





Standard Microstop Cages

 <p>Max. RPM = 3000 Shaft Travel = 9/32" Adjustment = 5/16" 1/4"-28 shaft thread Cage shown with the "S" style footpiece.</p> <p>ZT330-S as shown.</p> <p>ZT330</p>	 <p>Max. RPM = 3000 Shaft Travel = 1/2" Adjustment = 1" 3/8"-24 shaft thread Cage shown with "SP" style footpiece.</p> <p>ZT331-SP as shown</p> <p>ZT331</p>	 <p>Max. RPM = 3000 Shaft Travel = 1/2" Adjustment = 1" 7/16"-20 shaft thread Cage shown with "W" footpiece.</p> <p>ZT334-W as shown</p> <p>ZT334</p>
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 <p>Style "S" Style "W" Style "Y" Style "R"</p> <p>Style "SP" Style "WP" Style "X" Style "Z"</p> <p>All of the footpieces except "R" (which will only fit the ZT330) shown to the left will fit all three microstop cages shown above. Footpiece styles "SP" and "WP" are available with either a hardened, polished steel foot or a nylon screw-on protective footpiece to help eliminate surface scratching.</p>	 <p>Made in the USA!</p> <p>IT2196</p> <p>An economic alternative to the ZT330. Available in "S" style foot only.</p>
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Microstop Part Number	Footpiece OD	Overall Length	Max. Cutter Dia.
ZT330-S	.87"	3.56"	5/8"
ZT330-W	1.00"	3.56"	3/4"
ZT330-X	.87"	3.56"	5/8"
ZT330-Y	.87"	3.56"	5/8"
ZT330-Z	.87"	3.56"	5/8"
ZT330-R	.45"	3.56"	5/16"
ZT330-SP	1.25"	3.56"	5/8"
ZT330-WP	1.25"	3.56"	3/4"
ZT331-S	1.11"	5.31"	7/8"
ZT331-W	1.62"	5.31"	1-3/8"
ZT331-X	1.11"	5.31"	7/8"
ZT331-Y	1.11"	5.31"	7/8"
ZT331-Z	1.11"	5.31"	7/8"
ZT331-SP	1.13"	5.31"	7/8"
ZT331-WP	1.87"	5.31"	1-3/8"
ZT334-S	1.11"	5.31"	7/8"
ZT334-W	1.75"	5.31"	1-1/2"
ZT334-X	1.11"	5.31"	7/8"
ZT334-Z	1.11"	5.31"	7/8"
ZT334-SP	1.37"	5.31"	7/8"
ZT334-WP	2.00"	5.31"	1-1/2"



Specialty Microstop Cages



ZT284 Series
ZT284-A as shown

Extended Footpiece Microstop Cage

Features:

- Rated for 3000 rpm continuous usage.
- 2.750" long extended skirt
- 9/32" shaft travel
- 5/16" total adjustment
- .001" incremental depth adjustment

Cage part Number	Shaft Thread	Max. Cutter Dia.	Footpiece I.D.	Footpiece O.D.
ZT284-A	10-32	.250"	.275"	.375"
ZT284-B	1/4"-28	.300"	.325"	.425"
ZT284-C	1/4"-28	.375"	.400"	.500"
ZT284-D	1/4"-28	.562"	.656"	.750"



ZT339

For Precision Deburring or Spotfacing

Solves the problem of sheet cracking when dimpling titanium and other exotic materials. Accurately controls the depth of cut and radius with non-slip lock. 3/32" shaft travel with 5/16" total adjustment. .001" incremental depth adjustment.



IT1150W

Long-Travel Drill-Countersinking Cage & for the use of Taper-lok® Drills & Reamers with Coolant Port

Features:

- Rated at 2,000 rpm.
- 2.250" shaft travel.
- .001" incremental depth adjustment.
- Ball-bearing depth stop.
- 7/16"-20 shaft thread.
- 3/8" diameter shank with three flats.
- Quick-disconnect coolant port.
- 12" OAL.

For more information about Taper-lok tooling, cutters, gages and TLA4900 microstop cages, please refer to the Taper-lok section of this catalog!



IT2442

Low-Profile, Quick Change Microstop

Features:

- Only 9/16" O.D.I
- 1/16" shaft travel
- 3/8" I.D skirt
- For quick-change chucks only!
- 1/4"-28 shaft thd.

For quick-change chucks see the accessory section of our catalog.



IT2714

- Fits in 90 degree or offset Drillmotor w/ 1/4-28 thd.
- 3/32" Shaft Travel
- 1/4"-28 shaft internal thd.
- 3000 max. rpm
- 9/16" OD
- .390" OD



AT441HSBRS

Cages for Briles Cutters

Part #	Skirt style
AT441HSRBF	"F"
AT441HSRBS	"S"

Uses AT438BRC-Series Cutters
See cutting tool section.



High-Speed Microstop Cages & Kits



AT441HS/
AT441HSB

5,000 & 10,000 RPM Rated Microstop Cages

The AT 441HS series microstop cage is rated for a maximum of 5000 rpm. The AT441HSB series enhances that maximum rating to 10,000 rpm with the use of ball bearings. Each series has a full 5/16" shaft travel. To complete the part number, add the single digit letter which signifies the footpiece style selected.

Ordering example:

AT441HSS

5,000 rpm rated microstop cage with "S" style skirt

AT441HSBA

Full-bearing, 10,000 rpm rated microstop with "A" style skirt.



AT590CSK

High-Speed Microstop Cage Kit

This kit provides countersinking versatility with nine different 1/2" diameter cutters, six of the most commonly used footpieces, and a AT441HSS high-speed microstop cage.

Includes standard HSS cutters with 100° countersink angle with the following pilots:
#40, #30, #21, #10, 3/32", 1/8", 5/32", 3/16", & 1/4"

(S)



(B)



(D)



(F)



(A)



(C)



(E)



AT441 available skirts.
See below for "A" skirt
inserts.

High-Speed .0005" Incremental Depth Adjustment Cages



AT441HSB().0005

Insert Chart for "A" skirts

Skirt insert part number	O.D.	I.D.	Material	Finish
AT440A-4	.875"	.594"	phenolic	natural
AT440A-9	1.125"	.594"	steel	Hard chrome
AT440A-13	.875"	.750"	nylon	natural
AT440A-14	1.250"	.750"	nylon	natural

Developed for more sophisticated structures and fasteners, these microstops features half-thousandth incremental depth adjustment, hi-speed ball bearings, hardened and ground shafts with wrench flats, ball thrust bearing and left-hand threaded lock ring. These cages are also available with quick change shafts.

Part Number	Max. Cutter Dia.	Skirt Style
AT441HSBF-.0005	5/8"	"F"
AT441HSBS-.0005	5/8"	"S"



Heavy-Duty, Precision, High-Speed Microstop Cages

NEW!

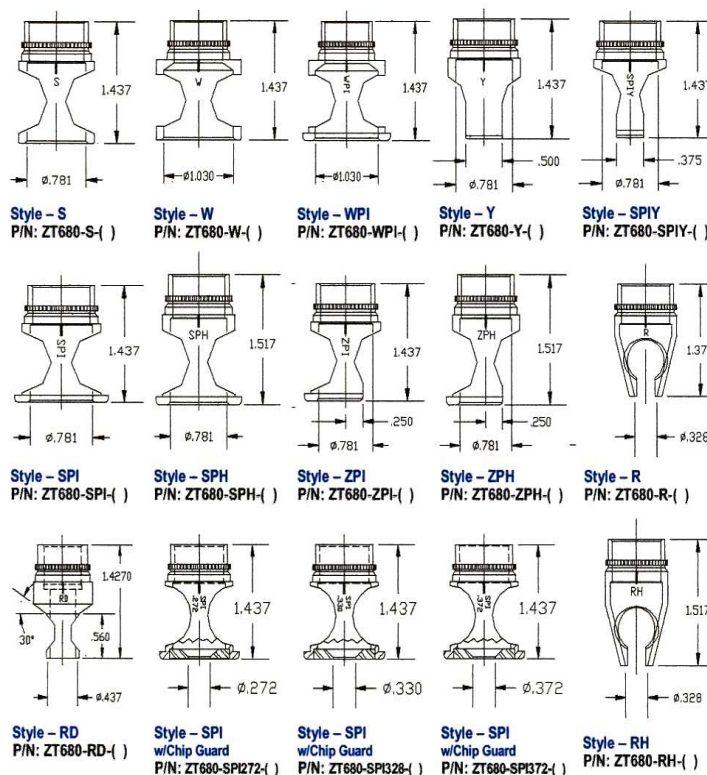


ZT680 Series
ZT680-SPI-QC as shown

The Ultimate Microstop Cage!

The ZT680 has been designed for continuous operation up to **10,000 rpm** in the most demanding applications. The ZT680 cage is available in a full range of footpieces shown to the right and below.

Footpiece Options for the ZT680 Microstop Cage

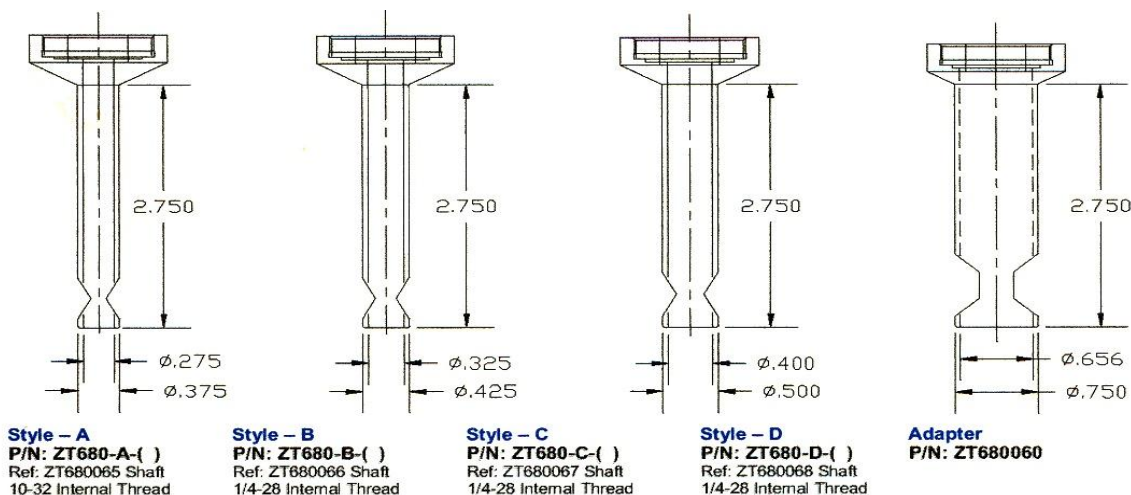


Shaft style

TF = Three Flats
QC = Quick Change
No Suffix = 1/4" round

Features:

- Fail-safe positive stop insures accurate repeatability and eliminates the possibility of work piece damage.
- Felt dust shield eliminates composite/graphite dust contamination of the radial ball bearings extending cage life.
- .0005" incremental depth adjustment. 3/4" diameter cutter capacity with standard "S" footpieces—1" capacity with wide "W" footpieces.
- 1/4" shaft travel. 1/4"-28 and 6MM internally threaded shafts.





Heavy-Duty, Precision, High-Speed Microstop Cages / Specialty Kits



Large Cutter Capacity Precision Cages

The ZT673 & ZT674 have been designed for continuous operation at 6,000 rpm .

Features Include:

- 7/16" shaft travel with full ball bearing design.
- .0005" incremental depth adjustment.
- Fail-safe positive stop insures accurate repeatability and eliminates possible work piece damage.
- TF = Three flats on the 3/8" shaft/ No Suffix = 3/8" round shaft

ZT673/ZT674 Series
ZT673-WWPH-TF as shown

Cage Part Number	Shaft Thread	Footpiece O.D.	Footpiece I.D.	Overall Length	Cutter Capacity
ZT673-SPI-TF	3/8"-24	1.620"	1.280"	5.07"	1.250"
ZT673-W-TF	3/8"-24	1.750"	1.531"	5.07"	1.500"
ZT673-WPH-TF	3/8"-24	2.125"	1.531"	5.07"	1.500"
ZT673-WWPH-TF	3/8"-24	2.500"	2.010"	5.07"	2.000"
ZT674-SPI-TF	7/16"-20	1.620"	1.280"	5.07"	1.250"
ZT674-W-TF	7/16"-20	1.750"	1.531"	5.07"	1.500"
ZT674-WPH-TF	7/16"-20	2.125"	1.531"	5.07"	1.500"
ZT674-WWPH-TF	7/16"-20	2.500"	2.010"	5.07"	2.000"



AT2200CSK Kit

Elliptical Fastener Countersink Cutter Kit for
NAS 1734/1735 Blind Nuts

Kit Includes:

- Two microstop cages with stabilizing rockers
- Four cobalt cutters

*ITS can do custom
countersink cage, cutter
and footpiece kits.*

*Give us a call for more
details!*

