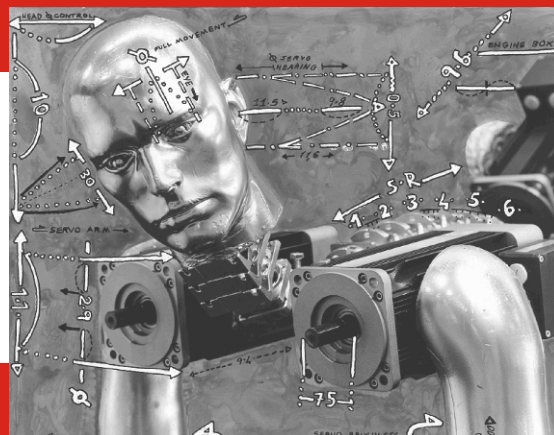
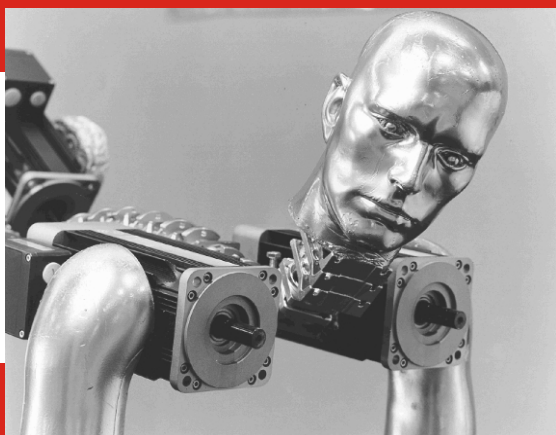




ESA

C.C. SERVOMOTOR



**MOTOR
POWER
COMPANY**

www.motorpowergroup.com



This series of permanent magnets servomotors ensures long-life, high reliability and dynamic performances. This series, that includes torque from 0,32 till 15 Nm, is the solution for any application where smooth running and overload capability is required.



Servomotor	Continuous Stall Torque (Nm)	Motor Diameter (mm)	Brake Lenght (mm)	Motor Lenght (mm)
ESA 2S ESA 2L	0.32 0.47	58	41.5	136 183.5
ESA 2R4S ESA 2R4M ESA 2R4L	0.21 0.32 0.44	51	* * *	89.5 99.5 109.5
ESA 3XS ESA 3S ESA 3SL ESA 3M ESA 3L	0.6 0.93 1.3 1.6 2.1	83.5	44	177.5 212.5 229 267.5 322.5
ESA 6S ESA 6F ESA 6M ESA 6L	2.65 3.5 5.5 8	116	* * * *	268 268 340 412
ESA 9S ESA 9M ESA 9L	6 11 15	153.5	* * *	298 363 424

* Included in motor's lenght

Protection IP54

Commutator with high number of blades for a sound commutation

Four pole tacho generator with rare earth magnets combined in motor

Skewed armature for smooth running at low speed

SERIE
Series

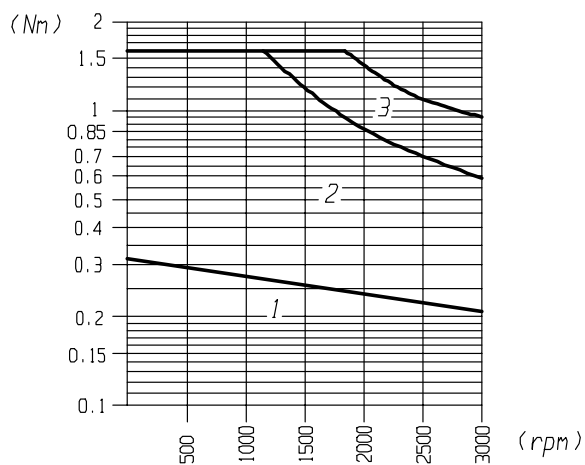
ESA 2S

COPPIA - TORQUE

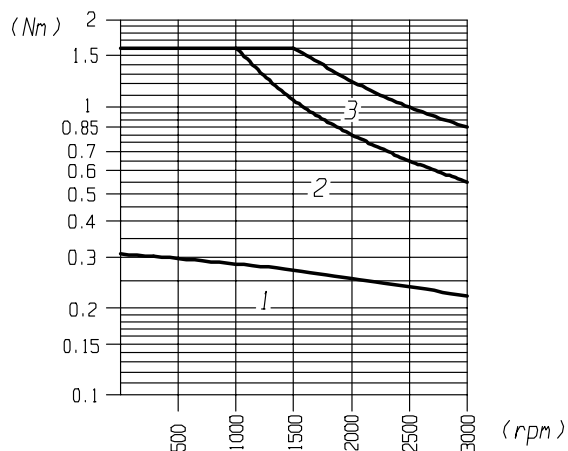
Nm 0.32

DATI MOTORE - <i>MOTOR RATINGS</i>			SIMBOLI Symbols	UNITA' Units	TIPO DI AVVOLGIMENTO <i>Type of winding</i>					
					1	2				
SERVOMOTORE - <i>Servomotor</i>	VELOCITA' NOMINALE - <i>Rated speed</i>	n	[rpm]	3000	3000					
	COPPIA ROTORE BLOCCATO - <i>Continuos stall torque</i>	Cn	[Nm]	0.32	0.32					
	POTENZA A VELOCITA' NOMINALE - <i>Power at rated speed</i>	Pn	[W]	70	70					
	CORRENTE A ROTORE BLOCCATO - <i>Stall current</i>	In	[A]	4.6	3.2					
	PICCO DI COPPIA ALLO SPUNTO - <i>Peak torque</i>	Cmax	[Nm]	1.6	1.6					
	CORRENTE AL PICCO DI COPPIA - <i>Peak current</i>	Imax	[A]	23	16					
	CORRENTE SMAGNETIZZANTE - <i>Demagnetise current</i>	Ipeak	[A]	25.3	17.6					
	FCEM A VELOCITA' NOMINALE - <i>Bemf at rated speed</i>	E	[V]	21.9	31.2					
	MAX VELOCITA' - <i>Max speed</i>	Nmax	[rpm]	4000	4000					
	DATI MECCANICI - <i>MECHANICAL DATA</i>									
	MOMENTO D'INERZIA - <i>Moment of inertia</i>	Jm	Kg cm ²	0.324	0.324					
	MAX. ACC. TEORICA - <i>Max theorethical acceleration</i>	αmax	rad/s ²	33950	33950					
	COSTANTE DI TEMPO MECCANICA - <i>Mechanical time constant</i>	Tm	[ms]	6	6					
	COPPIA SMORZAMENTO A 1000 RPM - <i>Damping constant at 1000 rpm</i>	Td	[Nm]	0.015	0.015					
	COPPIA ATTRITO STATICO - <i>Static friction torque</i>	Tf	[Nm]	0.002	0.002					
	MAX CARICO RADIALE (A 3000 RPM) - <i>Max radial load (at 3000 rpm)</i>	Fr	[N]	196	196					
	MAX CARICO ASSIALE - <i>Max axial load</i>	Fa	[N]	58	58					
	PESO - <i>Weight</i>	M	[Kg]	1.3	1.3					
	DATI ELETTRICI - <i>WINDING DATA</i>									
	COSTANTE DI TENSIONE ± 5% - <i>Voltage constant ± 5%</i>	Ke	V/Krpm	7.3	10.4					
	COSTANTE DI COPPIA ± 5% - <i>Torque constant ± 5%</i>	Kt	[Nm/A]	0.07	0.1					
	COSTANTE DI TEMPO ELETTRICA - <i>Electrical time constant</i>	Te	[ms]	1.58	1.62					
	COSTANTE DI TEMPO TERMICA - <i>Thermal time constant</i>	Tt	[min]	15	15					
	RESIST. ARMATURA ± 10% A 25°C - <i>Armature resistance ± 10% at 25°c</i>	Ra	[Ohm]	0.82	1.82					
	RESIST. ARMATURA CON SPAZZOLE - <i>Terminal resistance</i>	Rt	[Ohm]	0.85	1.85					
	INDUTTANZA - <i>Inductance</i>	La	[mH]	1.34	3					
	GRADO DI PROTEZIONE - <i>Protection degree</i>		IP					54		
	CLASSE D' ISOLAMENTO - <i>Insulation class</i>							F		
DINAMO T. <i>Tacho generator</i>	COSTANTE DI TENSIONE - <i>Voltage constant</i>	Ke	V/Krpm	10 +/- 5% (MAX 9000 rpm)						
	ONDULAZIONE PICCO/PICCO - <i>Ripple</i>		[%]	< 1.5 A 1000 rpm						
	LINEARITA' A 6000 RPM - <i>Linearity at 6000 rpm</i>		[%]	< 0.1						
	ERRORE DI REVERSIBILITA' - <i>Reversibility error</i>		[%]	< 0.12						
	COEFFICIENTE DI TEMPERATURA - <i>Temperature coefficient</i>		[%]	0.02						
	MOMENTO D' INERZIA - <i>Moment of inertia</i>	J	g cm ²	40						
	RESISTENZA - <i>Resistance</i>	Ra	[Ohm]	86						
	INDUTTANZA - <i>Inductance</i>	La	[mH]	13						
	CORRENTE - <i>Current</i>	I	[mA]	2 (MAX 8 mA)						
	NUMERO POLI - <i>Number of poles</i>			4						
	VITA SPAZZOLE PREVISTA - <i>Life expctancy</i>			15000 A 3000 rpm						
FRENO <i>Brake</i>	TIPO - <i>Type</i>			STD						
	COPPIA STATICA - <i>Static torque</i>	C	[Nm]	0.5						
	TENSIONE DI ALIMENTAZIONE - <i>Power supply voltage</i>	E	[V]	24						
	CORRENTE NOMINALE - <i>Rated current</i>	I	[A]	0.42						
	POTENZA ASSORBITA - <i>Input power</i>	P	[W]	10						

ESA 2S1



ESA 2S2



1 = Area di ciclo continuo
2 = Area di ciclo intermittente
3 = Area di accel. decel.

1 = Continuous duty area
2 = Intermittent duty area
3 = Accel. decel. duty area

SERIE
Series

ESA 2L

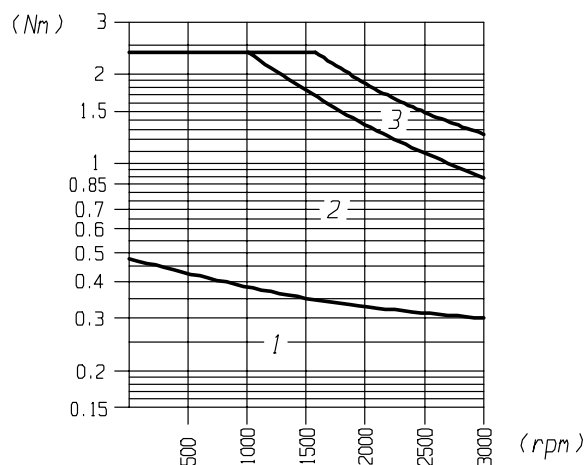
COPPIA - TORQUE

Nm 0.47

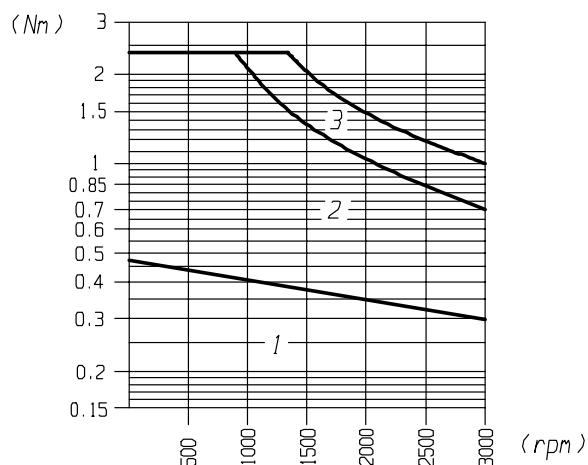
DATI MOTORE - <i>MOTOR RATINGS</i>			SIMBOLI Symbols	UNITA' Units	TIPO DI AVVOLGIMENTO <i>Type of winding</i>					
					1	2				
SERVOMOTORE - <i>Servomotor</i>	VELOCITA' NOMINALE - <i>Rated speed</i>		n	[rpm]	3000	3000				
	COPPIA ROTORE BLOCCATO - <i>Continuuous stall torque</i>		Cn	[Nm]	0.47	0.47				
	POTENZA A VELOCITA' NOMINALE - <i>Power at rated speed</i>		Pn	[W]	95	95				
	CORRENTE A ROTORE BLOCCATO - <i>Stall current</i>		In	[A]	6.5	4.6				
	PICCO DI COPPIA ALLO SPUNTO - <i>Peak torque</i>		Cmax	[Nm]	2.35	2.35				
	CORRENTE AL PICCO DI COPPIA - <i>Peak current</i>		Imax	[A]	32.5	23				
	CORRENTE SMAGNETIZZANTE - <i>Demagnetise current</i>		Ipeak	[A]	35.75	25.3				
	FCEM A VELOCITA' NOMINALE - <i>Bemf at rated speed</i>		E	[V]	22.5	32.1				
	MAX VELOCITA' - <i>Max speed</i>		Nmax	[rpm]	4000	4000				
	DATI MECCANICI - <i>MECHANICAL DATA</i>									
	MOMENTO D'INERZIA - <i>Moment of inertia</i>		Jm	Kg cm ²	0.607	0.607				
	MAX. ACC. TEORICA - <i>Max theorethical acceleration</i>		αmax	rad/s ²	24711	24711				
	COSTANTE DI TEMPO MECCANICA - <i>Mechanical time constant</i>		Tm	[ms]	6	7				
	COPPIA SMORZAMENTO A 1000 RPM - <i>Damping constant at 1000 rpm</i>		Td	[Nm]	0.018	0.018				
	COPPIA ATTRITO STATICO - <i>Static friction torque</i>		Tf	[Nm]	0.003	0.003				
	MAX CARICO RADIALE (A 3000 RPM) - <i>Max radial load (at 3000 rpm)</i>		Fr	[N]	196	196				
	MAX CARICO ASSIALE - <i>Max axial load</i>		Fa	[N]	58	58				
	PESO - <i>Weight</i>		M	[Kg]	1.85	1.85				
	DATI ELETTRICI - <i>WINDING DATA</i>									
	COSTANTE DI TENSIONE ± 5% - <i>Voltage constant ± 5%</i>		Ke	V/Krpm	7.5	10.7				
	COSTANTE DI COPPIA ± 5% - <i>Torque constant ± 5%</i>		Kt	[Nm/A]	0.072	0.103				
	COSTANTE DI TEMPO ELETTRICA - <i>Electrical time constant</i>		Te	[ms]	1.46	1.4				
	COSTANTE DI TEMPO TERMICA - <i>Thermal time constant</i>		Tt	[min]	25	25				
	RESIST. ARMATURA ± 10% A 25°C - <i>Armature resistance ± 10% at 25°c</i>		Ra	[Ohm]	0.45	1.16				
	RESIST. ARMATURA CON SPAZZOLE - <i>Terminal resistance</i>		Rt	[Ohm]	0.48	1.19				
	INDUTTANZA - <i>Inductance</i>		La	[mH]	0.7	1.65				
	GRADO DI PROTEZIONE - <i>Protection degree</i>			IP				54		
	CLASSE D' ISOLAMENTO - <i>Insulation class</i>							F		
DINAMO T. <i>Tacho generator</i>	COSTANTE DI TENSIONE - <i>Voltage constant</i>		Ke	V/Krpm	10 +/- 5% (MAX 9000 rpm)					
	ONDULAZIONE PICCO/PICCO - <i>Ripple</i>			[%]	< 1.5 A 1000 rpm					
	LINEARITA' A 6000 RPM - <i>Linearity at 6000 rpm</i>			[%]	< 0.1					
	ERRORE DI REVERSIBILITA' - <i>Reversibility error</i>			[%]	< 0.12					
	COEFFICIENTE DI TEMPERATURA - <i>Temperature coefficient</i>			[%]	0.02					
	MOMENTO D' INERZIA - <i>Moment of inertia</i>		J	g cm ²	40					
	RESISTENZA - <i>Resistance</i>		Ra	[Ohm]	86					
	INDUTTANZA - <i>Inductance</i>		La	[mH]	13					
	CORRENTE - <i>Current</i>		I	[mA]	2 (MAX 8 mA)					
	NUMERO POLI - <i>Number of poles</i>				4					
VITA SPAZZOLE PREVISTA - <i>Life expctancy</i>				15000 A 3000 rpm						
FRENO <i>Brake</i>	TIPO - <i>Type</i>				STD					
	COPPIA STATICA - <i>Static torque</i>		C	[Nm]	0.5					
	TENSIONE DI ALIMENTAZIONE - <i>Power supply voltage</i>		E	[V]	24					
	CORRENTE NOMINALE - <i>Rated current</i>		I	[A]	0.42					
	POTENZA ASSORBITA - <i>Input power</i>		P	[W]	10					

**CURVE OPERATIVE
PERFORMANCE CURVES**

ESA 2L1

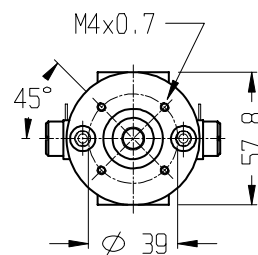
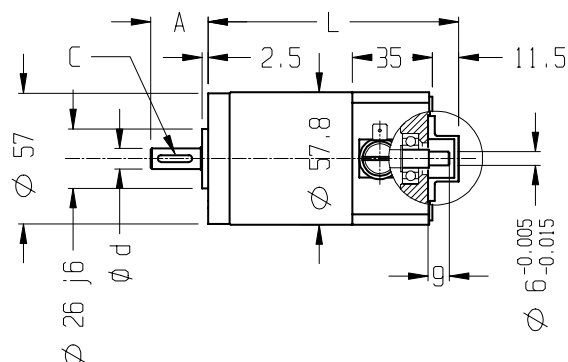
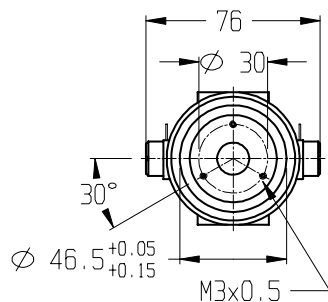


ESA 2L2



1 = Area di ciclo continuo
2 = Area di ciclo intermittente
3 = Area di accel. decel.

1 = Continuous duty area
2 = Intermittent duty area
3 = Accel. decel. duty area

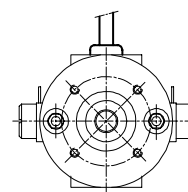
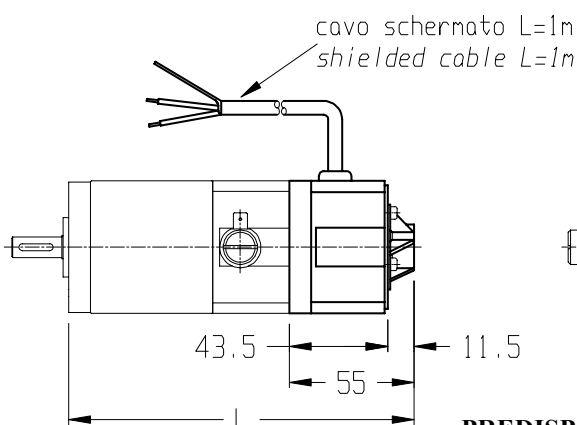
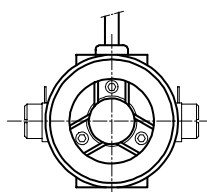


Type	S	L
A	20	25
L	136	183.5
d (j6)	7	9
C	-	3x3x15

PREDISPOSTO ENCODER STD
STD ENCODER PREARRANGEMENT

DINAMO TACHIMETRICA

TACHO GENERATOR

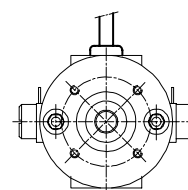
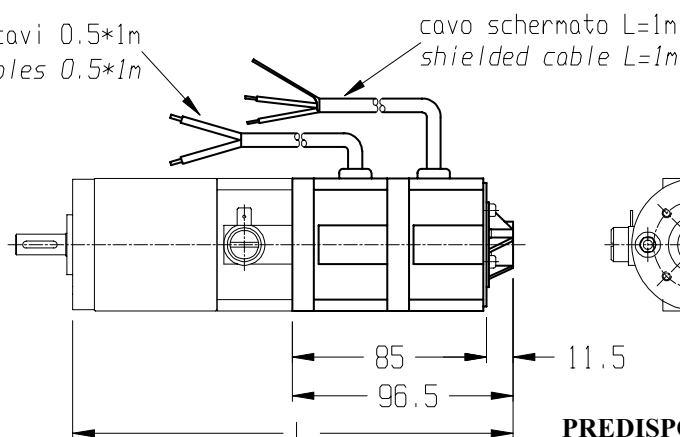
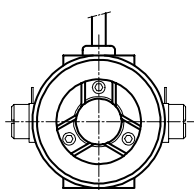


Type	S	L
L	177.5	225

PREDISPOSTO ENCODER STD
STD ENCODER PREARRANGEMENT

FRENO 0,5Nm + DINAMO TACHIMETRICA

TACHO GENERATOR + BRAKE 0,5Nm



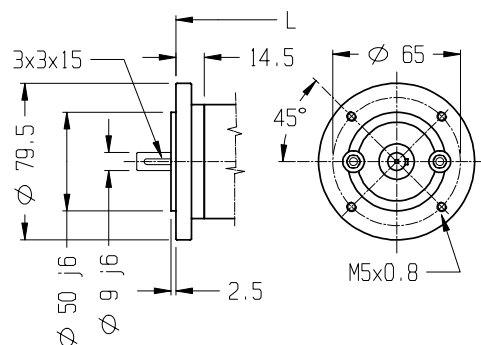
Type	S	L
L	219	266.5

PREDISPOSTO ENC. STD
STD ENC. PREARRANGEMENT

OPTIONALS

FLANGIA B14/56

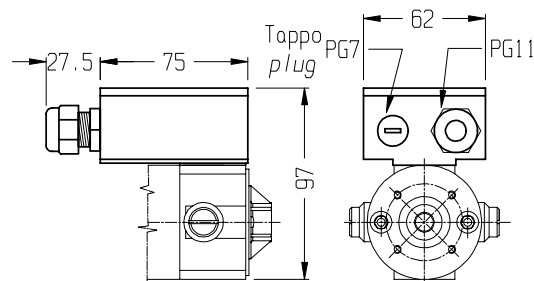
B14/56 FLANGE



Type	S	L
L	141	188.5

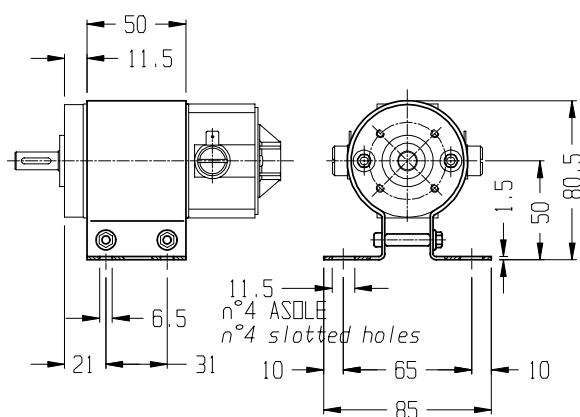
MORSETTIERA

TERMINAL BOX



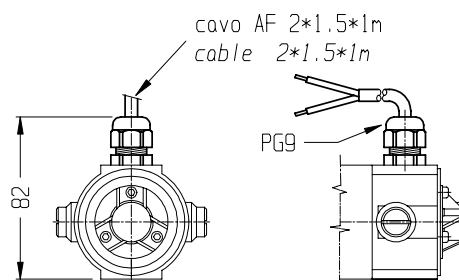
PIEDE A FASCIA

FOOT BAND TYPE



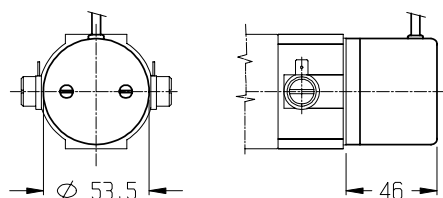
CAVO

FLYING LEADS



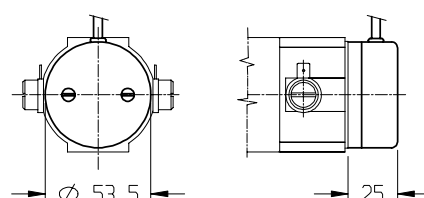
ENCODER EH53

ENCODER EH53



ENCODER EH38

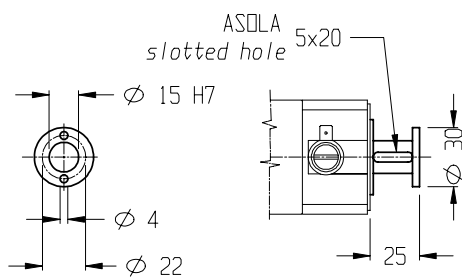
ENCODER EH38



OPTIONALS

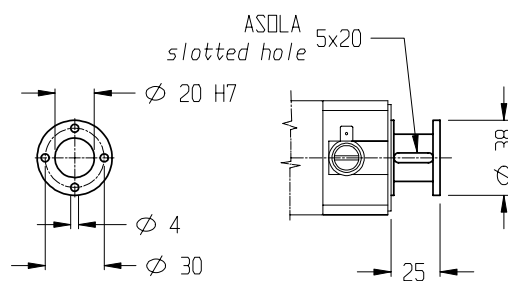
DISTANZ. ENC. N°1

ENCODER SPACER N°1



DISTANZ. ENC. N°2

ENCODER SPACER N°2



SERIE
Series

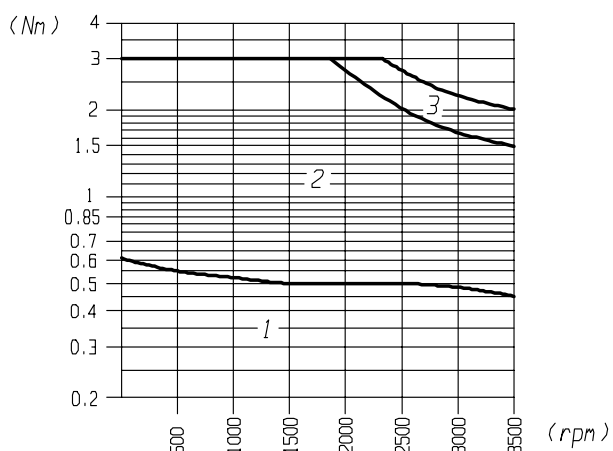
ESA 3XS

COPPIA - TORQUE

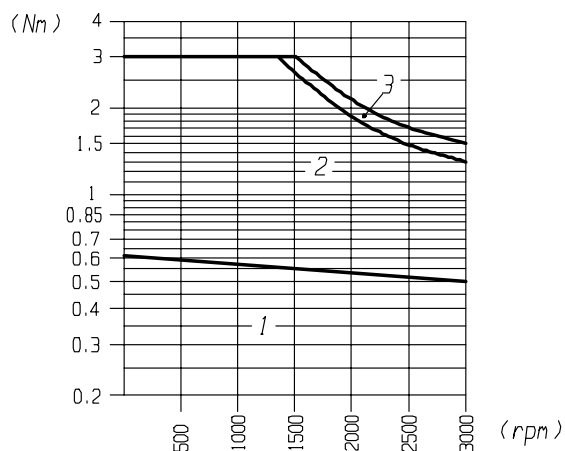
Nm 0.6

DATI MOTORE - <i>MOTOR RATINGS</i>			SIMBOLI Symbols	UNITA' Units	TIPO DI AVVOLGIMENTO <i>Type of winding</i>					
					1	2	3			
SERVOMOTORE - <i>Servomotor</i>	VELOCITA' NOMINALE - <i>Rated speed</i>		n	[rpm]	3500	3000	3000			
	COPPIA ROTORE BLOCCATO - <i>Continuous stall torque</i>		Cn	[Nm]	0.6	0.6	0.6			
	POTENZA A VELOCITA' NOMINALE - <i>Power at rated speed</i>		Pn	[W]	140	150	150			
	CORRENTE A ROTORE BLOCCATO - <i>Stall current</i>		In	[A]	4.6	1.55	3			
	PICCO DI COPPIA ALLO SPUNTO - <i>Peak torque</i>		Cmax	[Nm]	3	3	3			
	CORRENTE AL PICCO DI COPPIA - <i>Peak current</i>		Imax	[A]	23	9.5	15			
	CORRENTE SMAGNETIZZANTE - <i>Demagnetise current</i>		Ipeak	[A]	25.3	8.525	16.5			
	FCEM A VELOCITA' NOMINALE - <i>Bemf at rated speed</i>		E	[V]	45.5	120	60			
	MAX VELOCITA' - <i>Max speed</i>		Nmax	[rpm]	4000	4000	4000			
	DATI MECCANICI - <i>MECHANICAL DATA</i>									
	MOMENTO D'INERZIA - <i>Moment of inertia</i>		Jm	Kg m ²	0.0003	0.0003	0.0003			
	MAX. ACC. TEORICA - <i>Max theorethical acceleration</i>		αmax	rad/s ²	10000	10000	10000			
	COSTANTE DI TEMPO MECCANICA - <i>Mechanical time constant</i>		Tm	[ms]	17	15	21			
	COPPIA SMORZAMENTO A 1000 RPM - <i>Damping constant at 1000 rpm</i>		Td	[Nm]	0.037	0.037	0.037			
	COPPIA ATTRITO STATICO - <i>Static friction torque</i>		Tf	[Nm]	0.027	0.027	0.027			
	MAX CARICO RADIALE (A 3000 RPM) - <i>Max radial load (at 3000 rpm)</i>		Fr	[N]	294	294	294			
	MAX CARICO ASSIALE - <i>Max axial load</i>		Fa	[N]	88	88	88			
	PESO - <i>Weight</i>		M	[Kg]	3.5	3.5	3.5			
	DATI ELETTRICI - <i>WINDING DATA</i>									
	COSTANTE DI TENSIONE ± 5% - <i>Voltage constant ± 5%</i>		Ke	V/Krpm	13	40	20			
	COSTANTE DI COPPIA ± 5% - <i>Torque constant ± 5%</i>		Kt	[Nm/A]	0.13	0.386	0.2			
	COSTANTE DI TEMPO ELETTRICA - <i>Electrical time constant</i>		Te	[ms]	2.8	3.6	2.9			
	COSTANTE DI TEMPO TERMICA - <i>Thermal time constant</i>		Tt	[min]	20	20	20			
	RESIST. ARMATURA ± 10% A 25°C - <i>Armature resistance ± 10% at 25°c</i>		Ra	[Ohm]	0.8	7.4	2.5			
	RESIST. ARMATURA CON SPAZZOLE - <i>Terminal resistance</i>		Rt	[Ohm]	0.9	7.5	2.6			
	INDUTTANZA - <i>Inductance</i>		La	[mH]	2.5	27	7.5			
	GRADO DI PROTEZIONE - <i>Protection degree</i>			IP	54					
	CLASSE D' ISOLAMENTO - <i>Insulation class</i>				F					
DINAMO T. <i>Tacho generator</i>	COSTANTE DI TENSIONE - <i>Voltage constant</i>		Ke	V/Krpm	10 +/- 5% (MAX 9000 rpm)					
	ONDULAZIONE PICCO/PICCO - <i>Ripple</i>			[%]	< 1.5 A 1000 rpm					
	LINEARITA' A 6000 RPM - <i>Linearity at 6000 rpm</i>			[%]	< 0.1					
	ERRORE DI REVERSIBILITA' - <i>Reversibility error</i>			[%]	< 0.12					
	COEFFICIENTE DI TEMPERATURA - <i>Temperature coefficient</i>			[%]	0.02					
	MOMENTO D' INERZIA - <i>Moment of inertia</i>		J	g cm ²	40					
	RESISTENZA - <i>Resistance</i>		Ra	[Ohm]	86					
	INDUTTANZA - <i>Inductance</i>		La	[mH]	13					
	CORRENTE - <i>Current</i>		I	[mA]	2 (MAX 8 mA)					
	NUMERO POLI - <i>Number of poles</i>				4					
	VITA SPAZZOLE PREVISTA - <i>Life expctancy</i>				15000 A 3000 rpm					
FRENO <i>Brake</i>	TIPO - <i>Type</i>				STD					
	COPPIA STATICA - <i>Static torque</i>		C	[Nm]	3					
	TENSIONE DI ALIMENTAZIONE - <i>Power supply voltage</i>		E	[V]	24					
	CORRENTE NOMINALE - <i>Rated current</i>		I	[A]	0.42					
	POTENZA ASSORBITA - <i>Input power</i>		P	[W]	10					

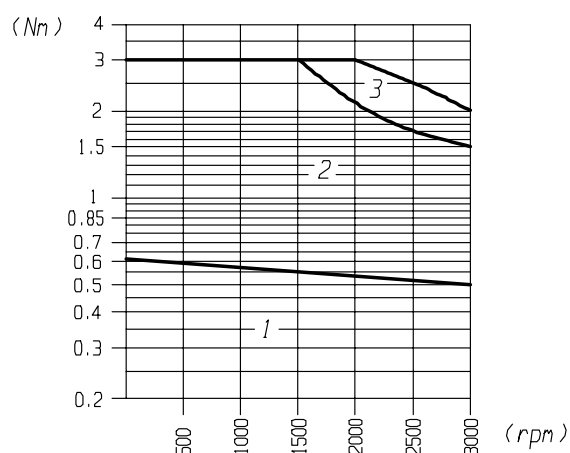
ESA 3XS1



ESA 3XS2



ESA 3XS3



1 = Area di ciclo continuo
2 = Area di ciclo intermittente
3 = Area di accel. decel.

1 = Continuous duty area
2 = Intermittent duty area
3 = Accel. decel. duty area

SERIE
Series

ESA 3S

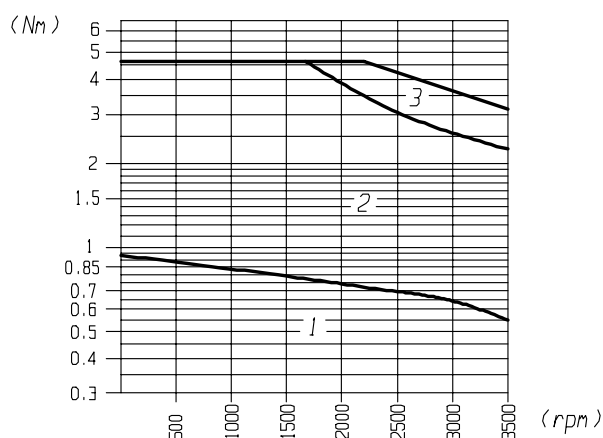
COPPIA - TORQUE

Nm 0.93

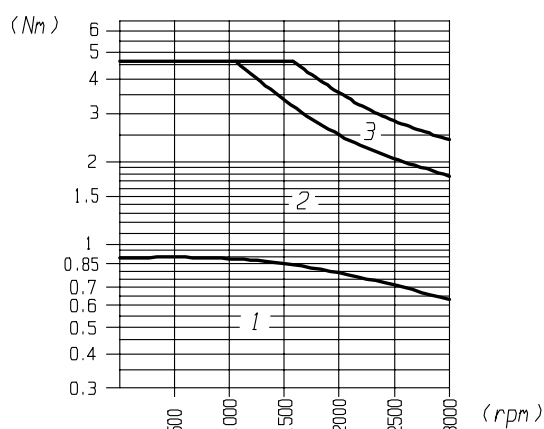
DATI MOTORE - <i>MOTOR RATINGS</i>			SIMBOLI Symbols	UNITA' Units	TIPO DI AVVOLGIMENTO <i>Type of winding</i>					
					1	2	3			
SERVOMOTORE - <i>Servomotor</i>	VELOCITA' NOMINALE - <i>Rated speed</i>		n	[rpm]	3500	3000	3000			
	COPPIA ROTORE BLOCCATO - <i>Continuos stall torque</i>		Cn	[Nm]	0.93	0.93	0.93			
	POTENZA A VELOCITA' NOMINALE - <i>Power at rated speed</i>		Pn	[W]	200	200	200			
	CORRENTE A ROTORE BLOCCATO - <i>Stall current</i>		In	[A]	7	2.4	4.8			
	PICCO DI COPPIA ALLO SPUNTO - <i>Peak torque</i>		Cmax	[Nm]	4.65	4.65	4.65			
	CORRENTE AL PICCO DI COPPIA - <i>Peak current</i>		Imax	[A]	35	12	24			
	CORRENTE SMAGNETIZZANTE - <i>Demagnetise current</i>		Ipeak	[A]	38.5	13.2	26.4			
	FCEM A VELOCITA' NOMINALE - <i>Bemf at rated speed</i>		E	[V]	48.3	120	60			
	MAX VELOCITA' - <i>Max speed</i>		Nmax	[rpm]	4000	4000	4000			
	DATI MECCANICI - <i>MECHANICAL DATA</i>									
	MOMENTO D'INERZIA - <i>Moment of inertia</i>		Jm	Kg m ²	0.0006	0.0006	0.0006			
	MAX. ACC. TEORICA - <i>Max theorethical acceleration</i>		αmax	rad/s ²	7750	7750	7750			
	COSTANTE DI TEMPO MECCANICA - <i>Mechanical time constant</i>		Tm	[ms]	16	12	16			
	COPPIA SMORZAMENTO A 1000 RPM - <i>Damping constant at 1000 rpm</i>		Td	[Nm]	0.04	0.04	0.04			
	COPPIA ATTRITO STATICO - <i>Static friction torque</i>		Tf	[Nm]	0.03	0.03	0.03			
	MAX CARICO RADIALE (A 3000 RPM) - <i>Max radial load (at 3000 rpm)</i>		Fr	[N]	294	294	294			
	MAX CARICO ASSIALE - <i>Max axial load</i>		Fa	[N]	88	88	88			
	PESO - <i>Weight</i>		M	[Kg]	4.6	4.6	4.6			
	DATI ELETTRICI - <i>WINDING DATA</i>									
	COSTANTE DI TENSIONE ± 5% - <i>Voltage constant ± 5%</i>		Ke	V/Krpm	13.8	40	20			
	COSTANTE DI COPPIA ± 5% - <i>Torque constant ± 5%</i>		Kt	[Nm/A]	0.133	0.386	0.193			
	COSTANTE DI TEMPO ELETTRICA - <i>Electrical time constant</i>		Te	[ms]	2.36	3.7	2.8			
	COSTANTE DI TEMPO TERMICA - <i>Thermal time constant</i>		Tt	[min]	25	25	25			
	RESIST. ARMATURA ± 10% A 25°C - <i>Armature resistance ± 10% at 25°c</i>		Ra	[Ohm]	0.37	2.9	0.86			
	RESIST. ARMATURA CON SPAZZOLE - <i>Terminal resistance</i>		Rt	[Ohm]	0.47	3	0.96			
	INDUTTANZA - <i>Inductance</i>		La	[mH]	1.11	11	2.67			
	GRADO DI PROTEZIONE - <i>Protection degree</i>			IP			54			
	CLASSE D' ISOLAMENTO - <i>Insulation class</i>						F			
DINAMO T. <i>Tacho generator</i>	COSTANTE DI TENSIONE - <i>Voltage constant</i>		Ke	V/Krpm	10 +/- 5% (MAX 9000 rpm)					
	ONDULAZIONE PICCO/PICCO - <i>Ripple</i>			[%]	< 1.5 A 1000 rpm					
	LINEARITA' A 6000 RPM - <i>Linearity at 6000 rpm</i>			[%]	< 0.1					
	ERRORE DI REVERSIBILITA' - <i>Reversibility error</i>			[%]	< 0.12					
	COEFFICIENTE DI TEMPERATURA - <i>Temperature coefficient</i>			[%]	0.02					
	MOMENTO D' INERZIA - <i>Moment of inertia</i>		J	g cm ²	40					
	RESISTENZA - <i>Resistance</i>		Ra	[Ohm]	86					
	INDUTTANZA - <i>Inductance</i>		La	[mH]	13					
	CORRENTE - <i>Current</i>		I	[mA]	2 (MAX 8 mA)					
	NUMERO POLI - <i>Number of poles</i>				4					
	VITA SPAZZOLE PREVISTA - <i>Life expctancy</i>				15000 A 3000 rpm					
FRENO <i>Brake</i>	TIPO - <i>Type</i>				STD					
	COPPIA STATICA - <i>Static torque</i>		C	[Nm]	3					
	TENSIONE DI ALIMENTAZIONE - <i>Power supply voltage</i>		E	[V]	24					
	CORRENTE NOMINALE - <i>Rated current</i>		I	[A]	0.42					
	POTENZA ASSORBITA - <i>Input power</i>		P	[W]	10					

CURVE OPERATIVE PERFORMANCE CURVES

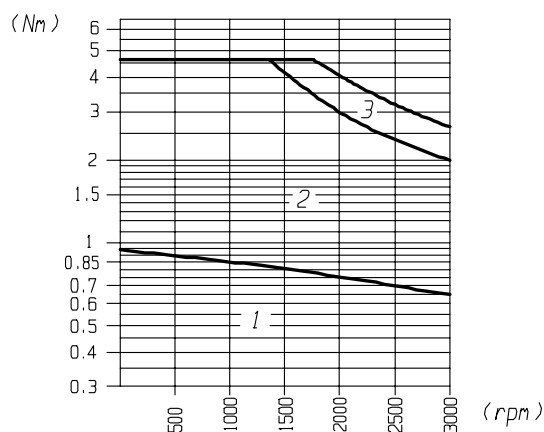
ESA 3S1



ESA 3S2



ESA 3S3



1 = Area di ciclo continuo
2 = Area di ciclo intermittente
3 = Area di accel. decel.

1 = Continuous duty area
2 = Intermittent duty area
3 = Accel. decel. duty area

SERIE
Series

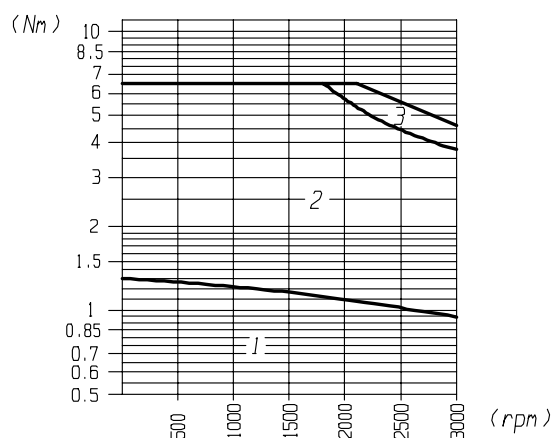
ESA 3SL

COPPIA - TORQUE

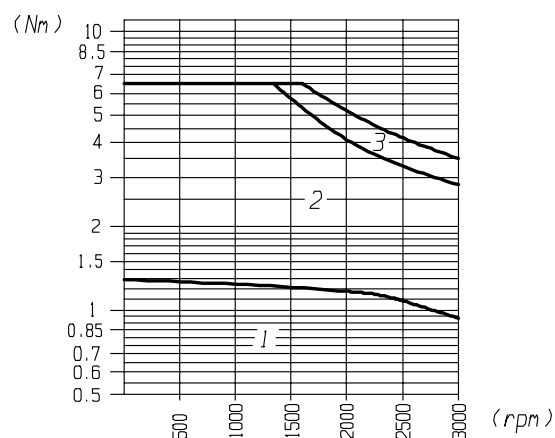
Nm 1.3

DATI MOTORE - <i>MOTOR RATINGS</i>			SIMBOLI Symbols	UNITA' Units	TIPO DI AVVOLGIMENTO <i>Type of winding</i>					
					1	2	3	4		
SERVOMOTORE - <i>Servomotor</i>	VELOCITA' NOMINALE - <i>Rated speed</i>		n	[rpm]	3000	3000	3000	3000		
	COPPIA ROTORE BLOCCATO - <i>Continuous stall torque</i>		Cn	[Nm]	1.3	1.3	1.3	1.3		
	POTENZA A VELOCITA' NOMINALE - <i>Power at rated speed</i>		Pn	[W]	300	300	300	300		
	CORRENTE A ROTORE BLOCCATO - <i>Stall current</i>		In	[A]	8	2.25	3.46	7.1		
	PICCO DI COPPIA ALLO SPUNTO - <i>Peak torque</i>		Cmax	[Nm]	6.5	6.5	6.5	6.5		
	CORRENTE AL PICCO DI COPPIA - <i>Peak current</i>		Imax	[A]	40	11.25	17.3	35.5		
	CORRENTE SMAGNETIZZANTE - <i>Demagnetise current</i>		Ipeak	[A]	44	12.375	19.03	39.05		
	FCEM A VELOCITA' NOMINALE - <i>Bemf at rated speed</i>		E	[V]	49.5	160	120	57		
	MAX VELOCITA' - <i>Max speed</i>		Nmax	[rpm]	4000	3400	4000	4000		
	DATI MECCANICI - <i>MECHANICAL DATA</i>									
	MOMENTO D'INERZIA - <i>Moment of inertia</i>		Jm	Kg m ²	0.0007	0.0007	0.0007	0.0007		
	MAX. ACC. TEORICA - <i>Max theorethical acceleration</i>		αmax	rad/s ²	10714	10714	10714	10714		
	COSTANTE DI TEMPO MECCANICA - <i>Mechanical time constant</i>		Tm	[ms]	14	12	12	14		
	COPPIA SMORZAMENTO A 1000 RPM - <i>Damping constant at 1000 rpm</i>		Td	[Nm]	0.044	0.044	0.044	0.044		
	COPPIA ATTRITO STATICO - <i>Static friction torque</i>		Tf	[Nm]	0.032	0.032	0.032	0.032		
	MAX CARICO RADIALE (A 3000 RPM) - <i>Max radial load (at 3000 rpm)</i>		Fr	[N]	343	343	343	343		
	MAX CARICO ASSIALE - <i>Max axial load</i>		Fa	[N]	103	103	103	103		
	PESO - <i>Weight</i>		M	[Kg]	5.3	5.3	5.3	5.3		
	DATI ELETTRICI - <i>WINDING DATA</i>									
	COSTANTE DI TENSIONE ± 5% - <i>Voltage constant ± 5%</i>		Ke	V/Krpm	16.5	60	40	19		
	COSTANTE DI COPPIA ± 5% - <i>Torque constant ± 5%</i>		Kt	[Nm/A]	0.16	0.58	0.375	0.183		
	COSTANTE DI TEMPO ELETTRICA - <i>Electrical time constant</i>		Te	[ms]	2.65	3.7	3.8	3		
	COSTANTE DI TEMPO TERMICA - <i>Thermal time constant</i>		Tt	[min]	30	30	30	30		
	RESIST. ARMATURA ± 10% A 25°C - <i>Armature resistance ± 10% at 25°c</i>		Ra	[Ohm]	0.39	5.4	2.4	0.57		
	RESIST. ARMATURA CON SPAZZOLE - <i>Terminal resistance</i>		Rt	[Ohm]	0.49	5.5	2.5	0.63		
	INDUTTANZA - <i>Inductance</i>		La	[mH]	1.3	20.5	9.46	2		
	GRADO DI PROTEZIONE - <i>Protection degree</i>			IP	54					
	CLASSE D' ISOLAMENTO - <i>Insulation class</i>				F					
DINAMO T. <i>Tacho generator</i>	COSTANTE DI TENSIONE - <i>Voltage constant</i>		Ke	V/Krpm	10 +/- 5% (MAX 9000 rpm)					
	ONDULAZIONE PICCO/PICCO - <i>Ripple</i>			[%]	< 1.5 A 1000 rpm					
	LINEARITA' A 6000 RPM - <i>Linearity at 6000 rpm</i>			[%]	< 0.1					
	ERRORE DI REVERSIBILITA' - <i>Reversibility error</i>			[%]	< 0.12					
	COEFFICIENTE DI TEMPERATURA - <i>Temperature coefficient</i>			[%]	0.02					
	MOMENTO D' INERZIA - <i>Moment of inertia</i>		J	g cm ²	40					
	RESISTENZA - <i>Resistance</i>		Ra	[Ohm]	86					
	INDUTTANZA - <i>Inductance</i>		La	[mH]	13					
	CORRENTE - <i>Current</i>		I	[mA]	2 (MAX 8 Ma)					
	NUMERO POLI - <i>Number of poles</i>				4					
	VITA SPAZZOLE PREVISTA - <i>Life expctancy</i>				15000 A 3000 rpm					
FRENO <i>Brake</i>	TIPO - <i>Type</i>				STD					
	COPPIA STATICA - <i>Static torque</i>		C	[Nm]	3					
	TENSIONE DI ALIMENTAZIONE - <i>Power supply voltage</i>		E	[V]	24					
	CORRENTE NOMINALE - <i>Rated current</i>		I	[A]	0.42					
	POTENZA ASSORBITA - <i>Input power</i>		P	[W]	10					

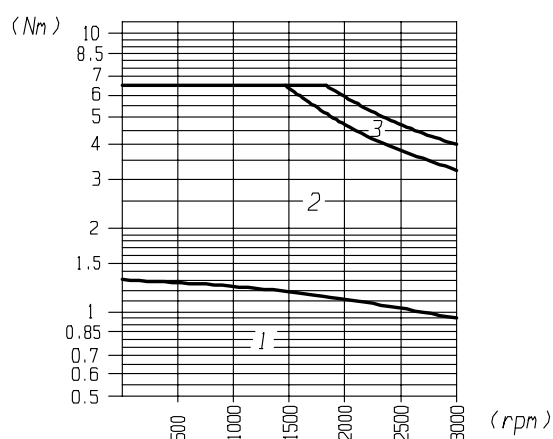
ESA SL1



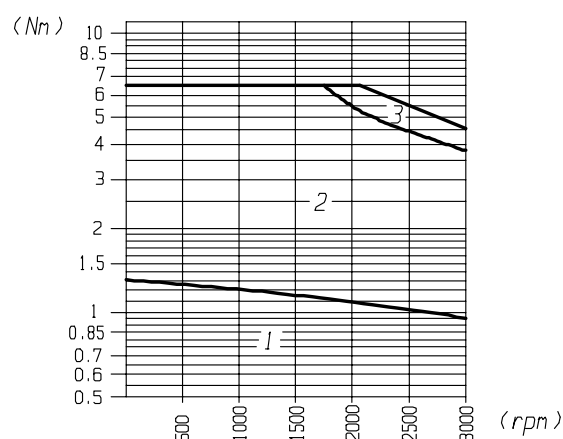
ESA 3SL2



ESA 3SL3



ESA 3SL4



1 = Area di ciclo continuo
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3 = Area di accel. decel.

1 = Continuous duty area
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SERIE
Series

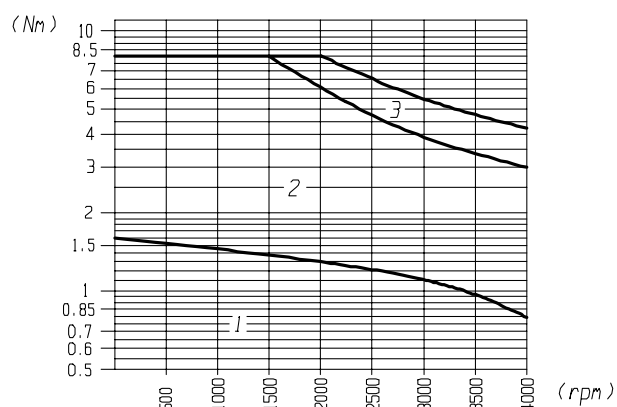
ESA 3M

COPPIA - TORQUE

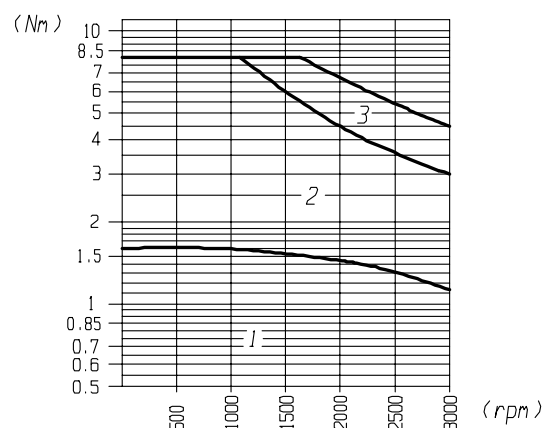
Nm 1.6

DATI MOTORE - <i>MOTOR RATINGS</i>			SIMBOLI Symbols	UNITA' Units	TIPO DI AVVOLGIMENTO <i>Type of winding</i>					
					2	3	5	8		
SERVOMOTORE - <i>Servomotor</i>	VELOCITA' NOMINALE - <i>Rated speed</i>		n	[rpm]	4000	3000	3000	3000		
	COPPIA ROTORE BLOCCATO - <i>Continuous stall torque</i>		Cn	[Nm]	1.6	1.6	1.6	1.6		
	POTENZA A VELOCITA' NOMINALE - <i>Power at rated speed</i>		Pn	[W]	335	360	360	360		
	CORRENTE A ROTORE BLOCCATO - <i>Stall current</i>		In	[A]	6.2	3	4.15	10		
	PICCO DI COPPIA ALLO SPUNTO - <i>Peak torque</i>		Cmax	[Nm]	8	8	8	8		
	CORRENTE AL PICCO DI COPPIA - <i>Peak current</i>		Imax	[A]	31	15	20.75	50		
	CORRENTE SMAGNETIZZANTE - <i>Demagnetise current</i>		Ipeak	[A]	34.1	16.5	22.825	55		
	FCEM A VELOCITA' NOMINALE - <i>Bemf at rated speed</i>		E	[V]	108	157.5	120	49.5		
	MAX VELOCITA' - <i>Max speed</i>		Nmax	[rpm]	4500	3400	4000	4000		
	DATI MECCANICI - <i>MECHANICAL DATA</i>									
	MOMENTO D'INERZIA - <i>Moment of inertia</i>		Jm	Kg m ²	0.0008	0.0008	0.0008	0.0008		
	MAX. ACC. TEORICA - <i>Max theorethical acceleration</i>		αmax	rad/s ²	10000	10000	10000	10000		
	COSTANTE DI TEMPO MECCANICA - <i>Mechanical time constant</i>		Tm	[ms]	12	10	10	13		
	COPPIA SMORZAMENTO A 1000 RPM - <i>Damping constant at 1000 rpm</i>		Td	[Nm]	0.048	0.048	0.048	0.048		
	COPPIA ATTRITO STATICO - <i>Static friction torque</i>		Tf	[Nm]	0.04	0.04	0.04	0.04		
	MAX CARICO RADIALE (A 3000 RPM) - <i>Max radial load (at 3000 rpm)</i>		Fr	[N]	343	343	343	343		
	MAX CARICO ASSIALE - <i>Max axial load</i>		Fa	[N]	103	103	103	103		
	PESO - <i>Weight</i>		M	[Kg]	6.4	6.4	6.4	6.4		
	DATI ELETTRICI - <i>WINDING DATA</i>									
	COSTANTE DI TENSIONE ± 5% - <i>Voltage constant ± 5%</i>		Ke	V/Krpm	27	52.5	40	16.5		
	COSTANTE DI COPPIA ± 5% - <i>Torque constant ± 5%</i>		Kt	[Nm/A]	0.26	0.5	0.385	0.16		
	COSTANTE DI TEMPO ELETTRICA - <i>Electrical time constant</i>		Te	[ms]	3	3.3	3.7	2.75		
	COSTANTE DI TEMPO TERMICA - <i>Thermal time constant</i>		Tt	[min]	40	40	40	40		
	RESIST. ARMATURA ± 10% A 25°C - <i>Armature resistance ± 10% at 25°c</i>		Ra	[Ohm]	0.8	2.96	1.74	0.3		
	RESIST. ARMATURA CON SPAZZOLE - <i>Terminal resistance</i>		Rt	[Ohm]	0.9	3.06	1.84	0.4		
	INDUTTANZA - <i>Inductance</i>		La	[mH]	3	10.2	6.8	1.1		
	GRADO DI PROTEZIONE - <i>Protection degree</i>			IP	54					
	CLASSE D' ISOLAMENTO - <i>Insulation class</i>				F					
DINAMO T. <i>Tacho generator</i>	COSTANTE DI TENSIONE - <i>Voltage constant</i>		Ke	V/Krpm	10 +/- 5% (MAX 9000 rpm)					
	ONDULAZIONE PICCO/PICCO - <i>Ripple</i>			[%]	< 1.5 A 1000 rpm					
	LINEARITA' A 6000 RPM - <i>Linearity at 6000 rpm</i>			[%]	< 0.1					
	ERRORE DI REVERSIBILITA' - <i>Reversibility error</i>			[%]	< 0.12					
	COEFFICIENTE DI TEMPERATURA - <i>Temperature coefficient</i>			[%]	0.02					
	MOMENTO D' INERZIA - <i>Moment of inertia</i>		J	g cm ²	40					
	RESISTENZA - <i>Resistance</i>		Ra	[Ohm]	86					
	INDUTTANZA - <i>Inductance</i>		La	[mH]	13					
	CORRENTE - <i>Current</i>		I	[mA]	2 (MAX 8 Ma)					
	NUMERO POLI - <i>Number of poles</i>				4					
	VITA SPAZZOLE PREVISTA - <i>Life expctancy</i>				15000 A 3000 rpm					
FRENO <i>Brake</i>	TIPO - <i>Type</i>				STD					
	COPPIA STATICA - <i>Static torque</i>		C	[Nm]	3					
	TENSIONE DI ALIMENTAZIONE - <i>Power supply voltage</i>		E	[V]	24					
	CORRENTE NOMINALE - <i>Rated current</i>		I	[A]	0.42					
	POTENZA ASSORBITA - <i>Input power</i>		P	[W]	10					

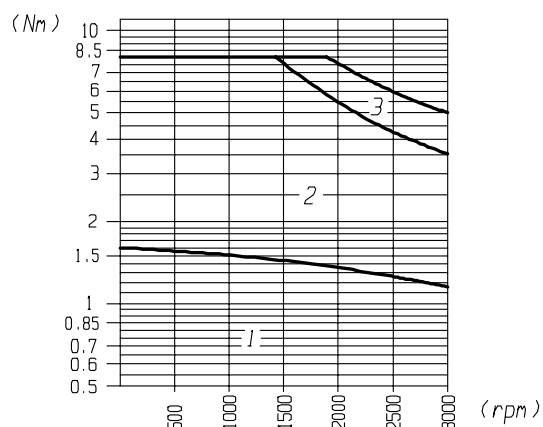
ESA 3M2



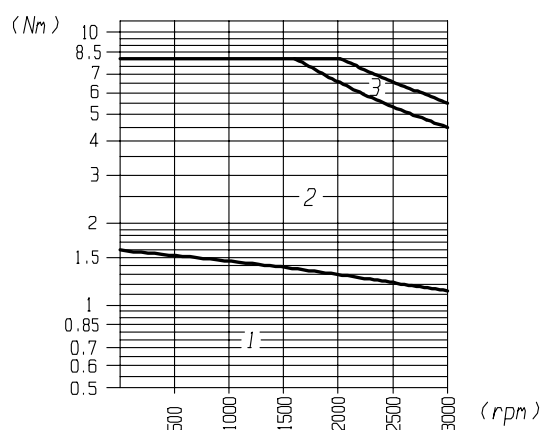
ESA 3M3



ESA 3M5



ESA 3M8



1 = Area di ciclo continuo
2 = Area di ciclo intermittente
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1 = Continuous duty area
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SERIE
Series

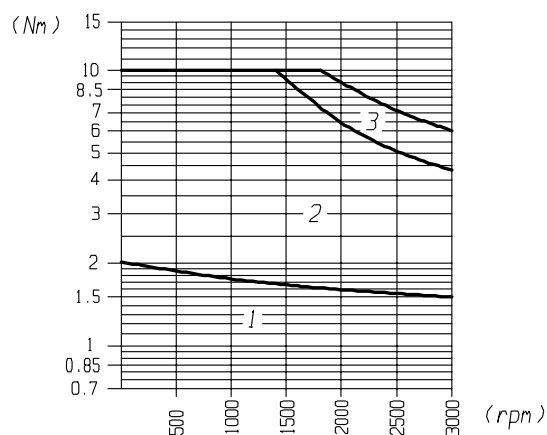
ESA 3L

COPPIA - TORQUE

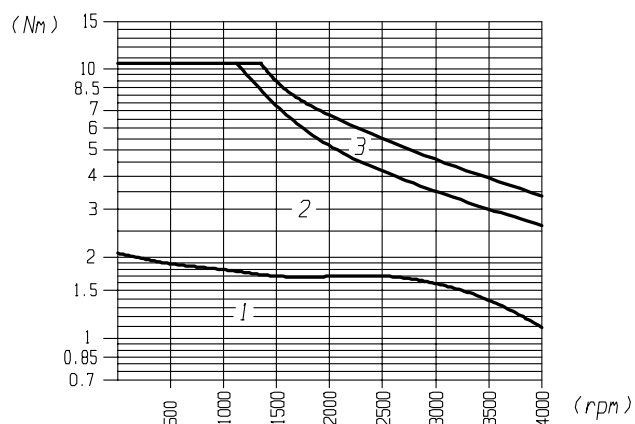
Nm 2.1

DATI MOTORE - <i>MOTOR RATINGS</i>			SIMBOLI Symbols	UNITA' Units	TIPO DI AVVOLGIMENTO <i>Type of winding</i>					
					1	3	4	6	7	
SERVOMOTORE - <i>Servomotor</i>	VELOCITA' NOMINALE - <i>Rated speed</i>		n	[rpm]	3000	4000	3000	3000	3000	
	COPPIA ROTORE BLOCCATO - <i>Continuous stall torque</i>		Cn	[Nm]	2	2.1	2.1	2	2.1	
	POTENZA A VELOCITA' NOMINALE - <i>Power at rated speed</i>		Pn	[W]	500	460	500	500	500	
	CORRENTE A ROTORE BLOCCATO - <i>Stall current</i>		In	[A]	10.5	6.65	5.4	12.5	3.8	
	PICCO DI COPPIA ALLO SPUNTO - <i>Peak torque</i>		Cmax	[Nm]	10	10.5	10.5	10	10.5	
	CORRENTE AL PICCO DI COPPIA - <i>Peak current</i>		Imax	[A]	52.5	33.25	27	62.5	19	
	CORRENTE SMAGNETIZZANTE - <i>Demagnetise current</i>		Ipeak	[A]	57.75	36.575	29.7	68.75	20.9	
	FCEM A VELOCITA' NOMINALE - <i>Bemf at rated speed</i>		E	[V]	59.7	128.8	120	49.5	171	
	MAX VELOCITA' - <i>Max speed</i>		Nmax	[rpm]	4000	4000	4000	4000	3200	
	DATI MECCANICI - <i>MECHANICAL DATA</i>									
	MOMENTO D'INERZIA - <i>Moment of inertia</i>		Jm	Kg m ²	0.001	0.001	0.001	0.001	0.001	
	MAX. ACC. TEORICA - <i>Max theorethical acceleration</i>		αmax	rad/s ²	10000	10500	10500	10000	10500	
	COSTANTE DI TEMPO MECCANICA - <i>Mechanical time constant</i>		Tm	[ms]	11	9	7	12	8	
	COPPIA SMORZAMENTO A 1000 RPM - <i>Damping constant at 1000 rpm</i>		Td	[Nm]	0.055	0.055	0.055	0.055	0.055	
	COPPIA ATTRITO STATICO - <i>Static friction torque</i>		Tf	[Nm]	0.05	0.05	0.05	0.05	0.05	
	MAX CARICO RADIALE (A 3000 RPM) - <i>Max radial load (at 3000 rpm)</i>		Fr	[N]	343	343	343	343	343	
	MAX CARICO ASSIALE - <i>Max axial load</i>		Fa	[N]	103	103	103	103	103	
	PESO - <i>Weight</i>		M	[Kg]	8	8	8	8	8	
	DATI ELETTRICI - <i>WINDING DATA</i>									
	COSTANTE DI TENSIONE ± 5% - <i>Voltage constant ± 5%</i>		Ke	V/Krpm	19.9	32.8	40	16.5	57	
	COSTANTE DI COPPIA ± 5% - <i>Torque constant ± 5%</i>		Kt	[Nm/A]	0.191	0.316	0.39	0.16	0.55	
	COSTANTE DI TEMPO ELETTRICA - <i>Electrical time constant</i>		Te	[ms]	2.9	3.3	3.9	2.4	4.1	
	COSTANTE DI TEMPO TERMICA - <i>Thermal time constant</i>		Tt	[min]	50	50	50	50	50	
	RESIST. ARMATURA ± 10% A 25°C - <i>Armature resistance ± 10% at 25°c</i>		Ra	[Ohm]	0.32	0.82	1	0.19	2.52	
	RESIST. ARMATURA CON SPAZZOLE - <i>Terminal resistance</i>		Rt	[Ohm]	0.42	0.92	1.1	0.29	2.62	
	INDUTTANZA - <i>Inductance</i>		La	[mH]	1.23	3.04	4.3	0.69	10.8	
	GRADO DI PROTEZIONE - <i>Protection degree</i>			IP	54					
	CLASSE D' ISOLAMENTO - <i>Insulation class</i>				F					
DINAMO T. <i>Tacho generator</i>	COSTANTE DI TENSIONE - <i>Voltage constant</i>		Ke	V/Krpm	10 +/- 5% (MAX 9000 rpm)					
	ONDULAZIONE PICCO/PICCO - <i>Ripple</i>			[%]	< 1.5 A 1000 rpm					
	LINEARITA' A 6000 RPM - <i>Linearity at 6000 rpm</i>			[%]	< 0.1					
	ERRORE DI REVERSIBILITA' - <i>Reversibility error</i>			[%]	< 0.12					
	COEFFICIENTE DI TEMPERATURA - <i>Temperature coefficient</i>			[%]	0.02					
	MOMENTO D' INERZIA - <i>Moment of inertia</i>		J	g cm ²	40					
	RESISTENZA - <i>Resistance</i>		Ra	[Ohm]	86					
	INDUTTANZA - <i>Inductance</i>		La	[mH]	13					
	CORRENTE - <i>Current</i>		I	[mA]	2 (MAX 8 mA)					
	NUMERO POLI - <i>Number of poles</i>				4					
	VITA SPAZZOLE PREVISTA - <i>Life expctancy</i>				15000 A 3000 rpm					
FRENO <i>Brake</i>	TIPO - <i>Type</i>				STD					
	COPPIA STATICA - <i>Static torque</i>		C	[Nm]	3					
	TENSIONE DI ALIMENTAZIONE - <i>Power supply voltage</i>		E	[V]	24					
	CORRENTE NOMINALE - <i>Rated current</i>		I	[A]	0.42					
	POTENZA ASSORBITA - <i>Input power</i>		P	[W]	10					

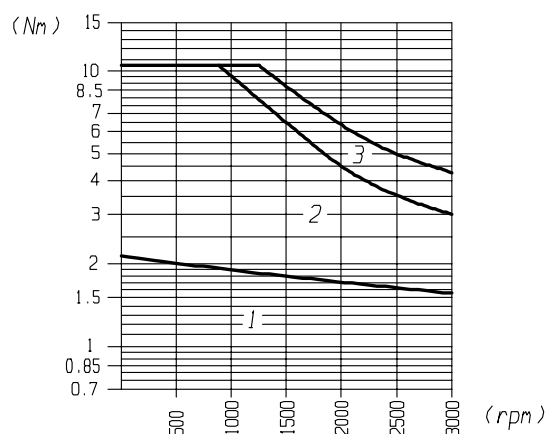
ESA 3L1



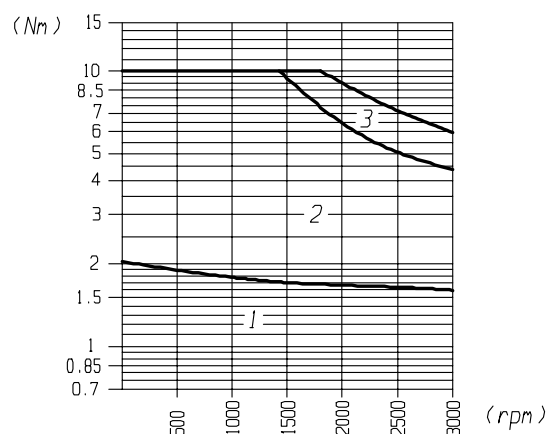
ESA 3L3



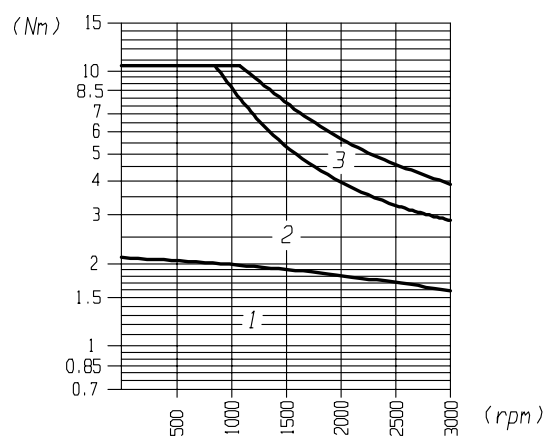
ESA 3L4



ESA 3L6

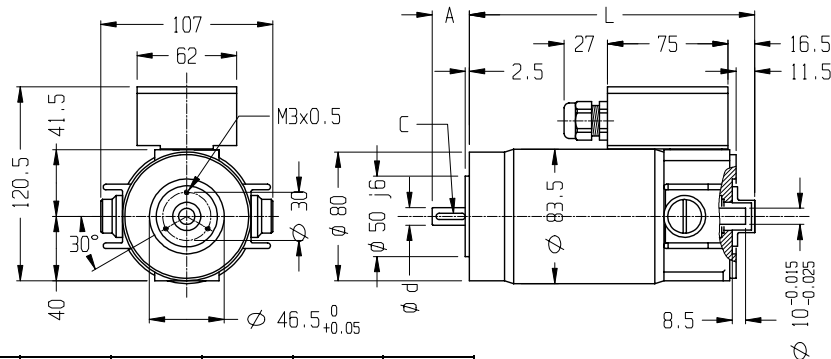


ESA 3L7



1 = Area di ciclo continuo
2 = Area di ciclo intermittente
3 = Area di accel. decel.

1 = Continuous duty area
2 = Intermittent duty area
3 = Accel. decel. duty area

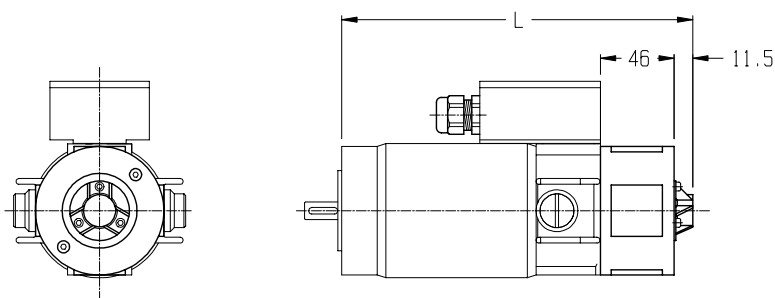


Type	XS	S	SL	M	L
A	20	23		30	
F	-	M4		M5	
L	177.5	212.5	229	267.5	322.5
d (j6)	9	11		14	
C	3x3x15	4x4x18		5x5x25	

PREDISPOSTO ENCODER STD
STD ENCODER

DINAMO TACHIMETRICA

TACHO GENERATOR

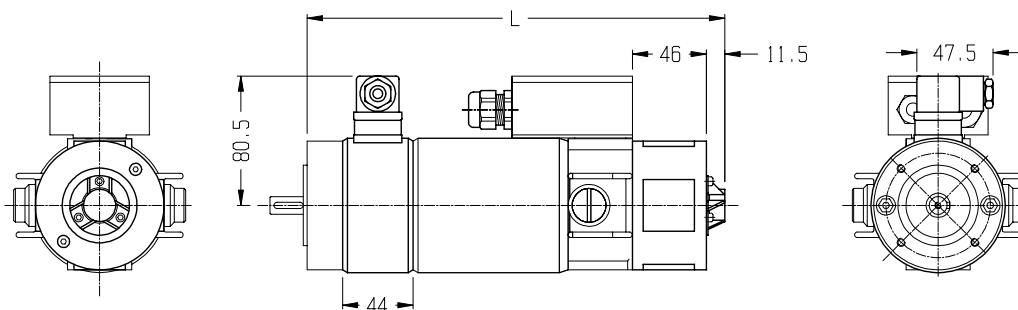


Type	XS	S	SL	M	L
L	218.5	253.5	270	308.5	363.5

PREDISPOSTO ENCODER STD
STD ENCODER

FRENO + DINAMO TACHIMETRICA

TACHO GENERATOR + BRAKE



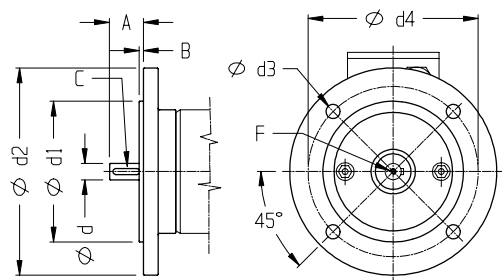
Type	XS	S	SL	M	L
L	262.5	297.5	314	352.5	407.5

PREDISPOSTO ENCODER STD
STD ENCODER

OPTIONALS

FLANGIA B5

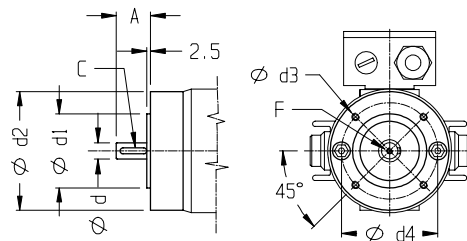
B5 FLANGE



Size	A	B	d(i6)	d1(i6)	d2	d3	d4	F	C
56	20	3	9	80	120	8.5	100	-	3*3*15
63	23	3	11	95	140	9.5	115	M4	4*4*18
71	30	3.5	14	110	160	9.5	130	M5	5*5*25

FLANGIA B14

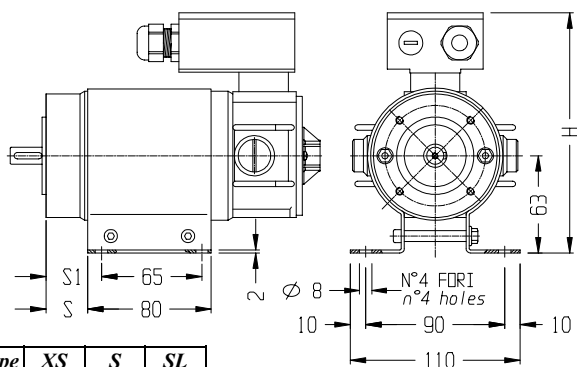
B14 FLANGE



Size	A	d(i6)	d1(i6)	d2	d3	d4	F	C
63	23	11	60	90	M5	75	M4	4*4*18
71	30	14	70	105	M6	85	M5	5*5*25

PIEDE A FASCIA

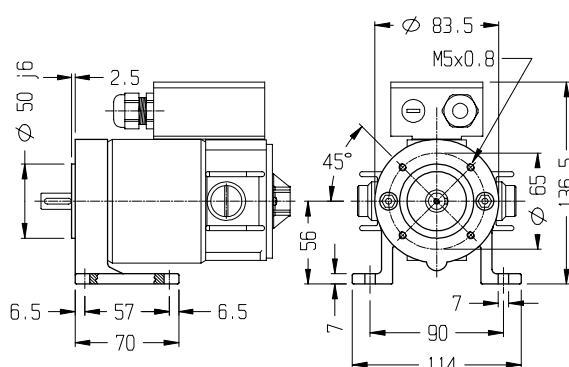
FOOT BAND TYPE



Type	XS	S	SL
H	155.5	143.5	143.5
S	27	27	27
SI	36	36	36

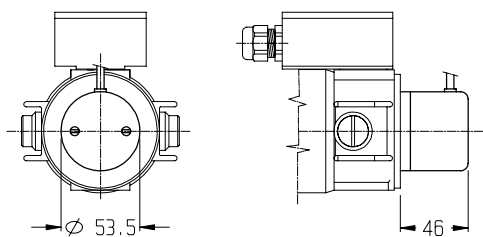
FLANGIA B3-B14/56

B3-B14/56 FLANGE



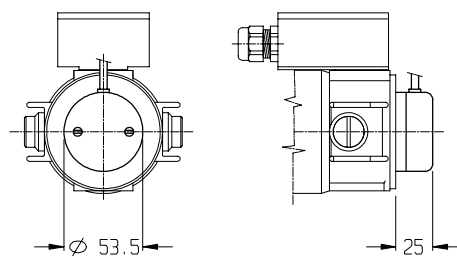
ENCODER EH53

ENCODER EH53

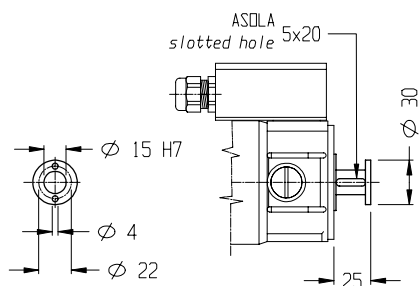


ENCODER EH38

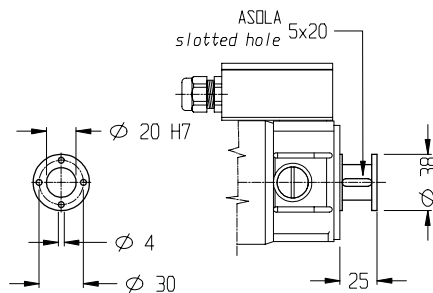
ENCODER EH38



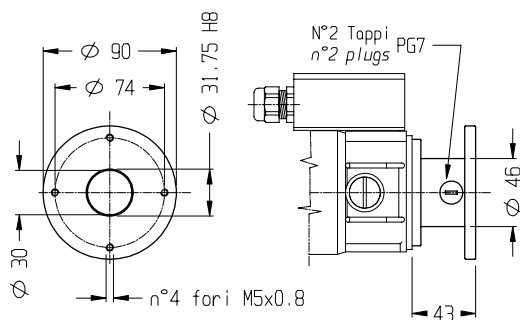
DISTANZ. ENC. N°1 *ENCODER SPACER N°1*



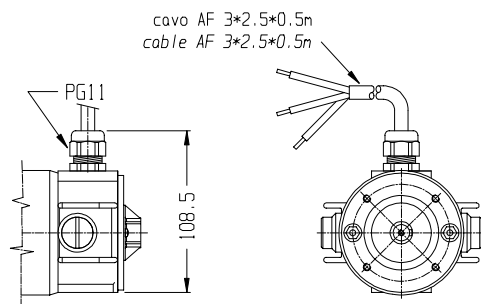
DISTANZ. ENC. N°2 *ENCODER SPACER N°2*



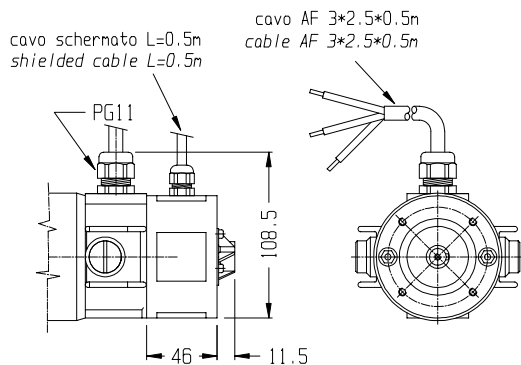
DISTANZ. ENC. N°3 *ENCODER SPACER N°3*



CAVO *FLYING LEADS*



CAVO + DINAMO *TACHO + FLYING LEDS*



SERIE
Series

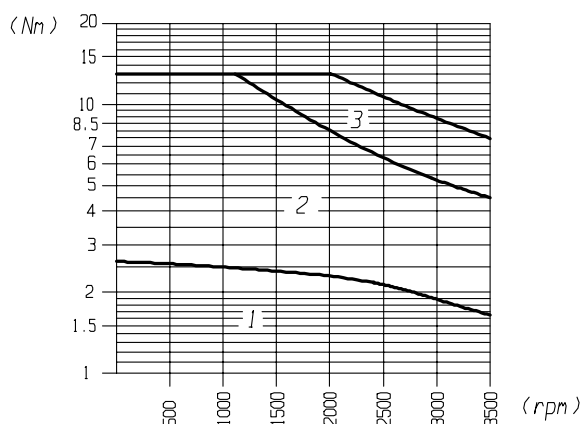
ESA 6S

COPPIA - TORQUE

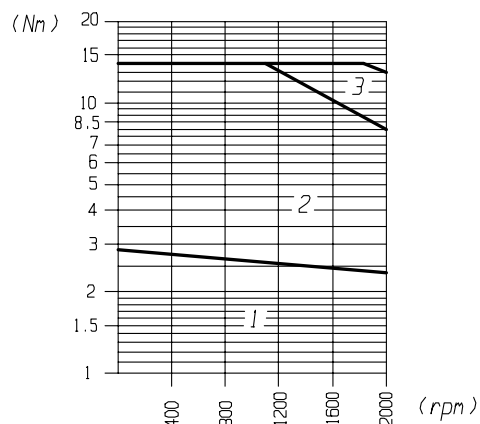
Nm 2.65

DATI MOTORE - <i>MOTOR RATINGS</i>			SIMBOLI Symbols	UNITA' Units	TIPO DI AVVOLGIMENTO <i>Type of winding</i>					
					1	2	5			
SERVOMOTORE - <i>Servomotor</i>	VELOCITA' NOMINALE - <i>Rated speed</i>		n	[rpm]	3500	2000	3000			
	COPPIA ROTORE BLOCCATO - <i>Continuos stall torque</i>		Cn	[Nm]	2.65	2.95	2.4			
	POTENZA A VELOCITA' NOMINALE - <i>Power at rated speed</i>		Pn	[W]	590	500	500			
	CORRENTE A ROTORE BLOCCATO - <i>Stall current</i>		In	[A]	7.8	5.1	13.7			
	PICCO DI COPPIA ALLO SPUNTO - <i>Peak torque</i>		Cmax	[Nm]	13.25	14.25	12			
	CORRENTE AL PICCO DI COPPIA - <i>Peak current</i>		Imax	[A]	39	25.5	68.5			
	CORRENTE SMAGNETIZZANTE - <i>Demagnetise current</i>		Ipeak	[A]	42.9	28.05	75.35			
	FCEM A VELOCITA' NOMINALE - <i>Bemf at rated speed</i>		E	[V]	124.25	116	50.7			
	MAX VELOCITA' - <i>Max speed</i>		Nmax	[rpm]	4000	3000	4000			
	DATI MECCANICI - <i>MECHANICAL DATA</i>									
	MOMENTO D'INERZIA - <i>Moment of inertia</i>		Jm	Kg m ²	0.0018	0.0018	0.0018			
	MAX. ACC. TEORICA - <i>Max theorethical acceleration</i>		αmax	rad/s ²	7360	7916	6660			
	COSTANTE DI TEMPO MECCANICA - <i>Mechanical time constant</i>		Tm	[ms]	17	14	23			
	COPPIA SMORZAMENTO A 1000 RPM - <i>Damping constant at 1000 rpm</i>		Td	[Nm]	0.113	0.113	0.113			
	COPPIA ATTRITO STATICO - <i>Static friction torque</i>		Tf	[Nm]	0.068	0.068	0.068			
	MAX CARICO RADIALE (A 3000 RPM) - <i>Max radial load (at 3000 rpm)</i>		Fr	[N]	588	588	588			
	MAX CARICO ASSIALE - <i>Max axial load</i>		Fa	[N]	176	176	176			
	PESO - <i>Weight</i>		M	[Kg]	9.4	9.4	9.4			
	DATI ELETTRICI - <i>WINDING DATA</i>									
	COSTANTE DI TENSIONE ± 5% - <i>Voltage constant ± 5%</i>		Ke	V/Krpm	35.5	58	16.9			
	COSTANTE DI COPPIA ± 5% - <i>Torque constant ± 5%</i>		Kt	[Nm/A]	0.34	0.56	0.175			
	COSTANTE DI TEMPO ELETTRICA - <i>Electrical time constant</i>		Te	[ms]	5.35	5.9	2.94			
	COSTANTE DI TEMPO TERMICA - <i>Thermal time constant</i>		Tt	[min]	40	40	40			
	RESIST. ARMATURA ± 10% A 25°C - <i>Armature resistance ± 10% at 25°c</i>		Ra	[Ohm]	1	2.25	0.24			
	RESIST. ARMATURA CON SPAZZOLE - <i>Terminal resistance</i>		Rt	[Ohm]	1.1	2.35	0.34			
	INDUTTANZA - <i>Inductance</i>		La	[mH]	5.9	13.8	1			
	GRADO DI PROTEZIONE - <i>Protection degree</i>			IP			54			
	CLASSE D' ISOLAMENTO - <i>Insulation class</i>						F			
DINAMO T. <i>Tacho generator</i>	COSTANTE DI TENSIONE - <i>Voltage constant</i>		Ke	V/Krpm	10 +/- 5% (MAX 9000 rpm)					
	ONDULAZIONE PICCO/PICCO - <i>Ripple</i>			[%]	< 1.5 A 1000 rpm					
	LINEARITA' A 6000 RPM - <i>Linearity at 6000 rpm</i>			[%]	< 0.1					
	ERRORE DI REVERSIBILITA' - <i>Reversibility error</i>			[%]	< 0.12					
	COEFFICIENTE DI TEMPERATURA - <i>Temperature coefficient</i>			[%]	0.02					
	MOMENTO D' INERZIA - <i>Moment of inertia</i>		J	g cm ²	40					
	RESISTENZA - <i>Resistance</i>		Ra	[Ohm]	86					
	INDUTTANZA - <i>Inductance</i>		La	[mH]	13					
	CORRENTE - <i>Current</i>		I	[mA]	2 (MAX 8 mA)					
	NUMERO POLI - <i>Number of poles</i>				4					
	VITA SPAZZOLE PREVISTA - <i>Life expctancy</i>				15000 A 3000 rpm					
FRENO <i>Brake</i>	TIPO - <i>Type</i>				STD	SVS				
	COPPIA STATICA - <i>Static torque</i>		C	[Nm]	12	16				
	TENSIONE DI ALIMENTAZIONE - <i>Power supply voltage</i>		E	[V]	24	24				
	CORRENTE NOMINALE - <i>Rated current</i>		I	[A]	0.6	0.4				
	POTENZA ASSORBITA - <i>Input power</i>		P	[W]	14	9.5				

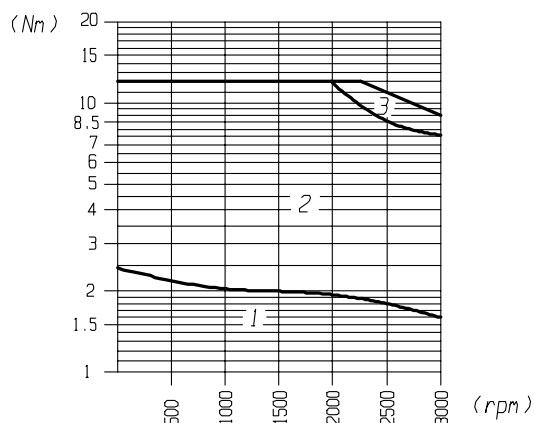
ESA 6S1



ESA 6S2



ESA 6S5



1 = Area di ciclo continuo
2 = Area di ciclo intermittente
3 = Area di accel. decel.

1 = Continuous duty area
2 = Intermittent duty area
3 = Accel. decel. duty area

SERIE
Series

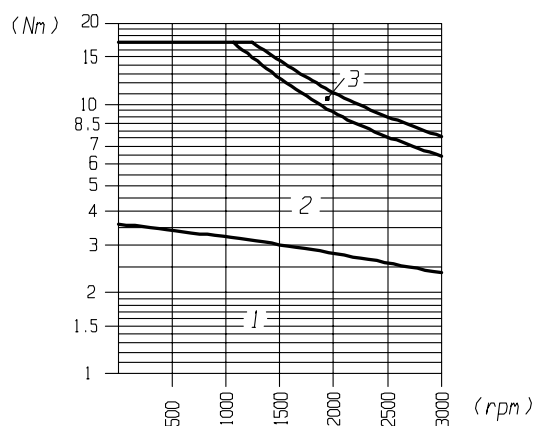
ESA 6F

COPPIA - TORQUE

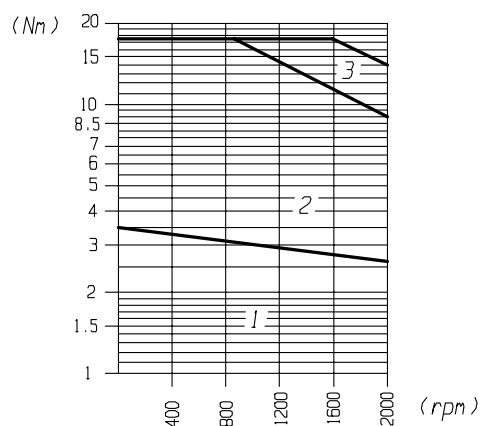
Nm 3.5

DATI MOTORE - <i>MOTOR RATINGS</i>			SIMBOLI Symbols	UNITA' Units	TIPO DI AVVOLGIMENTO <i>Type of winding</i>					
					2	3	4			
SERVOMOTORE - <i>Servomotor</i>	VELOCITA' NOMINALE - <i>Rated speed</i>		n	[rpm]	3000	2000	1200			
	COPPIA ROTORE BLOCCATO - <i>Continuous stall torque</i>		Cn	[Nm]	3.5	3.5	3.5			
	POTENZA A VELOCITA' NOMINALE - <i>Power at rated speed</i>		Pn	[W]	720	580	380			
	CORRENTE A ROTORE BLOCCATO - <i>Stall current</i>		In	[A]	9	6	3.65			
	PICCO DI COPPIA ALLO SPUNTO - <i>Peak torque</i>		Cmax	[Nm]	17.5	17.5	17.5			
	CORRENTE AL PICCO DI COPPIA - <i>Peak current</i>		Imax	[A]	45	30	16.5			
	CORRENTE SMAGNETIZZANTE - <i>Demagnetise current</i>		Ipeak	[A]	49.5	33	20.075			
	FCEM A VELOCITA' NOMINALE - <i>Bemf at rated speed</i>		E	[V]	120	120	119			
	MAX VELOCITA' - <i>Max speed</i>		Nmax	[rpm]	4000	3000	1800			
	DATI MECCANICI - <i>MECHANICAL DATA</i>									
	MOMENTO D'INERZIA - <i>Moment of inertia</i>		Jm	Kg m ²	0.0018	0.0018	0.0018			
	MAX. ACC. TEORICA - <i>Max theorethical acceleration</i>		αmax	rad/s ²	9720	9720	9720			
	COSTANTE DI TEMPO MECCANICA - <i>Mechanical time constant</i>		Tm	[ms]	12	9	9			
	COPPIA SMORZAMENTO A 1000 RPM - <i>Damping constant at 1000 rpm</i>		Td	[Nm]	0.138	0.138	0.138			
	COPPIA ATTRITO STATICO - <i>Static friction torque</i>		Tf	[Nm]	0.143	0.143	0.143			
	MAX CARICO RADIALE (A 3000 RPM) - <i>Max radial load (at 3000 rpm)</i>		Fr	[N]	588	588	588			
	MAX CARICO ASSIALE - <i>Max axial load</i>		Fa	[N]	176	176	176			
	PESO - <i>Weight</i>		M	[Kg]	9.4	9.4	9.4			
	DATI ELETTRICI - <i>WINDING DATA</i>									
	COSTANTE DI TENSIONE ± 5% - <i>Voltage constant ± 5%</i>		Ke	V/Krpm	40	60	99			
	COSTANTE DI COPPIA ± 5% - <i>Torque constant ± 5%</i>		Kt	[Nm/A]	0.39	0.58	0.96			
	COSTANTE DI TEMPO ELETTRICA - <i>Electrical time constant</i>		Te	[ms]	3.5	4	4.47			
	COSTANTE DI TEMPO TERMICA - <i>Thermal time constant</i>		Tt	[min]	40	40	40			
	RESIST. ARMATURA ± 10% A 25°C - <i>Armature resistance ± 10% at 25°c</i>		Ra	[Ohm]	0.92	1.7	4.4			
	RESIST. ARMATURA CON SPAZZOLE - <i>Terminal resistance</i>		Rt	[Ohm]	0.97	1.75	4.45			
	INDUTTANZA - <i>Inductance</i>		La	[mH]	3.4	7.1	19.9			
	GRADO DI PROTEZIONE - <i>Protection degree</i>			IP			54			
	CLASSE D' ISOLAMENTO - <i>Insulation class</i>						F			
DINAMO T. <i>Tacho generator</i>	COSTANTE DI TENSIONE - <i>Voltage constant</i>		Ke	V/Krpm	10 +/- 5% (MAX 9000 rpm)					
	ONDULAZIONE PICCO/PICCO - <i>Ripple</i>			[%]	< 1.5 A 1000 rpm					
	LINEARITA' A 6000 RPM - <i>Linearity at 6000 rpm</i>			[%]	< 0.1					
	ERRORE DI REVERSIBILITA' - <i>Reversibility error</i>			[%]	< 0.12					
	COEFFICIENTE DI TEMPERATURA - <i>Temperature coefficient</i>			[%]	0.02					
	MOMENTO D' INERZIA - <i>Moment of inertia</i>		J	g cm ²	40					
	RESISTENZA - <i>Resistance</i>		Ra	[Ohm]	86					
	INDUTTANZA - <i>Inductance</i>		La	[mH]	13					
	CORRENTE - <i>Current</i>		I	[mA]	2 (MAX 8 mA)					
	NUMERO POLI - <i>Number of poles</i>				4					
	VITA SPAZZOLE PREVISTA - <i>Life expctancy</i>				15000 A 3000 rpm					
FRENO <i>Brake</i>	TIPO - <i>Type</i>				STD	SVS				
	COPPIA STATICA - <i>Static torque</i>		C	[Nm]	12	16				
	TENSIONE DI ALIMENTAZIONE - <i>Power supply voltage</i>		E	[V]	24	24				
	CORRENTE NOMINALE - <i>Rated current</i>		I	[A]	0.6	0.4				
	POTENZA ASSORBITA - <i>Input power</i>		P	[W]	14	9.5				

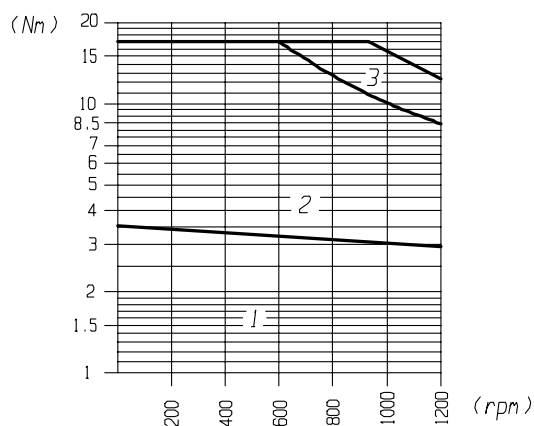
ESA 6F2



ESA 6F3



ESA 6F4



1 = Area di ciclo continuo
2 = Area di ciclo intermittente
3 = Area di accel. decel.

1 = Continuous duty area
2 = Intermittent duty area
3 = Accel. decel. duty area

SERIE
Series

ESA 6M

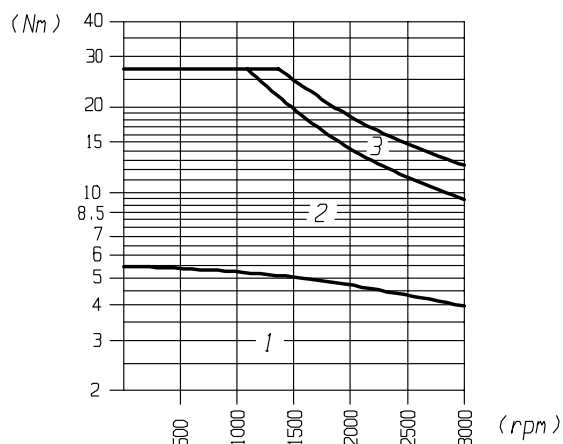
COPPIA - TORQUE

Nm 5.5

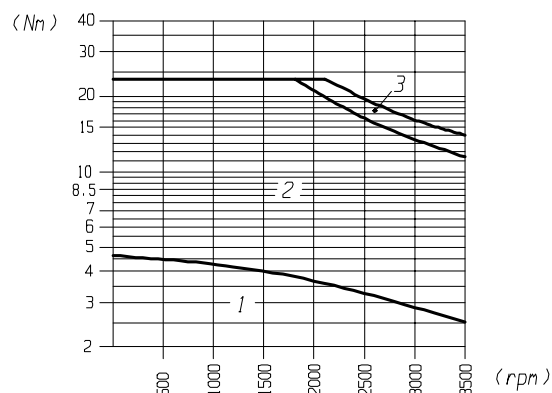
DATI MOTORE - <i>MOTOR RATINGS</i>			SIMBOLI Symbols	UNITA' Units	TIPO DI AVVOLGIMENTO <i>Type of winding</i>					
					1	2	3	4	7	
SERVOMOTORE - <i>Servomotor</i>	VELOCITA' NOMINALE - <i>Rated speed</i>		n	[rpm]	3000	3500	3000	3000	1200	
	COPPIA ROTORE BLOCCATO - <i>Continuos stall torque</i>		Cn	[Nm]	5.5	4.6	5.5	5.5	5.5	
	POTENZA A VELOCITA' NOMINALE - <i>Power at rated speed</i>		Pn	[W]	1250	920	1100	1100	720	
	CORRENTE A ROTORE BLOCCATO - <i>Stall current</i>		In	[A]	9.8	14	14	12	5.5	
	PICCO DI COPPIA ALLO SPUNTO - <i>Peak torque</i>		Cmax	[Nm]	27.5	23	27.5	27.5	27.5	
	CORRENTE AL PICCO DI COPPIA - <i>Peak current</i>		Imax	[A]	49	70	70	60	27.5	
	CORRENTE SMAGNETIZZANTE - <i>Demagnetise current</i>		Ipeak	[A]	53.9	77	77	66	30.25	
	FCEM A VELOCITA' NOMINALE - <i>Bemf at rated speed</i>		E	[V]	173	119	120	141	126	
	MAX VELOCITA' - <i>Max speed</i>		Nmax	[rpm]	3500	4000	4000	3500	1800	
	DATI MECCANICI - <i>MECHANICAL DATA</i>									
	MOMENTO D'INERZIA - <i>Moment of inertia</i>		Jm	Kg m ²	0.0028	0.0028	0.0028	0.0028	0.0028	
	MAX. ACC. TEORICA - <i>Max theorethical acceleration</i>		αmax	rad/s ²	9820	8214	9820	9820	9820	
	COSTANTE DI TEMPO MECCANICA - <i>Mechanical time constant</i>		Tm	[ms]	8	9	9	8	6.5	
	COPPIA SMORZAMENTO A 1000 RPM - <i>Damping constant at 1000 rpm</i>		Td	[Nm]	0.191	0.191	0.191	0.191	0.191	
	COPPIA ATTRITO STATICO - <i>Static friction torque</i>		Tf	[Nm]	0.162	0.162	0.162	0.162	0.162	
	MAX CARICO RADIALE (A 3000 RPM) - <i>Max radial load (at 3000 rpm)</i>		Fr	[N]	588	588	588	588	588	
	MAX CARICO ASSIALE - <i>Max axial load</i>		Fa	[N]	176	176	176	176	176	
	PESO - <i>Weight</i>		M	[Kg]	13.6	13.6	13.6	13.6	13.6	
	DATI ELETTRICI - <i>WINDING DATA</i>									
	COSTANTE DI TENSIONE ± 5% - <i>Voltage constant ± 5%</i>		Ke	V/Krpm	57.7	34	40	47	105	
	COSTANTE DI COPPIA ± 5% - <i>Torque constant ± 5%</i>		Kt	[Nm/A]	0.56	0.33	0.39	0.453	1	
	COSTANTE DI TEMPO ELETTRICA - <i>Electrical time constant</i>		Te	[ms]	3.7	3.2	3.67	3.6	4	
	COSTANTE DI TEMPO TERMICA - <i>Thermal time constant</i>		Tt	[min]	50	50	50	50	50	
	RESIST. ARMATURA ± 10% A 25°C - <i>Armature resistance ± 10% at 25°c</i>		Ra	[Ohm]	0.8	0.29	0.4	0.53	2.3	
	RESIST. ARMATURA CON SPAZZOLE - <i>Terminal resistance</i>		Rt	[Ohm]	0.85	0.34	0.45	0.58	2.35	
	INDUTTANZA - <i>Inductance</i>		La	[mH]	3.15	1.1	1.65	2.1	9.4	
	GRADO DI PROTEZIONE - <i>Protection degree</i>			IP	54					
	CLASSE D' ISOLAMENTO - <i>Insulation class</i>				F					
DINAMO T. <i>Tacho generator</i>	COSTANTE DI TENSIONE - <i>Voltage constant</i>		Ke	V/Krpm	10 +/- 5% (MAX 9000 rpm)					
	ONDULAZIONE PICCO/PICCO - <i>Ripple</i>			[%]	< 1.5 A 1000 rpm					
	LINEARITA' A 6000 RPM - <i>Linearity at 6000 rpm</i>			[%]	< 0.1					
	ERRORE DI REVERSIBILITA' - <i>Reversibility error</i>			[%]	< 0.12					
	COEFFICIENTE DI TEMPERATURA - <i>Temperature coefficient</i>			[%]	0.02					
	MOMENTO D' INERZIA - <i>Moment of inertia</i>		J	g cm ²	40					
	RESISTENZA - <i>Resistance</i>		Ra	[Ohm]	86					
	INDUTTANZA - <i>Inductance</i>		La	[mH]	13					
	CORRENTE - <i>Current</i>		I	[mA]	2 (MAX 8 mA)					
	NUMERO POLI - <i>Number of poles</i>				4					
	VITA SPAZZOLE PREVISTA - <i>Life expctancy</i>				15000 A 3000 rpm					
FRENO <i>Brake</i>	TIPO - <i>Type</i>				STD	SVS				
	COPPIA STATICA - <i>Static torque</i>		C	[Nm]	12	16				
	TENSIONE DI ALIMENTAZIONE - <i>Power supply voltage</i>		E	[V]	24	24				
	CORRENTE NOMINALE - <i>Rated current</i>		I	[A]	0.6	0.4				
	POTENZA ASSORBITA - <i>Input power</i>		P	[W]	14	9.5				

CURVE OPERATIVE PERFORMANCE CURVES

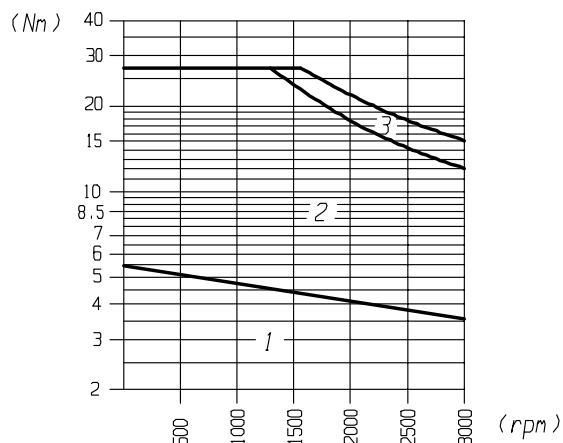
ESA 6M1



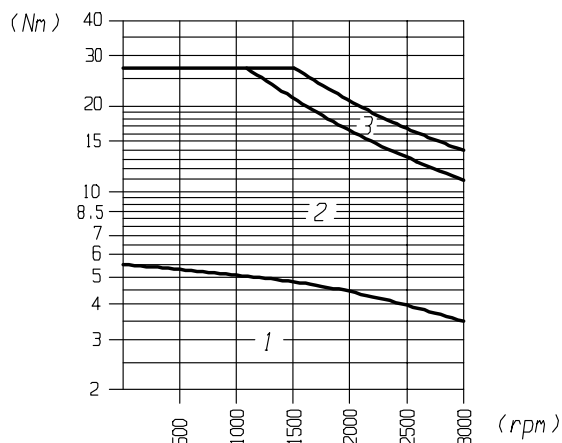
ESA 6M2



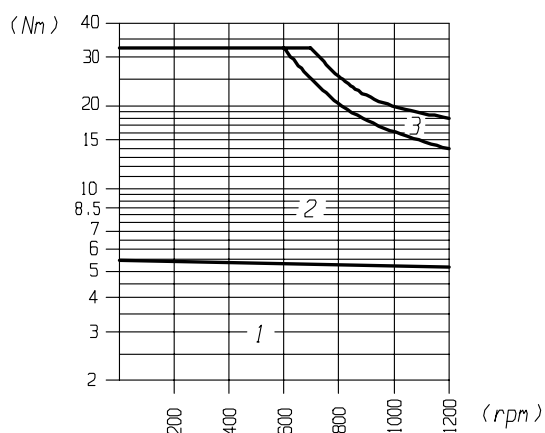
ESA 6M3



ESA 6M4



ESA 6M7



1 = Area di ciclo continuo
2 = Area di ciclo intermittente
3 = Area di accel. decel.

1 = Continuous duty area
2 = Intermittent duty area
3 = Accel. decel. duty area

SERIE
Series

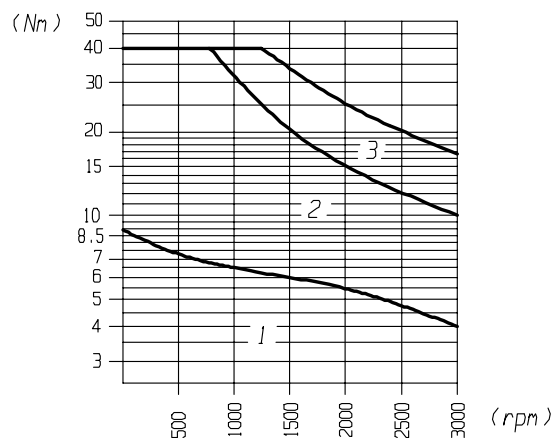
ESA 6L

COPPIA - TORQUE

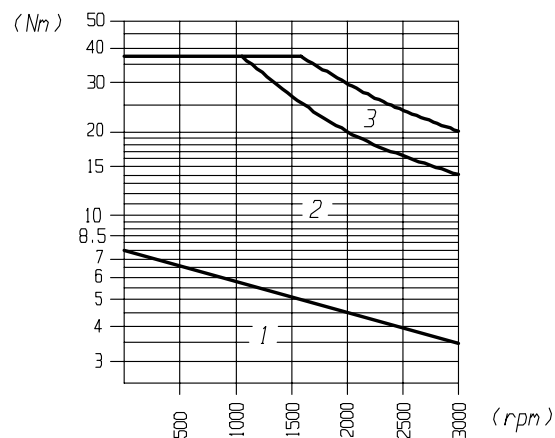
Nm 8

DATI MOTORE - <i>MOTOR RATINGS</i>			SIMBOLI Symbols	UNITA' Units	TIPO DI AVVOLGIMENTO <i>Type of winding</i>					
					1	2	3	5	7	8
SERVOMOTORE - <i>Servomotor</i>	VELOCITA' NOMINALE - <i>Rated speed</i>		n	[rpm]	3000	3000	3000	2000	1500	1200
	COPPIA ROTORE BLOCCATO - <i>Continuos stall torque</i>		Cn	[Nm]	8	7.5	8	8	8	8
	POTENZA A VELOCITA' NOMINALE - <i>Power at rated speed</i>		Pn	[W]	1260	1100	1260	1320	1100	920
	CORRENTE A ROTORE BLOCCATO - <i>Stall current</i>		In	[A]	14.5	21	15.5	13.8	9.9	8
	PICCO DI COPPIA ALLO SPUNTO - <i>Peak torque</i>		Cmax	[Nm]	40	37.5	40	40	40	40
	CORRENTE AL PICCO DI COPPIA - <i>Peak current</i>		Imax	[A]	72.5	105	77.5	69	49.5	40
	CORRENTE SMAGNETIZZANTE - <i>Demagnetise current</i>		Ipeak	[A]	79.75	115.5	82.25	75.9	54.45	44
	FCEM A VELOCITA' NOMINALE - <i>Bemf at rated speed</i>		E	[V]	171	114	160.5	120	128	128
	MAX VELOCITA' - <i>Max speed</i>		Nmax	[rpm]	3500	4000	3500	3000	2500	1800
	DATI MECCANICI - <i>MECHANICAL DATA</i>									
	MOMENTO D'INERZIA - <i>Moment of inertia</i>		Jm	Kg m ²	0.0051	0.0051	0.0051	0.0051	0.0051	0.0051
	MAX. ACC. TEORICA - <i>Max theorethical acceleration</i>		αmax	rad/s ²	7840	7350	7840	7840	7840	7840
	COSTANTE DI TEMPO MECCANICA - <i>Mechanical time constant</i>		Tm	[ms]	7	12	7	8	8	7
	COPPIA SMORZAMENTO A 1000 RPM - <i>Damping constant at 1000 rpm</i>		Td	[Nm]	0.21	0.21	0.21	0.21	0.21	0.21
	COPPIA ATTRITO STATICO - <i>Static friction torque</i>		Tf	[Nm]	0.21	0.21	0.21	0.21	0.21	0.21
	MAX CARICO RADIALE (A 3000 RPM) - <i>Max radial load (at 3000 rpm)</i>		Fr	[N]	588	588	588	588	588	588
	MAX CARICO ASSIALE - <i>Max axial load</i>		Fa	[N]	176	176	176	176	176	176
	PESO - <i>Weight</i>		M	[Kg]	17	17	17	17	17	17
	DATI ELETTRICI - <i>WINDING DATA</i>									
	COSTANTE DI TENSIONE ± 5% - <i>Voltage constant ± 5%</i>		Ke	V/Krpm	57	37.5	53.5	60	84	105
	COSTANTE DI COPPIA ± 5% - <i>Torque constant ± 5%</i>		Kt	[Nm/A]	0.55	0.36	0.514	0.57	0.808	1
	COSTANTE DI TEMPO ELETTRICA - <i>Electrical time constant</i>		Te	[ms]	4.1	2.7	4.1	3.8	4.15	4.5
	COSTANTE DI TEMPO TERMICA - <i>Thermal time constant</i>		Tt	[min]	60	60	60	60	60	60
	RESIST. ARMATURA ± 10% A 25°C - <i>Armature resistance ± 10% at 25°c</i>		Ra	[Ohm]	0.37	0.26	0.35	0.45	1	1.26
	RESIST. ARMATURA CON SPAZZOLE - <i>Terminal resistance</i>		Rt	[Ohm]	0.42	0.31	0.4	0.5	1.05	1.31
	INDUTTANZA - <i>Inductance</i>		La	[mH]	1.72	0.85	1.65	1.9	4.2	5.9
	GRADO DI PROTEZIONE - <i>Protection degree</i>			IP	54					
	CLASSE D' ISOLAMENTO - <i>Insulation class</i>				F					
DINAMO T. <i>Tacho generator</i>	COSTANTE DI TENSIONE - <i>Voltage constant</i>		Ke	V/Krpm	10 +/- 5% (MAX 9000 rpm)					
	ONDULAZIONE PICCO/PICCO - <i>Ripple</i>			[%]	< 1.5 A 1000 rpm					
	LINEARITA' A 6000 RPM - <i>Linearity at 6000 rpm</i>			[%]	< 0.1					
	ERRORE DI REVERSIBILITA' - <i>Reversibility error</i>			[%]	< 0.12					
	COEFFICIENTE DI TEMPERATURA - <i>Temperature coefficient</i>			[%]	0.02					
	MOMENTO D' INERZIA - <i>Moment of inertia</i>		J	g cm ²	40					
	RESISTENZA - <i>Resistance</i>		Ra	[Ohm]	86					
	INDUTTANZA - <i>Inductance</i>		La	[mH]	13					
	CORRENTE - <i>Current</i>		I	[mA]	2 (MAX 8 mA)					
	NUMERO POLI - <i>Number of poles</i>				4					
	VITA SPAZZOLE PREVISTA - <i>Life expctancy</i>				15000 A 3000 rpm					
FRENO <i>Brake</i>	TIPO - <i>Type</i>				STD	SVS				
	COPPIA STATICA - <i>Static torque</i>		C	[Nm]	12	16				
	TENSIONE DI ALIMENTAZIONE - <i>Power supply voltage</i>		E	[V]	24	24				
	CORRENTE NOMINALE - <i>Rated current</i>		I	[A]	0.6	0.4				
	POTENZA ASSORBITA - <i>Input power</i>		P	[W]	14	9.5				

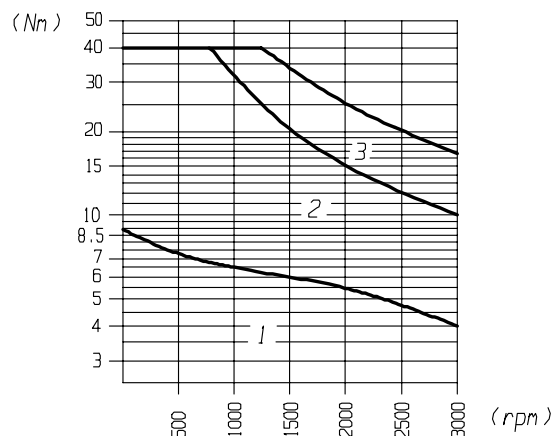
ESA 6L1



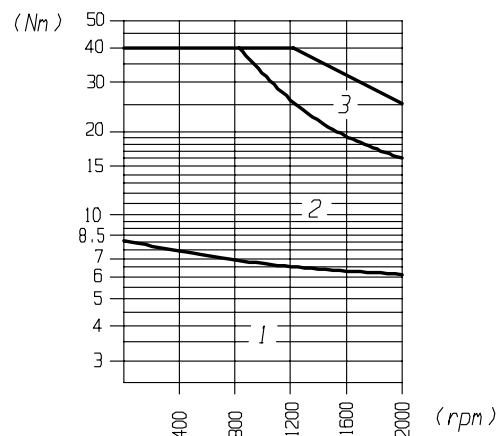
ESA 6L2



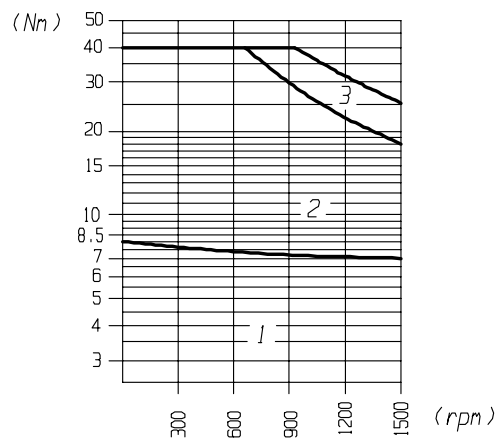
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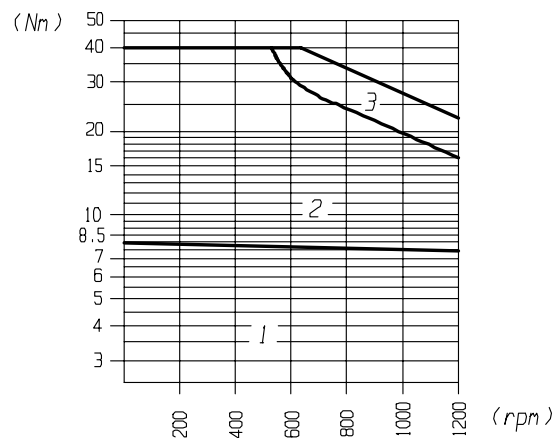
ESA 6L5



ESA 6L7



ESA 6L8



1 = Area di ciclo continuo
2 = Area di ciclo intermittente
3 = Area di accel. decel.

1 = Continuous duty area
2 = Intermittent duty area
3 = Accel. decel. duty area

ESA 6

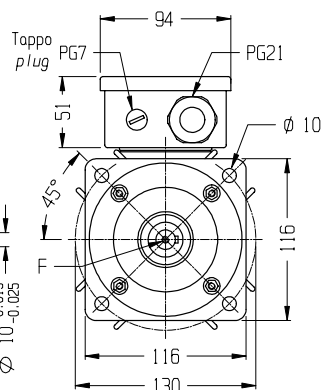
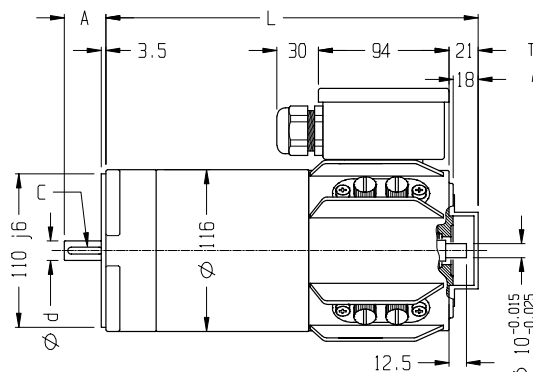
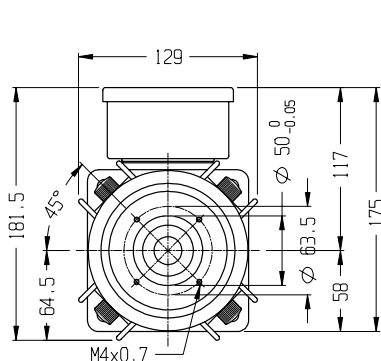
SERVOMOTORI C.C.

D.C. SERVOMOTORS

DIMENSIONI (mm)

DIMENSIONS (mm)

**MOTOR
POWER
COMPANY**

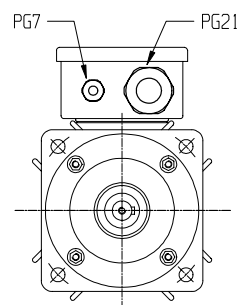
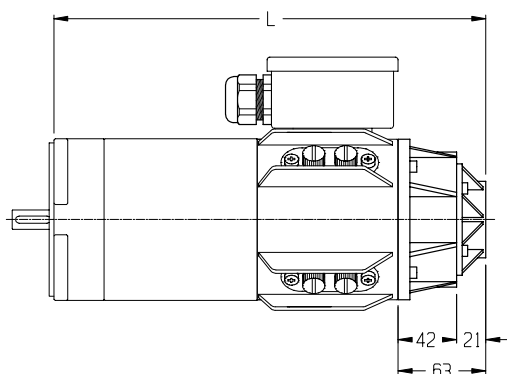
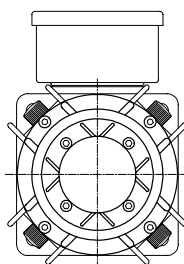


Type	S	F	M	L
A	30		40	
F	M5		M6	
L		268	340	412
d (j6)	14		19	
C	5x5x25		6x6x30	

PREDISPOSTO ENCODER STD
STD ENCODER PREARRANGEMENT

DINAMO TACHIMETRICA

TACHO GENERATOR

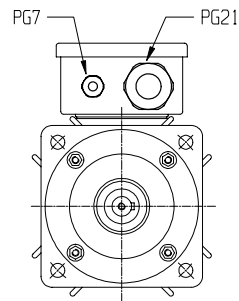
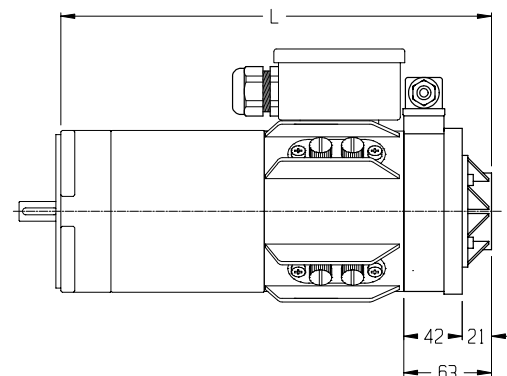
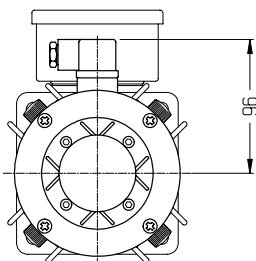


Type	S	F	M	L
L	309		381	453

PREDISPOSTO ENCODER STD
STD ENCODER PREARRANGEMENT

FRENO + DINAMO TACHIMETRICA

TACHO GENERATOR + BRAKE



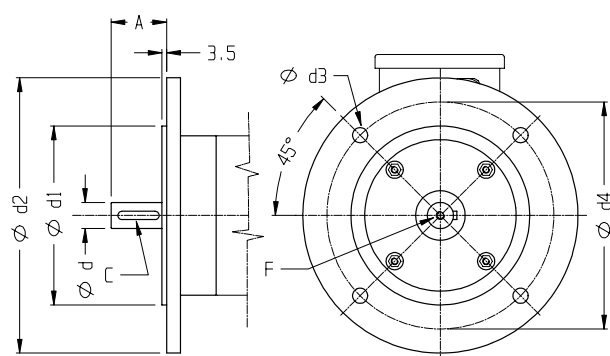
Type	S	F	M	L
L	309		381	453

PREDISPOSTO ENCODER STD
STD ENCODER PREARRANGEMENT

OPTIONALS

FLANGIA B5

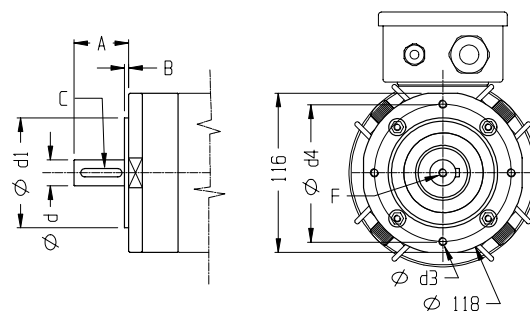
B5 FLANGE



Size	A	C	d(h7)	d1(h7)	d2	d3	d4	F
71	30	5x5x25	14	110	160	9.5	130	M5
80	40	6x6x30	19	130	200	11	165	M6

FLANGIA B14

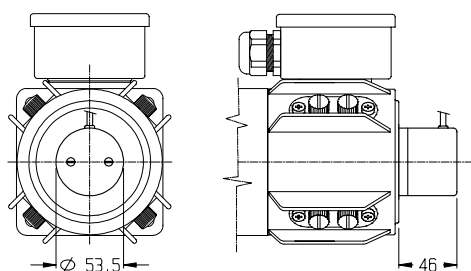
B14 FLANGE



Size	A	B	C	d(h7)	d1(h7)	d3	d4	F
71	30	2.5	5x5x25	14	70	M6	85	M5
80	40	3	6x6x30	19	80	M6	100	M6

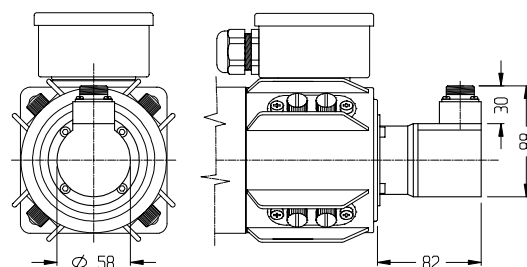
ENCODER EH53

ENCODER EH53



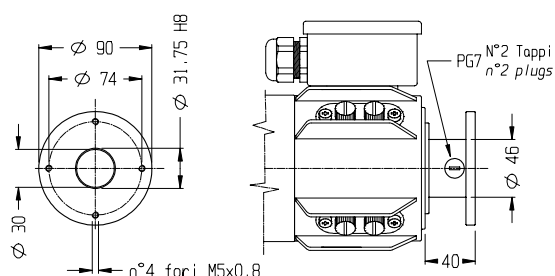
ENCODER EL72

ENCODER EL72



DISTANZ. ENC N°1

ENCODER SPACER N°1



SERIE
Series

ESA 9S

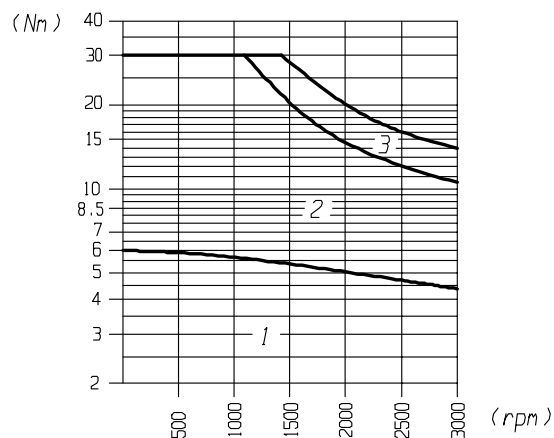
COPPIA - TORQUE

Nm 6

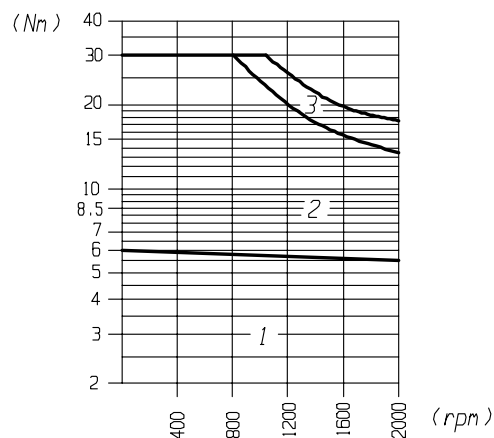
DATI MOTORE - <i>MOTOR RATINGS</i>			SIMBOLI Symbols	UNITA' Units	TIPO DI AVVOLGIMENTO <i>Type of winding</i>					
					1	2				
SERVOMOTORE - <i>Servomotor</i>	VELOCITA' NOMINALE - <i>Rated speed</i>	n	[rpm]	3000	2000					
	COPPIA ROTORE BLOCCATO - <i>Continuos stall torque</i>	Cn	[Nm]	6	6					
	POTENZA A VELOCITA' NOMINALE - <i>Power at rated speed</i>	Pn	[W]	1380	1150					
	CORRENTE A ROTORE BLOCCATO - <i>Stall current</i>	In	[A]	11	7.8					
	PICCO DI COPPIA ALLO SPUNTO - <i>Peak torque</i>	Cmax	[Nm]	27	27					
	CORRENTE AL PICCO DI COPPIA - <i>Peak current</i>	Imax	[A]	49.5	35					
	CORRENTE SMAGNETIZZANTE - <i>Demagnetise current</i>	Ipeak	[A]	60.5	42.9					
	FCEM A VELOCITA' NOMINALE - <i>Bemf at rated speed</i>	E	[V]	171	160					
	MAX VELOCITA' - <i>Max speed</i>	Nmax	[rpm]	3500	2500					
	DATI MECCANICI - <i>MECHANICAL DATA</i>									
	MOMENTO D'INERZIA - <i>Moment of inertia</i>	Jm	Kg m ²	0.006	0.006					
	MAX. ACC. TEORICA - <i>Max theorethical acceleration</i>	αmax	rad/s ²	4500	4500					
	COSTANTE DI TEMPO MECCANICA - <i>Mechanical time constant</i>	Tm	[ms]	17	17					
	COPPIA SMORZAMENTO A 1000 RPM - <i>Damping constant at 1000 rpm</i>	Td	[Nm]	0.25	0.25					
	COPPIA ATTRITO STATICO - <i>Static friction torque</i>	Tf	[Nm]	0.17	0.17					
	MAX CARICO RADIALE (A 3000 RPM) - <i>Max radial load (at 3000 rpm)</i>	Fr	[N]	784	784					
	MAX CARICO ASSIALE - <i>Max axial load</i>	Fa	[N]	235	235					
	PESO - <i>Weight</i>	M	[Kg]	14	14					
	DATI ELETTRICI - <i>WINDING DATA</i>									
	COSTANTE DI TENSIONE ± 5% - <i>Voltage constant ± 5%</i>	Ke	V/Krpm	57	80					
	COSTANTE DI COPPIA ± 5% - <i>Torque constant ± 5%</i>	Kt	[Nm/A]	0.55	0.77					
	COSTANTE DI TEMPO ELETTRICA - <i>Electrical time constant</i>	Te	[ms]	6.5	7					
	COSTANTE DI TEMPO TERMICA - <i>Thermal time constant</i>	Tt	[min]	70	70					
	RESIST. ARMATURA ± 10% A 25°C - <i>Armature resistance ± 10% at 25°c</i>	Ra	[Ohm]	0.8	1.6					
	RESIST. ARMATURA CON SPAZZOLE - <i>Terminal resistance</i>	Rt	[Ohm]	0.85	1.65					
	INDUTTANZA - <i>Inductance</i>	La	[mH]	5.5	11.55					
	GRADO DI PROTEZIONE - <i>Protection degree</i>		IP					54		
	CLASSE D' ISOLAMENTO - <i>Insulation class</i>							F		
DINAMO T. <i>Tacho generator</i>	COSTANTE DI TENSIONE - <i>Voltage constant</i>	Ke	V/Krpm	10 +/- 5% (MAX 9000 rpm)						
	ONDULAZIONE PICCO/PICCO - <i>Ripple</i>		[%]	< 1.5 A 1000 rpm						
	LINEARITA' A 6000 RPM - <i>Linearity at 6000 rpm</i>		[%]	< 0.1						
	ERRORE DI REVERSIBILITA' - <i>Reversibility error</i>		[%]	< 0.12						
	COEFFICIENTE DI TEMPERATURA - <i>Temperature coefficient</i>		[%]	0.02						
	MOMENTO D' INERZIA - <i>Moment of inertia</i>	J	g cm ²	40						
	RESISTENZA - <i>Resistance</i>	Ra	[Ohm]	86						
	INDUTTANZA - <i>Inductance</i>	La	[mH]	13						
	CORRENTE - <i>Current</i>	I	[mA]	2 (MAX 8 mA)						
	NUMERO POLI - <i>Number of poles</i>			4						
	VITA SPAZZOLE PREVISTA - <i>Life expctancy</i>			15000 A 3000 rpm						
FRENO <i>Brake</i>	TIPO - <i>Type</i>			STD						
	COPPIA STATICA - <i>Static torque</i>	C	[Nm]	16						
	TENSIONE DI ALIMENTAZIONE - <i>Power supply voltage</i>	E	[V]	24						
	CORRENTE NOMINALE - <i>Rated current</i>	I	[A]	2.3						
	POTENZA ASSORBITA - <i>Input power</i>	P	[W]	9.5						

**CURVE OPERATIVE
PERFORMANCE CURVES**

ESA 9S1



ESA 9S2



1 = Area di ciclo continuo
2 = Area di ciclo intermittente
3 = Area di accel. decel.

1 = Continuous duty area
2 = Intermittent duty area
3 = Accel. decel. duty area

SERIE
Series

ESA 9M

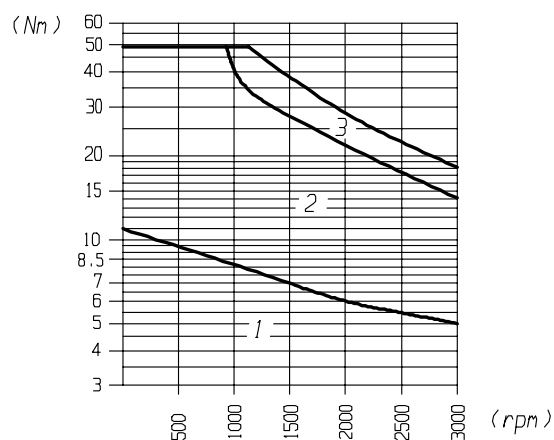
COPPIA - TORQUE

Nm 11

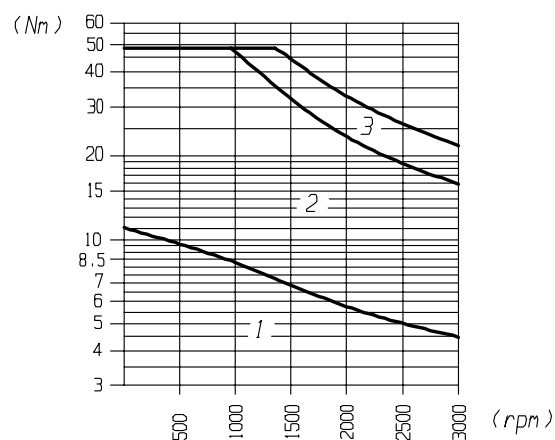
DATI MOTORE - <i>MOTOR RATINGS</i>			SIMBOLI Symbols	UNITA' Units	TIPO DI AVVOLGIMENTO <i>Type of winding</i>					
					1	2	3			
SERVOMOTORE - <i>Servomotor</i>	VELOCITA' NOMINALE - <i>Rated speed</i>		n	[rpm]	3000	3000	2000			
	COPPIA ROTORE BLOCCATO - <i>Continuous stall torque</i>		Cn	[Nm]	11	11	11			
	POTENZA A VELOCITA' NOMINALE - <i>Power at rated speed</i>		Pn	[W]	1570	1400	1500			
	CORRENTE A ROTORE BLOCCATO - <i>Stall current</i>		In	[A]	20	25	13.4			
	PICCO DI COPPIA ALLO SPUNTO - <i>Peak torque</i>		Cmax	[Nm]	49.5	49.5	49.5			
	CORRENTE AL PICCO DI COPPIA - <i>Peak current</i>		Imax	[A]	90	112.5	60			
	CORRENTE SMAGNETIZZANTE - <i>Demagnetise current</i>		Ipeak	[A]	110	137.5	73.7			
	FCEM A VELOCITA' NOMINALE - <i>Bemf at rated speed</i>		E	[V]	171	138	170			
	MAX VELOCITA' - <i>Max speed</i>		Nmax	[rpm]	3500	3500	2500			
	DATI MECCANICI - <i>MECHANICAL DATA</i>									
	MOMENTO D'INERZIA - <i>Moment of inertia</i>		Jm	Kg m ²	0.01	0.01	0.01			
	MAX. ACC. TEORICA - <i>Max theorethical acceleration</i>		αmax	rad/s ²	4950	4950	4950			
	COSTANTE DI TEMPO MECCANICA - <i>Mechanical time constant</i>		Tm	[ms]	12	13	10			
	COPPIA SMORZAMENTO A 1000 RPM - <i>Damping constant at 1000 rpm</i>		Td	[Nm]	0.35	0.35	0.35			
	COPPIA ATTRITO STATICO - <i>Static friction torque</i>		Tf	[Nm]	0.22	0.22	0.22			
	MAX CARICO RADIALE (A 3000 RPM) - <i>Max radial load (at 3000 rpm)</i>		Fr	[N]	784	784	784			
	MAX CARICO ASSIALE - <i>Max axial load</i>		Fa	[N]	235	235	235			
	PESO - <i>Weight</i>		M	[Kg]	22	22	22			
	DATI ELETTRICI - <i>WINDING DATA</i>									
	COSTANTE DI TENSIONE ± 5% - <i>Voltage constant ± 5%</i>		Ke	V/Krpm	57	46	85			
	COSTANTE DI COPPIA ± 5% - <i>Torque constant ± 5%</i>		Kt	[Nm/A]	0.55	0.44	0.82			
	COSTANTE DI TEMPO ELETTRICA - <i>Electrical time constant</i>		Te	[ms]	6.4	6	6.6			
	COSTANTE DI TEMPO TERMICA - <i>Thermal time constant</i>		Tt	[min]	80	80	80			
	RESIST. ARMATURA ± 10% A 25°C - <i>Armature resistance ± 10% at 25°c</i>		Ra	[Ohm]	0.31	0.2	0.61			
	RESIST. ARMATURA CON SPAZZOLE - <i>Terminal resistance</i>		Rt	[Ohm]	0.36	0.25	0.66			
	INDUTTANZA - <i>Inductance</i>		La	[mH]	2.3	1.5	4.35			
	GRADO DI PROTEZIONE - <i>Protection degree</i>			IP			54			
	CLASSE D' ISOLAMENTO - <i>Insulation class</i>						F			
DINAMO T. <i>Tacho generator</i>	COSTANTE DI TENSIONE - <i>Voltage constant</i>		Ke	V/Krpm	10 +/- 5% (MAX 9000 rpm)					
	ONDULAZIONE PICCO/PICCO - <i>Ripple</i>			[%]	< 1.5 A 1000 rpm					
	LINEARITA' A 6000 RPM - <i>Linearity at 6000 rpm</i>			[%]	< 0.1					
	ERRORE DI REVERSIBILITA' - <i>Reversibility error</i>			[%]	< 0.12					
	COEFFICIENTE DI TEMPERATURA - <i>Temperature coefficient</i>			[%]	0.02					
	MOMENTO D' INERZIA - <i>Moment of inertia</i>		J	g cm ²	40					
	RESISTENZA - <i>Resistance</i>		Ra	[Ohm]	86					
	INDUTTANZA - <i>Inductance</i>		La	[mH]	13					
	CORRENTE - <i>Current</i>		I	[mA]	2 (MAX 8 mA)					
	NUMERO POLI - <i>Number of poles</i>				4					
	VITA SPAZZOLE PREVISTA - <i>Life expctancy</i>				15000 A 3000 rpm					
FRENO <i>Brake</i>	TIPO - <i>Type</i>				STD					
	COPPIA STATICA - <i>Static torque</i>		C	[Nm]	16					
	TENSIONE DI ALIMENTAZIONE - <i>Power supply voltage</i>		E	[V]	24					
	CORRENTE NOMINALE - <i>Rated current</i>		I	[A]	2.3					
	POTENZA ASSORBITA - <i>Input power</i>		P	[W]	9.5					

CURVE OPERATIVE PERFORMANCE CURVES

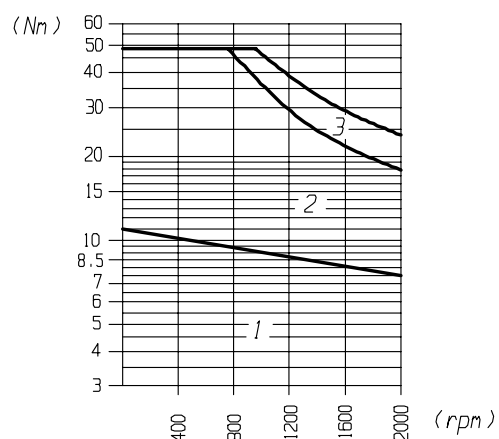
ESA 9M1



ESA 9M2



ESA 9M3



1 = Area di ciclo continuo
2 = Area di ciclo intermittente
3 = Area di accel. decel.

1 = Continuous duty area
2 = Intermittent duty area
3 = Accel. decel. duty area

SERIE
Series

ESA 9L

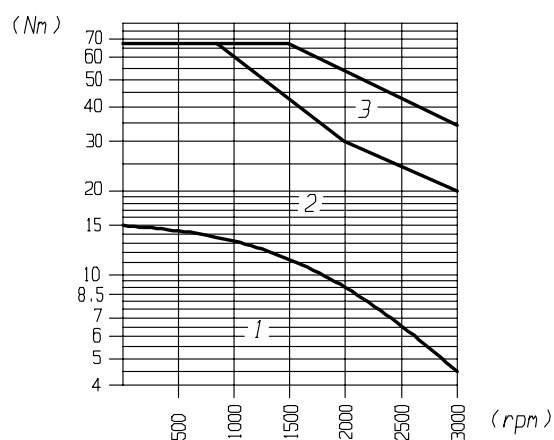
COPPIA - TORQUE

Nm 15

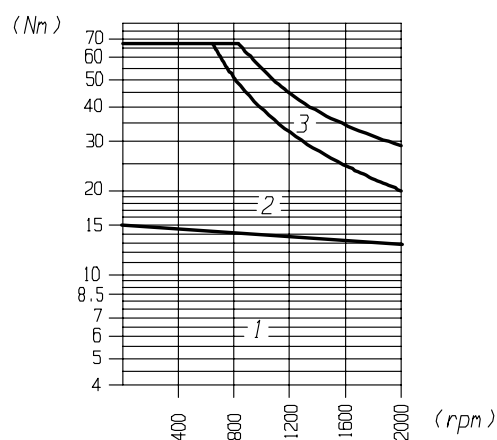
DATI MOTORE - <i>MOTOR RATINGS</i>			SIMBOLI Symbols	UNITA' Units	TIPO DI AVVOLGIMENTO <i>Type of winding</i>					
					1	2	3			
SERVOMOTORE - <i>Servomotor</i>	VELOCITA' NOMINALE - <i>Rated speed</i>		n	[rpm]	3000	2000	1500			
	COPPIA ROTORE BLOCCATO - <i>Continuos stall torque</i>		Cn	[Nm]	15	15	15			
	POTENZA A VELOCITA' NOMINALE - <i>Power at rated speed</i>		Pn	[W]	1400	2680	2040			
	CORRENTE A ROTORE BLOCCATO - <i>Stall current</i>		In	[A]	27.5	18.3	14.2			
	PICCO DI COPPIA ALLO SPUNTO - <i>Peak torque</i>		Cmax	[Nm]	67.5	67.5	67.5			
	CORRENTE AL PICCO DI COPPIA - <i>Peak current</i>		Imax	[A]	124	82	64			
	CORRENTE SMAGNETIZZANTE - <i>Demagnetise current</i>		Ipeak	[A]	151.25	100.65	78.1			
	FCEM A VELOCITA' NOMINALE - <i>Bemf at rated speed</i>		E	[V]	171	170	165			
	MAX VELOCITA' - <i>Max speed</i>		Nmax	[rpm]	3500	2400	1800			
	DATI MECCANICI - <i>MECHANICAL DATA</i>									
	MOMENTO D'INERZIA - <i>Moment of inertia</i>		Jm	Kg m ²	0.014	0.014	0.014			
	MAX. ACC. TEORICA - <i>Max theorethical acceleration</i>		αmax	rad/s ²	4820	4820	4820			
	COSTANTE DI TEMPO MECCANICA - <i>Mechanical time constant</i>		Tm	[ms]	13	12	12			
	COPPIA SMORZAMENTO A 1000 RPM - <i>Damping constant at 1000 rpm</i>		Td	[Nm]	0.45	0.45	0.45			
	COPPIA ATTRITO STATICO - <i>Static friction torque</i>		Tf	[Nm]	0.3	0.3	0.3			
	MAX CARICO RADIALE (A 3000 RPM) - <i>Max radial load (at 3000 rpm)</i>		Fr	[N]	784	784	784			
	MAX CARICO ASSIALE - <i>Max axial load</i>		Fa	[N]	235	235	235			
	PESO - <i>Weight</i>		M	[Kg]	30	30	30			
	DATI ELETTRICI - <i>WINDING DATA</i>									
	COSTANTE DI TENSIONE ± 5% - <i>Voltage constant ± 5%</i>		Ke	V/Krpm	57	85	110			
	COSTANTE DI COPPIA ± 5% - <i>Torque constant ± 5%</i>		Kt	[Nm/A]	0.55	0.82	1.06			
	COSTANTE DI TEMPO ELETTRICA - <i>Electrical time constant</i>		Te	[ms]	4.95	5.2	5.4			
	COSTANTE DI TEMPO TERMICA - <i>Thermal time constant</i>		Tt	[min]	90	90	90			
	RESIST. ARMATURA ± 10% A 25°C - <i>Armature resistance ± 10% at 25°c</i>		Ra	[Ohm]	0.23	0.52	0.88			
	RESIST. ARMATURA CON SPAZZOLE - <i>Terminal resistance</i>		Rt	[Ohm]	0.28	0.57	0.93			
	INDUTTANZA - <i>Inductance</i>		La	[mH]	1.39	2.95	5			
	GRADO DI PROTEZIONE - <i>Protection degree</i>			IP	54					
	CLASSE D' ISOLAMENTO - <i>Insulation class</i>				F					
DINAMO T. <i>Tacho generator</i>	COSTANTE DI TENSIONE - <i>Voltage constant</i>		Ke	V/Krpm	10 +/- 5% (MAX 9000 rpm)					
	ONDULAZIONE PICCO/PICCO - <i>Ripple</i>			[%]	< 1.5 A 1000 rpm					
	LINEARITA' A 6000 RPM - <i>Linearity at 6000 rpm</i>			[%]	< 0.1					
	ERRORE DI REVERSIBILITA' - <i>Reversibility error</i>			[%]	< 0.12					
	COEFFICIENTE DI TEMPERATURA - <i>Temperature coefficient</i>			[%]	0.02					
	MOMENTO D' INERZIA - <i>Moment of inertia</i>		J	g cm ²	40					
	RESISTENZA - <i>Resistance</i>		Ra	[Ohm]	86					
	INDUTTANZA - <i>Inductance</i>		La	[mH]	13					
	CORRENTE - <i>Current</i>		I	[mA]	2 (MAX 8 mA)					
	NUMERO POLI - <i>Number of poles</i>				4					
	VITA SPAZZOLE PREVISTA - <i>Life expctancy</i>				15000 A 3000 rpm					
FRENO <i>Brake</i>	TIPO - <i>Type</i>				STD					
	COPPIA STATICA - <i>Static torque</i>		C	[Nm]	16					
	TENSIONE DI ALIMENTAZIONE - <i>Power supply voltage</i>		E	[V]	24					
	CORRENTE NOMINALE - <i>Rated current</i>		I	[A]	2.3					
	POTENZA ASSORBITA - <i>Input power</i>		P	[W]	9.5					

CURVE OPERATIVE PERFORMANCE CURVES

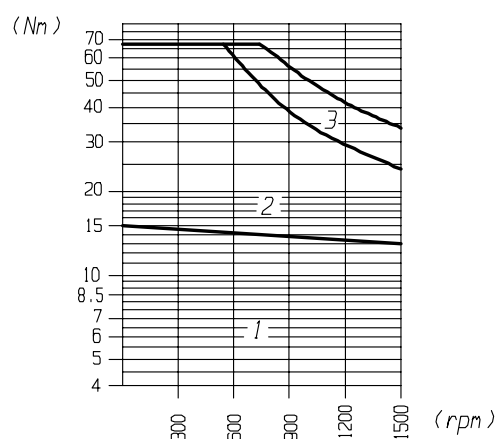
ESA 9L1



ESA 9L2

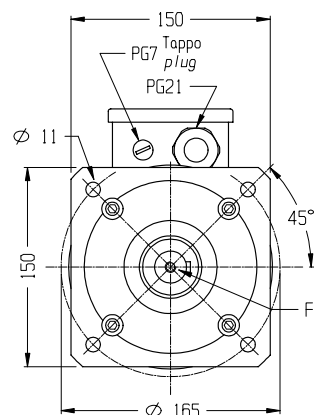
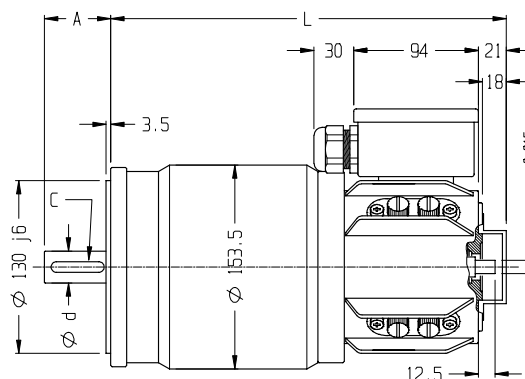
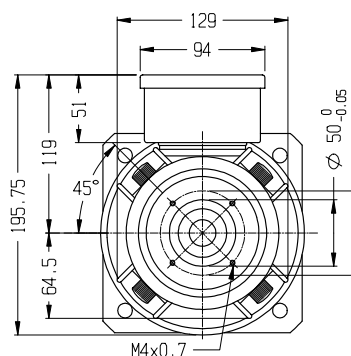


ESA 9L3



1 = Area di ciclo continuo
2 = Area di ciclo intermittente
3 = Area di accel. decel.

1 = Continuous duty area
2 = Intermittent duty area
3 = Accel. decel. duty area



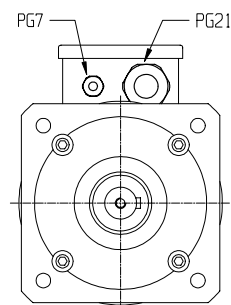
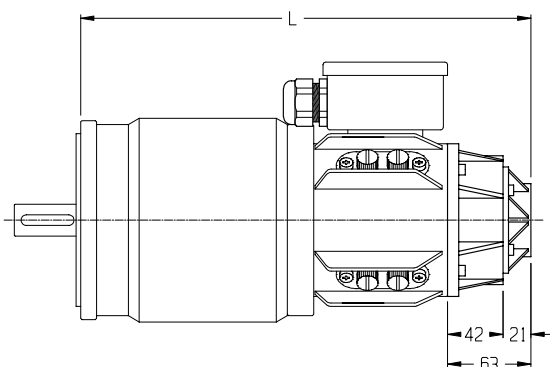
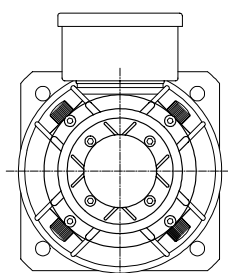
Type	S	M	L
A		50	
F		M8	
d(i6)		24	

Type	S	M	L
L	298	363	424
C		8*7*40	

PREDISPOSTO ENCODER STD
STD ENCODER PREARRANGEMENT

DINAMO TACHIMETRICA

TACHO GENERATOR

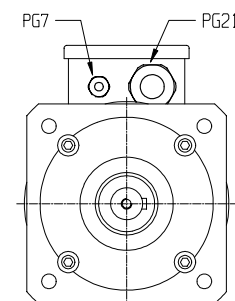
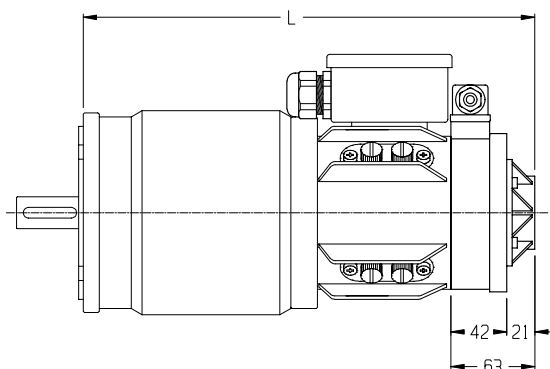
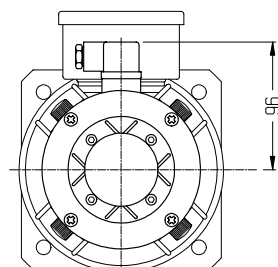


Type	S	M	L
L	339	404	465

PREDISPOSTO ENCODER STD
STD ENCODER PREARRANGEMENT

FRENO + DINAMO TACHIMETRICA

TACHO GENERATOR + BRAKE



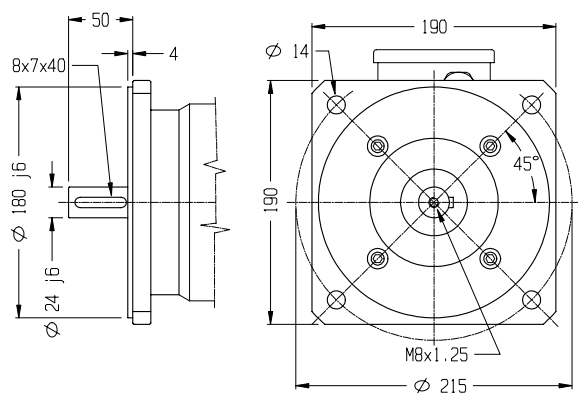
Type	S	M	L
L	339	404	465

PREDISPOSTO ENCODER STD
STD ENCODER PREARRANGEMENT

OPTIONALS

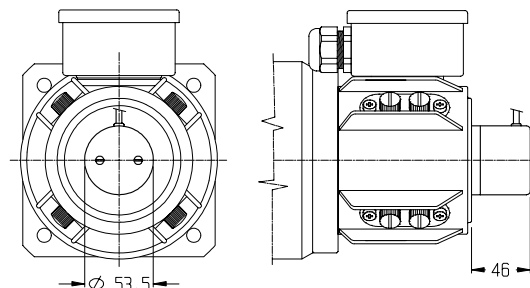
FLANGIA B5/100

B5/100 FLANGE



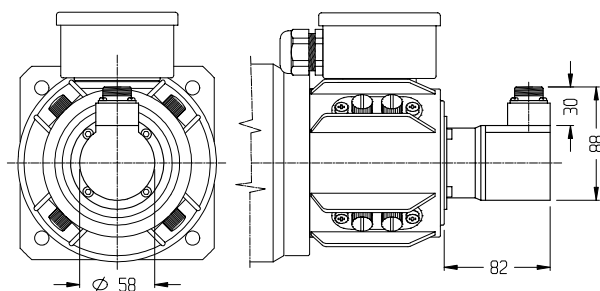
ENCODER EH53

ENCODER EH53



ENCODER EL72

ENCODER EL72

**DISTANZ. ENC. N°1**

ENCODER SPACER N°1

