

Precision Retention Knobs and Setup Equipment

Retention Knobs



- All mating surfaces are precision ground
- Manufactured to the highest standards 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

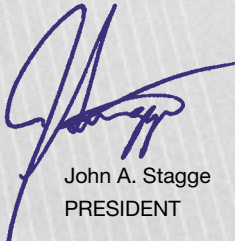


Torque Wrenches and Adapters

*You lose 10% of tool life for every .0001" of T.I.R.
Always torque your retention knobs and collets to
proper torque for best performance and tool life.*

**We don't sell tools.
We sell tool life.**

I guarantee your satisfaction with every Techniks product.



John A. Stagge
PRESIDENT

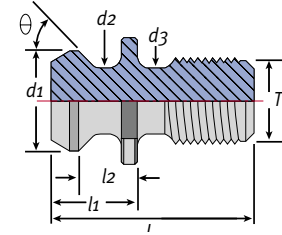
CAT 40 and CAT 50 Precision Retention Knobs



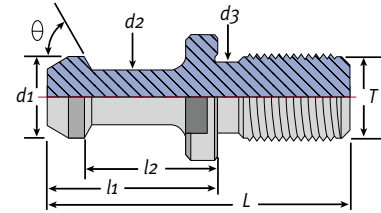
Techniks Retention Knobs

- 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 tool holder, and may create a safety hazard.



ANSI Style



MAS Style

CAT Standard Retention Knobs

Part No.	Type	θ	d1	d2	d3	L	l1	l2	T
21006-15	CAT 40-DIN	15°	.75"	0.55"	0.640"	1.88"	1.024"	.787"	5/8 - 11"
21007-15	CAT 40-DIN	15°	.75"	0.55"	-	1.89"	1.028"	.792"	5/8 - 11"
21003	CAT 40-ANSI	45°	0.740"	0.490"	0.490"	1.50"	0.640"	.440"	5/8 - 11"
21003-45	CAT 40-MAS-I	45°	0.590"	0.394"	0.512"	2.25"	1.266"	.990"	5/8 - 11"
21003-60	CAT 40-MAS-II	60°	0.590"	0.394"	0.512"	2.25"	1.266"	.990"	5/8 - 11"
21003-90	CAT 40-MAS-III	90°	0.590"	0.394"	0.512"	2.25"	1.266"	.990"	5/8 - 11"
21005-45	CAT 50-MAS-I	45°	0.906"	0.669"	0.827"	3.346"	1.772"	1.378"	1 - 8"
21005-60	CAT 50-MAS-II	60°	0.906"	0.669"	0.827"	3.346"	1.772"	1.378"	1 - 8"
21005-90	CAT 50-MAS-III	90°	0.906"	0.669"	0.827"	3.346"	1.772"	1.378"	1 - 8"
21008-15	CAT 50-DIN	15°	1.101"	0.825"	-	2.640"	1.338"	.984"	1 - 8"
21005	CAT 50-ANSI	45°	1.140"	0.820"	0.820"	2.30"	1.00"	.700"	1 - 8"

CAT Coolant Style Retention Knobs

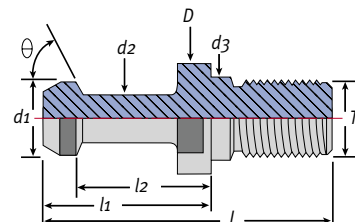
Part No.	Type	θ	d1	d2	d3	L	l1	l2	T
21006-15C	CAT 40-DIN Coolant	15°	.75"	0.55"	0.640"	1.88"	1.024"	.787"	5/8 - 11"
21007-15C	CAT 40-DIN Coolant	15°	.75"	0.55"	-	1.89"	1.028"	.792"	5/8 - 11"
21003-C	CAT 40-ANSI-C	45°	0.740"	0.490"	0.490"	1.50"	0.640"	.440"	5/8 - 11"
21003-45C	CAT 40-Coolant-I	45°	0.590"	0.394"	0.512"	2.25"	1.266"	.990"	5/8 - 11"
21003-60C	CAT 40-Coolant-II	60°	0.590"	0.394"	0.512"	2.25"	1.266"	.990"	5/8 - 11"
21003-90C	CAT 40-Coolant-III	90°	0.590"	0.394"	0.512"	2.25"	1.266"	.990"	5/8 - 11"
21003-45CSF	CAT 40-Coolant-I Slim Fit	45°	0.590"	0.394"	0.512"	2.25"	1.266"	.990"	5/8 - 11"
21003-60CSF	CAT 40-Coolant-II Slim Fit	60°	0.590"	0.394"	0.512"	2.25"	1.266"	.990"	5/8 - 11"
21003-90CSF	CAT 40-Coolant-III Slim Fit	90°	0.590"	0.394"	0.512"	2.25"	1.266"	.990"	5/8 - 11"
21005-45C	CAT 50-Coolant-I	45°	0.906"	0.669"	0.827"	3.346"	1.772"	1.378"	1 - 8"
21005-60C	CAT 50-Coolant-II	60°	0.906"	0.669"	0.827"	3.346"	1.772"	1.378"	1 - 8"
21005-90C	CAT 50-Coolant-III	90°	0.906"	0.669"	0.827"	3.346"	1.772"	1.378"	1 - 8"
21008-15C	CAT 50-DIN Coolant	15°	1.101"	0.825"	-	2.640"	1.338"	.984"	1 - 8"
21005-C	CAT 50-ANSI-C	45°	1.140"	0.820"	0.820"	2.30"	1.00"	.700"	1 - 8"

BT Retention Knobs



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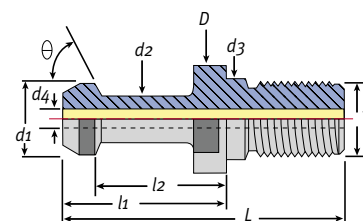


Please make sure that the Retention Knob you order is the correct one for your machine. Using the wrong Retention Knob can cause damage to your machine spindle, the tool holder, and may create a safety hazard.

BT Standard Retention Knobs

Dimensions in millimeters.

Part No.	Description	θ	D	d1	d2	d3	L	l1	l2	T
07801	BT 30 - 45°	45°	16.5	11	7	12.5	43	23	18	M12
07801-C	BT 30 - 45° coolant style	45°	16.5	11	7	12.5	43	23	18	M12
07803	BT 40 - 45°	45°	23	15	10	17	60	35	28	M16
07834	BT 40, ANSI, metric thread	45°	23	18.8	12.5	12.4	38	16	11	M16
07805	BT 50 - 45°	45°	38	23	17	25	85	45	35	M24
07806	BT 30 - 60°	60°	16.5	11	7	12.5	43	23	18	M12
07808	BT 40 - 60°	60°	23	15	10	17	60	35	28	M16
07810	BT 50 - 60°	60°	38	23	17	25	85	45	35	M24
07812	BT 30 - 90°	60°	16.5	11	7	12.5	43	23	8	M12
07814	BT 40 - 90°	60°	23	15	10	17	60	35	28	M16
07816	BT 50 - 90°	60°	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
17836	BT 40, ANSI, metric, coolant	45°	-	18.8	12.5	12.5	6.8	38	16	11	M16
17818	BT 40 - 45° coolant	45°	23	15	10	17	4	60	35	28	M16
17820	BT 40 - 60° coolant	60°	23	15	10	17	4	60	35	28	M16
17822	BT 40 - 90° coolant	90°	23	15	10	17	4	60	35	28	M16
17824	BT 50 - 45° coolant	45°	38	23	17	25	5	85	45	35	M24
17826	BT 50 - 60° coolant	60°	38	23	17	25	5	85	45	35	M24
17828	BT 50 - 90° coolant	90°	38	23	17	25	5	85	45	35	M24

DIN 69871 A & B Retention Knobs – ER Pre-set Screws



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DIN 69871 A and B Style Retention Knobs

Dimensions in millimeters.

Part No.	Description	D	d1	d2	d3	d4	L	l1	l2	l3	SW	T
13001	DAT30-A	17	13	9	13	-	44	24	19	-	14	M12
13003	DAT40-A	23	19	14	17	7	54	26	20	-	19	M16
13005	DAT50-A	36	28	21	25	11.5	74	34	25	-	30	M24
13011	DAT30-B	17	13	9	13	-	44	24	19	2.3	14	M12
13013	DAT40-B	23	19	14	17	7	54	26	20	3.0	19	M16
13015	DAT50-B	36	28	21	25	11.5	74	34	25	4.5	30	M24

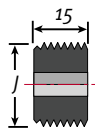
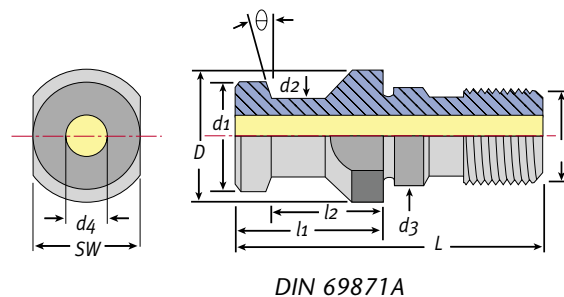
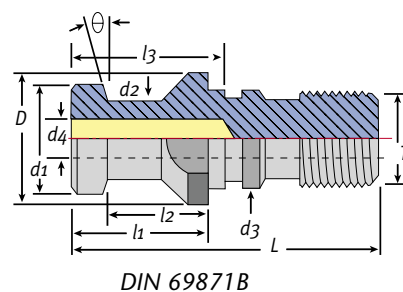


Figure 1

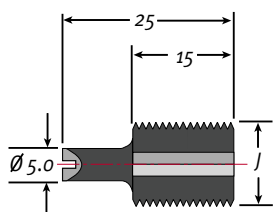
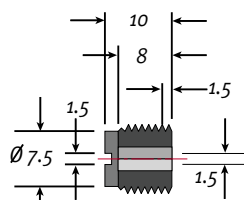
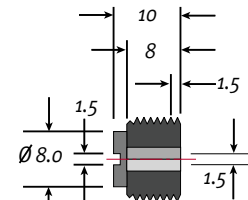


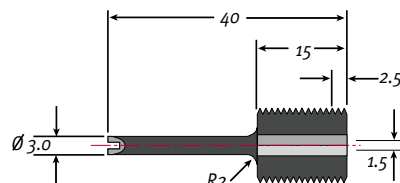
Figure 2



BD-TH-1031



BD-TH-1062



BD-TH-1063

Solid Pre-set Screws for ER and TG Collet Chucks

Part No.	Description	Figure
06081	M 6 x 1.0 P - 15	1
06083	M 10 x 1.5 P - 15	1
06085	M 12 x 1.75 P - 15	1
06087	M 12 x 1.75 P - 25 (extended)	2
06089	M 16 x 2.0 P - 15	1
06091	M 20 x 2.0 P - 15	1
06093	M 24 x 2.0 P - 15	1

Coolant Thru Pre-Set Screws

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

CNC Router Retention Knobs

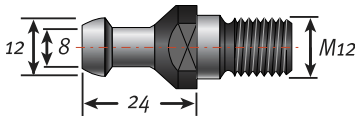


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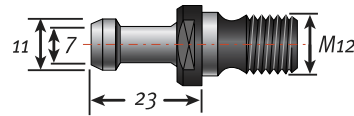
CNC Router Retention Knobs

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.



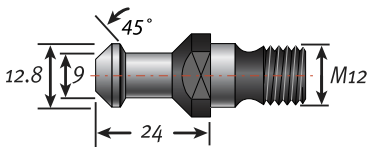
No. 49019 (for HSD spindles)

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



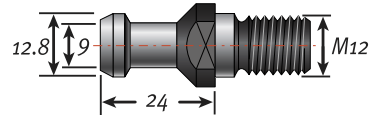
No. 07806 (BT 30 – 60°)

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



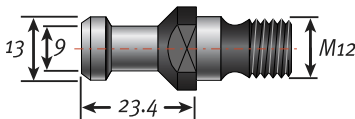
No. 49001-45 (Colombo ISO 30 ball style for RS spindles)

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



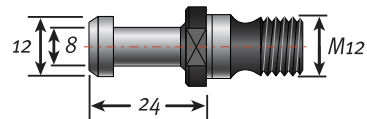
No. 750-19 (BT 30 KOMO)

Includes: Only for BT 30 KOMO routers



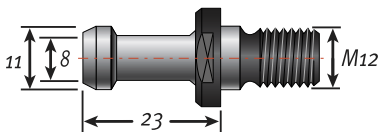
No. 13001 (for Colombo ISO 30 billet spindle)

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



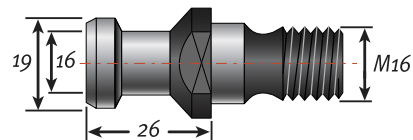
No. 07812 (BT 30 – 90°)

(verify on manufacturer's print)



No. 07801 (BT 30 – 45°)

Includes: Heian, Shinx



No. 13003 (DAT 40)

(verify on manufacturer's print)



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Hand Wrenches for Collet Nuts



DNA slotted wrench



ER hex wrench



ER slotted wrench

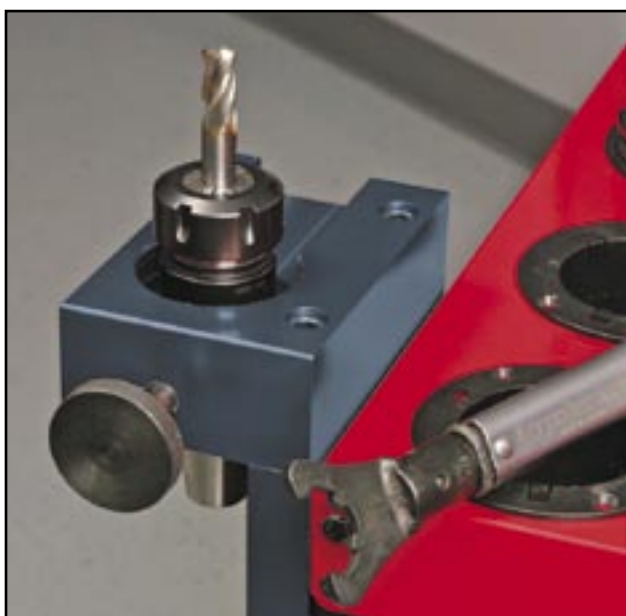


ER mini wrench



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 109 for tightening collet nuts. Do not overtighten nuts or you may damage the collet and/or toolholder.



Use a tightening fixture to secure the tool holder. (pg. 168)

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 mini nut wrench	DNA-Mini

ER Hex Hand Wrenches

Part No.	Description	Nut Type
894-36	TE-Short wrench	TE Short
04608	ER 11-A wrench	A (Hex)
04609	ER 16-A wrench	A (Hex)
04610	ER 20-A wrench	A (Hex)

ER Slotted Hand Wrenches

Part No.	Description	Nut Type
04613	ER 16-E wrench	Slotted
04614	ER 20-E wrench	Slotted
04615	ER 25-E wrench	Slotted
04616	ER 32-E wrench	Slotted
04617	ER 40-E wrench	Slotted
04618	ER 50-E wrench	Slotted

ER Mini Hand Wrenches

Part No.	Description	Nut Type
04620	ER 8-M wrench	ER Mini
04621	ER 11-M wrench	ER Mini
04622	ER 16-M wrench	ER Mini
04623	ER 20-M wrench	ER Mini
04624	ER 25-M wrench	ER Mini

TG Hand Wrenches

Part No.	Description	Nut Type
04018	TG 75 wrench	Hook Type
03691	TG 100 wrench	Hook Type

Adjustable Torque Wrenches and Collet Key Adapters



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

Torque Wrench Features

- Provides proper tightening for cutting tool life
- Easy read dial for fast adjustments to torque value
- Prevent tool accidents

Adjustable Torque Wrench

Part No.	Range	Length	Weight	Spigot
60 TH	5-45 ft/lbs	12"	1 lb.	16mm round
200 TH	30-150 ft/lbs	16.5"	1.75 lbs	16mm round
300 TH	45-228 ft/lbs	21.5"	2.5 lbs	16mm round



ER 25 Mini



TG Hook



DNA 16 Slotted



ER Hex



ER Slotted

ER Mini Collet Key Adapters

Part No.	Size	Type	Torque
04576	ER 11 mini	mini	14 ft/lbs
04577	ER 16 mini	mini	22 ft/lbs
04578	ER 20 mini	mini	25 ft/lbs
04587	ER 25 mini	mini	29 ft/lbs

ER Hex Collet Key Adapters

Part No.	Size	Type	Torque
04601-16	ER 16 hex	hex	50 ft/lbs
04602-20	ER 20 hex	hex	75 ft/lbs

ER Slotted Collet Key Adapters

Part No.	Size	Type	Torque
DNA16TWA	DNA 16	slotted	50 ft/lbs
04580-16	ER 16 slotted	slotted	50 ft/lbs
04580-20	ER 20 slotted	slotted	75 ft/lbs
04603-25	ER 25 slotted	slotted	95 ft/lbs
04604-32	ER 32 slotted	slotted	125 ft/lbs
04605-40	ER 40 slotted	slotted	140 ft/lbs
04604-32	TG 75	slotted	100 ft/lbs

Hook Collet Key Adapters

Part No.	Size	Type	Torque
03690-25	TG 100/SYOZ 25	hook	100 ft/lbs
SYOZ-TWA	SYOZ-20	hook	45 ft/lbs

Retention Knob Sockets – Square Drive

Part No.	Size	Flats	Drive	Torque
PSS-30BT	BT 30	0.535"	3/8"	40 ft/lbs
PSS-30ISO	ISO 30	0.535"	3/8"	40 ft/lbs
PSS-40	All 40 taper	0.750"	3/8"	85 ft/lbs
PSSC-50	CAT 50, BT 50	1.187"	1/2"	110 ft/lbs



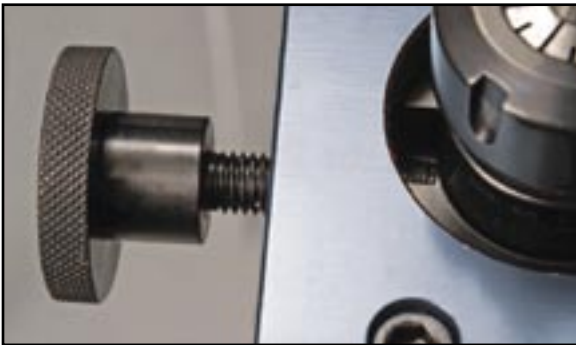
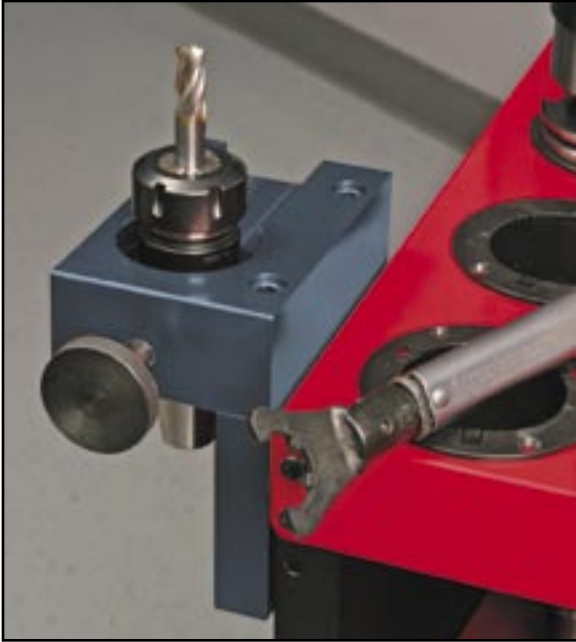
Fixed Head Square Drives

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



*Recommended Torque is 80 – 90 % of value given.

NTS Fixtures For CAT, BT, HSK, and ISO Spindles



NTS Side Mount Fixtures

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



A sliding collar engages the wrench flats on HSK and toolholders without drive slots.

A large set-screw engages the drive slot in BT and CAT holders.

40 Taper and BT 30 NTS Fixtures

Part No.	Description
NTS-40 Taper	Any CAT 40 or BT 40 taper
NTS-BT30-38	BT 30 taper - 38mm flats
NTS-BT30-41	BT 30 taper - 41mm flats
NTS-BT30-Slot	BT 30 for drive slots

HSK 63 NTS Fixtures

Part No.	Description
NTS-HSK63A	HSK63A - no flats
NTS-HSK63F-36	HSK 63F - 36mm flats
NTS-HSK63F-38	HSK 63F - 38mm flats
NTS-HSK63F-41	HSK 63F - 41mm flats
NTS-HSK63F-46	HSK 63F - 46mm flats

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

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

TSHG Tightening Fixture

- For CAT, BT, HSK, ISO spindles
- Change knobs from bottom
- Use with a height gauge to preset tools



Top or Side Mount Fixtures

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



Benchtop Mount Fixtures

- For CAT, BT spindles
- Bolts right to workbench



Benchtop Mount Fixtures

Part No.	Description
07852	BT 30
07854	BT 40
07856	BT 50
07870	CAT 40
07872	CAT 50

TSHG Tightening Fixtures

Part No.	Description
TSHG1-40-CT	CAT 40 taper
TSHG1-40-BT	BT 40 taper
TSHG1-30-41	BT 30 taper, 41mm flats
TSHG1-63F-36	HSK 63F, 36mm flats
TSHG1-63F-38	HSK 63F, 38mm flats
TSHG1-63F-46	HSK 63F, 46mm flats
TSHG1-30-36	ISO 30 taper, 36mm flats
TSHG1-30-38	ISO 30 taper, 38mm flats
TSHG1-30-47	ISO 30 taper, 47mm flats

Top or Side Mount Fixtures

Part No.	Description
17883	BT 30, CAT 30
07884	BT 40, CAT 40
07885	BT 50, CAT 50
17893	HSK 63A, 63B, 63D

Spindle Wipers – Analog and Touch Lamp Preset Gauges

Retention Knobs and Setup Equipment



Spindle Wipers

- For CAT, BT, HSK spindles
- Remove contaminants from spindles and holders

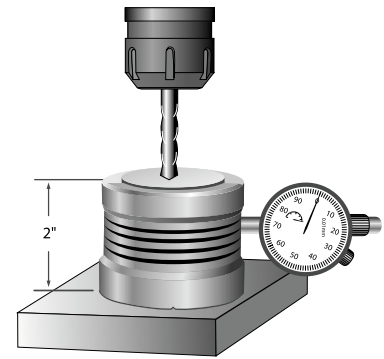
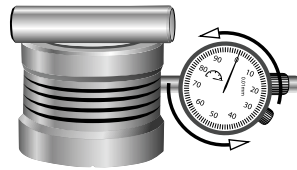
Part No.	Taper	Total	Taper
17706	30	170mm	60mm
17707	40	188mm	78mm
17708	50	240mm	120mm
07710	HSK 63A	165mm	31mm
07711	HSK 63F	165mm	31mm

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



Analog Axial Preset Gauge Features

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



Analog Axial Preset Gauge

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

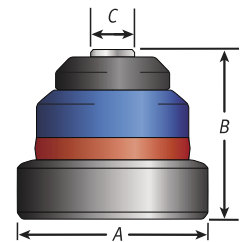
1. Use the gauge pin included to press down on the spring-loaded center piece as illustrated. Please be sure the gauge pin is placed on the shiny surface.
2. Turn the indicator to read "0", then remove the gauge pin.

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.



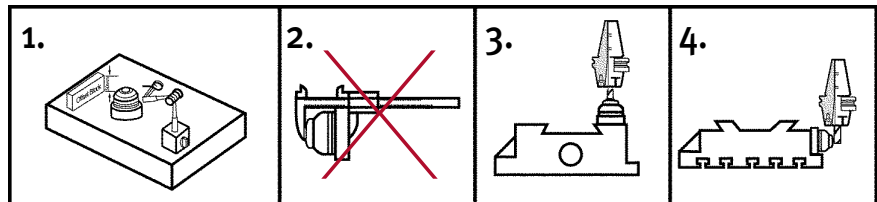
Touch Lamp Axial Preset Gauge Features

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



Instructions

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.



Touch Lamp Axial Preset Gauge

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