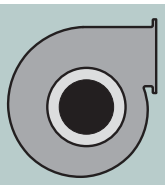
Curves



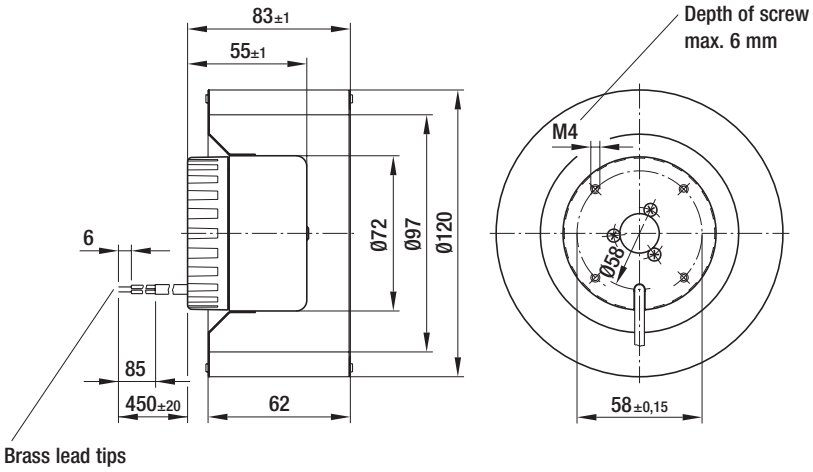
	n [rpm]	P_1 [W]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1'	2410	50	63	—
Ⓐ 2'	2620	47	62	58
Ⓐ 3'	2870	44	61	60
Ⓐ 4'	3200	36	62	55
Ⓐ 1	2200	40	62	—
Ⓐ 2	2410	36	60	59
Ⓐ 3	2600	32	58	62
Ⓐ 4	2880	25	58	55
Ⓐ 5	1870	24	55	—
Ⓐ 6	1990	21	54	58
Ⓐ 7	2100	18	53	61
Ⓐ 8	2310	14	54	54

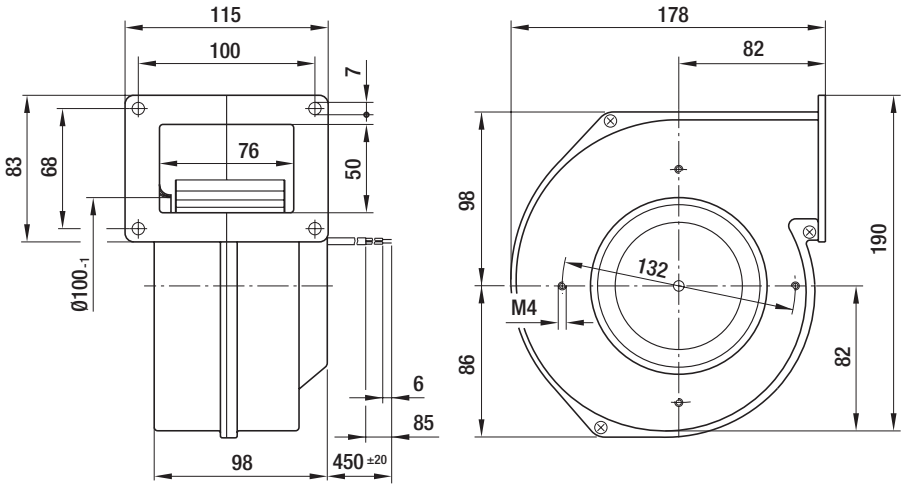
ebmpapst

- **Technical features:**
  - Control input 0-10 VDC / PWM
  - Tach output
  - Reverse polarity and locked-rotor protection
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-2
- **Cable exit:** Axial
- **Protection class:** I
- **Product conforming to standard:** EN 60950-1
- **Approvals:** Ⓐ (24 VDC) UL, CSA, Ⓐ (48 VDC) CCC



Centrifugal fan	Mass of centrifugal fan kg	Centrifugal blower with flange	Mass of centrifugal blower kg
R1G 120-AB67 -02	0.8	**G1G 120-AB67 -02**	1.6
R1G 120-AB71 -02	0.8	**G1G 120-AB71 -02**	1.6





EC centrifugal fans and blowers

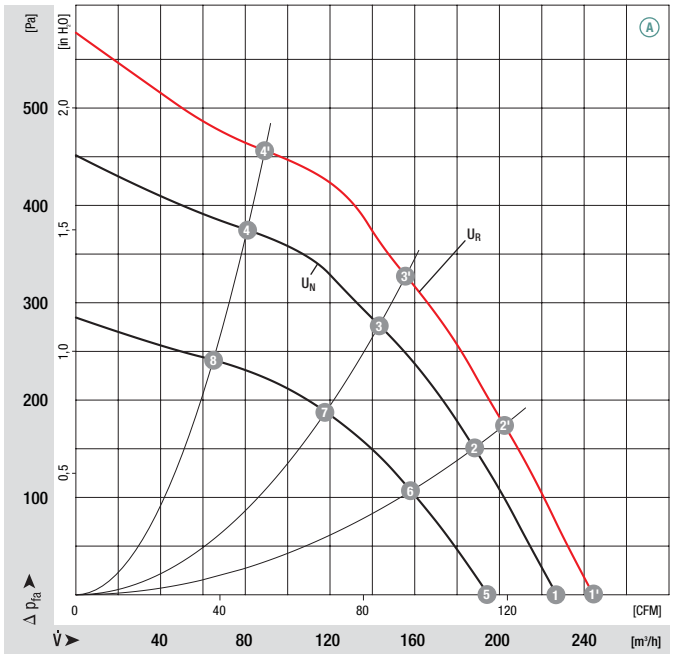
single inlet, Ø 133

- **Material:** Housing: Hot-dip galvanised sheet steel
  Impeller: Hot-dip galvanised sheet steel
  Rotor: Galvanised
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 22
- **Insulation class:** "B"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage	Voltage range	Air flow	Speed/rpm	Power input	Current draw	Sound pressure level	Min. back pressure	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VDC**	**VDC**	**m³/h**	**rpm**	**W**	**A**	**dB(A)**	**Pa**	**°C**	p. 600
***1G 133**	M1G 055-BD	Ⓐ	24	16-28	225	2000	40	2.20	64	0	-25 to +60	G)
***1G 133**	M1G 055-BD	Ⓐ	48	36-57	225	2000	45	1.10	64	0	-25 to +60	G)

subject to alterations

Curves

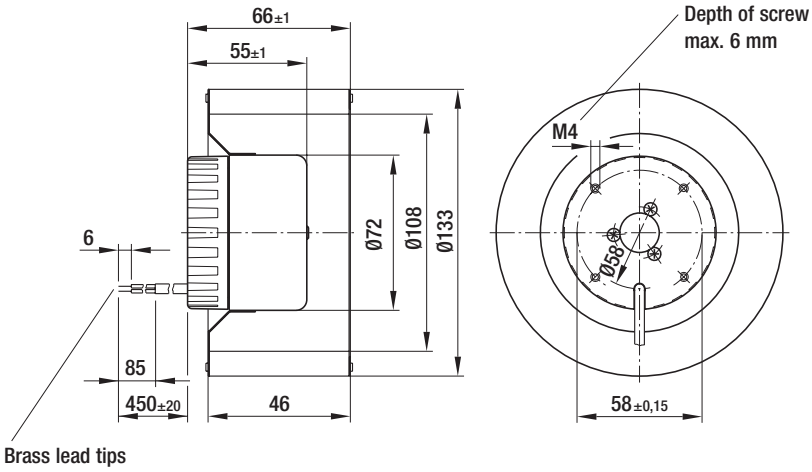


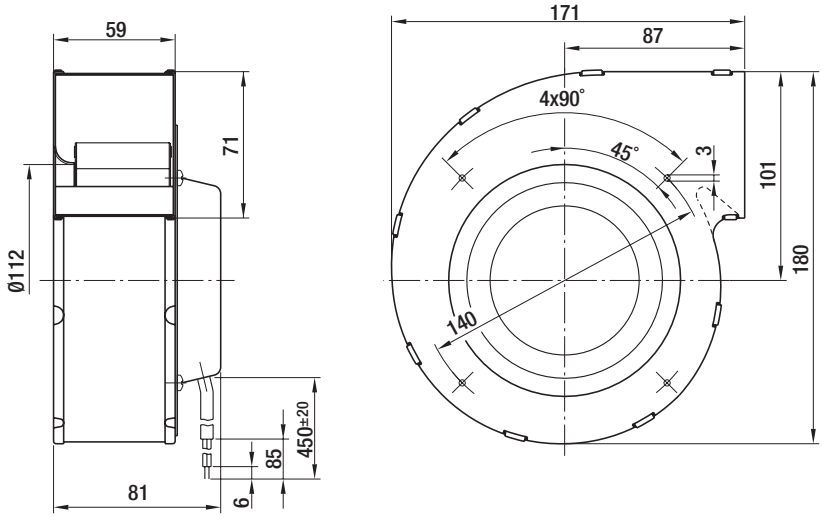
	n [rpm]	P_1 [W]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1'	2170	57	66	—
Ⓐ 2'	2410	51	66	47
Ⓐ 3'	2750	44	64	49
Ⓐ 4'	3200	36	66	32
Ⓐ 1	2000	45	64	—
Ⓐ 2	2230	40	64	49
Ⓐ 3	2540	35	62	51
Ⓐ 4	2920	27	63	33
Ⓐ 5	1750	28	60	—
Ⓐ 6	1910	24	59	50
Ⓐ 7	2120	20	58	53
Ⓐ 8	2370	15	59	35

ebmpapst

- **Technical features:**
  - Control input 0-10 VDC / PWM
  - Tach output
  - Reverse polarity and locked-rotor protection
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-2
- **Cable exit:** Lateral
- **Protection class:** I
- **Product conforming to standard:** EN 60950-1
- **Approvals:** Ⓐ (24 VDC) UL, CSA, Ⓐ (48 VDC) CCC

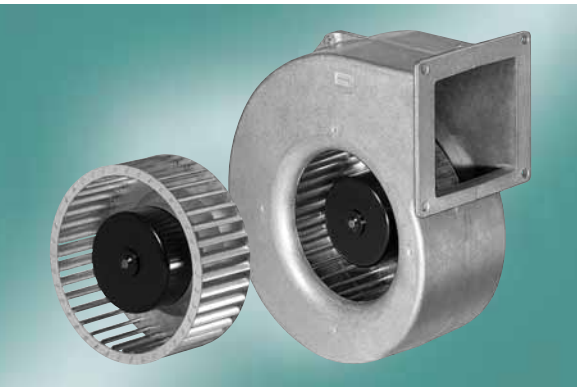
Centrifugal fan	Mass of centrifugal fan kg	Centrifugal blower without flange	Mass of centrifugal blower kg
R1G 133-AE19 -02	0.7	G1G 133-DE19 -02	1.3
R1G 133-AE03 -02	0.7	G1G 133-DE03 -02	1.3





EC centrifugal fans and blowers

single inlet, Ø 140



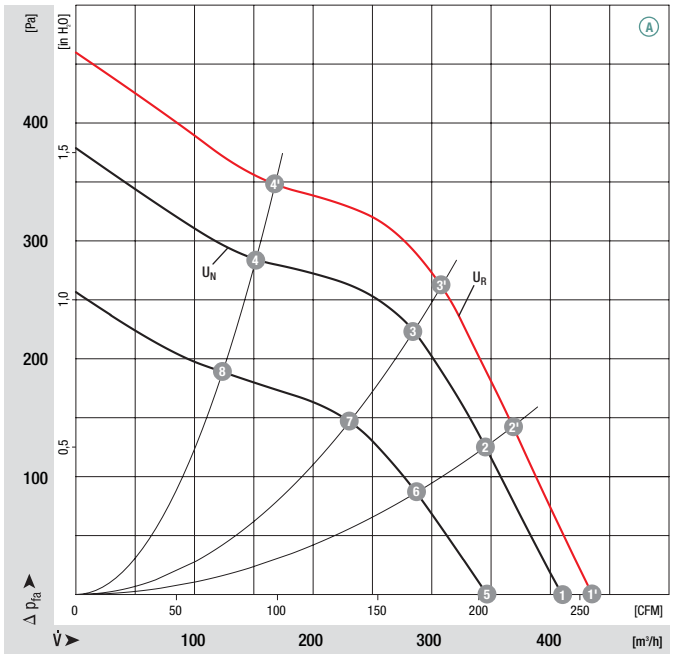
- **Material:** Housing: Die-cast aluminium
  Impeller: Hot-dip galvanised sheet steel
  Rotor: Coated in black
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 22
- **Insulation class:** "B"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data

Type	Motor	Curve	Nominal voltage	Voltage range	Air flow	Speed/rpm	Power input	Current draw	Sound pressure level	Min. back pressure	Perm. amb. temp.	Electr. connection
			VDC	VDC	m³/h	rpm	W	A	dB(A)	Pa	°C	p. 600
*1G 140	M1G 055-CF	Ⓐ	24	16-28	400	1750	54	2.50	63	0	-25 to +60	G)
*1G 140	M1G 055-CF	Ⓐ	48	36-57	410	1750	54	1.30	63	0	-25 to +60	G)

subject to alterations

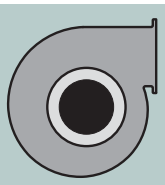
Curves



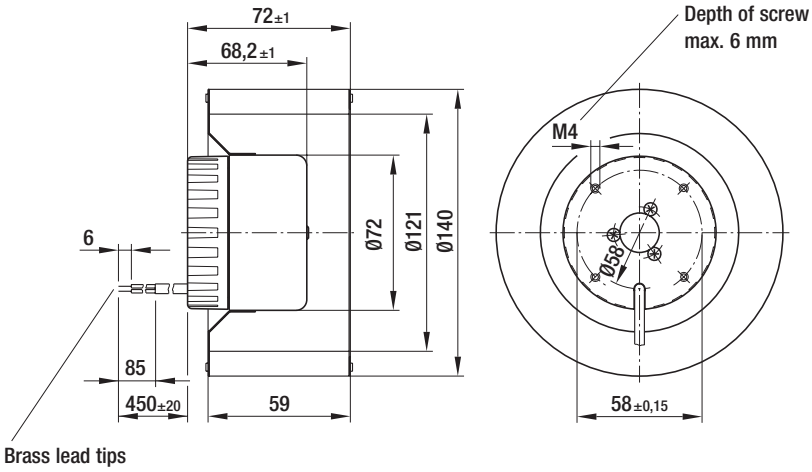
	n [rpm]	P_1 [W]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1'	1850	65	64	—
Ⓐ 2'	2020	61	61	50
Ⓐ 3'	2200	57	59	54
Ⓐ 4'	2550	43	60	40
Ⓐ 1	1750	54	63	—
Ⓐ 2	1900	50	59	51
Ⓐ 3	2030	45	58	54
Ⓐ 4	2310	32	58	40
Ⓐ 5	1500	34	60	—
Ⓐ 6	1580	29	56	50
Ⓐ 7	1670	25	54	53
Ⓐ 8	1880	19	53	41

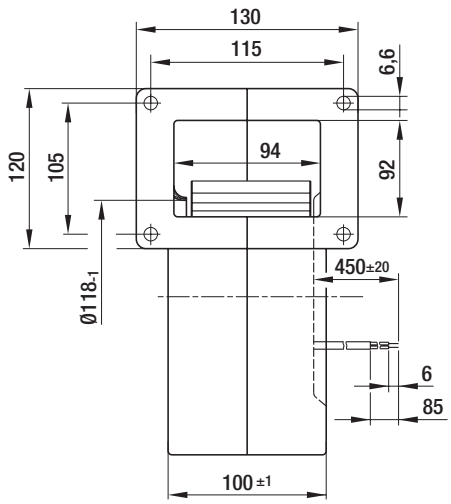
ebmpapst

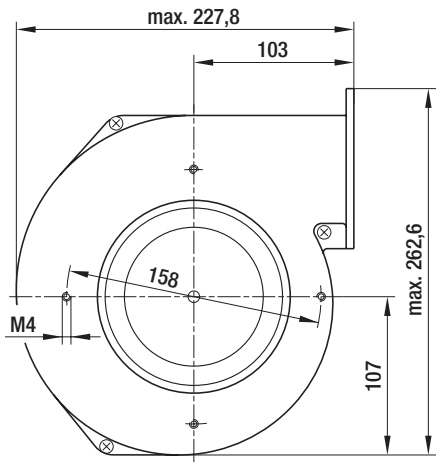
- **Technical features:**
  - Control input 0-10 VDC / PWM
  - Tach output
  - Reverse polarity and locked-rotor protection
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-2
- **Cable exit:** Axial
- **Protection class:** I
- **Product conforming to standard:** EN 60950-1
- **Approvals:** Ⓐ (48 VDC) CCC



Centrifugal fan	Mass of centrifugal fan kg	Centrifugal blower with flange	Mass of centrifugal blower kg
R1G 140-AV17 -02	1.0	**G1G 140-AV17 -02**	2.3
R1G 140-AV21 -02	1.0	**G1G 140-AV21 -02**	2.3

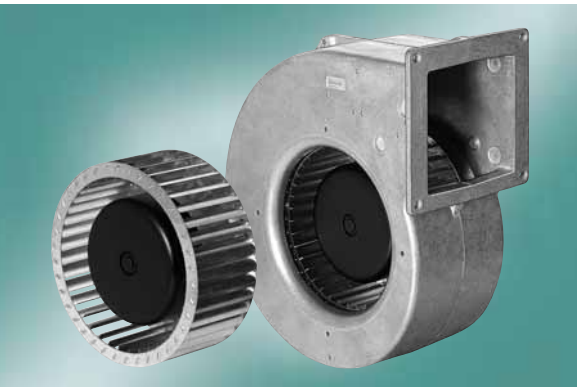






EC centrifugal fans and blowers

single inlet, Ø 146

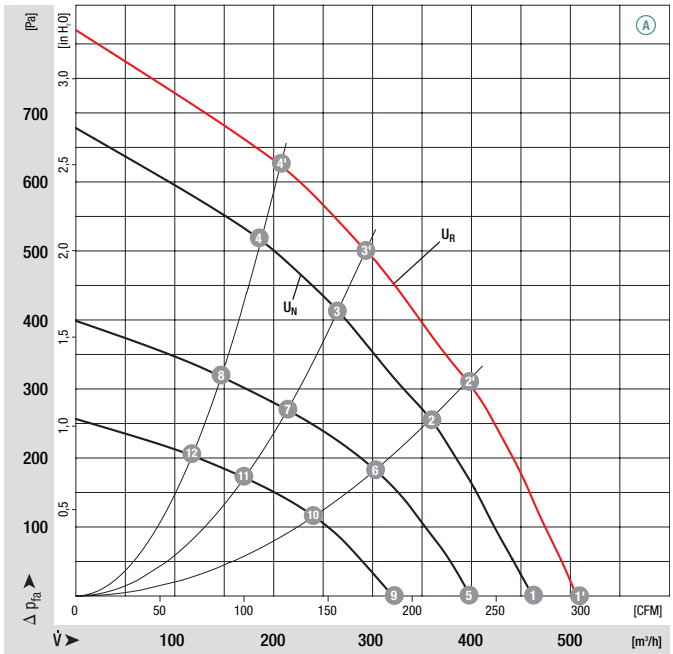


- **Material:** Housing: Die-cast aluminium
  Impeller: Galvanised sheet steel
  Rotor: Coated in black
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 42
- **Insulation class:** "B"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage	Voltage range	Air flow	Speed/rpm	Power input	Current draw	Sound pressure level	Min. back pressure	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VDC**	**VDC**	**m³/h**	**rpm**	**W**	**A**	**dB(A)**	**Pa**	**°C**	p. 600
***1G 146**	M1G 074-BF	Ⓐ	24	16-28	470	2200	100	5.00	68	0	-25 to +60	G)
***1G 146**	M1G 074-BF	Ⓐ	48	36-57	465	2150	100	2.60	67	0	-25 to +60	G)

subject to alterations

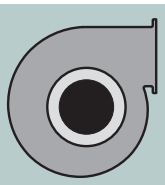
Curves (established at 24 VDC)



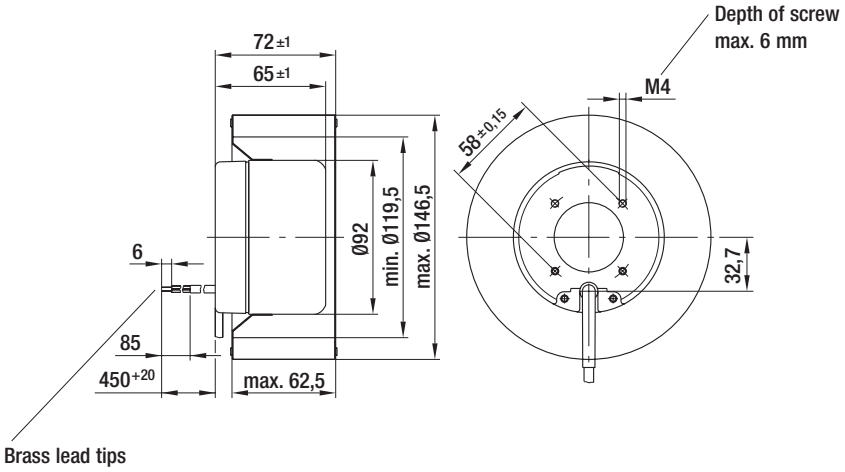
	n [rpm]	P_1 [W]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1'	2400	140	70	—
Ⓐ 2'	2650	130	67	45
Ⓐ 3'	3000	110	66	49
Ⓐ 4'	3300	100	67	45
Ⓐ 1	2200	100	68	—
Ⓐ 2	2445	90	65	46
Ⓐ 3	2750	84	64	49
Ⓐ 4	3025	77	65	45
Ⓐ 5	1890	68	63	—
Ⓐ 6	2075	57	60	46
Ⓐ 7	2250	48	61	49
Ⓐ 8	2335	41	61	45
Ⓐ 9	1520	37	59	—
Ⓐ 10	1670	32	55	46
Ⓐ 11	1815	27	55	49
Ⓐ 12	1920	23	55	45

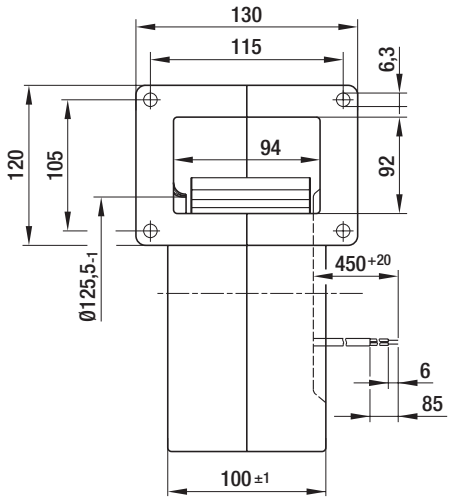
ebmpapst

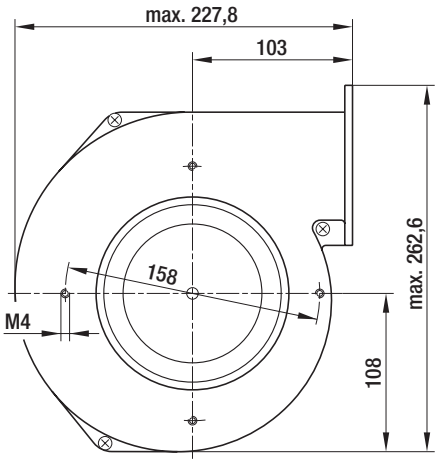
- **Technical features:**
  - Control input 0-10 VDC / PWM
  - Tach output
  - Reverse polarity and locked-rotor protection
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-2
- **Cable exit:** Axial
- **Protection class:** I
- **Product conforming to standard:** EN 60950-1
- **Approvals:** UL, CSA, CCC (centrifugal blower only)



Centrifugal fan	Mass of centrifugal fan kg	Centrifugal blower with flange	Mass of centrifugal blower kg
R1G 146-AA07 -52	1.4	**G1G 146-BA07 -52**	2.8
R1G 146-AA11 -52	1.4	**G1G 146-BA11 -52**	2.8

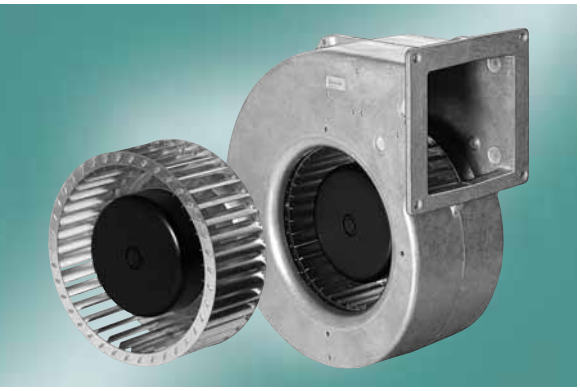






EC centrifugal fans and blowers

single inlet, Ø 160



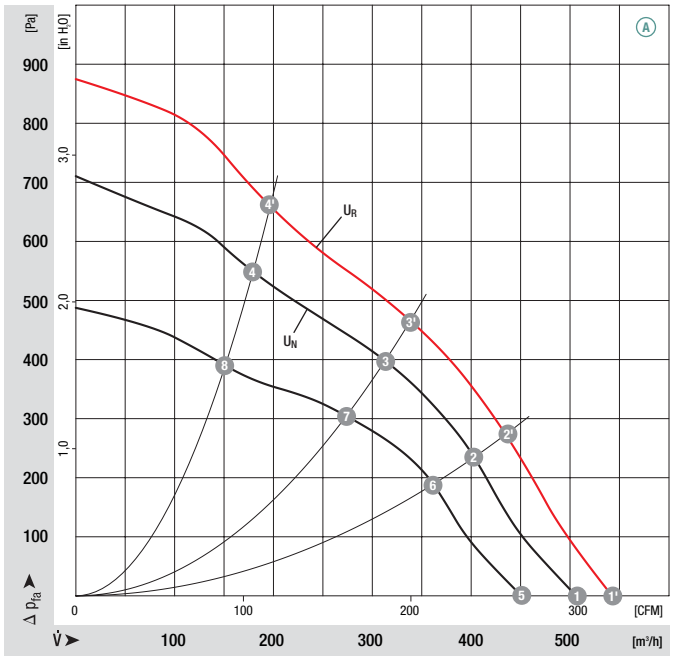
- **Material:** Housing: Die-cast aluminium
  Impeller: Hot-dip galvanised sheet steel
  Rotor: Coated in black
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 42
- **Insulation class:** "B"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data

Type	Motor	Curve	Nominal voltage	Voltage range	Air flow	Speed/rpm	Power input	Current draw	Sound pressure level	Min. back pressure	Perm. amb. temp.	Electr. connection
			VDC	VDC	m³/h	rpm	W	A	dB(A)	Pa	°C	p. 600
*1G 160	M1G 074-BF	Ⓐ	24	16-28	505	1750	105	5.80	67	0	-25 to +60	G)
*1G 160	M1G 074-BF	Ⓐ	48	36-57	505	1750	105	2.90	67	0	-25 to +60	G)

subject to alterations

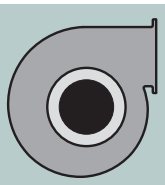
Curves



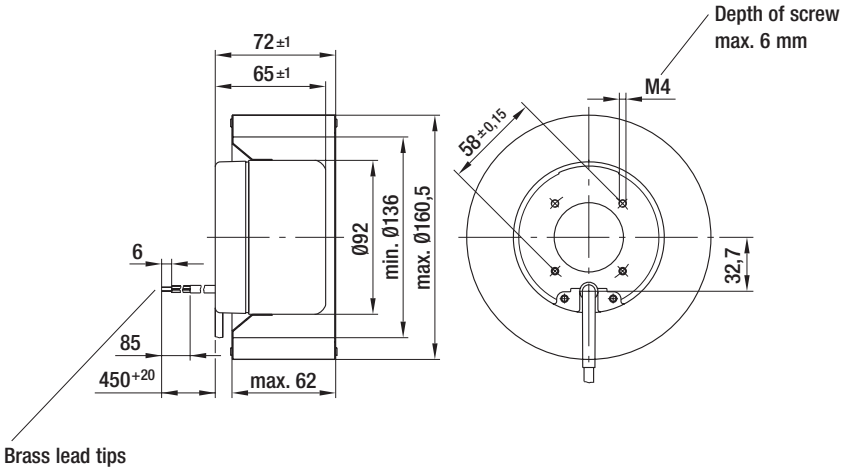
	n [rpm]	P_1 [W]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1'	1890	134	68	—
Ⓐ 2'	2200	118	67	52
Ⓐ 3'	2500	110	67	57
Ⓐ 4'	2900	102	69	52
Ⓐ 1	1750	105	67	—
Ⓐ 2	2030	95	66	52
Ⓐ 3	2270	90	65	57
Ⓐ 4	2550	81	67	44
Ⓐ 5	1580	72	62	—
Ⓐ 6	1810	66	62	52
Ⓐ 7	2000	58	62	57
Ⓐ 8	2200	48	63	54

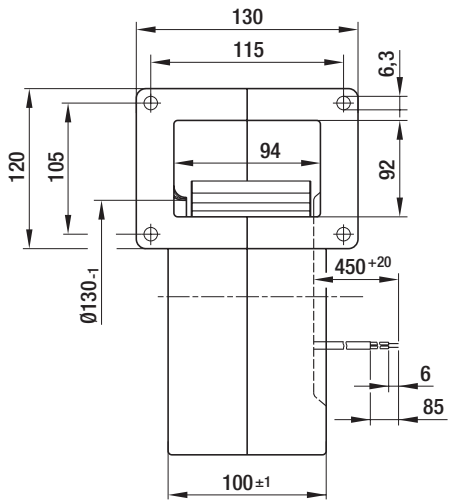
ebmpapst

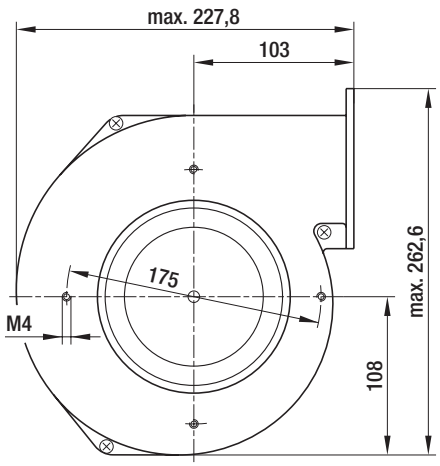
- **Technical features:**
  - Control input 0-10 VDC / PWM
  - Tach output
  - Reverse polarity and locked-rotor protection
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-2
- **Cable exit:** Axial
- **Protection class:** I
- **Product conforming to standard:** EN 60950-1
- **Approvals:** UL, CSA



Centrifugal fan	Mass of centrifugal fan kg	Centrifugal blower with flange	Mass of centrifugal blower kg
R1G 160-AH29 -52	1.4	**G1G 160-BH29 -52**	2.8
R1G 160-AH39 -52	1.4	**G1G 160-BH39 -52**	2.8







EC centrifugal fan and blowers

single inlet, Ø 108

- **Material:** Housing: Die-cast aluminium
  Impeller: Hot-dip galvanised sheet steel
  Rotor: Galvanised
  Electronics enclosure: Die-cast aluminium
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 44
- **Insulation class:** "B"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

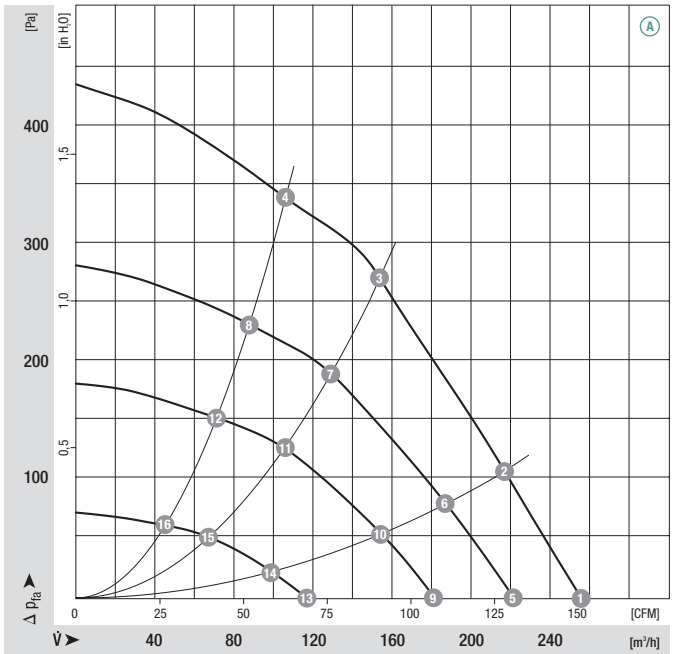
Nominal data

Type	Motor	Curve	Nominal voltage	Frequency	Speed/rpm	Max. power input (1)	Max. current draw (1)	Min. back pressure	Perm. amb. temp.	Electr. connection
			VAC	Hz	rpm	W	A	Pa	°C	p. 601
*3G 108	M3G 055-BD	Ⓐ	1~ 115	50/60	2960	60	0.90	0	-25 to +60	H1)

subject to alterations

(1) Nominal data in operating point with maximum load and 115 VAC

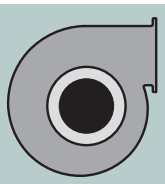
Curves



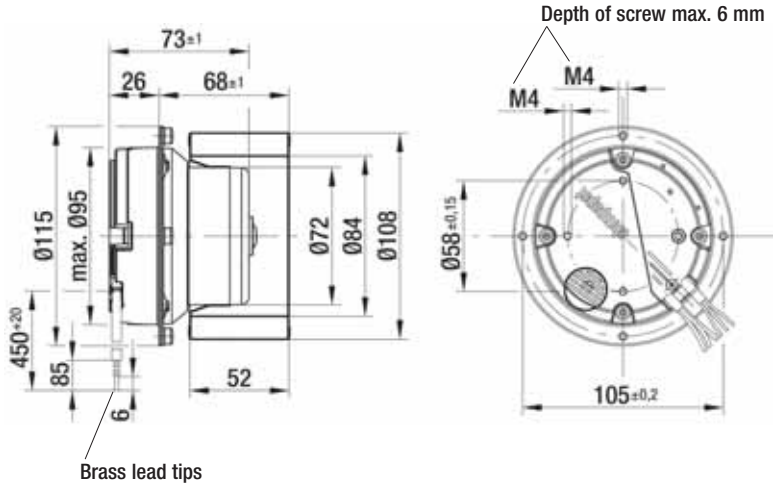
		n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ	1	2960	60	0.90	64	—
Ⓐ	2	3100	53	0.80	62	42
Ⓐ	3	3370	42	0.60	60	44
Ⓐ	4	3560	34	0.50	59	32
Ⓐ	5	2570	38	0.55	61	—
Ⓐ	6	2660	34	0.50	60	42
Ⓐ	7	2820	25	0.40	57	44
Ⓐ	8	2920	19	0.30	55	32
Ⓐ	9	2150	23	0.35	56	—
Ⓐ	10	2200	20	0.30	55	42
Ⓐ	11	2320	16	0.25	52	44
Ⓐ	12	2390	12	0.20	50	32
Ⓐ	13	1400	9	0.20	46	—
Ⓐ	14	1425	8	0.20	44	42
Ⓐ	15	1490	7	0.20	40	44
Ⓐ	16	1530	6	0.20	40	32

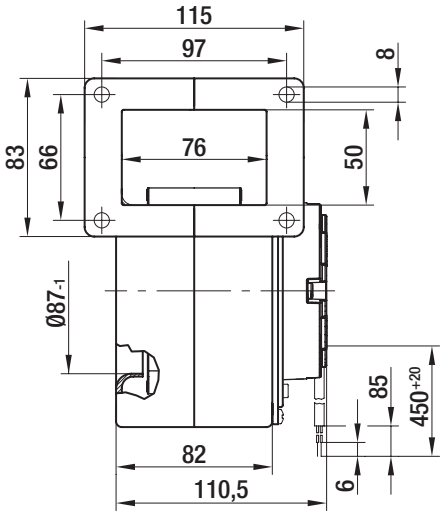
ebmpapst

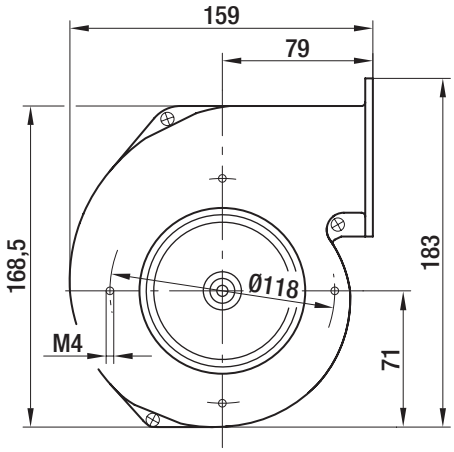
- **Technical features:**
  - Control input 0-10 VDC / PWM
  - Output 10 VDC max. 1.1 mA
  - Tach output
  - Locked-rotor protection
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-1
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 60950-1
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 60335-1, CE
- **Approvals:** GOST; VDE, UL, CSA, CCC are applied for



Centrifugal fan	Mass of centrifugal fan kg	Centrifugal blower with flange	Mass of centrifugal blower kg
R3G 108-AB15 -02	1.0	G3G 108-BB15 -02	1.7







EC centrifugal fan and blowers

single inlet, Ø 108

- **Material:** Housing: Die-cast aluminium
  Impeller: Hot-dip galvanised sheet steel
  Rotor: Galvanised
  Electronics enclosure: Die-cast aluminium
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 44
- **Insulation class:** "B"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

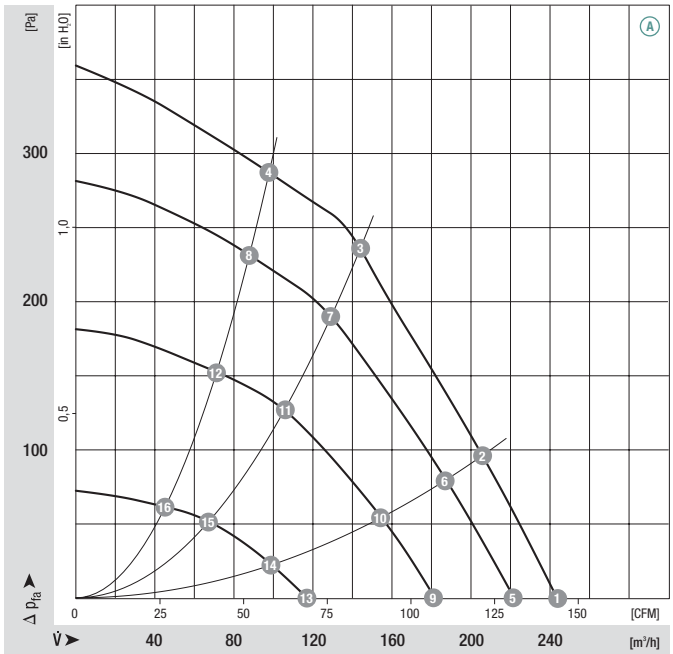
Nominal data

Type	Motor	Curve	Nominal voltage	Frequency	Speed/rpm	Max. power input (1)	Max. current draw (1)	Min. back pressure	Perm. amb. temp.	Electr. connection
			VAC	Hz	rpm	W	A	Pa	°C	p. 601
*3G 108	M3G 055-BD	Ⓐ	1~ 230	50/60	2800	50	0.38	0	-25 to +60	H1)

subject to alterations

(1) Nominal data in operating point with maximum load and 230 VAC

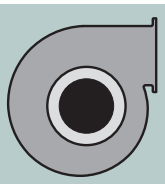
Curves



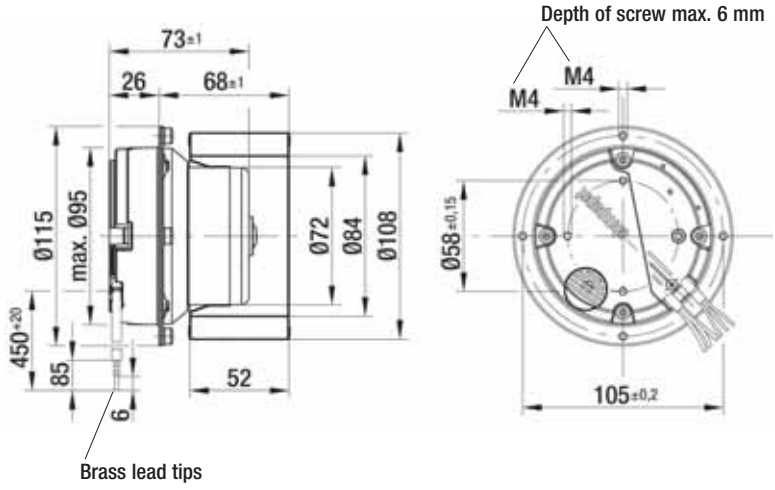
	n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1	2800	50	0.38	64	—
Ⓐ 2	2950	44	0.35	62	42
Ⓐ 3	3120	33	0.25	60	44
Ⓐ 4	3260	25	0.20	59	32
Ⓐ 5	2570	38	0.30	61	—
Ⓐ 6	2660	34	0.25	60	42
Ⓐ 7	2820	25	0.20	57	44
Ⓐ 8	2920	19	0.15	55	32
Ⓐ 9	2150	23	0.20	56	—
Ⓐ 10	2200	20	0.15	55	42
Ⓐ 11	2320	16	0.15	52	44
Ⓐ 12	2390	12	0.10	50	32
Ⓐ 13	1400	9	0.10	46	—
Ⓐ 14	1425	8	0.10	44	42
Ⓐ 15	1490	7	0.10	40	44
Ⓐ 16	1530	6	0.10	40	32

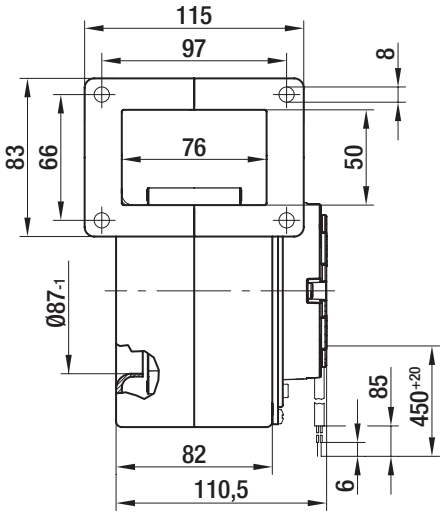
ebmpapst

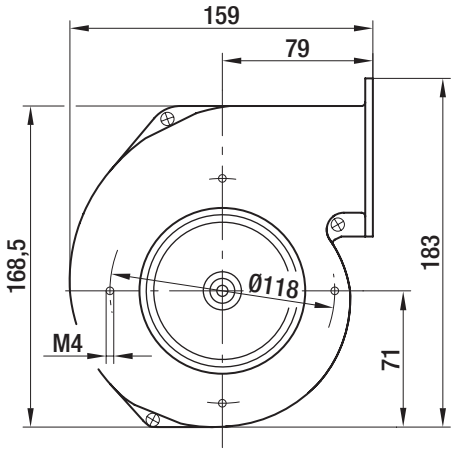
- **Technical features:**
  - Control input 0-10 VDC / PWM
  - Output 10 VDC max. 1.1 mA
  - Tach output
  - Locked-rotor protection
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-1
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 60950-1
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 60335-1, CE
- **Approvals:** GOST; VDE, UL, CSA, CCC are applied for



Centrifugal fan	Mass of centrifugal fan kg	Centrifugal blower with flange	Mass of centrifugal blower kg
R3G 108-AB01 -02	1.0	G3G 108-BB01 -02	1.7







EC centrifugal fan and blowers

single inlet, Ø 120

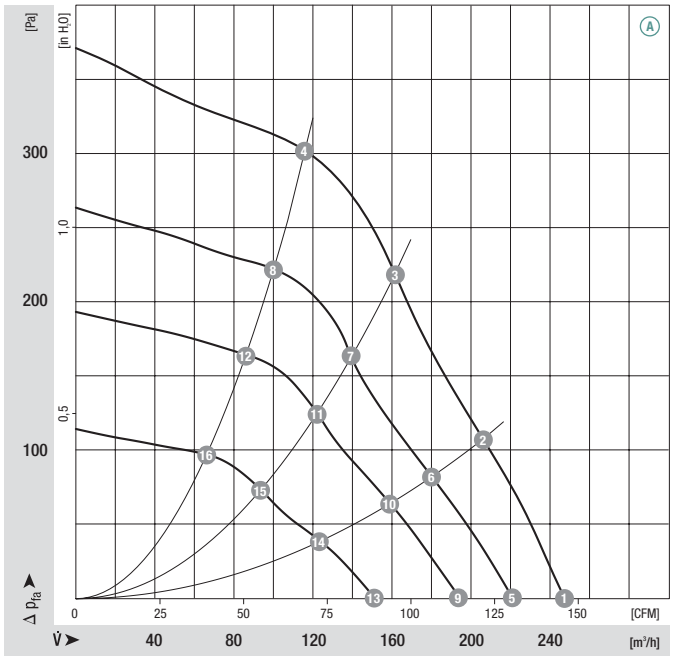
- **Material:** Housing: Die-cast aluminium
  Impeller: Hot-dip galvanised sheet steel
  Rotor: Galvanised
  Electronics enclosure: Die-cast aluminium
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 44
- **Insulation class:** "B"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage	Frequency	Speed/rpm	Max. power input (1)	Max. current draw (1)	Min. back pressure	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VAC**	**Hz**	**rpm**	**W**	**A**	**Pa**	**°C**	p. 601
***3G 120**	M3G 055-BD	Ⓐ	1~ 115	50/60	2320	46	0.70	0	-25 to +60	H1)

subject to alterations

(1) Nominal data in operating point with maximum load and 115 VAC

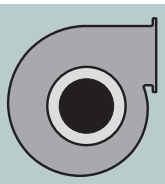
Curves



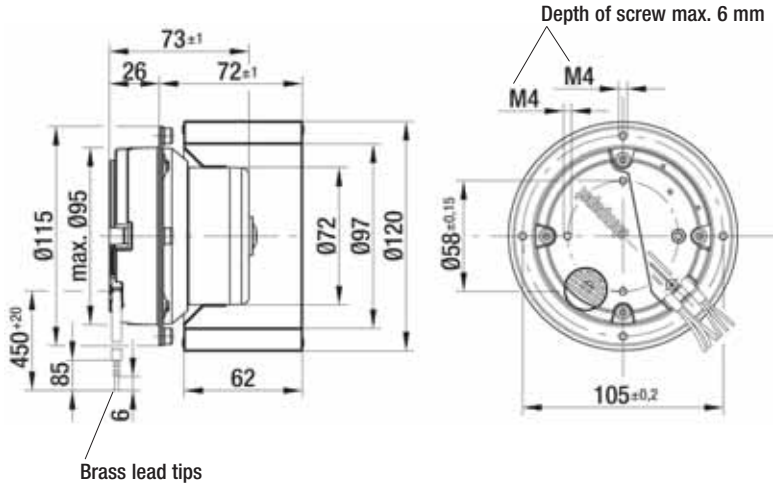
	n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1	2320	46	0.70	61	—
Ⓐ 2	2490	40	0.60	59	52
Ⓐ 3	2640	33	0.50	58	58
Ⓐ 4	2880	24	0.40	57	51
Ⓐ 5	2060	34	0.50	59	—
Ⓐ 6	2190	29	0.45	57	50
Ⓐ 7	2295	24	0.40	55	54
Ⓐ 8	2445	18	0.30	54	52
Ⓐ 9	1830	24	0.40	54	—
Ⓐ 10	1920	20	0.30	52	50
Ⓐ 11	2010	17	0.30	51	54
Ⓐ 12	2115	13	0.20	51	52
Ⓐ 13	1430	13	0.20	48	—
Ⓐ 14	1500	12	0.20	45	50
Ⓐ 15	1580	10	0.20	44	54
Ⓐ 16	1640	8	0.20	44	52

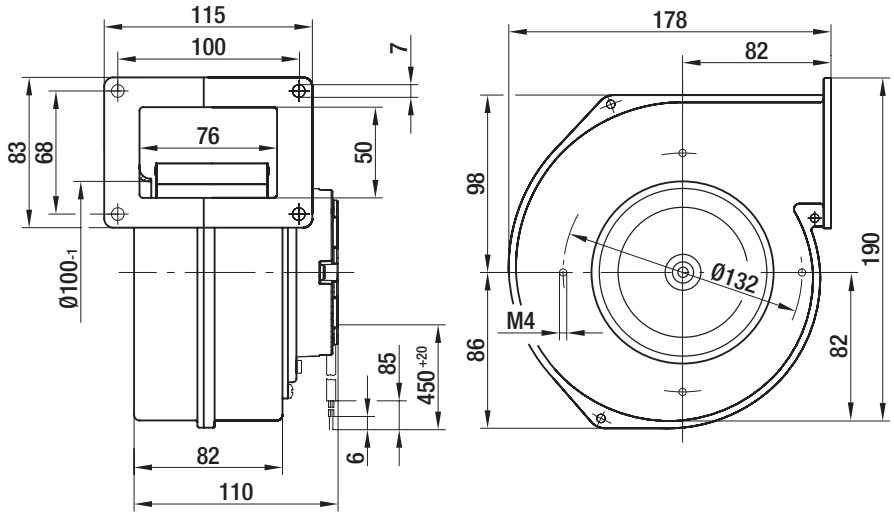
ebmpapst

- **Technical features:**
  - Control input 0-10 VDC / PWM
  - Output 10 VDC max. 1.1 mA
  - Tach output
  - Locked-rotor protection
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-1
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 60950-1
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 60335-1, CE
- **Approvals:** GOST; VDE, UL, CSA, CCC are applied for



Centrifugal fan	Mass of centrifugal fan kg	Centrifugal blower with flange	Mass of centrifugal blower kg
R3G 120-AB13 -02	1.1	G3G 120-BB13 -02	1.8





Inlet nozzle p. 552
Guard grille p. 554
Air filter p. 563
Electr. connection p. 601

EC centrifugal fan and blowers

single inlet, Ø 120

- **Material:** Housing: Die-cast aluminium
  Impeller: Hot-dip galvanised sheet steel
  Rotor: Galvanised
  Electronics enclosure: Die-cast aluminium
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 44
- **Insulation class:** "B"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

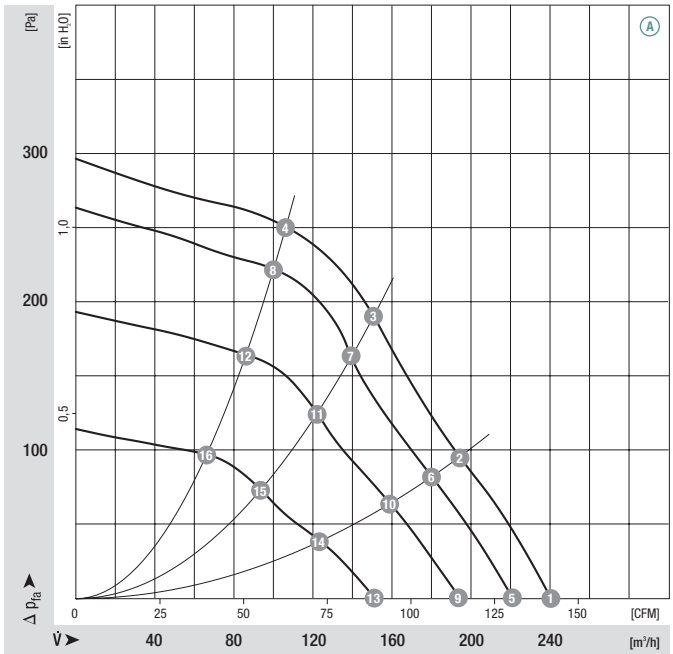
Nominal data

Type	Motor	Curve	Nominal voltage	Frequency	Speed/rpm	Max. power input (1)	Max. current draw (1)	Min. back pressure	Perm. amb. temp.	Electr. connection
			VAC	Hz	rpm	W	A	Pa	°C	p. 601
*3G 120	M3G 055-BD	Ⓐ	1~ 230	50/60	2200	41	0.30	0	-25 to +60	H1)

subject to alterations

(1) Nominal data in operating point with maximum load and 230 VAC

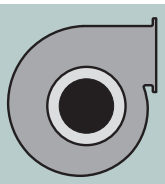
Curves



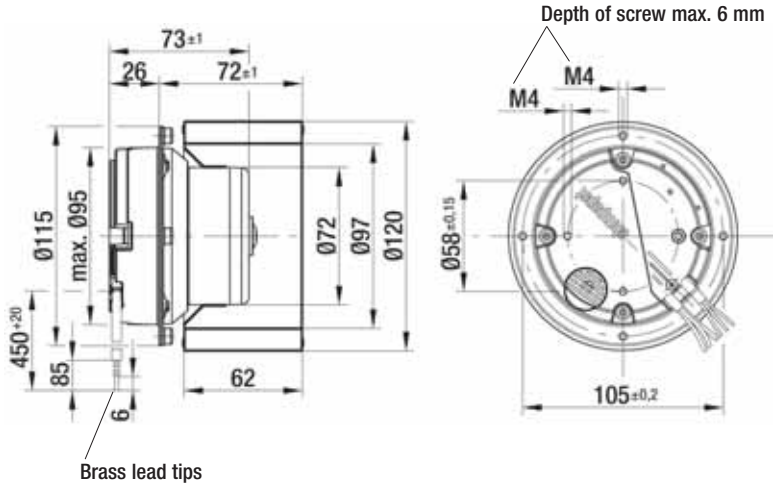
	n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1	2200	41	0.30	62	—
Ⓐ 2	2320	34	0.25	59	51
Ⓐ 3	2440	28	0.20	57	55
Ⓐ 4	2600	20	0.15	57	49
Ⓐ 5	2060	34	0.25	59	—
Ⓐ 6	2190	29	0.20	57	50
Ⓐ 7	2295	24	0.20	55	54
Ⓐ 8	2445	18	0.15	54	52
Ⓐ 9	1830	24	0.20	54	—
Ⓐ 10	1920	20	0.15	52	50
Ⓐ 11	2010	17	0.15	51	54
Ⓐ 12	2115	13	0.10	51	52
Ⓐ 13	1430	13	0.10	48	—
Ⓐ 14	1500	12	0.10	45	50
Ⓐ 15	1580	10	0.10	44	54
Ⓐ 16	1640	8	0.10	44	52

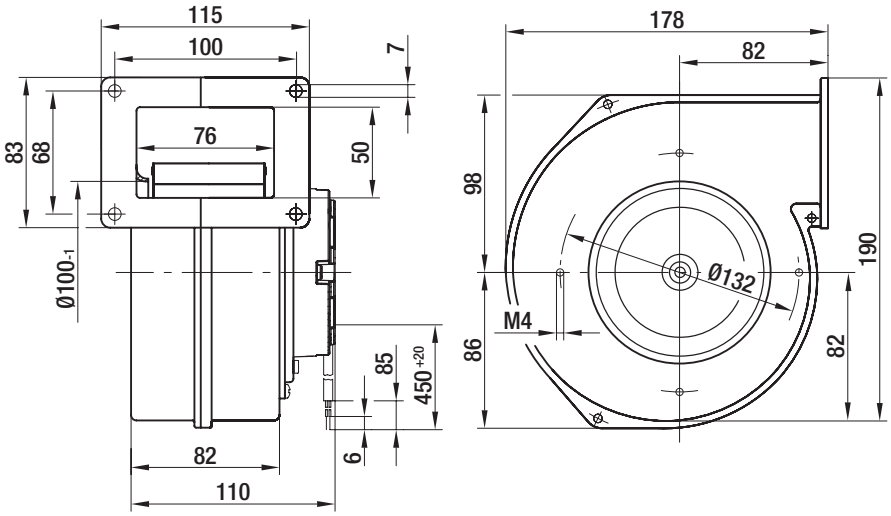
ebmpapst

- **Technical features:**
  - Control input 0-10 VDC / PWM
  - Output 10 VDC max. 1.1 mA
  - Tach output
  - Locked-rotor protection
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-1
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 60950-1
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 60335-1, CE
- **Approvals:** GOST; VDE, UL, CSA, CCC are applied for



Centrifugal fan	Mass of centrifugal fan kg	Centrifugal blower with flange	Mass of centrifugal blower kg
R3G 120-AB03 -02	1.1	G3G 120-BB03 -02	1.8





Inlet nozzle p. 552
Guard grille p. 554
Air filter p. 563
Electr. connection p. 601

EC centrifugal fan and blowers

single inlet, Ø 133

- **Material:** Housing: Hot-dip galvanised sheet steel
  Impeller: Hot-dip galvanised sheet steel
  Rotor: Galvanised
  Electronics enclosure: Die-cast aluminium
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 44
- **Insulation class:** "B"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

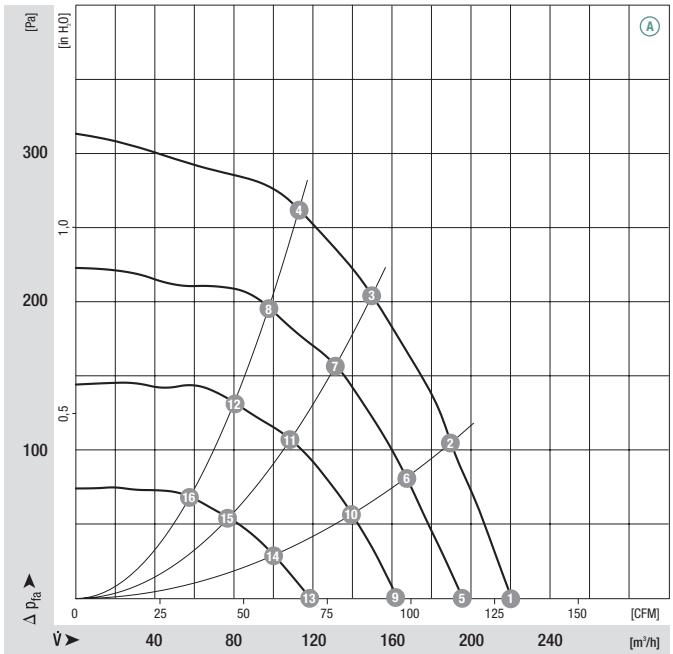
Nominal data

Type	Motor	Curve	Nominal voltage	Frequency	Speed/rpm	Max. power input (1)	Max. current draw (1)	Min. back pressure	Perm. amb. temp.	Electr. connection
			VAC	Hz	rpm	W	A	Pa	°C	p. 601
*3G 133	M3G 055-BD	Ⓐ	1~ 115	50/60	2000	42	0.60	0	-25 to +60	H1)

subject to alterations

(1) Nominal data in operating point with maximum load and 115 VAC

Curves

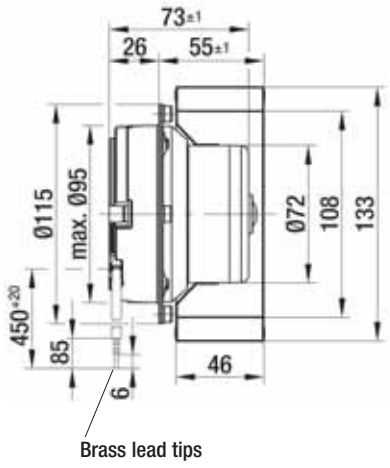


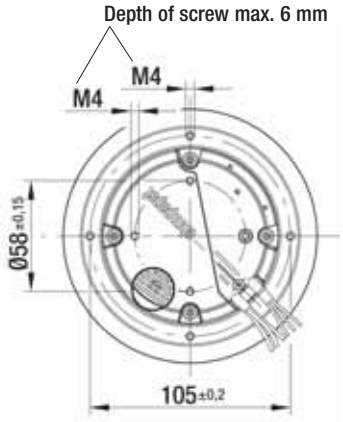
	n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1	2000	42	0.60	64	—
Ⓐ 2	2140	37	0.55	62	42
Ⓐ 3	2310	30	0.45	60	52
Ⓐ 4	2460	23	0.35	58	51
Ⓐ 5	1780	30	0.45	60	—
Ⓐ 6	1870	26	0.40	59	45
Ⓐ 7	1995	21	0.30	56	53
Ⓐ 8	2120	17	0.25	56	51
Ⓐ 9	1495	18	0.30	55	—
Ⓐ 10	1570	16	0.25	54	45
Ⓐ 11	1640	13	0.20	51	53
Ⓐ 12	1730	10	0.20	50	51
Ⓐ 13	1100	9	0.20	49	—
Ⓐ 14	1140	8	0.20	47	45
Ⓐ 15	1200	7	0.20	44	53
Ⓐ 16	1250	6	0.20	41	51

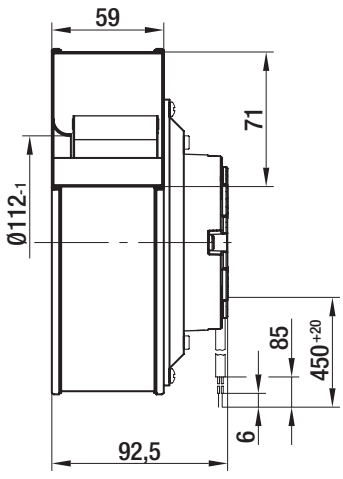
ebmpapst

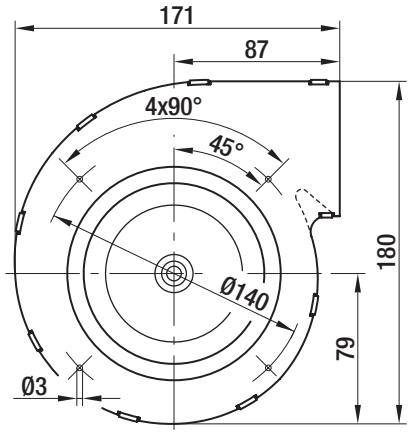
- **Technical features:**
  - Control input 0-10 VDC / PWM
  - Output 10 VDC max. 1.1 mA
  - Tach output
  - Locked-rotor protection
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-1
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 60950-1
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 60335-1, CE
- **Approvals:** GOST; VDE, UL, CSA, CCC are applied for

Centrifugal fan	Mass of centrifugal fan kg	Centrifugal blower without flange	Mass of centrifugal blower kg
R3G 133-AD11 -02	1.0	G3G 133-DD11 -02	1.5









Inlet nozzle p. 552
Electr. connection p. 601

EC centrifugal fan and blowers

single inlet, Ø 133

- **Material:** Housing: Hot-dip galvanised sheet steel
  Impeller: Hot-dip galvanised sheet steel
  Rotor: Galvanised
  Electronics enclosure: Die-cast aluminium
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 44
- **Insulation class:** "B"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

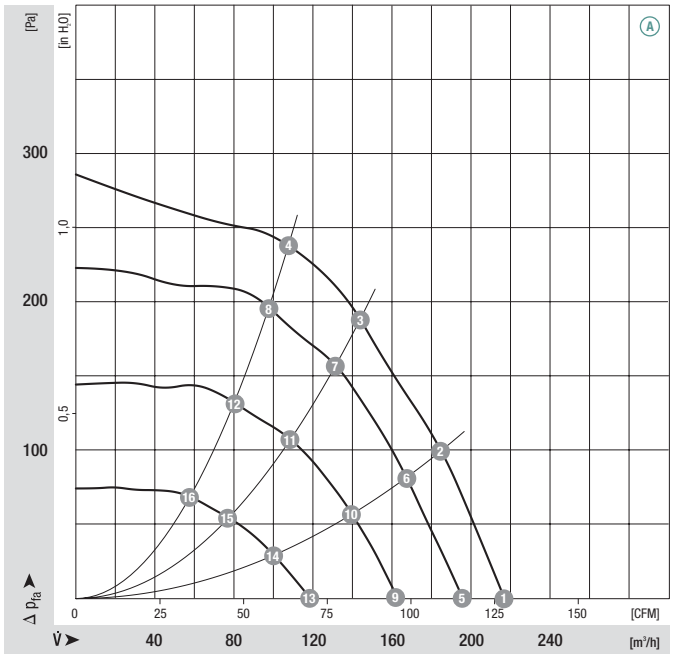
Nominal data

Type	Motor	Curve	Nominal voltage	Frequency	Speed/rpm	Max. power input (1)	Max. current draw (1)	Min. back pressure	Perm. amb. temp.	Electr. connection
			VAC	Hz	rpm	W	A	Pa	°C	p. 601
*3G 133	M3G 055-BD	Ⓐ	1~ 230	50/60	1925	38	0.30	0	-25 to +60	H1)

subject to alterations

(1) Nominal data in operating point with maximum load and 230 VAC

Curves

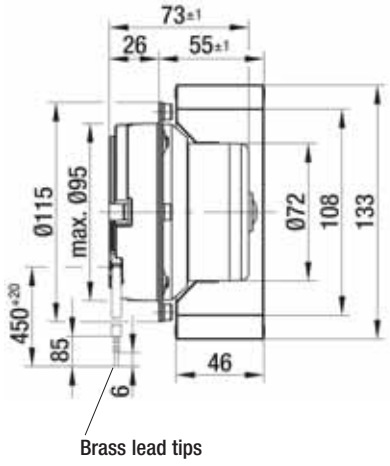


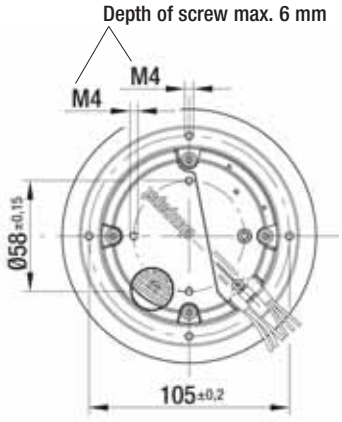
	n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1	1925	38	0.30	63	—
Ⓐ 2	2070	34	0.25	62	45
Ⓐ 3	2210	27	0.20	60	53
Ⓐ 4	2330	21	0.15	59	51
Ⓐ 5	1780	30	0.25	60	—
Ⓐ 6	1870	26	0.20	59	45
Ⓐ 7	1995	21	0.15	56	53
Ⓐ 8	2120	17	0.15	56	51
Ⓐ 9	1495	18	0.15	55	—
Ⓐ 10	1570	16	0.15	54	45
Ⓐ 11	1640	13	0.10	51	53
Ⓐ 12	1730	10	0.10	50	51
Ⓐ 13	1100	9	0.10	49	—
Ⓐ 14	1140	8	0.10	47	45
Ⓐ 15	1200	7	0.10	44	53
Ⓐ 16	1250	6	0.10	41	51

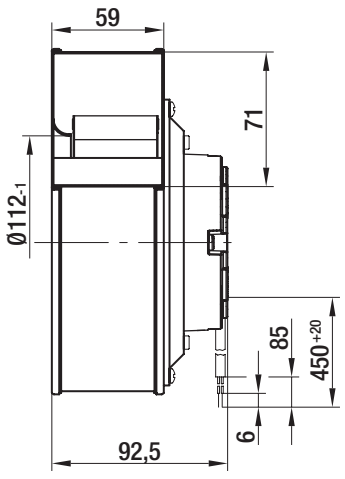
ebmpapst

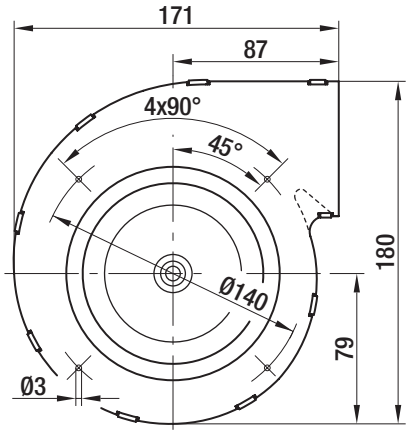
- **Technical features:**
  - Control input 0-10 VDC / PWM
  - Output 10 VDC max. 1.1 mA
  - Tach output
  - Locked-rotor protection
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-1
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 60950-1
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 60335-1, CE
- **Approvals:** GOST; VDE, UL, CSA, CCC are applied for

Centrifugal fan	Mass of centrifugal fan kg	Centrifugal blower without flange	Mass of centrifugal blower kg
R3G 133-AD05 -02	1.0	G3G 133-DD05 -02	1.5







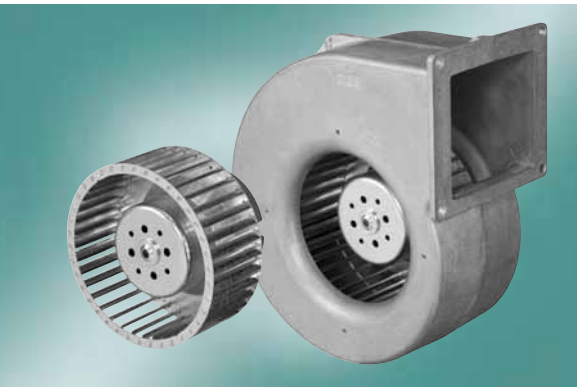


Inlet nozzle p. 552

Electr. connection p. 601

EC centrifugal fan and blowers

single inlet, Ø 140



- **Material:** Housing: Die-cast aluminium
  Impeller: Hot-dip galvanised sheet steel
  Rotor: Galvanised
  Electronics enclosure: Die-cast aluminium
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 44
- **Insulation class:** "B"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

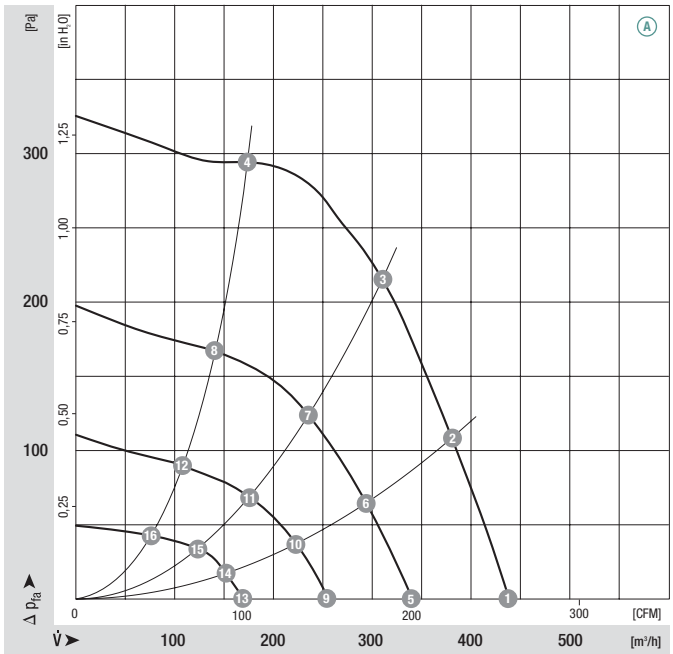
Nominal data

Type	Motor	Curve	Nominal voltage	Frequency	Speed/rpm	Max. power input (1)	Max. current draw (1)	Min. back pressure	Perm. amb. temp.	Electr. connection
			VAC	Hz	rpm	W	A	Pa	°C	p. 601
*3G 140	M3G 055-CF	Ⓐ	1~ 115	50/60	1790	70	1.00	0	-25 to +60	H1)

subject to alterations

(1) Nominal data in operating point with maximum load and 115 VAC

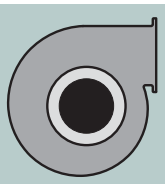
Curves



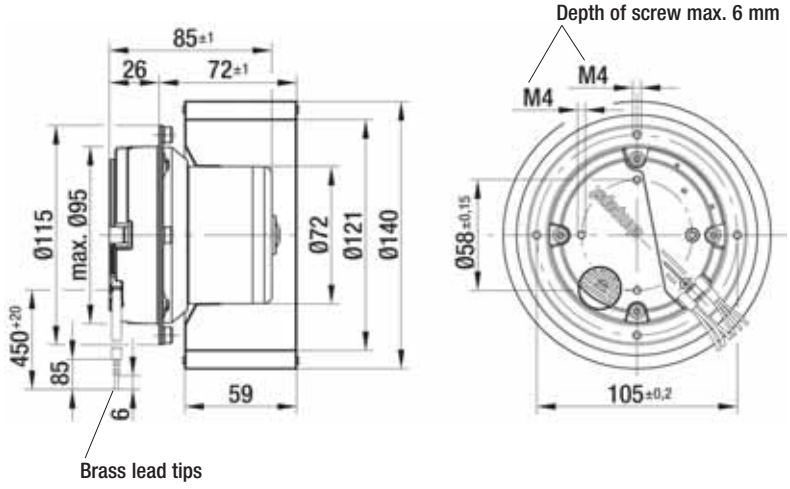
	n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1	1790	70	1.00	63	—
Ⓐ 2	1900	63	1.00	61	46
Ⓐ 3	2040	53	0.80	60	61
Ⓐ 4	2250	36	0.50	58	55
Ⓐ 5	1410	33	0.60	58	—
Ⓐ 6	1500	30	0.55	56	46
Ⓐ 7	1600	25	0.45	54	56
Ⓐ 8	1790	18	0.30	53	48
Ⓐ 9	1060	14	0.35	51	—
Ⓐ 10	1105	13	0.30	50	46
Ⓐ 11	1210	11	0.25	47	56
Ⓐ 12	1355	8	0.20	47	48
Ⓐ 13	705	4	0.20	40	—
Ⓐ 14	750	4	0.20	39	46
Ⓐ 15	800	3	0.20	38	56
Ⓐ 16	895	3	0.20	37	48

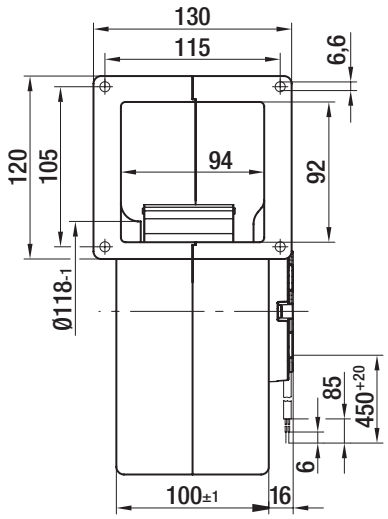
ebmpapst

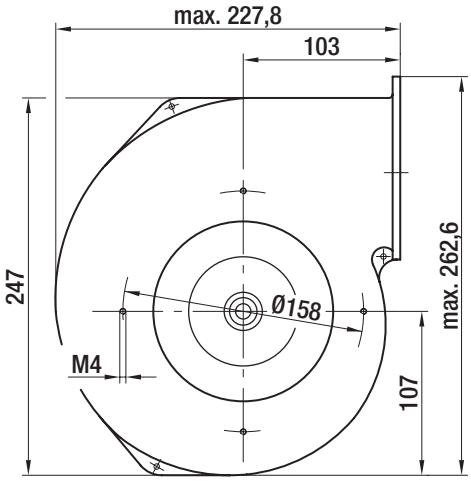
- **Technical features:**
  - Control input 0-10 VDC / PWM
  - Output 10 VDC max. 1.1 mA
  - Tach output
  - Locked-rotor protection
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-1
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 60950-1
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 60335-1, CE
- **Approvals:** GOST; VDE, UL, CSA, CCC are applied for



Centrifugal fan	Mass of centrifugal fan kg	Centrifugal blower with flange	Mass of centrifugal blower kg
R3G 140-AV19 -02	1.3	G3G 140-AV19 -02	2.6

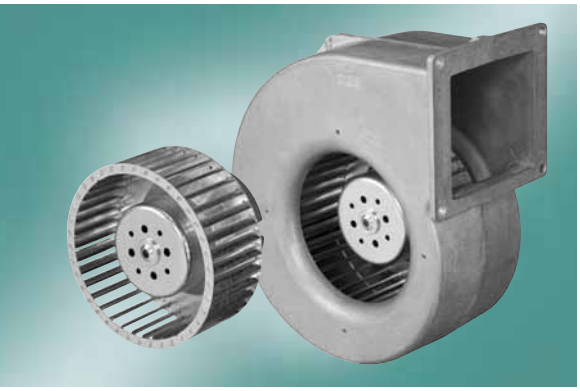






EC centrifugal fan and blowers

single inlet, Ø 140



- **Material:** Housing: Die-cast aluminium
  Impeller: Hot-dip galvanised sheet steel
  Rotor: Galvanised
  Electronics enclosure: Die-cast aluminium
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 44
- **Insulation class:** "B"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

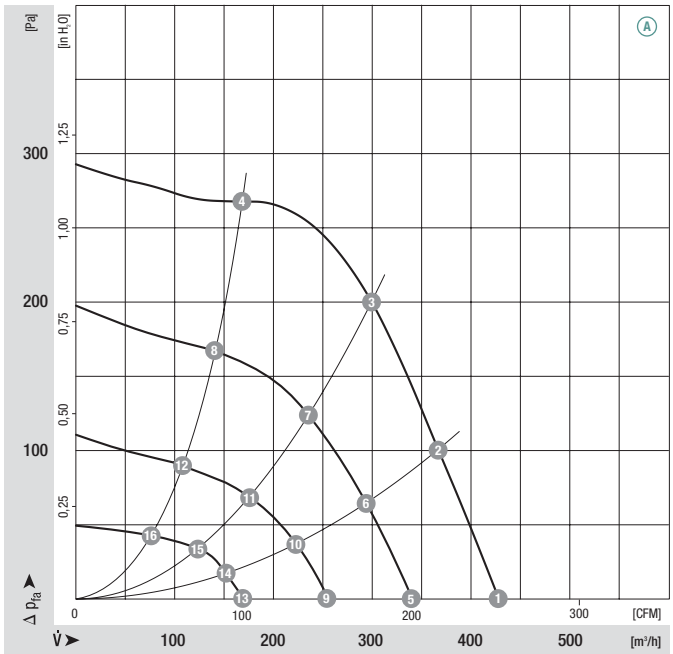
Nominal data

Type	Motor	Curve	Nominal voltage	Frequency	Speed/rpm	Max. power input (1)	Max. current draw (1)	Min. back pressure	Perm. amb. temp.	Electr. connection
			VAC	Hz	rpm	W	A	Pa	°C	p. 601
*3G 140	M3G 055-CF	Ⓐ	1~ 230	50/60	1800	66	0.50	0	-25 to +60	H1)

subject to alterations

(1) Nominal data in operating point with maximum load and 230 VAC

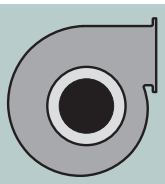
Curves



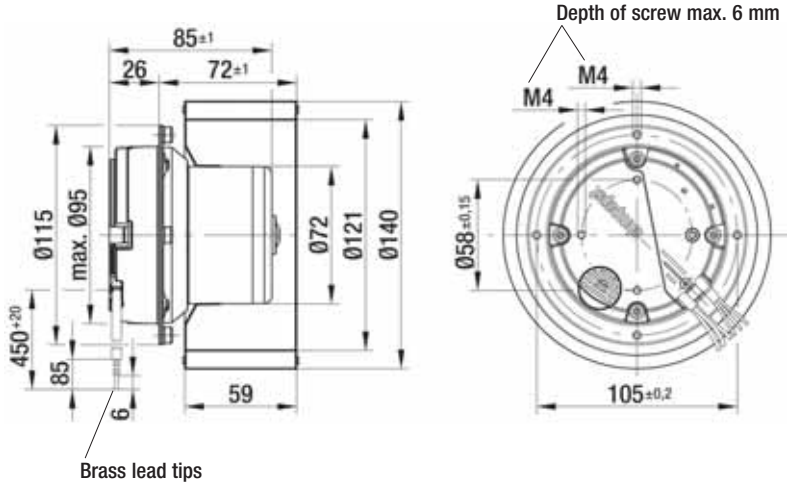
		n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ	1	1800	66	0.50	63	—
Ⓐ	2	1860	58	0.40	62	46
Ⓐ	3	1970	49	0.35	60	56
Ⓐ	4	2170	33	0.25	58	48
Ⓐ	5	1410	33	0.30	58	—
Ⓐ	6	1500	30	0.25	56	46
Ⓐ	7	1600	25	0.25	54	56
Ⓐ	8	1790	18	0.15	53	48
Ⓐ	9	1060	14	0.15	51	—
Ⓐ	10	1105	13	0.15	50	46
Ⓐ	11	1210	11	0.15	47	56
Ⓐ	12	1355	8	0.10	47	48
Ⓐ	13	705	4	0.10	40	—
Ⓐ	14	750	4	0.10	39	46
Ⓐ	15	800	3	0.10	38	56
Ⓐ	16	895	3	0.10	37	48

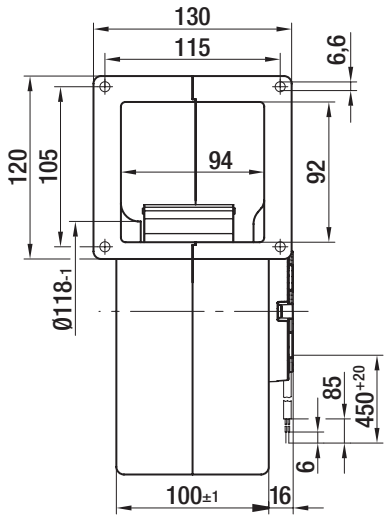
ebmpapst

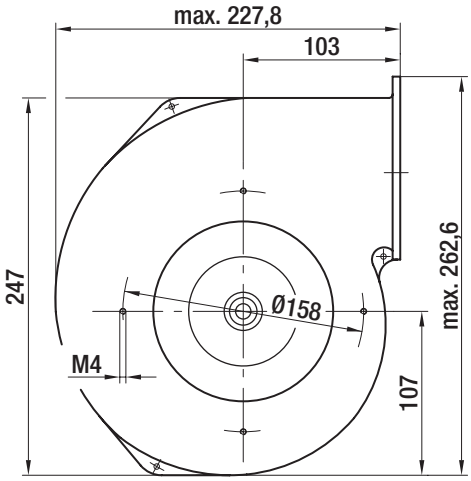
- **Technical features:**
  - Control input 0-10 VDC / PWM
  - Output 10 VDC max. 1.1 mA
  - Tach output
  - Locked-rotor protection
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-1
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 60950-1
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 60335-1, CE
- **Approvals:** GOST; VDE, UL, CSA, CCC are applied for



Centrifugal fan	Mass of centrifugal fan kg	Centrifugal blower with flange	Mass of centrifugal blower kg
R3G 140-AV03 -02	1.3	G3G 140-AV03 -02	2.6

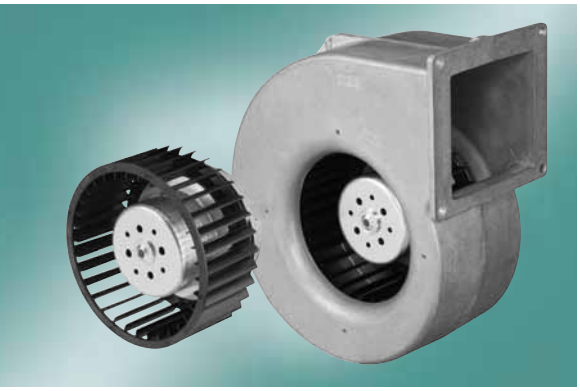






EC centrifugal fan and blowers

single inlet, constant air flow, Ø 140



- **Material:** Housing: Die-cast aluminium
  Impeller: PP plastic
  Rotor: Galvanised
  Electronics enclosure: Die-cast aluminium
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 44
- **Insulation class:** "B"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

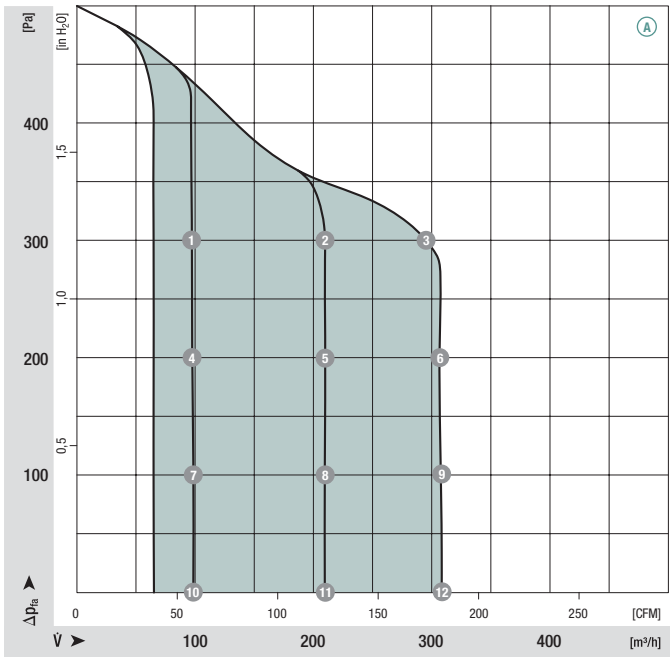
Nominal data

Type	Motor	Curve	Nominal voltage	Frequency	Speed/rpm	Max. power input (1)	Max. current draw (1)	Min. back pressure	Perm. amb. temp.	Electr. connection
			VAC	Hz	rpm	W	A	Pa	°C	p. 602
*3G 140	M3G 055-CF	Ⓐ	1~ 115	50/60	1340	70	1.00	0	-25 to +60	H2)

subject to alterations

(1) Nominal data in operating point with maximum load and 115 VAC

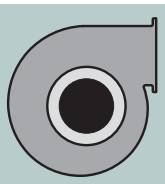
Curves



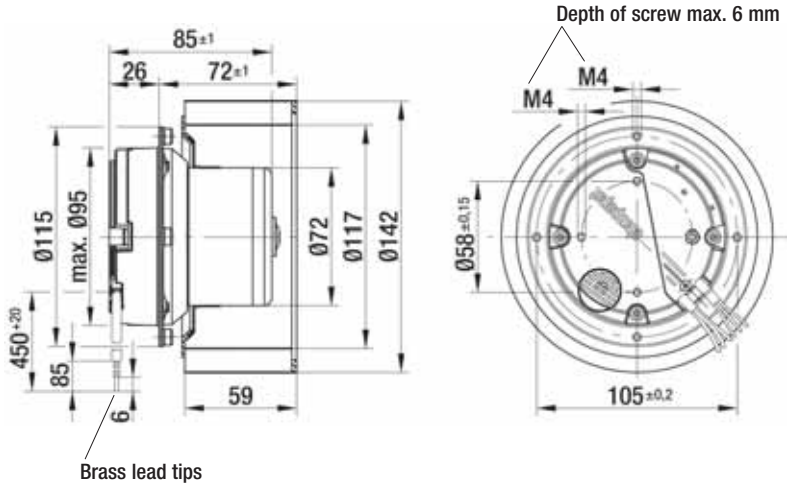
	n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1	2390	29	0.40	59	37
Ⓐ 2	2450	55	0.80	60	50
Ⓐ 3	2460	67	1.00	60	57
Ⓐ 4	1920	17	0.30	54	38
Ⓐ 5	1960	30	0.70	55	54
Ⓐ 6	2130	55	0.80	60	55
Ⓐ 7	1300	9	0.20	46	36
Ⓐ 8	1550	22	0.30	51	48
Ⓐ 9	1760	40	0.60	58	48
Ⓐ 10	440	3	0.10	33	—
Ⓐ 11	880	9	0.15	45	—
Ⓐ 12	1340	25	0.40	55	—

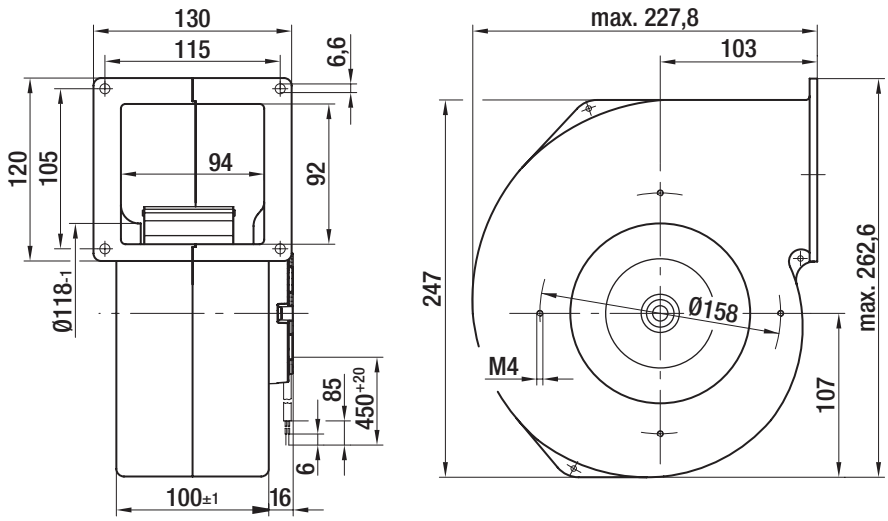
ebmpapst

- **Technical features:**
  - Input for set value Lin 0-10 VDC / PWM (1.7 V ≙ 50 m³/h, 10 V ≙ 300 m³/h)
  - Output 10 VDC max. 1.1 mA
  - Tach output
  - Locked-rotor protection
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-1
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 60950-1
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 60335-1, CE
- **Approvals:** GOST; VDE, UL, CSA, CCC are applied for
- **Air intake:** Constant air flow curves can only be attained with unobstructed air intake (s. p. 586)



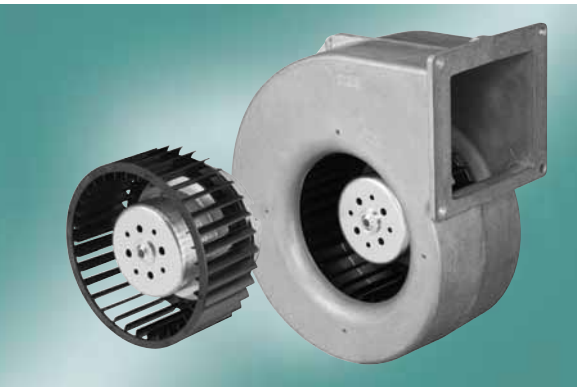
Centrifugal fan	Mass of centrifugal fan kg	Centrifugal blower with flange	Mass of centrifugal blower kg
R3G 140-AW21 -12	1.3	G3G 140-AW21 -12	2.6





EC centrifugal fan and blowers

single inlet, constant air flow, Ø 140



- **Material:** Housing: Die-cast aluminium
  Impeller: PP plastic
  Rotor: Galvanised
  Electronics enclosure: Die-cast aluminium
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 44
- **Insulation class:** "B"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

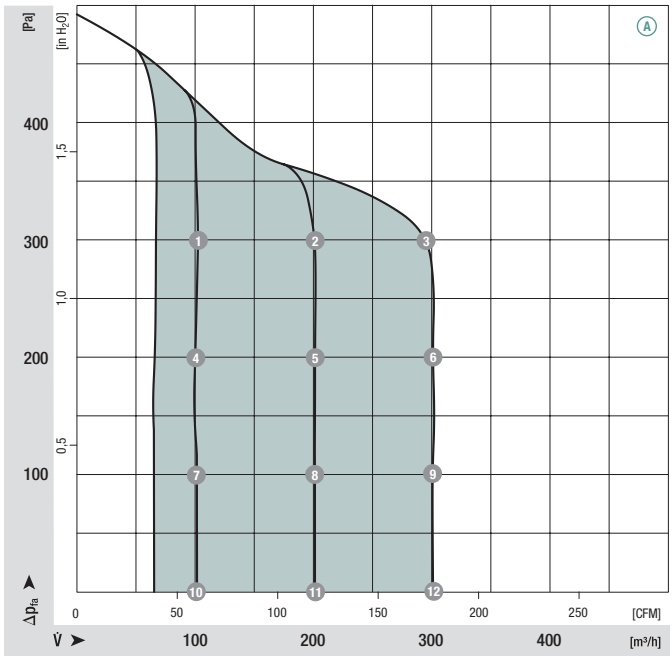
Nominal data

Type	Motor	Curve	Nominal voltage	Frequency	Speed/rpm	Max. power input (1)	Max. current draw (1)	Min. back pressure	Perm. amb. temp.	Electr. connection
			VAC	Hz	rpm	W	A	Pa	°C	p. 602
*3G 140	M3G 055-CF	Ⓐ	1~ 230	50/60	1380	70	0.60	0	-25 to +60	H2)

subject to alterations

(1) Nominal data in operating point with maximum load and 230 VAC

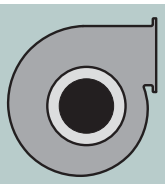
Curves



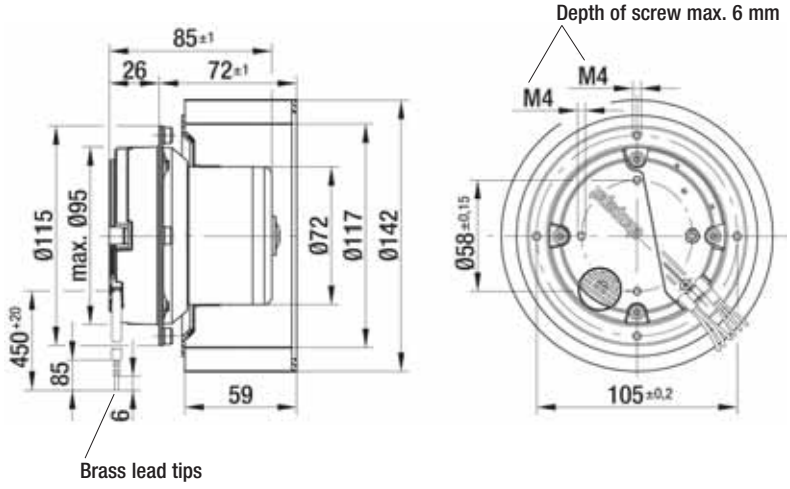
	n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1	2380	33	0.25	59	37
Ⓐ 2	2495	51	0.45	60	50
Ⓐ 3	2400	67	0.55	60	57
Ⓐ 4	2030	22	0.20	54	38
Ⓐ 5	2000	34	0.30	55	54
Ⓐ 6	2110	61	0.50	60	55
Ⓐ 7	1325	12	0.10	46	36
Ⓐ 8	1460	21	0.20	51	48
Ⓐ 9	1755	43	0.35	58	48
Ⓐ 10	480	3	0.05	33	—
Ⓐ 11	890	11	0.10	45	—
Ⓐ 12	1380	31	0.25	55	—

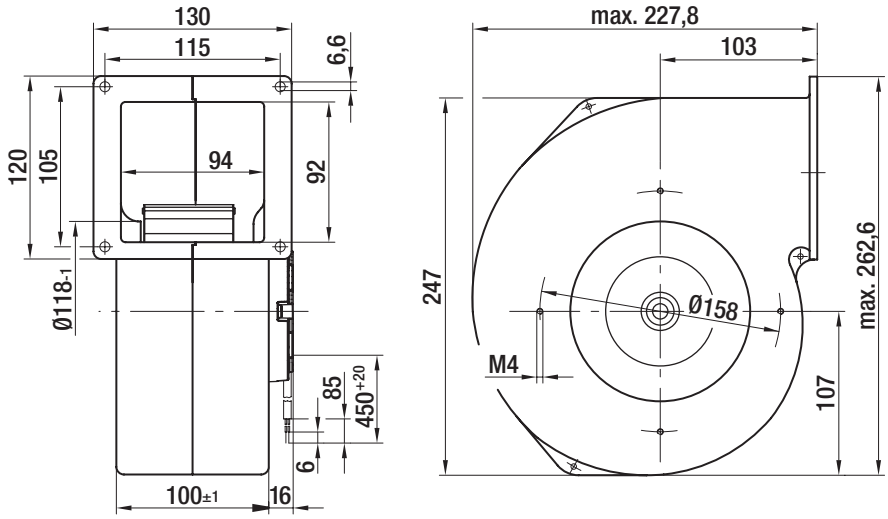
ebmpapst

- **Technical features:**
  - Input for set value Lin 0-10 VDC / PWM (1.7 V ≙ 50 m³/h, 10 V ≙ 300 m³/h)
  - Output 10 VDC max. 1.1 mA
  - Tach output
  - Locked-rotor protection
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-1
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 60950-1
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 60335-1, CE
- **Approvals:** GOST; VDE, UL, CSA, CCC are applied for
- **Air intake:** Constant air flow curves can only be attained with unobstructed air intake (s. p. 586)



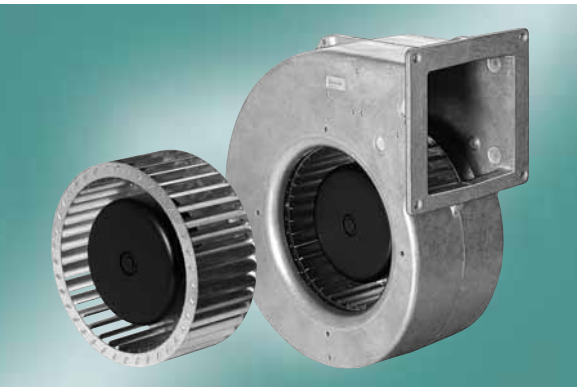
Centrifugal fan	Mass of centrifugal fan kg	Centrifugal blower with flange	Mass of centrifugal blower kg
R3G 140-AW05-12	1.3	G3G 140-AW05-12	2.6





EC centrifugal fan and blowers

single inlet, Ø 146



- **Material:** Housing: Die-cast aluminium
  Impeller: Galvanised sheet steel
  Rotor: Galvanised
  Electronics enclosure: Die-cast aluminium
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 44
- **Insulation class:** "B"
- **Mounting position:** Shaft horizontal or rotor on top; rotor on bottom on request
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

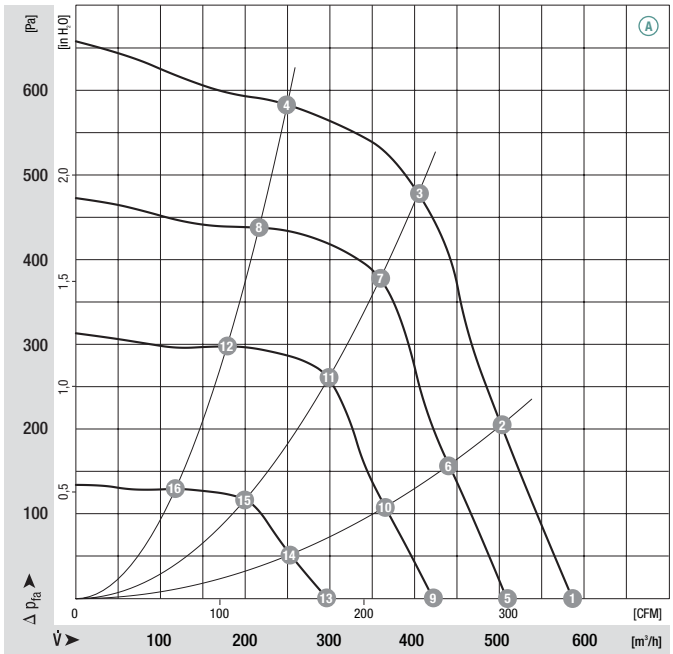
Nominal data

Type	Motor	Curve	Nominal voltage range	Frequency	Speed/rpm	Max. power input (1)	Max. current draw (1)	Min. back pressure	Perm. amb. temp.	Electr. connection
			VAC	Hz	rpm	W	A	Pa	°C	p. 603
*3G 146	M3G 074-CF	Ⓐ	1~ 100-130	50/60	2430	170	2.20	0	-25 to +60	J1)

subject to alterations

(1) Nominal data in operating point with maximum load and 115 VAC

Curves



	n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1	2430	168	2.10	71	—
Ⓐ 2	2720	167	2.10	70	40
Ⓐ 3	3040	159	2.00	68	55
Ⓐ 4	3230	119	1.50	67	50
Ⓐ 5	2120	110	1.40	67	—
Ⓐ 6	2390	109	1.40	66	40
Ⓐ 7	2700	109	1.40	65	56
Ⓐ 8	2800	77	1.00	63	49
Ⓐ 9	1770	66	0.90	63	—
Ⓐ 10	1980	66	0.90	62	39
Ⓐ 11	2230	65	0.90	60	53
Ⓐ 12	2330	48	0.70	59	44
Ⓐ 13	1250	26	0.40	54	—
Ⓐ 14	1390	26	0.40	52	32
Ⓐ 15	1520	24	0.40	51	43
Ⓐ 16	1560	19	0.30	50	32

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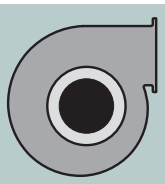
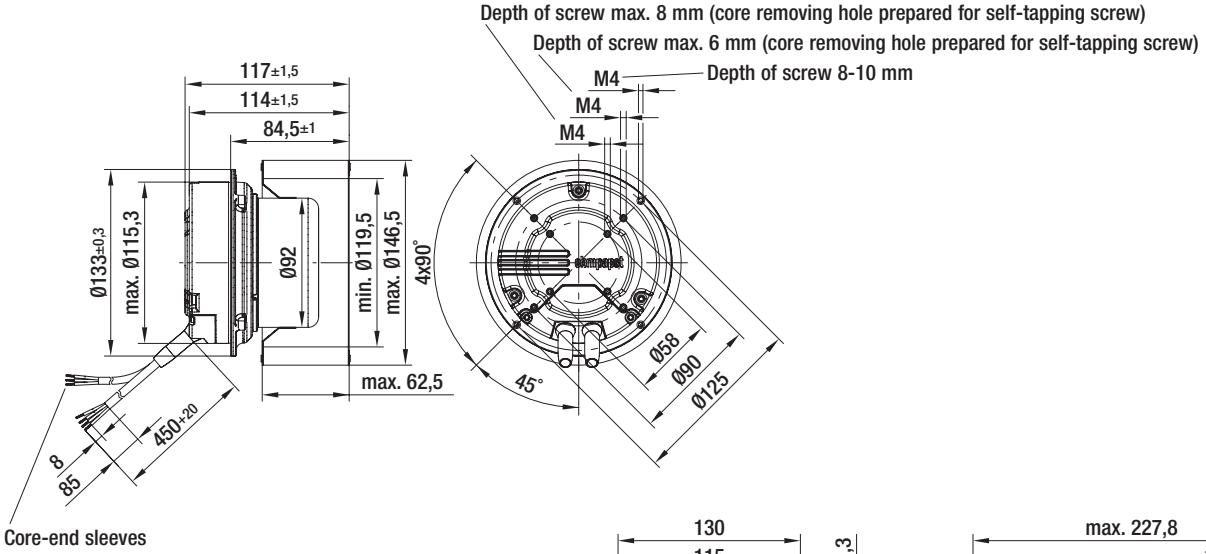
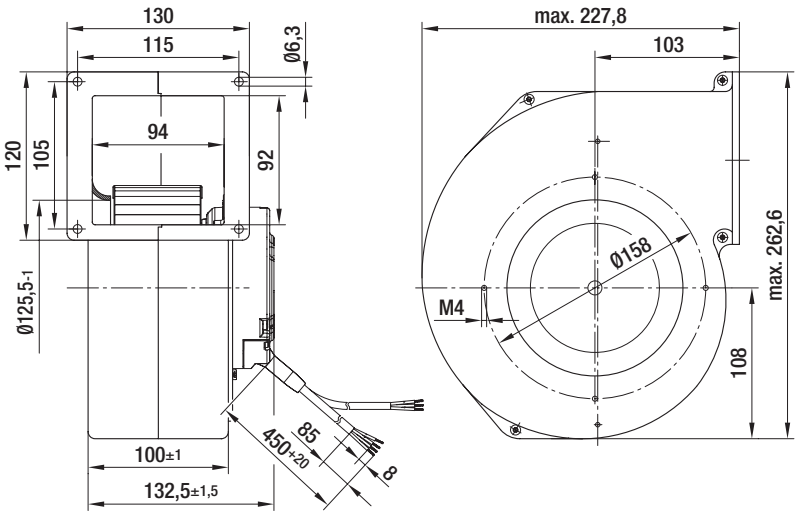
- **Technical features:**
  - PFC (passive)
  - Control input 0-10 VDC / PWM
  - Output 10 VDC max. 1.1 mA
  - Tach output
  - Over-temperature protected electronics / motor
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-1
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 60950-1
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 60335-1, EN 61800-5-1, EN 60950-1, CE
- **Approvals:** UL, CSA; CCC, GOST are applied for



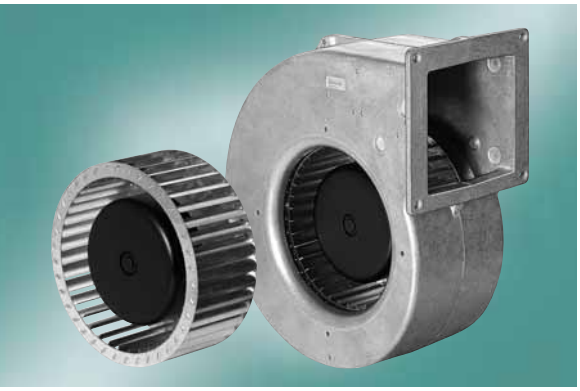
Centrifugal fan	Mass of centrifugal fan kg	Centrifugal blower with flange	Mass of centrifugal blower kg
R3G 146-AB72 -01	2.0	G3G 146-AB72 -01	3.5





EC centrifugal fan and blowers

single inlet, Ø 146



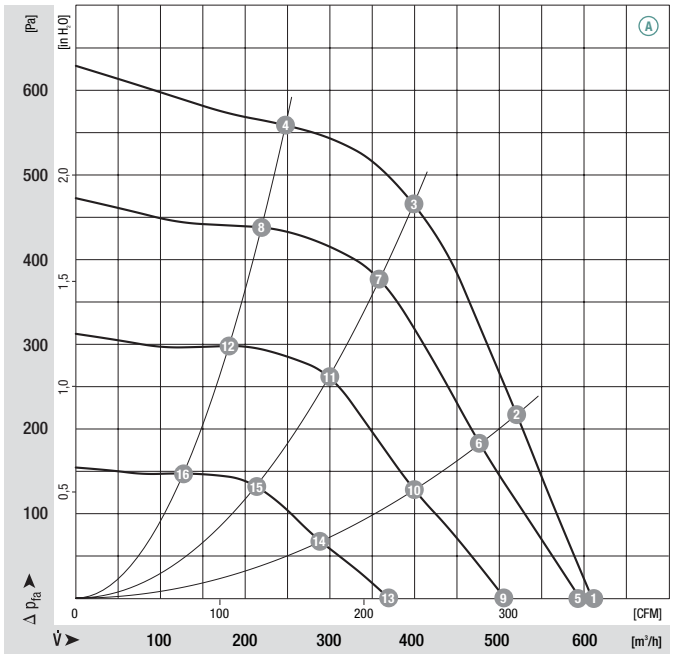
- **Material:** Housing: Die-cast aluminium
  Impeller: Galvanised sheet steel
  Rotor: Galvanised
  Electronics enclosure: Die-cast aluminium
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 44
- **Insulation class:** "B"
- **Mounting position:** Shaft horizontal or rotor on top; rotor on bottom on request
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage range	Frequency	Speed/rpm	Max. power input (1)	Max. current draw (1)	Min. back pressure	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VAC**	**Hz**	**rpm**	**W**	**A**	**Pa**	**°C**	p. 603
***3G 146**	M3G 074-CF	Ⓐ	1~ 200-277	50/60	2520	175	1.30	0	-25 to +60	J1)

subject to alterations

(1) Nominal data in operating point with maximum load and 230 VAC

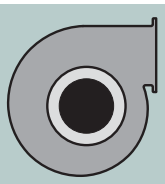
Curves



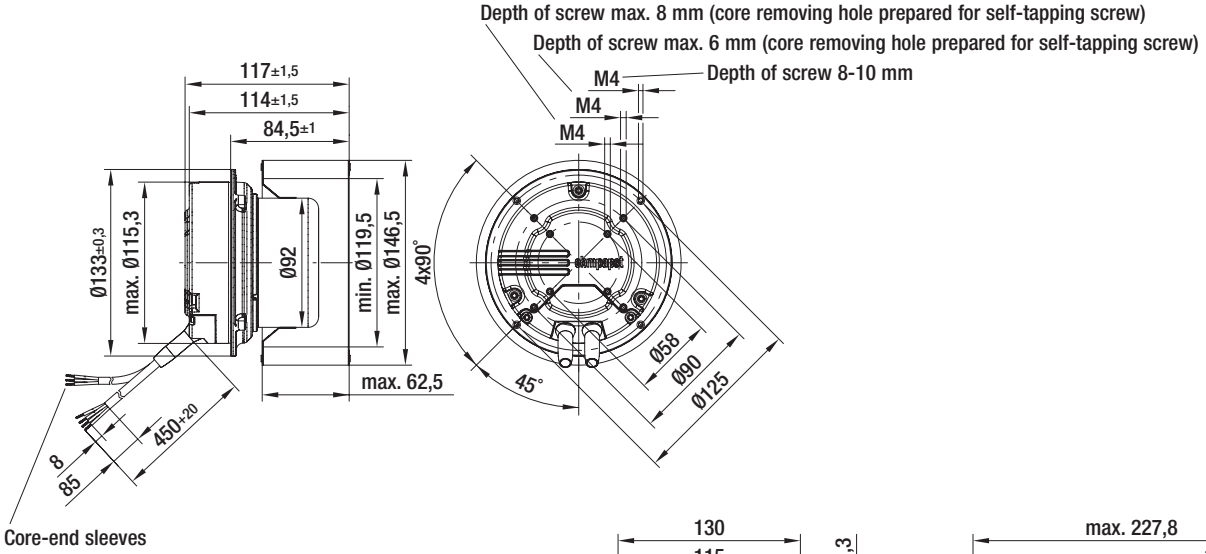
	n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1	2520	175	1.30	71	—
Ⓐ 2	2840	172	1.20	70	43
Ⓐ 3	3030	144	1.10	68	60
Ⓐ 4	3210	105	0.80	67	51
Ⓐ 5	2430	172	1.30	71	—
Ⓐ 6	2545	138	1.10	68	42
Ⓐ 7	2655	105	0.80	65	60
Ⓐ 8	2770	78	0.60	63	50
Ⓐ 9	2080	108	0.80	67	—
Ⓐ 10	2160	84	0.70	64	41
Ⓐ 11	2240	70	0.60	66	52
Ⓐ 12	2310	50	0.40	59	51
Ⓐ 13	1540	48	0.40	59	—
Ⓐ 14	1580	39	0.30	56	34
Ⓐ 15	1610	29	0.25	52	41
Ⓐ 16	1640	22	0.20	51	40

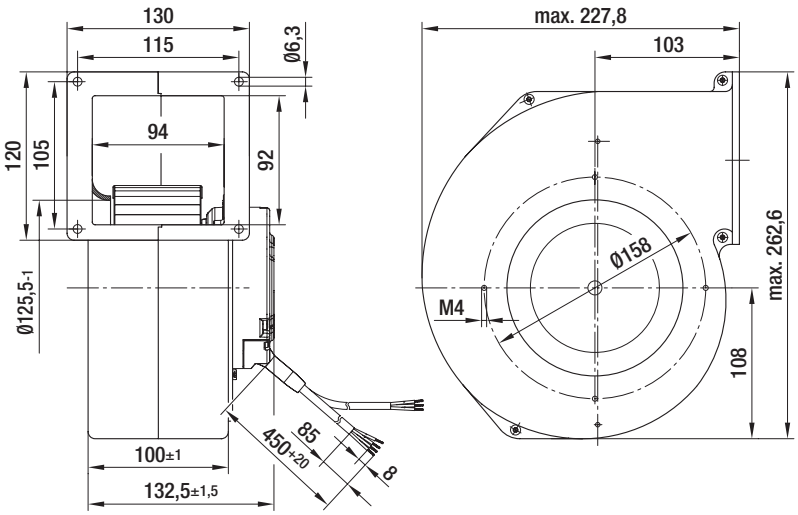
ebmpapst

- **Technical features:**
  - PFC (passive)
  - Control input 0-10 VDC / PWM
  - Output 10 VDC max. 1.1 mA
  - Tach output
  - Over-temperature protected electronics / motor
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-1
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 60950-1
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 60335-1, EN 61800-5-1, EN 60950-1, CE
- **Approvals:** UL, CSA; CCC, GOST are applied for



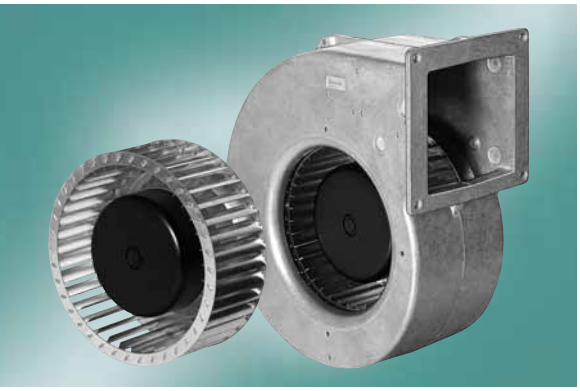
Centrifugal fan	Mass of centrifugal fan kg	Centrifugal blower with flange	Mass of centrifugal blower kg
R3G 146-AB54 -01	2.0	G3G 146-AB54 -01	3.5





EC centrifugal fan and blowers

single inlet, Ø 160



- **Material:** Housing: Die-cast aluminium
  Impeller: Galvanised sheet steel
  Rotor: Galvanised
  Electronics enclosure: Die-cast aluminium
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 44
- **Insulation class:** "B"
- **Mounting position:** Shaft horizontal or rotor on top; rotor on bottom on request
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

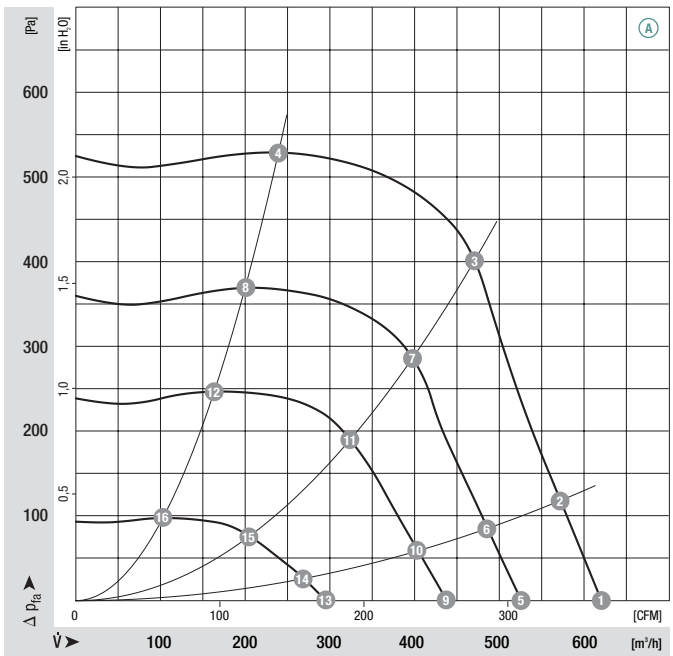
Nominal data

Type	Motor	Curve	Nominal voltage range	Frequency	Speed/rpm	Max. power input (1)	Max. current draw (1)	Min. back pressure	Perm. amb. temp.	Electr. connection
			VAC	Hz	rpm	W	A	Pa	°C	p. 603
*3G 160	M3G 074-CF	Ⓐ	1~ 100-130	50/60	2100	170	2.20	0	-25 to +60	J1)

subject to alterations

(1) Nominal data in operating point with maximum load and 115 VAC

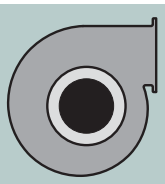
Curves



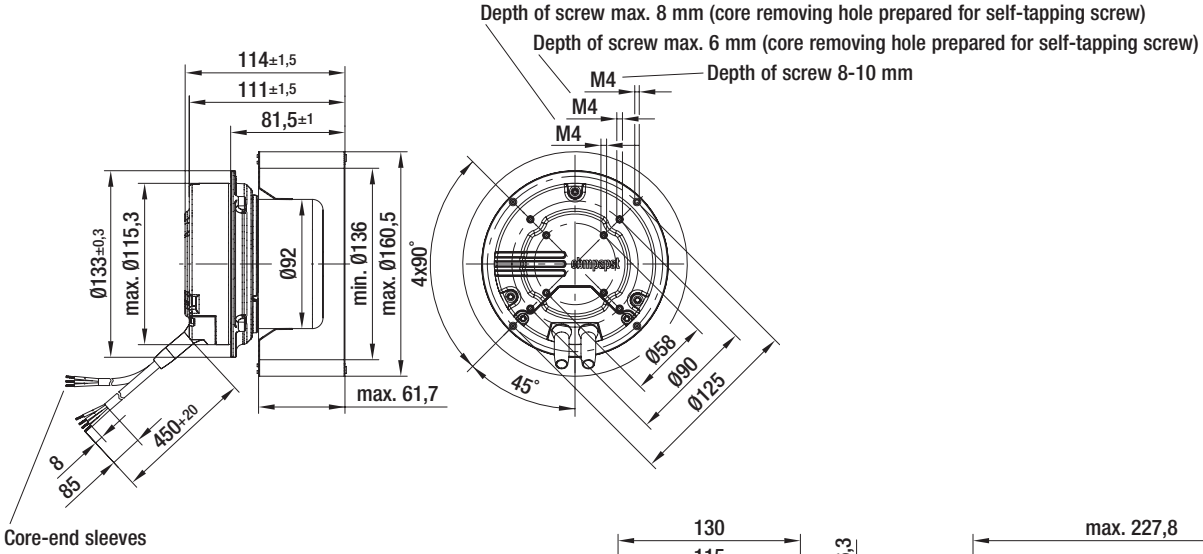
		n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ	1	2100	166	2.10	69	—
Ⓐ	2	2230	167	2.10	68	41
Ⓐ	3	2550	164	2.10	69	58
Ⓐ	4	2640	104	1.40	67	49
Ⓐ	5	1810	106	1.40	64	—
Ⓐ	6	1930	105	1.40	64	38
Ⓐ	7	2160	102	1.30	65	55
Ⓐ	8	2230	62	0.90	62	43
Ⓐ	9	1510	64	0.90	60	—
Ⓐ	10	1600	64	0.90	60	36
Ⓐ	11	1780	61	0.90	60	49
Ⓐ	12	1830	41	0.60	58	39
Ⓐ	13	1020	25	0.40	51	—
Ⓐ	14	1080	24	0.40	50	29
Ⓐ	15	1150	22	0.30	50	37
Ⓐ	16	1170	16	0.30	47	25

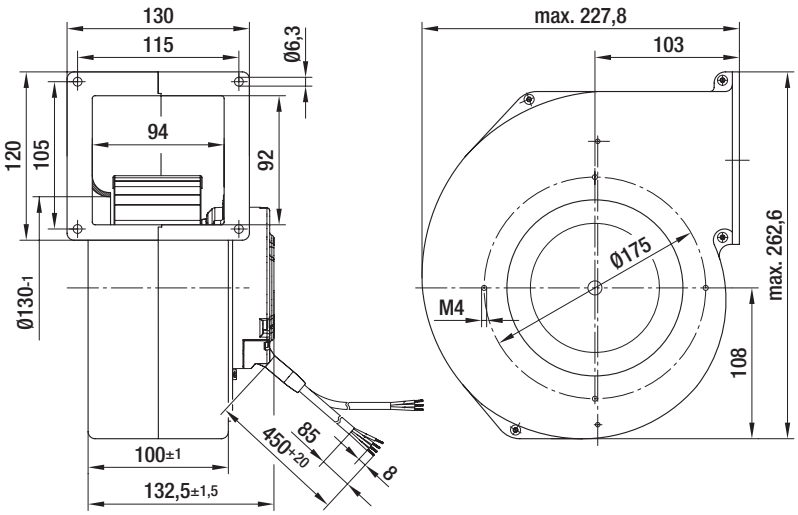
ebmpapst

- **Technical features:**
  - PFC (passive)
  - Control input 0-10 VDC / PWM
  - Output 10 VDC max. 1.1 mA
  - Tach output
  - Over-temperature protected electronics / motor
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-1
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 60950-1
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 60335-1, EN 61800-5-1, EN 60950-1, CE
- **Approvals:** UL, CSA; CCC, GOST are applied for



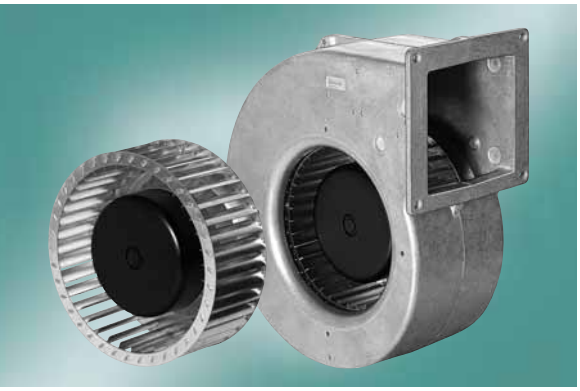
Centrifugal fan	Mass of centrifugal fan kg	Centrifugal blower with flange	Mass of centrifugal blower kg
R3G 160-AC70 -01	2.0	G3G 160-AC70 -01	3.5





EC centrifugal fan and blowers

single inlet, Ø 160



- **Material:** Housing: Die-cast aluminium
  Impeller: Galvanised sheet steel
  Rotor: Coated in black
  Electronics enclosure: Die-cast aluminium
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 44
- **Insulation class:** "B"
- **Mounting position:** Shaft horizontal or rotor on top; rotor on bottom on request
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

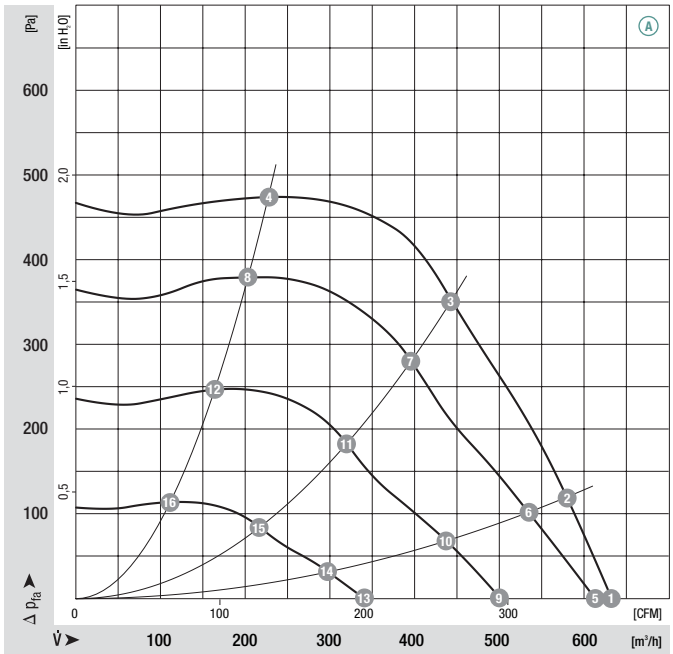
Nominal data

Type	Motor	Curve	Nominal voltage range	Frequency	Speed/rpm	Max. power input (1)	Max. current draw (1)	Min. back pressure	Perm. amb. temp.	Electr. connection
			VAC	Hz	rpm	W	A	Pa	°C	p. 603
*3G 160	M3G 074-CF	Ⓐ	1~ 200-277	50/60	2150	175	1.30	0	-25 to +60	J1)

subject to alterations

(1) Nominal data in operating point with maximum load and 230 VAC

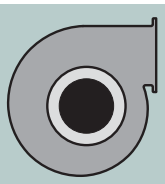
Curves



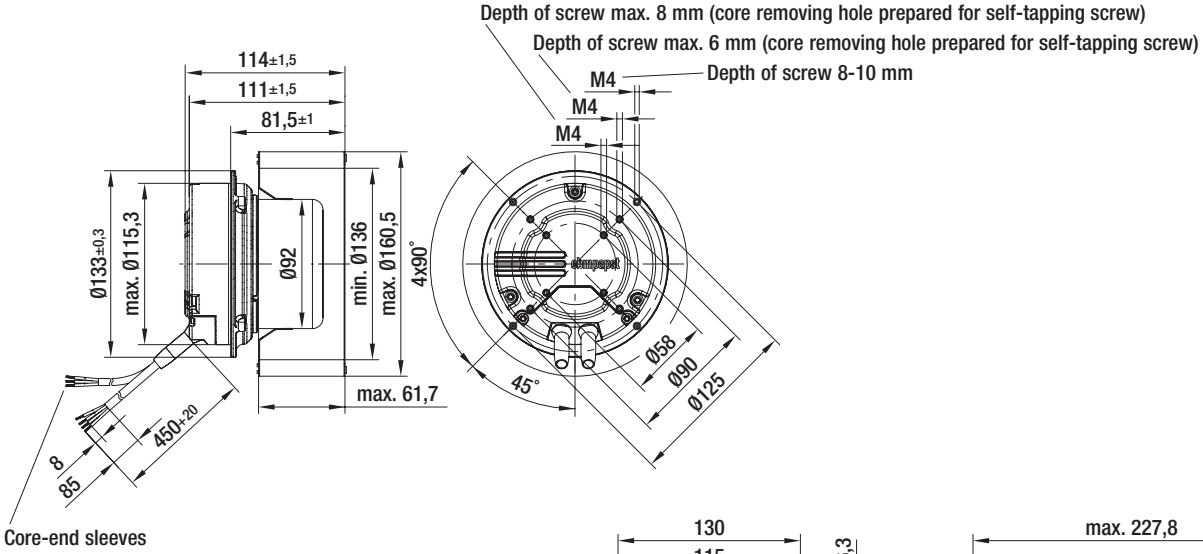
		n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ	1	2150	170	1.25	70	—
Ⓐ	2	2320	172	1.30	70	39
Ⓐ	3	2450	139	1.10	68	41
Ⓐ	4	2540	91	0.70	67	46
Ⓐ	5	2070	153	1.10	69	—
Ⓐ	6	2090	138	1.00	67	40
Ⓐ	7	2150	101	0.80	65	56
Ⓐ	8	2205	68	0.60	63	45
Ⓐ	9	1700	91	0.70	63	—
Ⓐ	10	1730	80	0.60	62	37
Ⓐ	11	1760	60	0.50	59	49
Ⓐ	12	1795	41	0.30	58	37
Ⓐ	13	1190	37	0.30	54	—
Ⓐ	14	1200	33	0.30	53	29
Ⓐ	15	1220	27	0.25	51	35
Ⓐ	16	1240	20	0.20	48	27

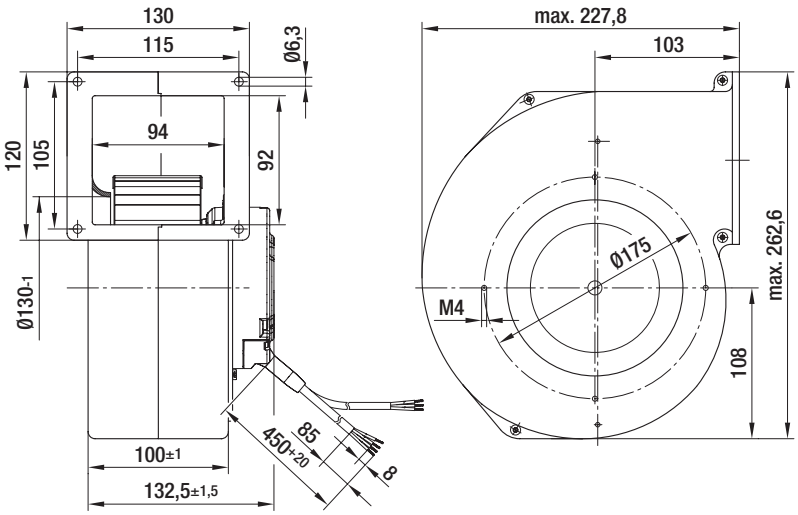
ebmpapst

- **Technical features:**
  - PFC (passive)
  - Control input 0-10 VDC / PWM
  - Output 10 VDC max. 1.1 mA
  - Tach output
  - Over-temperature protected electronics / motor
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-1
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 60950-1
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 60335-1, EN 61800-5-1, EN 60950-1, CE
- **Approvals:** UL, CSA; CCC, GOST are applied for



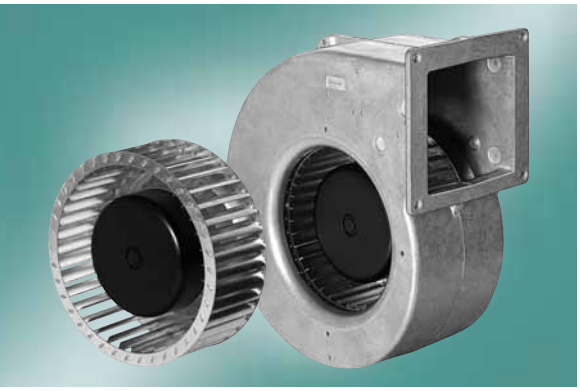
Centrifugal fan	Mass of centrifugal fan kg	Centrifugal blower with flange	Mass of centrifugal blower kg
R3G 160-AC50 -01	2.0	G3G 160-AC50 -01	3.5





EC centrifugal fan and blowers

single inlet, constant air flow, Ø 160



- **Material:** Housing: Die-cast aluminium
  Impeller: Galvanised sheet steel
  Rotor: Galvanised
  Electronics enclosure: Die-cast aluminium
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 44
- **Insulation class:** "B"
- **Mounting position:** Shaft horizontal or rotor on top; rotor on bottom on request
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

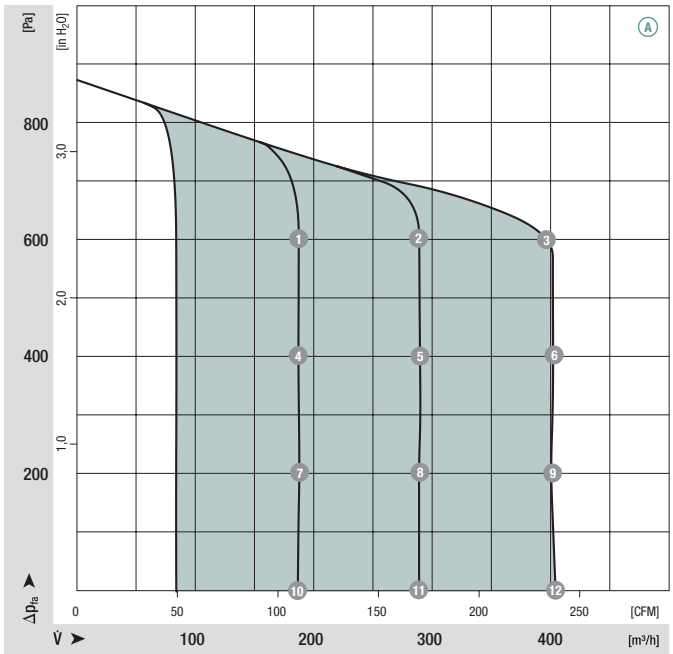
Nominal data

Type	Motor	Curve	Nominal voltage	Frequency	Speed/rpm	Max. power input (1)	Max. current draw (1)	Min. back pressure	Perm. amb. temp.	Electr. connection
			VAC	Hz	rpm	W	A	Pa	°C	p. 604
*3G 160	M3G 074-BF	Ⓐ	1~ 230	50/60	1340	175	1.30	0	-25 to +60	J2)

subject to alterations

(1) Nominal data in operating point with maximum load and 230 VAC

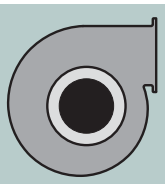
Curves



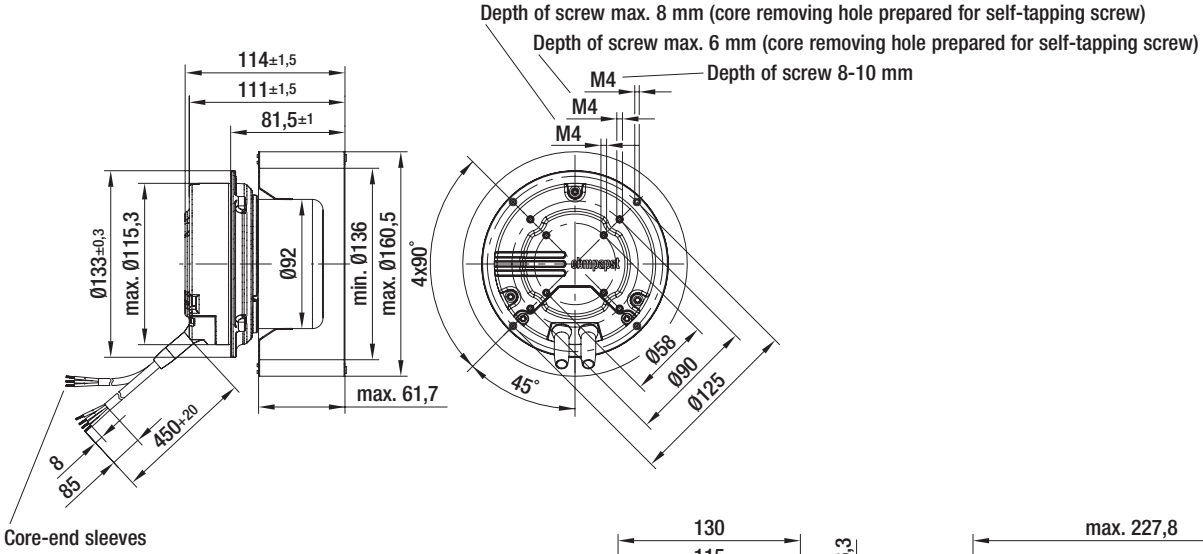
	n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1	2910	110	0.90	68	44
Ⓐ 2	2930	142	1.10	69	52
Ⓐ 3	2780	175	1.30	71	63
Ⓐ 4	2380	68	0.60	63	47
Ⓐ 5	2360	88	0.70	65	58
Ⓐ 6	2450	132	0.95	67	62
Ⓐ 7	1690	35	0.30	57	49
Ⓐ 8	1760	51	0.40	60	56
Ⓐ 9	2020	94	0.70	63	50
Ⓐ 10	610	9	0.10	40	—
Ⓐ 11	950	22	0.25	51	—
Ⓐ 12	1340	51	0.40	58	—

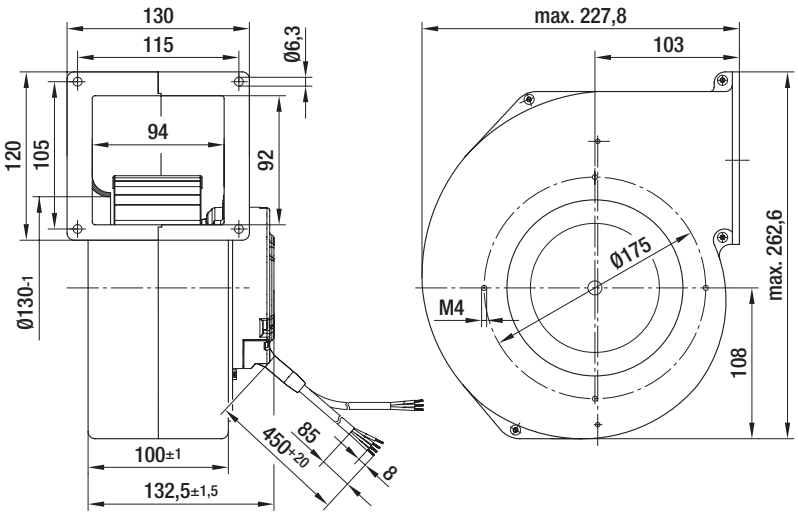
ebmpapst

- **Technical features:**
  - Input for set value Lin 0-10 VDC / PWM (1.7 V ≙ 50 m³/h, 10 V ≙ 300 m³/h)
  - PFC (passive)
  - Output 10 VDC max. 1.1 mA
  - Tach output
  - Over-temperature protected electronics / motor
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-1
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 60950-1
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 60335-1, EN 61800-5-1, EN 60950-1, CE
- **Approvals:** UL, CSA; CCC, GOST are applied for
- **Air intake:** Constant air flow curves can only be attained with unobstructed air intake (s. p. 586)



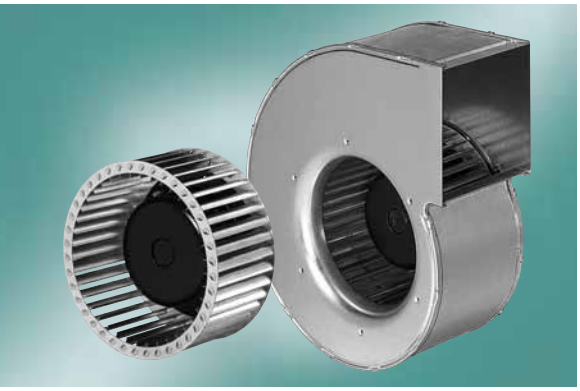
Centrifugal fan	Mass of centrifugal fan kg	Centrifugal blower with flange	Mass of centrifugal blower kg
R3G 160-AD52 -01	2.0	G3G 160-AD52 -01	3.5





EC centrifugal fan and blowers

single inlet, Ø 180



- **Material:** Housing: Galvanised sheet steel
  Impeller: Galvanised sheet steel
  Rotor: Galvanised
  Electronics enclosure: Die-cast aluminium
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 44
- **Insulation class:** "B"
- **Mounting position:** Shaft horizontal or rotor on top; rotor on bottom on request
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

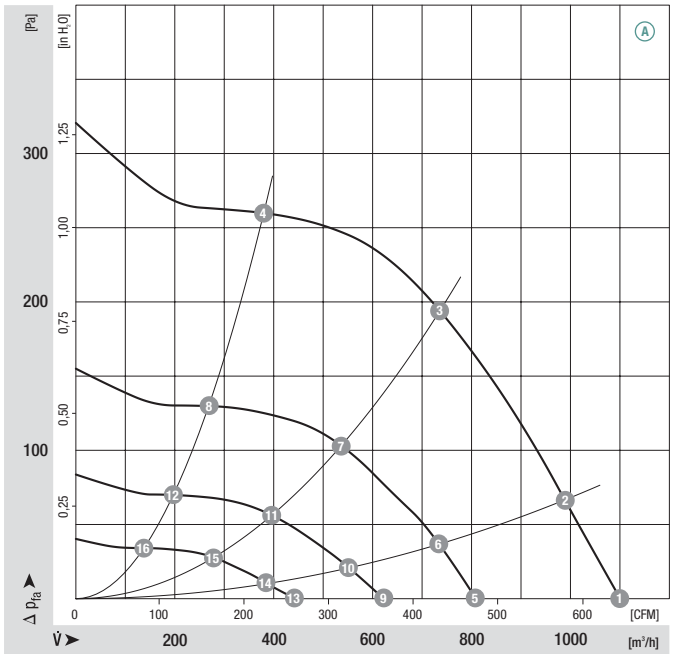
Nominal data

Type	Motor	Curve	Nominal voltage range	Frequency	Speed/rpm	Max. power input (1)	Max. current draw (1)	Min. back pressure	Perm. amb. temp.	Electr. connection
			VAC	Hz	rpm	W	A	Pa	°C	p. 603
*3G 180	M3G 074-CF	Ⓐ	1~ 100-130	50/60	1320	175	2.20	0	-25 to +60	J1)

subject to alterations

(1) Nominal data in operating point with maximum load and 115 VAC

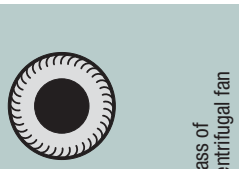
Curves



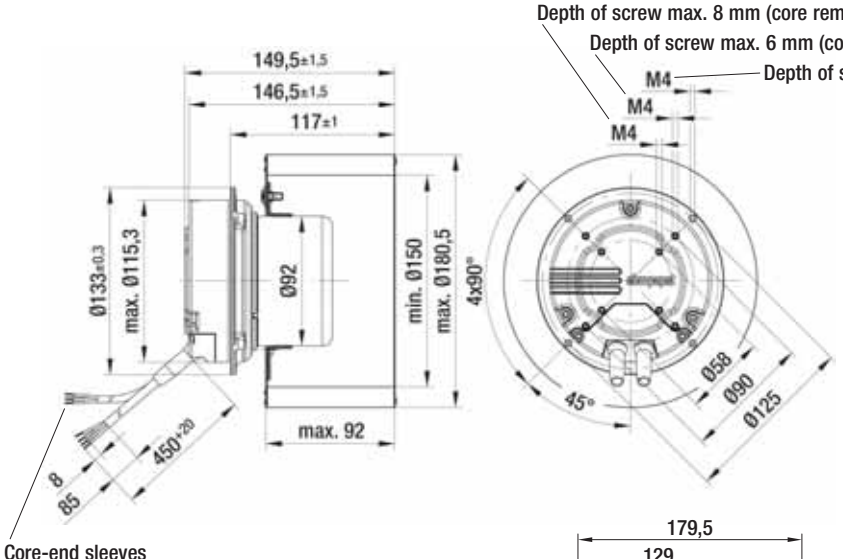
	n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1	1320	171	2.10	67	—
Ⓐ 2	1370	151	1.90	65	57
Ⓐ 3	1460	115	1.50	61	69
Ⓐ 4	1570	69	0.90	59	59
Ⓐ 5	990	69	0.90	59	—
Ⓐ 6	1030	65	0.90	57	54
Ⓐ 7	1080	48	0.70	54	64
Ⓐ 8	1130	29	0.40	51	57
Ⓐ 9	770	35	0.50	52	—
Ⓐ 10	790	30	0.40	50	49
Ⓐ 11	810	23	0.30	46	55
Ⓐ 12	840	15	0.20	42	40
Ⓐ 13	560	16	0.20	44	—
Ⓐ 14	560	13	0.20	40	38
Ⓐ 15	580	11	0.20	36	41
Ⓐ 16	590	8	0.10	33	24

ebmpapst

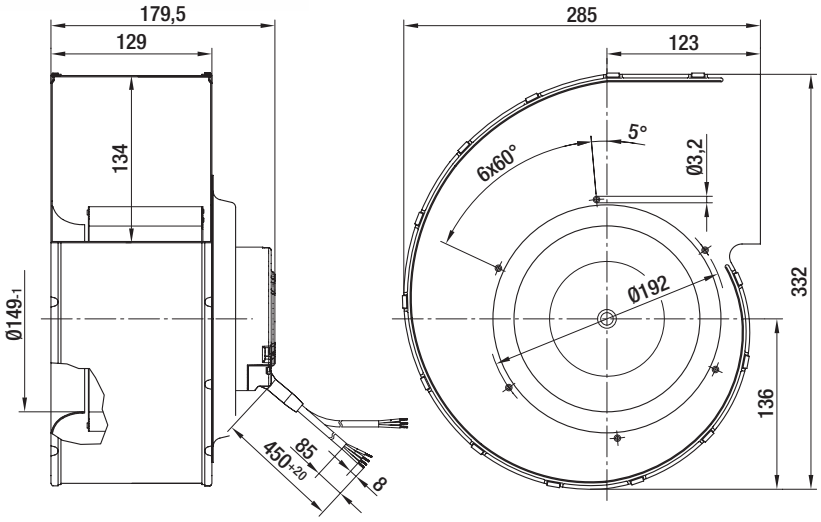
- **Technical features:**
  - PFC (passive)
  - Control input 0-10 VDC / PWM
  - Output 10 VDC max. 1.1 mA
  - Tach output
  - Over-temperature protected electronics / motor
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-1
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 60950-1
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 60335-1, EN 61800-5-1, EN 60950-1, CE
- **Approvals:** UL, CSA; CCC, GOST are applied for



Centrifugal fan	Mass of centrifugal fan kg	Centrifugal blower without flange	Mass of centrifugal blower kg
R3G 180-AU73 -01	2.0	G3G 180-EU73 -01	4.0

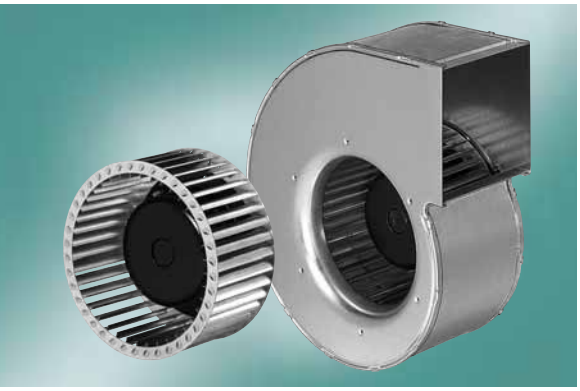


Core-end sleeves



EC centrifugal fan and blowers

single inlet, Ø 180



- **Material:** Housing: Galvanised sheet steel
  Impeller: Galvanised sheet steel
  Rotor: Galvanised
  Electronics enclosure: Die-cast aluminium
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 44
- **Insulation class:** "B"
- **Mounting position:** Shaft horizontal or rotor on top; rotor on bottom on request
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

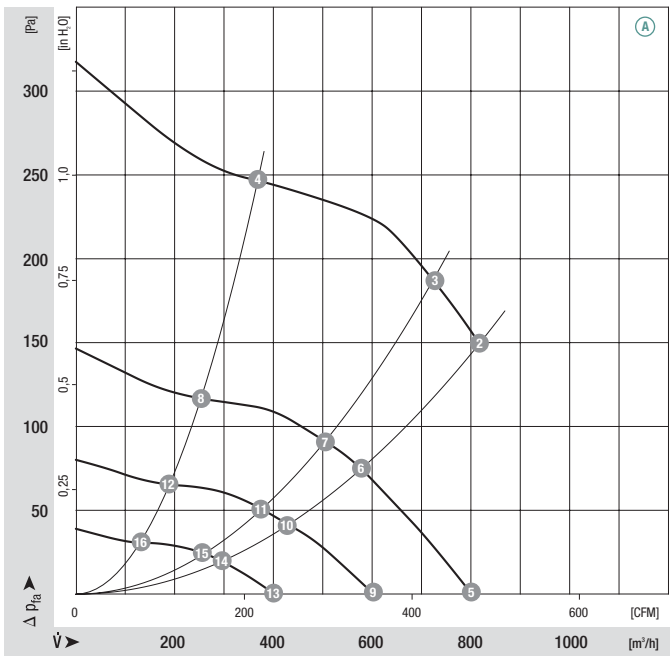
Nominal data

Type	Motor	Curve	Nominal voltage range	Frequency	Speed/rpm	Max. power input (1)	Max. current draw (1)	Min. back pressure	Perm. amb. temp.	Electr. connection
			VAC	Hz	rpm	W	A	Pa	°C	p. 603
*3G 180	M3G 074-CF	Ⓐ	1~ 200-277	50/60	1320	162	1.20	150	-25 to +60	J1)

subject to alterations

(1) Nominal data in operating point with maximum load and 230 VAC

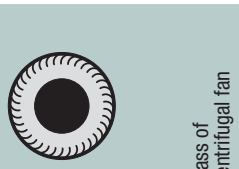
Curves



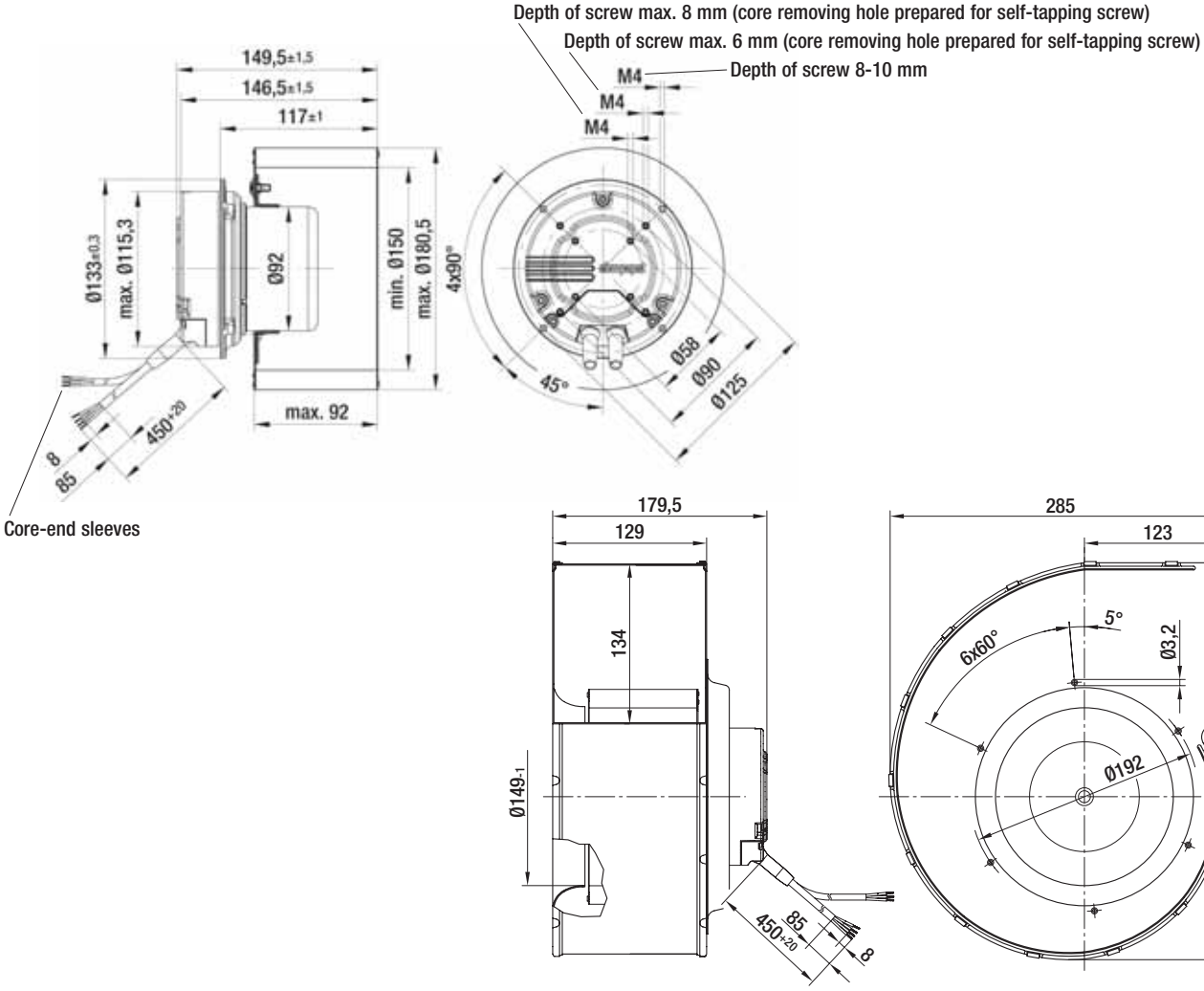
	n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1	—	—	—	—	—
Ⓐ 2	1420	118	1.90	62	59
Ⓐ 3	1445	106	1.50	61	69
Ⓐ 4	1530	65	1.00	59	56
Ⓐ 5	975	65	1.00	58	—
Ⓐ 6	995	56	0.90	56	54
Ⓐ 7	1025	42	0.70	53	60
Ⓐ 8	1065	26	0.45	49	45
Ⓐ 9	745	31	0.50	52	—
Ⓐ 10	755	28	0.45	49	47
Ⓐ 11	775	21	0.35	45	49
Ⓐ 12	805	15	0.25	42	34
Ⓐ 13	515	33	0.25	41	—
Ⓐ 14	520	12	0.20	39	33
Ⓐ 15	535	10	0.20	35	34
Ⓐ 16	560	8	0.15	32	20

ebmpapst

- **Technical features:**
  - PFC (passive)
  - Control input 0-10 VDC / PWM
  - Output 10 VDC max. 1.1 mA
  - Tach output
  - Over-temperature protected electronics / motor
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-1
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 60950-1
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 60335-1, EN 61800-5-1, EN 60950-1, CE
- **Approvals:** UL, CSA; CCC, GOST are applied for



Centrifugal fan	Mass of centrifugal fan kg	Centrifugal blower without flange	Mass of centrifugal blower kg
R3G 180-AU60 -01	2.0	G3G 180-EU60 -01	4.0



Inlet nozzle p. 552

Guard grille p. 554

Electr. connection p. 603

General information

AC centrifugal, backward

AC centrifugal, forward

EC centrifugal, backward

EC centrifugal, backward for clean rooms

EC centrifugal, forward

EC-SYSTEMS

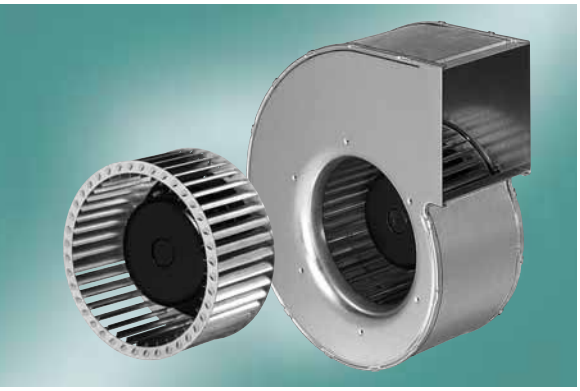
Accessories

Technology

Contacts

EC centrifugal fan and blowers

single inlet, Ø 180



- **Material:** Housing: Galvanised sheet steel
  Impeller: Galvanised sheet steel
  Rotor: Coated in black
  Electronics enclosure: Die-cast aluminium
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 54
- **Insulation class:** "B"
- **Mounting position:** Shaft horizontal or rotor on top; rotor on bottom on request
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

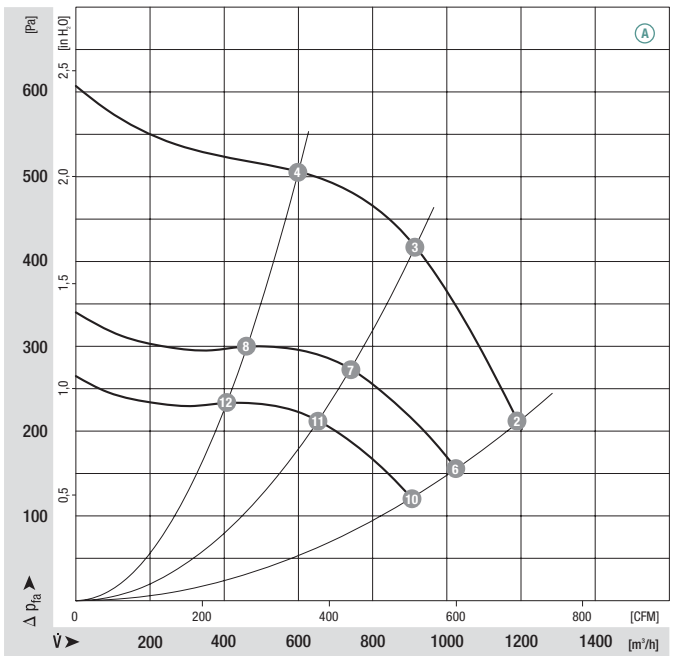
Nominal data

Type	Motor	Curve	Nominal voltage range	Frequency	Speed/rpm	Max. power input (1)	Max. current draw (1)	Min. back pressure	Perm. amb. temp.	Electr. connection
			VAC	Hz	rpm	W	A	Pa	°C	p. 605
*3G 180	M3G 084-DF	Ⓐ	1~ 100-130	50/60	1970	335	3.90	200	-25 to +60	K1)

subject to alterations

(1) Nominal data in operating point with maximum load and 115 VAC

Curves



	n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1	—	—	—	—	—
Ⓐ 2	1970	335	3.90	76	52
Ⓐ 3	2100	265	3.15	72	62
Ⓐ 4	2205	195	2.35	70	56
Ⓐ 5	—	—	—	—	—
Ⓐ 6	1700	213	2.45	71	52
Ⓐ 7	1700	140	1.65	65	62
Ⓐ 8	1700	90	1.10	63	56
Ⓐ 9	—	—	—	—	—
Ⓐ 10	1500	147	1.70	68	52
Ⓐ 11	1500	96	1.15	62	62
Ⓐ 12	1500	61	0.75	59	46

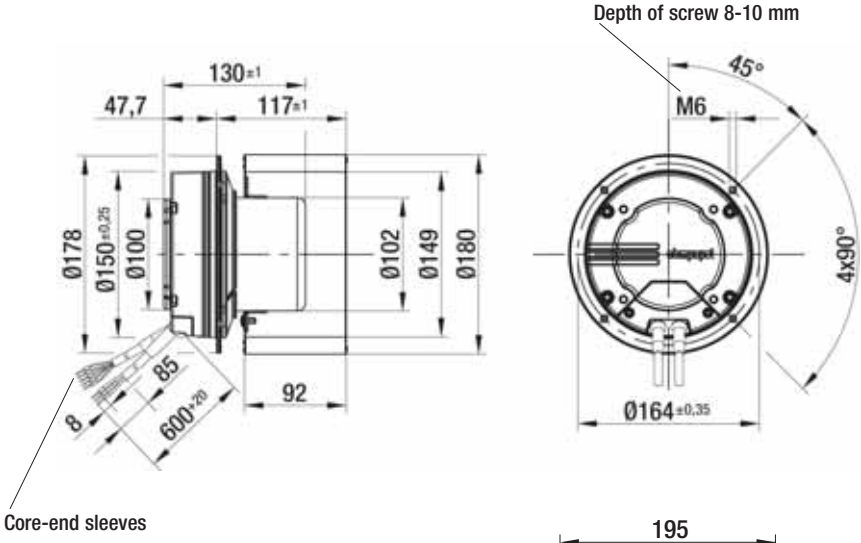
ebmpapst

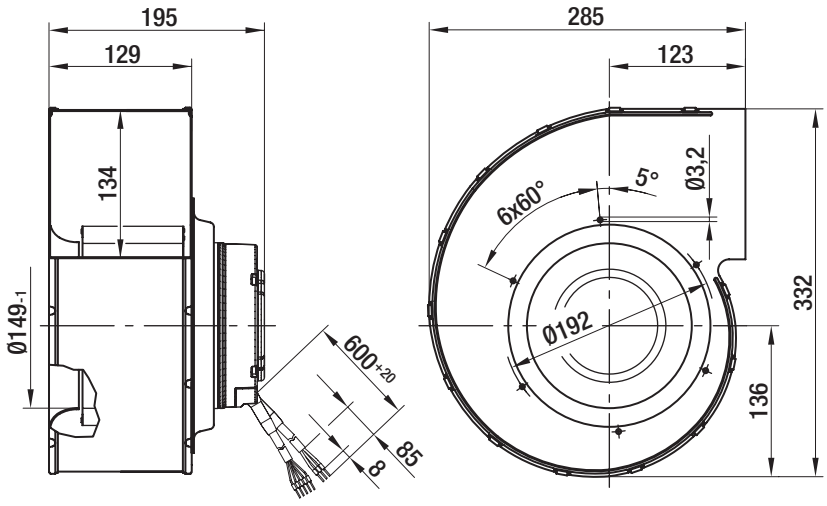
- **Technical features:**
  - PFC (passive)
  - Control input 0-10 VDC / PWM
  - Output 10 VDC max. 1.1 mA
  - Alarm relay
  - Over-temperature protected electronics / motor
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-2
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 61800-5-1
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 61800-5-1, CE
- **Approvals:** UL, CSA; CCC, GOST are applied for

Mass of centrifugal fan

Mass of centrifugal blower

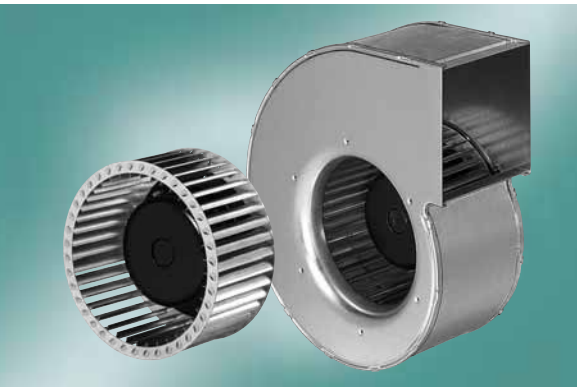
Centrifugal fan	kg	Centrifugal blower without flange	kg
R3G 180-AA01 -81	3.9	G3G 180-AA01 -81	6.0





EC centrifugal fan and blowers

single inlet, Ø 180



- **Material:** Housing: Galvanised sheet steel
  Impeller: Galvanised sheet steel
  Rotor: Coated in black
  Electronics enclosure: Die-cast aluminium
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 54
- **Insulation class:** "B"
- **Mounting position:** Shaft horizontal or rotor on top; rotor on bottom on request
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

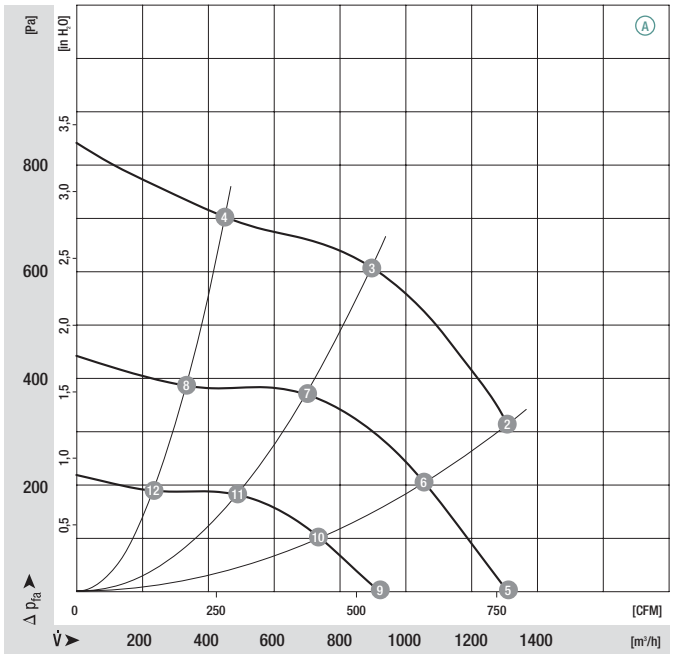
Nominal data

Type	Motor	Curve	Nominal voltage range	Frequency	Speed/rpm	Max. power input (1)	Max. current draw (1)	Min. back pressure	Perm. amb. temp.	Electr. connection
			VAC	Hz	rpm	W	A	Pa	°C	p. 605
*3G 180	M3G 084-FA	Ⓐ	1~ 200-277	50/60	2450	510	3.15	300	-25 to +60	K1)

subject to alterations

(1) Nominal data in operating point with maximum load and 230 VAC

Curves

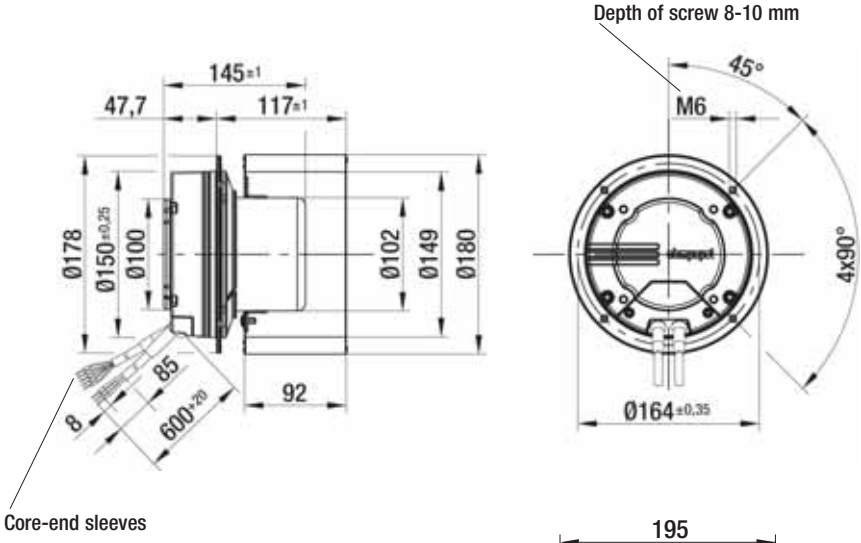


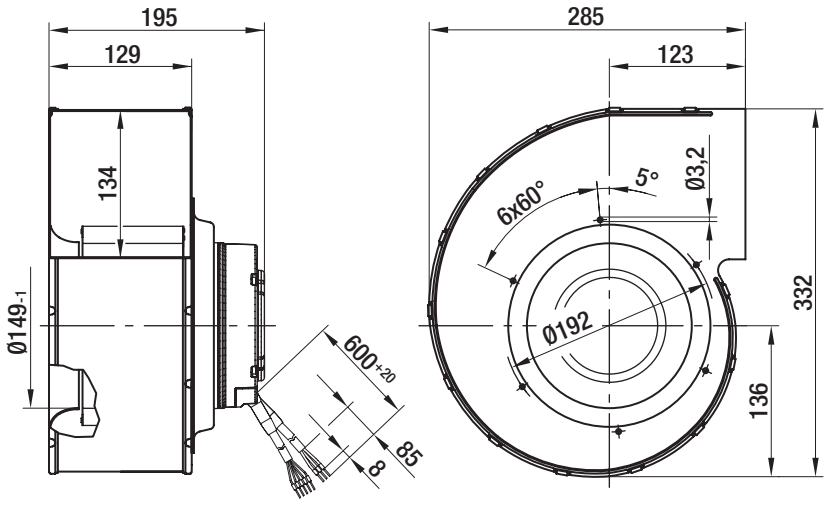
		n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ	1	—	—	—	—	—
Ⓐ	2	2450	510	3.15	79	47
Ⓐ	3	2570	361	2.25	75	58
Ⓐ	4	2690	223	1.45	73	45
Ⓐ	5	2000	395	2.50	77	—
Ⓐ	6	2000	295	1.90	73	47
Ⓐ	7	2000	185	1.20	68	58
Ⓐ	8	2000	100	0.60	64	45
Ⓐ	9	1400	135	0.90	67	—
Ⓐ	10	1400	100	0.60	64	47
Ⓐ	11	1400	65	0.40	59	58
Ⓐ	12	1400	35	0.20	55	45

ebmpapst

- **Technical features:**
  - PFC (passive)
  - Control input 0-10 VDC / PWM
  - Output 10 VDC max. 1.1 mA
  - Alarm relay
  - Over-temperature protected electronics / motor
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-2
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 61800-5-1
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 61800-5-1, CE
- **Approvals:** UL, CSA; CCC, GOST are applied for

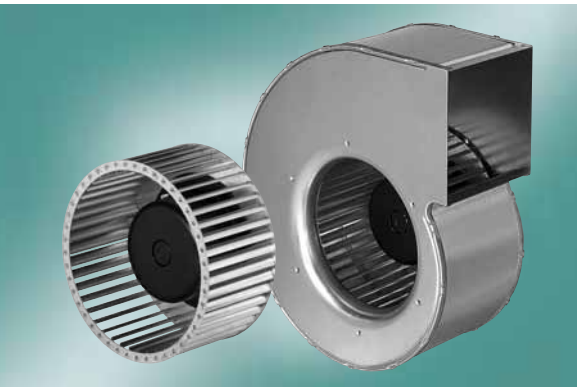
Centrifugal fan	Mass of centrifugal fan kg	Centrifugal blower without flange	Mass of centrifugal blower kg
R3G 180-AD43 -71	4.7	G3G 180-AD43 -71	6.8





EC centrifugal fan and blowers

single inlet, Ø 200



- **Material:** Housing: Galvanised sheet steel
  Impeller: Galvanised sheet steel
  Rotor: Coated in black
  Electronics enclosure: Die-cast aluminium
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 54
- **Insulation class:** "B"
- **Mounting position:** Shaft horizontal or rotor on top; rotor on bottom on request
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

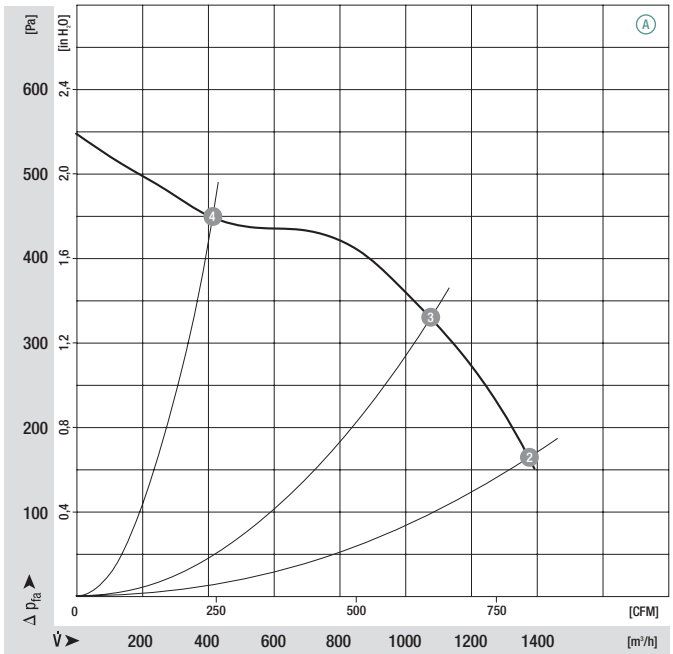
Nominal data

Type	Motor	Curve	Nominal voltage range	Frequency	Speed/rpm	Max. power input (1)	Max. current draw (1)	Min. back pressure	Perm. amb. temp.	Electr. connection
			VAC	Hz	rpm	W	A	Pa	°C	p. 605
*3G 200	M3G 084-FA	Ⓐ	1~ 100-130	50/60	1720	350	4.20	150	-25 to +60	K1)

subject to alterations

(1) Nominal data in operating point with maximum load and 115 VAC

Curves

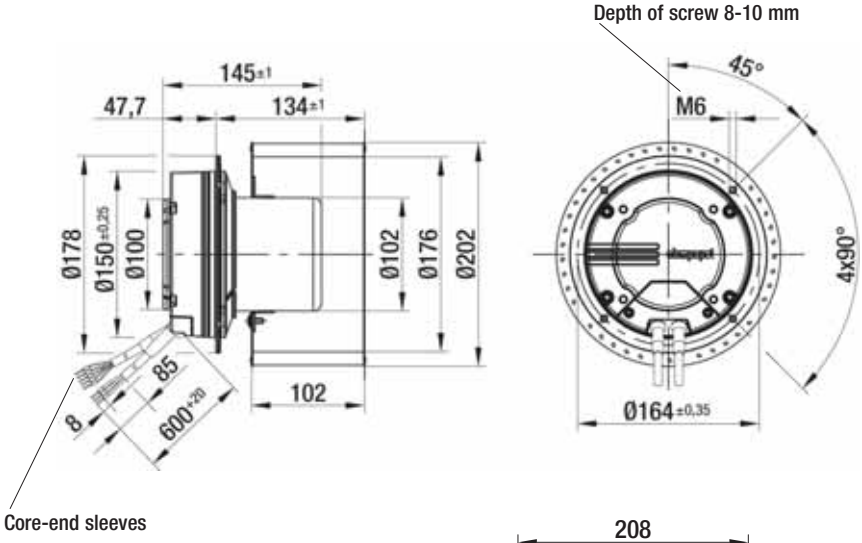


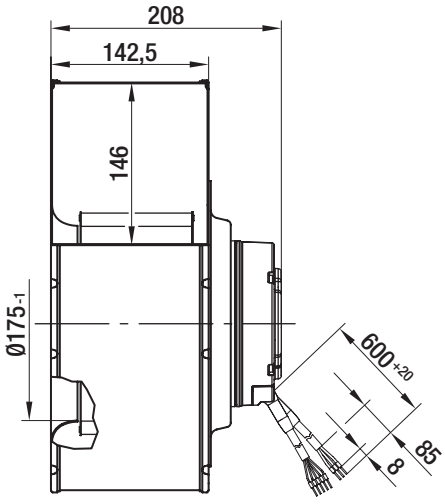
	n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1	—	—	—	—	—
Ⓐ 2	1720	350	4.10	73	49
Ⓐ 3	1780	277	3.40	71	58
Ⓐ 4	1945	152	2.10	69	50

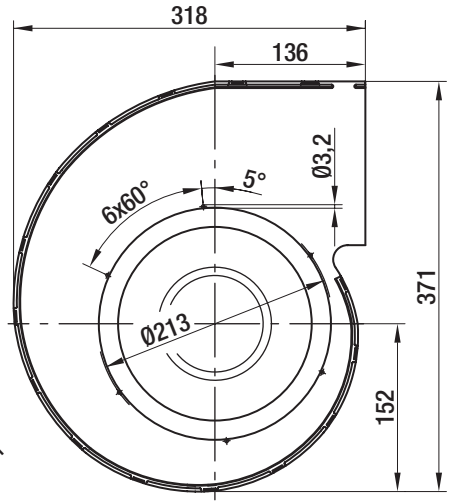
ebmpapst

- **Technical features:**
  - PFC (passive)
  - Control input 0-10 VDC / PWM
  - Output 10 VDC max. 1.1 mA
  - Alarm relay
  - Over-temperature protected electronics / motor
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-2
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 61800-5-1
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 61800-5-1, CE
- **Approvals:** UL, CSA, CCC, GOST are applied for

Centrifugal fan	Mass of centrifugal fan kg	Centrifugal blower without flange	Mass of centrifugal blower kg
R3G 200-AL36 -81	5.2	G3G 200-AL36 -81	7.4





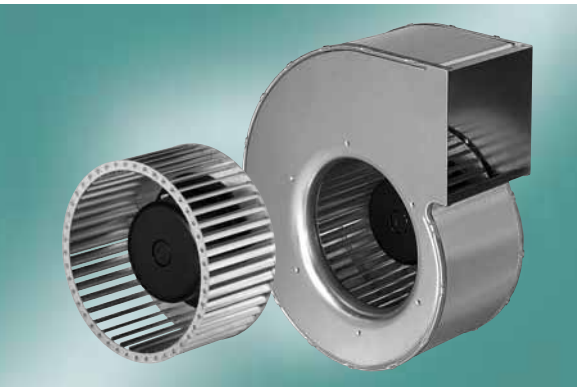


Inlet nozzle p. 552

Electr. connection p. 605

EC centrifugal fan and blowers

single inlet, Ø 200



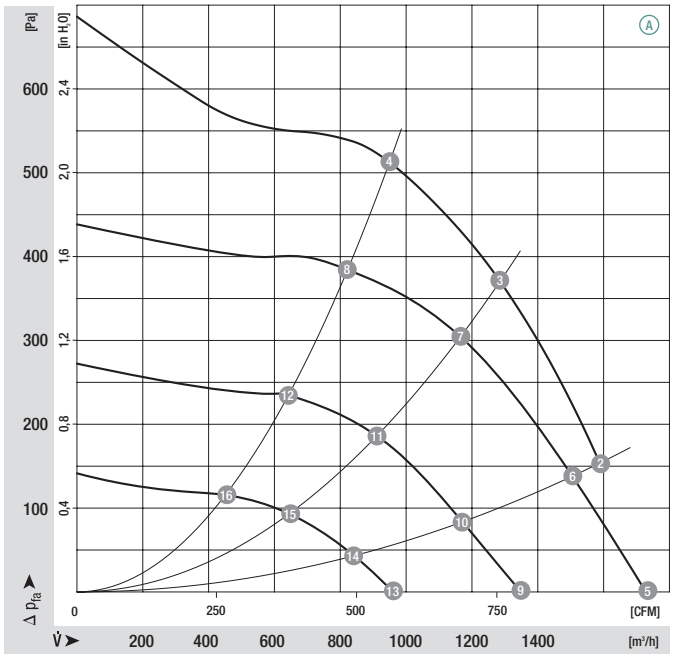
- **Material:** Housing: Galvanised sheet steel
  Impeller: Galvanised sheet steel
  Rotor: Coated in black
  Electronics enclosure: Die-cast aluminium
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 54
- **Insulation class:** "B"
- **Mounting position:** Shaft horizontal or rotor on top; rotor on bottom on request
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage range	Frequency	Speed/rpm	Max. power input (1)	Max. current draw (1)	Min. back pressure	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VAC**	**Hz**	**rpm**	**W**	**A**	**Pa**	**°C**	p. 605
***3G 200**	M3G 084-FA	Ⓐ	1~ 200-277	50/60	1890	510	3.10	150	-25 to +60	K1)

subject to alterations

(1) Nominal data in operating point with maximum load and 230 VAC

Curves

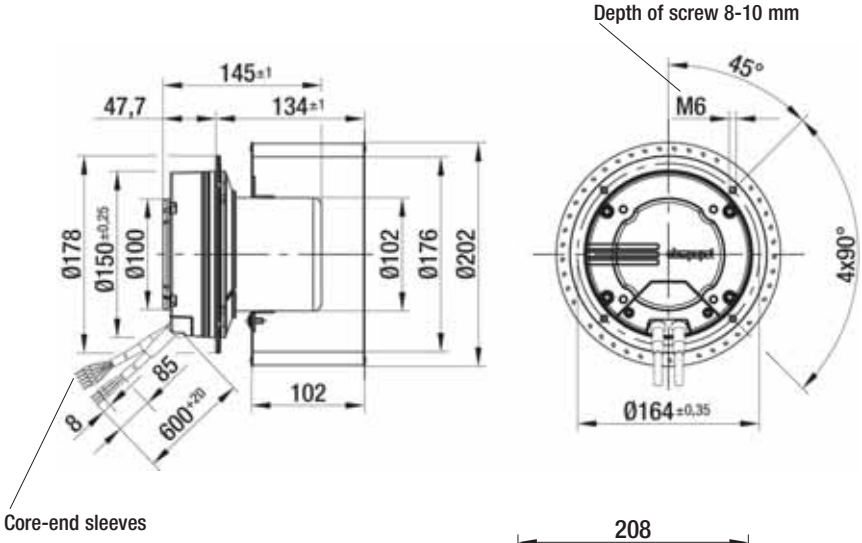


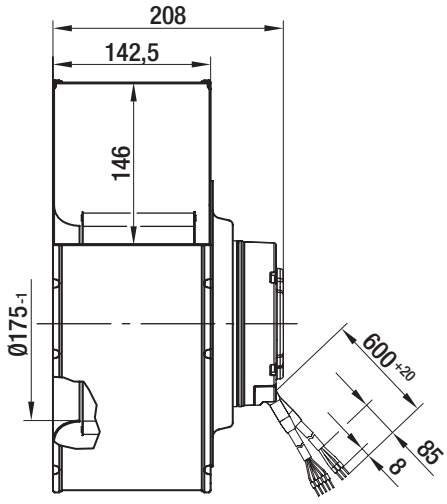
	n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1	—	—	—	—	—
Ⓐ 2	1890	490	3.00	76	46
Ⓐ 3	1960	403	2.40	74	57
Ⓐ 4	2050	322	2.00	73	58
Ⓐ 5	1800	510	3.10	77	—
Ⓐ 6	1800	420	2.50	75	46
Ⓐ 7	1800	320	1.90	71	57
Ⓐ 8	1800	220	1.30	69	58
Ⓐ 9	1400	240	1.50	71	—
Ⓐ 10	1400	200	1.20	68	46
Ⓐ 11	1400	145	0.90	65	57
Ⓐ 12	1400	103	0.70	63	58
Ⓐ 13	1000	87	0.60	63	—
Ⓐ 14	1000	72	0.50	60	46
Ⓐ 15	1000	55	0.40	57	57
Ⓐ 16	1000	38	0.30	53	58

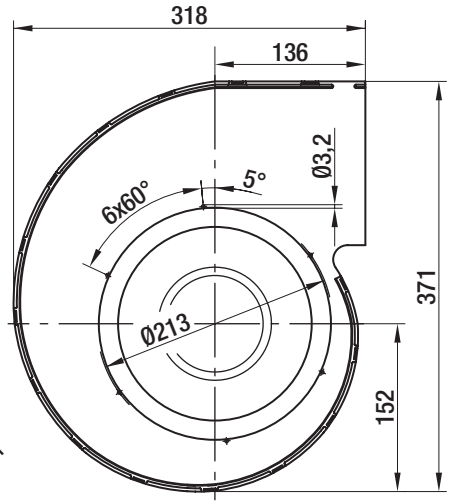
ebmpapst

- **Technical features:**
  - PFC (passive)
  - Control input 0-10 VDC / PWM
  - Output 10 VDC max. 1.1 mA
  - Alarm relay
  - Over-temperature protected electronics / motor
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-2
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 61800-5-1
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 61800-5-1, CE
- **Approvals:** UL, CSA; CCC, GOST are applied for

Centrifugal fan	Mass of centrifugal fan kg	Centrifugal blower without flange	Mass of centrifugal blower kg
R3G 200-AL29 -71	5.2	G3G 200-AL29 -71	7.4





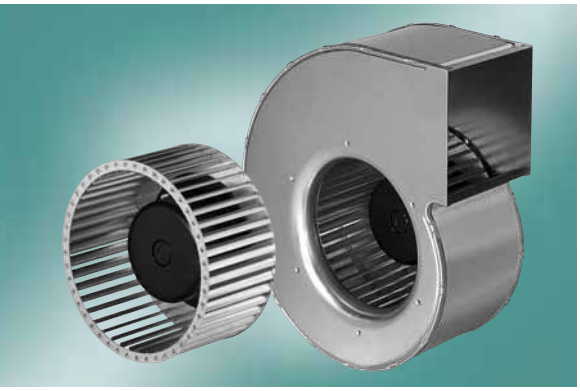


Inlet nozzle p. 552

Electr. connection p. 605

EC centrifugal fan and blowers

single inlet, Ø 225



- **Material:** Housing: Galvanised sheet steel
  Impeller: Galvanised sheet steel
  Rotor: Coated in black
  Electronics enclosure: Die-cast aluminium
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 54
- **Insulation class:** "B"
- **Mounting position:** Shaft horizontal or rotor on top; rotor on bottom on request
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

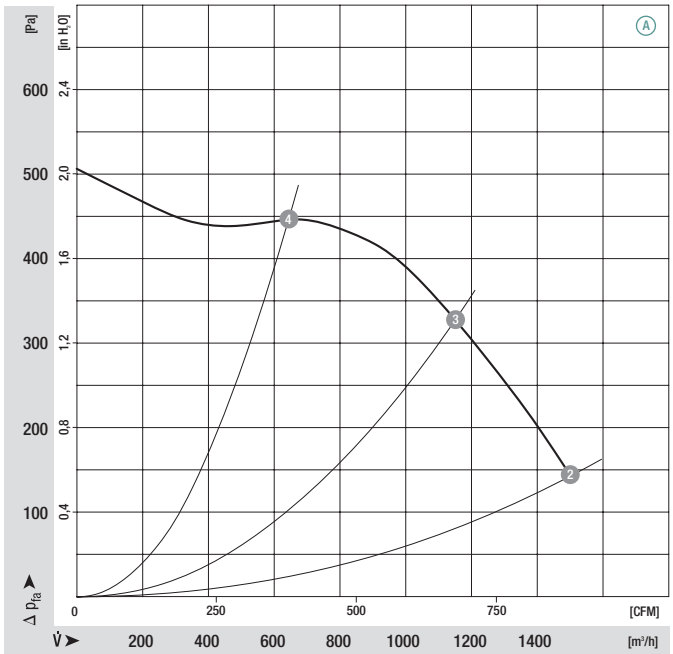
Nominal data

Type	Motor	Curve	Nominal voltage range	Frequency	Speed/rpm	Max. power input (1)	Max. current draw (1)	Min. back pressure	Perm. amb. temp.	Electr. connection
			VAC	Hz	rpm	W	A	Pa	°C	p. 605
*3G 225	M3G 084-FA	Ⓐ	1~ 100-130	50/60	1500	350	4.30	150	-25 to +60	K1)

subject to alterations

(1) Nominal data in operating point with maximum load and 115 VAC

Curves

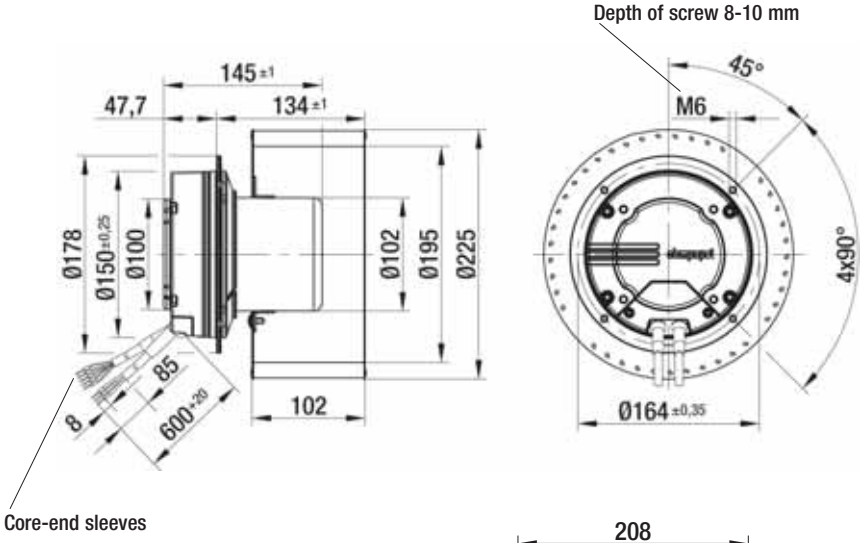


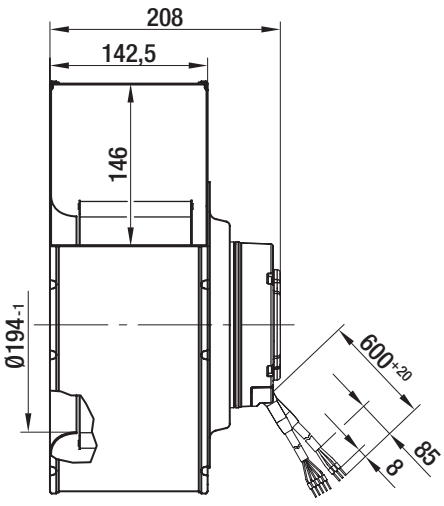
	n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1	—	—	—	—	—
Ⓐ 2	1500	350	4.30	72	48
Ⓐ 3	1620	300	3.60	69	60
Ⓐ 4	1775	205	2.70	68	56

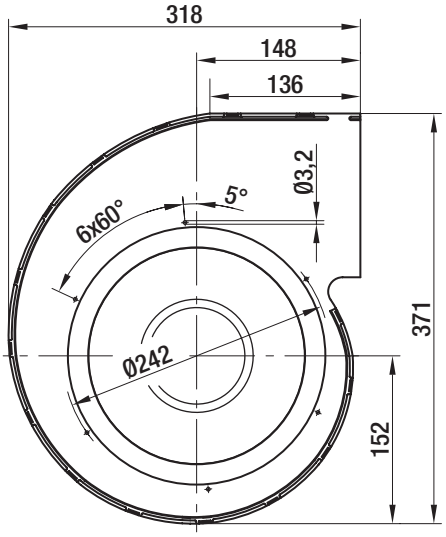
ebmpapst

- **Technical features:**
  - PFC (passive)
  - Control input 0-10 VDC / PWM
  - Output 10 VDC max. 1.1 mA
  - Alarm relay
  - Over-temperature protected electronics / motor
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-2
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 61800-5-1
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 61800-5-1, CE
- **Approvals:** UL, CSA, CCC, GOST are applied for

Centrifugal fan	Mass of centrifugal fan kg	Centrifugal blower without flange	Mass of centrifugal blower kg
R3G 225-AL36 -81	5.3	G3G 225-AL36 -81	7.5





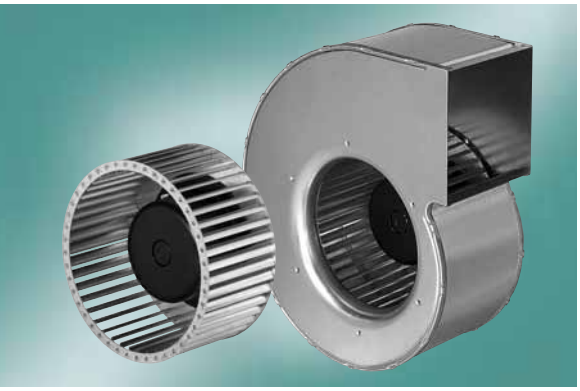


Inlet nozzle p. 552

Electr. connection p. 605

EC centrifugal fan and blowers

single inlet, Ø 225



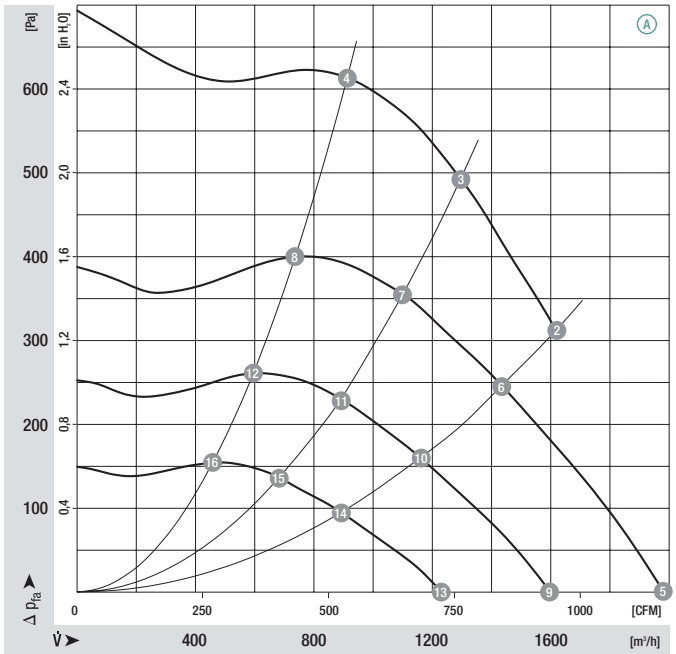
- **Material:** Housing: Galvanised sheet steel
  Impeller: Galvanised sheet steel
  Rotor: Coated in black
  Electronics enclosure: Die-cast aluminium
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 54
- **Insulation class:** "B"
- **Mounting position:** Shaft horizontal or rotor on top; rotor on bottom on request
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage range	Frequency	Speed/rpm	Max. power input (1)	Max. current draw (1)	Min. back pressure	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VAC**	**Hz**	**rpm**	**W**	**A**	**Pa**	**°C**	p. 605
***3G 225**	M3G 084-FA	Ⓐ	1~ 200-277	50/60	1815	545	3.50	300	-25 to +60	K1)

subject to alterations

(1) Nominal data in operating point with maximum load and 230 VAC

Curves

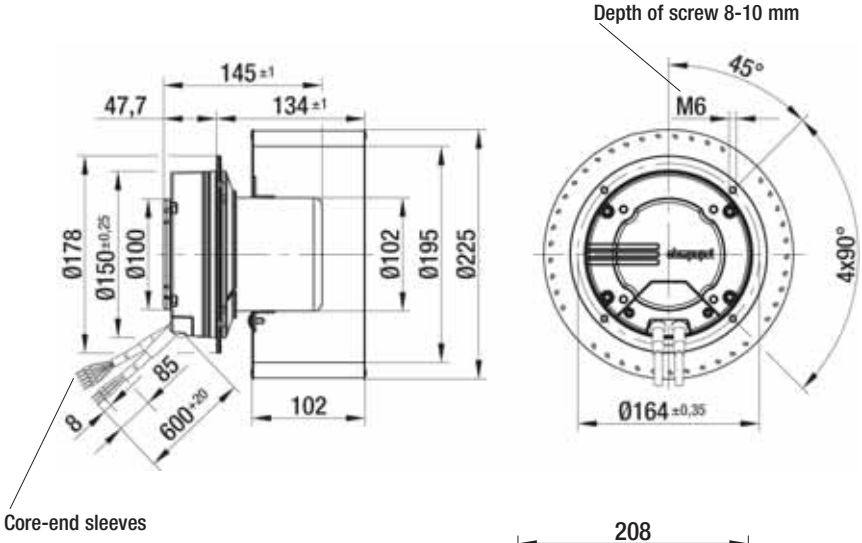


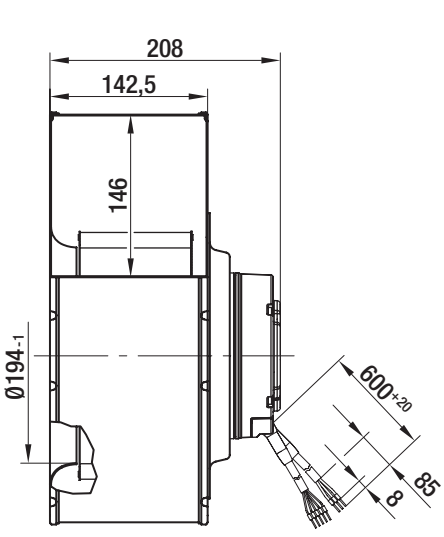
	n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1	—	—	—	—	—
Ⓐ 2	1815	545	3.50	75	53
Ⓐ 3	1900	456	2.90	74	60
Ⓐ 4	1995	363	2.35	73	59
Ⓐ 5	1610	592	3.85	76	—
Ⓐ 6	1610	381	2.45	71	53
Ⓐ 7	1610	278	1.80	69	60
Ⓐ 8	1610	191	1.25	66	59
Ⓐ 9	1300	312	2.05	72	—
Ⓐ 10	1300	200	1.30	66	53
Ⓐ 11	1300	146	0.95	63	60
Ⓐ 12	1300	101	0.65	61	59
Ⓐ 13	1000	142	0.95	65	—
Ⓐ 14	1000	91	0.60	59	53
Ⓐ 15	1000	67	0.45	56	60
Ⓐ 16	1000	46	0.30	54	59

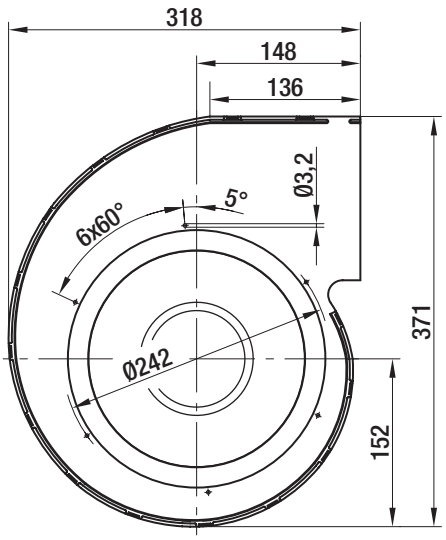
ebmpapst

- **Technical features:**
  - PFC (passive)
  - Control input 0-10 VDC / PWM
  - Output 10 VDC max. 1.1 mA
  - Alarm relay
  - Over-temperature protected electronics / motor
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-2
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 61800-5-1
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 61800-5-1, CE
- **Approvals:** UL, CSA, CCC, GOST are applied for

Centrifugal fan	Mass of centrifugal fan kg	Centrifugal blower without flange	Mass of centrifugal blower kg
R3G 225-AD29 -71	5.3	G3G 225-AD29 -71	7.5



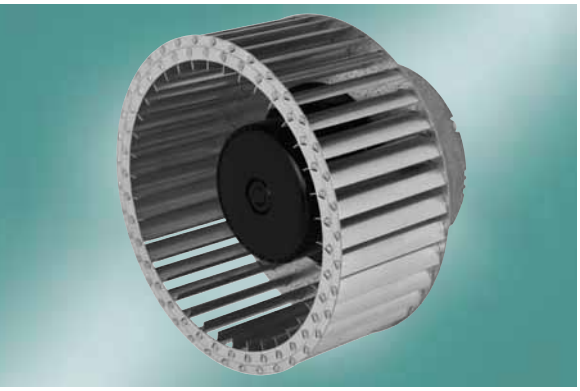




Inlet nozzle p. 552
Electr. connection p. 605

EC centrifugal fan

single inlet, Ø 250



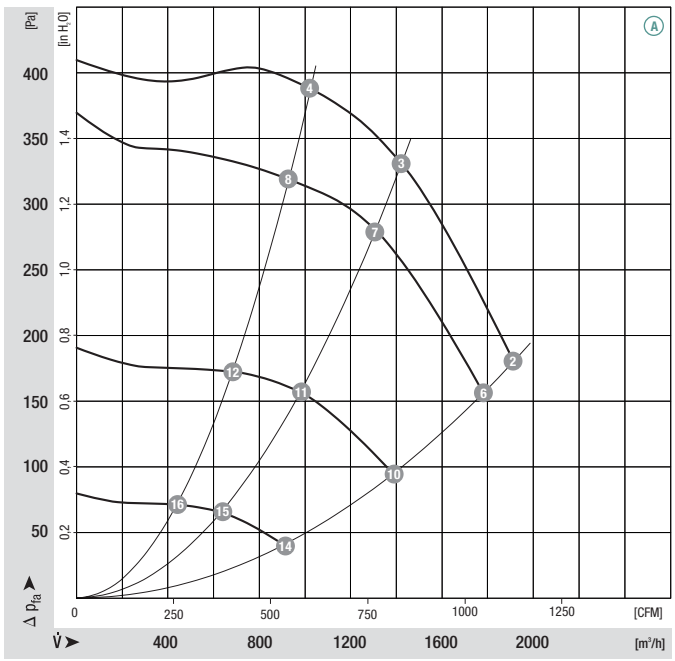
- **Material:** Impeller: Galvanised sheet steel
  Rotor: Coated in black
  Electronics enclosure: Die-cast aluminium
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 54
- **Insulation class:** "B"
- **Mounting position:** Shaft horizontal or rotor on top; rotor on bottom on request
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage range	Frequency	Speed/rpm	Max. power input (1)	Max. current draw (1)	Min. back pressure	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VAC**	**Hz**	**rpm**	**W**	**A**	**Pa**	**°C**	p. 605
R3G 250	M3G 084-FA	Ⓐ	1~ 200-277	50/60	1230	450	2.90	180	-25 to +45	K1)

subject to alterations

(1) Nominal data in operating point with maximum load and 230 VAC

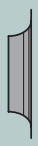
Curves



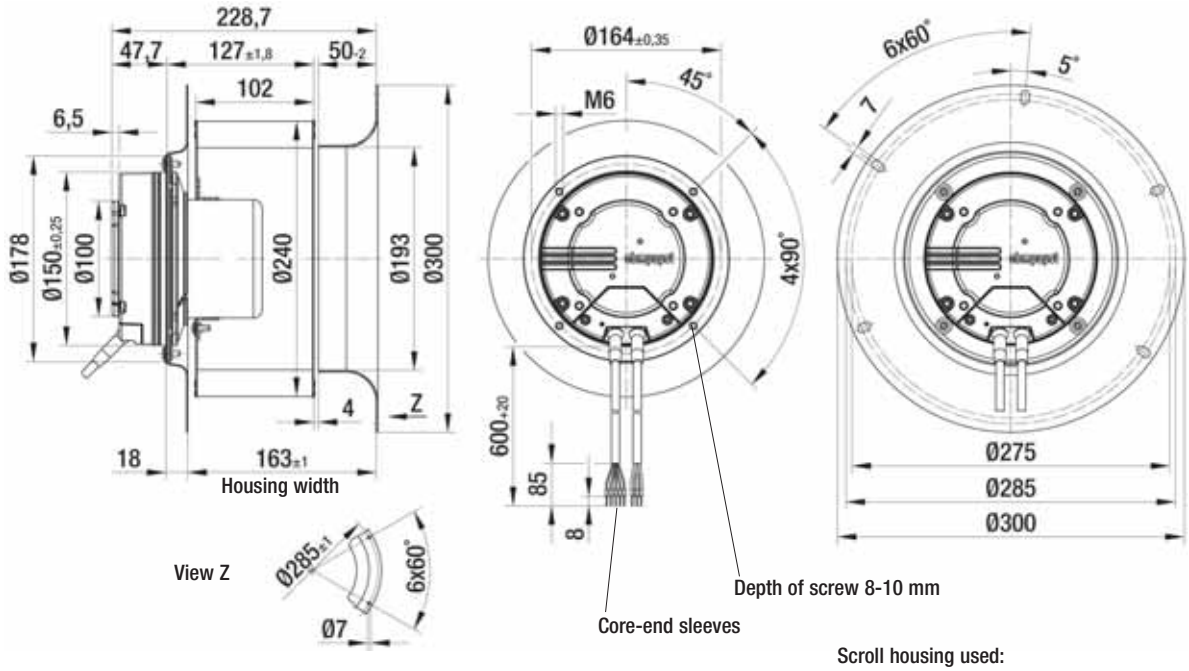
		n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ	1	—	—	—	—	—
Ⓐ	2	1230	450	2.90	72	50
Ⓐ	3	1370	338	2.20	70	60
Ⓐ	4	1460	266	1.70	68	56
Ⓐ	5	—	—	—	—	—
Ⓐ	6	1160	357	2.30	71	50
Ⓐ	7	1270	269	1.70	67	60
Ⓐ	8	1320	195	1.30	66	56
Ⓐ	9	—	—	—	—	—
Ⓐ	10	900	166	1.10	64	50
Ⓐ	11	960	118	0.80	60	60
Ⓐ	12	990	87	0.60	58	56
Ⓐ	13	—	—	—	—	—
Ⓐ	14	600	54	0.40	53	50
Ⓐ	15	630	37	0.30	48	60
Ⓐ	16	640	31	0.20	46	56

ebmpapst

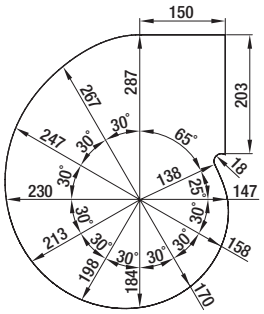
- **Technical features:**
  - PFC (passive)
  - Control input 0-10 VDC / PWM
  - Output 10 VDC max. 1.1 mA
  - Alarm relay
  - Over-temperature protected electronics / motor
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-2
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 61800-5-1
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 61800-5-1, CE
- **Approvals:** UL, CSA, GOST; CCC is applied for



Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle	Flange
R3G 250-AQ28 -71	5.6	25010-2-4013	10011-2-4017



Scroll housing used:



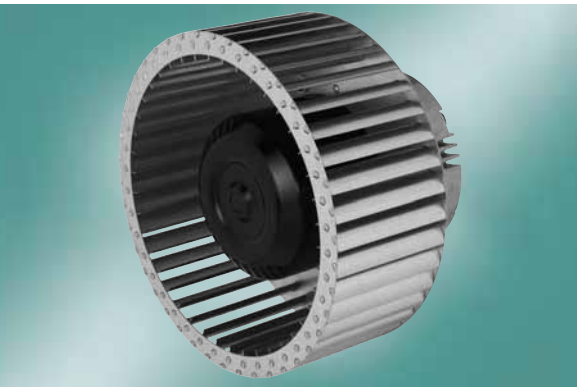
Inlet nozzle p. 552

Electr. connection p. 605

General information
AC centrifugal, backward
AC centrifugal, forward
EC centrifugal, backward
EC centrifugal, backward for clean rooms
EC centrifugal, forward
EC-SYSTEMS
Accessories
Technology
Contacts

EC centrifugal fan

single inlet, Ø 250



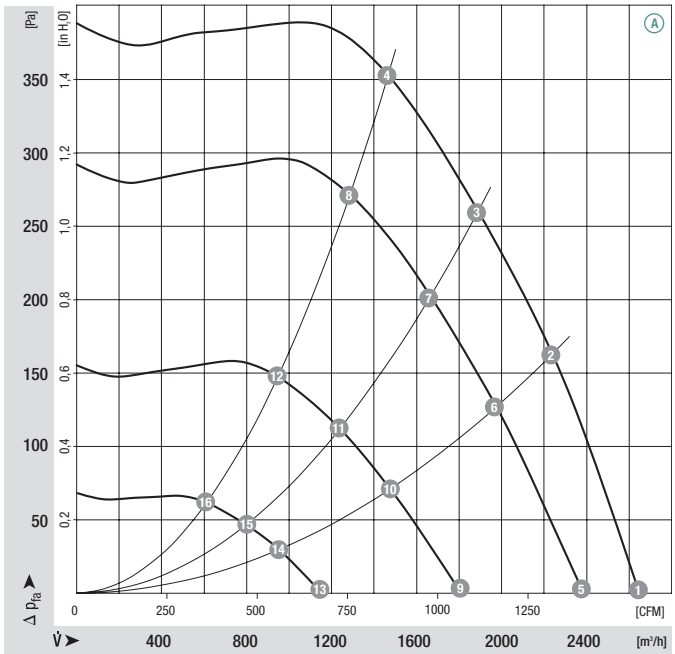
- **Material:** Impeller: Galvanised sheet steel
  Rotor: Coated in black
  Electronics enclosure: Die-cast aluminium
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 54 (acc. to EN 60529)
- **Insulation class:** "F"
- **Mounting position:** Shaft horizontal or rotor on bottom; rotor on top on request
- **Condensate discharges:** Rotor-side
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage range	Frequency	Speed/rpm	Max. power input (1)	Max. current draw (1)	Min. back pressure	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VAC**	**Hz**	**rpm**	**kW**	**A**	**Pa**	**°C**	p. 607
R3G 250	M3G 112-EA	Ⓐ	1~ 200-277	50/60	1320	0.76	3.30	0	-25 to +60	L1)

subject to alterations

(1) Nominal data in operating point with maximum load and 230 VAC

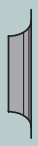
Curves

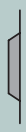


	n [rpm]	P_1 [kW]	I [A]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1	1320	0.76	3.30	81	—
Ⓐ 2	1380	0.61	2.70	78	46
Ⓐ 3	1410	0.51	2.30	76	50
Ⓐ 4	1450	0.39	1.70	73	53
Ⓐ 5	1190	0.55	2.40	78	—
Ⓐ 6	1220	0.43	1.90	75	46
Ⓐ 7	1250	0.36	1.60	73	50
Ⓐ 8	1280	0.28	1.20	69	53
Ⓐ 9	910	0.25	1.10	71	—
Ⓐ 10	930	0.20	0.90	67	46
Ⓐ 11	940	0.16	0.70	65	50
Ⓐ 12	950	0.13	0.60	61	53
Ⓐ 13	610	0.09	0.40	59	—
Ⓐ 14	610	0.07	0.40	55	46
Ⓐ 15	620	0.06	0.30	53	50
Ⓐ 16	630	0.05	0.30	49	53

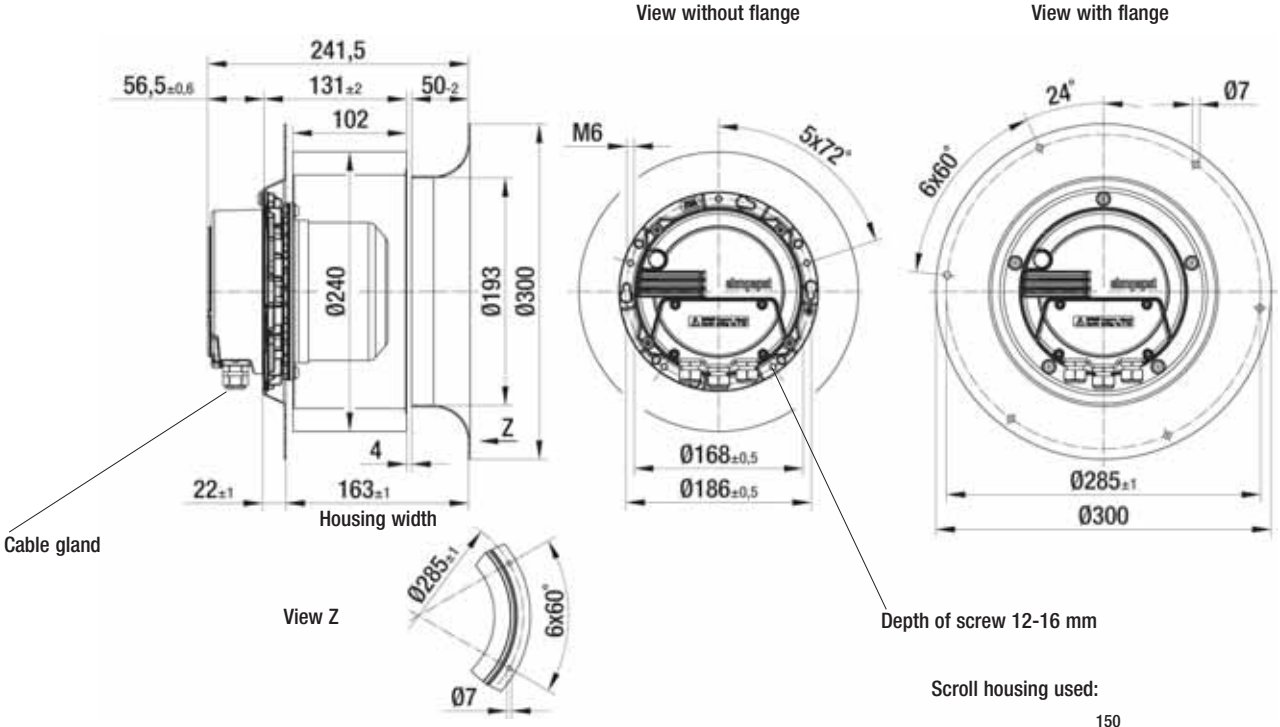
ebmpapst

- **Technical features:**
  - PFC (active)
  - Integrated PID controller
  - Control input 0-10 VDC / PWM
  - Input for sensor 0-10 V or 4-20 mA
  - Slave output 0-10 V max. 3 mA
  - Output 20 VDC (±20 %) max. 50 mA
  - Output 10 VDC (+10 %) max. 10 mA
  - RS485 ebmBUS
  - Alarm relay
  - Line undervoltage detection
  - Motor current limitation
  - Electronics / motor overtemperature protection
  - Locked-rotor protection
  - Soft start
- **EMC:** Interference emission acc. to EN 61000-6-4 (industrial environment)
  Interference immunity acc. to EN 61000-6-2 (industrial environment)
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 61800-5-1
- **Connection leads:** Via terminal strip
- **Protection class:** I (acc. to EN 610800-5-1)
- **Product conforming to standard:** CE
- **Approvals:** UL, CSA, GOST, CCC are applied for

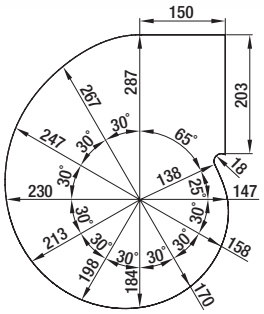




Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle	Flange
R3G 250-AS51 -11	7.6	25010-2-4013	10025-2-4017



Scroll housing used:

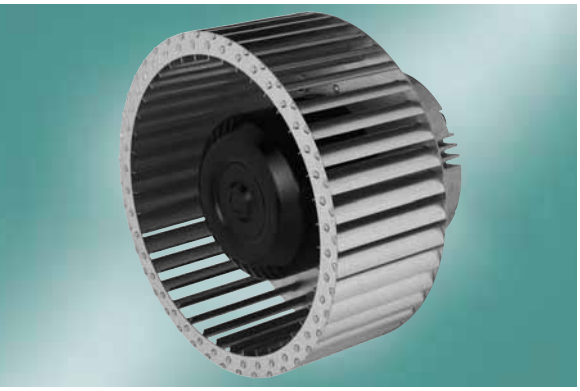


Inlet nozzle p. 552

Electr. connection p. 607

EC centrifugal fan

single inlet, Ø 280



- **Material:** Impeller: Galvanised sheet steel
  Rotor: Coated in black
  Electronics enclosure: Die-cast aluminium
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 54 (acc. to EN 60529)
- **Insulation class:** "F"
- **Mounting position:** Shaft horizontal or rotor on bottom; rotor on top on request
- **Condensate discharges:** Rotor-side
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

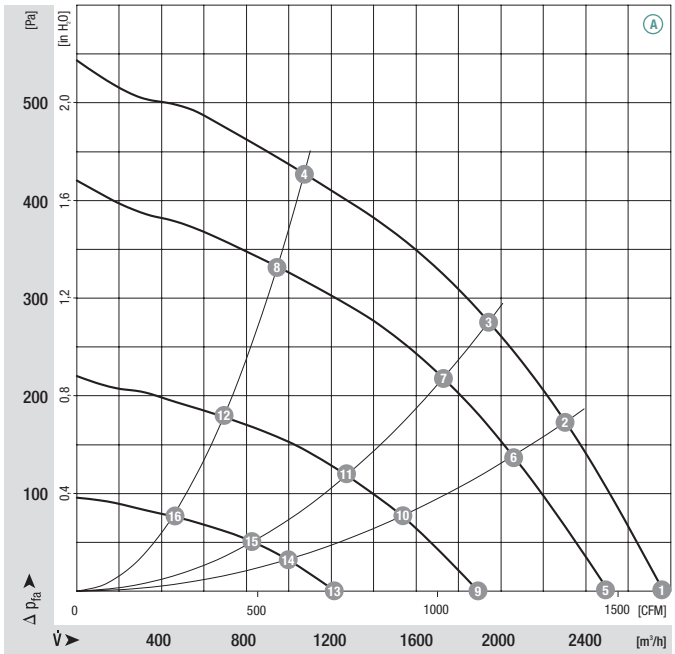
Nominal data

Type	Motor	Curve	Nominal voltage range	Frequency	Speed/rpm	Max. power input (1)	Max. current draw (1)	Min. back pressure	Perm. amb. temp.	Electr. connection
			VAC	Hz	rpm	kW	A	Pa	°C	p. 607
R3G 280	M3G 112-GA	Ⓐ	1~ 200-277	50/60	1130	0.75	3.30	0	-25 to +50	L1)

subject to alterations

(1) Nominal data in operating point with maximum load and 230 VAC

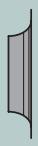
Curves

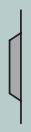


		n [rpm]	P_1 [kW]	I [A]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ	1	1130	0.75	3.30	78	—
Ⓐ	2	1170	0.60	2.70	75	53
Ⓐ	3	1210	0.53	2.30	73	54
Ⓐ	4	1250	0.32	1.40	69	51
Ⓐ	5	1020	0.56	2.50	76	—
Ⓐ	6	1050	0.44	2.00	72	53
Ⓐ	7	1070	0.37	1.60	70	54
Ⓐ	8	1110	0.23	1.00	65	51
Ⓐ	9	780	0.25	1.10	69	—
Ⓐ	10	790	0.20	0.90	65	53
Ⓐ	11	800	0.17	0.80	63	54
Ⓐ	12	820	0.11	0.50	58	51
Ⓐ	13	520	0.09	0.40	58	—
Ⓐ	14	530	0.08	0.40	54	53
Ⓐ	15	530	0.07	0.30	51	54
Ⓐ	16	550	0.05	0.30	46	51

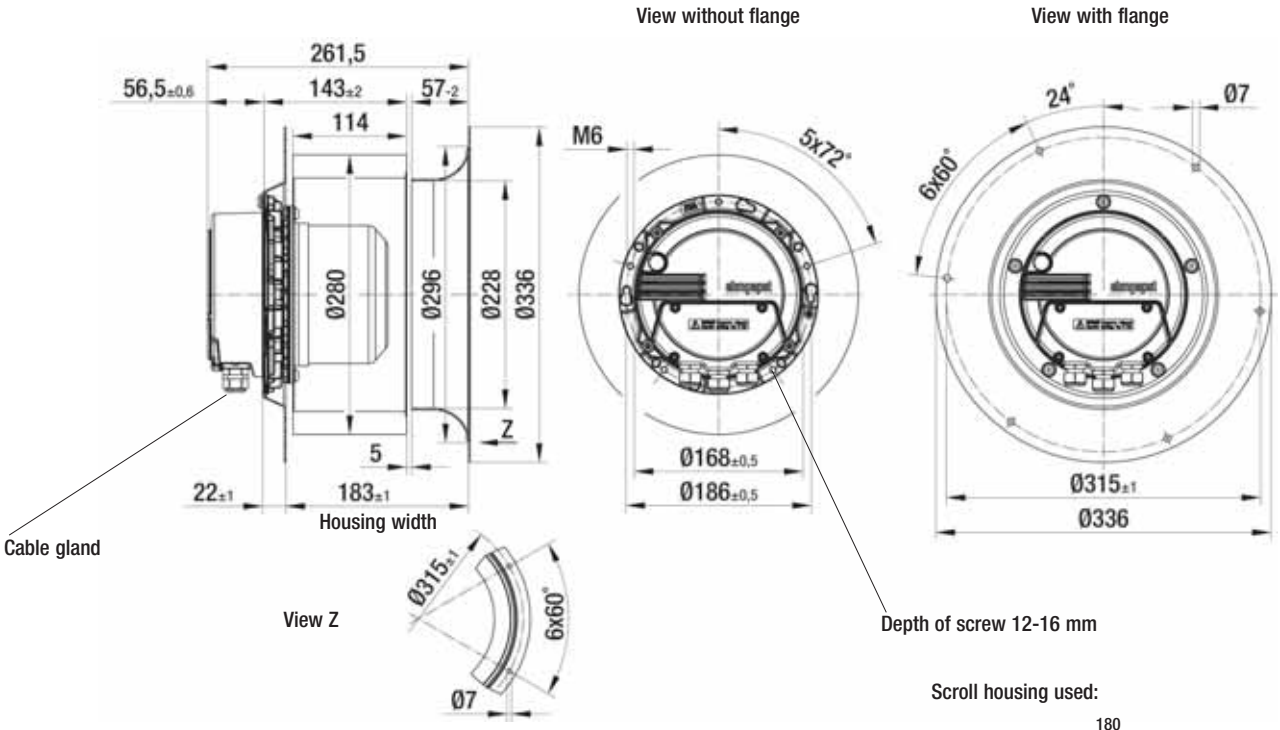
ebmpapst

- **Technical features:**
  - PFC (active)
  - Integrated PID controller
  - Control input 0-10 VDC / PWM
  - Input for sensor 0-10 V or 4-20 mA
  - Slave output 0-10 V max. 3 mA
  - Output 20 VDC (±20 %) max. 50 mA
  - Output 10 VDC (+10 %) max. 10 mA
  - RS485 ebmBUS
  - Alarm relay
  - Line undervoltage detection
  - Motor current limitation
  - Electronics / motor overtemperature protection
  - Locked-rotor protection
  - Soft start
- **EMC:** Interference emission acc. to EN 61000-6-4 (industrial environment)
  Interference immunity acc. to EN 61000-6-2 (industrial environment)
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 61800-5-1
- **Connection leads:** Via terminal strip
- **Protection class:** I (acc. to EN 610800-5-1)
- **Product conforming to standard:** CE
- **Approvals:** VDE, UL, CSA, GOST, CCC are applied for

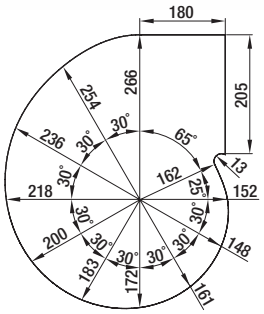




Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle	Flange
R3G 280-AN32 -11	9.4	28010-2-4013	10026-2-4017



Scroll housing used:

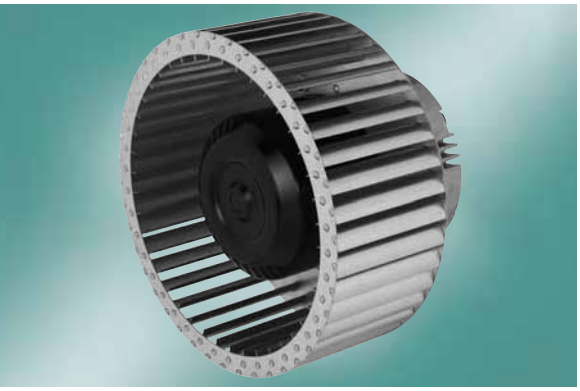


Inlet nozzle p. 552

Electr. connection p. 607

EC centrifugal fan

single inlet, Ø 280



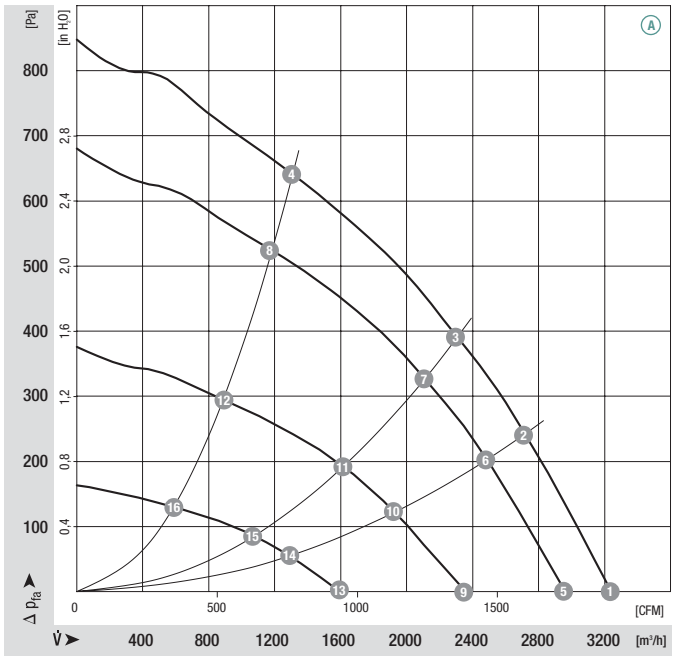
- **Material:** Impeller: Galvanised sheet steel
  Rotor: Coated in black
  Electronics enclosure: Die-cast aluminium
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 54 (acc. to EN 60529)
- **Insulation class:** "F"
- **Mounting position:** Shaft horizontal or rotor on bottom; rotor on top on request
- **Condensate discharges:** Rotor-side
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage range	Frequency	Speed/rpm	Max. power input (1)	Max. current draw (1)	Min. back pressure	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VAC**	**Hz**	**rpm**	**kW**	**A**	**Pa**	**°C**	p. 607
R3G 280	M3G 112-GA	Ⓐ	3~ 380-480	50/60	1300	1.10	2.00	0	-25 to +50	L2)

subject to alterations

(1) Nominal data in operating point with maximum load and 400 VAC

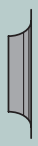
Curves

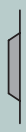


	n [rpm]	P_1 [kW]	I [A]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1	1300	1.10	2.00	82	—
Ⓐ 2	1370	0.94	1.80	79	55
Ⓐ 3	1420	0.81	1.50	77	59
Ⓐ 4	1540	0.53	1.00	73	57
Ⓐ 5	1200	0.87	1.60	79	—
Ⓐ 6	1260	0.73	1.40	76	55
Ⓐ 7	1310	0.62	1.20	75	59
Ⓐ 8	1400	0.40	0.80	71	57
Ⓐ 9	970	0.46	0.90	74	—
Ⓐ 10	990	0.36	0.80	70	55
Ⓐ 11	1010	0.30	0.60	68	59
Ⓐ 12	1050	0.19	0.50	63	57
Ⓐ 13	660	0.16	0.40	64	—
Ⓐ 14	680	0.13	0.30	60	55
Ⓐ 15	680	0.11	0.30	58	59
Ⓐ 16	710	0.08	0.20	53	57

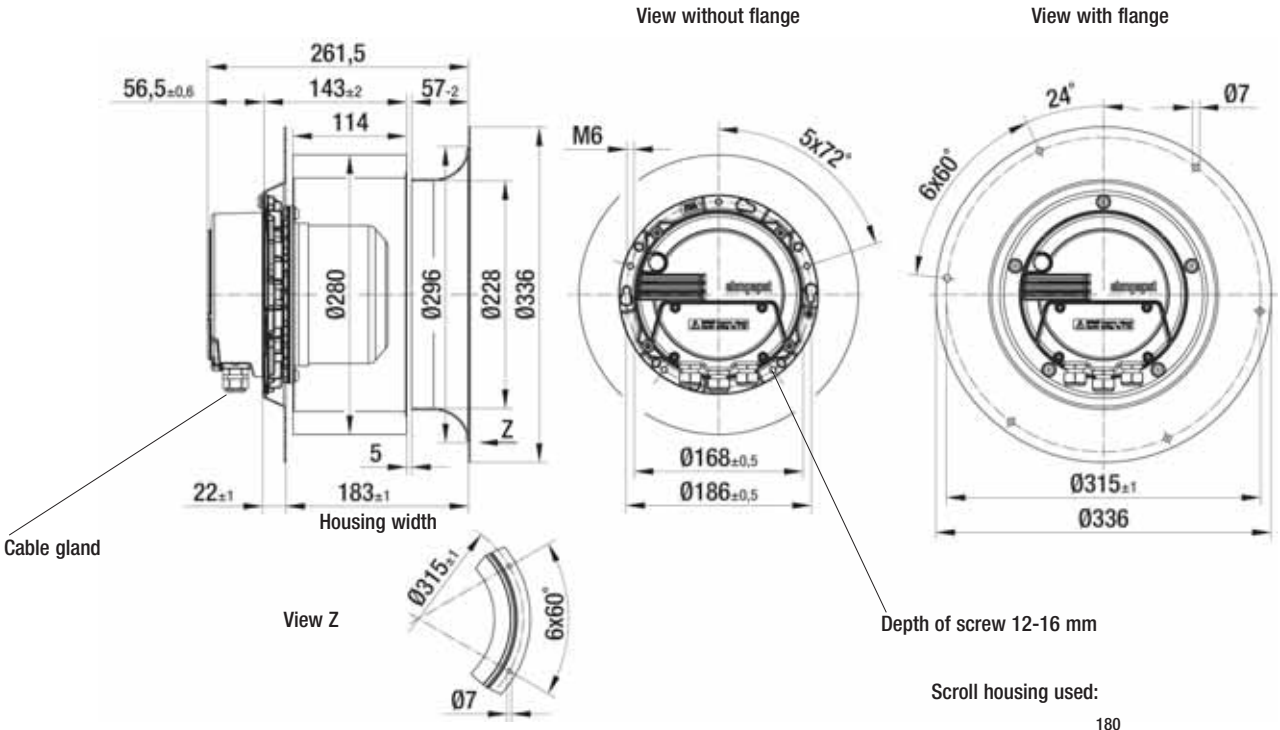
ebmpapst

- **Technical features:**
  - PFC (passive)
  - Integrated PID controller
  - Control input 0-10 VDC / PWM
  - Input for sensor 0-10 V or 4-20 mA
  - Slave output 0-10 V max. 3 mA
  - Output 20 VDC (±20 %) max. 50 mA
  - Output 10 VDC (+10 %) max. 10 mA
  - RS485 ebmBUS
  - Alarm relay
  - Line undervoltage / phase failure detection
  - Motor current limitation
  - Electronics / motor overtemperature protection
  - Locked-rotor protection
  - Soft start
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-2
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 61800-5-1
- **Connection leads:** Via terminal strip
- **Protection class:** I (acc. to EN 610800-5-1)
- **Product conforming to standard:** CE
- **Approvals:** VDE, UL, CSA, GOST, CCC are applied for

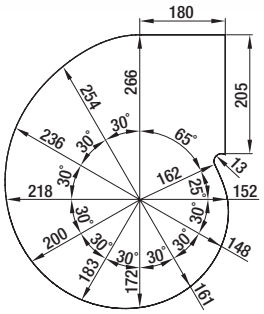




Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle	Flange
R3G 280-AN32 -01	9.4	28010-2-4013	10026-2-4017



Scroll housing used:

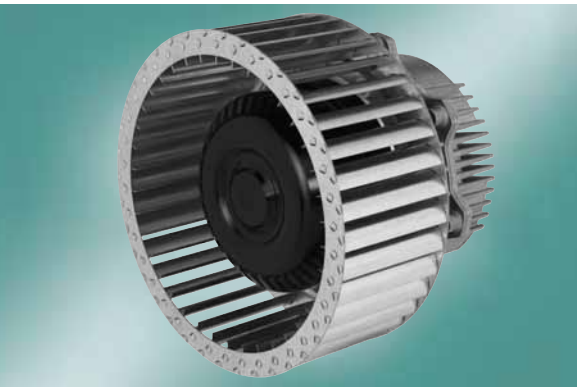


Inlet nozzle p. 552

Electr. connection p. 607

EC centrifugal fan

single inlet, Ø 310



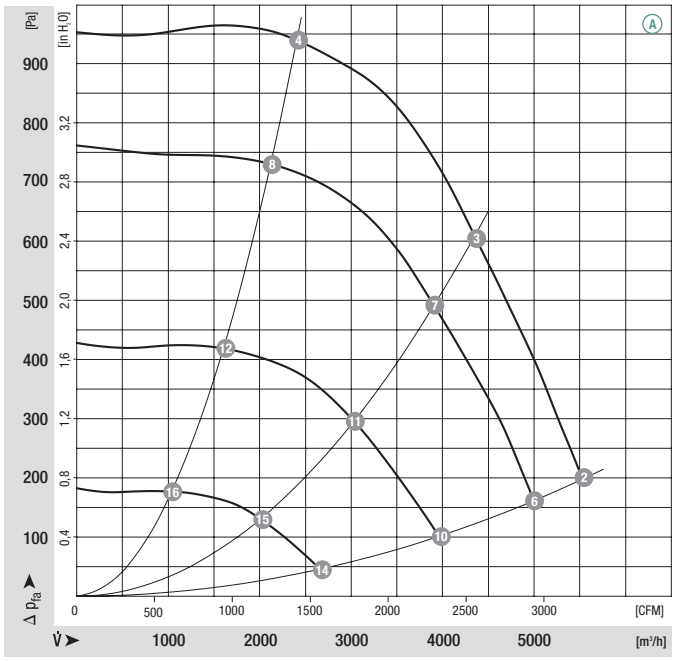
- **Material:** Impeller: Galvanised sheet steel
  Rotor: Coated in black
  Electronics enclosure: Die-cast aluminium
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 54 (acc. to EN 60529)
- **Insulation class:** "F"
- **Mounting position:** Shaft horizontal or rotor on bottom; rotor on top on request
- **Condensate discharges:** Rotor-side
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage range	Frequency	Speed/rpm	Max. power input (1)	Max. current draw (1)	Min. back pressure	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VAC**	**Hz**	**rpm**	**kW**	**A**	**Pa**	**°C**	p. 608
R3G 310	M3G 150-FF	Ⓐ	3~ 380-480	50/60	1500	2.97	4.60	200	-25 to +45	M)

subject to alterations

(1) Nominal data in operating point with maximum load and 400 VAC

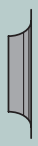
Curves



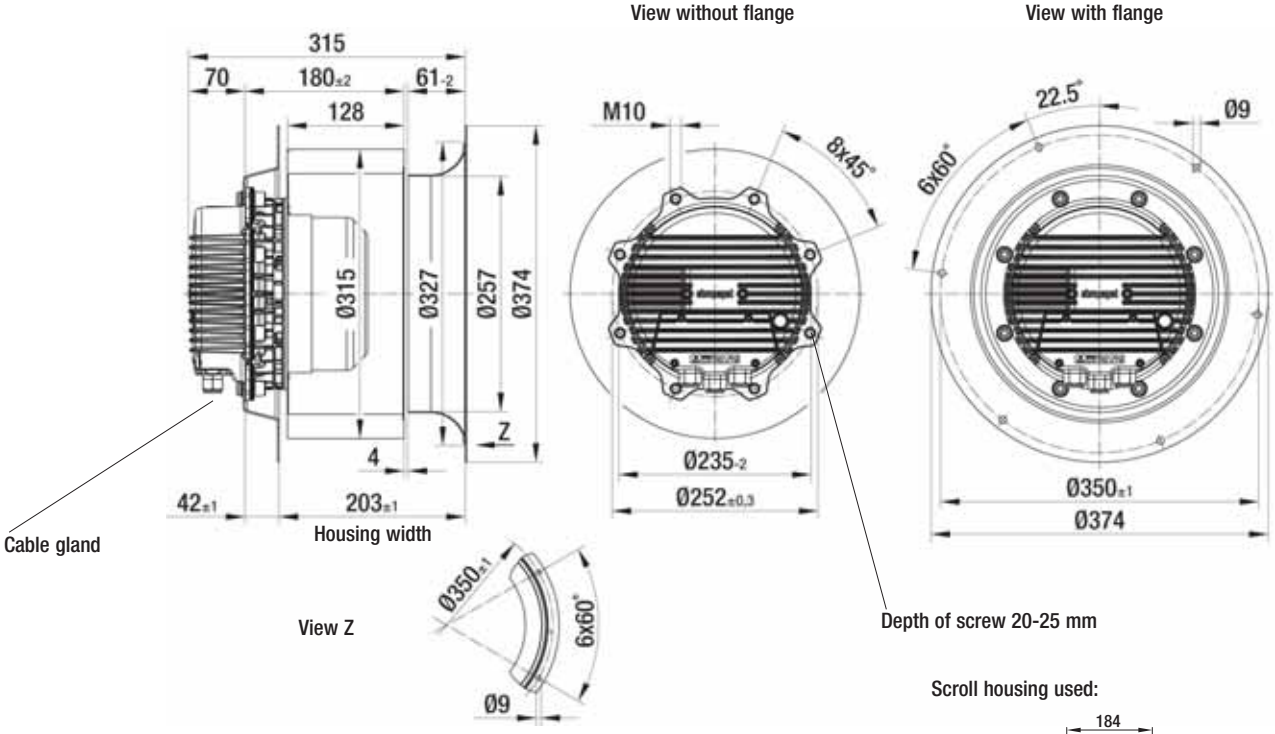
	n [rpm]	P_1 [kW]	I [A]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1	—	—	—	—	—
Ⓐ 2	1500	2.97	4.60	88	47
Ⓐ 3	1600	2.34	3.70	85	57
Ⓐ 4	1730	1.37	2.10	82	56
Ⓐ 5	—	—	—	—	—
Ⓐ 6	1350	2.19	3.30	85	47
Ⓐ 7	1440	1.71	2.60	82	57
Ⓐ 8	1540	0.96	1.60	79	56
Ⓐ 9	—	—	—	—	—
Ⓐ 10	1080	1.12	1.80	80	47
Ⓐ 11	1120	0.82	1.40	76	57
Ⓐ 12	1170	0.47	1.00	72	56
Ⓐ 13	—	—	—	—	—
Ⓐ 14	730	0.37	0.90	69	47
Ⓐ 15	750	0.27	0.70	65	57
Ⓐ 16	780	0.16	0.50	60	56

ebmpapst

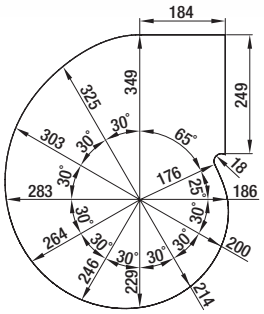
- **Technical features:**
  - PFC (passive)
  - Integrated PID controller
  - Control input 0-10 VDC / PWM
  - Input for sensor 0-10 V or 4-20 mA
  - Slave output 0-10 V max. 3 mA
  - Output 20 VDC (±20 %) max. 50 mA
  - Output 10 VDC (+10 %) max. 10 mA
  - RS485 ebmBUS
  - Alarm relay
  - Line undervoltage / phase failure detection
  - Motor current limitation
  - Electronics / motor overtemperature protection
  - Locked-rotor protection
  - Soft start
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-2
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 61800-5-1
- **Connection leads:** Via terminal strip
- **Protection class:** I (acc. to EN 61800-5-1)
- **Product conforming to standard:** CE
- **Approvals:** VDE, UL, CSA, GOST



Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle	Flange
R3G 310-AU07 -03	19.4	31010-2-4013	10050-2-4017



Scroll housing used:

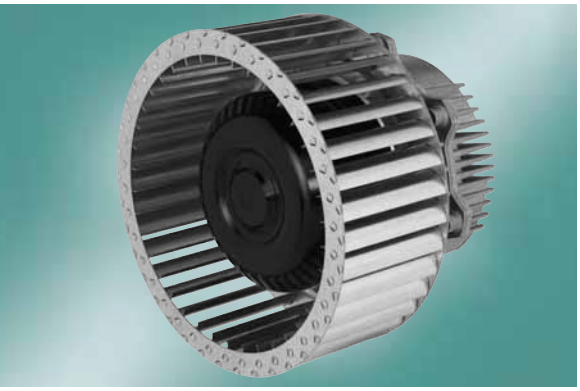


Inlet nozzle p. 552

Electr. connection p. 608

EC centrifugal fan

single inlet, Ø 355



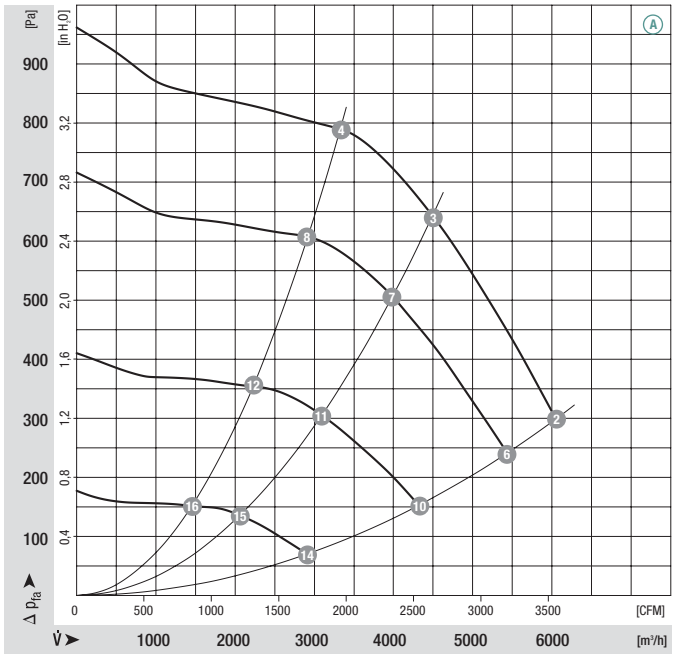
- **Material:** Impeller: Galvanised sheet steel
  Rotor: Coated in black
  Electronics enclosure: Die-cast aluminium
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 54 (acc. to EN 60529)
- **Insulation class:** "F"
- **Mounting position:** Shaft horizontal or rotor on bottom; rotor on top on request
- **Condensate discharges:** Rotor-side
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage range	Frequency	Speed/rpm	Max. power input (1)	Max. current draw (1)	Min. back pressure	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VAC**	**Hz**	**rpm**	**kW**	**A**	**Pa**	**°C**	p. 608
R3G 355	M3G 150-FF	Ⓐ	3~ 380-480	50/60	1180	2.60	4.00	300	-25 to +35	M)

subject to alterations

(1) Nominal data in operating point with maximum load and 400 VAC

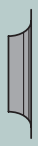
Curves

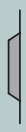


		n [rpm]	P_1 [kW]	I [A]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ	1	—	—	—	—	—
Ⓐ	2	1180	2.60	4.00	84	54
Ⓐ	3	1280	1.95	3.00	80	64
Ⓐ	4	1350	1.52	2.30	79	64
Ⓐ	5	—	—	—	—	—
Ⓐ	6	1050	1.91	2.90	82	54
Ⓐ	7	1130	1.36	2.00	77	64
Ⓐ	8	1190	1.02	1.60	75	64
Ⓐ	9	—	—	—	—	—
Ⓐ	10	840	0.97	1.70	76	54
Ⓐ	11	890	0.66	1.30	71	64
Ⓐ	12	920	0.49	1.00	68	64
Ⓐ	13	—	—	—	—	—
Ⓐ	14	580	0.31	0.70	65	54
Ⓐ	15	600	0.22	0.60	59	64
Ⓐ	16	610	0.17	0.50	56	64

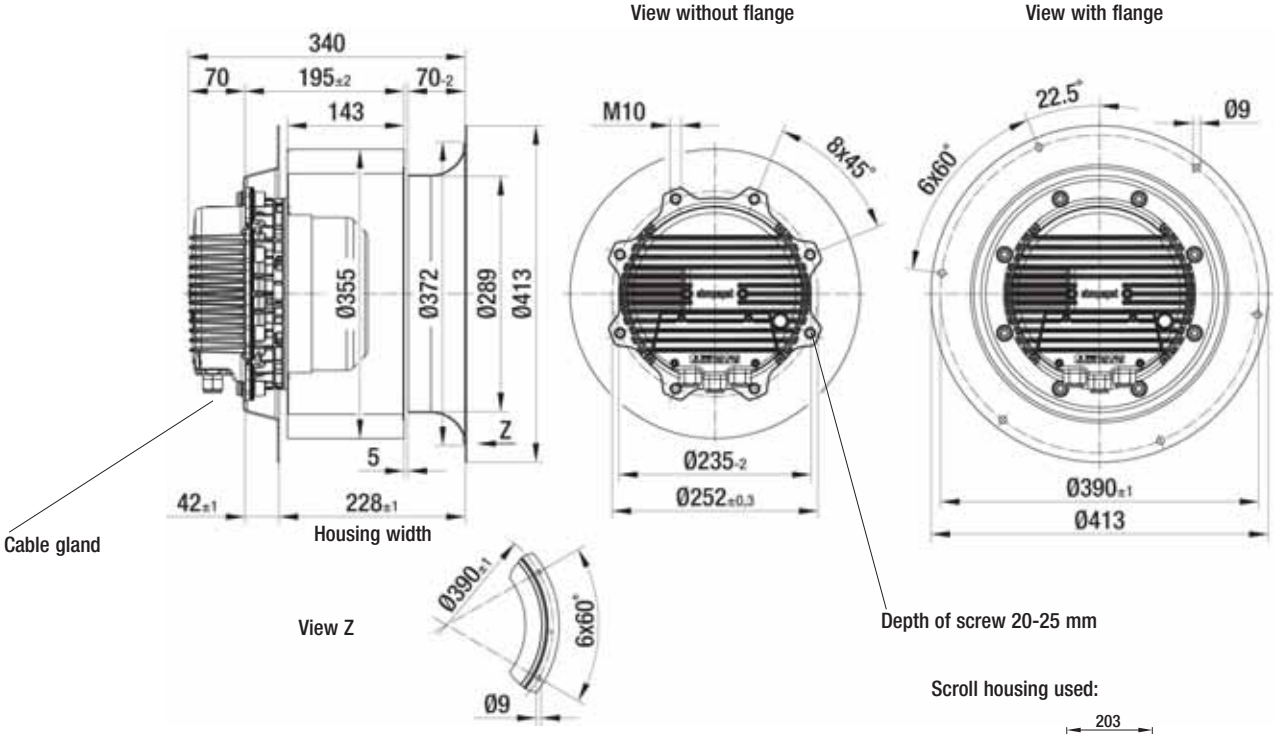
ebmpapst

- **Technical features:**
  - PFC (passive)
  - Integrated PID controller
  - Control input 0-10 VDC / PWM
  - Input for sensor 0-10 V or 4-20 mA
  - Slave output 0-10 V max. 3 mA
  - Output 20 VDC (±20 %) max. 50 mA
  - Output 10 VDC (+10 %) max. 10 mA
  - RS485 ebmBUS
  - Alarm relay
  - Line undervoltage / phase failure detection
  - Motor current limitation
  - Electronics / motor overtemperature protection
  - Locked-rotor protection
  - Soft start
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-2
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 61800-5-1
- **Connection leads:** Via terminal strip
- **Protection class:** I (acc. to EN 61800-5-1)
- **Product conforming to standard:** CE
- **Approvals:** VDE, UL, CSA, GOST

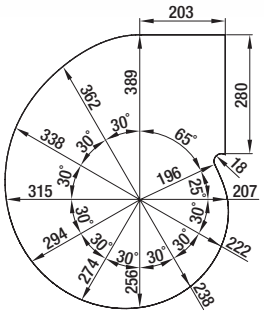




Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle	Flange
R3G 355-AR08 -03	19.9	35510-2-4013	10051-2-4017



Scroll housing used:



EC centrifugal fan

single inlet, Ø 400

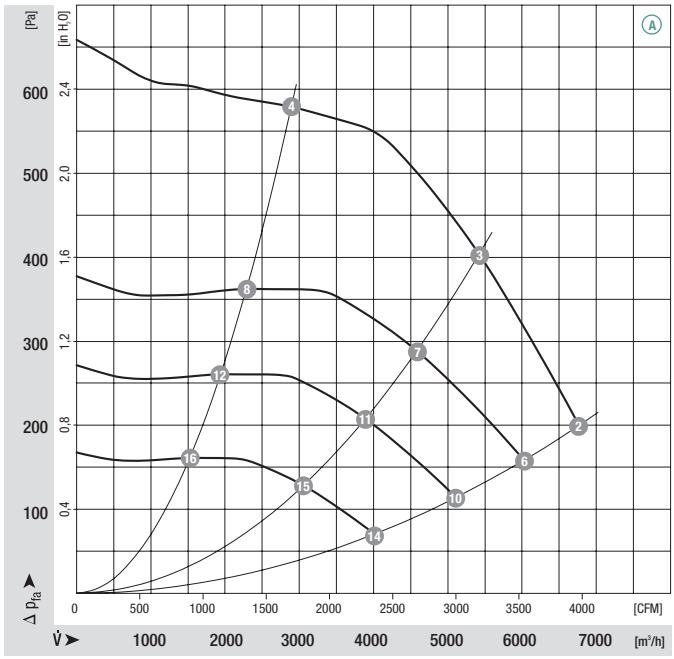
- **Material:** Impeller: Galvanised sheet steel
  Rotor: Coated in black
  Electronics enclosure: Die-cast aluminium
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 54 (acc. to EN 60529)
- **Insulation class:** "F"
- **Mounting position:** Shaft horizontal or rotor on bottom; rotor on top on request
- **Condensate discharges:** Rotor-side
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage range	Frequency	Speed/rpm	Max. power input (1)	Max. current draw (1)	Min. back pressure	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VAC**	**Hz**	**rpm**	**kW**	**A**	**Pa**	**°C**	p. 608
R3G 400	M3G 150-IF	Ⓐ	3~ 380-480	50/60	930	2.13	3.30	200	-25 to +45	M)

subject to alterations

(1) Nominal data in operating point with maximum load and 400 VAC

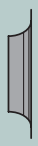
Curves

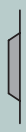


	n [rpm]	P_1 [kW]	I [A]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1	—	—	—	—	—
Ⓐ 2	930	2.13	3.30	83	54
Ⓐ 3	980	1.68	2.60	80	63
Ⓐ 4	1040	0.93	1.60	74	61
Ⓐ 5	—	—	—	—	—
Ⓐ 6	830	1.49	2.40	80	54
Ⓐ 7	830	1.01	1.60	75	63
Ⓐ 8	830	0.46	0.80	67	61
Ⓐ 9	—	—	—	—	—
Ⓐ 10	700	0.91	1.40	76	54
Ⓐ 11	700	0.62	1.00	71	63
Ⓐ 12	700	0.28	0.50	63	61
Ⓐ 13	—	—	—	—	—
Ⓐ 14	550	0.44	0.70	69	54
Ⓐ 15	550	0.30	0.50	65	63
Ⓐ 16	550	0.14	0.20	56	61

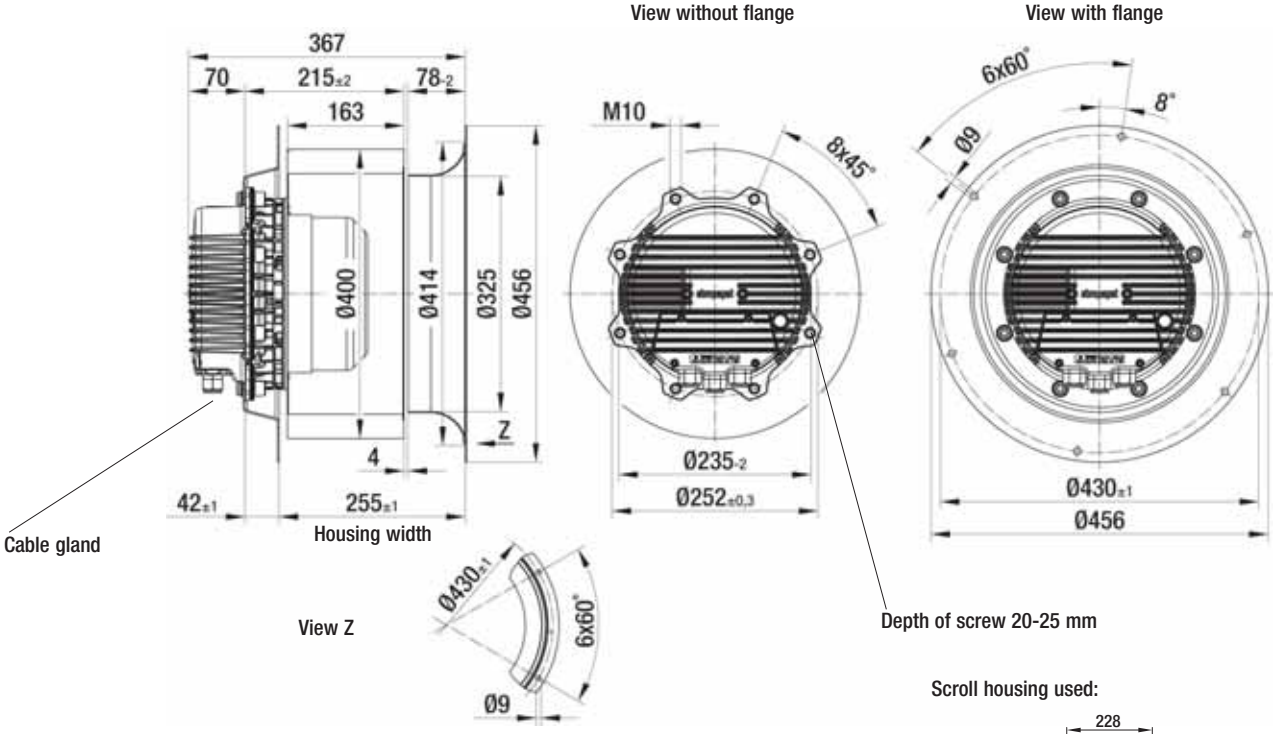
ebmpapst

- **Technical features:**
  - PFC (passive)
  - Integrated PID controller
  - Control input 0-10 VDC / PWM
  - Input for sensor 0-10 V or 4-20 mA
  - Slave output 0-10 V max. 3 mA
  - Output 20 VDC (±20 %) max. 50 mA
  - Output 10 VDC (+10 %) max. 10 mA
  - RS485 ebmBUS
  - Alarm relay
  - Line undervoltage / phase failure detection
  - Motor current limitation
  - Electronics / motor overtemperature protection
  - Locked-rotor protection
  - Soft start
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-2
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 61800-5-1
- **Connection leads:** Via terminal strip
- **Protection class:** I (acc. to EN 61800-5-1)
- **Product conforming to standard:** CE
- **Approvals:** VDE, UL, CSA, GOST

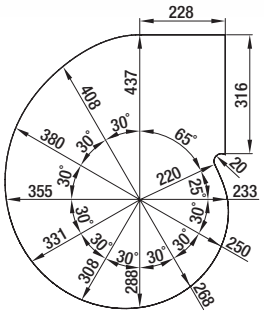




Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle	Flange
R3G 400-AR04 -03	25.5	40010-2-4013	10052-2-4017



Scroll housing used:



Inlet nozzle p. 552
Electr. connection p. 608

EC centrifugal fan

single inlet, Ø 400

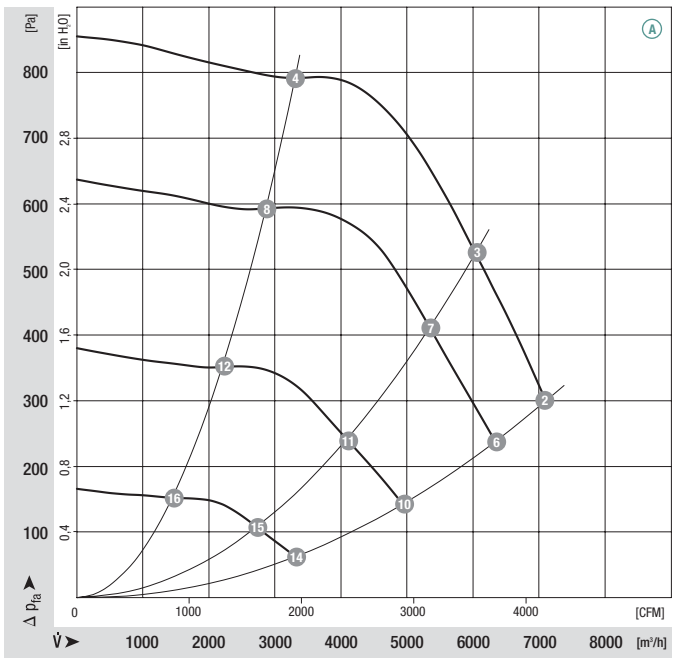
- **Material:** Impeller: Galvanised sheet steel
  Rotor: Coated in black
  Electronics enclosure: Die-cast aluminium
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 54 (acc. to EN 60529)
- **Insulation class:** "F"
- **Mounting position:** Shaft horizontal or rotor on bottom; rotor on top on request
- **Condensate discharges:** Rotor-side
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage range	Frequency	Speed/rpm	Max. power input (1)	Max. current draw (1)	Min. back pressure	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VAC**	**Hz**	**rpm**	**kW**	**A**	**Pa**	**°C**	p. 608
R3G 400	M3G 150-NA	Ⓐ	3~ 380-480	50/60	1120	3.080	4.60	300	-25 to +55	M)

subject to alterations

(1) Nominal data in operating point with maximum load and 400 VAC

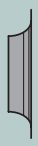
Curves

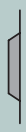


	n [rpm]	P_1 [kW]	I [A]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1	—	—	—	—	—
Ⓐ 2	1120	3.08	4.60	87	49
Ⓐ 3	1160	2.60	3.90	85	57
Ⓐ 4	1220	1.53	2.30	79	58
Ⓐ 5	—	—	—	—	—
Ⓐ 6	1000	2.16	3.20	84	49
Ⓐ 7	1020	1.81	2.70	82	57
Ⓐ 8	1060	1.02	1.70	75	58
Ⓐ 9	—	—	—	—	—
Ⓐ 10	780	1.05	1.70	78	49
Ⓐ 11	790	0.87	1.50	75	57
Ⓐ 12	820	0.51	1.10	68	58
Ⓐ 13	—	—	—	—	—
Ⓐ 14	520	0.35	0.80	67	49
Ⓐ 15	530	0.31	0.70	64	57
Ⓐ 16	550	0.19	0.50	57	58

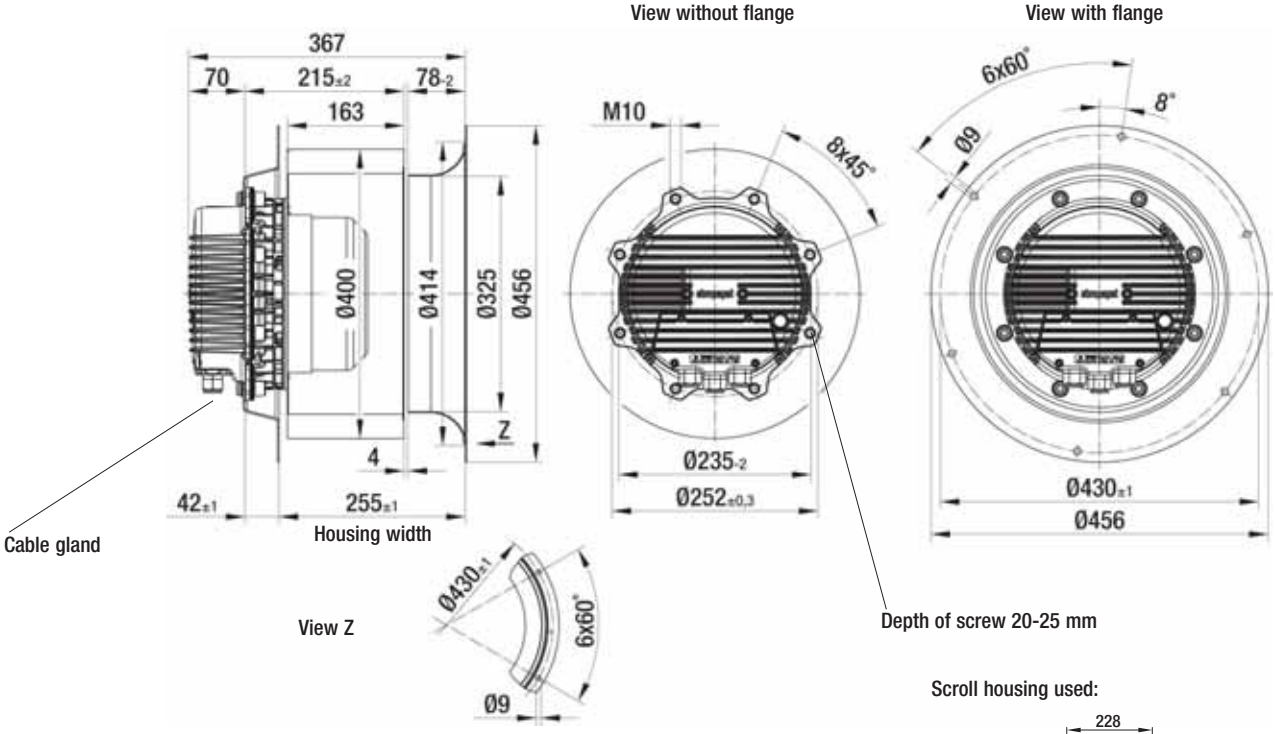
ebmpapst

- **Technical features:**
  - PFC (passive)
  - Integrated PID controller
  - Control input 0-10 VDC / PWM
  - Input for sensor 0-10 V or 4-20 mA
  - Slave output 0-10 V max. 3 mA
  - Output 20 VDC (±20 %) max. 50 mA
  - Output 10 VDC (+10 %) max. 10 mA
  - RS485 ebmBUS
  - Alarm relay
  - Line undervoltage / phase failure detection
  - Motor current limitation
  - Electronics / motor overtemperature protection
  - Locked-rotor protection
  - Soft start
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-2
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 61800-5-1
- **Connection leads:** Via terminal strip
- **Protection class:** I (acc. to EN 61800-5-1)
- **Product conforming to standard:** CE
- **Approvals:** VDE, UL, CSA, GOST

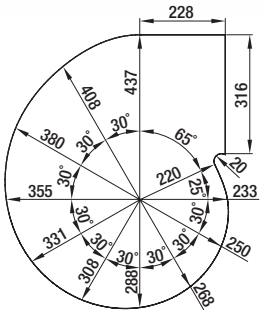




Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle	Flange
R3G 400-AT01 -03	30.0	40010-2-4013	10052-2-4017



Scroll housing used:



Inlet nozzle p. 552

Electr. connection p. 608

EC centrifugal fan

single inlet, Ø 450

- **Material:** Impeller: Galvanised sheet steel
  Rotor: Coated in black
  Electronics enclosure: Die-cast aluminium
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 54 (acc. to EN 60529)
- **Insulation class:** "F"
- **Mounting position:** Shaft horizontal or rotor on bottom; rotor on top on request
- **Condensate discharges:** Rotor-side
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

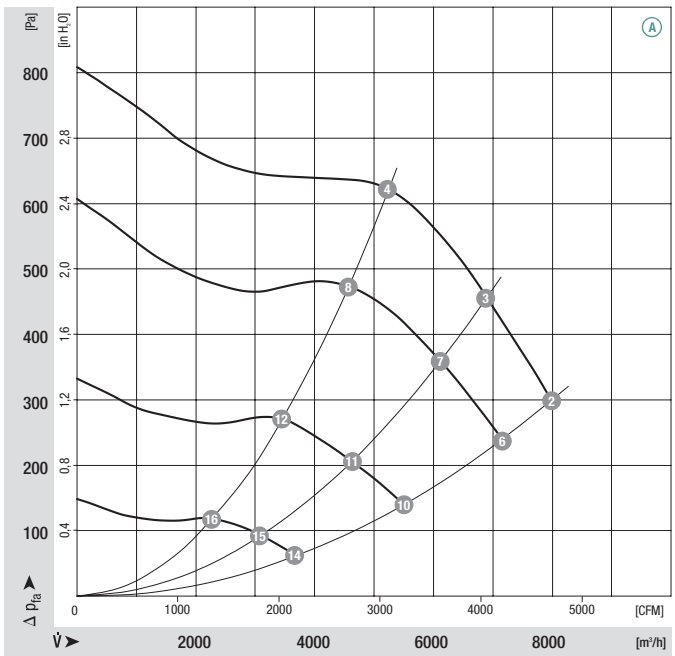
Nominal data

Type	Motor	Curve	Nominal voltage range	Frequency	Speed/rpm	Max. power input (1)	Max. current draw (1)	Min. back pressure	Perm. amb. temp.	Electr. connection
			VAC	Hz	rpm	kW	A	Pa	°C	p. 608
R3G 450	M3G 150-NA	Ⓐ	3~ 380-480	50/60	890	2.65	4.50	300	-25 to +50	M)

subject to alterations

(1) Nominal data in operating point with maximum load and 400 VAC

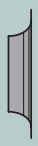
Curves



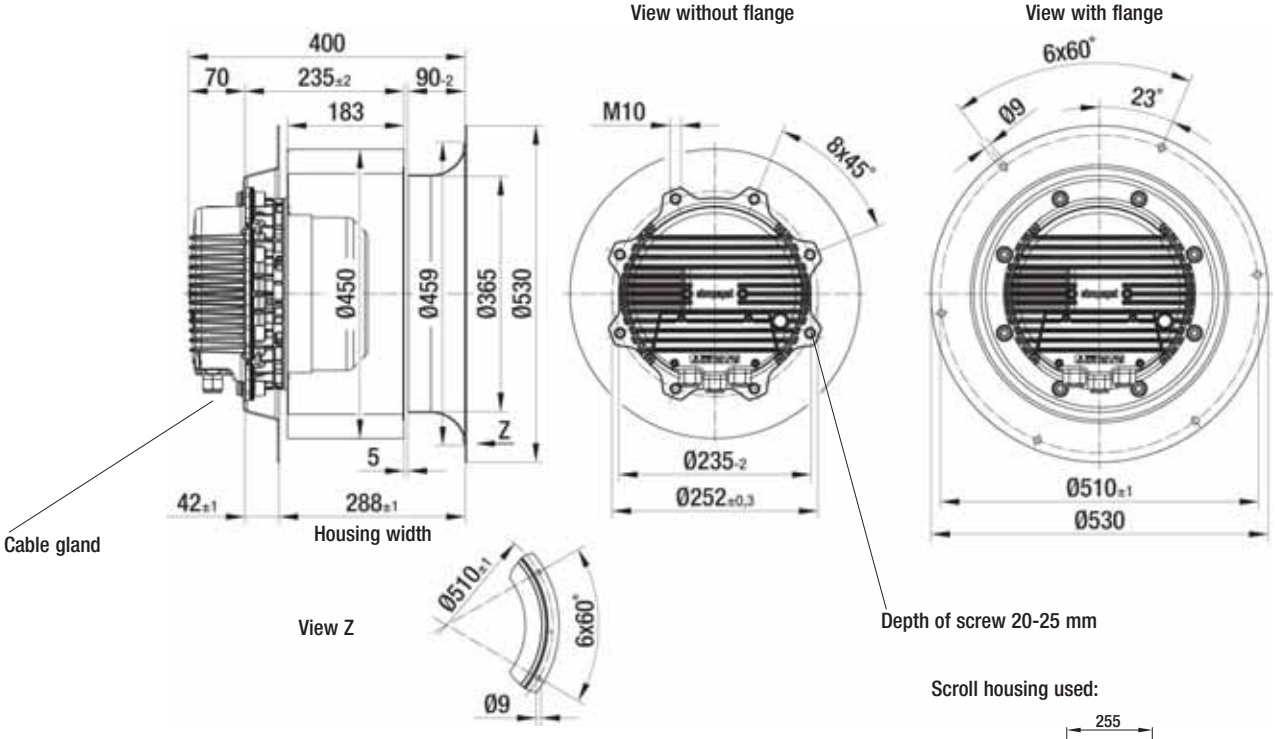
	n [rpm]	P_1 [kW]	I [A]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1	—	—	—	—	—
Ⓐ 2	890	2.65	4.50	82	60
Ⓐ 3	920	2.26	3.50	80	66
Ⓐ 4	970	1.80	2.80	76	70
Ⓐ 5	—	—	—	—	—
Ⓐ 6	790	1.82	3.20	79	60
Ⓐ 7	810	1.58	2.80	76	66
Ⓐ 8	840	1.17	2.20	74	70
Ⓐ 9	—	—	—	—	—
Ⓐ 10	610	0.83	1.60	71	60
Ⓐ 11	620	0.73	1.50	68	66
Ⓐ 12	630	0.54	1.10	66	70
Ⓐ 13	—	—	—	—	—
Ⓐ 14	410	0.27	0.70	60	60
Ⓐ 15	420	0.23	0.60	57	66
Ⓐ 16	420	0.18	0.50	54	70

ebmpapst

- **Technical features:**
  - PFC (passive)
  - Integrated PID controller
  - Control input 0-10 VDC / PWM
  - Input for sensor 0-10 V or 4-20 mA
  - Slave output 0-10 V max. 3 mA
  - Output 20 VDC (±20 %) max. 50 mA
  - Output 10 VDC (+10 %) max. 10 mA
  - RS485 ebmBUS
  - Alarm relay
  - Line undervoltage / phase failure detection
  - Motor current limitation
  - Electronics / motor overtemperature protection
  - Locked-rotor protection
  - Soft start
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-2
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 61800-5-1
- **Connection leads:** Via terminal strip
- **Protection class:** I (acc. to EN 61800-5-1)
- **Product conforming to standard:** CE
- **Approvals:** VDE, UL, CSA, GOST



Centrifugal fan	Mass of centrifugal fan kg	Inlet nozzle	Flange
R3G 450-AR03 -03	31.5	45010-2-4013	10053-2-4017



Inlet nozzle p. 552
Electr. connection p. 608

EC centrifugal blowers

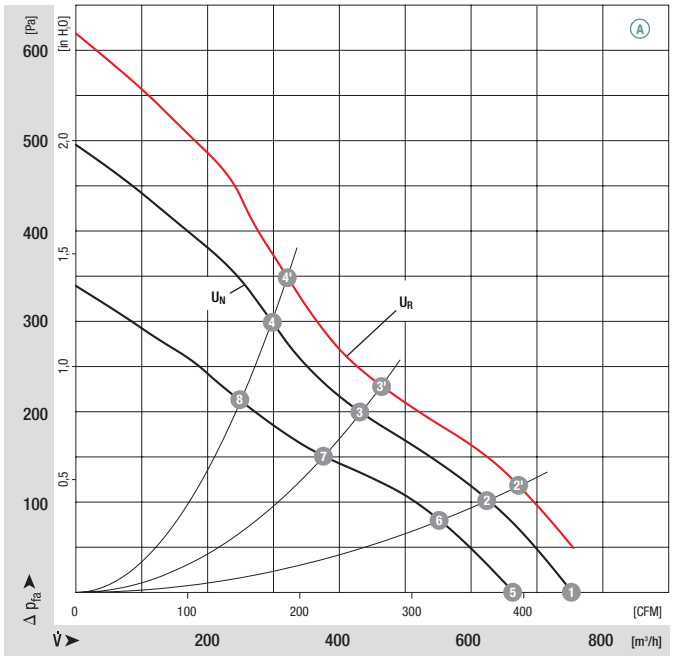
dual inlet, Ø 133

- **Material:** Housing: Galvanised sheet steel
  Impeller: Galvanised sheet steel
  Rotor: Coated in black
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 42
- **Insulation class:** "B"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Design:** Standard external-rotor motor anti-vibration mounted on both sides
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage	Voltage range	Air flow	Speed/rpm	Power input	Current draw	Sound pressure level	Min. back pressure	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VDC**	**VDC**	**m³/h**	**rpm**	**W**	**A**	**dB(A)**	**Pa**	**°C**	p. 600
D1G 133	M1G 074-BF	Ⓐ	24	16-28	700	1780	105	5.60	62	50	-25 to +60	G)
D1G 133	M1G 074-BF	Ⓐ	48	36-57	700	1780	105	2.80	62	50	-25 to +60	G)

subject to alterations

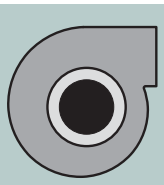
Curves



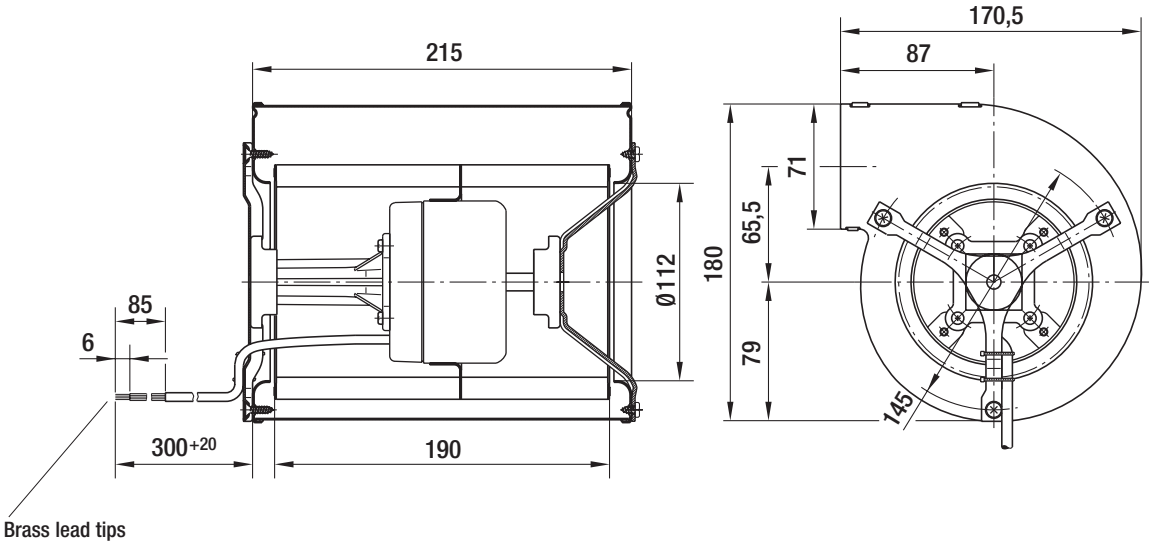
	n [rpm]	P_1 [W]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1'	—	—	—	—
Ⓐ 2'	2050	121	63	49
Ⓐ 3'	2490	106	62	41
Ⓐ 4'	2820	100	62	37
Ⓐ 1	1780	105	62	—
Ⓐ 2	1900	97	61	49
Ⓐ 3	2310	86	59	41
Ⓐ 4	2630	80	60	37
Ⓐ 5	1500	73	59	—
Ⓐ 6	1720	67	57	49
Ⓐ 7	2020	58	56	41
Ⓐ 8	2230	49	56	37

ebmpapst

- **Technical features:**
  - Control input 0-10 VDC / PWM
  - Tach output
  - Reverse polarity and locked-rotor protection
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-2
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standard:** EN 60950-1
- **Approvals:** UL, CSA; Ⓐ (48 VDC) with CCC



Centrifugal blower without flange	Mass of centrifugal blower kg
D1G 133-AB29 -52	3.3
D1G 133-AB39 -52	3.3



EC centrifugal blowers

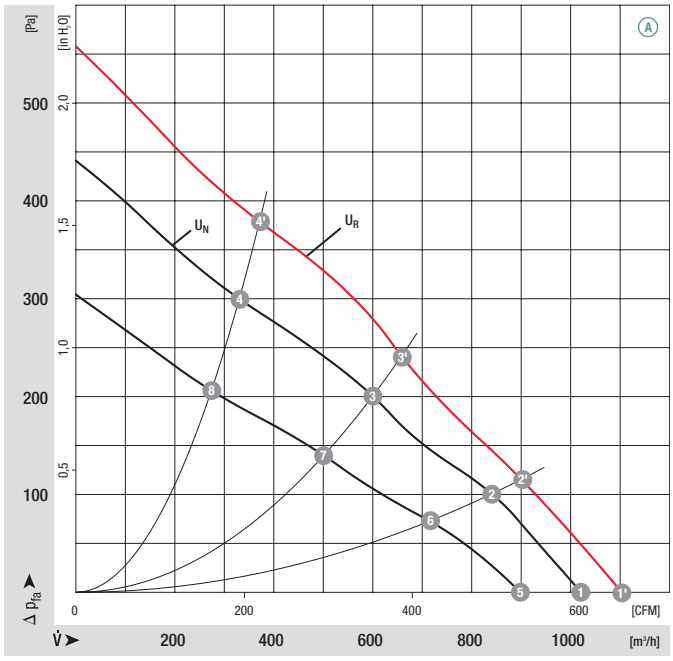
dual inlet, Ø 133

- **Material:** Housing: Galvanised sheet steel
  Impeller: Galvanised sheet steel
  Rotor: Coated in black
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 42
- **Insulation class:** "B"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Design:** Standard external-rotor motor anti-vibration mounted on both sides
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage	Voltage range	Air flow	Speed/rpm	Power input	Current draw	Sound pressure level	Min. back pressure	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VDC**	**VDC**	**m³/h**	**rpm**	**W**	**A**	**dB(A)**	**Pa**	**°C**	p. 600
D1G 133	M1G 074-CF	Ⓐ	24	16-28	1020	1580	118	6.00	64	0	-25 to +60	G)
D1G 133	M1G 074-CF	Ⓐ	48	36-57	1020	1580	118	3.00	64	0	-25 to +60	G)

subject to alterations

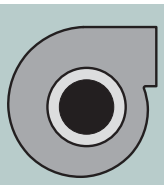
Curves



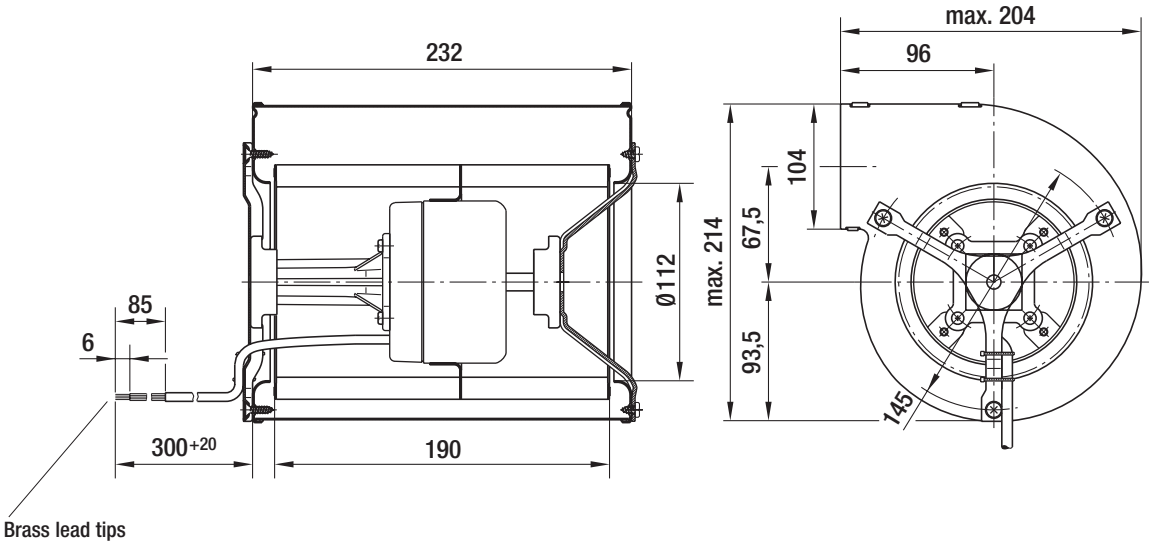
	n [rpm]	P_1 [W]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1'	1700	145	65	—
Ⓐ 2'	1930	133	62	38
Ⓐ 3'	2290	122	59	41
Ⓐ 4'	2700	99	61	32
Ⓐ 1	1580	118	64	—
Ⓐ 2	1790	107	61	38
Ⓐ 3	2100	95	57	41
Ⓐ 4	2410	73	58	32
Ⓐ 5	1400	78	60	—
Ⓐ 6	1580	70	56	38
Ⓐ 7	1760	56	53	41
Ⓐ 8	2000	44	53	32

ebmpapst

– **Technical features:**
  - Control input 0-10 VDC / PWM
  - Tach output
  - Reverse polarity and locked-rotor protection
– **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-2
– **Cable exit:** Variable
– **Protection class:** I
– **Product conforming to standard:** EN 60950-1
– **Approvals:** UL, CSA



Centrifugal blower without flange	Mass of centrifugal blower kg
D1G 133-DC13 -52	3.4
D1G 133-DC17 -52	3.4



EC centrifugal blowers

dual inlet, Ø 146

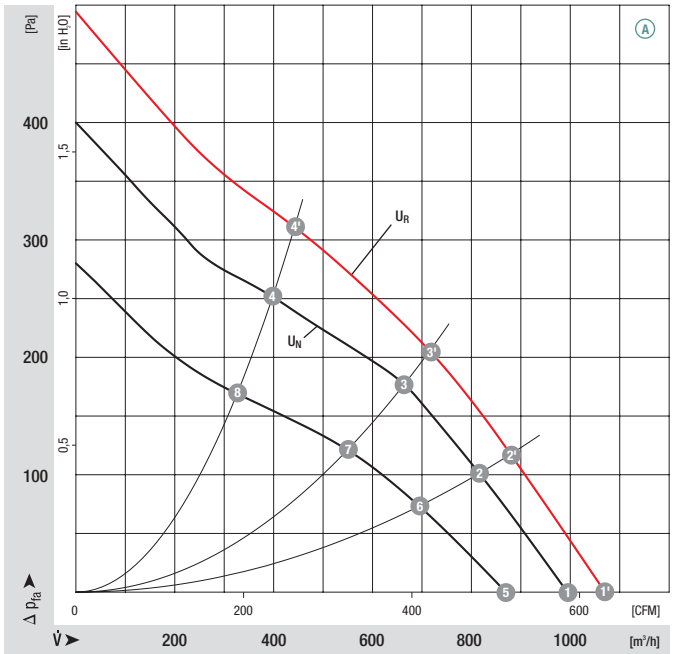
- **Material:** Housing: Galvanised sheet steel
  Impeller: Galvanised sheet steel
  Rotor: Coated in black
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 42
- **Insulation class:** "B"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Design:** Standard external-rotor motor anti-vibration mounted on both sides
- **Bearings:** Maintenance-free ball bearings

Nominal data

Type	Motor	Curve	Nominal voltage	Voltage range	Air flow	Speed/rpm	Power input	Current draw	Sound pressure level	Min. back pressure	Perm. amb. temp.	Electr. connection
			VDC	VDC	m³/h	rpm	W	A	dB(A)	Pa	°C	p. 600
D1G 146	M1G 074-CF	Ⓐ	24	16-28	1000	1350	105	5.10	61	0	-25 to +60	G)
D1G 146	M1G 074-CF	Ⓐ	48	36-57	1000	1350	105	2.60	61	0	-25 to +60	G)

subject to alterations

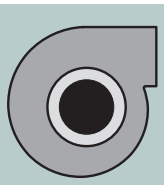
Curves



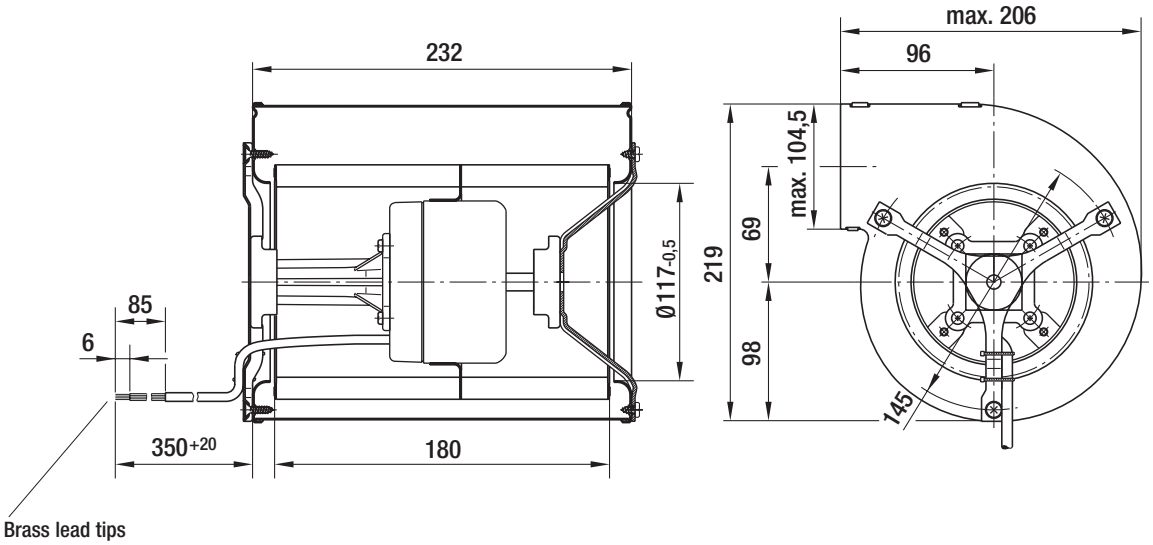
	n [rpm]	P_1 [W]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1'	1460	129	63	—
Ⓐ 2'	1680	119	60	53
Ⓐ 3'	1890	111	58	61
Ⓐ 4'	2240	95	59	55
Ⓐ 1	1350	105	61	—
Ⓐ 2	1570	95	58	53
Ⓐ 3	1750	88	56	61
Ⓐ 4	2010	70	57	55
Ⓐ 5	1210	70	56	—
Ⓐ 6	1360	60	54	53
Ⓐ 7	1460	53	52	61
Ⓐ 8	1670	42	51	55

ebmpapst

- **Technical features:**
  - Control input 0-10 VDC / PWM
  - Tach output
  - Reverse polarity and locked-rotor protection
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-2
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standard:** EN 60950-1
- **Approvals:** UL, CSA



Centrifugal blower without flange	Mass of centrifugal blower kg
D1G 146-AA19 -52	3.5
D1G 146-AA33 -52	3.5



EC centrifugal blowers

dual inlet, Ø 160

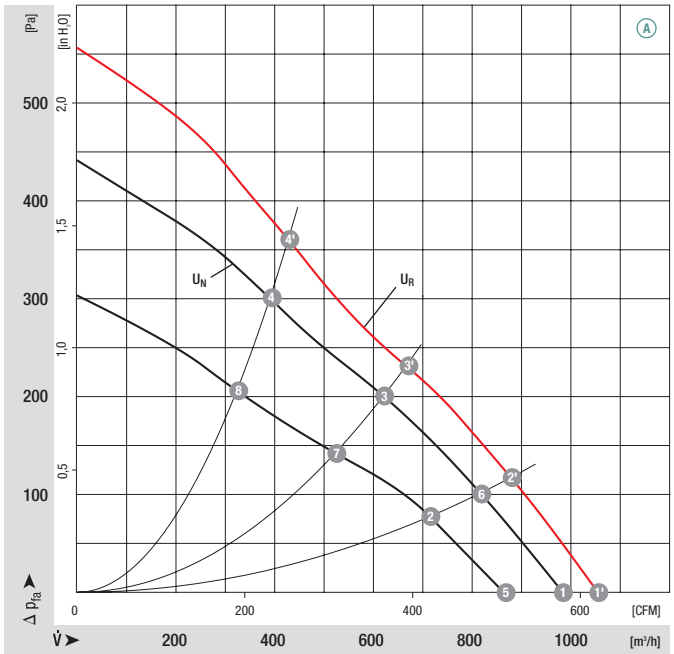
- **Material:** Housing: Galvanised sheet steel
  Impeller: Galvanised sheet steel
  Rotor: Coated in black
- **Direction of rotation:** Counter-clockwise, seen on rotor
- **Type of protection:** IP 42
- **Insulation class:** "B"
- **Mounting position:** Any
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Design:** Standard external-rotor motor anti-vibration mounted on both sides
- **Bearings:** Maintenance-free ball bearings

Nominal data

Type	Motor	Curve	Nominal voltage	Voltage range	Air flow	Speed/rpm	Power input	Current draw	Sound pressure level	Min. back pressure	Perm. amb. temp.	Electr. connection
			VDC	VDC	m³/h	rpm	W	A	dB(A)	Pa	°C	p. 600
D1G 160	M1G 074-CF	Ⓐ	24	16-28	980	1250	112	5.60	60	0	-25 to +60	G)
D1G 160	M1G 074-CF	Ⓐ	48	36-57	980	1250	112	2.90	60	0	-25 to +60	G)

subject to alterations

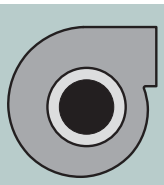
Curves



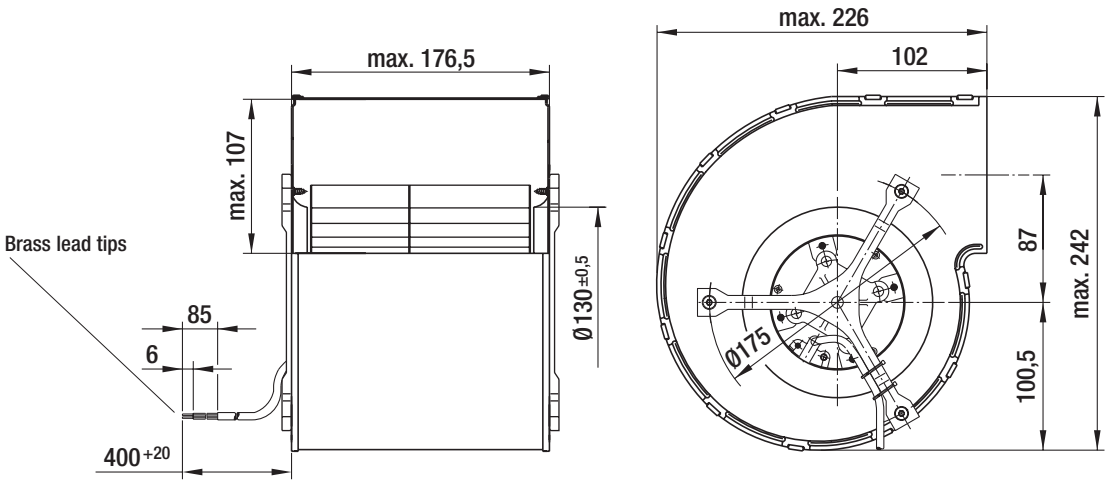
	n [rpm]	P_1 [W]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1'	1330	142	63	—
Ⓐ 2'	1520	128	61	64
Ⓐ 3'	1790	115	59	66
Ⓐ 4'	2090	105	60	60
Ⓐ 1	1250	112	60	—
Ⓐ 2	1420	102	59	64
Ⓐ 3	1660	92	58	66
Ⓐ 4	1900	80	58	60
Ⓐ 5	1100	75	58	—
Ⓐ 6	1250	69	56	64
Ⓐ 7	1420	58	54	66
Ⓐ 8	1580	47	53	60

ebmpapst

- **Technical features:**
  - Control input 0-10 VDC / PWM
  - Tach output
  - Reverse polarity and locked-rotor protection
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-2
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standard:** EN 60950-1
- **Approvals:** UL, CSA

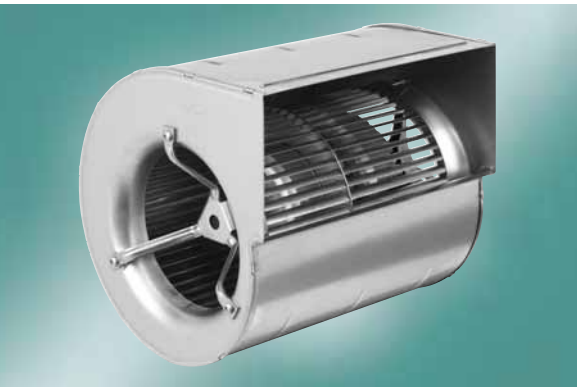


Centrifugal blower without flange	Mass of centrifugal blower kg
D1G 160-DA19 -52	3.6
D1G 160-DA33 -52	3.6



EC centrifugal blowers

dual inlet, Ø 146



- **Material:** Housing: Galvanised sheet steel
  Impeller: Galvanised sheet steel
  Rotor: Galvanised
  Electronics enclosure: Die-cast aluminium
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 44
- **Insulation class:** "B"
- **Mounting position:** Shaft horizontal; rotor on top or rotor on bottom on request
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

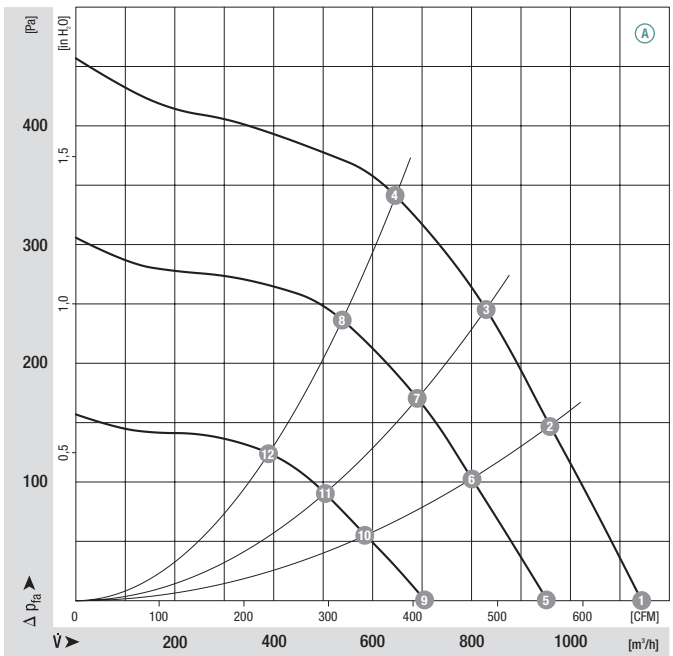
Nominal data

Type	Motor	Curve	Nominal voltage range	Frequency	Speed/rpm	Max. power input (1)	Max. current draw (1)	Min. back pressure	Perm. amb. temp.	Electr. connection
			VAC	Hz	rpm	W	A	Pa	°C	p. 603
D3G 146	M3G 074-CF	Ⓐ	1~ 200-277	50/60	1740	171	1.30	0	-25 to +60	J1)

subject to alterations

(1) Nominal data in operating point with maximum load and 230 VAC

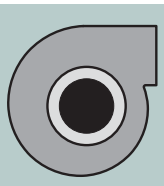
Curves



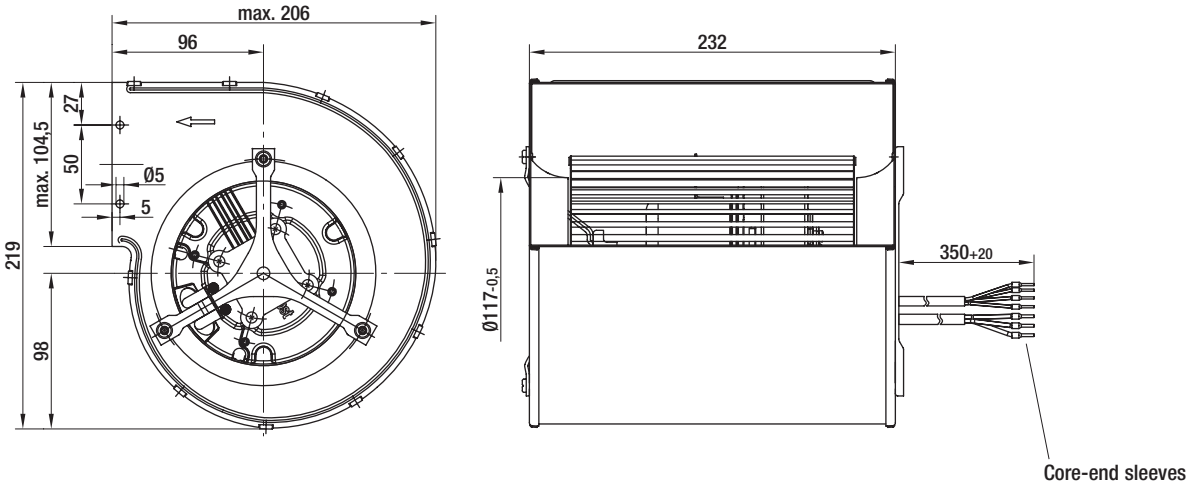
	n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1	1740	171	1.30	67	—
Ⓐ 2	1960	169	1.20	65	49
Ⓐ 3	2150	165	1.20	65	56
Ⓐ 4	2410	166	1.20	66	55
Ⓐ 5	1460	103	0.70	62	—
Ⓐ 6	1650	102	0.80	60	46
Ⓐ 7	1820	104	0.80	60	53
Ⓐ 8	2020	102	0.70	61	52
Ⓐ 9	1090	47	0.40	55	—
Ⓐ 10	1220	46	0.40	56	41
Ⓐ 11	1330	46	0.40	52	47
Ⓐ 12	1480	46	0.40	53	44

ebmpapst

- **Technical features:**
  - PFC (passive)
  - Control input 0-10 VDC / PWM
  - Output 10 VDC max. 1.1 mA
  - Tach output
  - Over-temperature protected electronics / motor
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-1
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 60950-1
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 60335-1, EN 61800-5-1, EN 60950-1, CE
- **Approvals:** UL, CSA; CCC, GOST are applied for

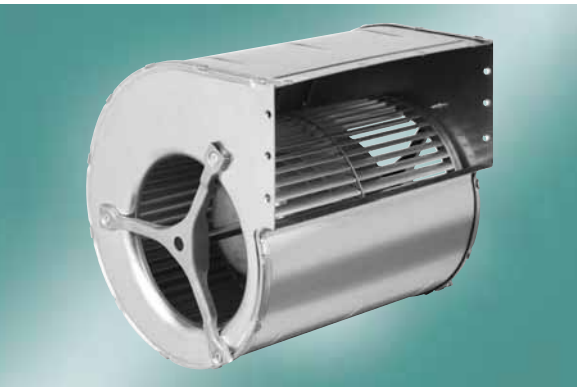


Centrifugal blower without flange	Mass of centrifugal blower kg
D3G 146-AH50 -01	4.0



EC centrifugal blowers

dual inlet, Ø 160



- **Material:** Housing: Galvanised sheet steel
  Impeller: Galvanised sheet steel
  Rotor: Galvanised
  Electronics enclosure: Die-cast aluminium
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 44
- **Insulation class:** "B"
- **Mounting position:** Shaft horizontal; rotor on top or rotor on bottom on request
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

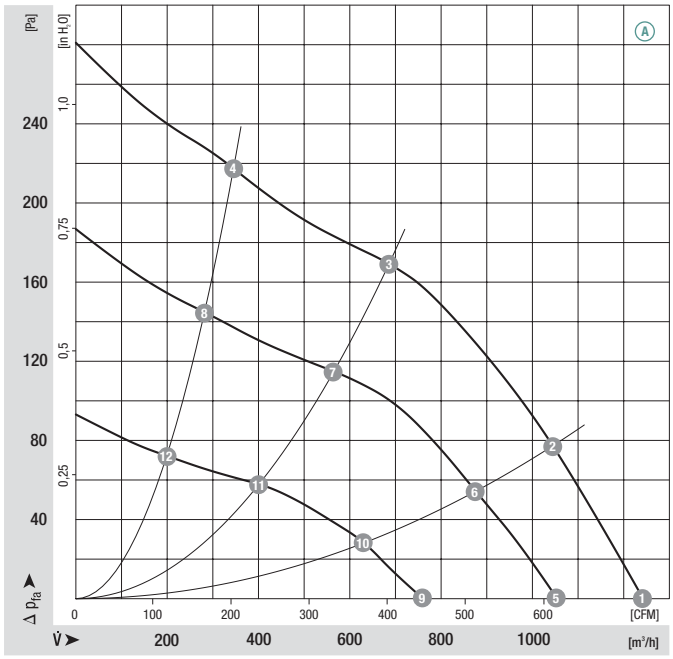
Nominal data

Type	Motor	Curve	Nominal voltage range	Frequency	Speed/rpm	Max. power input (1)	Max. current draw (1)	Min. back pressure	Perm. amb. temp.	Electr. connection
			VAC	Hz	rpm	W	A	Pa	°C	p. 603
D3G 160	M3G 074-CF	Ⓐ	1~ 200-277	50/60	1390	154	1.20	0	-25 to +60	J1)

subject to alterations

(1) Nominal data in operating point with maximum load and 230 VAC

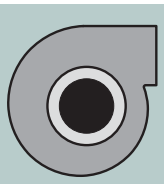
Curves



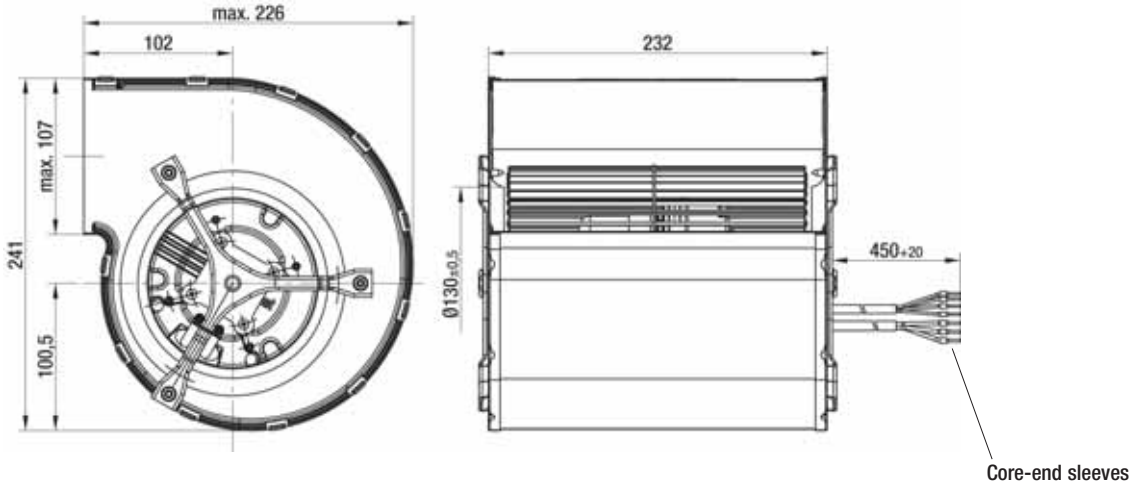
		n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ	1	1390	154	1.20	64	—
Ⓐ	2	1440	129	1.00	61	53
Ⓐ	3	1540	93	0.70	57	60
Ⓐ	4	1590	63	0.50	56	47
Ⓐ	5	1180	96	0.70	59	—
Ⓐ	6	1220	79	0.60	56	52
Ⓐ	7	1270	54	0.40	52	57
Ⓐ	8	1310	37	0.30	51	44
Ⓐ	9	860	40	0.30	51	—
Ⓐ	10	890	34	0.30	47	45
Ⓐ	11	910	24	0.20	43	45
Ⓐ	12	930	18	0.20	42	31

ebmpapst

- **Technical features:**
  - PFC (passive)
  - Control input 0-10 VDC / PWM
  - Output 10 VDC max. 1.1 mA
  - Tach output
  - Over-temperature protected electronics / motor
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-1
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 60950-1
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 60335-1, EN 61800-5-1, EN 60950-1, CE
- **Approvals:** UL, CSA; CCC, GOST are applied for

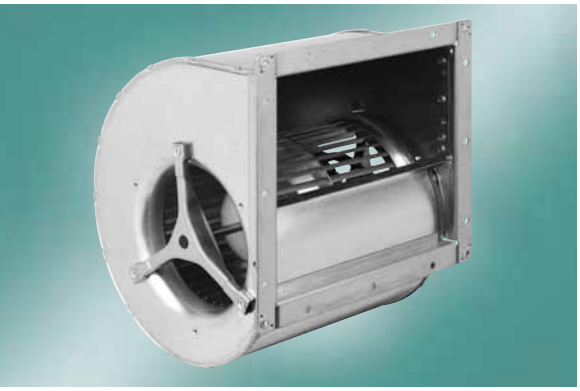


Centrifugal blower without flange	Mass of centrifugal blower kg
D3G 160-BF60 -01	4.9



EC centrifugal blowers

dual inlet, Ø 180



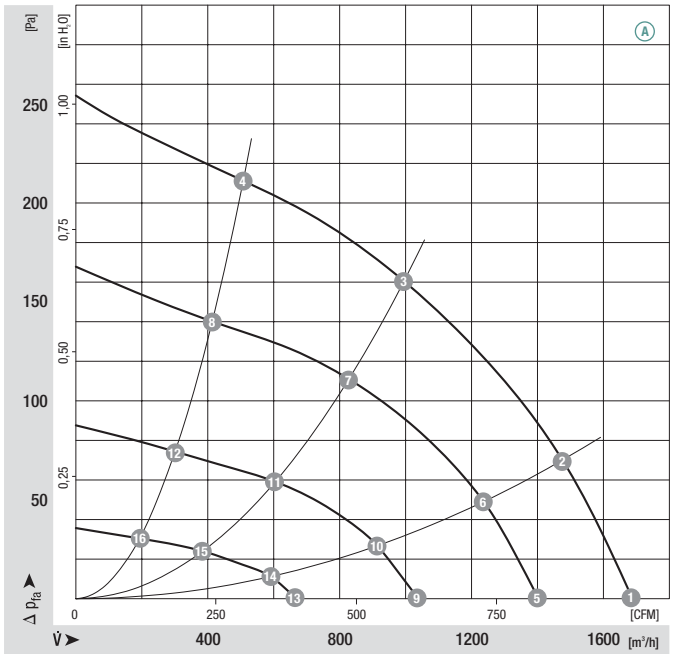
- **Material:** Housing: Galvanised sheet steel
  Impeller: Galvanised sheet steel
  Rotor: Galvanised
  Electronics enclosure: Die-cast aluminium
- **Direction of rotation:** Clockwise, seen on rotor
- **Type of protection:** IP 44
- **Insulation class:** "B"
- **Mounting position:** Shaft horizontal; rotor on top or rotor on bottom on request
- **Condensate discharges:** None
- **Mode of operation:** Continuous operation (S1)
- **Bearings:** Maintenance-free ball bearings

Nominal data		Curve	Nominal voltage range	Frequency	Speed/rpm	Max. power input (1)	Max. current draw (1)	Min. back pressure	Perm. amb. temp.	Electr. connection
Type	**Motor**		**VAC**	**Hz**	**rpm**	**W**	**A**	**Pa**	**°C**	p. 603
D3G 180	M3G 074-CF	Ⓐ	1~ 200-277	50/60	1090	165	1.22	0	-25 to +60	J1)

subject to alterations

(1) Nominal data in operating point with maximum load and 230 VAC

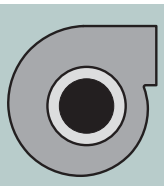
Curves



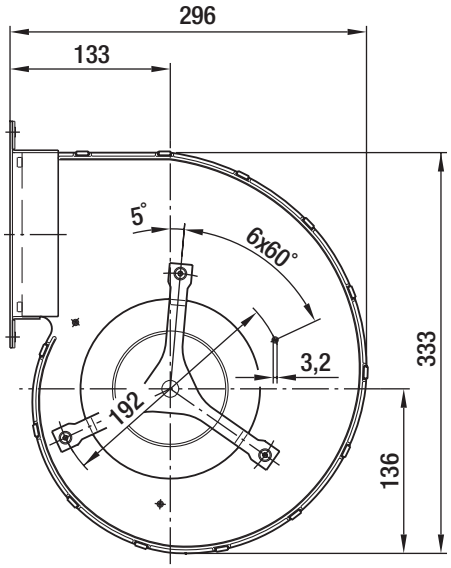
	n [rpm]	P_1 [W]	I [A]	Lp_A [dB(A)]	η_{tL} [%]
Ⓐ 1	1090	165	1.22	64	—
Ⓐ 2	1200	155	1.15	62	54
Ⓐ 3	1310	113	0.85	59	62
Ⓐ 4	1400	74	0.55	56	53
Ⓐ 5	925	101	0.75	60	—
Ⓐ 6	1015	95	0.70	58	51
Ⓐ 7	1090	67	0.50	54	61
Ⓐ 8	1145	45	0.35	51	48
Ⓐ 9	690	43	0.35	52	—
Ⓐ 10	760	42	0.30	50	47
Ⓐ 11	805	31	0.25	46	51
Ⓐ 12	840	21	0.20	43	39
Ⓐ 13	455	15	0.15	40	—
Ⓐ 14	500	15	0.15	38	36
Ⓐ 15	525	12	0.10	34	35
Ⓐ 16	545	9	0.10	32	23

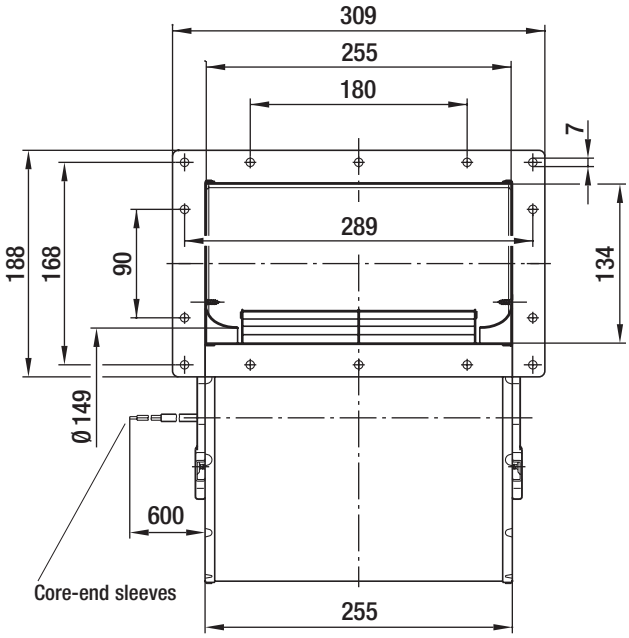
ebmpapst

- **Technical features:**
  - PFC (passive)
  - Control input 0-10 VDC / PWM
  - Output 10 VDC max. 1.1 mA
  - Tach output
  - Over-temperature protected electronics / motor
- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-1
  Harmonics acc. to DIN EN 61000-3-2/3
- **Leakage current:** < 3.5 mA acc. to EN 60950-1
- **Cable exit:** Variable
- **Protection class:** I
- **Product conforming to standards:** EN 60335-1, EN 61800-5-1, EN 60950-1, CE
- **Approvals:** UL, CSA; CCC, GOST are applied for

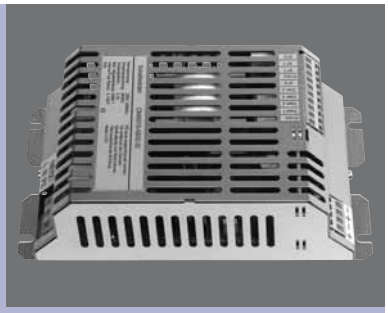


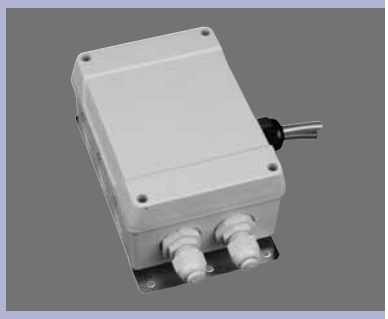
Centrifugal blower without flange	Mass of centrifugal blower kg
D3G 180-AB62 -01	7.0





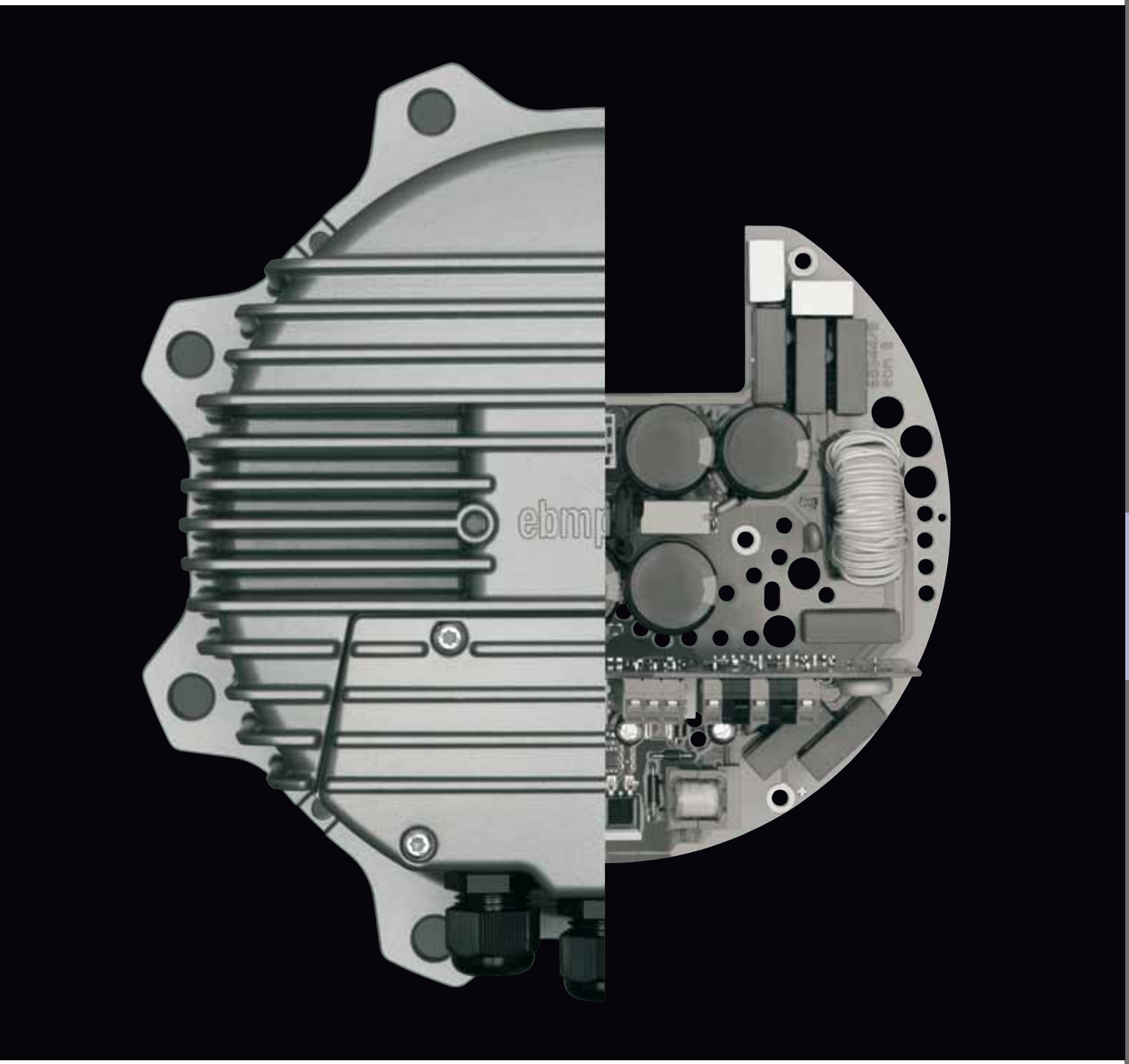
Guard grille p. 555
Electr. connection p. 603

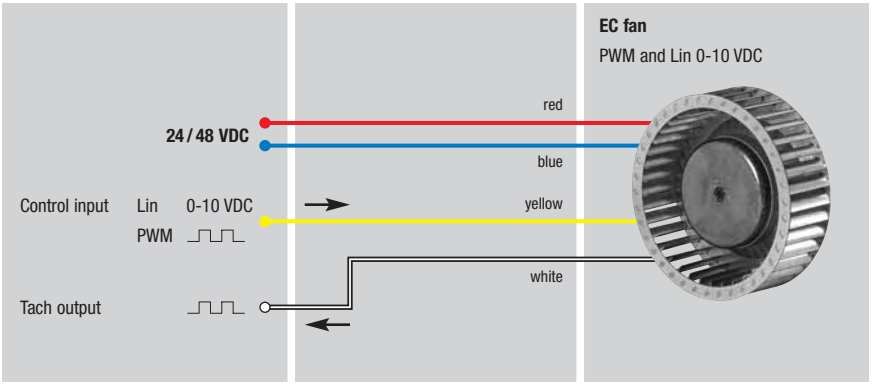




EC-SYSTEMS

	Options	518
	Switch power supplies	522
	External commutation electronics for rail technology	526
	Accessories: Temperature sensor / control module, pressure control, selection module, interface converter, ...	528
	HMS controller	546

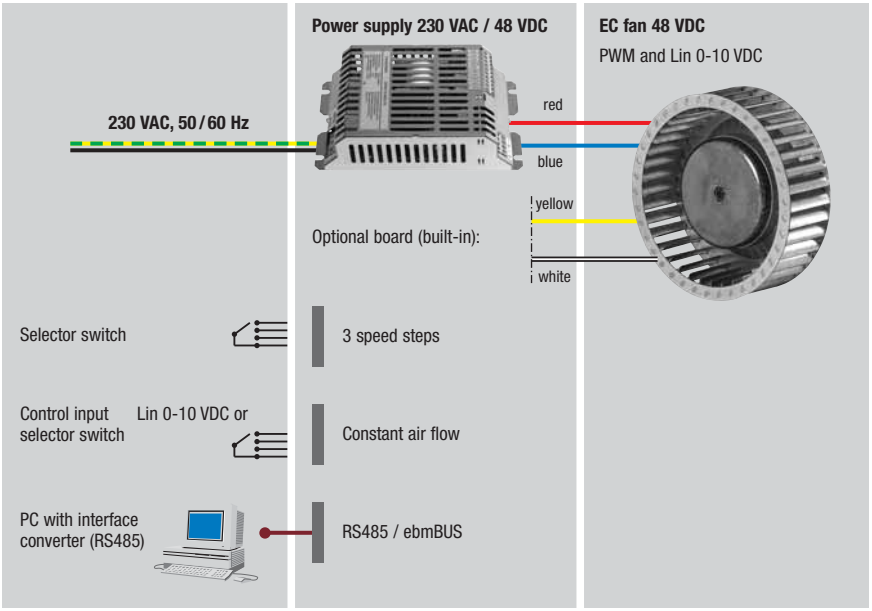




EC fans 24 / 48 VDC
with integrated commutation electronics

Linear input:
< 1 VDC -> n=0
1 VDC -> n_{min}
10 VDC -> n_{max}

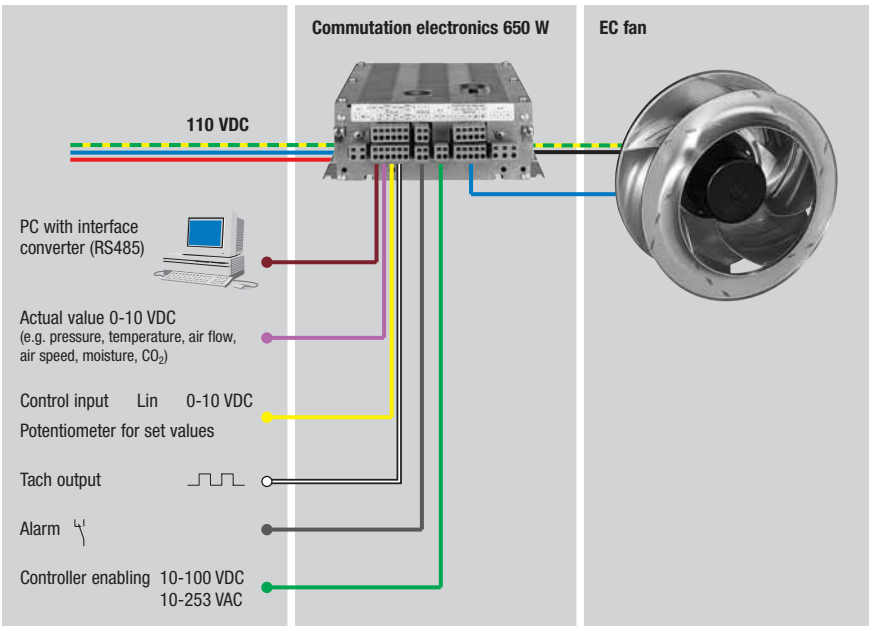
PWM input:
< 10% PWM -> n=0
10% PWM -> n_{min}
100% PWM -> n_{max}



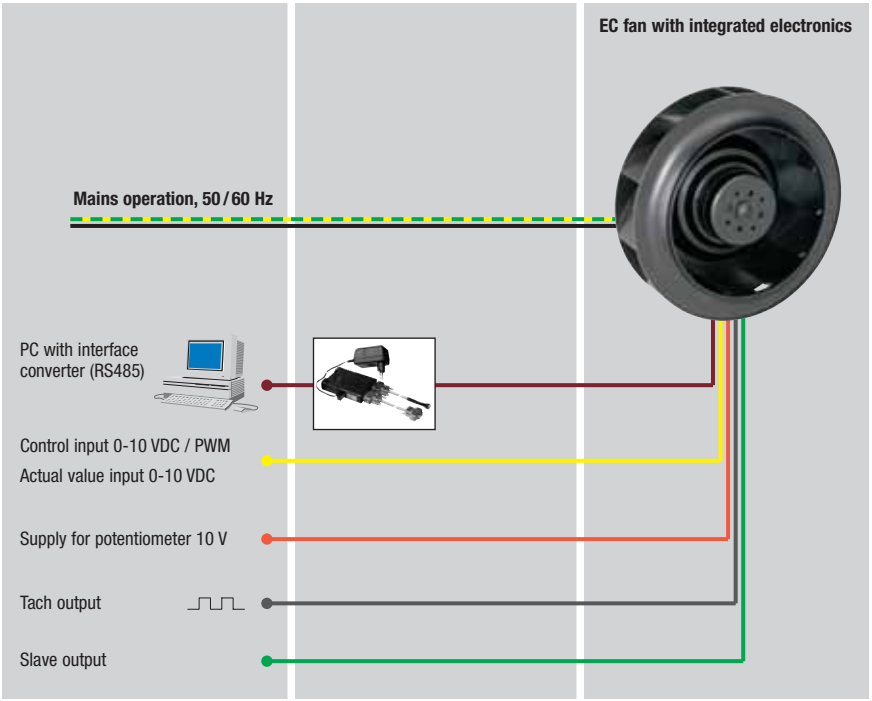
EC fans 48 VDC
with integrated commutation electronics

Linear input:
< 1 VDC -> n=0
1 VDC -> n_{min}
10 VDC -> n_{max}

PWM input:
< 10% PWM -> n=0
10% PWM -> n_{min}
100% PWM -> n_{max}

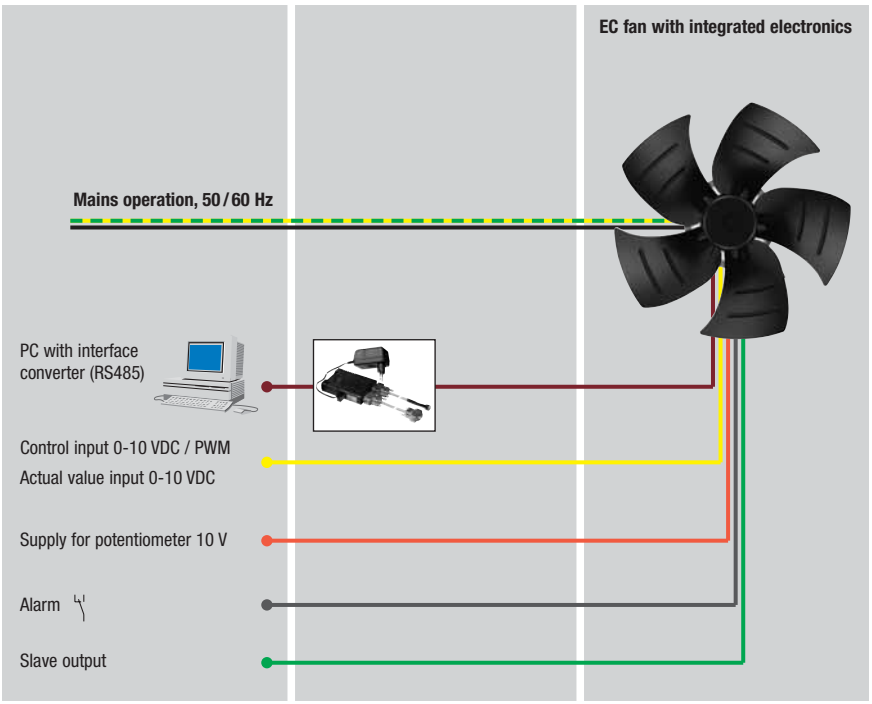


EC fans
with external commutation electronics
650 W, 110 VDC (rail technology)

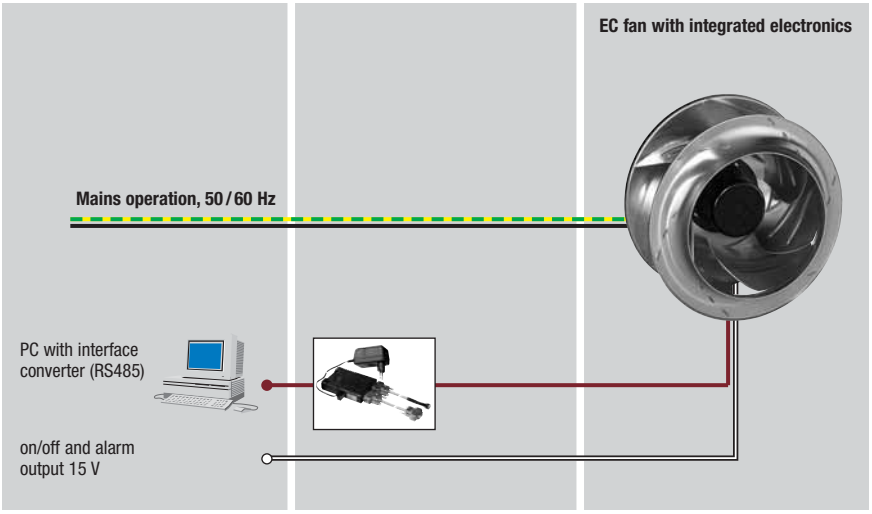


EC fans (motor size 055)
with integrated commutation electronics
1~ 115 VAC or 230 VAC
50/60 Hz mains operation

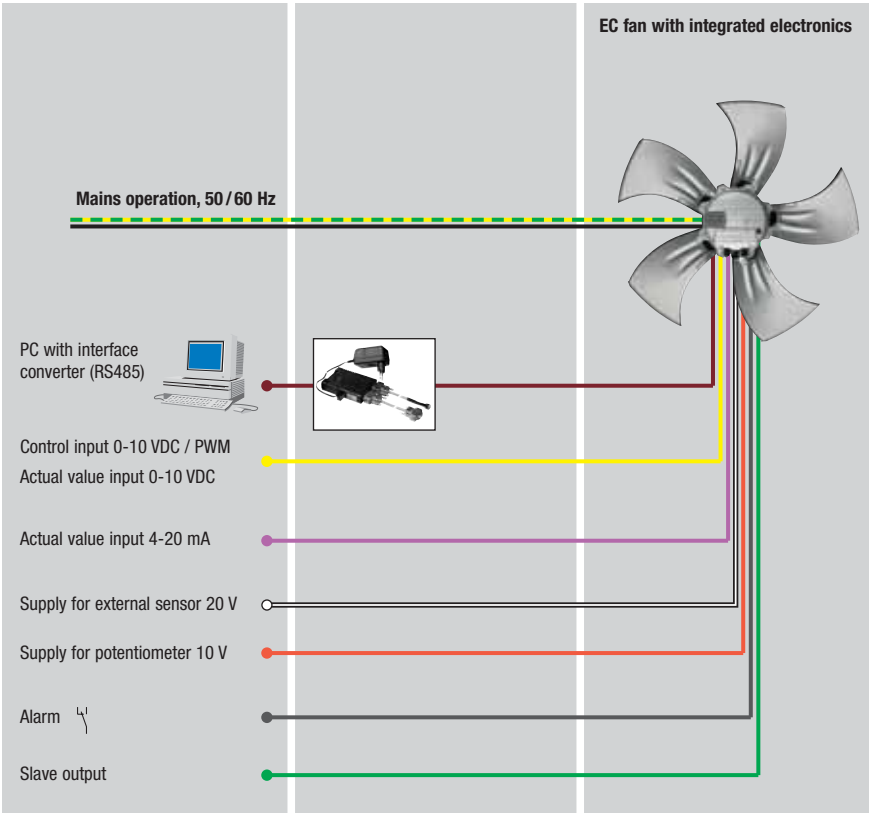
EC fans (motor size 074)
with integrated commutation electronics
1~ 100 -130 VAC or 200 -277 VAC
50/60 Hz mains operation



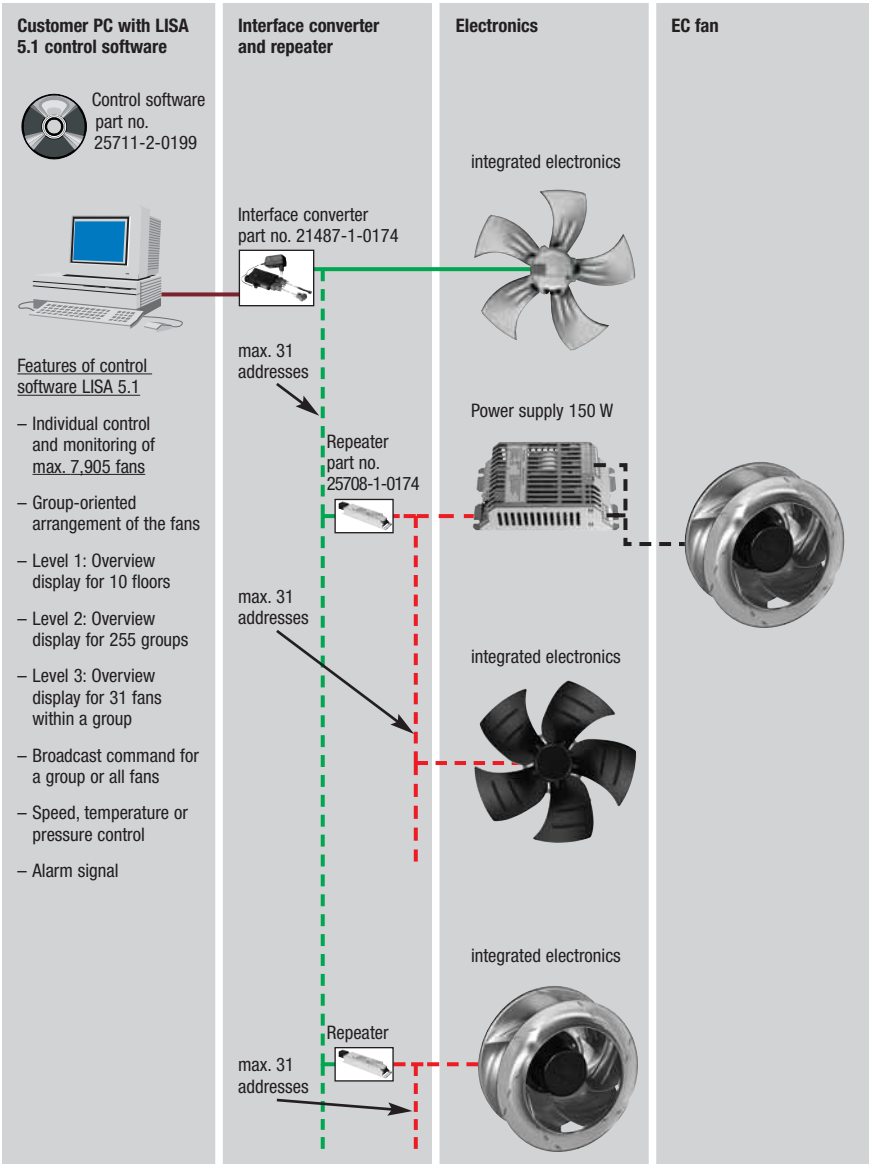
EC fans (motor size 084)
with integrated commutation electronics
1~ 100 -130 VAC or 200 -277 VAC
50/60 Hz mains operation



EC fans (motor size 084, ebmBUS)
with integrated commutation electronics
1~ 200-277 VAC,
50/60 Hz mains operation



EC fans (motor size 112/150)
with integrated commutation electronics
1~ 200-277 VAC or
3~ 200-240 / 380-480 VAC
50/60 Hz mains operation



EC-SYSTEMS:
Networked EC fans with interface converter and repeater

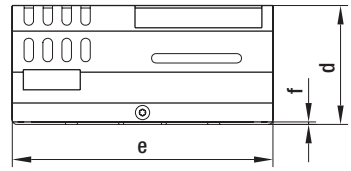
Switch power supply with PFC, basic version

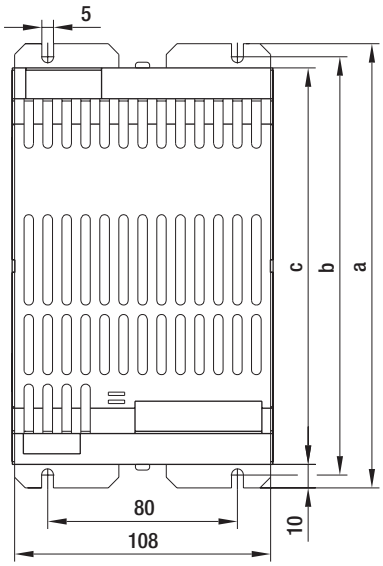
48 VDC, 150 W / 300 W

- **General remarks:** Switch power supply with an output power of 150 W / 300 W to supply 48 VDC EC motors from the 115 / 230 VAC mains. It is also possible to run several motors up to an overall power of 150 W / 300 W. Data on the 60 W switching power supply is available on request.
- **Function:** Supply of an electrically insulated direct voltage of 48 VDC at the output when connected to the 115 / 230 V mains. The power supply is sustainably short-circuit proof, open-circuit proof and protected against overheating. An integrated EMC filter guarantees RFI suppression of the unit according to EN 61000-3-2.
- **Material:** Housing made of stainless steel
- **Protection class:** I
- **Type of protection:** IP 20 (acc. to EN 60529)

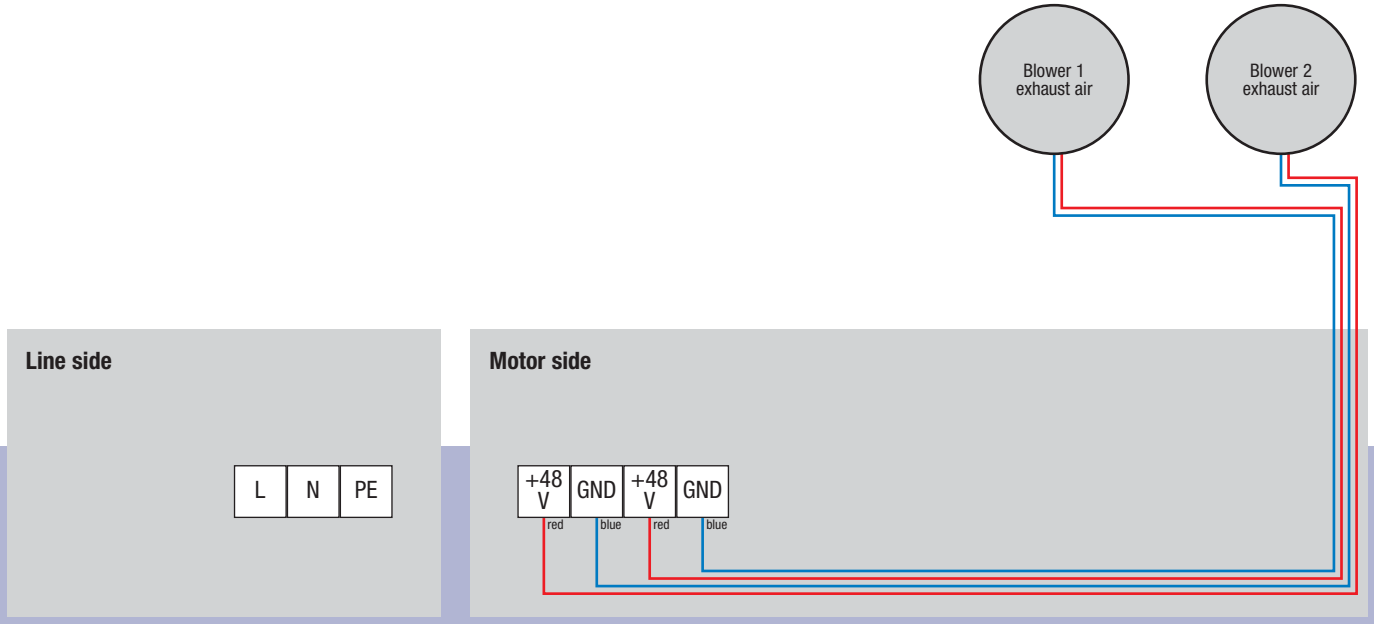
Nominal data	Nominal voltage	Frequency	Output voltage	Output P_1 max.	Rated output current	Mass	Dimensions					
Type	**VAC**	**Hz**	**VDC**	**W**	**A**	**kg**	**a**	**b**	**c**	**d**	**e**	**f**
CNW015-AB06 -01	1~ 115	50/60	48	150	3.10	0.7	187	176	167	50	110	1
CNW015-AB02 -01	1~ 230	50/60	48	150	3.10	0.7	187	176	167	50	110	1
CNW030-AC06 -01	1~ 100-120	50/60	48	300	6.25	1.3	272	260	251	66	112	2
CNW030-AC02 -01	1~ 200-277	50/60	48	300	6.25	1.3	272	260	251	66	112	2

subject to alterations





- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-1
- **Product conforming to standards:** EN 50178, CE
- **Approvals:** UL/CSA (File No. E 181381)


Blower 1
exhaust air
Blower 2
exhaust air
Line side
L
N
PE
Motor side
+48 V
GND
+48 V
GND
red
blue
red
blue

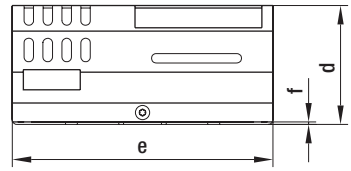
Switch power supply with PFC, RS485 and ebmBUS

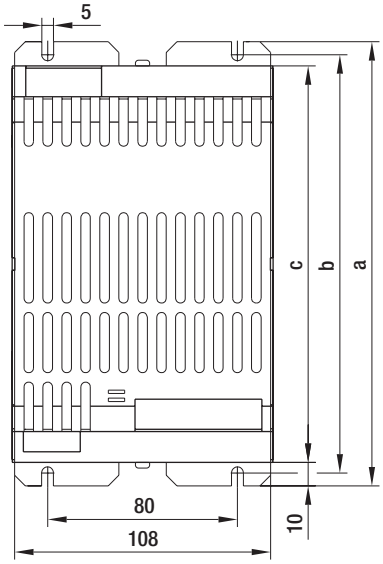
48 VDC, 150 W / 300 W

- **General remarks:** Switch power supply with an output power of 150 W / 300 W to supply 48 VDC EC motors from the 115 / 230 VAC mains. It is also possible to run several motors up to an overall power of 150 W / 300 W. Data on the 60 W switching power supply is available on request.
- **Function:** Supply of an electrically insulated direct voltage of 48 VDC at the output when connected to the 115 / 230 V mains. The power supply is sustainably short-circuit proof, open-circuit proof and protected against overheating. An integrated EMC filter guarantees RFI suppression of the unit according to EN 61000-3-2.
- **Material:** Housing made of stainless steel
- **Protection class:** I
- **Type of protection:** IP 20 (acc. to EN 60529)

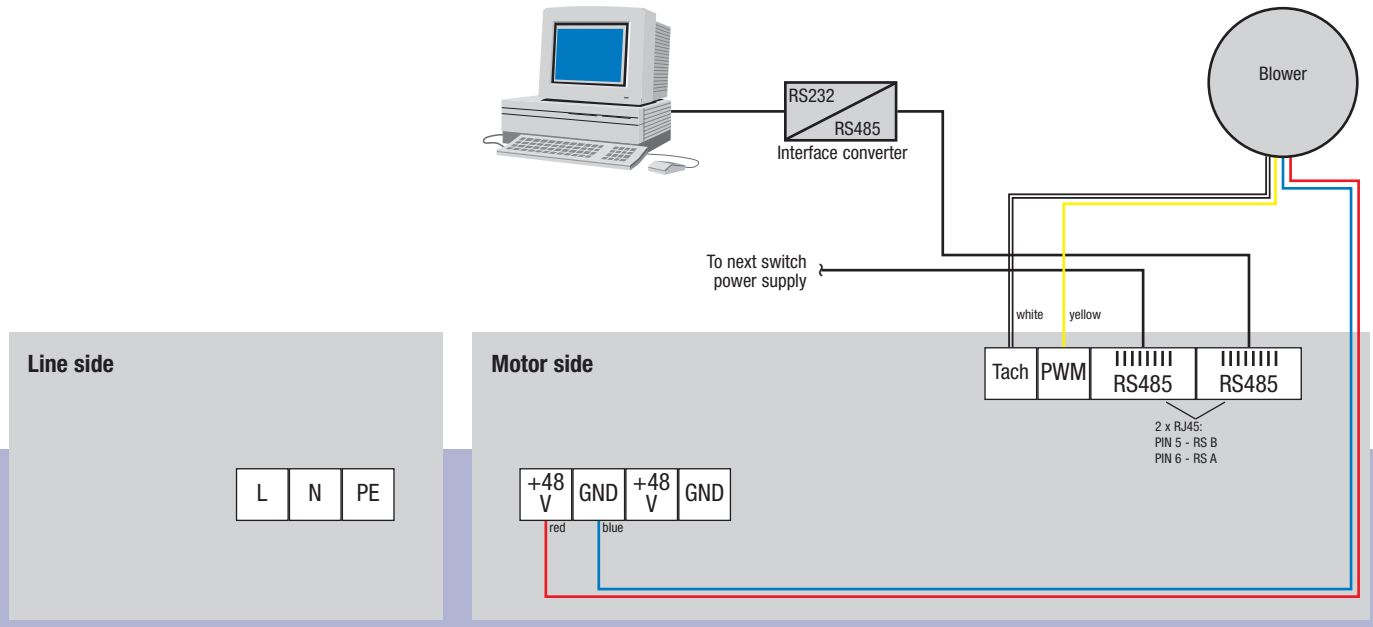
Nominal data	Nominal voltage	Frequency	Output voltage	Output P_1 max.	Rated output current	Mass	Dimensions					
Type	**VAC**	**Hz**	**VDC**	**W**	**A**	**kg**	**a**	**b**	**c**	**d**	**e**	**f**
CNW015-AB06 -05	1~ 115	50/60	48	150	3.10	0.7	187	176	167	50	110	1
CNW015-AB02 -05	1~ 230	50/60	48	150	3.10	0.7	187	176	167	50	110	1
CNW030-AC06 -05	1~ 100-120	50/60	48	300	6.25	1.3	272	260	251	66	112	2
CNW030-AC02 -05	1~ 200-277	50/60	48	300	6.25	1.3	272	260	251	66	112	2

subject to alterations



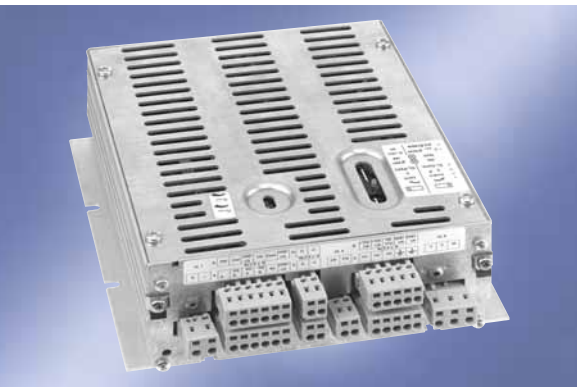


- **EMC:** Interference emission acc. to EN 61000-6-3
  Interference immunity acc. to EN 61000-6-1
- **Product conforming to standards:** EN 50178, CE
- **Approvals:** UL/CSA (File No. E 181381)
- **Technical features:** Control board for RS485, ebmBUS and LISA functions


RS232
RS485
Interface converter
Blower
To next switch
power supply
white
yellow
Line side
Motor side
Tach
PWM
RS485
RS485
2 x RJ45:
PIN 5 - RS B
PIN 6 - RS A
L
N
PE
+48 V
GND
+48 V
GND
red
blue

External commutation electronics

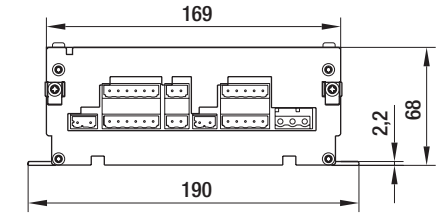
for rail technology, 110 VDC, 650 W

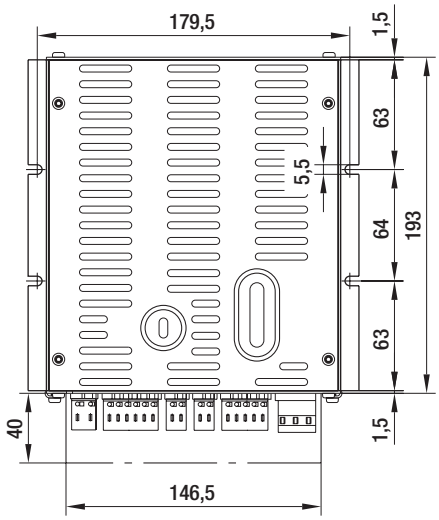


- **General remarks:** For EC motors / fans with three cores and without integrated commutation electronics
- **Function:** Commutation unit for three-core ebm EC motors up to a power input of 650 W. Various basic functions are integrated: open loop speed control, closed loop speed control, even an RS485 interface. In combination with sensors, all control tasks as required in air technology can be executed.
- **Protection class:** I
- **Type of protection:** IP 20 (acc. to DIN EN 60529)
- **NB:** Connected fans have to be designed for rated voltage of 127 VDC!

Nominal data	Nominal voltage	Power input P_1 max.	Current draw	Perm. amb. temp.	Mass
Type	**VDC**	**W**	**A**	**°C**	**kg**
CEG 485-HB50 -01	110	650	5.9	-25 to +40	2.0

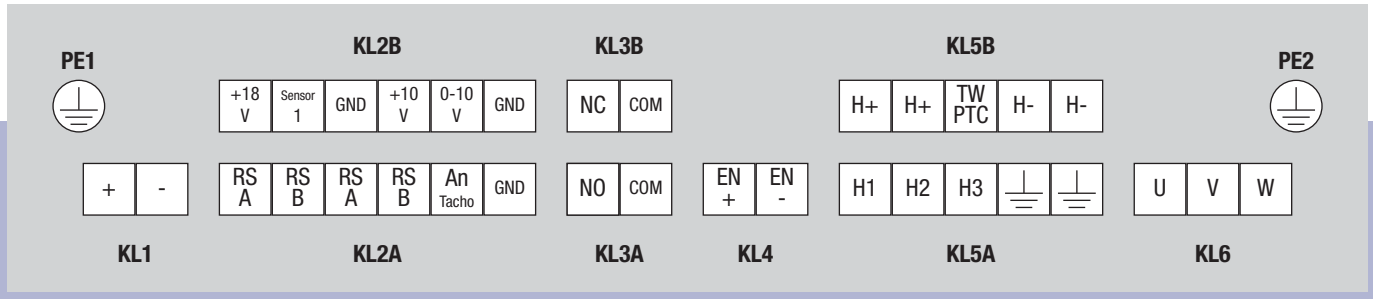
subject to alterations





- **EMC / EMI:** Acc. to EN 50155 and EN 50121
- **Legislation:** Low voltage directive 73/23/EEC, VDE 0160/EN 50178
- **Design:**
  - motor output protected against short circuit phase to phase and conditionally phase to earth
  - 0-10 V input (Ri: 100 kΩ)
  - 0-10 V input (Ri: 100 kΩ) for connection of external actual value input
  - RS485 interface (ebmBUS)
  - Floating alarm contact 250 VAC / 5A, during alarm, relay is released (low-active)
  - Wide voltage input for external controller enabling via RESET function
  - Tach output
  - LED for operation and alarm mode
    green: unit on
    red: alarm
  - Setting of minimum and maximum values via potentiometer
  - Operational modes (to be set via DIP switch):
    Open loop speed control
    Closed loop speed control
    Controlling external parameters
  - Direction of motor rotation reversible
- **Connectors for external electronics:**

KL1	2-pole connector; centreline 7.5; Co. Wago part no.: 231-202/026-000
KL2A	6-pole connector; centreline 5; Co. Wago part no.: 231-106/026-000
KL2B	6-pole connector; centreline 5; Co. Wago part no.: 231-106/026-000
KL3A	2-pole connector; centreline 5; Co. Wago part no.: 231-102/026-000
KL3B	2-pole connector; centreline 5; Co. Wago part no.: 231-102/026-000
KL4	2-pole connector; centreline 5; Co. Wago part no.: 231-102/026-000
KL5A	5-pole connector; centreline 5; Co. Wago part no.: 231-105/026-000
KL5B	5-pole connector; centreline 5; Co. Wago part no.: 231-105/026-000
KL6	3-pole connector; centreline 7.5; Co. Wago part no.: 731-603



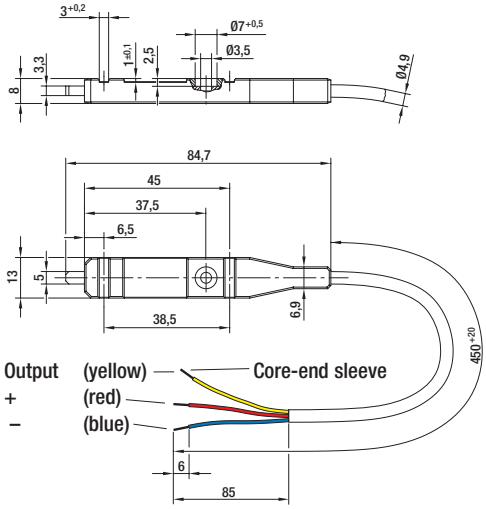
Connector	Connection	Assignment / function
PE1		Ground connection
PE2		Ground connection
KL1	+	110 VDC
	-	110 VDC
KL2A	RS A	Interface connection RS A
	RS B	Interface connection RS B
	RS A	Interface connection RS A
	RS B	Interface connection RS B
	An, Tacho	Tach output, open collector
	GND	Reference KL2 (for KL2 only)
KL2B	+18 V	+18 V (non-stabilised, +20 %, 20 mA) to supply external sensors
	Sensor 1	Input for external sensor, Ri = 100 kΩ
	GND	Reference KL2 (for KL2 only)
	+10 V	+10 V (stabilised +/- 3 %, 25 mA)
	0-10 V	Input for set value 0 - 10 V, Ri = 100 kΩ
	GND	Reference KL2 (for KL2 only)

Connector	Connection	Assignment / function
KL3A	NO	Relay contact for alarm, make for failure
	COM	Relay contact for alarm
KL3B	NC	Relay contact for alarm, break for failure
	COM	Relay contact for alarm
KL4	EN +	Enable input via RESET function
	EN -	Enable input via RESET function
KL5A	H1	Hall-sensor 1
	H2	Hall-sensor 2
	H3	Hall-sensor 3
	⏚	Shielding connection
	⏚	Shielding connection
KL5B	H+	Power supply for hall-sensors (+)
	H+	Power supply for hall-sensors (+)
	TW / PTC	Thermal switch or PTC connection
	H-	Power supply for hall-sensors (-)
	H-	Power supply for hall-sensors (-)
KL6	U	Motor winding U
	V	Motor winding V
	W	Motor winding W

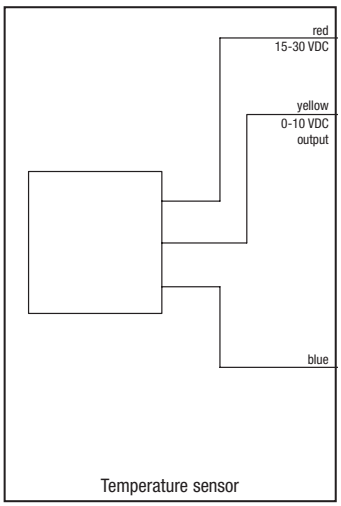
Temperature sensor

Nominal data	Nominal voltage	Current draw	Output voltage	Output current	Output impedance	Temperature measuring range	Mass
Part no.	**VDC**	**mA**	**VDC**	**mA**	**kΩ**	**°C**	**kg**
50005-1-0174	15-30	10	0-10	1.0	1.1	-20 to +80	0.02

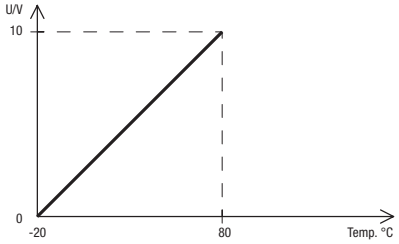
subject to alterations



– **Electr. connection:**



– **Output voltage depending on temperature:**

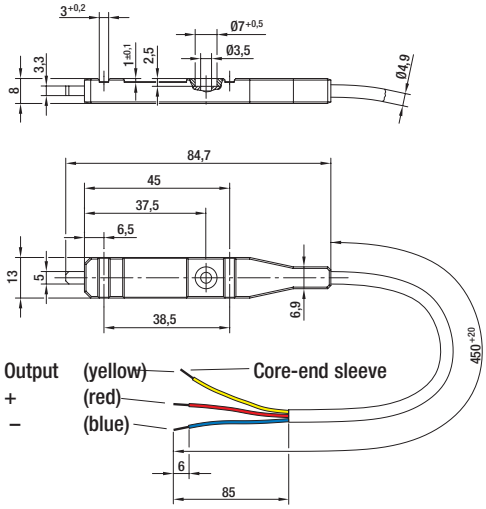


Tolerance ±3 K

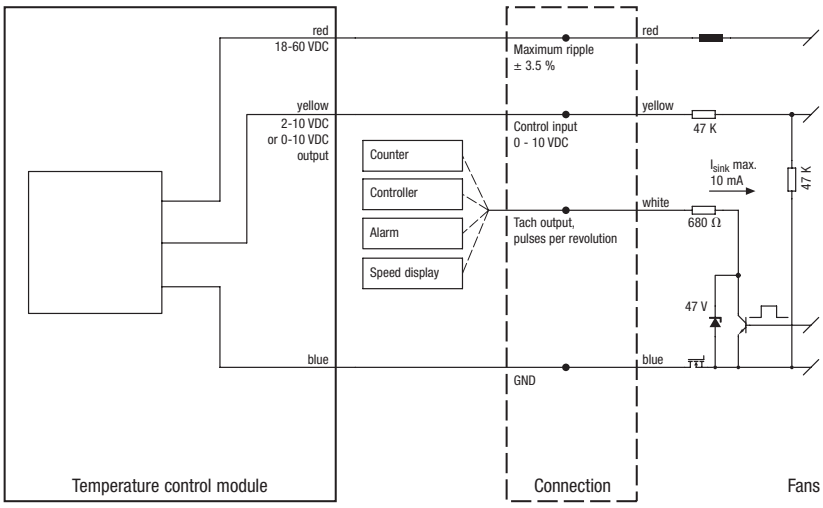
Temperature control module

Nominal data	Nominal voltage	Current draw	Output voltage	Output current	Output impedance	Temperature control range	Mass
Part no.	**VDC**	**mA**	**VDC**	**mA**	**kΩ**	**°C**	**kg**
50002-1-0174	18-60	10	2-10	0.1	6.8	+30 to +55	0.02
50003-1-0174	18-60	10	0-10	0.1	6.8	+10 to +45	0.02

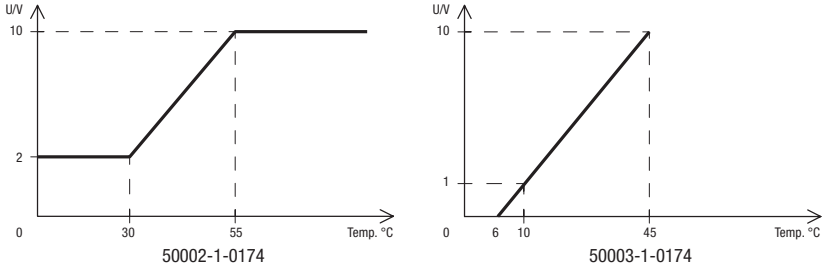
subject to alterations



– **Electr. connection:**

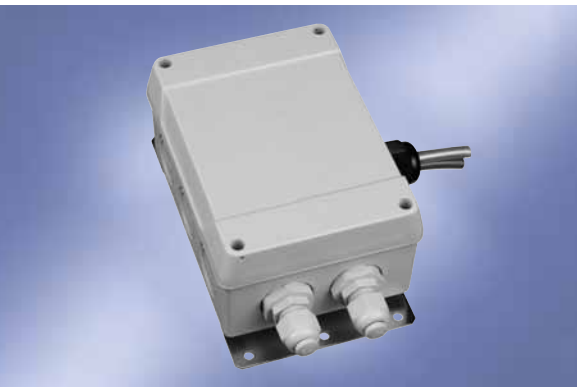


– **Control function:** Both designs have "cooling" as control function



Tolerance ±3 K

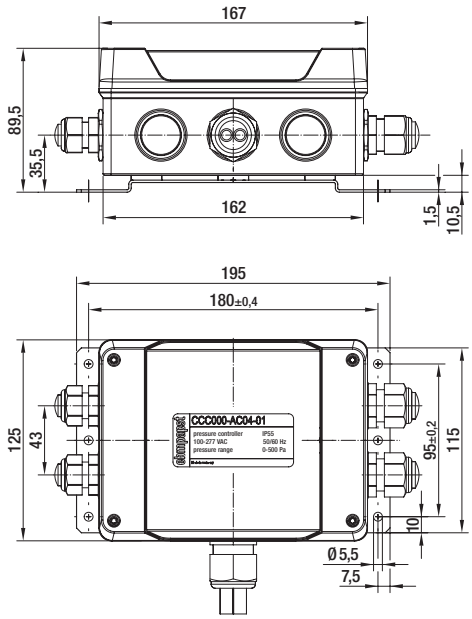
Pressure control with integrated pressure sensor



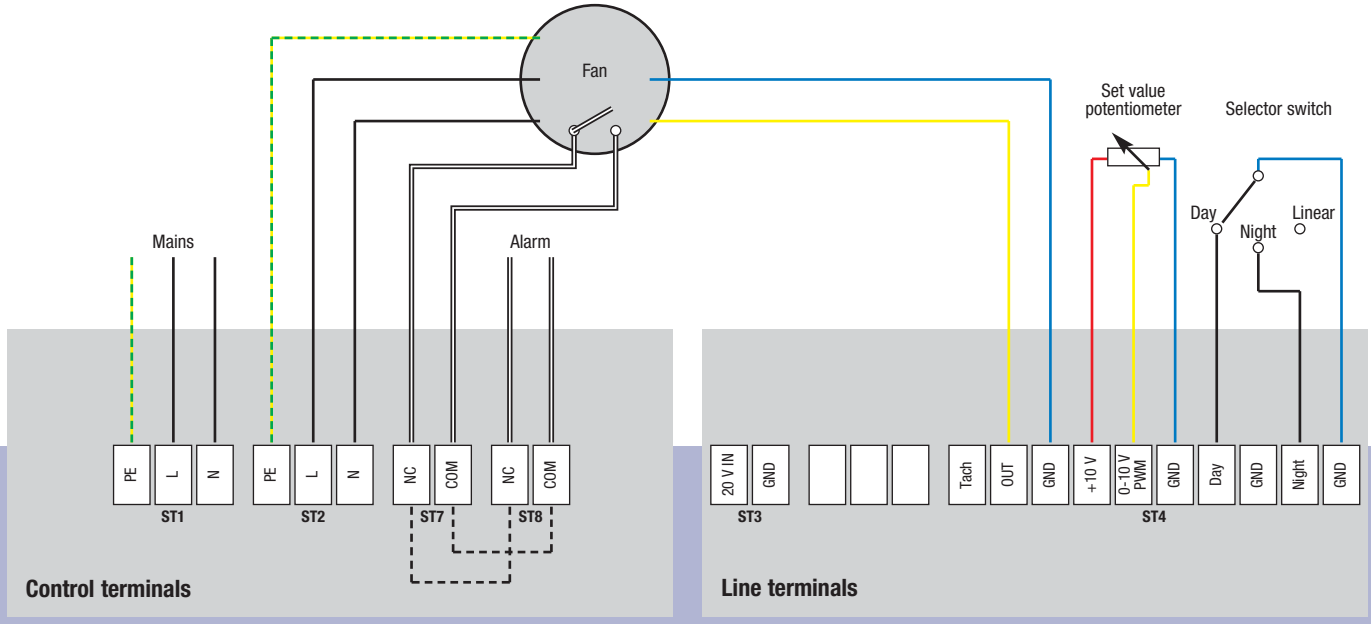
- **Functions:** Integrated PID controller, day/night/linear set point preset, integrated set point potentiometer for day and night, external set point preset via potentiometer
- **Pressure sensor:** 0-500 Pa, bursting strength 200 mbar, for non-aggressive gaseous media
- **Type of protection:** IP 55
- **Inlet nozzles:** Suitable inlet nozzles to determine airflow, see page 551

Nominal data	Nominal voltage range	Frequency	Nominal voltage, alternative	Pressure control range	Perm. amb. temp.
Type	**VAC**	**Hz**	**VDC**	**Pa**	**°C**
CCC 000-AC04 -01	1~ 100-277	50/60	20 @ 50 mA	50-500	-25 to +60

subject to alterations



ebmpapst



Connector	Connection	Assignment / function
ST1	PE	Protective earth
	L	Mains 50/60 Hz, phase
	N	Mains 50/60 Hz, neutral
ST2	PE	Protective earth
	L	Mains 50/60 Hz, phase
	N	Mains 50/60 Hz, neutral
ST7	NC	Relay contact for alarm, break for failure
	COM	Relay contact for alarm
ST8	NC	Relay contact for alarm, break for failure
	COM	Relay contact for alarm

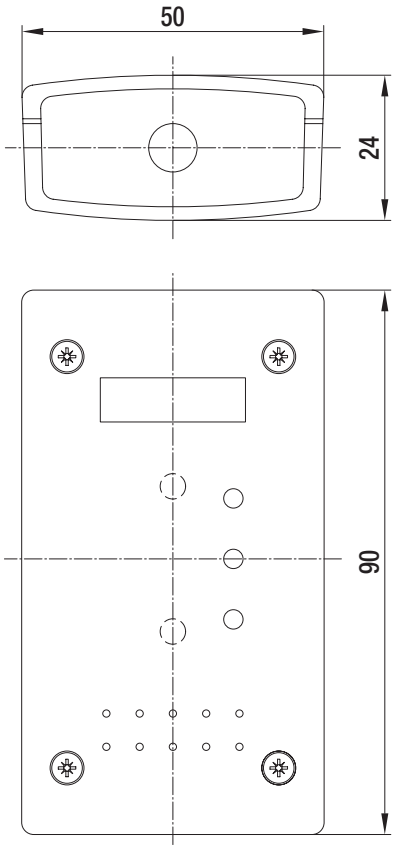
Connector	Connection	Assignment / function
ST3	20 V IN	DC voltage supply (optional),
		with reverse polarity protection
	GND	GND
ST4	Tach	Tach output from fan
	OUT	Control voltage for fan, 0-10 V
	GND	GND
	+10 V	Set value potentiometer,
		supply 10 V (-10 %), 10 mA
	0-10 V PWM	Set value potentiometer
	GND	Set value potentiometer
	Day	Selector switch terminal
	GND	Selector switch terminal
	Night	Selector switch terminal
	GND	Selector switch terminal

Selection module for 3 speeds

- **General remarks:** Using an external selector switch, one of three preset speeds can be chosen. Presetting is done via one integrated potentiometer each.
- **Material:** Plastics
- **Type of protection:** IP 20

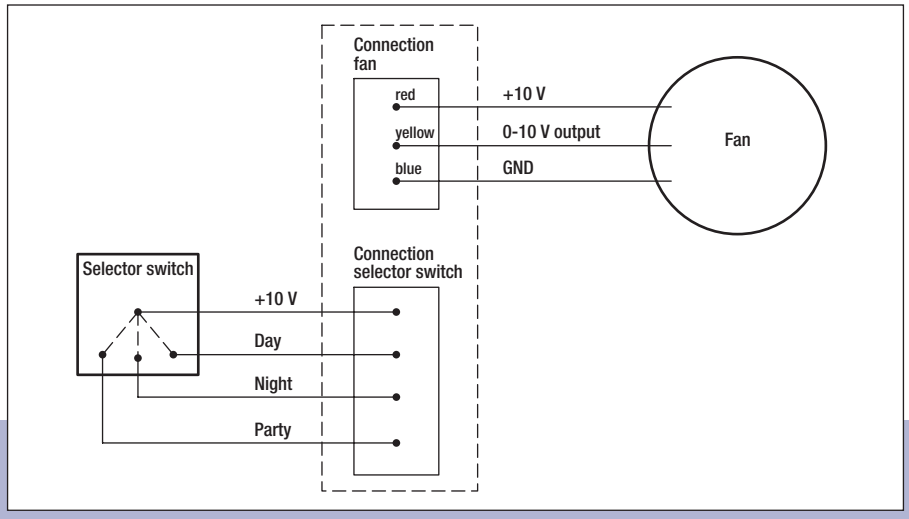
Type
CBC 000-AE04 -01

subject to alterations

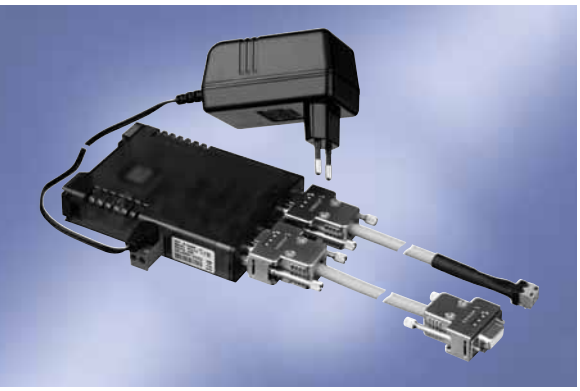


ebmpapst

– **Electr. connection:**



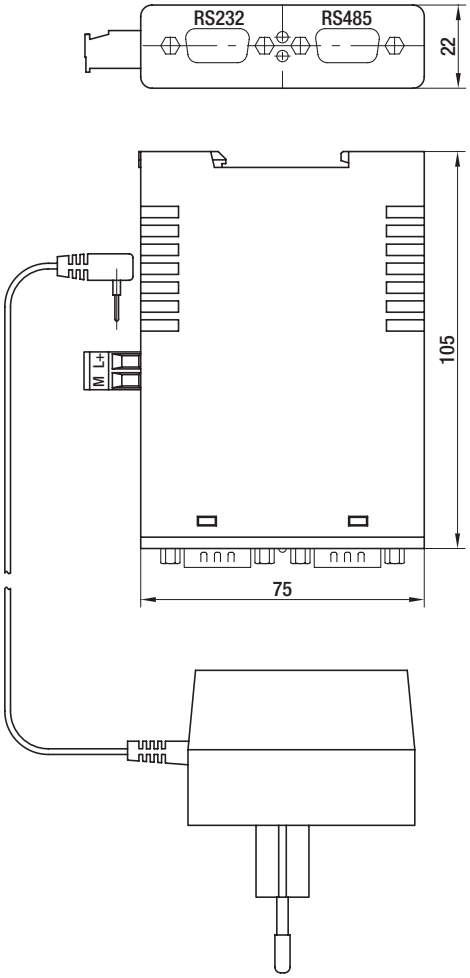
Interface converter RS232 - RS485



- **General remarks:** This interface converter permits bi-directional connection of RS232 devices (laptop or PC) with ebmBUS devices (electronic commutation units with RS485 interface)
- **Safety:** Electrical insulation between the RS232 and RS485 side is provided
- **Material:** Plastic housing for standard rail mounting according to DIN EN 50022-35
- **Status display:** Via LEDs
  green: supply voltage OK
  red: data exchange

Nominal data		Nominal voltage power supply	Supply voltage	Current draw at no-load operation	Mass (incl. PS)
Part no.		**VAC**	**VAC / VDC**	**mA**	**kg**
21487-1-0174	1~	230	12-24	150	0.4

subject to alterations



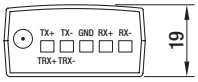
- **Mode of operation:** RS485 2-wire mode with echo and automatic control
- **Galvanic insulation:** Min. 1kV insulation voltage between RS232 and RS485 interfaces and between power supply and interfaces
- **ESD immunity:** Up to 15 kV (acc. to IEC 801-2, Stage 4)
- **Delivery scope:**
  - Interface converter
  - Plug-in supply unit (230 VAC / 12 VDC, 500 mA)
  - Adaptor leads with 2 x 9-pole SUB-D sockets
  - Adaptor leads with 9-pole SUB-D socket
  - Screw terminal RS485

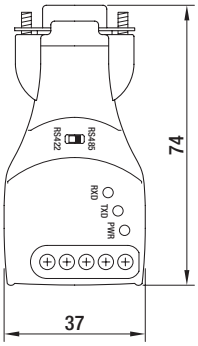
Interface converter RS232 - RS485

- **General remarks:** This interface converter permits bi-directional connection of RS232 devices (laptop / PDA) with ebmBUS devices (electronic commutation units with RS485 interface) Power supplied by RS232 of the laptop / PDA.
- **Material:** Plastic housing
- **Status display:** Via LEDs
  PWR: Power supply
  TXD: Data transfer (send)
  RXD: Data transfer (receive)

Nominal data	Mass
Part no.	**kg**
21495-2-0174	0.1

subject to alterations





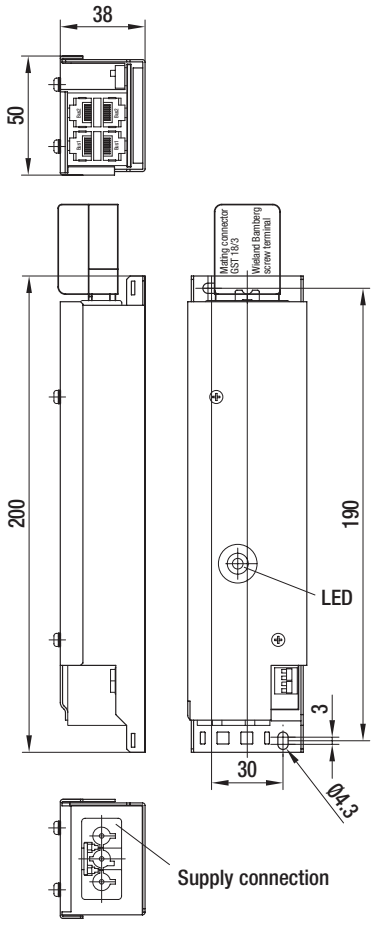
- **Mode of operation:** RS485 2-wire mode with echo and automatic control
- **Delivery scope:** Interface converter, English-language operating manual
- **Electrical terminals:** Screw terminal, TRX+ = RSA, TRX– = RSB

RS485 repeater

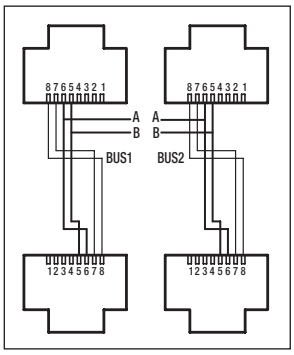
- **General remarks:** The physical RS485 repeater is used for the connection of two segments on an RS485 basis. It can split a segment with network bus wires that are too long, or with too many nodes into two smaller, standardised units. A maximum of 31 nodes can be connected to the repeater.
- **Installation:** The repeater housing is mounted on the wall or in the cable duct with two screws (Ø 4 mm) or with cable ties.
- **Material:** Housing made of galvanised sheet steel
- **Type of protection:** IP 20 according to DIN EN 60529

Nominal data	Supply voltage	Frequency	Power input	Perm. operating temp.	Perm. storage temp.	Mass
Part no.	**VAC**	**Hz**	**VA**	**°C**	**°C**	**kg**
25708-1-0174	1~ 200-277	50/60	< 3	0 to +50	-20 to +70	0.3

subject to alterations



- **Type of transceiver:** 2 x ANSI standard RS485 transceiver
- **Galvanic insulation:** Operating insulation 500 V between both channels
- **Network connection:** Screw terminals
- **Mains connection:** Wieland connector GST 18/3 (part of delivery)
- **Pin configuration of network:**



Pin No.	Assignment / function
1 - 4	not assigned
5	Connection RS485, line B
6	Connection RS485, line B
7, 8	not assigned
	(each looped through within BUS1 and BUS2)

ebmpapst

RS485 terminal box with lead connections

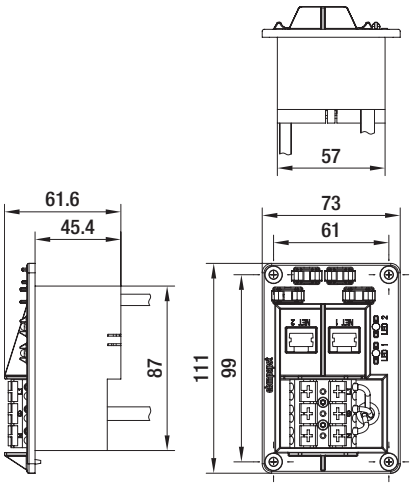
for centrifugal fans with EC motor size 084 (ebmBUS, RS485)

– **General remarks:** RS485 terminal box with
  - 2x RJ45 socket for ebmBUS
  - ebmBUS lead with Molex Mini-Fit female connector to connect to motor
  - 3-pole 4-pin unit connector with AMP Mate-N-Lock female connector to connect to motor
  - Mode of operation display (LED2 green) and alarm display (LED1 red)
– **Delivery scope:**
  - Terminal box
  - Supply line (800 mm)
  - ebmBUS line (800 mm)
– **Material:** ABS (fire rating V0 according to UL)

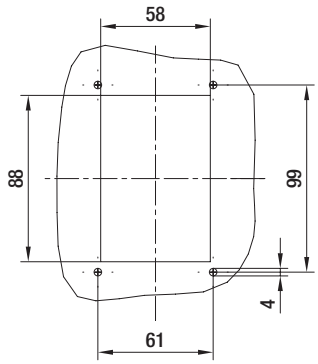
Part no.

54002-4-1040

subject to alterations



Mounting dimensions



– **Pin configuration of supply lead:**

Colour	Assignment / function
green/yellow	PE
black 2	N
black 1	L

– **Pin configuration of ebmBUS lead:**

Colour	Assignment / function
yellow	RS A
white	RS B
red	Operation: +15 V Alarm: 0 V
blue	Operation: 0 V Alarm: +15 V

– **Pin configuration of RJ45 sockets:**

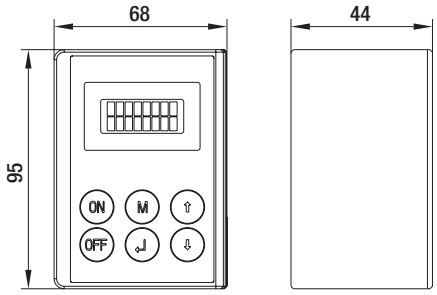
Pin No.	Assignment / function
5	RS B
6	RS A

Hand-held control terminal

- **General remarks:** Terminal to control networked fans and to set their parameters; RS485 (ebmBUS)
- **Type of protection:** IP 20 (acc. to DIN EN 60529)
- **Protection class:** III
- **Display:** Plain text LCD, 2x8 characters
- **Accumulator and charging electronics:** 2 x round cell R6 DIN 40863 NiMH 1,500 mAh, operating time approx. 40 hrs, standby time approx. 100 days, charging time max. 4 hrs.
- **Parts included in delivery:** Hand-held control terminal, power supply and accumulator unit, BUS cable, 2 x round cell R6 NiMH 1,500 mAh

Nominal data	Nominal voltage range power supply	Frequency	Supply voltage	Perm. amb. temp.	Perm. storage temp.	Mass
Type	**VAC**	**Hz**	**VDC**	**°C**	**°C**	**kg**
CBC 000-AB06 -01	1~ 100-240	50/60	12	0 to +45	-20 to +65	0.4

subject to alterations



ebmpapst

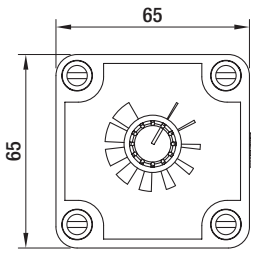
Speed setting

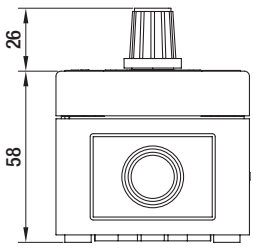
with housing

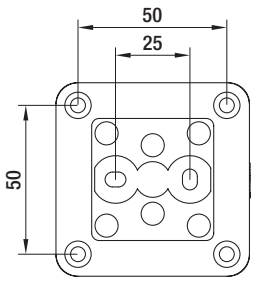
- **Material:** Housing made of plastic
- **Type of protection:** IP 54
- **Design:** The speed setting can be operated with the entire range of ebm-papst EC fans. It is supplied with current via the fan's DC output and supplies a 0-10 V signal that allows infinitely variable open loop speed control. The control also permits fan speed measurement using a multimeter equipped with a frequency meter (for which a tach output is given from the fan).
- **Cable inputs:** 4 x M16 or M20
- **Mounting holes:** Suitable for 4 mm mounts

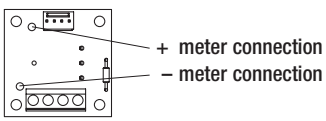
Nominal data	Supply voltage	Max. current draw	Resistance	Perm. amb. temp.	Mass
Type	**VDC**	**mA**	**kΩ**	**°C**	**kg**
CLC 000-AE04 -01	10	1.1	0-10 Lin	50	0.10

subject to alterations



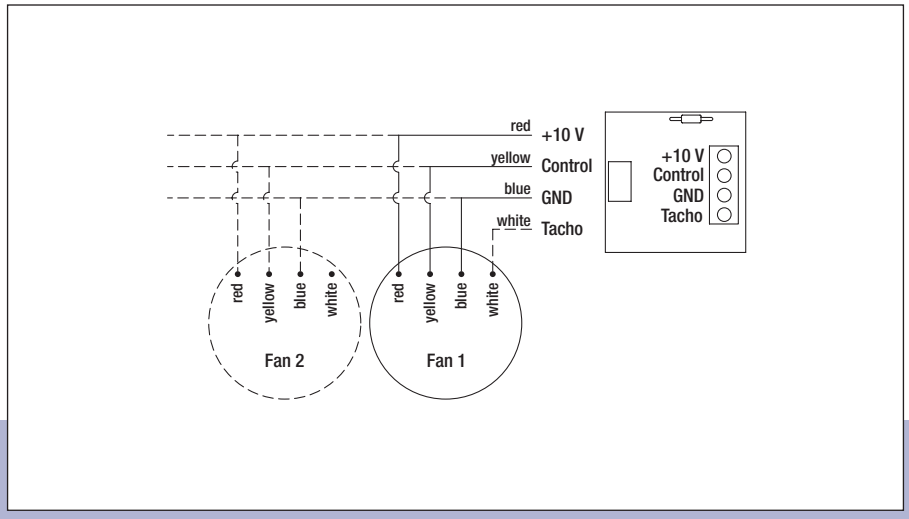






- **Speed measurement:** Connect a frequency meter to the connection points (labelled + and -) on the PCB board. The fan outputs 1 pulse per revolution, so that the measured frequency can be converted into rpm using the following equation: rpm = frequency (Hz) x 60
- **Comment:**
  - A single controller can be used to control multiple fans with the same speed setting.
  - The connection to the controller is made using four screw connections or one Molex connection (adaptor lead available).
  - If the tach cable is required, this device can only be connected to a fan. Note that in rare operating cases, it is possible that permanent connection of the tach cable can cause a slight decrease in the maximum speed.

– **Electr. connection:**



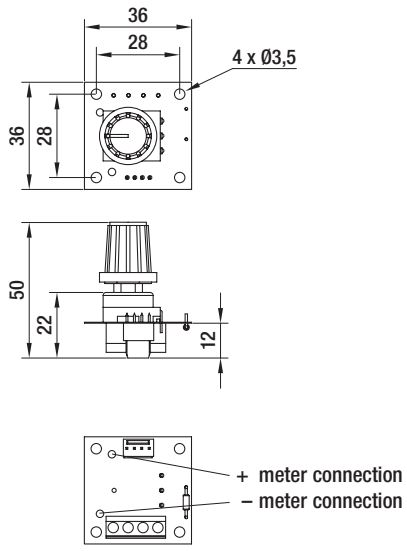
Speed setting

without housing

– **Design:** The speed setting can be operated with the entire range of ebm-papst EC fans. It is supplied with current via the fan's DC output and supplies a 0-10 V signal that allows infinitely variable open loop speed control. The control also permits fan speed measurement using a multimeter equipped with a frequency meter (for which a tach output is given from the fan).
– **Mounting hole:** 10 mm

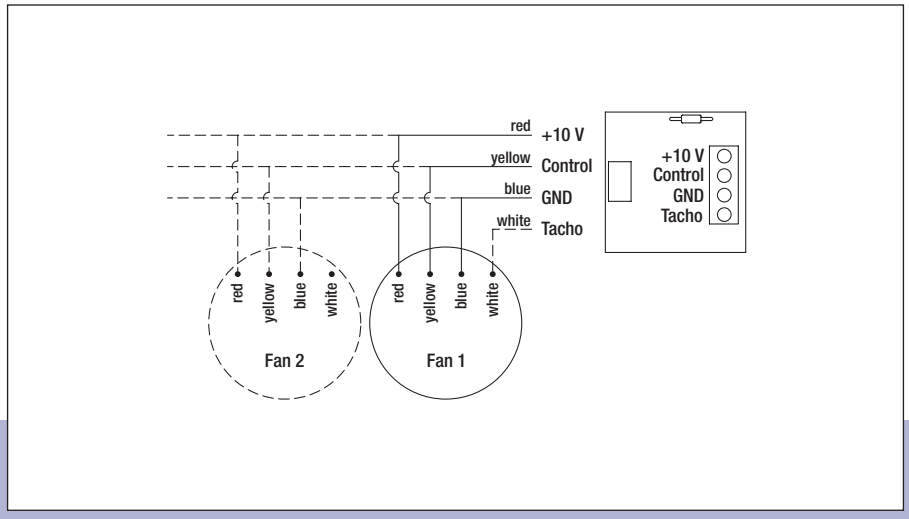
Nominal data	Supply voltage	Max. current draw	Resistance	Perm. amb. temp.	Mass
Type	**VDC**	**mA**	**kΩ**	**°C**	**kg**
CLC 000-AD04 -01	10	1.1	0-10 Lin	50	0.05

subject to alterations



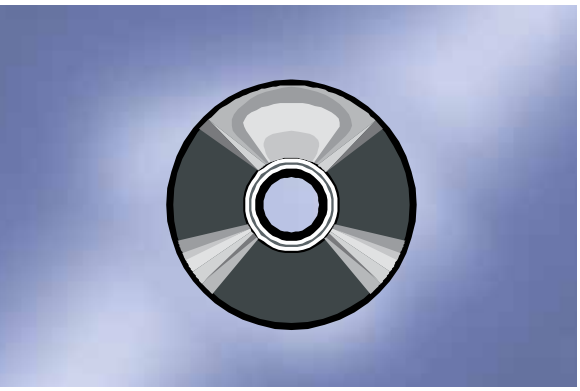
– **Speed measurement:** Connect a frequency meter to the connection points (labelled + and -) on the PCB board. The fan outputs 1 pulse per revolution, so that the measured frequency can be converted into rpm using the following equation: rpm = frequency (Hz) x 60
– **Comment:**
  • A single controller can be used to control multiple fans with the same speed setting.
  • The connection to the controller is made using four screw connections or one Molex connection (adaptor lead available).
  • If the tach cable is required, this device can only be connected to a fan. Note that in rare operating cases, it is possible that permanent connection of the tach cable can cause a slight decrease in the maximum speed.

– **Electr. connection:**



LISA

Control software for EC-SYSTEMS

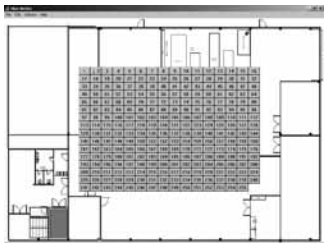


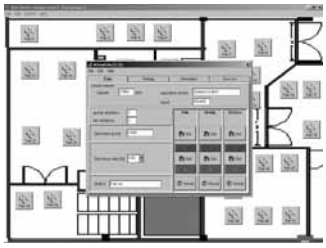
- **Version:** LISA 5.1
- **Features:**
  - Individual control and monitoring of max. 7,905 fans
  - Group-oriented arrangement of the fans
  - Level 1: Overview display for 10 floors
  - Level 2: Overview display for 255 groups within a floor
  - Level 3: Overview display for 31 fans within a group
  - Broadcast command for one group or all fans
  - Speed, temperature or pressure control
  - Error message

Part no.

25711-2-0199

subject to alterations

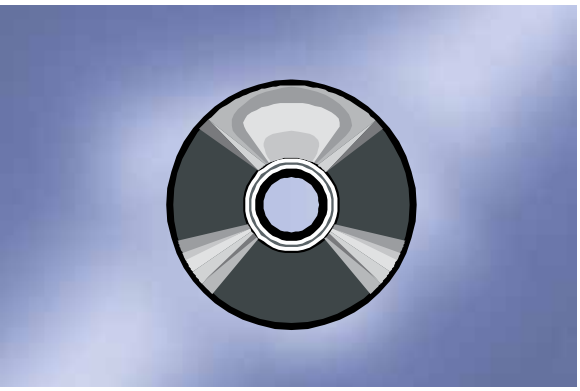




- **Suitable for:** EC motors and electronics with ebmBUS
- **System requirements:** Windows 2000 / XP

Fan Control

Control software & accessories for Pocket PCs / PDAs

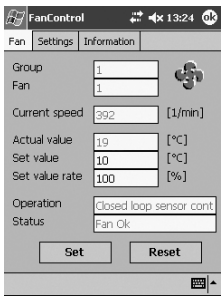


– **Version:** Fan Control 1.00
– **Features:**
  • Managing up to 31 fans
  • Setting pre-set values and indicating actual values
  • Setting parameters for PID control
  • Setting fan address
  • Setting mode of operation (heating/cooling)
  • Alarm diagnosis
  • Language selection for user interface

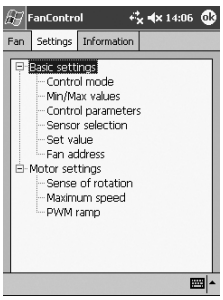
Part no.

21500-1-0174

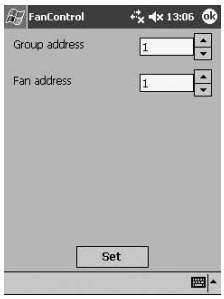
subject to alterations



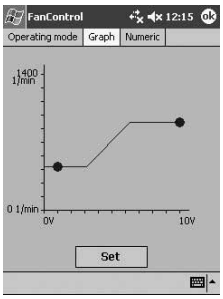
Set and actual values



Mode of operation



Fan address

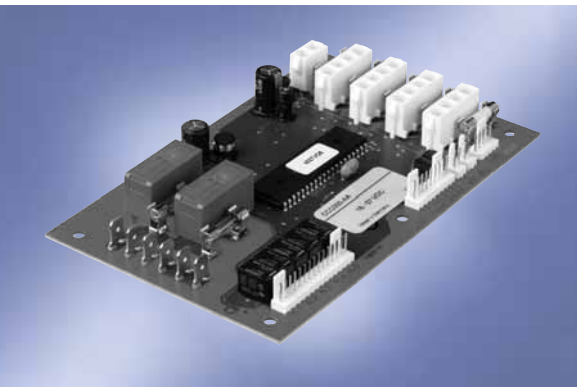


Graphic setting

– **Delivery scope:** Installation-CD, interface converter (RS232-RS485), BUS cable, installation instruction and detailed manual (PDF). The Pocket PC / PDA and compatible serial communication cables are not included in the scope of delivery.
– **Suitable for:** EC motors and electronics with ebmBUS
– **System requirements:** Pocket PC / PDA with Windows Mobile 5.0, RS232 interface, and serial communication cable.
– **Compatible Pocket PCs / PDAs:** (as of 2006-09-14)
  • Hewlett-Packard rx1950
  • Hewlett-Packard hx2190
  • Fujitsu-Siemens Pocket Loox C550
  • Dell Axim x51v (624 MHz)

  Refer to our website at www.ebmpapst.com/downloads for a continuously updated list of approved Pocket PCs / PDAs along with the suitable serial communication cables.

HMS controller

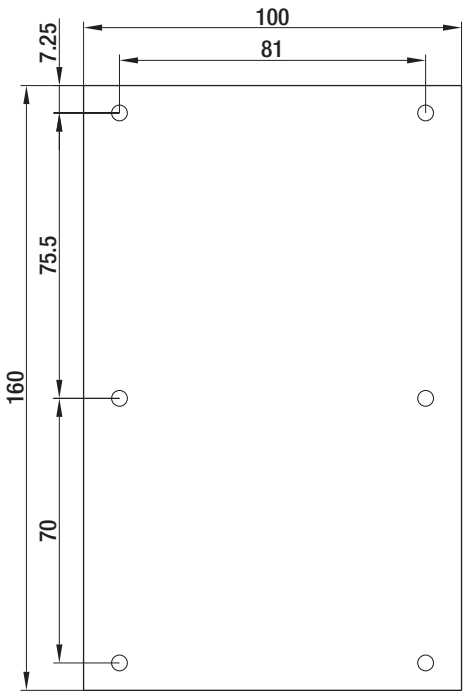


– **General remarks:** The HMS controller is governed by a microprocessor and is specifically designed for Heat Management Systems (= HMS). This controller allows for an almost limitless programming variety as regards customer-specific fan speed / temperature profiles. Moreover, this controller offers a multitude of the most diverse alarm configurations. Our HMS controller has been specially designed and adjusted to the product range of ebm-papst in Mulfingen. Thus, any size of our fans or blowers can be used. The most diverse of applications needing temperature-dependent control are possible. Among these are applications in telecommunication and the IT industry, in refrigeration and air-conditioning as well as in specific industrial plants and systems.

Nominal data	Supply voltage	Power input(1), max.	Power input(2), max.	Current draw(1), max.	Perm. amb. temp.	Mass
Type	**VDC**	**W**	**W**	**A**	**°C**	**kg**
CCC 000-AA05 -03	16-57	10	130	0.175	-40 to +70	0.15

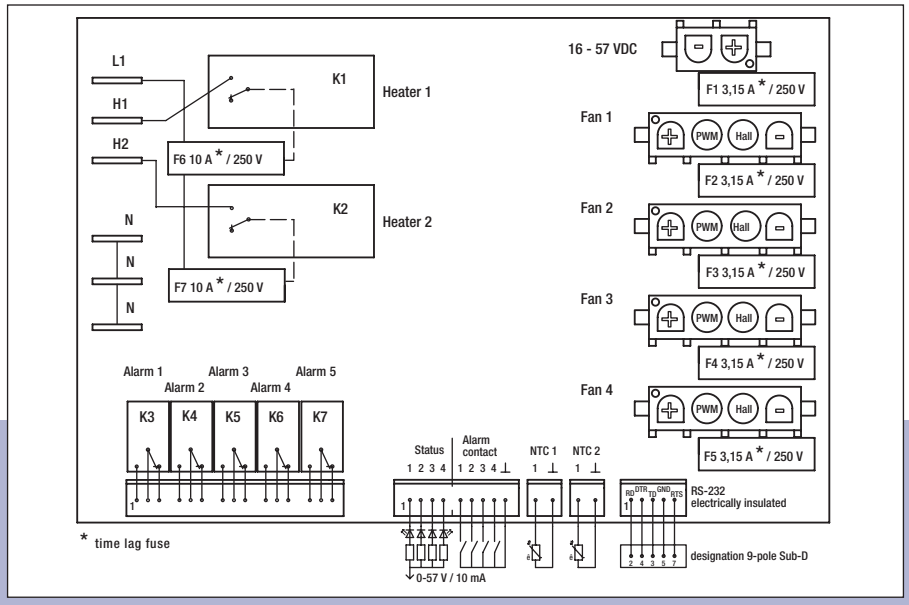
subject to alterations

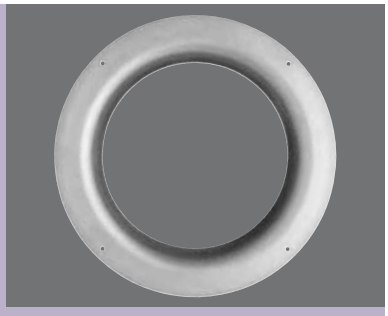
(1) without fans (2) per fan at nominal voltage



– **Features:**
  - 4 fan speed / temperature characteristics that can be programmed independent of each other
  - 2 programmable no-frost relays for connection of 115 / 230 VAC heating devices
  - 5 programmable alarm relays (with time lag):
    – Temperature alarm (over- / under-temperature)
    – Fan good / bad alarm programming
    – Temperature sensor alarm
    – Programmable depending on signal inputs
  - 4 programmable status outputs (with time lag):
    – With "open collector" design to connect optical or acoustic displays / alarms
    – Each fan speed can be set individually
  - 4 signal inputs for external switch
  - Connection of two independent temperature sensors (NTCs) possible
  - RS232 interface galvanic insulated
  - Selective protection of each fan
  - programming via Windows software (terminal program version 15 ff.: part no. 25710-2-0199)
– **Requirements:**
  - Supply voltage of HMS controller: 16-57 VDC
  - Fans with standard interface
    – 24 / 48 VDC fan voltage
    – PWM / linear control input (0-10 V)
    – Open collector tach output
  - NTC with R_{25} = 33 kΩ (EPCOS type M 891/33k/J)
  - System requirements: Windows 2000 / XP
– **Safety:** According to EN 50178
– **EMC / EMI:** Interference immunity EN 61000, interference emission EN 50081-1

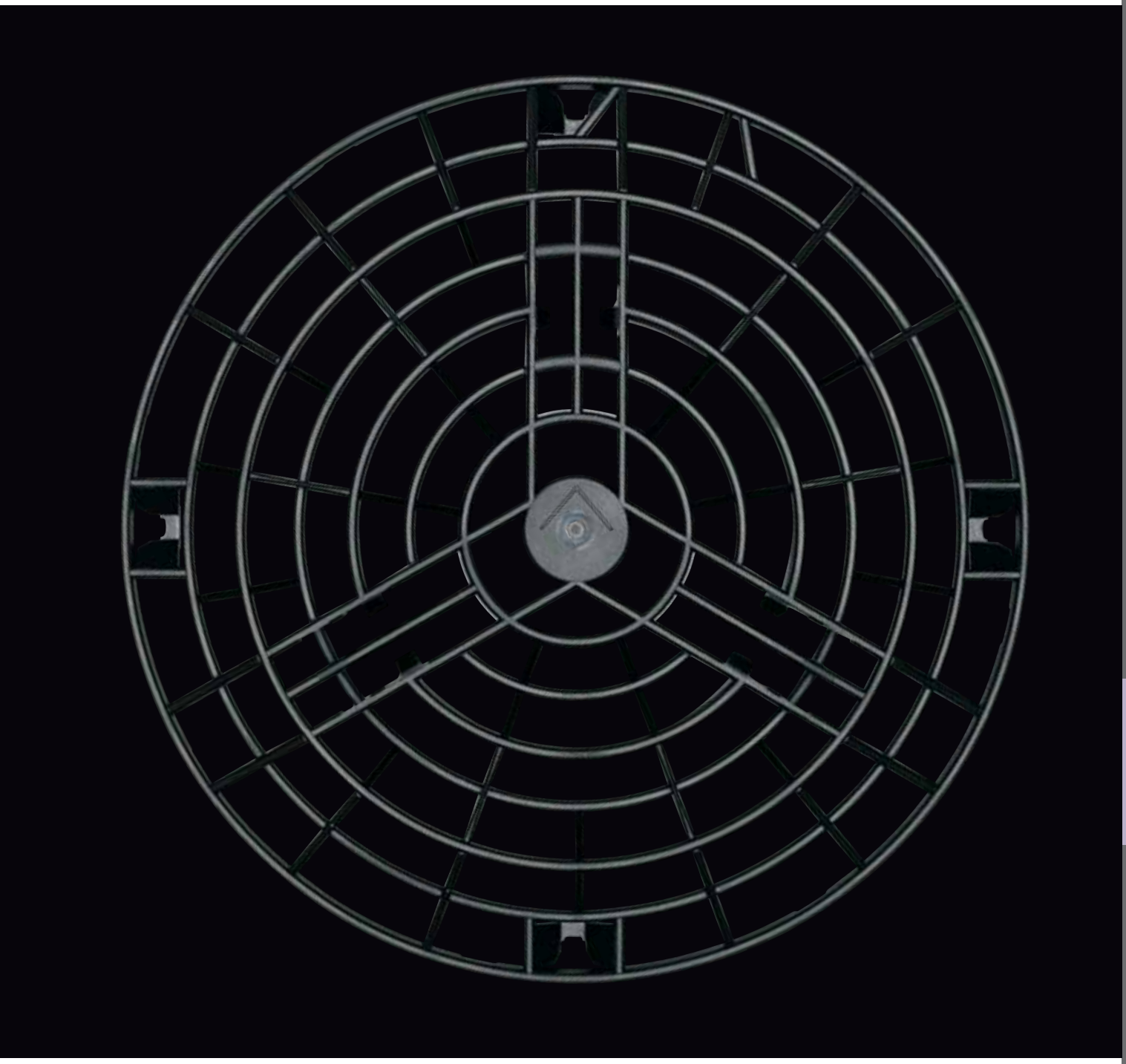
ebmpapst


L1
H1
H2
N
N
N
K1
Heater 1
F6 10 A * / 250 V
K2
Heater 2
F7 10 A * / 250 V
16 - 57 VDC
F1 3,15 A * / 250 V
Fan 1
PWM
Hall
F2 3,15 A * / 250 V
Fan 2
F3 3,15 A * / 250 V
Fan 3
F4 3,15 A * / 250 V
Fan 4
F5 3,15 A * / 250 V
Alarm 1
Alarm 2
Alarm 3
Alarm 4
Alarm 5
K3
K4
K5
K6
K7
Status
Alarm contact
1 2 3 4
1 2 3 4
NTC 1
NTC 2
RS-232
electrically insulated
designation 9-pole Sub-D
0-57 V / 10 mA
* time lag fuse

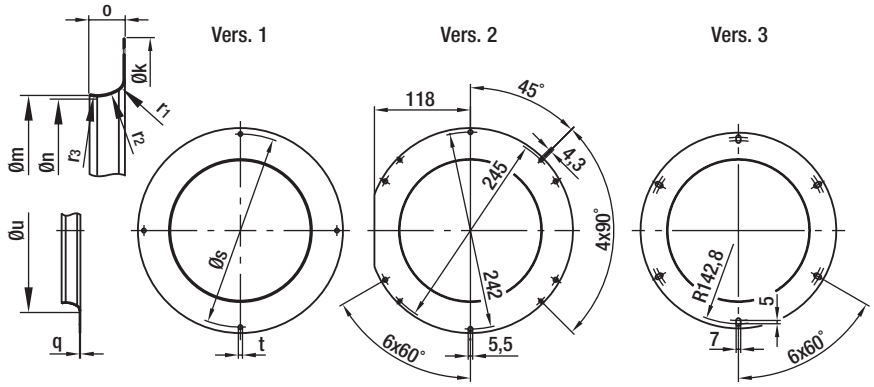


Accessories

	Inlet nozzles	550
	Guard grilles	553
	Lead connections, capacitors	558
	Terminal boxes, air filters	562
	Speed setting, motor protection switch, third-party accessories	564



Inlet nozzles



– **Material:** Galvanised sheet steel

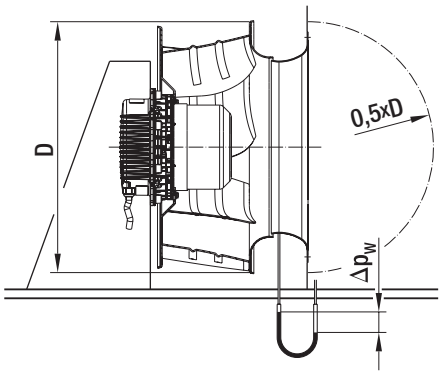
Inlet nozzles for backward curved centrifugal fans

Part no.	Size[1]	Vers.	k	m	n	o	q	r_1	r_2	r_3	s	t	u
96120-2-4013	120 (P)	1	146.0	94.4	—	18.0	0.80	16.0	—	—	134.0	4x4.5	126.0
09566-2-4013	133 (P)	1	129.0	87.0	—	13.0	1.00	8.0	—	—	118.0	4x4.5	103.0
09576-2-4013	175 / 190 (P)	1	170.0	125.5	—	14.0	1.25	10.0	—	—	158.0	4x4.5	146.0
09609-2-4013	220 (P)	2	252.0	155.0	—	21.0	0.80	22.0	—	—	—	—	199.0
96358-2-4013	225 (P)	1	223.0	146.0	—	28.0	1.50	25.0	—	—	210.0	4x4.5	196.0
96359-2-4013	250 (P/S)	1	255.0	164.5	—	31.0	1.50	28.0	—	—	240.0	4x4.5	221.0
96360-2-4013	270 / 280 (S)	1	280.0	182.5	—	35.0	1.50	31.0	—	—	260.0	4x4.5	245.0
97512-2-4013	310 (P)	3	300.0	192.0	—	53.0	1.00	30.0	60.0	—	—	—	257.0
31050-2-4013	310 (A)	1	300.0	211.0	208.1	48.0	1.25	18.0	55.5	35.0	280.0	4x4.5	256.0
31051-2-4013	310[2] (A)	1	300.0	211.0	209.2	27.5	1.25	10.0	32.0	20.0	280.0	4x4.5	236.0
51357-2-4013	330 / 355 (P)	1	350.0	224.0	—	60.0	1.50	54.0	28.0	—	325.0	4x4.5	284.0
35560-2-4013	355 (A)	1	350.0	240.0	236.4	60.0	1.50	22.5	70.0	44.0	325.0	4x4.5	296.0
35561-2-4013	355[2] (A)	1	350.0	240.0	238.0	30.0	1.50	11.0	35.0	22.0	325.0	4x4.5	267.0
54476-2-4013	400 (A)	1	370.0	257.0	—	66.0	1.50	22.0	50.0	90.0	345.0	4x4.5	322.0
54478-2-4013	450 (A)	1	413.0	287.0	—	71.0	1.50	25.0	55.0	100.0	390.0	6x9	362.0
63045-2-4013	450 (A)	1	450.0	289.0	284.5	75.0	1.50	28.0	87.0	49.0	425.0	6x9	360.0
54480-2-4013	500 (A)	1	520.0	323.0	—	79.0	1.50	28.0	65.0	115.0	430.0	6x9	408.0
63072-2-4013	500 (A)	1	470.0	342.0	337.0	75.0	2.00	28.0	87.0	55.0	445.0	6x9	412.0
63071-2-4013	560 (A)	1	515.0	385.0	380.0	82.0	2.00	30.0	95.0	60.0	490.0	6x9	461.0
63070-2-4013	630 (A)	1	634.0	433.0	427.0	98.5	2.00	37.0	14.0	72.0	600.0	6x10.5	525.0

subject to alterations

(1) size with key for impeller material: (P) = plastic, (S) = sheet steel, (A) = aluminium (2) short inlet nozzle

Inlet nozzles with pressure-measuring point for air flow measurement



Air flow measurement:
The differential pressure approach compares the static pressure before the inlet nozzle with the static pressure inside the inlet nozzle.
Air flow can be calculated on the basis of the differential pressure (difference in pressure of the static pressures) in keeping with the following equation:

$\dot{V} = k \cdot \sqrt{\Delta p_W}$ $\dot{V}$ in [m³/h] and Δp_W in [Pa]

If constant air flow control is used, then the nozzle pressure has to be kept constant: $\Delta p_W = \dot{V}^2 : k^2$

k takes into account the specific nozzle characteristics.
1 or 4 pressure measuring points are spaced along the circumference of the inlet nozzle. Connection on the customer side is accomplished via a premounted T tube connector. This tube connector is suited for pneumatic hoses with an internal diameter of 4 mm.

Inlet nozzles with measuring device to determine air flow for backward curved centrifugal fans

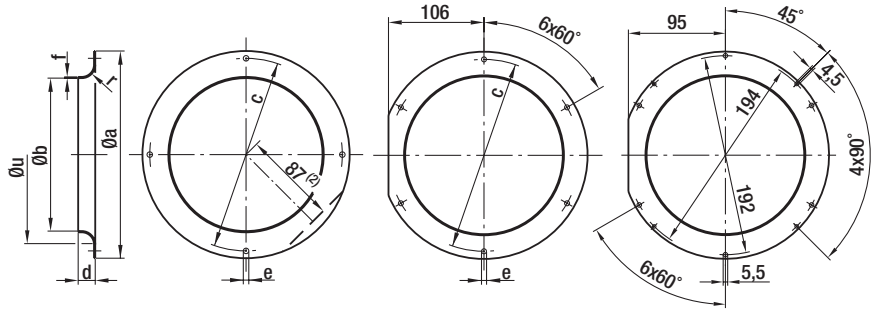
Part no. with 1 nozzle	Part no. with 4 nozzles (Piezometer ring)	Size	k-value	For additional information, refer to p. 550
—	**96400-2-4013**	250	68	96359-2-4013
—	**96410-2-4013**	280	80	96360-2-4013
31100-2-4013	**31080-2-4013**	310	120	31050-2-4013
31110-2-4013	**31090-2-4013**	310	103	31051-2-4013
35600-2-4013	**35580-2-4013**	355	155	35560-2-4013
35610-2-4013	**35590-2-4013**	355	138	35561-2-4013
54515-2-4013	**54500-2-4013**	400	183	54476-2-4013
54514-2-4013	**54510-2-4013**	450	217	54478-2-4013
64015-2-4013	**64005-2-4013**	450	214	63045-2-4013
54518-2-4013	**54516-2-4013**	500	265	54480-2-4013
64025-2-4013	**64002-2-4013**	500	283	63072-2-4013
64030-2-4013	**64001-2-4013**	560	350	63071-2-4013
64040-2-4013	**64000-2-4013**	630	480	63070-2-4013

subject to alterations

Inlet nozzles

– **Material:** Galvanised sheet steel

Vers. 1 Vers. 2 Vers. 3



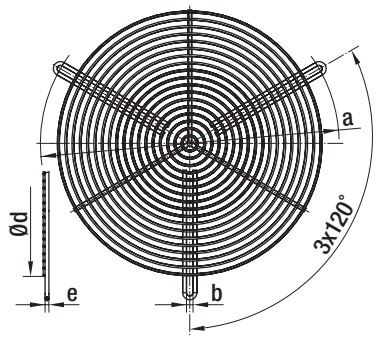
Inlet nozzles for forward curved centrifugal fans

Part no.	Size	Vers.	a	b	c	d	e	f	r	u
09560-2-4013	076 / 085 (1)	1	92.0	63.4	84.0	6.0	3x4.2	0.80	6.8	—
09563-2-4013	097 (1)	1	116.0	80.0	108.0	10.0	3x4.5	0.80	10.0	—
09566-2-4013	108	1	129.0	87.0	118.0	13.0	4x4.5	1.00	8.0	—
09569-2-4013	120	1	142.0	100.0	132.0	9.0	4x4.5	1.00	8.0	—
09572-2-4013	133	1	150.0	112.0	142.0	12.0	4x4.5	1.00	10.0	—
09576-2-4013	140 / 146	1	170.0	125.5	158.0	14.0	4x4.5	1.25	10.0	—
09588-2-4013	160	1 (2)	185.0	130.0	175.0	17.0	4x4.5	0.75	12.0	—
09597-2-4013	180	3	210.0	149.0	—	28.0	—	1.25	25.0	—
09605-2-4013	200 / 225	2	230.0	175.0	213.0	24.0	6x5.5	1.25	20.0	203.0
25010-2-4013	250 (3)	1	300.0	193.0	285.0	51.5	6x7	1.50	27.3	—
28010-2-4013	280 (3)	1	336.0	228.0	315.0	58.5	6x7	1.50	36.5	296.0
31010-2-4013	310 (3)	1	374.0	257.0	350.0	62.5	6x9	1.50	39.5	327.0
35510-2-4013	355 (3)	1	413.0	289.0	390.0	71.5	6x9	1.50	43.5	372.0
40010-2-4013	400 (3)	1	456.0	325.0	430.0	79.5	6x9	1.50	45.5	414.0
45010-2-4013	450 (3)	1	530.0	365.0	510.0	91.5	6x9	1.50	49.5	459.0

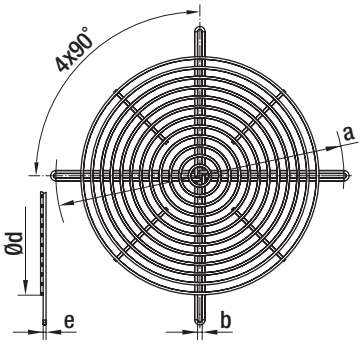
subject to alterations (1) 3 drilled holes staggered by 120° (2) only for 09588-2-1013 (3) 6 drilled holes staggered by 60°

Guard grille

Vers. 1



Vers. 2



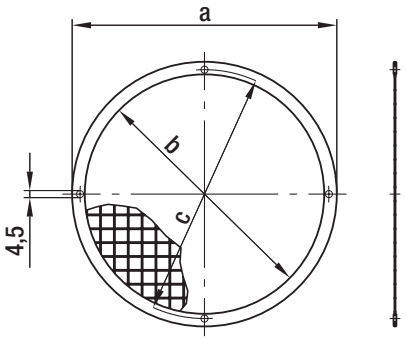
– **Material:** Steel wire, plastic coated, silver-metallic gloss

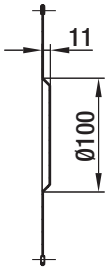
Guard grille for backward curved centrifugal fans (according to EN 294)

Part no.	Size	Vers.	a	b	d	e
78130-2-4039	310	1	280.0	4.5	230.0	2.8
78132-2-4039	400	1	345.0	4.5	310.0	2.8
78136-2-4039	450	2	425.0	8.5	350.0	3.8
78139-2-4039	500	2	445.0	8.5	410.0	3.8
78137-2-4039	560	2	490.0	8.5	430.0	3.8
78138-2-4039	630	2	600.0	8.5	490.0	3.8

subject to alterations

Guard grille





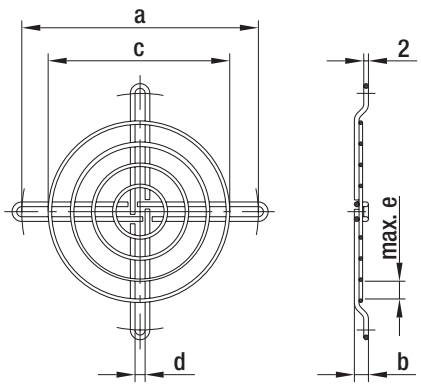
(4) Size 160

– **Material:** Welded grille made of galvanised steel, frame made of tinned sheet iron 0.4 mm thick

Guard grilles for centrifugal blowers with single inlet

Part no.	Size	a	b	c
09489-2-4039	076 / 085 (3)	90.0	74.0	84.0
09490-2-4039	108	126.0	110.0	118.0
09494-2-4039	120	140.0	124.0	132.0
09492-2-4039	140 / 146	168.0	152.0	158.0
09503-2-4039	160 (4)	183.0	170.0	175.0
09493-2-4039	180 (5)	205.0	189.0	194.0

subject to alterations (3) 3 drilled holes staggered by 120° (5) not suitable for G2E180-EH03-01



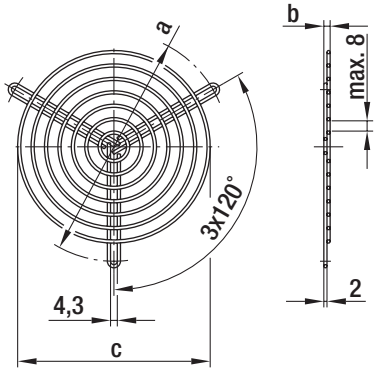
– **Material:** Steel wire

Guard grilles for centrifugal blowers with single inlet

Part no.	Size	a	b	c	d	e	Coating
09603-2-4039	076 / 085	101.0	6.0	79.0	4.3	8.0	plastic coated, silver-metallic gloss
98214-2-4039	108	120.0	3.5	88.0	4.3	8.0	plastic coated, silver-metallic gloss
25028-2-4039	140 / 146	162.0	8.5	139.0	4.3	8.0	galvanised, chromatised in blue
17729-2-4039	160	175.0	3.5	139.0	4.6	7.0	galvanised, chromatised in blue
09526-2-4039	180 (6)	194.0	39.5	164.0	4.3	8.0	phosphated, plastic coated in RAL no. 9005

subject to alterations (6) only suitable for G2E180-EH03-01

Guard grille

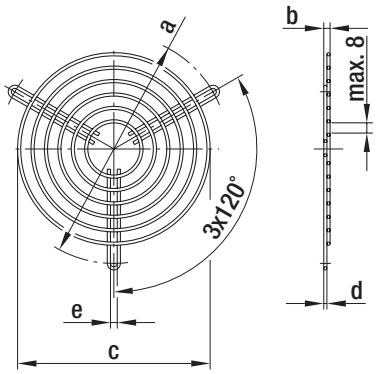


– **Material:** Steel wire

Guard grilles for centrifugal blowers with dual inlet

Part no.	Size	a	b	c	Coating
83319-2-4039	097 (1)	96.0	3.5	71.0	phosphated, plastic coated in RAL no. 9005
09485-2-4039	097 (2)	114.0	3.5	88.0	phosphated, plastic coated in RAL no. 9005
09500-2-4039	133 / 146	145.0	4.0	122.0	phosphated, plastic coated in RAL no. 9005
31003-2-4039	180	192.0	9.5	174.0	phosphated, plastic coated in RAL no. 9005
95644-2-4039	200	250.0	5.0	206.0	plastic coated, silver-metallic gloss

subject to alterations (1) for D2E097-CH (2) for D2E097-B*



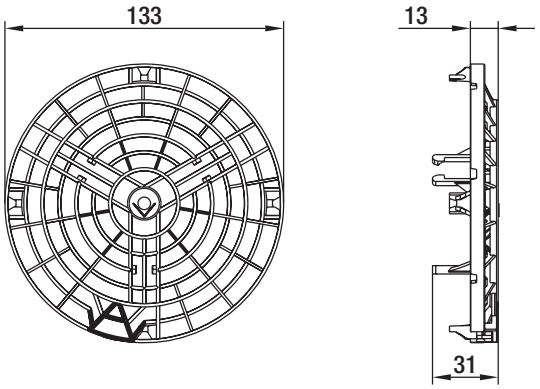
– **Material:** Phosphated steel wire, plastic coated, silver-metallic gloss

Guard grilles for centrifugal blowers with dual inlet (versions with EW motor)

Part no.	Size	a	b	c	d	e
35000-2-4039	160	182.0	12.0	144.0	2.4	4.5
62226-2-4039	180	192.0	9.0	173.0	3.0	5.2
62227-2-4039	200	213.0	9.0	190.0	3.0	5.2
62228-2-4039	225 / 240	242.0	9.0	222.0	3.0	5.2
25825-2-4039	250	275.0	9.0	255.0	3.0	5.2

subject to alterations

Guard grille



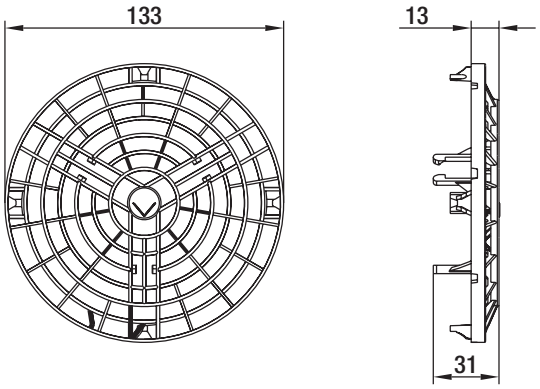
- **Material:** PA plastic 6.6 GV25 V0, black
- **Special feature:** Triangular, raised contour
- **Suitable for:**
  D2E140-HR; D2E146-KA; D2E146-KB;
  D2E146-HR; D2E146-HS; D2E146-HT;
  D4E146-LV

Guard grilles for blowers with dual inlet with plastic housing (cable exit side of blower)

Part no.

34265-2-2929

subject to alterations



- **Material:** PA plastic 6.6 GV25 V0, black
- **Special feature:** Outer two rings are closed
- **Suitable for:**
  D2E140-HR; D2E146-KA; D2E146-KB;
  D2E146-HR; D2E146-HS; D2E146-HT;
  D4E146-LV; K4E146-AB

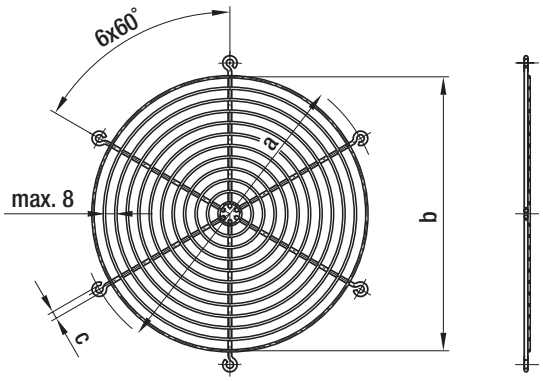
Guard grilles for blowers with dual inlet with plastic housing (side of blower opposite cable exit)

Part no.

38182-2-2929

subject to alterations

Guard grille



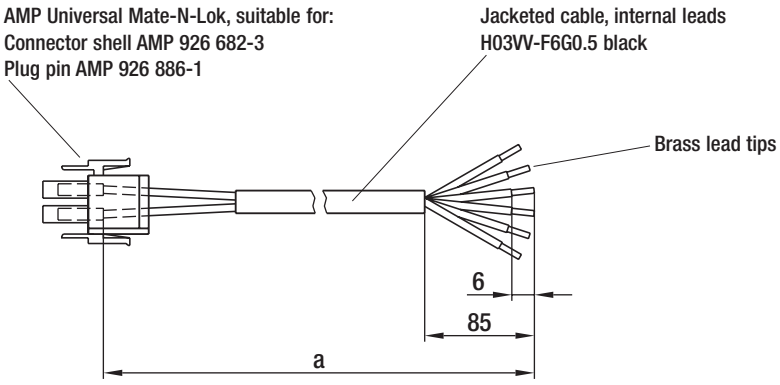
– **Material:** Phosphated steel wire, plastic coated in RAL no. 9005, black

Guard grilles (e.g. for axial fans)

Part no.	Size	a	b	c
09513-2-4039	200	250.0	227.0	6.0
09518-2-4039	250	295.0	265.0	7.0
09532-2-4039	300	380.0	323.0	9.0

subject to alterations

Connection leads

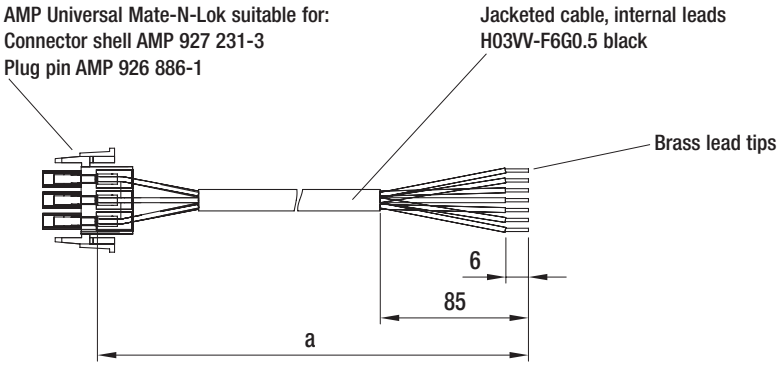


- **Suitable for:**
  D2E140-HR; D2E146-KA; D2E146-KB; D2E146-HR; D2E146-HS; D2E146-HT; D2E160-FI; D2E160-FK
- **Plug assignment:**
  1 = Step 1 (white)
  2 = Step 2 (red)
  3 = Step 3 (grey)
  4 = Step 4 (black)
  5 = N (blue)
  6 = PE (green/yellow)

Lead connections for centrifugal blowers

Part no.	a
21956-4-1040	300.0
21957-4-1040	450.0
21958-4-1040	650.0
21959-4-1040	1000.0

subject to alterations



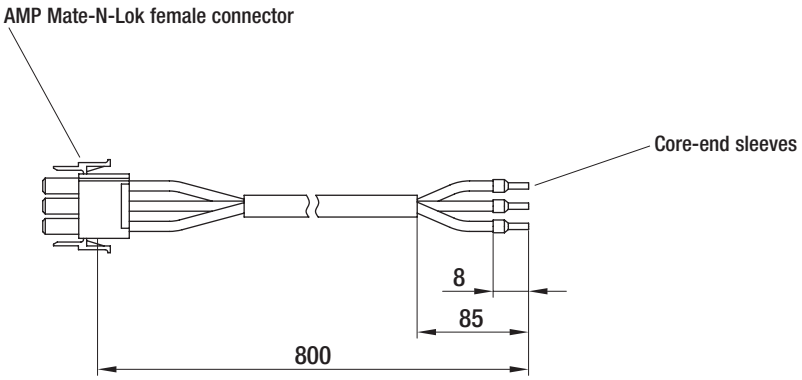
- **Suitable for:**
  D4E146-LV; K4E146-AB
- **Plug assignment:**
  1 = Step 1 (white)
  2 = Step 2 (red)
  3 = Step 3 (grey)
  4 = Step 4 (orange)
  5 = Step 5 (black)
  8 = N (blue)
  9 = PE (green/ yellow)

Lead connections for centrifugal blowers

Part no.	a
21810-4-1012	450.0
21811-4-1012	1050.0
21812-4-1012	1300.0
21813-4-1012	1600.0
21814-4-1012	2300.0

subject to alterations

Connection leads



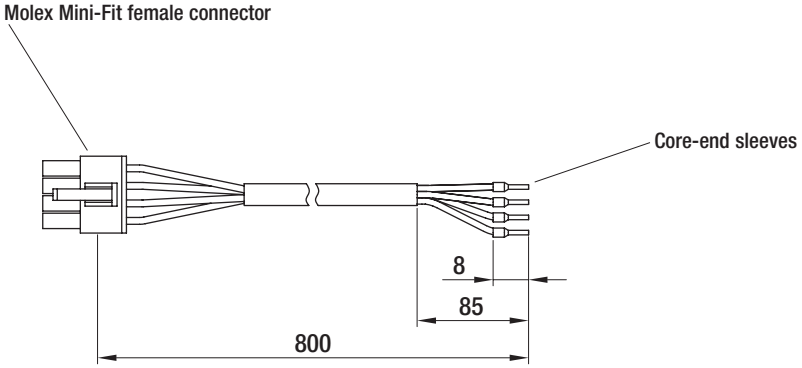
– **Plug assignment:**
  1 = N (black 2)
  2 = L (black 1)
  3 = PE (green / yellow)

Line lead for EC centrifugal fans (clean room technology)

Part no.

22243-4-1029

subject to alterations



– **Plug assignment:**
  1 = RSB (white)
  2 = RSA (yellow)
  3 = +15 V (red)
  4 = 0 V (blue)

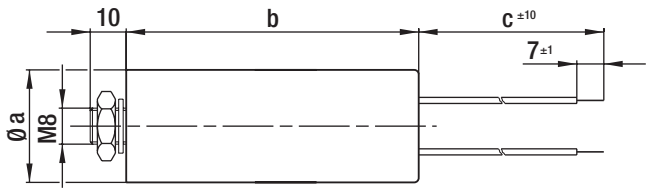
Control line for EC centrifugal fans (clean room technology)

Part no.

22242-4-1029

subject to alterations

Capacitors



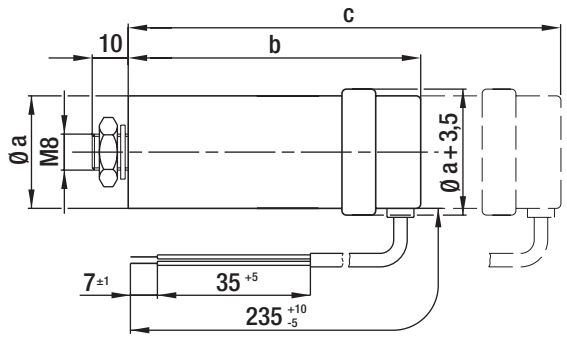
- **Material:** Housing made of Thermoplast
- **Connection lead:** Multi-lead PVC cable 0.5 mm² with brass lead tips
- **Approval:** VDE according to DIN EN 60252 (VDE 0560/8)
- **Calculated life time:**
  400 V; -25 to +85°C; 30,000 hrs; class A
  450 V; -25 to +85°C; 10,000 hrs; class B

MKP motor capacitors (without fuse)

Part no.	Capacity	a	b (max.)	c
02100-4-7320	1.0 µF	25-28	58.0	235.0
99282-4-7320	1.5 µF	25-28	58.0	235.0
99283-4-7320	2.0 µF	25-28	58.0	235.0
02103-4-7320	2.5 µF	25-28	70.0	235.0
68462-4-7320	3.0 µF	25-28	70.0	235.0
99284-4-7320	4.0 µF	28-32	58.0	235.0
02101-4-7320	5.0 µF	30-36	70.0	235.0
99285-4-7320	6.0 µF	30-36	70.0	235.0
66788-4-7320	7.0 µF	30-36	72.0	100.0
99286-4-7320	8.0 µF	35-40	72.0	235.0
99287-4-7320	10.0 µF	35-40	72.0	200.0
66786-4-7320	12.0 µF	40.0	72.0	100.0
30457-4-7320	14.0 µF	40-45	92.0	150.0
50090-4-7320	16.0 µF	35-40	95.0	100.0
90034-4-7320	20.0 µF	40.0	95.0	235.0
90025-4-7320	25.0 µF	40.0	120.0	235.0

subject to alterations

Capacitors

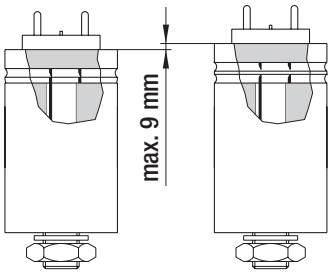


- **Material:** Plastic cap, aluminium cup
- **Designation:** FPU or P2 according to IEC 252 (non-flammable, non-explosive, circuit-breaking)
- **Approval:** VDE according to DIN EN 60252 (VDE 0560/8)
- **Calculated life time:**
  420 V; -25 to +85°C; 30,000 hrs; class A
  470 V; -25 to +85°C; 10,000 hrs; class B
  500 V; -25 to +85°C; 3,000 hrs; class C

MKP motor capacitors FPU or P2 (with fuse)

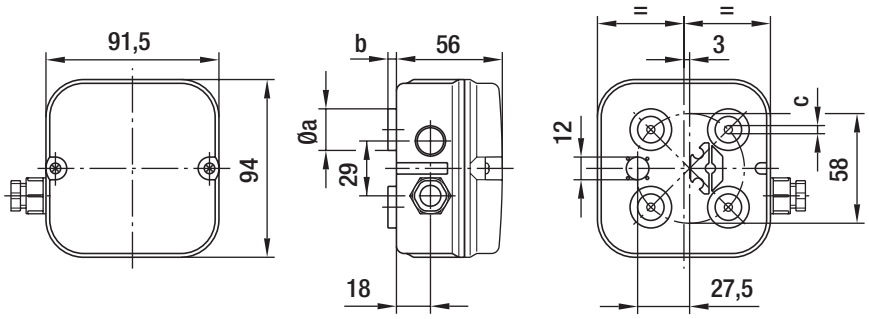
Part no.	Capacity	a	b (max.)	c (max.)
02151-4-7320	1.0 µF	25-30	77.0	92.0
02155-4-7320	1.5 µF	25.0	77.0	92.0
02156-4-7320	2.0 µF	25.0	77.0	92.0
02159-4-7320	2.5 µF	30.0	71.0	92.0
02160-4-7320	3.0 µF	30.0	71.0	92.0
02161-4-7320	4.0 µF	25-30	104.0	135.0
02162-4-7320	5.0 µF	25-30	104.0	113.0
02163-4-7320	6.0 µF	30.0	101.0	110.0
02164-4-7320	7.0 µF	30-35	101.0	110.0
02165-4-7320	8.0 µF	30-35	102.0	111.0
02166-4-7320	10.0 µF	35.0	96.0	110.0
02167-4-7320	12.0 µF	35.0	96.0	110.0
90026-4-7320	14.0 µF	40.0	130.0	139.0
02168-4-7320	16.0 µF	40.0	96.0	130.0
02169-4-7320	20.0 µF	40.0	116.0	130.0
02170-4-7320	25.0 µF	40-45	116.0	130.0

subject to alterations



- **Pull-off protector:** The housing expands by max. 9 mm. The protector responds to overload by the generated excess pressure snapping off the internal lead in a predetermined breaking point.
- **Mounting:** c is the overall dimension of the capacitor which has to be taken into account when mounting the part. The capacitor design, however, depends on the manufacturer. The expansion (9 mm) is either added to dimension b, or it is already integrated in the capacitor.

Terminal box



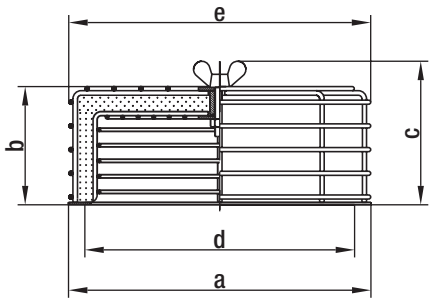
- **Material:** ABS
- **Description:** Two-piece terminal box for AC motors of size 068 or 074, terminal strip with 4- or 7-pole. Suitable for installation of capacitor with 10 µF max.
- **Type of protection:** IP 54

Terminal box

Part no.	AC motor	a	b	c
64442-1-7612	068 (4 poles)	22.0	5.0	4.3
64444-1-7612	068 (7 poles)	22.0	5.0	4.3
64443-1-7612	074 (4 poles)	12x14.5	10.5	5.5
64445-1-7612	074 (7 poles)	12x14.5	10.5	5.5

subject to alterations

Air filter



- **Material:** Steel wire / sheet steel, plastic coated in RAL no. 9005, black
- **Filter:** Viledon filter type R: PSB / 29 OS (according to DIN 24185)
  Separation capacity: < 86 %
  Efficiency: < 20 %
  Dust binding capacity: 650 g/m²

Air filters for centrifugal blowers (with die-cast aluminium housing)

Part no.	Size	a	b	c	d	e	Spare filter
95777-1-5171	108 / 120	142.0	66.0	83.0	118-132	145.0	95779-1-5171
95778-1-5171	140 / 146 / 160	185.0	74.0	91.0	158-175	185.0	95780-1-5171
95347-1-5171	180	210.0	74.0	91.0	194.0	185.0	95780-1-5171

subject to alterations

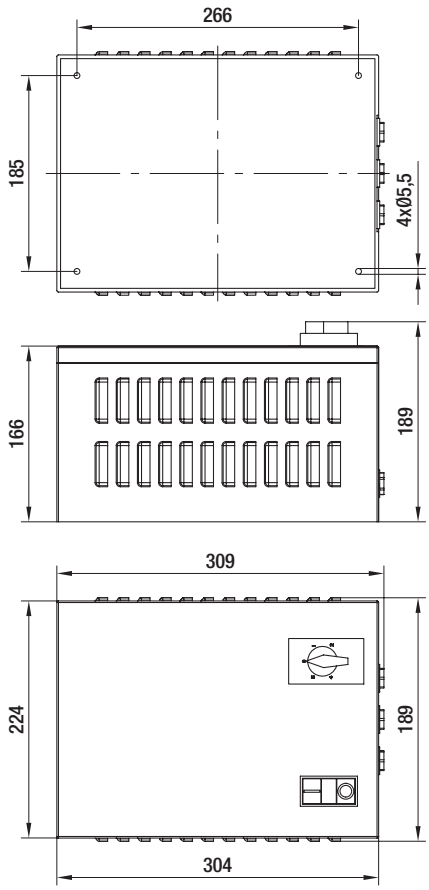
Speed setting, 3-phase (with 5 steps)

for wall assembly

- **Technical features:** Input for TOP
- **Voltage steps:** 3~ 400 / 280 / 230 / 180 / 140 VAC
- **Type of protection:** IP 20 (with vertical installation)

Nominal data		Nominal voltage	Frequency	Current draw	Mass
Type		**VAC**	**Hz**	**A**	**kg**
TCD 020-AA01 -05	3~	400	50/60	2.0	9.5
TCD 040-AA01 -05	3~	400	50/60	4.0	13.9
TCD 070-AA01 -05	3~	400	50/60	7.0	19.7

subject to alterations



ebmpapst

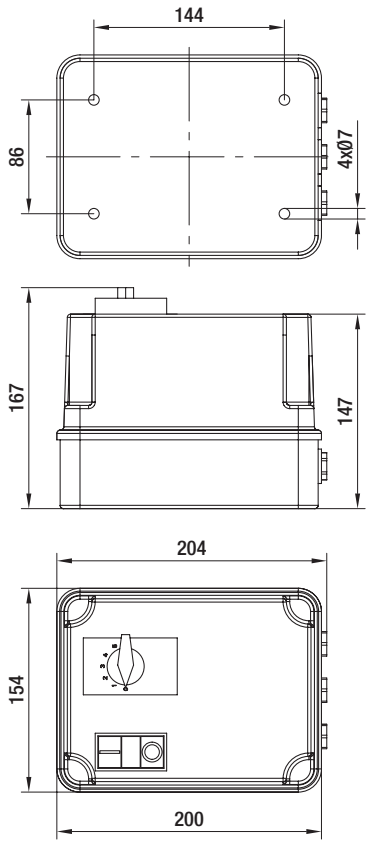
Speed setting, single-phase (with 5 steps)

for wall assembly

- **Technical features:** Input for TOP
- **Voltage steps:** 1~ 230 / 160 / 145 / 130 / 105 VAC
- **Type of protection:** IP 40

Nominal data		Nominal voltage	Frequency	Current draw	Mass
Type		**VAC**	**Hz**	**A**	**kg**
TCE 021-AA01 -05	1~	230	50/60	2.1	3.6
TCE 040-AA01 -05	1~	230	50/60	4.0	4.8
TCE 075-AA01 -05	1~	230	50/60	7.5	6.5

subject to alterations



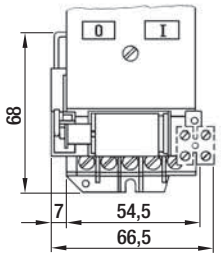
Motor protection switch, 3-phase

for assembly inside a cabinet

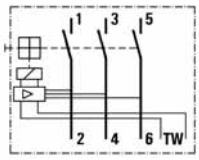
– **Technical features:** Input for TOP

Nominal data		Nominal voltage	Frequency	Current draw	Mass	
Type		**VAC**	**Hz**	**A**	**kg**	**Auxiliary contactor**
TPD 250-AB01 -01	3~	400	50/60	25.0	0.3	without auxiliary contactor
TPD 250-AB01 -02	3~	400	50/60	25.0	0.3	with break contact
TPD 250-AB01 -03	3~	400	50/60	25.0	0.3	with make contact

subject to alterations



– **Electr. connection:**



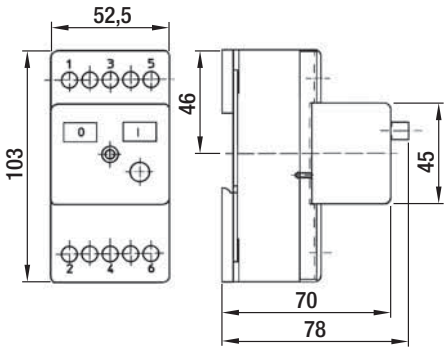
Motor protection switch, single-phase

for assembly inside a cabinet

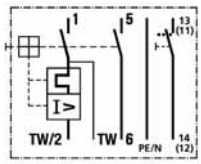
– **Technical features:** Input for TOP

Nominal data		Nominal voltage	Frequency	Current draw	Mass	
Type		**VAC**	**Hz**	**A**	**kg**	**Auxiliary contactor**
TPE 100-AB01 -01	3~	230	50/60	10.0	0.3	without auxiliary contactor
TPE 100-AB01 -02	3~	230	50/60	10.0	0.3	with break contact
TPE 100-AB01 -03	3~	230	50/60	10.0	0.3	with make contact

subject to alterations



– **Electr. connection:**



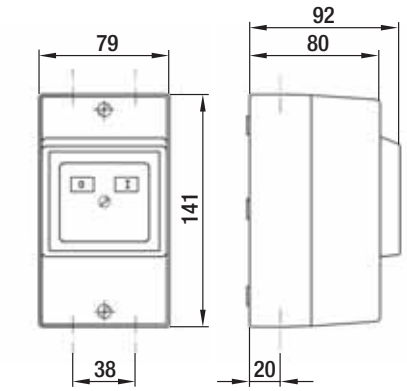
Motor-protection switch, single phase and three-phase

for wall assembly

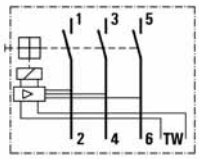
- **Technical features:** Input for TOP
- **Type of protection:** IP 55

Nominal data		Nominal voltage	Frequency	Current draw	Mass	
Type		**VAC**	**Hz**	**A**	**kg**	**Auxiliary contactor**
TPD 250-AA01 -01	3~	400	50/60	25.0	0.6	without auxiliary contactor
TPD 250-AA01 -02	3~	400	50/60	25.0	0.6	with break contact
TPD 250-AA01 -03	3~	400	50/60	25.0	0.6	with make contact
TPE 100-AA01 -01	1~	230	50/60	10.0	0.6	without auxiliary contactor
TPE 100-AA01 -02	1~	230	50/60	10.0	0.6	with break contact
TPE 100-AA01 -03	1~	230	50/60	10.0	0.6	with make contact

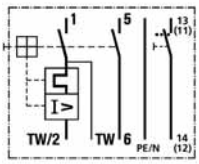
subject to alterations



- **Electr. connection, three-phase:**



- **Electr. connection, single-phase:**



ebmpapst

Star-delta switch / repair switch

Third-party accessories from Möller Electric GmbH

for wall installation

More information: www.moeller.net

Star-delta switch (available from Möller Electric GmbH)

Designation	Installation
T0-4-8410/I1	Wall installation
T0-4-8410/E	Cabinet installation

subject to alterations

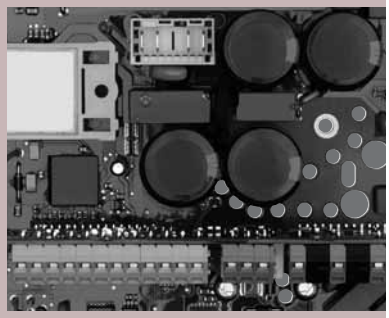
for wall installation

More information: www.moeller.net

Repair switch, lockable (available from Möller Electric GmbH)

Designation	Installation
T0-2-8900/I1/SVB-SW	Wall installation
T0-2-8900/EA/SVB-SW	Cabinet installation

subject to alterations



Technology

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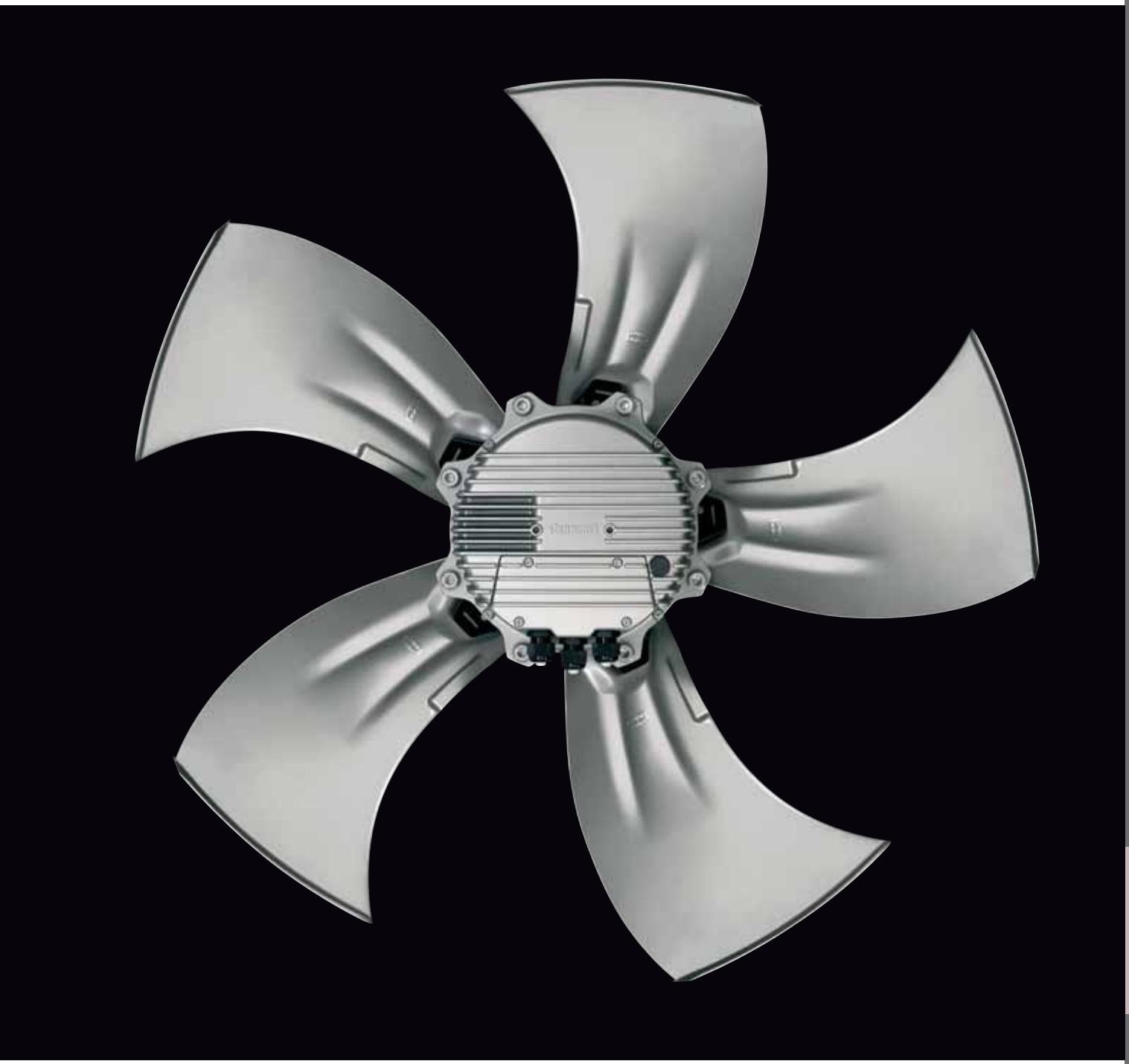


Technical parameters & scope

High standards for all ebm-papst products

Here at ebm-papst, we constantly strive to further improve our products in order to be able to offer you the best possible product for your application. Careful monitoring of the market ensures that technical innovations are reflected in the improvements of our products.
Based on the technical parameters listed below and the ambience you want our product to operate in, we here at ebm-papst can always work out the best solution for your specific application.

General performance parameters

Any deviations from the technical data and parameters described here are listed on the product-specific data sheet.

Type of protection

The type of protection is specified in the product-specific data sheets.

Insulation class

The insulation class is specified in the product-specific data sheets.

Mounting position

The mounting position is specified in the product-specific data sheets.

Condensate discharge holes

Information on the condensate discharge holes is provided in the product-specific data sheets.

Mode of operation

The mode of operation is specified in the product-specific data sheets.

Protection class

The protection class is specified in the product-specific data sheets.

Service life

The service life of ebm-papst products depends on two major factors:

– The service life of the insulation system
– The service life of the bearing system

The service life of the insulation system mainly depends on voltage level, temperature and ambient conditions, such as humidity and condensation.
The service life of the bearing system depends mainly on the thermal load on the bearing.
The majority of our products use maintenance-free ball bearings for any mounting position possible. As an option, sleeve bearings can be used, which is indicated on the product-specific data sheet wherever applicable.
The service life L10 of the ball bearings can be taken as approx. 40,000 operating hours at an ambient temperature of 40 °C, yet this estimate can vary according to the actual ambient conditions.
We will gladly provide you with a lifetime calculation taking into account your specific operating conditions.

Motor protection / thermal protection

Information on motor protection and thermal protection is provided in the product-specific data sheets.
Depending on motor type and field of application, the following protective features are realised:

– Thermal overload protection (TOP), either in-circuit or external
– PTC with electronic diagnostics
– Impedance protection
– Thermal overload protection (TOP) with electronic diagnostics
– Current limitation via electronics

If an external TOP is connected, the customer has to make sure to connect a conventional trigger device for switching it off.
All fans with 1~ AC voltage are equipped with a TOP that is connected in the winding circuit.
Products without fitted TOP and without protection against improper use, a motor protection complying with the valid standards has to be installed.

Left: Endurance test room
Middle: Shock test
Right: Chamber test rig

Mechanical strain / performance parameters

All ebm-papst products are subjected to comprehensive tests complying with the normative specifications. In addition to this, the tests also reflect the vast experience and expertise of ebm-papst.

Vibration test

Vibration tests are carried out in compliance with

– Vibration test in operation according to DIN IEC 68, parts 2-4
– Vibration test at standstill according to DIN IEC 68, parts 2-4

Shock load

Shock load tests are carried out in compliance with

– Shock load according to DIN IEC 68, parts 2-27

Balancing quality

Testing the balancing quality is carried out in compliance with

– Residual imbalance according to DIN ISO 1940
– Standard balancing quality level G 6.3

Should you require a higher balancing quality level for your specific application, please let us know and specify this when ordering your product.

Chemo-physical strain / performance parameters

Should you have questions about chemo-physical strain, please direct them to your ebm-papst contact.

Fields of application, industries and applications

Our products are used in various industries and applications:
Ventilation, air-conditioning and refrigeration technology, clean room technology, automotive and rail technology, medical and laboratory technology, electronics, computer and office technology, telecommunications, household appliances, heating, machines and plants, drive engineering.
Our products are not designed for use in the aviation and aerospace industry!

Legal and normative directives

The products described in this catalogue are designed, developed and produced in keeping with the standards in place for the relevant product and, if known, the conditions governing the relevant fields of application.

Standards

Information on standards is provided in the product-specific data sheets.

EMC

Information on EMC standards is provided in the product-specific data sheets.
Complying with the EMC standards has to be established on the final appliance, as different mounting situations can result in changed EMC properties.

Leakage current

Information on the leakage current is provided in the product-specific data sheets.
The measurement takes place according to Fig. D.1 according to IEC 60990, Fig. 4.

Approvals

In case you require a specific approval for your ebm-papst product (VDE, UL, GOST, CCC, CSA, etc.) please let us know.
Most of our products can be supplied with the relevant approval.
Information on existing approvals is provided in the product-specific data sheets.

Air performance measurements

All air performance measurements are carried out on inlet-side chamber test rigs in conformity with the requirements of DIN 24163 and ISO 5801.
The fans being tested are installed on the measuring chamber at free air intake and discharge (installation type A according to DIN 24163 Part 1) and are operated at nominal voltage (for AC, also at nominal frequency) without additional attachments such as the guard grille.
As required by the standard, the air performance curves correspond to an air density of 1.2 kg/m^3.

Room for precision noise measuring

Measurement conditions for air and noise measurement

ebm-papst products are measured under the following conditions:

- Axial and centrifugal fans with direction of air flow "V", without guard grille and in the wall ring
- Backward curved centrifugal fans, free-running and with inlet nozzle
- Forward curved single and dual inlet centrifugal fans with housing

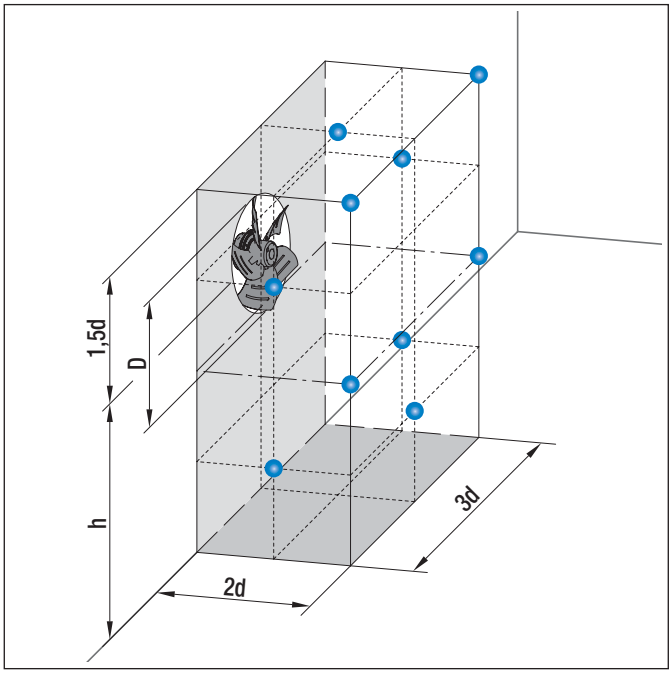
Noise measurements

All noise measurements are carried out in low-reflective test rooms with reverberant floor. Thus the ebm-papst acoustic test chambers meet the requirements of precision class 1 according to DIN EN ISO 3745. For noise measurement, the fans being tested are placed in a reverberant wall and operated at nominal voltage (for AC, also at nominal frequency) without additional attachments such as the guard grille.

Sound pressure level and sound level

All noise levels are measured in conformity to DIN 45635 and ISO 3744/3745 according to precision class 2 and specified A-weighted. When the sound pressure level (L_p) is measured, the microphone is on the intake side of the fan being tested, usually at a distance of 1 m on the fan axis.

To measure the sound level (L_w), 10 microphones are distributed over an enveloping surface on the intake side of the fan being tested (see graphic). The sound level measured can be roughly calculated from the sound pressure level by adding 7 dB.



Measurement configuration according to DIN 45635 T38:

- 10 measuring points

$d \geq D$

$h = 1.5d$ to $4.5d$

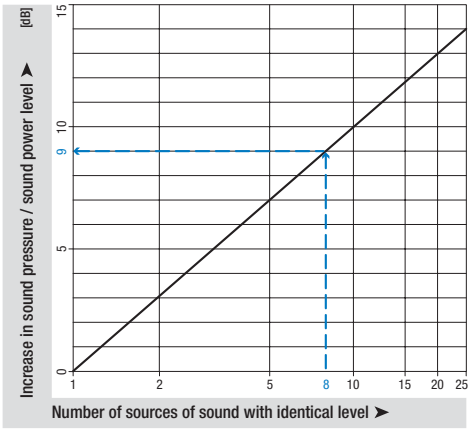
Measurement area $S = 6d^2 + 7d\ (h + 1.5d)$

Curves

Adding multiple noise sources with the same level

Adding 2 noise sources with the same volume results in a level increase of approx. 3 dB. The noise characteristics of multiple identical fans can be determined in advance based on the noise values specified in the data sheet. This is shown in the diagram opposite.

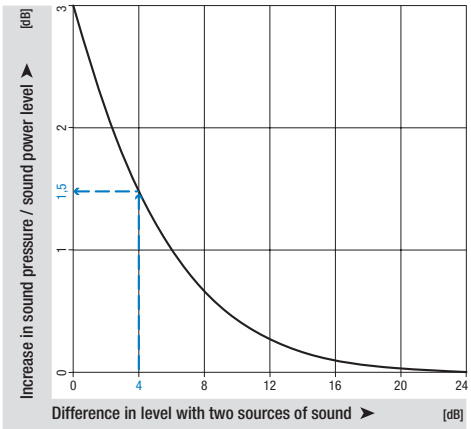
Example: 8 A3G800 axial fans are on a condenser. According to the data sheet, the sound pressure level of a fan is approximately 75 dB(A).
The level increase measured from the diagram is 9 dB. Thus the overall sound level of the installation can be expected to be 84 dB(A).



Adding two noise sources with different levels

The acoustic performance of two different fans can be predetermined based on the sound levels given in the data sheet. This is shown in the diagram opposite.

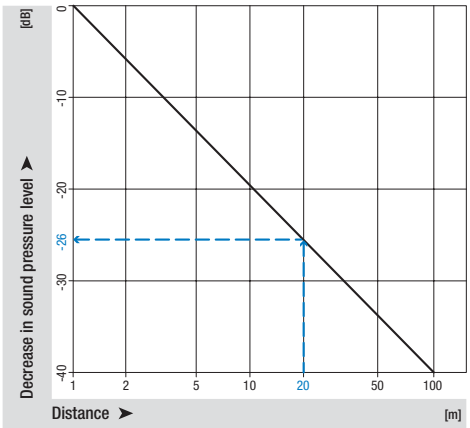
Example: There is an axial fan A3G800 with a sound pressure level of 75 dB(A) at the operating point and an axial fan A3G710 with 71 dB(A) in a ventilation unit. The level difference is 4 dB. The level increase can now be read in the diagram as approx. 1.5 dB. This means that the overall sound level of the unit can be expected to be 76.5 dB(A).



Inverse square laws

The sound level is independent of the distance from the noise source. Conversely, the sound pressure level decreases as distance from the noise source increases. The diagram to the right shows the level decrease expressed in terms of an output measurement at a distance of 1 m from the noise source under far-field conditions.

Example: An axial fan A3G800 has a sound pressure level of 75 db(A) at the operating point. Now, you want to measure the noise characteristics at a distance of 20 m. In the diagram to the right, you can now read a reduction of 26 dB for the 20 m distance.



Impellers

Impellers made by ebm-papst

Like pumps and compressors, fans and blowers belong to the category of aerodynamic and fluid work machines. A fan consists of an impeller, a drive motor and a housing for suspension and for guiding the air flow. The blades spaced along the circumference of the impeller are designed in such a way as to cause the flowing work medium to change direction, thus passing on pressure and speed energy.

ebm-papst construction designs

Depending on the geometrical shape of the impeller, there are different construction designs, with their names taken from the main flow direction in the impeller.

The most important designs are:

- Axial fans
- Centrifugal fans with backward curved blades
- Single or dual inlet centrifugal blowers with forward curved blades
- Diagonal (mixed flow) fans (a cross between axial and centrifugal fans)

Relevant fields of application of the various construction designs

The different ebm-papst fan and blower designs correspond to the different fields of application:

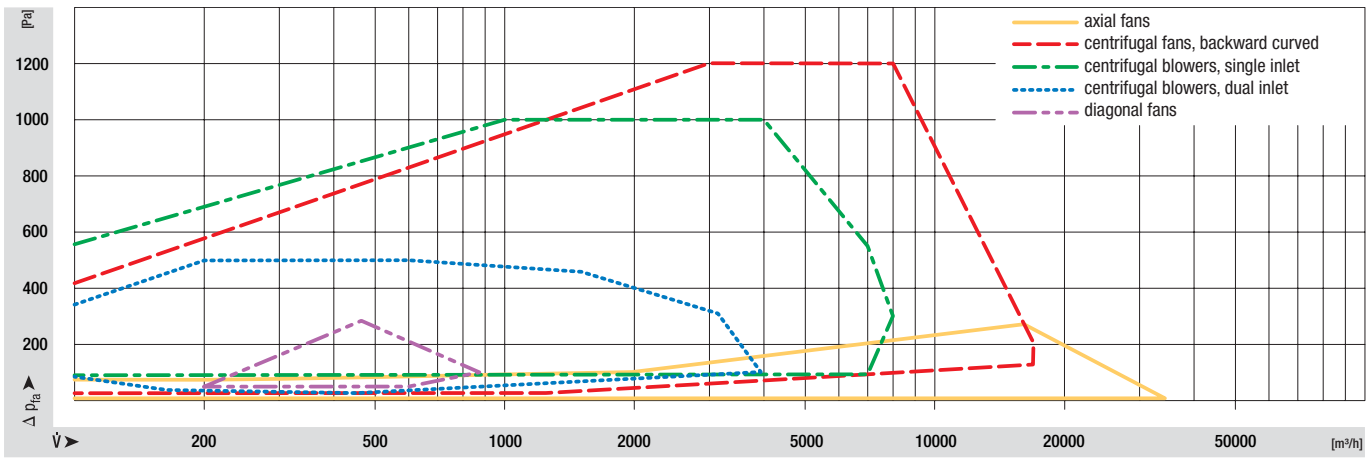
- Small back pressures: axial fans
- High back pressures: centrifugal fans with backward curved blades and single or dual inlet centrifugal blowers
- Threshold between axial and centrifugal fans: diagonal fans

Application-specific selection parameters

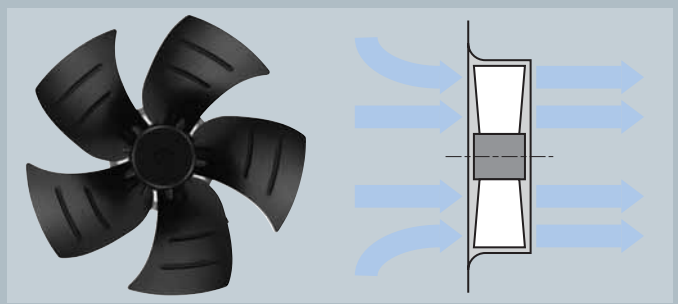
When selecting an application-specific fan or blower, the main parameters to be taken into account are these:

- Air flow at given back pressure
- Constructional design
- Speed/rpm
- Impeller diameter
- Ambient conditions governing suction and exhaust side

Characteristic curves of the various designs



ebmpapst



Axial fans

Operating range

To the right of the "saddle" (right part of the air performance curve):

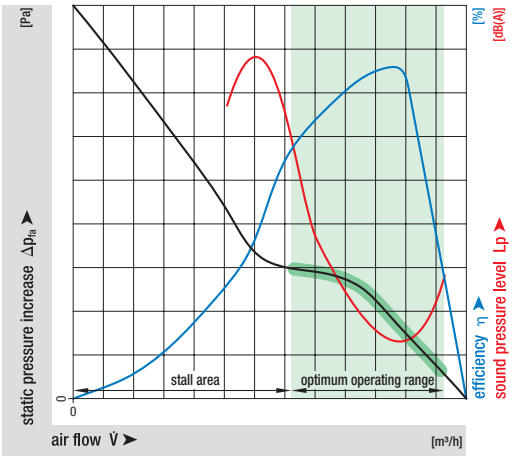
– Maximum efficiency
– Minimal noise

To the left of the "saddle" (left part of the air performance curve):

– Stall area
– Drop in efficiency
– Soaring noise

The optimum operating range of the fan is shaded in green in the curve given here.

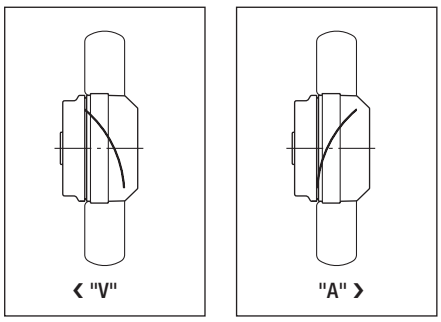
Noise / efficiency curve



Direction of air flow

The direction of air flow is given as follows:

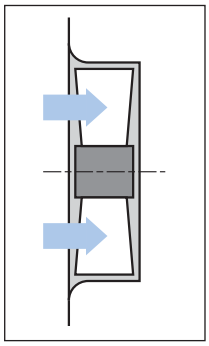
Direction of air flow "V" Direction of air flow "A"



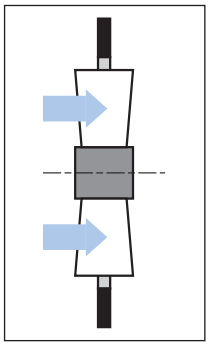
Effects when mounted in wall ring or in the aperture

Mounting the fan in a wall ring can significantly increase the air performance in the operating range.

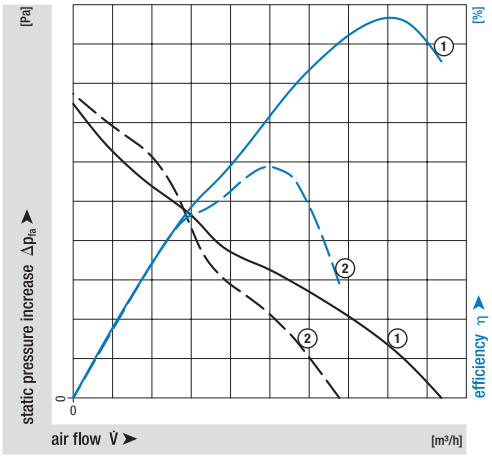
① Wall ring



② Aperture



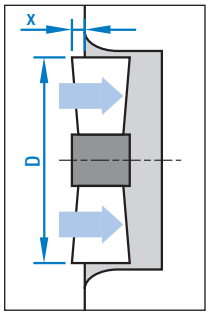
Curve



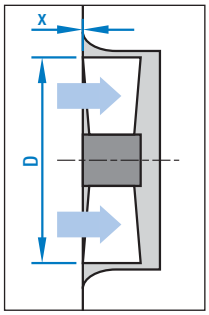
Effects with axial position in the wall ring

Axial position in the wall ring influences air performance and efficiency.

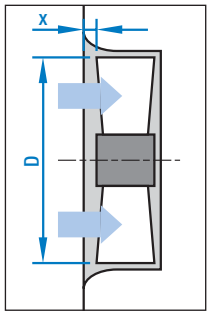
① Projecting on inlet side
x / D = 7 %



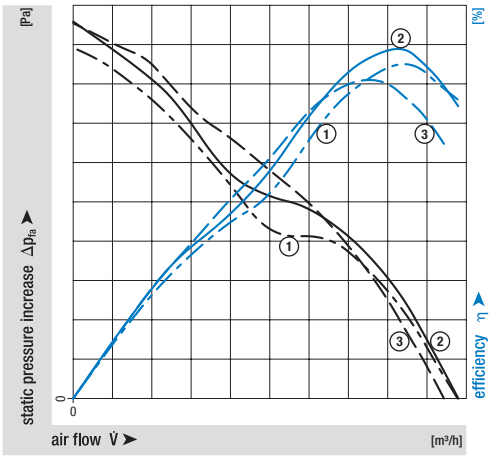
② Flush on inlet side
x / D = 0 %



③ Immersed on inlet side
x / D = -7 %



Curve

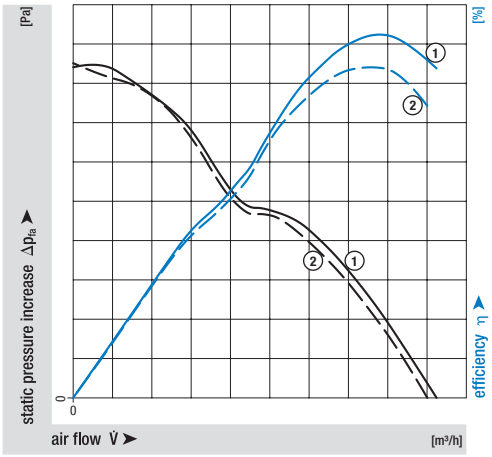


Effects with guard grilles

Mounting a guard grille reduces the air performance of the axial fan.

① Without guard grille
② With guard grille

Curve



The pressure drop in Pa can be roughly calculated according to the following equation:

$$\Delta p_{GG} = \epsilon_{GG} \cdot 10^{-8} \cdot \dot{V}^2 \qquad \dot{V} \text{ in } [m^3/h]$$

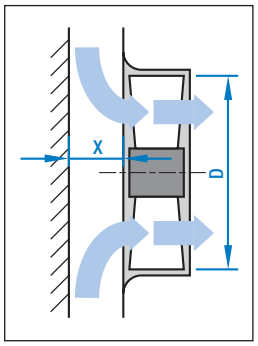
For the guard grilles used at ebm-papst, the correction factor ϵ_{GG} can be used depending on the impeller diameter D from the table to the right.

Diameter D	Correction factor ϵ_{GG}
130	10000
143	6600
180	2550
200	1650
250	650
300	300
315	240
350	150
400	90
450	55
500	35
560	20
630	11
710	6
800	3
910	1.5
990	0.9

Effects of obstructions on the suction or exhaust side

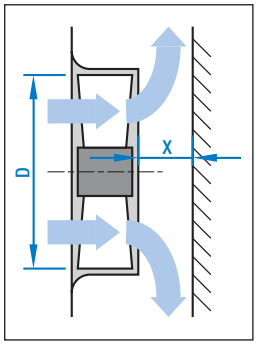
Disturbances or obstructions on the suction or pressure side reduce the air performance of the axial fan.

Obstructions on the inlet side



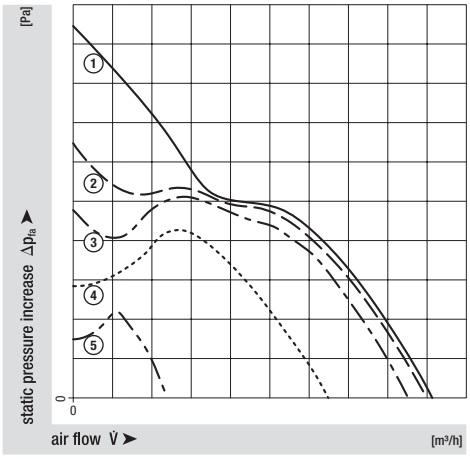
① x / D = ∞
② x / D = 35 %
③ x / D = 18 %
④ x / D = 9 %
⑤ x / D = 5 %

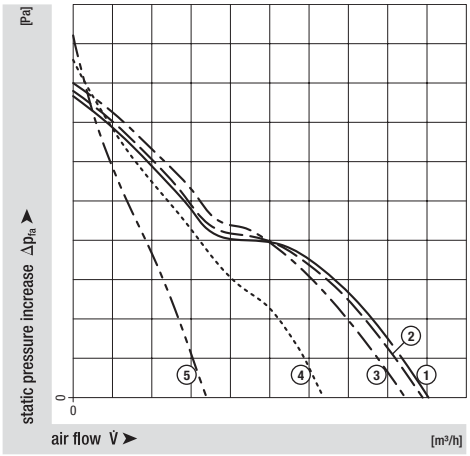
Obstructions on the exhaust side



① x / D = ∞
② x / D = 35 %
③ x / D = 18 %
④ x / D = 9 %
⑤ x / D = 5 %

Curve





Centrifugal fans with backward curved blades

Operating range

Middle part of air performance curve:

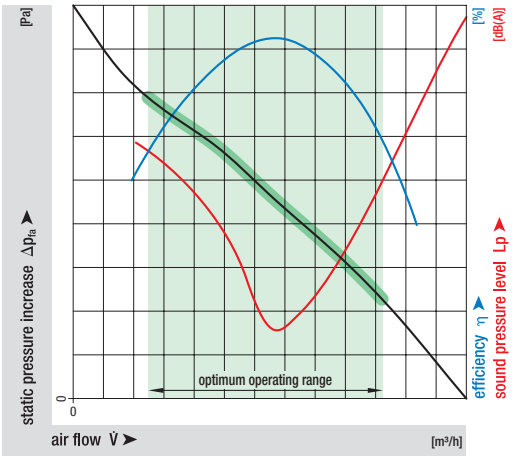
– Maximum efficiency
– Minimal noise

To the right and the left of the middle part of the air performance curve:

– Reduced efficiency
– Increasing noise

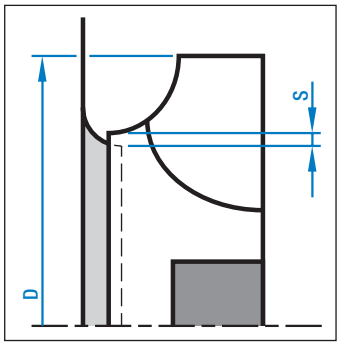
The optimum operating range of the fan is shaded in green in the curve given here.

Noise / efficiency curve



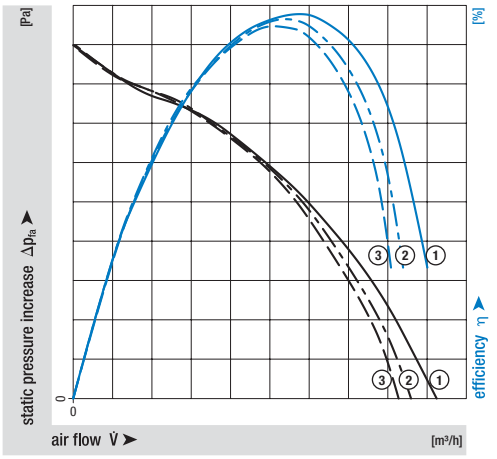
Effects of nozzle gap dimension

The centrifugal air gap between the inlet nozzle and impeller cover plate influences the air performance and efficiency of the centrifugal fan.



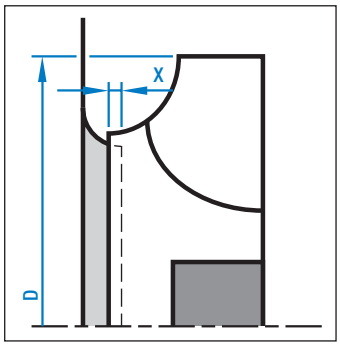
① s / D = 0.4 %
② s / D = 1.0 %
③ s / D = 1.4 %

Curve



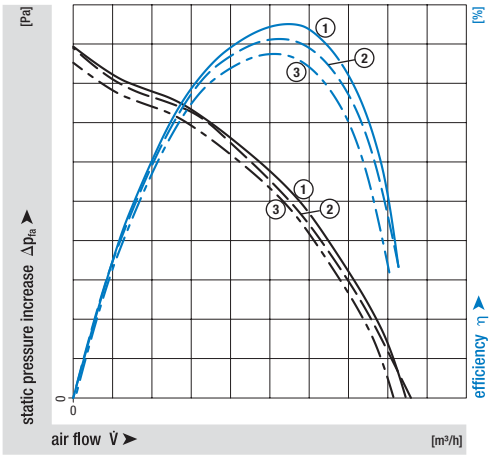
Effects of overlapping dimension

The axial overlap between the inlet nozzle and impeller cover plate influences the air performance and efficiency of a centrifugal fan.



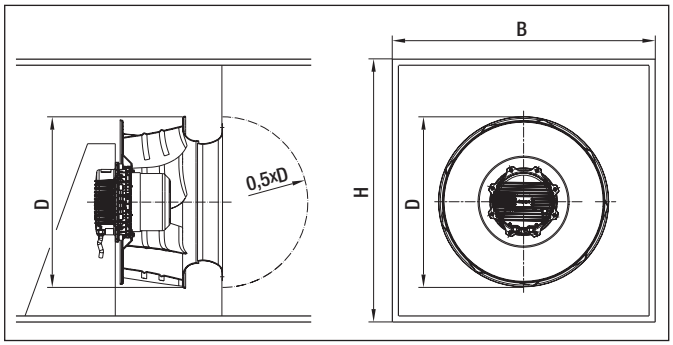
① x / D = 0.6 %
② x / D = 0 %
③ x / D = -0.8 %

Curve



Effects of installation space

When mounting our product in a rectangular box, air performance might be reduced.



d_h = Hydraulic diameter

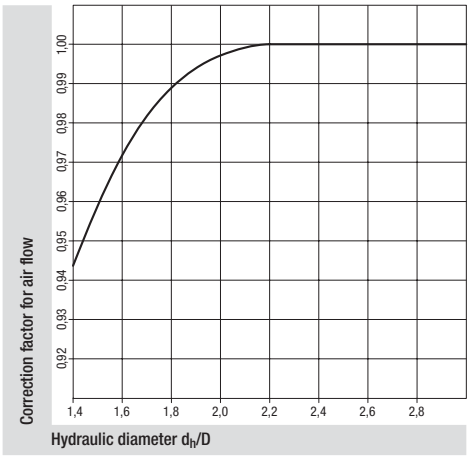
Formula: $d_h = 2 \times B \times H / (B + H)$

B = Width of box

H = Height of box

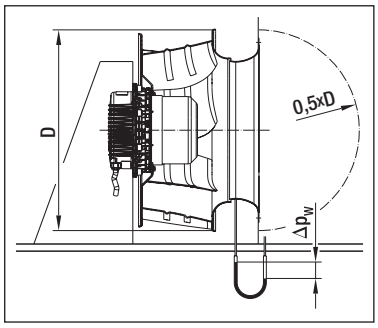
D = Outer diameter of the fan

Curve



Air flow measurement for inlet nozzles with pressure-measuring point

The differential pressure approach compares the static pressure before the inlet nozzle with the static pressure inside the inlet nozzle.



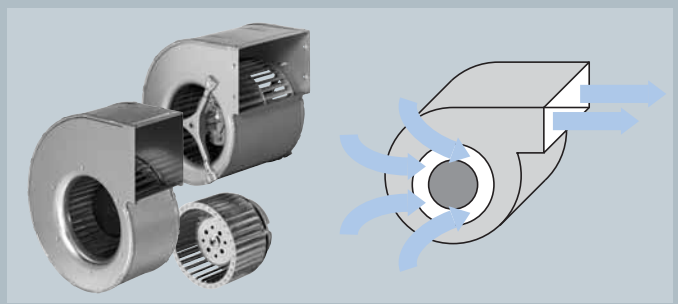
Air flow can be calculated on the basis of the differential pressure (difference in pressure of the static pressures) in keeping with the following equation:

$\dot{V} = k \cdot \sqrt{\Delta p_W}$ $\dot{V}$ in [m³/h] and Δp_W in [Pa]

If constant air flow control is used, then the nozzle pressure has to be kept constant: $\Delta p_w = \dot{V}^2 : k^2$

k takes into account the specific nozzle characteristics.

One or four pressure measuring points are spaced along the circumference of the inlet nozzle. Connection on the customer side is accomplished via a premounted T tube connector. This tube connector is suited for pneumatic hoses with an internal diameter of 4 mm.



Single and dual inlet centrifugal blowers with forward curved blades

The forward curved centrifugal impeller must always be operated inside a scroll housing.

A dual inlet centrifugal blower shows the same behaviour as two single inlet blowers operated in parallel: with size, speed and pressure being identical, double the air flow is achieved.

Operating range

Middle part of air performance curve:

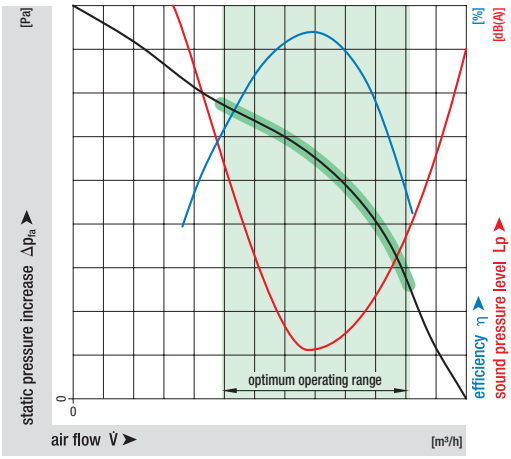
- Maximum efficiency
- Minimal noise
- higher performance density than with the backward curved centrifugal fan

To the right and the left of the middle part of the air performance curve:

- Reduced efficiency
- Increasing noise

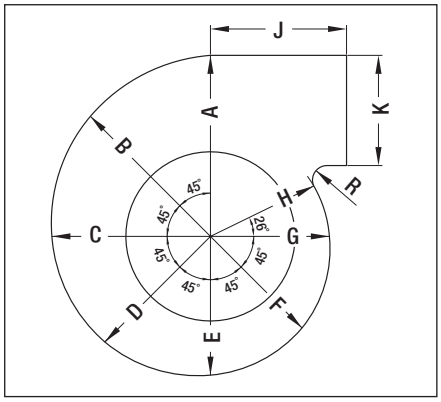
The optimum operating range of the fan is shaded in green in the curve given here.

Noise / efficiency curve



Dimensioning of the scroll

The dimensions of a typical scroll can be calculated with the following formulae, subject to the impeller diameter D:



A = 1.062 · D
B = 0.992 · D
C = 0.922 · D
D = 0.853 · D
E = 0.784 · D
F = 0.715 · D
G = 0.646 · D
H = 0.612 · D
J = 0.720 · D
K = 0.689 · D
R = 0.073 · D

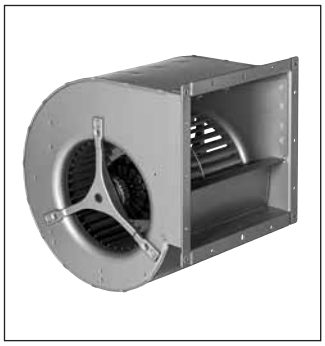
Adjusting the dimensions to diminished mounting spaces is possible.

Effects of step diffusers

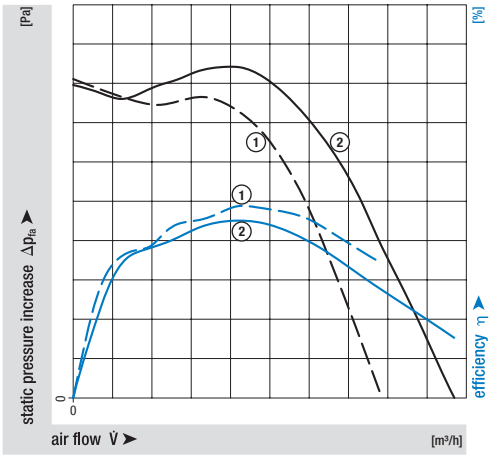
A diffuser mounted on the exhaust side with connected exhaust tunnel increases air performance and efficiency of the centrifugal blower.

① without step diffuser

② with step diffuser

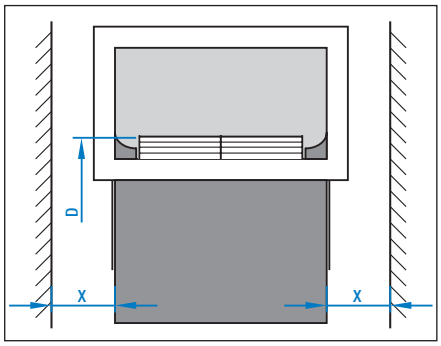


Curve



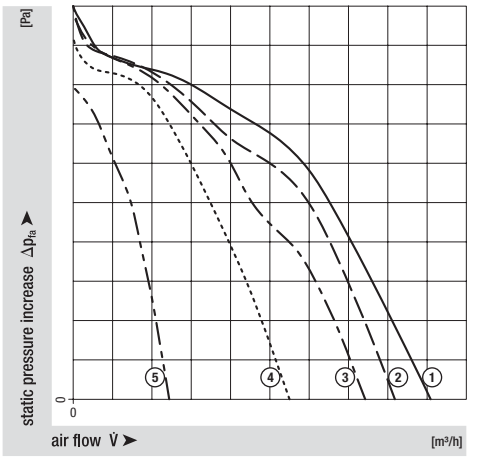
Effects of obstructions on the intake side

Obstructions on the air intake side reduce the air performance of the centrifugal blower.



① x / D = ∞
② x / D = 30 %
③ x / D = 23 %
④ x / D = 15 %
⑤ x / D = 7.5 %

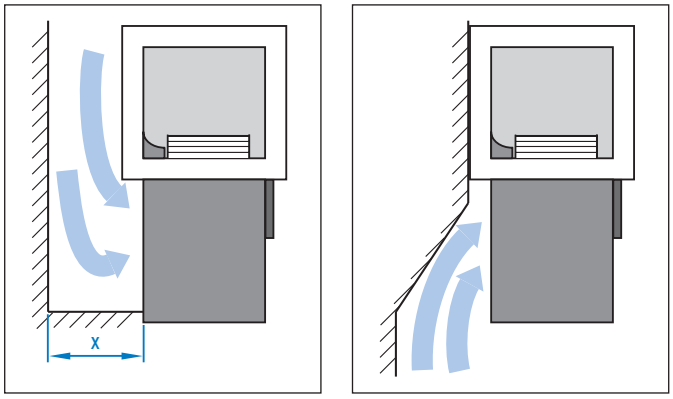
Curve



Effects caused by obstructions on the inlet side for constant air flow EC centrifugal blowers

Constant air flow is attained with unimpaired inflow only.
An obstructed (e. g. asymmetrical or partially blocked) air flow can have a significant effect on the curve behaviour and cause large deviations from a constant air flow curve.

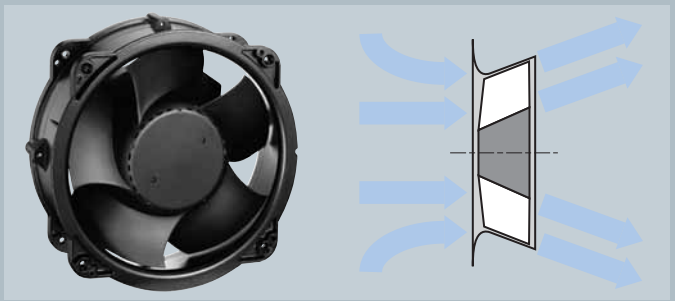
Examples of obstructed inflows



Instructions for designing a sufficiently unobstructed inflow:

– The distance x between the blower intake and neighbouring walls or obstructions should be at least 25 % of the impeller diameter.
– Inflows with angular momentum or asymmetrical rotation should be avoided.
– The inflow can be made more uniform using resistances such as those from filters or grilles.

On request, we offer calibrated blower designs that incorporate a specific installation situation.



Diagonal fans (axial design)

Operating range

Directly to the right of the "saddle" (right part of the air performance curve):

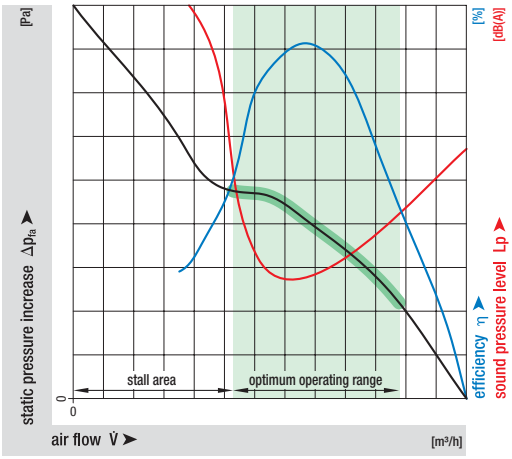
– Maximum efficiency
– Minimal noise

To the left of the "saddle" (left part of the air performance curve):

– Stall area
– Drop in efficiency
– Soaring noise

The saddle of the diagonal / mixed flow fan is slightly higher than that of the axial fan. This means that the technical ratings in the optimal operating range are better than those of the axial fan.
The optimum operating range of the fan is shaded in green in the curve given here.

Noise / efficiency curve



Mounting information

The conical housing (part of delivery) makes sure the necessary gap dimension is kept.

Effects

The effects of the diagonal / mixed flow fan are similar to those listed for the axial fan (p. 577-580).

Influence of speed n

A change in speed influences:

– Air flow $\dot{V}$

$\dot{V} \sim n$

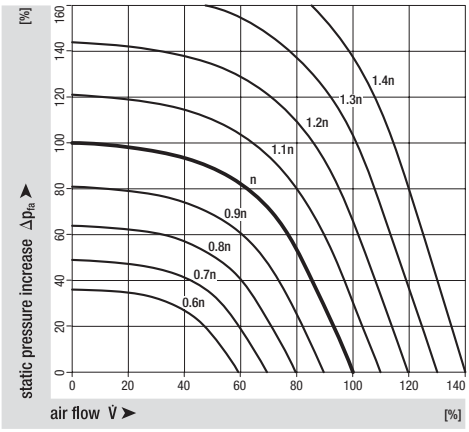
– Static pressure increase Δp_{fa}

$\Delta p_{fa} \sim n^2$

– Requirement of energy P_1

$P_1 \sim n^3$

Curve



Influence of the speed n on the sound level Lw

When the speed changes, the approximate sound level can be determined using the diagram to the right and the following formula:

$Lw_2 - Lw_1 = 50\ dB \cdot \log (n_2 : n_1)$

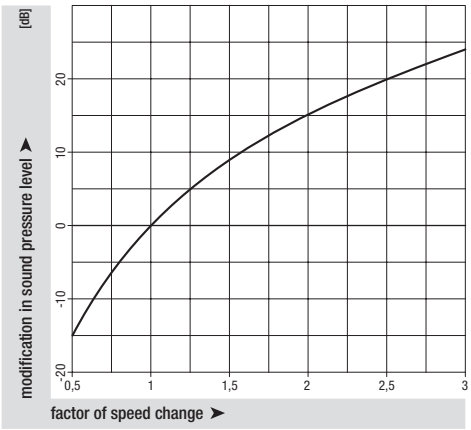
Lw_1 = Sound level after speed change

Lw_2 = Sound level before speed change

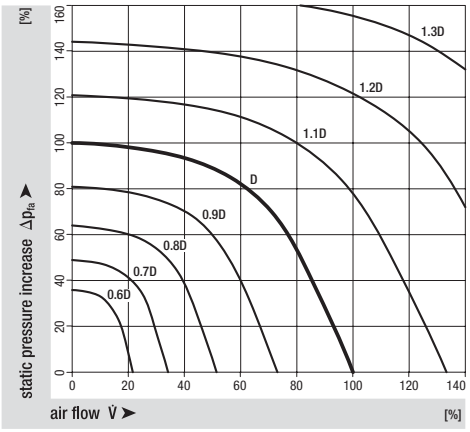
n_1 = Changed speed

n_2 = Starting speed

Curve



Curve



Influence of impeller diameter D

A change in impeller diameter influences:

– Air flow $\dot{V}$

$\dot{V} \sim D^3$

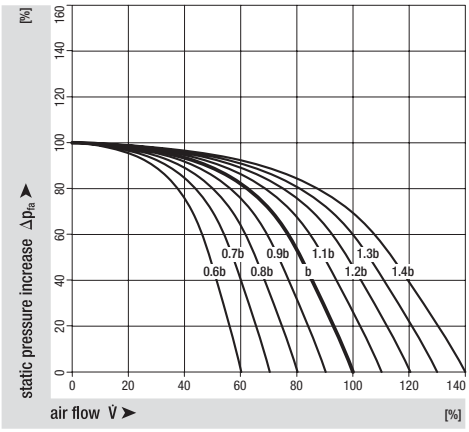
– Static pressure increase Δp_{fa}

$\Delta p_{fa} \sim D^2$

– Requirement of energy P_1

$P_1 \sim D^5$

Curve



Influence of width of air discharge b (only for centrifugal impellers)

A change in width of the air discharge influences, in approximation:

– Air flow $\dot{V}$

$\dot{V} \sim b$

– Static pressure increase Δp_{fa}

$\Delta p_{fa} = \text{const}$

– Requirement of energy P_1

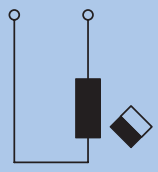
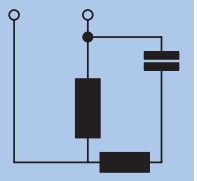
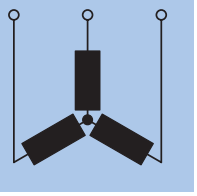
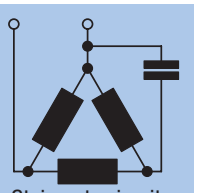
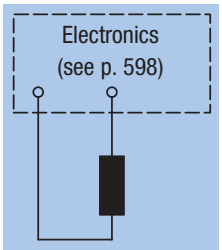
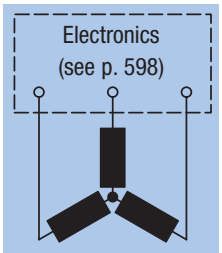
$P_1 \sim b$

Motors made by ebm-papst

In AC and EC technology, ebm-papst relies on the proven external-rotor motor principle, with the rotor turning around the stator within. Advantages of the ebm-papst external-rotor principle are:

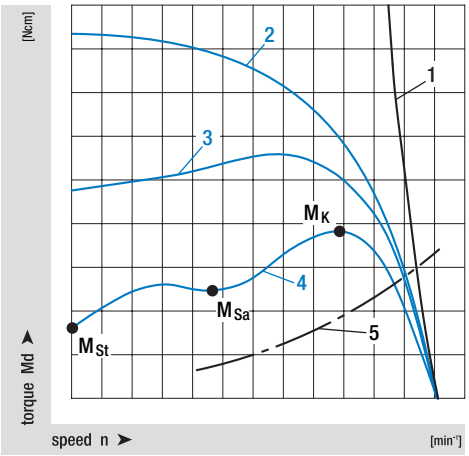
- *Space saving design due to integrated bearings and direct installation inside the impeller*
- *lower load and more precise balancing of the bearing due to the fixed connection of all rotating elements*
- *Prolonged service life due to the motor-impeller unit placed right within the air flow*

The ebm-papst motors achieve very good results in efficiency and acoustic behaviour when used in EC technology.

Features	AC motors			EC motors	
	Shaded-pole motor	Single-phase capacitor motor	3-phase motor	Single-core motor	3-core motor
1~ AC voltage connector	Yes	Yes	Limited use (Steinmetz circuit)	Yes	Yes
3~ AC voltage connector	No	No	Yes	No	Yes
DC voltage connector	No	No	No	Yes	Yes
Design of circuit diagram - Stator -			  Steinmetz circuit	 Electronics (see p. 598)	 Electronics (see p. 598)
Rotor principle	Squirrel cage	Squirrel cage	Squirrel cage	Magnetic rotor	Magnetic rotor
Efficiency	Low	Medium	Good	Excellent	Excellent
Continuous speed setting integrated	No	No	No	Yes	Yes
Noise behaviour	Medium	Good	Excellent	Medium	Excellent

AC motors (induction motors) are based in their function on the principle of the asynchronous rotation of the stator rotating field and rotor.

Torque curves of the motor types



Key:

1	– EC motor	5	– System characteristic
2	– 3-phase motor	M_{St}	– Starting torque
3	– Single-phase motor	M_{Sa}	– Saddle torque
4	– Shaded-pole motor	M_K	– Breakdown torque

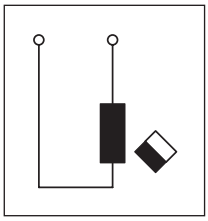
Start-up current

The start-up current of our AC motors is maximally 4x higher than the nominal current given.

Shaded-pole motor

Each pole of the motor is divided electro-magnetically into a main and auxiliary pole (split) via a cage winding in order to generate a starting torque.

At ebm-papst, shaded-pole motors are available as 2 or 4-pole symmetrical external or internal rotor designs.

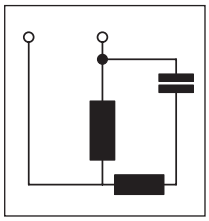


Advantages:

- Extremely robust motor design due to cast squirrel cage rotor and stable bearing system
- Cost-efficient motor
- Extremely easy to connect
- Long service life

Single-phase capacitor motor

Two cores (main winding MW and auxiliary winding AW) generate the rotating field of the single-phase capacitor motor via a capacitor connected in series to form an auxiliary winding.

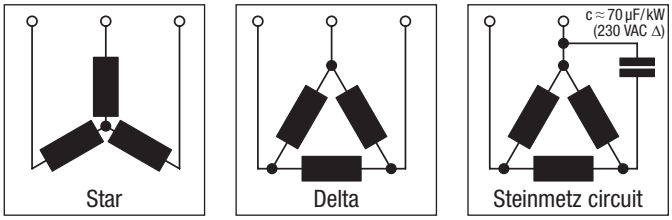


Advantages:

- Extremely robust motor design due to cast squirrel cage rotor and stable bearing system
- Diverse options for setting speed
- Efficiency between 30 % and 75 % (depending on motor size)
- Long service life
- Good vibration and noise behaviour

3-phase motor

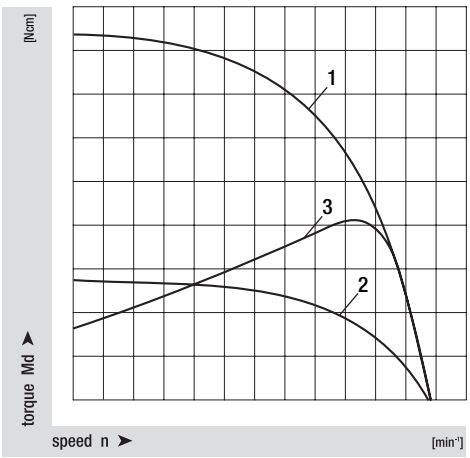
The three motor cores are offset by 120° and generate a circular rotating field when connected to the 3-phase mains.



Advantages:

- Extremely robust motor design due to cast squirrel cage rotor and stable bearing system
- Very good vibration and noise behaviour
- Efficiency between 40 % and 80 % (depending on the motor size)
- Long service life

Torque curves of 3-phase motors

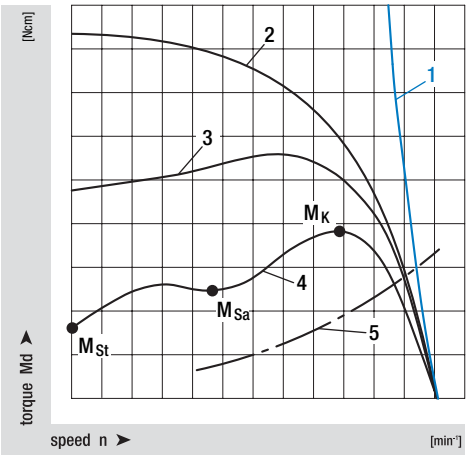


Key:

1 – Delta
2 – Star
3 – Steinmetz circuit

EC motors are based in their function on the principle of the synchronous rotation of stator rotating field and rotor.

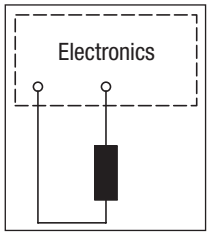
Torque curves of the motor types



Key:

1	– EC motor	5	– System characteristic
2	– 3-phase motor	M_{St}	– Starting torque
3	– Single-phase motor	M_{Sa}	– Saddle torque
4	– Shaded-pole motor	M_K	– Breakdown torque

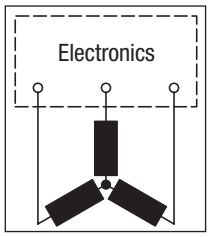
Single-core motor



Advantages:

- Integrated speed setting
- Efficiency between 50 % and 80 % (depending on the motor size)
- Long service life

3-core motor



Advantages:

- Integrated speed setting
- Good efficiency between 60 % and 90 % (depending on the motor size)
- Long service life
- Very good vibration and noise behaviour even in controlled operation
- Can be used as drive motor

Control technology

Open and closed loop control using ebm-papst technology

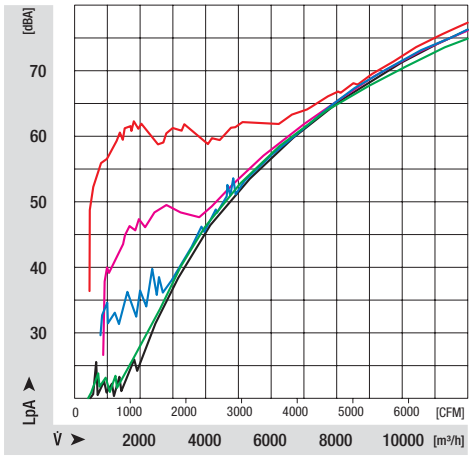
Depending on the field of application, fan speed has to be adjusted. In AC technology, the speed setting option can result in an increase in installation expenditure and, typically, a less favourable noise performance and an increase in power input.

Here, ebm-papst EC technology is a more eco-friendly and cost-efficient alternative. The EC motor with integrated commutation electronics offers high efficiency across the entire speed range and optimal acoustic performance at minimal installation expenditure.

Features	AC							EC commutating electronics		
	Series resistance	Transformer	Speed stepping	Phase-angle control	Phase-angle control with sine filter	Frequency inverter	Frequency inverter with sine filter	integrated	integrated with switch power supply	external
Installation	+	–	+	–	–	–	–	++	–	–
Noise behaviour	+	++	–	––	–	–	+	++	+	+
Power input	––	–	–	–	–	+	+	++	+	+
Service life	+	+	–	–	+	–	+	+	+	+

+ = positive ++ = very positive – = negative –– = very negative

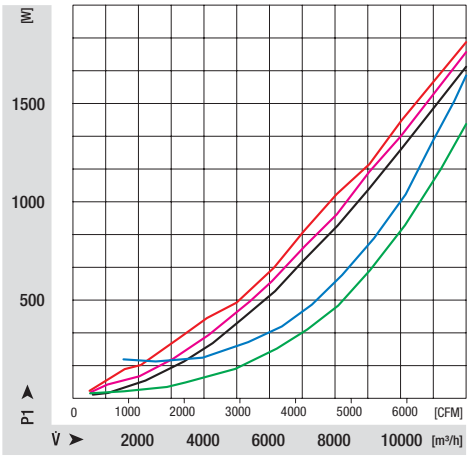
Acoustic performance of controlled motors



Key:

- ebm-papst EC controls
- Frequency inverter with sine filter
- Phase-angle control without sine filter
- Phase-angle control with sine filter
- Transformer

Power input of controlled motors



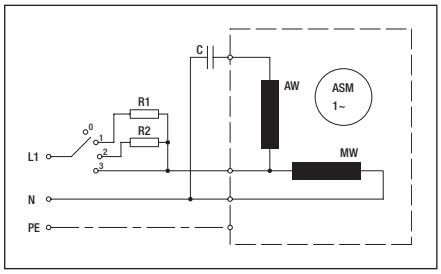
Key:

- ebm-papst EC controls
- Frequency inverter with sine filter
- Phase-angle control without sine filter
- Phase-angle control with sine filter
- Transformer

Speed setting with AC motors

Speed setting helps to optimise power input and the flow noise as requested.

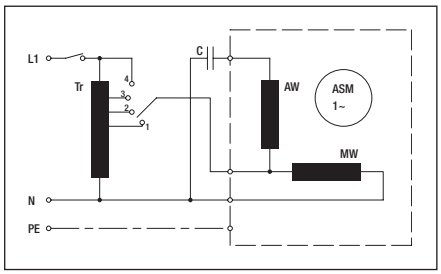
When selecting a voltage controller, note that the nominal current in the partial load range can be up to 20 % (depending on the controller) above the specified maximum current.



Series resistance

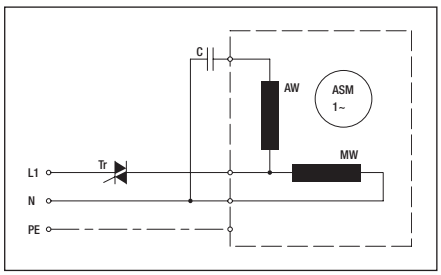
– Fixed speed steps
– Speed setting via change in motor voltage
– Cost-efficient
– Small capacities

Note: Capacitors or chokes reduce the loss capacity.



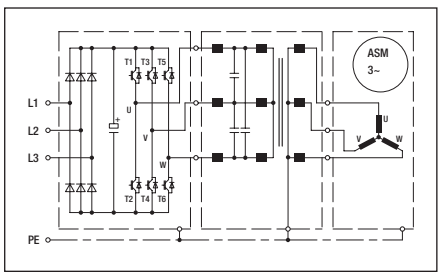
Transformer

– Fixed speed steps
– Speed setting via change in motor voltage



Phase-angle control

– Continuous speed setting
– Speed setting via change in motor voltage
– Cost-efficient
– Acoustic performance and warming has to be reviewed in the application



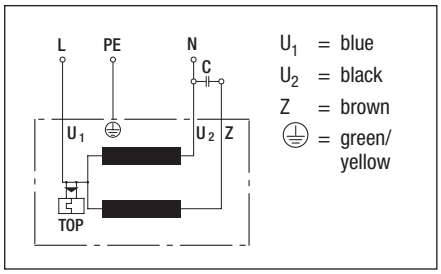
Frequency inverter with sine filter

– Continuous speed setting
– Speed setting via change in frequency of rotating field
– High efficiency

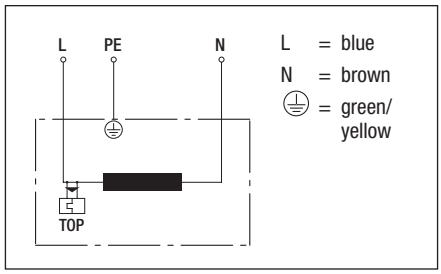
Note: An all-pole sine filter (phase-phase and phase-earth) has to be used.

Fans (1~ 230 VAC power line)

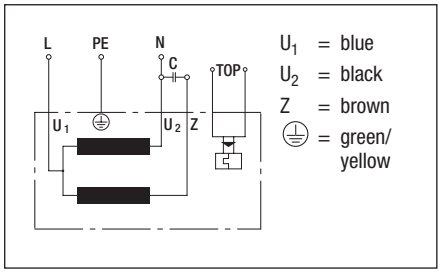
A1) Single-phase capacitor motor
with TOP wired internally



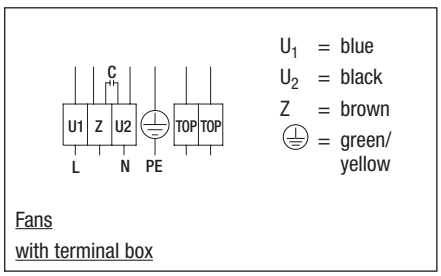
B) Shaded pole motor
with TOP wired internally



A2a) Single-phase capacitor motor
with connection for external TOP



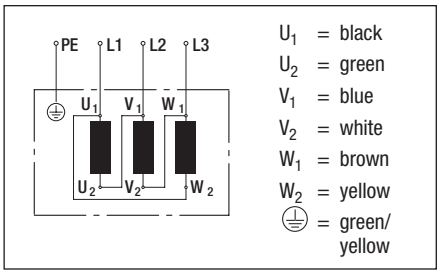
A2b) Single-phase capacitor motor
with connection for external TOP



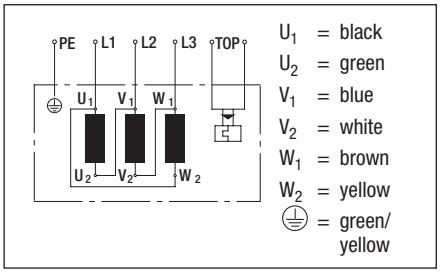
Fans
with terminal box

Fans, 1 speed (3~ 230 VAC power line)

C1) Delta connection (3~ 230 VAC power system)
without TOP



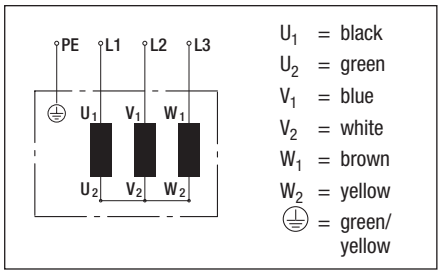
D1) Delta connection (3~ 230 VAC power line)
with TOP



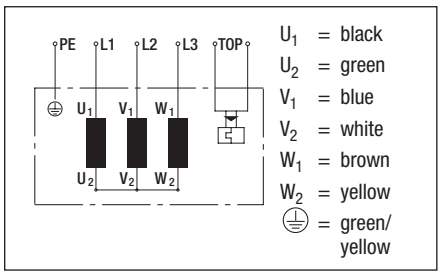
Direction of rotation is reversed by swapping two line phases.

Fans, 1 speed (3~ 400 VAC power line)

C2) Star connection (3~ 400 VAC power system) without TOP



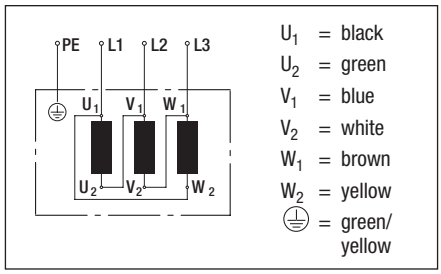
D2) Star connection (3~ 400 VAC power line) with TOP



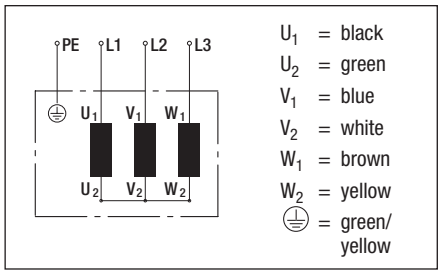
Direction of rotation is reversed by swapping two line phases.

Fans, 2 speeds via △/Y-switch (3~ 400 VAC power line)

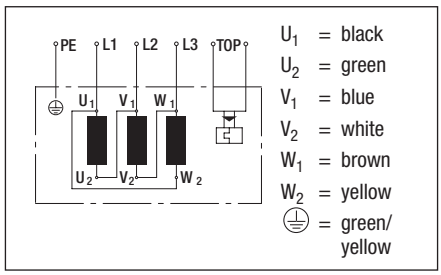
E1) Delta connection (high speed) without TOP



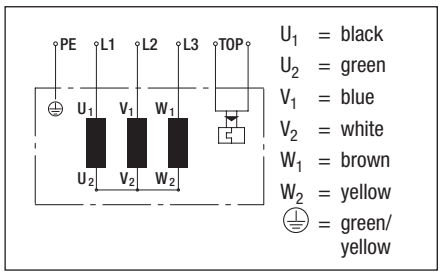
E2) Star connection (low speed) without TOP



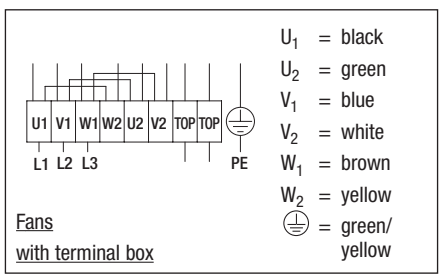
F1a) Delta connection (high speed) with TOP



F2a) Star connection (low speed) with TOP

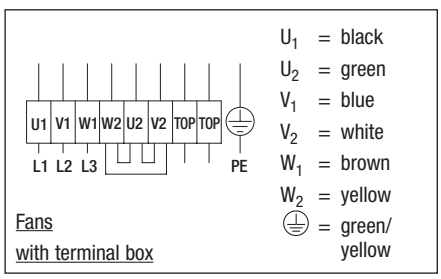


F1b) Delta connection (high speed) with TOP



Fans with terminal box

F2b) Star connection (low speed) with TOP



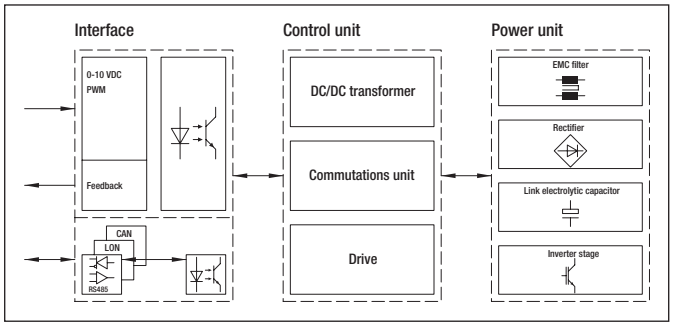
Fans with terminal box

Direction of rotation is reversed by swapping two line phases.

Speed setting with EC motors

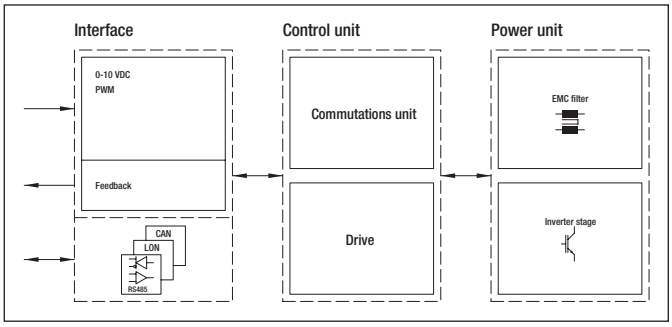
The speed of EC motors is set via commutation electronics. Via electronic circuits and depending on the rotor position, this commutation switches the motor currents on and off.

Principle of AC-fed commutation electronics



(with electrically isolated interface)

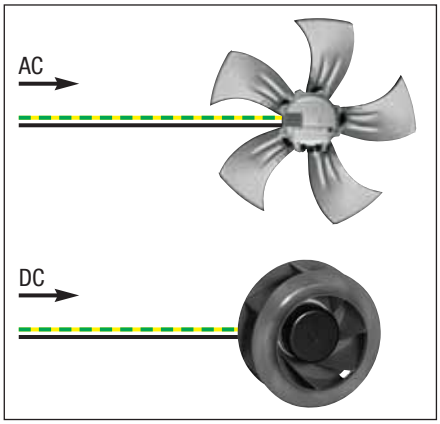
Principle of DC-fed commutation electronics



Integrated commutation electronics

– Compact unit
– Easy to install
– Low installation expenditure
– Can be operated all over the world

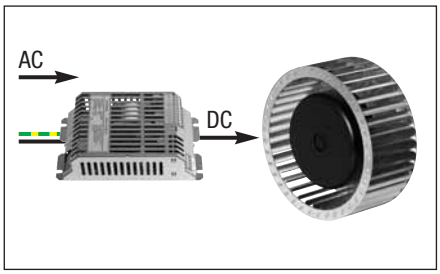
Note: Motors with 12-72 VDC supply voltage have to be fed via electrically isolated supply unit.



Integrated commutation electronics with switch power supply

– Protective extra-low voltage 24 / 48 VDC

Note: Switch power supply is not included but has to be ordered as accessory.



Typical features of the ebm-papst commutation electronics:

- Input for analogue and digital signals
- Open and closed loop control as well as monitoring of the motor
- Integrated EMC filter
- High efficiency throughout the entire speed range
- Speed setting via linear set value (0-10 VDC) or PWM signal
- Low-noise operation across the entire speed range
- minimal extra costs for additional functions (open / closed loop control)
- Optional BUS interface

Types of alarms and reactions with EC motors

With DC-fed EC motors, certain faults in modes of operation are recognised by the electronics, and the motor is automatically restarted.
With AC-fed EC motors, certain faults in modes of operation are recognised by the electronics, and the motor is switched off.
The motor restarts automatically after the following failures have been diagnosed:

- Line failure
- Phase failure
- Line under-voltage
- DC link voltage too high or too low
- Locked rotor

With the following types of failures, there is no automatic restart.
Here, hardware or software reset is required:

- Motor temperature too high
- Temperature of cooling element or ambient temperature of electronics too high
- Hall failure

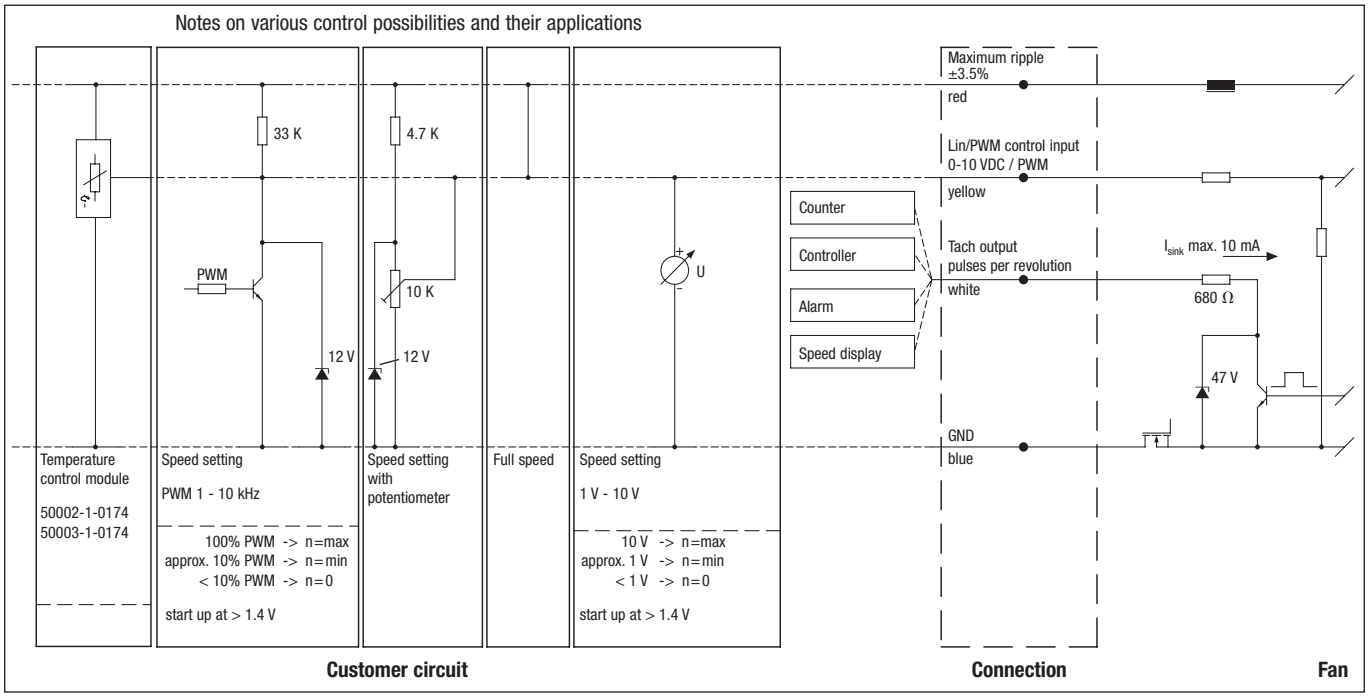
Hardware reset

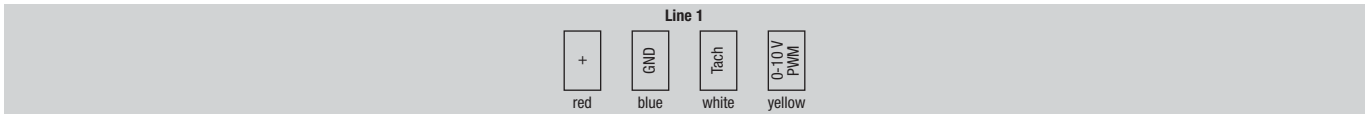
Switching off the fan and restarting it after one minute results in hardware reset.

Software reset

Software reset is via ebmBUS and LISA software, hand-held control terminal, or PDA with Fan Control Software.

G) EC motors (nominal voltage 24 / 48 VDC)

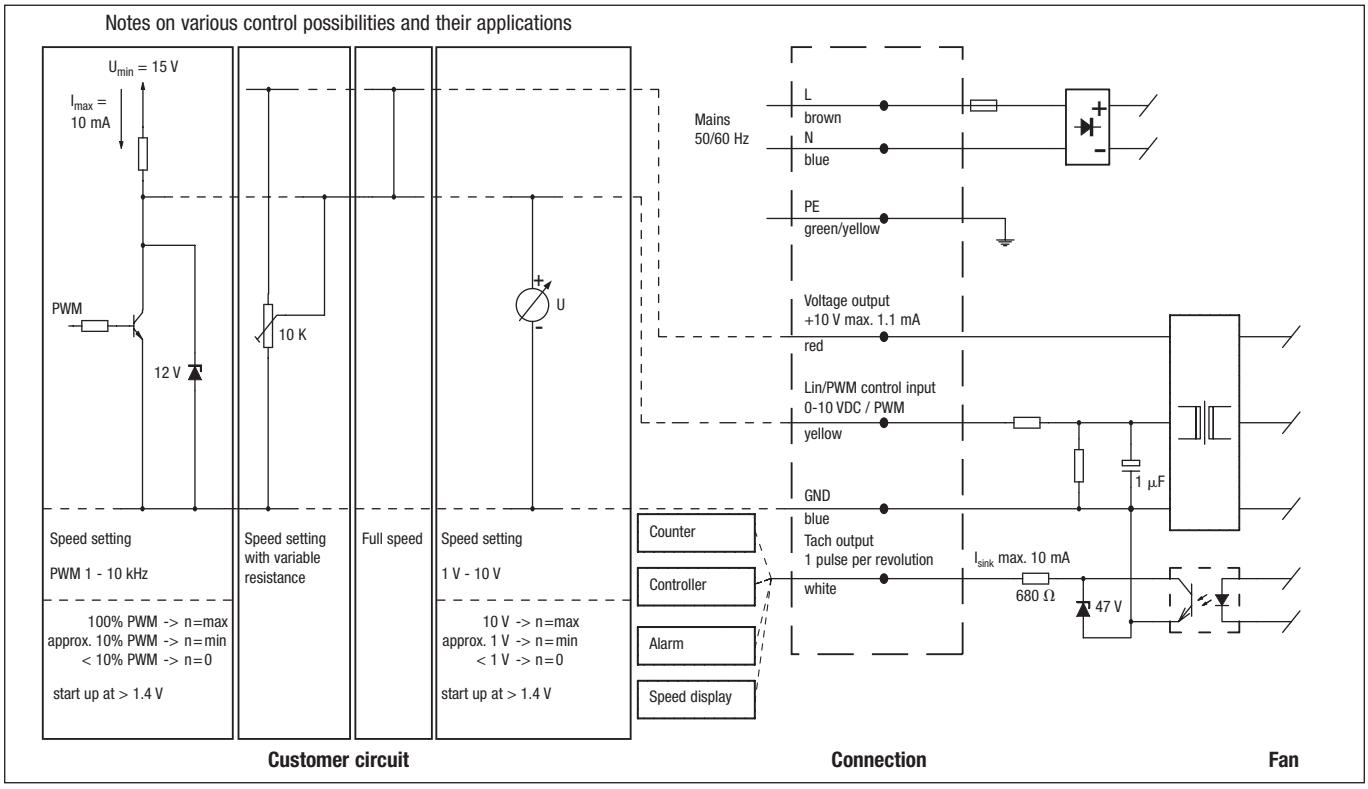


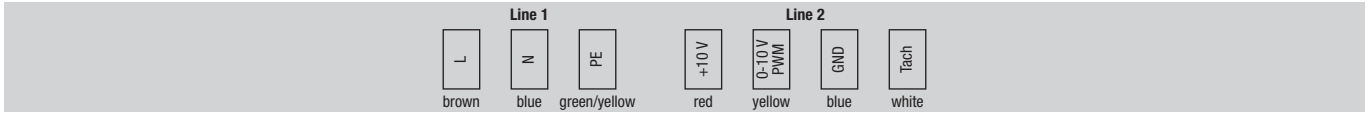


Line	Connection	Colour	Assignment / function
1	+	red	Maximum ripple ± 3.5 %
	GND	blue	GND

Line	Connection	Colour	Assignment / function
1	Tach	white	Tach output:
			2 pulses / revolution (M1G045/M1G055)
			3 pulses / revolution (M1G074/M3G084)
	0-10 V / PWM	yellow	Control input (Impedance 100 kΩ)

H1) EC motors (size 055, line-fed)

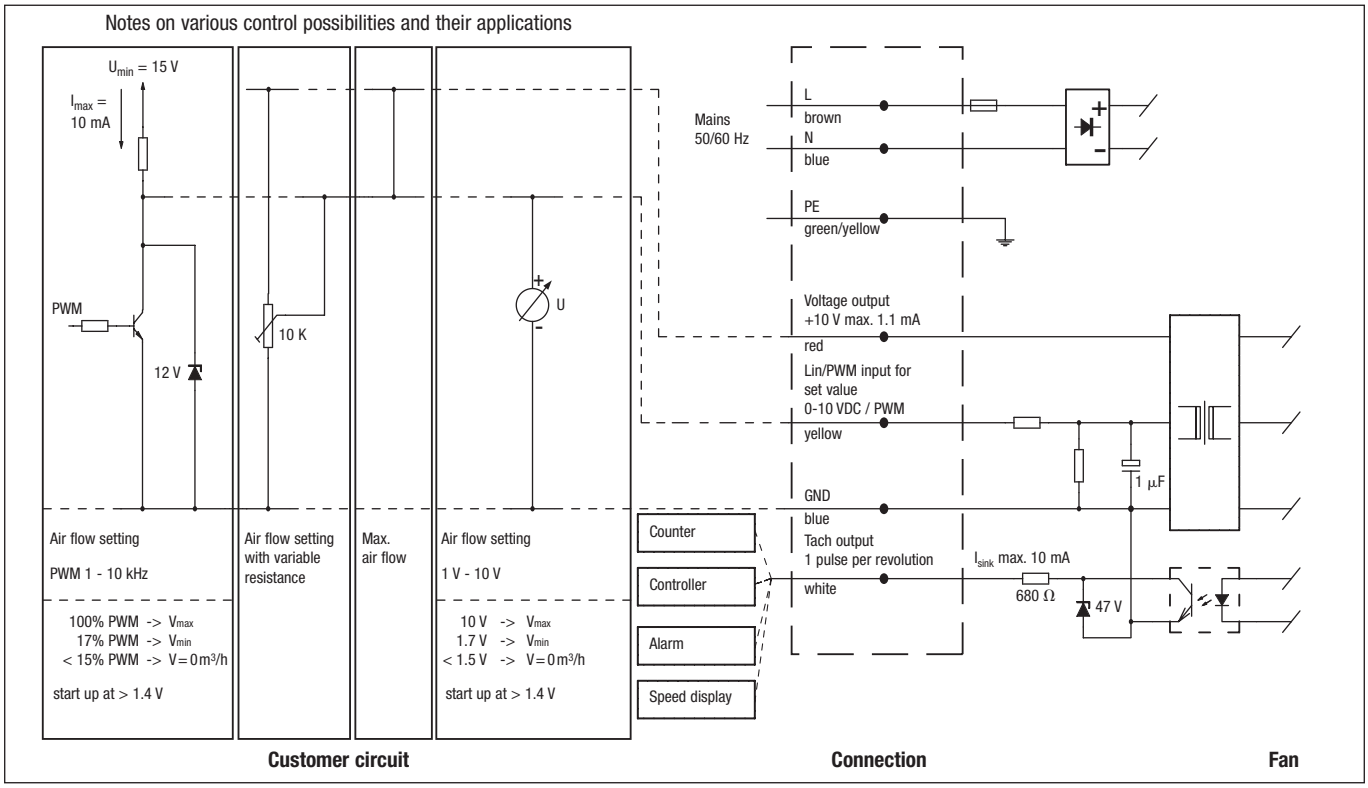


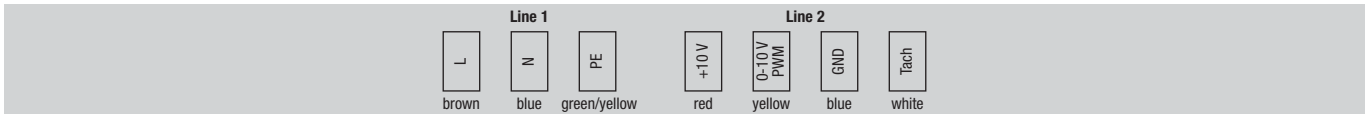


Line	Connection	Colour	Assignment / function
1	L	brown	Mains 50/60 Hz, phase
	N	blue	Mains 50/60 Hz, neutral
	PE	green/yel	Protective earth

Line	Connection	Colour	Assignment / function
2	+10 V	red	Voltage output +10 V max. 1.1 mA
	0-10 V / PWM	yellow	Control input (Impedance 100 kΩ)
	GND	blue	GND
	Tach	white	Tach output: 1 pulse per revolution

H2) EC motors (size 055, line-fed and constant air flow)

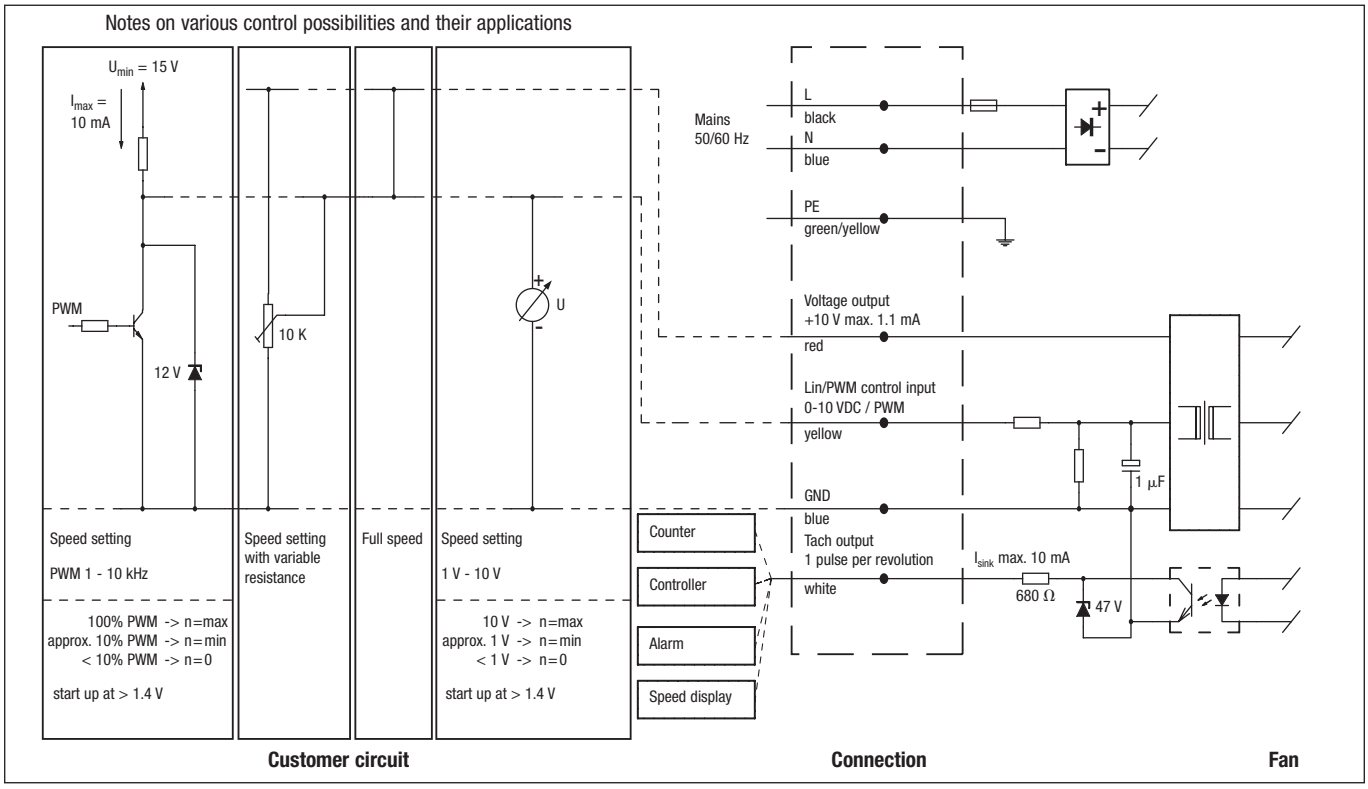


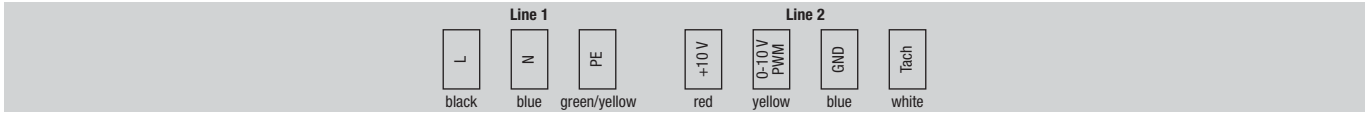


Line	Connection	Colour	Assignment / function
1	L	brown	Mains 50/60 Hz, phase
	N	blue	Mains 50/60 Hz, neutral
	PE	green/yel	Protective earth

Line	Connection	Colour	Assignment / function
2	+10 V	red	Voltage output +10 V max. 1.1 mA
	0-10 V / PWM	yellow	Input for set value (impedance 100 kΩ)
	GND	blue	GND
	Tach	white	Tach output: 1 pulse per revolution

J1) EC motors (size 074, line-fed)

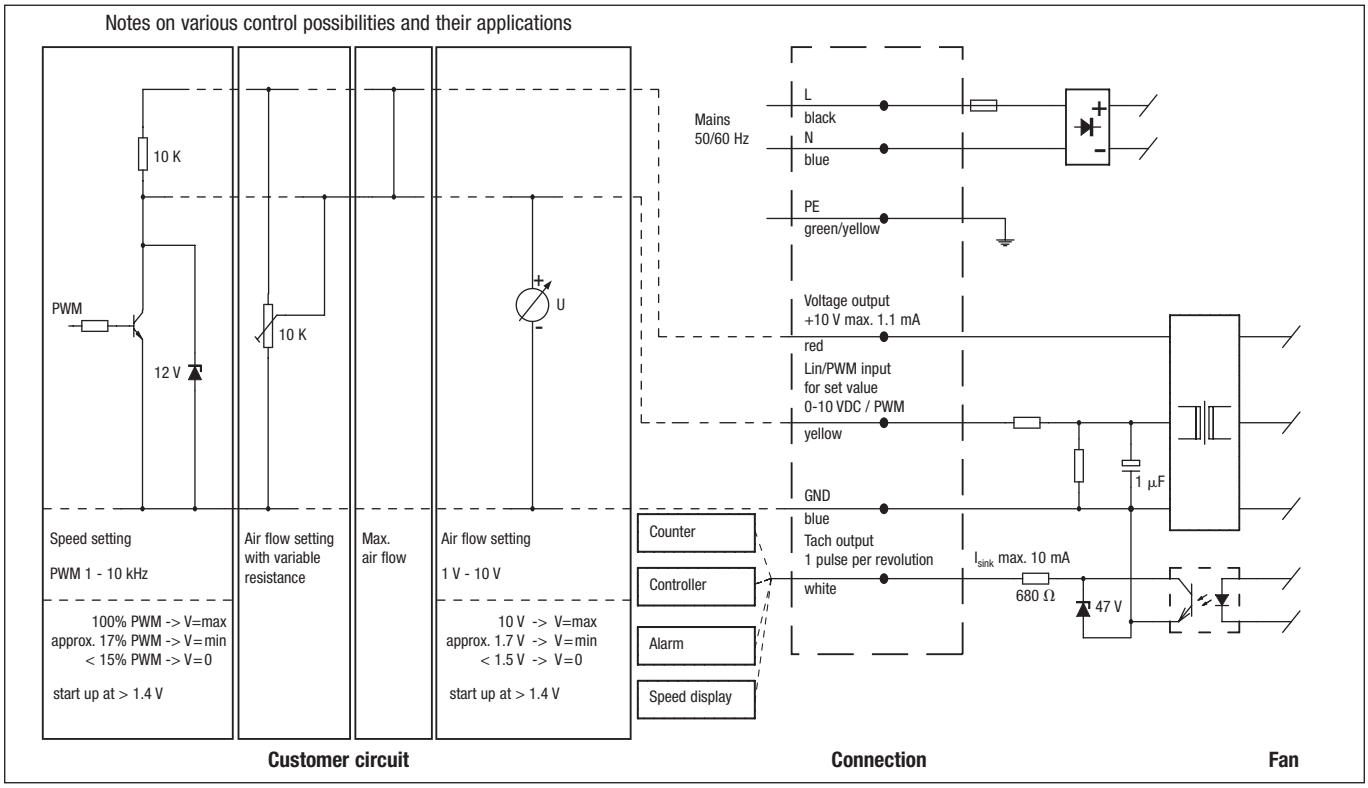


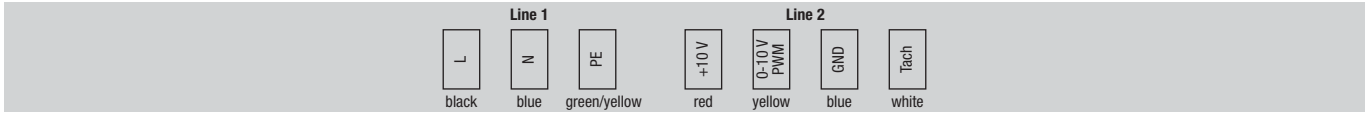


Line	Connection	Colour	Assignment / function
1	L	black	Mains 50/60 Hz, phase
	N	blue	Mains 50/60 Hz, neutral
	PE	green/yel	Protective earth

Line	Connection	Colour	Assignment / function
2	+10 V	red	Voltage output +10 V max. 1.1 mA
	0-10 V / PWM	yellow	Control input (Impedance 100 kΩ)
	GND	blue	GND
	Tach	white	Tach output: 1 pulse per revolution

J2) EC motors (size 074, line-fed and constant air flow)

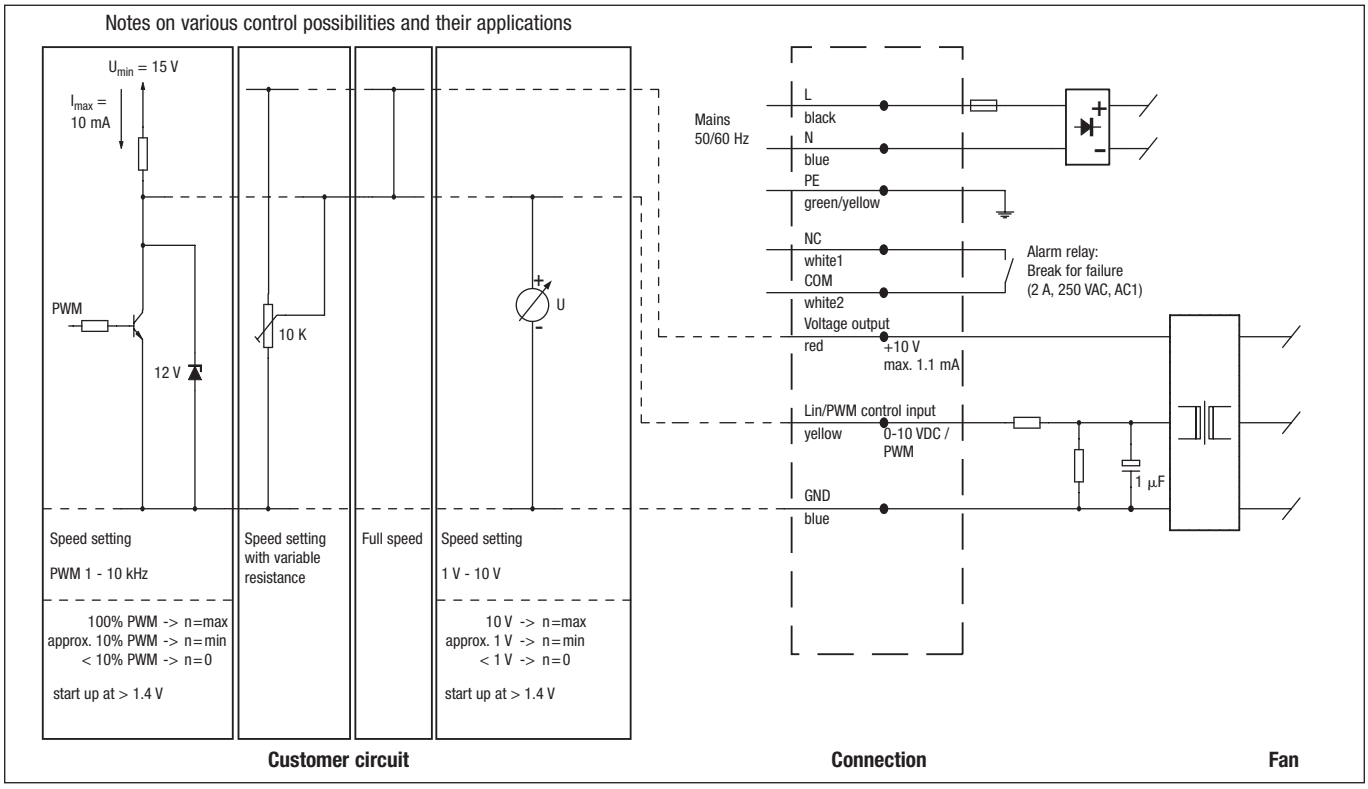


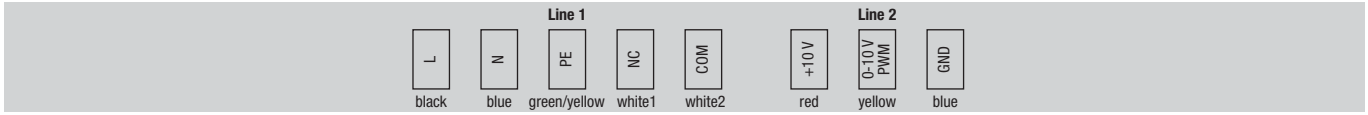


Line	Connection	Colour	Assignment / function
1	L	black	Mains 50/60 Hz, phase
	N	blue	Mains 50/60 Hz, neutral
	PE	green/yel	Protective earth

Line	Connection	Colour	Assignment / function
2	+10 V	red	Voltage output +10 V max. 1.1 mA
	0-10 V / PWM	yellow	Input for set value (impedance 100 kΩ)
	GND	blue	GND
	Tach	white	Tach output: 1 pulse per revolution

K1) EC motors (size 084, line-fed)





Line	Connection	Colour	Assignment / function
1	L	black	Mains 50/60 Hz, phase
	N	blue	Mains 50/60 Hz, neutral
	PE	green/yel	Protective earth
	NC	white1	Alarm relay, break for failure
	COM	white2	Alarm relay, COMMON

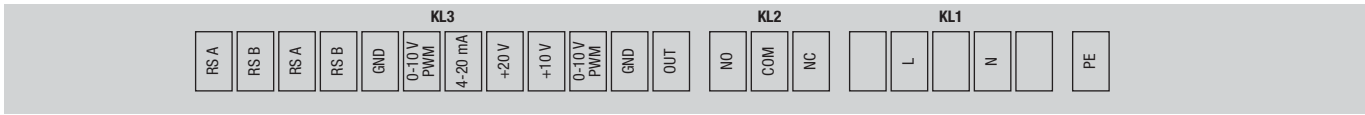
Line	Connection	Colour	Assignment / function
2	+10 V	red	Voltage output +10 V max. 1.1 mA
	0-10 V / PWM	yellow	Control input (Impedance 100 kΩ)
	GND	blue	GND

K2) EC motors (size 084/112 with ebmBUS, mains-powered)

Connector	Connection	Assignment / function
KL1	PE	Protective earth
	N	Mains 50/60 Hz, neutral
	L	Mains 50/60 Hz, phase

Connector	Connection	Assignment / function
KL2	RS B	RS485 interface for ebmBUS; RS B
	RS A	RS485 interface for ebmBUS; RS A
	+15 V	Operation: +15 V (50 mA); Alarm: 0 V
	0 V	Operation: 0 V; Alarm: +15 V (50 mA)

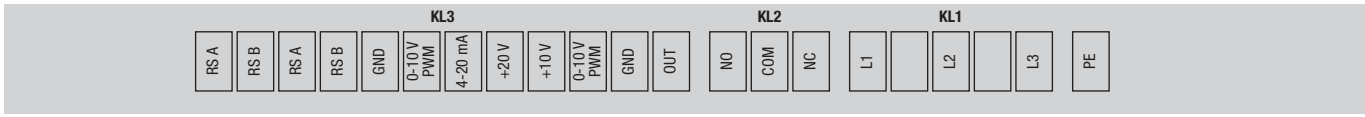
L1) EC motors (size 112, single-phase mains-powered)



Connector	Connection	Assignment / function
PE	PE	Protective earth
KL1	N	Mains 50/60 Hz, neutral
	L	Mains 50/60 Hz, phase
KL2	NC	Alarm relay, break for failure
	COM	Alarm relay, COMMON (2A, 250 VAC, AC1)
	NO	Alarm relay, make for failure

Connector	Connection	Assignment / function
KL3	OUT	Master output 0-10 V max. 3 mA
	GND	GND
	0-10 V / PWM	Control / Actual value input (Impedance 100 kΩ)
	+10 V	Supply for external potentiometer,
		10 VDC (+10 %) @ 10 mA
	+20 V	Supply for external sensor,
		20 VDC (±20 %) @ 50 mA
	4-20 mA	Control / Actual value input
	0-10 V / PWM	Control / Actual value input
	GND	GND
	RSB	RS485 interface for ebmBUS; RS B
	RSA	RS485 interface for ebmBUS; RS A
	RSB	RS485 interface for ebmBUS; RS B
	RSA	RS485 interface for ebmBUS; RS A

L2) EC motors (size 112, three-phase mains-powered)



Connector	Connection	Assignment / function
PE	PE	Protective earth
KL1	L3	Mains; L3
	L2	Mains; L2
	L1	Mains; L1
KL2	NC	Alarm relay, break for failure
	COM	Alarm relay, COMMON (2A, 250 VAC, AC1)
	NO	Alarm relay, make for failure

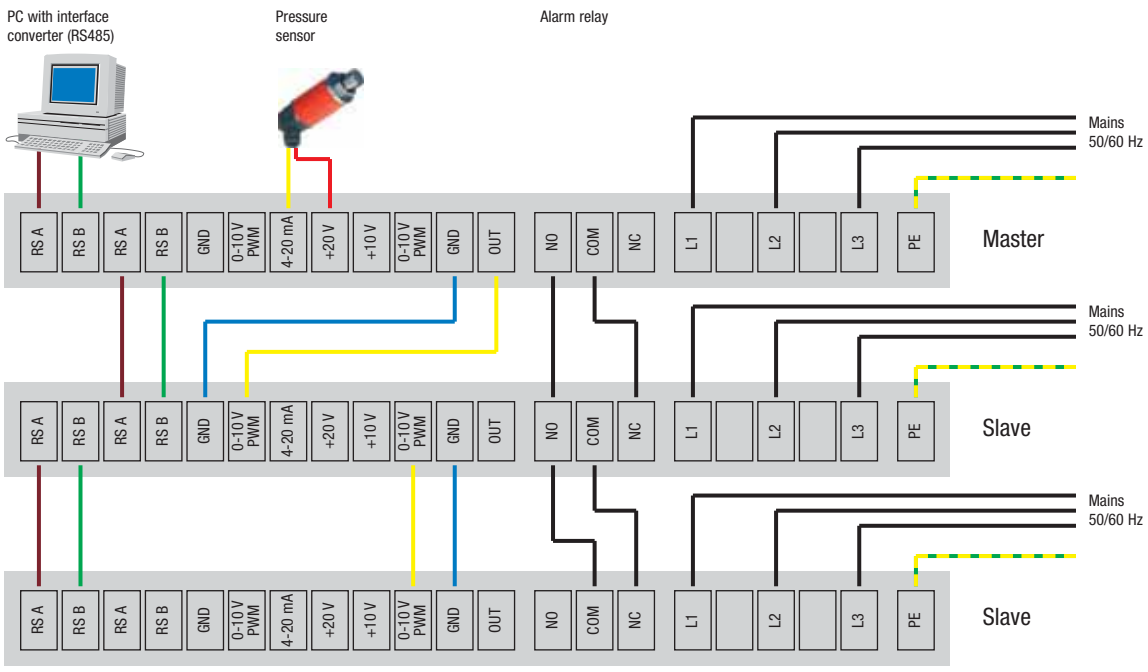
Connector	Connection	Assignment / function
KL3	OUT	Master output 0-10 V max. 3 mA
	GND	GND
	0-10 V / PWM	Control / Actual value input (Impedance 100 kΩ)
	+10 V	Supply for external potentiometer,
		10 VDC (+10 %) @ 10 mA
	+20 V	Supply for external sensor,
		20 VDC (±20 %) @ 50 mA
	4-20 mA	Control / Actual value input
	0-10 V / PWM	Control / Actual value input
	GND	GND
	RSB	RS485 interface for ebmBUS; RS B
	RSA	RS485 interface for ebmBUS; RS A
	RSB	RS485 interface for ebmBUS; RS B
	RSA	RS485 interface for ebmBUS; RS A

M) EC motors (size 150, three-phase mains-powered)

Connector	Connection	Assignment / function
PE	PE	Protective earth
KL1	L3	Mains; L3
	L2	Mains; L2
	L1	Mains; L1
KL2	NC	Alarm relay, break for failure
	COM	Alarm relay, COMMON (2A, 250 VAC, AC1)
	NO	Alarm relay, make for failure

Connector	Connection	Assignment / function
KL3	OUT	Master output 0-10 V max. 3 mA
	GND	GND
	0-10 V / PWM	Control / Actual value input (Impedance 100 kΩ)
	+10 V	Supply for external potentiometer,
		10 VDC (+10 %) @ 10 mA
	+20 V	Supply for external sensor,
		20 VDC (±20 %) @ 50 mA
	4-20 mA	Control / Actual value input
	0-10 V / PWM	Control / Actual value input
	GND	GND
	RSB	RS485 interface for ebmBUS; RS B
	RSA	RS485 interface for ebmBUS; RS A
	RSB	RS485 interface for ebmBUS; RS B
	RSA	RS485 interface for ebmBUS; RS A

Connection diagram: Condensing pressure control with master-slave fans



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