



Retention Knob Features

Retention knobs come in many shapes and sizes. Many machining center manufacturers use different configurations on each of their models. Please provide us with the following information when ordering retention knobs:

- Machining Center Taper Size (40, 50 taper etc.) and flange type (CAT or BT)
- Brand and model of machining center
- Drawing of retention knob (if available)

CAT Retention Knobs



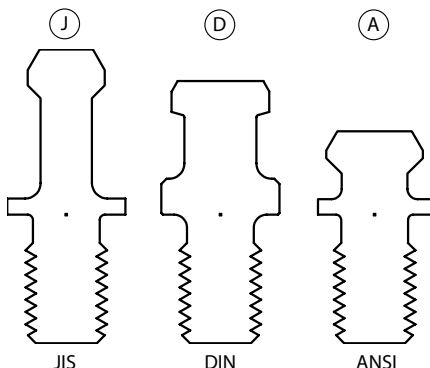
- Class 3A UNC Thread
- Magnetic particle crack tested
- Tensile and shear requirements per ISO and JIS standard
- All locations that make contact with ground spindle mechanism components are ground or hard turned
- Base of pullstud flange is ground to assure perpendicular alignment between pullstud and taper of toolholder
- Tight pitch diameter tolerance helps maintain accurate concentricity between threads and knob limiting the expansion or flaring of the small end of the taper

BT Retention Knobs

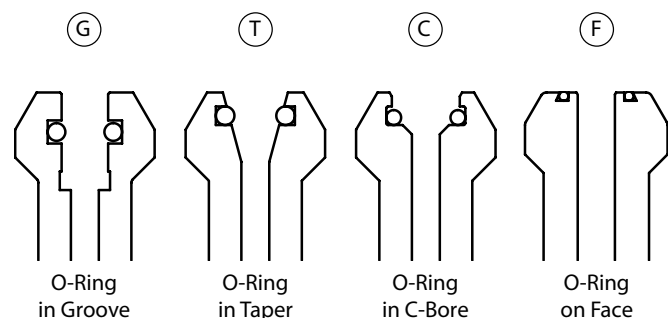


- Class 4g6g metric thread
- Magnetic particle crack tested
- Tensile and shear requirements per JIS 6339
- All locations of the pullstud that make contact with ground spindle mechanism components are ground
- Base of pullstud flange is ground to assure perpendicular alignment between pullstud and taper of toolholder
- Ground Pilot and tight pitch diameter tolerance help maintain accurate concentricity between threads and knob limiting the expansion or flaring of the small end of the taper

Retention Knob Style

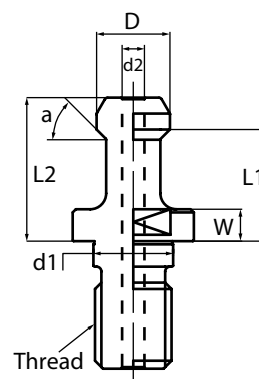


O-Ring Type



CAT Retention Knobs

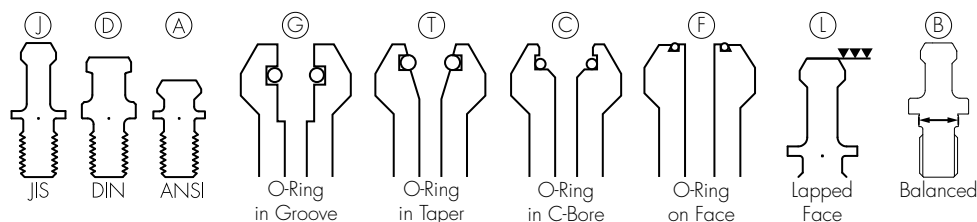
Part Number	D	d1	d2	L1	L2	Angle Degree	W	Thread	O-Ring	Torque Range (Ft-lbs)	Torque Wrench Attachment*	Style
C40-1500	0.748	0.512	0.276	0.793	1.030	15	0.276	5/8"-11	—	44-59	TQW-PS(19)	D
C40-1500(R)	0.748	0.641	0.276	0.793	1.030	15	0.275	5/8"-11	S-15	44-59	TQW-PS(19)	D
C40-1500-MORI	0.748	0.641	0.276	0.793	1.030	15	0.236	5/8"-11	S-15, P-9	44-59	TQW-PS(19)	D, T
C40-4500	0.591	0.512	—	0.990	1.266	45	0.124	5/8"-11	—	44-59	TQW-PS(19)	J
C40-4500(H)	0.591	0.512	0.177	0.990	1.266	45	0.124	5/8"-11	—	44-59	TQW-PS(19)	J
C40S-4500	0.591	0.512	—	0.990	1.266	45	0.236	5/8"-11	—	44-59	TQW-PS(19)	J
C40S-4500(H)	0.591	0.512	0.177	0.990	1.266	45	0.236	5/8"-11	—	44-59	TQW-PS(19)	J
C40-6000	0.591	0.512	—	0.990	1.266	30	0.124	5/8"-11	—	44-59	TQW-PS(19)	J
C40-6000(H)	0.591	0.512	0.177	0.990	1.266	30	0.124	5/8"-11	—	44-59	TQW-PS(19)	J
C40S-6000	0.591	0.512	—	0.990	1.266	30	0.236	5/8"-11	—	44-59	TQW-PS(19)	J
C40-9000	0.591	0.512	—	0.990	1.266	90	0.124	5/8"-11	—	44-59	TQW-PS(19)	J
C40S-9000	0.591	0.512	—	0.990	1.266	90	0.236	5/8"-11	—	44-59	TQW-PS(19)	J
C40-STD	0.740	0.512	0.276	0.433	0.640	45	0.118	5/8"-11	—	44-59	TQW-PS(19)	A
C40-STD(B)	0.740	0.641	0.276	0.433	0.640	45	0.118	5/8"-11	—	44-59	TQW-PS(19)	A, B
C50-1500	1.102	0.827	0.394	0.992	1.346	15	0.276	1"-8	—	85-110	TQW-PS(30)	D
C50-1500(ISO)	1.102	0.827	0.433	0.984	1.339	15	0.197	1"-8	—	85-110	TQW-PS(30)	D
C50-4500	0.906	0.827	—	1.386	1.780	45	0.394	1"-8	—	85-110	TQW-PS(30)	J
C50-4500(B)	0.906	1.031	—	1.386	1.780	45	0.394	1"-8	—	85-110	TQW-PS(30)	J, B
C50-4500(H)	0.906	0.827	0.236	1.386	1.780	45	0.394	1"-8	—	85-110	TQW-PS(30)	J
C50-6000	0.906	0.827	—	1.386	1.780	30	0.394	1"-8	—	85-110	TQW-PS(30)	J
C50-6000(H)	0.906	0.827	0.236	1.386	1.780	30	0.394	1"-8	—	85-110	TQW-PS(30)	J
C50-9000	0.906	0.827	—	1.386	1.780	90	0.394	1"-8	—	85-110	TQW-PS(30)	J
C50-9000(H)	0.906	0.827	0.236	1.386	1.780	90	0.394	1"-8	—	85-110	TQW-PS(30)	J
C50-STD	1.142	0.768	0.461	0.701	1.000	45	0.197	1"-8	—	85-110	TQW-PS(32)	A
C50-STD(B)	1.142	1.031	0.461	0.701	1.000	45	0.197	1"-8	—	85-110	TQW-PS(32)	A, B
C50-MAKINO	0.906	0.984	0.236	1.378	1.772	45	0.394	1"-8	P-22	85-110	TQW-PS(30)	J, L
C50-OKUMA(OH)	0.906	0.945	0.236	1.378	1.772	30	0.394	1"-8	N-24	85-110	TQW-PS(30)	J, L
PS-B61	0.906	1.024	0.236	1.378	1.772	30	0.394	1"-8	N-24	85-110	TQW-PS(30)	J, L



The drawing above details the seven critical dimensions needed to determine which retention stud is required.

Please have these dimensions ready when you place your order, so that we may easily and quickly determine which retention stud is needed for your machining center.

Retention Knob Style Reference



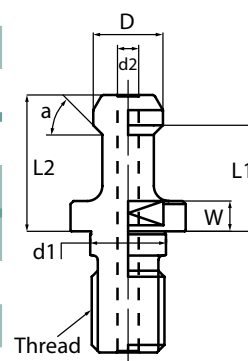
A = ANSI Style Knob
B = Balanced Knob (With Pilot Dia.)
C = O-Ring in C-Bore
D = DIN Style Knob
F = O-Ring on Face
G = O-Ring in Groove
J = JIS Style Knob
L = Lapped Face
T = O-Ring in Taper

Note: *Torque Wrench sold separately from Torque Wrench Attachments. See page 244 for more details.

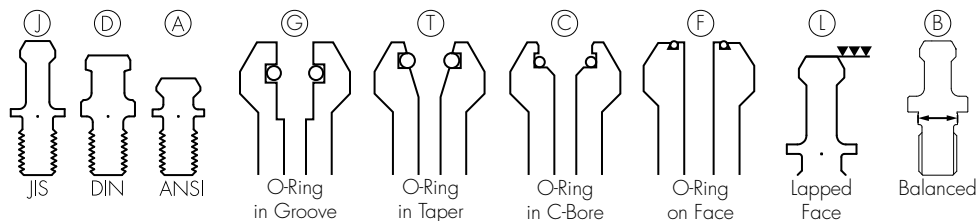
BT Retention Knobs

Part Number	D	d1	d2	L1	L2	Angle Degree	W	Thread	O-Ring	Torque Range (FtLbs)	Torque Wrench Attachment*	Style
PS-16	0.433	0.492	—	0.709	0.906	45	0.197	M12 P-1.75	—	16-18	TQW-PS(13)	J
PS-17	0.433	0.492	—	0.709	0.906	30	0.197	M12 P-1.75	—	16-18	TQW-PS(13)	J
PS-130E	0.433	0.492	0.197	0.709	0.906	30	0.197	M12 P-1.75	P-9	16-18	TQW-PS(13)	J, L
PS-132	0.433	0.492	0.157	0.709	0.906	45	0.197	M12 P-1.75	P-9	16-18	TQW-PS(13)	J
PS-801	0.472	0.492	—	0.724	0.921	15	0.197	M12 P-1.75	—	16-18	TQW-PS(13)	J, D
B30-4500	0.433	0.492	—	0.709	0.906	45	0.197	M12 P-1.75	—	16-18	TQW-PS(13)	J
B30-6000	0.433	0.492	—	0.709	0.906	30	0.197	M12 P-1.75	—	16-18	TQW-PS(13)	J
B35-6000	0.539	0.512	—	0.886	1.102	30	0.197	M12 P-1.75	—	16-18	—	J
B35-9000	0.551	0.512	—	0.709	0.906	90	0.197	M12 P-1.75	—	16-18	—	J
PS-1	0.591	0.669	—	1.102	1.378	45	0.236	M16 P-2	—	44-59	TQW-PS(19)	J
PS-805	0.748	0.669	—	0.906	1.142	15	0.276	M16 P-2	—	44-59	TQW-PS(19)	J
B40-1500	0.748	0.669	0.276	0.906	1.142	15	0.276	M16 P-2	—	44-59	TQW-PS(19)	D
B40-1500(R)	0.748	0.669	0.276	0.906	1.142	15	0.276	M16 P-2	AS568-015	44-59	TQW-PS(19)	D
B40-1500(ISO)	0.748	0.669	0.276	0.906	1.142	15	0.335	M16 P-2	P-9	44-59	TQW-PS(19)	D, T
B40-1500-MORI	0.748	0.669	0.276	0.906	1.142	15	0.335	M16 P-2	S-15, P-9	44-59	TQW-PS(19)	D, T
B40-4500	0.591	0.669	—	1.102	1.378	45	0.236	M16 P-2	—	44-59	TQW-PS(19)	J
B40-4500(H)	0.591	0.669	0.181	1.102	1.378	45	0.236	M16 P-2	—	44-59	TQW-PS(19)	J
B40-6000	0.591	0.669	—	1.102	1.378	30	0.236	M16 P-2	—	44-59	TQW-PS(19)	J
B40-9000	0.591	0.669	—	1.102	1.378	90	0.236	M16 P-2	—	44-59	TQW-PS(19)	J
B40-FADAL	0.740	0.669	—	0.552	0.752	45	0.236	M16 P-2	—	44-59	TQW-PS(19)	A
B50-4500	0.906	0.984	—	1.378	1.772	45	0.394	M24 P-3	—	85-110	TQW-PS(30)	J
B50-4500(H)	0.906	0.984	0.276	1.378	1.772	45	0.394	M24 P-3	—	85-110	TQW-PS(30)	J
B50-6000	0.906	0.984	—	1.378	1.772	30	0.394	M24 P-3	—	85-110	TQW-PS(30)	J
B50-6000(H)-EU	0.906	0.984	0.276	1.378	1.772	30	0.394	M24 P-3	—	85-110	TQW-PS(30)	J
B50-9000(H)	0.906	0.984	0.276	1.378	1.772	90	0.394	M24 P-3	—	85-110	TQW-PS(30)	D

Note: *Torque Wrench sold separately from Torque Wrench Attachments. See page 244 for more details.



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 J = JIS Style Knob
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Retention Knob Inquiry Form

CUSTOMER NAME:

ADDRESS:

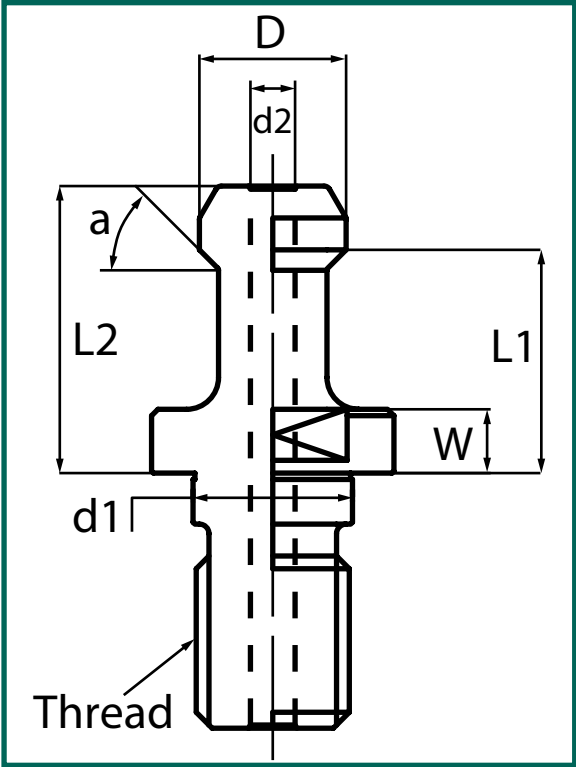
CITY / STATE / ZIP:

CONTACT:

PHONE:

EMAIL:

Please complete form with as much information as possible and return to Lyndex-Nikken.



Machine Information			Required Dimensions					Coolant Through		
Machine Make	Machine Model	Machine Taper	L1	L2	W	a	Thread	d1	d2	O-Ring (Y/N)

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