

Precision Retention Knobs & Setup Equipment



Retention Knobs

- Manufactured to the highest standards and hand inspected for quality
- All mating surfaces are precision ground for maximum safety and long life

Tightening Fixtures

- Preset tools offline to save machine time
- For CAT, BT, HSK, ISO tapers
- Change retention knobs from below



Fits C5, C6
(pg. 234)



Adjustable Torque Wrenches and Adapters

<http://ow.ly/rloi1>
View the video on testing runout.



You lose 10% of tool life for every .0001" of T.I.R.
Techniks End Mill holders are manufactured to an
H5 bore tolerance to extend cutting tool life.



Built for Speed.

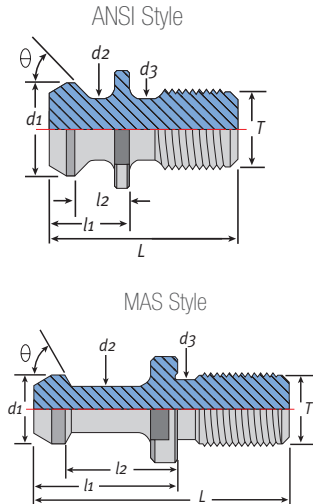
All Techniks products are backed by our 100% satisfaction guarantee!

CAT40, 50 Precision Retention Knobs



- All mating surfaces precision ground
- Manufactured to the highest standards for maximum safety and long life
- Hardened for maximum longevity

Please make sure that the Retention Knob you order is the correct one for your machine. Using the wrong Retention Knob can cause damage to your machine spindle, the toolholder, and may create a safety hazard.



CAT Retention Knobs

Part No.	Type	θ	d1	d2	d3	L	l1	l2	T
21006-15	CAT40-DIN	15°	.75"	0.55"	0.640"	1.88"	1.024"	.787"	5/8 - 11
21007-15	CAT40-DIN	15°	.75"	0.55"	-	1.89"	1.028"	.792"	5/8 - 11
21003	CAT40-ANSI	45°	0.740"	0.490"	0.490"	1.50"	0.640"	.440"	5/8 - 11
21003-45	CAT40-MAS-I	45°	0.590"	0.394"	0.512"	2.25"	1.266"	.990"	5/8 - 11
21003-60	CAT40-MAS-II	60°	0.590"	0.394"	0.512"	2.25"	1.266"	.990"	5/8 - 11
21003-90	CAT40-MAS-III	90°	0.590"	0.394"	0.512"	2.25"	1.266"	.990"	5/8 - 11
21005-45	CAT50-MAS-I	45°	0.906"	0.669"	0.827"	3.346"	1.772"	1.378"	1 - 8
21005-60	CAT50-MAS-II	60°	0.906"	0.669"	0.827"	3.346"	1.772"	1.378"	1 - 8
21005-90	CAT50-MAS-III	90°	0.906"	0.669"	0.827"	3.346"	1.772"	1.378"	1 - 8
21008-15	CAT50-DIN	15°	1.101"	0.825"	-	2.640"	1.338"	.984"	1 - 8
21005	CAT50-ANSI	45°	1.140"	0.820"	0.820"	2.30"	1.00"	.700"	1 - 8

CAT Coolant Style Retention Knobs

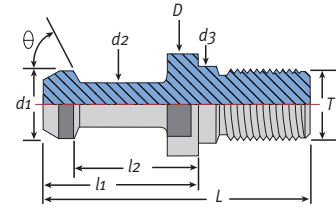
Part No.	Type	θ	d1	d2	d3	L	l1	l2	T
17836	CAT40, ANSI, w/ metric thread	45°	.74"	0.49"	0.49"	1.50"	0.63"	0.56"	M16x2
21006-15C	CAT40-DIN Coolant	15°	.75"	0.55"	0.640"	1.88"	1.024"	.787"	5/8 - 11
21007-15C	CAT40-DIN Coolant	15°	.75"	0.55"	-	1.89"	1.028"	.792"	5/8 - 11
21148-C	CAT40-Coolant Mori-Seiki	15°	0.747"	0.548"	0.641"	2.004"	1.024"	.787"	5/8 - 11
21003-C	CAT40-ANSI-C	45°	0.740"	0.490"	0.490"	1.50"	0.640"	.440"	5/8 - 11
21003-45C	CAT40-Coolant-I	45°	0.590"	0.394"	0.512"	2.25"	1.266"	.990"	5/8 - 11
21003-60C	CAT40-Coolant-II	60°	0.590"	0.394"	0.512"	2.25"	1.266"	.990"	5/8 - 11
21003-90C	CAT40-Coolant-III	90°	0.590"	0.394"	0.512"	2.25"	1.266"	.990"	5/8 - 11
21003-45CSF	CAT40-Coolant-I SlimFIT	45°	0.590"	0.394"	0.512"	2.25"	1.266"	.990"	5/8 - 11
21003-60CSF	CAT40-Coolant-II SlimFIT	60°	0.590"	0.394"	0.512"	2.25"	1.266"	.990"	5/8 - 11
21003-90CSF	CAT40-Coolant-III SlimFIT	90°	0.590"	0.394"	0.512"	2.25"	1.266"	.990"	5/8 - 11
21005-45C	CAT50-Coolant-I	45°	0.906"	0.669"	0.827"	3.346"	1.772"	1.378"	1 - 8
21005-60C	CAT50-Coolant-II	60°	0.906"	0.669"	0.827"	3.346"	1.772"	1.378"	1 - 8
21005-90C	CAT50-Coolant-III	90°	0.906"	0.669"	0.827"	3.346"	1.772"	1.378"	1 - 8
21008-15C	CAT50-DIN Coolant	15°	1.101"	0.825"	-	2.640"	1.338"	.984"	1 - 8
21005-C	CAT50-ANSI-C	45°	1.140"	0.820"	0.820"	2.30"	1.00"	.700"	1 - 8

BT Retention Knobs



- All mating surfaces precision ground
- Manufactured to the highest standards for maximum safety and long life
- Hardened for maximum longevity

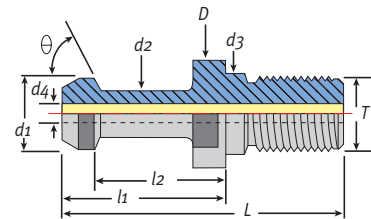
Please make sure that the Retention Knob you order is the correct one for your machine. Using the wrong Retention Knob can cause damage to your machine spindle, the toolholder, and may create a safety hazard.



BT Retention Knobs

Dimensions in millimeters.

Part No.	Description	θ	D	d1	d2	d3	L	l1	l2	T
17801	BT30 - 45°	45°	16.5	11	7	12.5	43	23	18	M12
17803	BT40 - 45°	45°	23	15	10	17	60	35	28	M16
17834	BT40, ANSI, metric thread	45°	23	18.8	12.5	12.4	38	16	11	M16
17805	BT50 - 45°	45°	38	23	17	25	85	45	35	M24
17806	BT30 - 60°	60°	16.5	11	7	12.5	43	23	18	M12
17808	BT40 - 60°	60°	23	15	10	17	60	35	28	M16
17810	BT50 - 60°	60°	38	23	17	25	85	45	35	M24
17812	BT30 - 90°	90°	16.5	11	7	12.5	43	23	8	M12
17814	BT40 - 90°	90°	23	15	10	17	60	35	28	M16
17816	BT50 - 90°	90°	38	23	17	25	85	45	35	M24



BT Coolant Style Retention Knobs

Dimensions in millimeters.

Part No.	Description	θ	D	d1	d2	d3	d4	L	l1	l2	T
17817	BT30 - 45° coolant	45°	16.5	11	7	12.5	4	43	23	18	M12
17818	BT40 - 45° coolant	45°	23	15	10	17	4	60	35	28	M16
17820	BT40 - 60° coolant	60°	23	15	10	17	4	60	35	28	M16
17822	BT40 - 90° coolant	90°	23	15	10	17	4	60	35	28	M16
17824	BT50 - 45° coolant	45°	38	23	17	25	5	85	45	35	M24
17826	BT50 - 60° coolant	60°	38	23	17	25	5	85	45	35	M24
17828	BT50 - 90° coolant	90°	38	23	17	25	5	85	45	35	M24

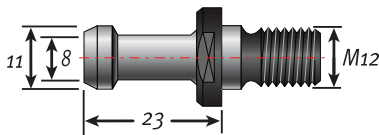
Retention Knobs for CNC Routers



- All mating surfaces precision ground
- Manufactured to the highest standards for maximum safety and long life
- Hardened for maximum longevity

Match the dimensions and appearance of your retention knob to the drawings below. Use the manufacturer's print that came with your machine to verify your selection.

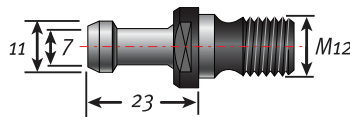
For safe operation, make sure that the pull stud you order is the exact pull stud your machine uses. Using the wrong pull stud can cause damage to the spindle and/or toolholder, and is a safety hazard.



BT30 – 45°

Part No. 07801

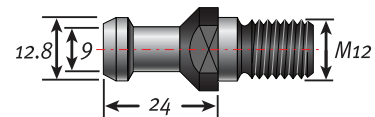
Includes: Heian, Shinx



BT30 – 60°

Part No. 07806

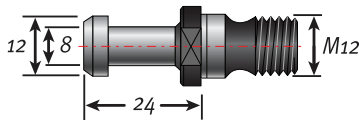
Includes: Shoda, Anderson (1997 and earlier, verify on manufacturer's print)



BT30 KOMO

Part No. 750-19

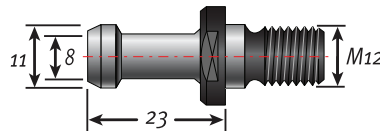
Only for BT30 KOMO routers



BT30 – 90°

Part No. 07812

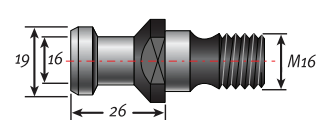
(verify on manufacturer's print)



BT35 – 60°

Part No. 4403502

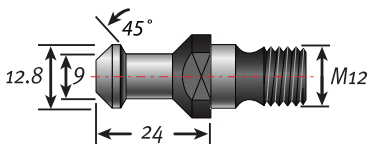
(Heian, verify on manufacturer's print)



DAT 40

Part No. 49003

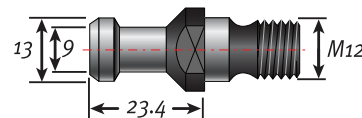
(verify on manufacturer's print)



Colombo ISO30 Ball Style for RS Spindles

Part No. 49001-45

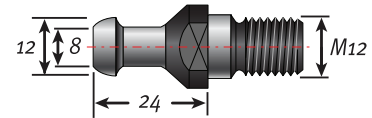
Includes: Motion Master
(verify on manufacturer's print)



For Colombo ISO30 for Billet Spindle

Part No. 49001

Includes: Motion Master, Anderson
(for newer machines, verify on manufacturer's print)



ISO30 For HSD Spindles

Part No. 49019

Includes: Biesse, Bermag, Bussellato, CNT, DMS, CR Onsrud, Masterwood, Thermwood, and Holz-her

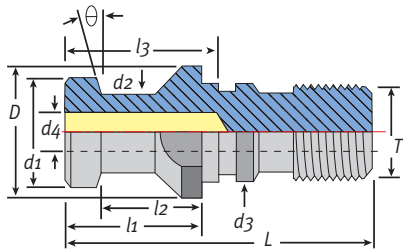
DIN 69871 A & B Retention Knobs & Calibration Tools



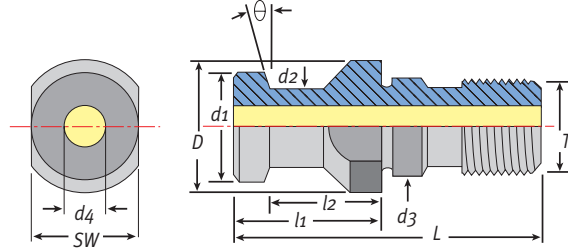
Techniks Retention Knobs

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- Hardened for maximum longevity

Please make sure that the Retention Knob you order is the correct one for your machine. Using the wrong Retention Knob can cause damage to your machine spindle, the toolholder, and may create a safety hazard.



DIN 69871B

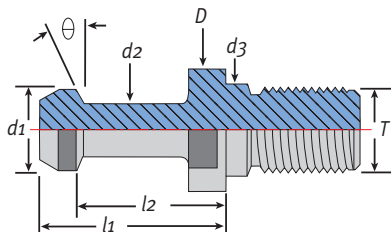


DIN 69871A

DIN 69871 A and B Style Retention Knobs

Dimensions in millimeters.

Part No.	Description	θ	D	d1	d2	d3	d4	L	I1	I2	I3	SW	T
49001	DAT30-A	15°	17	13	9	13	-	44	24	19	-	14	M12
49003	DAT40-A	15°	23	19	14	17	7	54	26	20	-	19	M16
49005	DAT50-A	15°	36	28	21	25	11.5	74	34	25	-	30	M24
49011	DAT30-B	15°	17	13	9	13	-	44	24	19	2.3	14	M12
49013	DAT40-B	15°	23	19	14	17	7	54	26	20	3.0	19	M16
49015	DAT50-B	15°	36	28	21	25	11.5	74	34	25	4.5	30	M24



Hard-To-Find- Retention Knobs

We can get the Retention Knobs you need. Just fill in your dimensions on the chart below before you call.

Keep your information in this catalog for easy re-orders.

Stud	Machine	d1	d2	I1	I2	θ	T



CAT & BT Alignment Tools, HSK Calibration Tools

Part No.	Description
21000-CAT40-3	CAT 40 Alignment Tool - 3 pcs
21000-CAT50-3	CAT 50 Alignment Tool - 3 pcs
16000-BT30-3	BT 30 Alignment Tool - 3 pcs.
171.02.002.000	HSK 63F Calibration Tool - 4.975"



Hand Wrenches for Collet Nuts



DNA slotted wrench



ER hex wrench



ER or TG slotted wrench

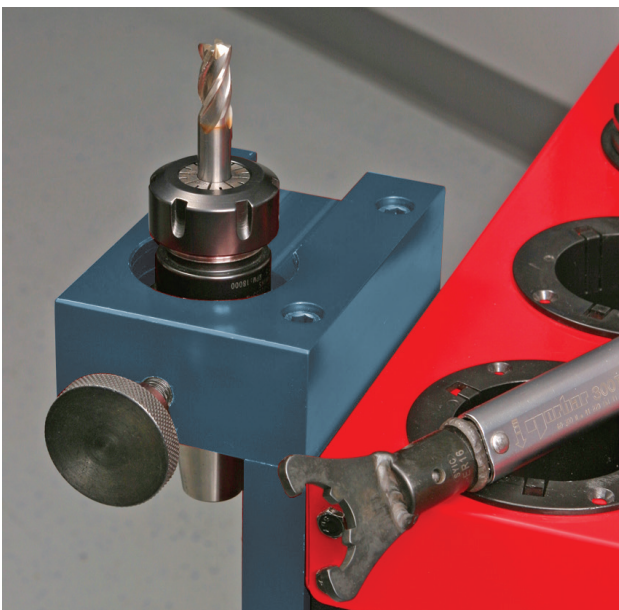


ER mini wrench



TG hook wrench

Note: Correct torque on the collet nut reduces collet wear and improves safety by properly securing cutting tool in the holder. Use the torque chart on page 72 for tightening collet nuts. Do not overtighten nuts or you may damage the collet and/or toolholder.



Use a tightening fixture to secure the toolholder. (pg. 206)

DNA Hand Wrenches

Part No.	Description	Nut Type
DNA11W	DNA 11 wrench	DNA-11
DNA16W	DNA 16 wrench	DNA-16
DNA20W	DNA 20 wrench	DNA-20
DNA32W	DNA 32 wrench	DNA-32
894-22	DNA 16 mini nut wrench	DNA-16 Mini

ER Hex Hand Wrenches

Part No.	Description	Nut Type
894-36	TE-Short wrench	TE Short
04608	ER11-A wrench	A (Hex)
04609	ER16-A wrench	A (Hex)
04610	ER20-A wrench	A (Hex)

ER Slotted Hand Wrenches

Part No.	Description	Nut Type
04613	ER16-E wrench	Slotted
04614	ER20-E wrench	Slotted
04615	ER25-E wrench	Slotted
04616	ER32-E wrench	Slotted
04617	ER40-E wrench	Slotted
04618	ER50-E wrench	Slotted

ER Mini Hand Wrenches

Part No.	Description	Nut Type
04620	ER8-M wrench	ER Mini
04621	ER11-M wrench	ER Mini
04622	ER16-M wrench	ER Mini
04623	ER20-M wrench	ER Mini
04624	ER25-M wrench	ER Mini

TG, SYOZ and Drill Chuck Hand Wrenches

Part No.	Description	Nut Type
04018	TG 75 slotted wrench 45–50mm	TG 75
03691	TG 100/SYOZ 25 hook wrench 55–60mm	TG 100
22220	SYOZ 20 wrench	SYOZ 20
82172	Drill Chuck wrench	Chuck

Adjustable Torque Wrenches & Collet Key Adapters



Torque Wrench Features

- Factory calibrated and certified accuracy +/- 3%
- Easy read dial for fast adjustments to torque value
- Improved locking system for a more secure lock



Set adjustable dial to specified torque, and tighten nut until wrench "clicks".

Improved "pull-release" locking system makes locking wrench at correct torque more secure.

Adjustable Torque Wrench

Part No.	Range	Length	Weight	Spigot	
50TH	7.5-37.5 ft/lbs	12.5"	1.4 lbs	16mm round	NEW
200TH	30-150 ft/lbs	16.5"	1.75 lbs	16mm round	
300TH	45-228 ft/lbs	21.5"	2.5 lbs	16mm round	



ER25 Mini



TG Hook



DNA 16 Slotted



ER Hex



ER Slotted



ER Slotted Enclosed

ER Mini Collet Key Adapters

Part No.	Size	Type	Torque
04576	ER11 mini	mini	12 ft/lbs
04577	ER16 mini	mini	20 ft/lbs
04578	ER20 mini	mini	22 ft/lbs
04587	ER25 mini	mini	28 ft/lbs

ER Hex Collet Key Adapters

Part No.	Size	Type	Torque
04581	ER11 hex	hex	12 ft/lbs
04601-16	ER16 hex	hex	42 ft/lbs
04602-20	ER20 hex	hex	59 ft/lbs

ER Slotted Collet Key Adapters

Part No.	Size	Type	Torque
04581	DNA 11	hex	12 ft/lbs
DNA16TWA	DNA 16	slotted	42 ft/lbs
DNA20TWA	DNA 20	slotted	59 ft/lbs
DNA32TWA	DNA 32	slotted	100 ft/lbs
04588-R	ER 32 Enclosed	slotted	100 ft/lbs
04580-16	ER16 slotted	slotted	42 ft/lbs
04580-20	ER20 slotted	slotted	59 ft/lbs
04603-25	ER25 slotted	slotted	77 ft/lbs
04604-32	ER32 slotted	slotted	100 ft/lbs
04605-40	ER40 slotted	slotted	130 ft/lbs

TG and SYOZ Collet Key Adapters

Part No.	Size	Type	Torque
04018-TWA	TG 75, 45-50mm	hook	90 ft/lbs
03690-25	TG 100/SYOZ25, 55-60mm	hook	90 ft/lbs
04593	SYOZ-20	hook	40 ft/lbs

Retention Knob Sockets Square Drive



Part No.	Size	Flats	Drive	Torque
PSS-30BT	BT30	0.535"	3/8"	36 ft/lbs
PSS-30ISO	ISO 30	0.535"	3/8"	36 ft/lbs
PSS-40	All 40 taper	0.750"	3/8"	76 ft/lbs
PSC-50	CAT50, BT50	1.187"	1/2"	100 ft/lbs

Fixed Head Square Drives

Part No.	Description	Drive
29828	3/8" square drive	3/8"
29827	1/2" square drive	1/2"



Tightening Fixtures For CAT, BT, HSK, & ISO Spindles

Roller Bearing Tightening Fixture

- For CAT, BT, HSK, ISO spindles
- Roller bearing design for the fastest tool changes possible!



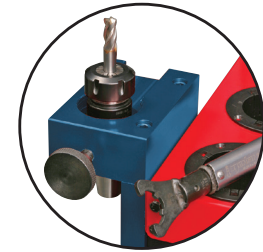
Auto-locking roller bearing design makes tool changes faster and eliminates slippage.

NTS Side Mount Tightening Fixtures

- For CAT, BT, HSK, ISO spindles
- Change knobs from bottom
- Bolts right to workbench



HSK style shown



NOTE: a large set-screw engages the drive slot in BT and CAT holders.

Part No.	Description
17385B	roller bearing fixture for ISO30, SK30, HSK50
17386B	roller bearing fixture for BT30
17386B-35	roller bearing fixture for BT35
17584B	roller bearing fixture for HSK32
17586B	roller bearing fixture for HSK40
17785B	roller bearing fixture for CAT50, BT50
17786B	roller bearing fixture for HSK100
17846B	CAT40, BT40, HSK63A/E/F, C6, ISO40
17387B	Clamping Device - HSK85 Weining

CAT40 and BT30 NTS Fixtures

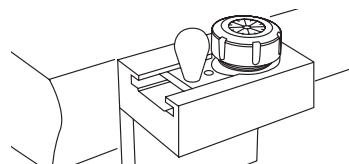
Part No.	Description
NTS-40-TAPER	NTS Fixture for any CAT40 or BT40 taper
NTS-BT30-38	NTS Fixture for BT30 taper - 38mm flats
NTS-BT30-41	NTS Fixture for BT30 taper - 41mm flats
NTS-BT30-SLOT	NTS Fixture for BT30 for drive slots

Top or Side Mount Fixtures

- For CAT, BT, HSK, spindles
- Change knobs from bottom
- Bolts right to workbench



BT, CAT style shown



NOTE: a sliding collar engages the wrench flats on HSK and toolholders without drive slots.

Part No.	Description
17883	top or side mount fixture for BT30, CAT 30
07884	top or side mount fixture for BT40, CAT40
07885	top or side mount fixture for BT50, CAT50
17893	top or side mount fixture for HSK63A, 63B, 63D

HSK63 NTS Fixtures

Part No.	Description
NTS-HSK63A	HSK63A - no flats
NTS-HSK63F-36	HSK63F - 36mm flats
NTS-HSK63F-38	HSK63F - 38mm flats
NTS-HSK63F-41	HSK63F - 41mm flats
NTS-HSK63F-46	HSK63F - 46mm flats

Benchtop Mount Fixture for CAT & BT

Part No.	Description
07852	BT30
07854	BT40
07856	BT50
07870	CAT40
07872	CAT50



ISO NTS Fixtures

Part No.	Description
NTS-ISO20-17	ISO 20 - 17mm flats
NTS-ISO20-22	ISO 20 - 22mm flats
NTS-ISO25-27	ISO 25 - 27mm flats
NTS-ISO30-36	ISO 30 - 36mm flats
NTS-ISO30-38	ISO 30 - 38mm flats
NTS-ISO30-47	ISO 30 - 47mm flats

Spindle Wipers – Analog & Touch Lamp Preset Gauges



Real lambskin provides the best cleaning. Use with any type of machine with a taper of 7/24 CAT, BT or DIN 69871.

Spindle Wipers

- For CAT, BT, ISO, HSK spindles
- Keep spindle and tapers clean

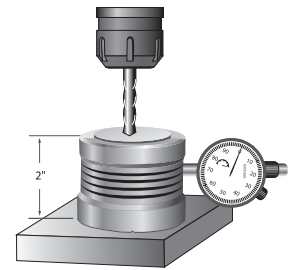
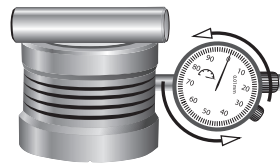
Part No.	Taper	Total Length	Taper Length
17706	30	170	60
17707	40	188	78
17708	50	240	120
38036	HSK63A	165	31
38032	HSK63F	165	31



Analog Axial Preset Gauge

Part No.	Description
17906-2	ZSI-50 preset gauge
17906-04	replacement dial

- Accuracy 0.0002"
- Easy to measure tool depth
- Height 50mm



1. Use the gauge pin included to press down on the spring-loaded center piece as illustrated. Please be sure the gauge pin is placed on the shiny surface.
2. Turn the indicator to read "0", then remove the gauge pin.
3. Put the unit on the workpiece and carefully jog the tool down to make contact with the gauge face. When the gauge reads "0" the tool is 2" above the workpiece.

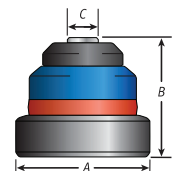


Features

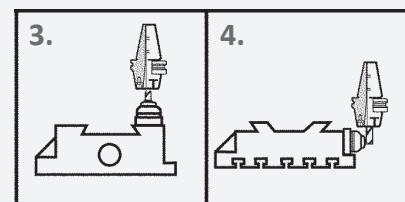
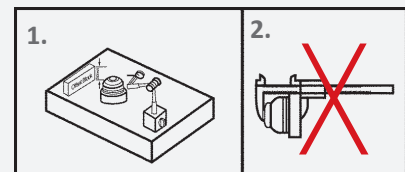
- Accuracy .0002"
- 360° red lamp lights up when touched
- Height 2" (50mm)
- Magnetic base (use vertically or horizontally)

Touch Lamp Axial Preset Gauge

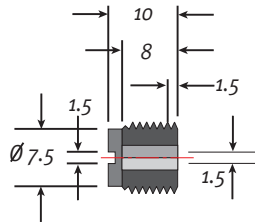
Part No.	Description	A	B	C
07905-2	ZOP-50 Gauge	56mm	50mm or 2"	13.5mm



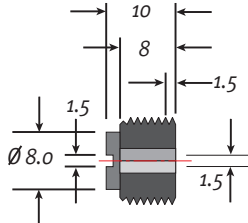
1. Check height of unit with a gauge block and dial indicator. Turn allen screw on the side of the unit if adjustment is needed.
2. Do not use calipers for presetting unit, only use gauge block.
3. Move the cutting tool tip towards the sensor button until the unit lights up, then reverse direction until the light goes off.
4. When presetting diameter, rotate tool slowly for higher precision.



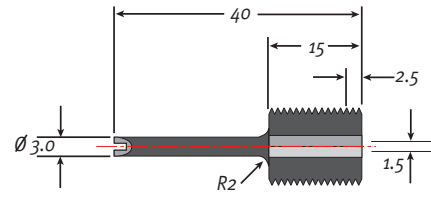
Coolant-Thru Pre-Set Screws



BD-TH-1031



BD-TH-1062



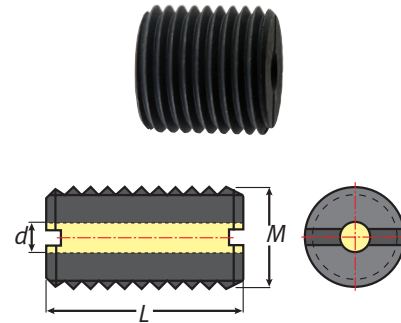
BD-TH-1063

Coolant Set Screws

Part No.	Description
BD-TH-1031	For M10 x 1.5 straight shank chuck with coolant – for small diameter tools
BD-TH-1062	For M12 x 1.75 straight shank chuck w/ coolant – for small diameter tools
BD-TH-1063	Long stop for M12 x 1.75 straight shank chuck w/coolant – for small diameter tools

Coolant Set Screws

Part No.	Description	M	L	d
16080C-20	Coolant Set Screw	M5 x 0.8P	20mm	2.5
16082C-20	Coolant Set Screw	M8 x 1.25P	20mm	4
16083C-20	Coolant Set Screw	M10 x 1.5P	20mm	4
16085C-20	Coolant Set Screw	M12 x 1.75P	20mm	4
16089C-20	Coolant Set Screw	M16 x 02.0P	20mm	5
16091C-20	Coolant Set Screw	M20 x 2.0P	20mm	5



Solid Set Screws for ER and TG Collet Chucks

Part No.	Description	Figure	Collet Series
16081	M 6 x 1.0 P - 15	1	ER11
16083	M 10 x 1.5 P - 15	1	ER16
16085	M 12 x 1.75 P - 15	1	ER20
16087	M 12 x 1.75 P - 25 (extended)	2	ER20
16088	M 8 x 1.25 P -16	1	-
16089	M 16 x 2.0 P - 15	1	ER25 & 32, TG 75
16096	M 16 x 2.0 P - 50	-	-
16091	M 20 x 2.0 P - 15	1	ER40
16094	M 20 x 2.0 P - 50	-	-
16092	M20 x 2.0P - 100	-	-
16093	M 24 x 2.0 P - 15	1	ER50 & TG 100

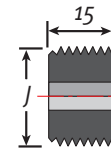


Figure 1

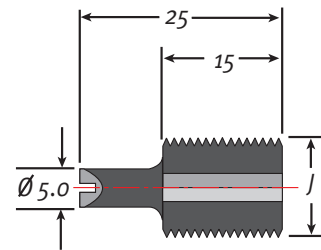


Figure 2

HSKA Coolant Pipe and Wrench for HSKA and HSKE

Part No.	Description	HSK-AE	D	T	Wrench
92002	Coolant Pipe	40	8mm	M12 x 1	91.11.026.002
92003	Coolant Pipe	50	10mm	M16 x 1	92.11.026.003
92004	Coolant Pipe	63	12mm	M18 x 1	93.11.026.004
92005	Coolant Pipe	100	16mm	M24 x 1.5	95.11.026.005

