

Retention Knobs

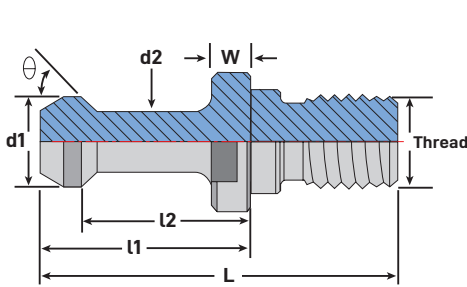


MegaFORCE

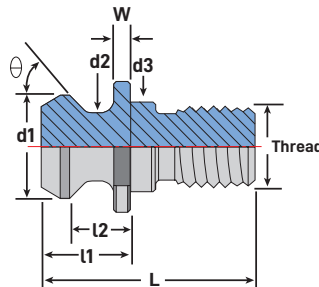
ULTIMATE PERFORMANCE RETENTION KNOBS

FEATURES

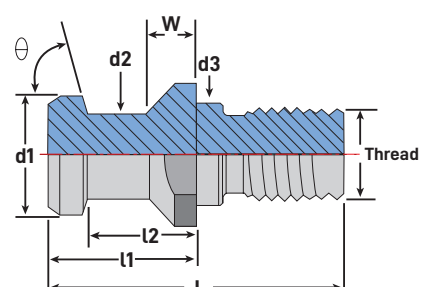
- Deeper thread engagement reduces tool holder taper swelling
- Blended radii on the neck improves strength
- Precision pilot provides greater stability
- Formed threads provide 20% greater strength vs. cut threads



MegaFORCE MAS Style



MegaFORCE ANSI/ISO Style



MegaFORCE DIN Style

BT 40 - DIN MegaForce Retention Knob

Part #	Type	Θ	d1	d2	L	l1	l2	W	Coolant Hole	Thread
4020TRK-MF	BT40 - MAS 75° Coolant-Through	75°	.748"	.551"	2.126"	1.142"	.906"	.276"	.276"	M16 - 2

BT 30/40 - MAS MegaForce Retention Knobs

Part #	Type	Θ	d1	d2	L	l1	l2	W	Coolant Hole	Thread
3003TRK-MF	BT30 - MAS 45° Solid	45°	.433"	.276"	1.693"	.906"	.709"	.197"	-	M12 - 1.75
3004TRK-MF	BT30 - MAS 60° Solid	60°	.433"	.276"	1.693"	.906"	.709"	.197"	-	M12 - 1.75
4003TRK-MF	BT40 - MAS 45° Solid	45°	.591"	.394"	2.362"	1.378"	1.102"	.236"	-	M16 - 2
4003TRKC-MF	BT40 - MAS 45° Coolant-Through	45°	.591"	.394"	2.362"	1.378"	1.102"	.236"	.591"	M16 - 2
4004TRKC-MF	BT40 - MAS 60° Coolant-Through	60°	.591"	.394"	2.362"	1.378"	1.102"	.236"	.591"	M16 - 2

CAT 40/50 – ANSI/ISO MegaForce Retention Knobs

Part #	Type	Θ	d1	d2	L	l1	l2	W	Coolant Hole	Thread
40NTRK-MF	CAT40 – ANSI Solid	45°	.740"	.490"	1.624"	.640"	.440"	.118"	-	5/8" – 11
40TRK-MF	CAT40 – ANSI Coolant-Through	45°	.740"	.490"	1.624"	.640"	.440"	.118"	.280"	5/8" – 11
50NTRK-MF	CAT50 – ANSI Solid	45°	1.140"	.820"	.2300"	1.000"	.700"	.200"	-	1" – 8
50TRK-MF	CAT50 – ANSI Coolant-Through	45°	1.140"	.820"	.2300"	1.000"	.700"	.200"	.468"	1" – 8
M50TRK-MF	CAT50 – ANSI Coolant-Through Mazak O-Ring Seal Groove	45°	1.140"	.820"	.2300"	1.000"	.700"	.200"	.458"	1" – 8

CAT 40/50 – DIN MegaForce Retention Knobs

Part #	Type	Θ	d1	d2	L	l1	l2	W	Coolant Hole	Thread
4008TRK-MF	CAT40 – DIN Solid	75°	.748"	.551"	2.126"	1.024"	.787"	.276"	-	5/8" – 11
4008TRKC-MF	CAT40 – DIN Coolant-Through	75°	.748"	.551"	2.126"	1.024"	.787"	.276"	.276"	5/8" – 11
4030TRK-MF	CAT40 – DIN Coolant-Through	75°	.748"	.551"	2.126"	1.024"	.787"	.157"	.276"	5/8" – 11
5030TRK-MF	CAT50 – DIN Coolant-Through	75°	1.102"	.827"	2.913"	.1339"	.984"	.197"	.453"	1" – 8

CAT 40/50 – MAS MegaForce Retention Knobs

Part #	Type	Θ	d1	d2	L	l1	l2	W	Coolant Hole	Thread
4001TRK-MF	CAT40 – MAS 90° Solid	90°	.591"	.394"	2.250"	1.266"	.990"	.236"	-	5/8" – 11
4005TRKC-MF	CAT40 – MAS 45° Solid	45°	.591"	.394"	2.250"	1.266"	.990"	.124"	-	5/8" – 11
4005TRKC-MF	CAT40 – MAS 45° Coolant-Through	45°	.591"	.394"	2.250"	1.266"	.990"	.124"	.118"	5/8" – 11
4009TRK-MF	CAT40 – MAS 45° Solid	45°	.591"	.394"	2.250"	1.266"	.990"	.236"	-	5/8" – 11
4009TRKC-MF	CAT40 – MAS 45° Coolant-Through	45°	.591"	.394"	2.250"	1.266"	.990"	.236"	.157"	5/8" – 11
4014TRK-MF	CAT40 – MAS 60° Solid	60°	.591"	.394"	2.250"	1.266"	.990"	.236"	-	5/8" – 11
5001TRK-MF	CAT50 – MAS 90° Solid	90°	.906"	.669"	3.354"	1.780"	1.386"	.394"	-	1" – 8
5001TRKC-MF	CAT50 – MAS 90° Coolant-Through	90°	.906"	.669"	3.354"	1.780"	1.386"	.394"	.311"	1" – 8
5005TRK-MF	CAT50 – MAS 45° Solid	45°	.906"	.669"	3.354"	1.780"	1.386"	.394"	-	1" – 8
5005TRKC-MF	CAT50 – MAS 45° Coolant-Through	45°	.906"	.669"	3.354"	1.780"	1.386"	.394"	.311"	1" – 8
5014TRK-MF	CAT50 – MAS 60° Solid	60°	.906"	.669"	3.354"	1.780"	1.386"	.394"	-	1" – 8
5014TRKC-MF	CAT50 – MAS 60° Coolant-Through	60°	.906"	.669"	3.354"	1.780"	1.386"	.394"	.311"	1" – 8
MAK050TRK-MF	CAT50 – MAS 45° Makino Coolant-Through	45°	.906"	.669"	3.354"	1.780"	1.386"	.394"	.311"	1" – 8
TOY050TRK-MF	CAT50 – MAS 45° Toyoda Coolant-Through	45°	.906"	.669"	3.354"	1.780"	1.386"	.394"	.236"	1" – 8

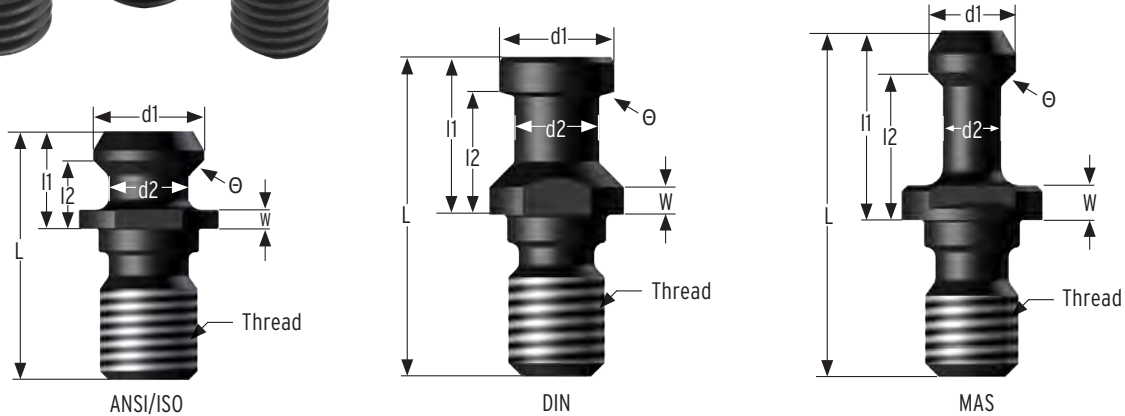
Retention Knobs

Standard | Inch Threads



FEATURES

- All mating surfaces precision ground
- Manufactured from aircraft quality AMS-6274 alloy steel
- Hardened for maximum strength and longevity



CAT 40/50 - ANSI/ISO Retention Knobs - Inch

Part #	Type	Θ	d1	d2	L	l1	l2	W	Coolant Hole	Thread
40NTRK	CAT40 - ANSI 45° Solid	45°	.74"	.49"	1.68"	.64"	.44"	.12"	-	5/8" - 11
40TRK	CAT40 - ANSI 45° Coolant-Through	45°	.74"	.49"	1.68"	.64"	.44"	.12"	.281"	5/8" - 11
50NTRK	CAT50 - ANSI 45° Solid	45°	1.14"	.82"	2.54"	1.00"	.70"	.20"	-	1" - 9
50TRK	CAT50 - ANSI 45° Coolant-Through	45°	1.14"	.82"	2.54"	1.00"	.70"	.20"	.468"	1" - 9
50TRK-390-P	CAT50 - ANSI 45° Coolant-Through	45°	1.14"	.82"	2.30"	1.00"	.70"	.20"	.390"	1" - 9
50TRK-500	CAT50 - ANSI 45° Coolant-Through	45°	1.14"	.82"	2.54"	1.00"	.70"	.20"	.500"	1" - 9
M50TRK	CAT50 - ANSI 45° Coolant-Through Mazak	45°	1.14"	.82"	2.30"	1.00"	.70"	.20"	.468"	1" - 9

CAT 40/50 - DIN Retention Knobs - Inch

Part #	Type	Θ	d1	d2	L	l1	l2	W	Coolant Hole	Thread
4008TRK	CAT40 - DIN 75° Solid	75°	.744"	.549"	2.06"	1.024"	.787"	.28"	-	5/8" - 11
4008TRKC	CAT40 - DIN 75° Coolant-Through	75°	.744"	.549"	2.06"	1.024"	.787"	.28"	.28"	5/8" - 11
4010TRK	CAT40 - DIN 75° Coolant-Through	75°	.748"	.551"	2.13"	1.142"	.906"	.28"	.28"	5/8" - 11
4030TRK	CAT40 - DIN 75° Coolant-Through	75°	.75"	.55"	2.06"	1.02"	.79"	.18"	.28"	5/8" - 11
5030TRK	CAT50 - DIN 75° Coolant-Through	75°	1.10"	.83"	2.88"	1.35"	.99"	.20"	.47"	1" - 8

Standard | Inch Threads

CAT 40/50 - MAS Retention Knobs - Inch

Part #	Type	Θ	d1	d2	L	l1	l2	W	Coolant Hole	Thread
3001TRK	CAT30 - MAS 45° Solid Chiron	45°	.393"	.236"	1.42"	.787"	.63"	.12"	-	1/2" - 13
4001TRK	CAT40 - MAS 90° Solid	90°	.588"	.393"	2.32"	1.275"	.988"	.23"	-	5/8" - 11
4001TRKC	CAT40 - MAS 90° Coolant-Through	90°	.588"	.393"	2.32"	1.275"	.988"	.23"	.197"	5/8" - 11
4005TRK	CAT40 - MAS 45° Solid	45°	.588"	.393"	2.31"	1.268"	.988"	.13"	-	5/8" - 11
4005TRKC	CAT40 - MAS 45° Coolant-Through	45°	.588"	.393"	2.31"	1.268"	.988"	.13"	.157"	5/8" - 11
4006TRK	CAT40 - MAS 45° Solid	45°	.588"	.393"	2.45"	1.264"	.99"	.24"	-	5/8" - 11
4009TRK	CAT40 - MAS 45° Solid	45°	.588"	.393"	2.31"	1.264"	.99"	.24"	-	5/8" - 11
4009TRKC	CAT40 - MAS 45° Coolant-Through	45°	.588"	.393"	2.31"	1.264"	.99"	.24"	.197"	5/8" - 11
4014TRK	CAT40 - MAS 60° Solid	60°	.588"	.393"	2.31"	1.268"	.99"	.23"	-	5/8" - 11
4014TRKC	CAT40 - MAS 60° Coolant-Through	60°	.588"	.393"	2.31"	1.268"	.99"	.23"	.197"	5/8" - 11
4015TRK	CAT40 - MAS 60° Solid Thin Flange	60°	.588"	.393"	2.31"	1.268"	.99"	.13"	-	5/8" - 11
C400TRK	CAT40 - MAS 45° Solid	45°	.588"	.406"	2.48"	1.436"	1.137"	.19"	-	5/8" - 11
C400TRKC	CAT40 - MAS 45° Coolant-Through	45°	.588"	.404"	2.48"	1.436"	1.137"	.19"	.157"	5/8" - 11
TOY040TRK	CAT40 - MAS 45° Toyoda O-ring	45°	.588"	.393"	2.25"	1.268"	.988"	.12"	.118"	5/8" - 11
4008TRK	CAT40 - MAS 75° Solid	75°	.744"	.549"	2.06"	1.024"	.787"	.28"	-	5/8" - 11
4008TRKC	CAT40 - MAS 75° Coolant-Through	75°	.744"	.549"	2.06"	1.024"	.787"	.28"	.276"	5/8" - 11
4010TRK	CAT40 - MAS 75° Coolant-Through Long Neck	75°	.744"	.551"	2.13"	1.142"	.906"	.28"	.276"	5/8" - 11
5001TRK	CAT50 - MAS 90° Solid	90°	.904"	.667"	3.31"	1.77"	1.378"	.39"	-	1" - 8
5001TRKC	CAT50 - MAS 90° Coolant-Through	90°	.904"	.667"	3.31"	1.77"	1.378"	.39"	.25"	1" - 8
5005TRK	CAT50 - MAS 45° Solid	45°	.904"	.667"	3.33"	1.791"	1.378"	.41"	-	1" - 8
5005TRKC	CAT50 - MAS 45° Coolant-Through	45°	.904"	.667"	3.33"	1.791"	1.378"	.41"	.25"	1" - 8
5014TRK	CAT50 - MAS 60° Solid	60°	.904"	.667"	3.31"	1.77"	1.378"	.39"	-	1" - 8
5014TRKC	CAT50 - MAS 60° Coolant-Through	60°	.904"	.667"	3.31"	1.77"	1.378"	.39"	.25"	1" - 8
5021TRK	CAT50 - MAS 90° Solid Thin Flange	90°	.94"	.708"	2.77"	1.234"	.907"	.19"	-	1" - 8
MAK050TRK	CAT50 - MAS 45° Makino O-ring	45°	.904"	.667"	3.14"	1.78"	1.386"	.39"	.236"	1" - 8
MH500TRK	CAT50 - MAS 90° Solid	90°	.904"	.667"	3.32"	1.78"	1.386"	.40"	-	1" - 8
MH500TRKC	CAT50 - MAS 90° Coolant-Through	90°	.904"	.667"	3.32"	1.78"	1.386"	.40"	.25"	1" - 8
MS5034TRK	CAT50 - MAS 90° Mitsui Coolant-Through	90°	.94"	.706"	2.76"	1.218"	.903"	.20"	.315"	1" - 8
OKM050TRK	CAT50 - MAS 60° Okuma O-ring	60°	.904"	.667"	3.25"	1.77"	1.378"	.39"	.236"	1" - 8
TOY050TRK	CAT50 - MAS 45° Toyoda O-ring	45°	.904"	.667"	3.55"	1.78"	1.386"	.40"	.236"	1" - 8

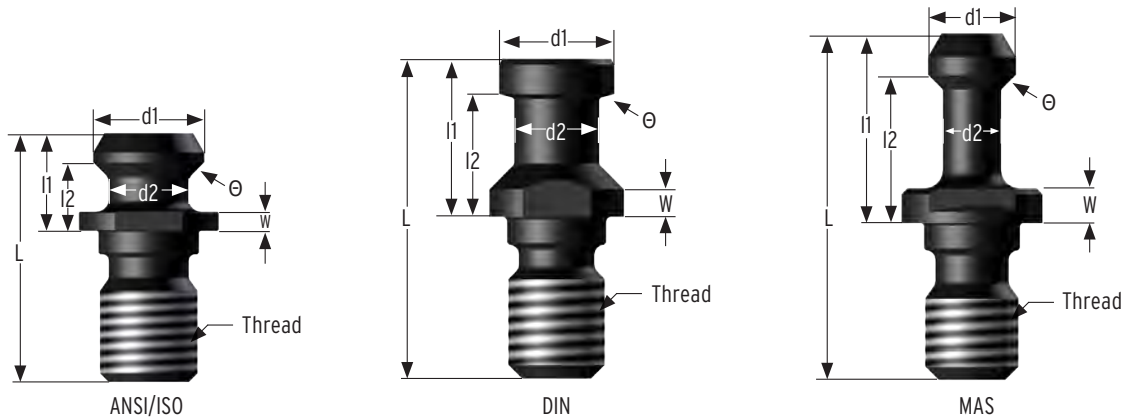
Retention Knobs

Standard | Metric Threads



FEATURES

- All mating surfaces precision ground
- Manufactured from aircraft quality AMS-6274 alloy steel
- Hardened for maximum strength and longevity



BT 40/50 - ANSI/ISO Retention Knobs - Metric

Part #	Type	θ	d1	d2	L	l1	l2	W	Coolant Hole	Thread
A40TRK	BT40 - ANSI 45° Coolant-Through	45°	.74"	.49"	1.65"	.64"	.44"	.12"	.281"	M16 x 2
MZ40TRK	BT40 - MAS 45° Mazak	45°	.74"	.49"	1.85"	.75"	.55"	.12"	.281"	M16 x 2
F40TRK	BT40 - ANSI 45° Fadal	45°	.74"	.49"	1.85"	.75"	.55"	.23"	-	M16 x 2
A50TRK	BT50 - ANSI 45° Coolant-Through	45°	1.14"	.82"	2.58"	1.00"	.70"	.20"	.468"	M24 x 3

BT 40 - DIN Retention Knobs - Metric

Part #	Type	θ	d1	d2	L	l1	l2	W	Coolant Hole	Thread
4020NTRK	BT40 - DIN 75° Solid	75°	.748"	.55"	2.26"	1.142"	.905"	.28"	-	M16 x 2
4020TRK	BT40 - DIN 75° Coolant-Through	75°	.748"	.55"	2.26"	1.142"	.905"	.28"	.276"	M16 x 2
DIN40ATRK	BT40 - DIN 75° Coolant-Through	75°	.75"	.55"	2.13"	1.02"	.79"	.16"	.276"	M16 x 2

Standard | Metric Threads

BT 30/40/50 - MAS Retention Knobs - Metric

Part #	Type	Θ	d1	d2	L	l1	l2	W	Coolant Hole	Thread
3002TRK	BT30 - MAS 45° Chiron	45°	.393"	.236"	1.42"	.787"	.63"	.12"	-	M12 - 1.75
3003TRK	BT30 - MAS 45° Solid	45°	.43"	.273"	1.70"	.908"	.71"	.19"	-	M12 - 1.75
3003TRKC	BT30 - MAS 45° Coolant-Through	45°	.43"	.273"	1.70"	.908"	.71"	.19"	.125"	M12 - 1.75
3004TRK	BT30 - MAS 60° Solid	60°	.43"	.273"	1.70"	.908"	.71"	.19"	-	M12 - 1.75
4002TRK	BT40 - MAS 90° Solid	90°	.588"	.393"	2.36"	1.376"	1.102"	.23"	-	M16 x 2
4003TRK	BT40 - MAS 45° Solid	45°	.588"	.393"	2.36"	1.376"	1.102"	.23"	-	M16 x 2
4003TRKC	BT40 - MAS 45° Coolant-Through	45°	.588"	.393"	2.36"	1.376"	1.102"	.23"	.197"	M16 x 2
4004TRK	BT40 - MAS 60° Solid	60°	.588"	.393"	2.36"	1.376"	1.102"	.23"	-	M16 x 2
4004TRKC	BT40 - MAS 60° Coolant-Through	60°	.588"	.393"	2.36"	1.376"	1.102"	.23"	.243"	M16 x 2
4009MTRK	BT40 - MAS 45° Solid	45°	.588"	.393"	2.31"	1.264"	.99"	.24"	-	M16 x 2
4009MTRKC	BT40 - MAS 45° Coolant-Through	45°	.588"	.393"	2.31"	1.264"	.99"	.24"	.197"	M16 x 2
5002TRK	BT50 - MAS 90° Solid	90°	.904"	.667"	3.34"	1.77"	1.378"	.39"	-	M24 x 3
5003TRK	BT50 - MAS 45° Solid	45°	.904"	.667"	3.34"	1.77"	1.378"	.39"	-	M24 x 3
5003TRKC	BT50 - MAS 45° Coolant-Through	45°	.904"	.667"	3.34"	1.77"	1.378"	.39"	.25"	M24 x 3
5004TRK	BT50 - MAS 60° Solid	60°	.904"	.667"	3.34"	1.77"	1.378"	.39"	-	M24 x 3

WARNING:

Machine tool manufacturers have used many various styles and sizes of retention knobs. They often look very similar and appear to be interchangeable. The use of the incorrect knob, or the incorrect use of a knob, may result in injury or property damage. It is the responsibility of the end user to check that the supplied knobs are correct for the machine tool and taper type. It is very important not to use metric retention knobs with inch toolholders. Be sure to fully tighten the retention knob. Failure to do so may result in the toolholder coming loose during operation.

The use of sealing and thread lock is recommended. Overtightening may cause a toolholder taper deformation.