


# Pivot Pins - Diameter Tolerance Selectable / Length Configurable



RoHS

Type	Material	Hardness	Surface Treatment	Accessories	Accessories		
				Shape C (Retaining Ring)	Shape B (Lock Nut)		
KCL	1045 Carbon Steel	40-45HRC	Black Oxide	Retaining Ring 1 pc.	Nut 1 pc.		
KCLH						M Spring Steel	M SWRCH Carbon Steel
PKCL						M 304 Stainless Steel	M 304 Stainless Steel
PKCLH						M 304 Stainless Steel	M 304 Stainless Steel
KCLS	304 Stainless Steel	-	-	M 304 Stainless Steel	M 304 Stainless Steel		
KCLSH	440C Stainless Steel	45-50HRC	-	M 304 Stainless Steel	M 304 Stainless Steel		

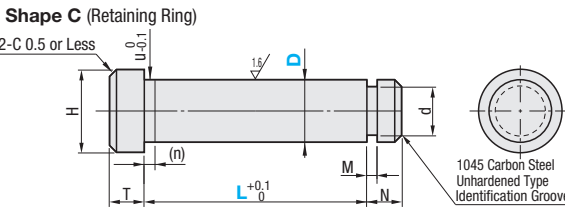
Tolerance Selection						
D	M	P	H	F	C	*LF
	m6	p6	h7	f8	c9	-
2.3	+0.008 +0.002	+0.012 +0.006	0 -0.010	-0.006 -0.020	-0.060 -0.085	-0.025 -0.034
4.5, 6	+0.012 +0.004	+0.020 +0.012	0 -0.012	-0.010 -0.028	-0.070 -0.100	-0.025 -0.037
8, 10	+0.015 +0.006	+0.024 +0.015	0 -0.015	-0.013 -0.035	-0.080 -0.116	-0.025 -0.040
12-18	+0.018 +0.007	+0.029 +0.018	0 -0.018	-0.016 -0.043	-0.095 -0.138	-0.025 -0.043
20-25	+0.021 +0.008	+0.035 +0.022	0 -0.021	-0.020 -0.053	-0.110 -0.162	-0.025 -0.046

\*LF tolerances are recommended values for Multi-Layer Oil Free Bushings LF Type (MDZB, MDZF).

⚡ KCLSH \_ \_ may be discolored by hardening.

⚡ Relief dimension under the shoulder is for reference.

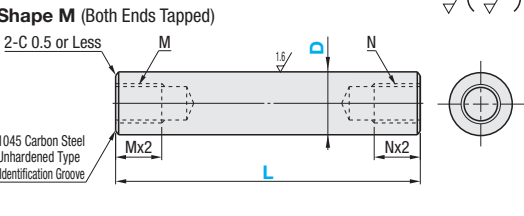
**Shape C (Retaining Ring)**



2-C 0.5 or Less

1045 Carbon Steel Unhardened Type Identification Groove

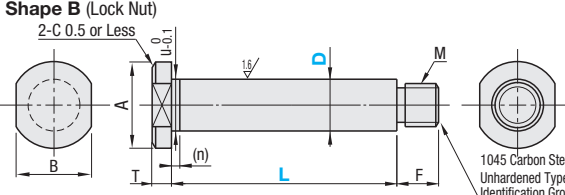
**Shape M (Both Ends Tapped)**



2-C 0.5 or Less

1045 Carbon Steel Unhardened Type Identification Groove

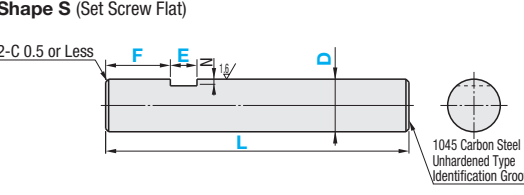
**Shape B (Lock Nut)**



2-C 0.5 or Less

1045 Carbon Steel Unhardened Type Identification Groove

**Shape S (Set Screw Flat)**



2-C 0.5 or Less

1045 Carbon Steel Unhardened Type Identification Groove

Alterations

Part Number - L - (NC, TC...etc.)

KCLCF15 - 120.3 - NC3.5 - TC3.5

Alterations	Retaining Ring Groove Position	Shoulder Thickness	Thread Length	Thread Diameter	Shoulder Thickness	L Dimension Tolerance																																
	Shape C NC	Shape C TC	Shape B FC	Shape B MC	Shape B TC	Shape B LKC																																
Code	NC	TC	FC	MC	TC	LKC																																
Spec.	<p>Ordering Code: NC3.5</p> <table border="1"> <tr><th>D</th><th>NC</th></tr> <tr><td>2-4</td><td>1.5-3</td></tr> <tr><td>5</td><td>1.7-3</td></tr> <tr><td>6</td><td>1.9-4</td></tr> <tr><td>8</td><td>2.4-5</td></tr> <tr><td>10-18</td><td>2.7-5</td></tr> <tr><td>20-25</td><td>2.9-5</td></tr> </table> <p>Overall Length is L+NC+T.</p>	D	NC	2-4	1.5-3	5	1.7-3	6	1.9-4	8	2.4-5	10-18	2.7-5	20-25	2.9-5	<p>Ordering Code: TC3</p> <p>TC=0.5mm Increment</p> <p>T&lt;TC&lt;5</p> <p>Overall Length is L+N+TC.</p>	<p>Ordering Code: FC4</p> <p>FC=1mm Increment</p> <p>M (MC) ≤ FC ≤ M (MC) x3</p>	<p>Ordering Code: MC3</p> <table border="1"> <tr><th>D</th><th>MC (Selection Range)</th></tr> <tr><td>5</td><td>3</td></tr> <tr><td>6</td><td>3 4</td></tr> <tr><td>8</td><td>3 4 5</td></tr> <tr><td>10</td><td>4 5 6</td></tr> <tr><td>12</td><td>5 6 8</td></tr> <tr><td>13-18</td><td>6 8 10</td></tr> <tr><td>20, 22</td><td>8 10 12</td></tr> <tr><td>25</td><td>10 12</td></tr> </table> <p>Not applicable to D4.</p>	D	MC (Selection Range)	5	3	6	3 4	8	3 4 5	10	4 5 6	12	5 6 8	13-18	6 8 10	20, 22	8 10 12	25	10 12	<p>Ordering Code: TC3</p> <p>TC=0.5mm Increment</p> <p>2≤TC≤5</p>	<p>Ordering Code: LKC</p> <p>Changes L dimension tolerance to ±0.05.</p>
D	NC																																					
2-4	1.5-3																																					
5	1.7-3																																					
6	1.9-4																																					
8	2.4-5																																					
10-18	2.7-5																																					
20-25	2.9-5																																					
D	MC (Selection Range)																																					
5	3																																					
6	3 4																																					
8	3 4 5																																					
10	4 5 6																																					
12	5 6 8																																					
13-18	6 8 10																																					
20, 22	8 10 12																																					
25	10 12																																					
Price Adder																																						

Alterations	Thread Diameter	Tapping																													
	Shape M MC NC	Shape S MMC																													
Code	MC, NC	MMC																													
Spec.	<p>Ordering Code: MC3</p> <table border="1"> <tr><th>D</th><th>MC, NC (Selection Range)</th></tr> <tr><td>8</td><td>3 4</td></tr> <tr><td>10, 12</td><td>4 5</td></tr> <tr><td>13-15</td><td>5 6</td></tr> <tr><td>16-18</td><td>6 8</td></tr> <tr><td>20, 22</td><td>8 10</td></tr> <tr><td>25</td><td>10 12</td></tr> </table>	D	MC, NC (Selection Range)	8	3 4	10, 12	4 5	13-15	5 6	16-18	6 8	20, 22	8 10	25	10 12	<p>Ordering Code: MMC</p> <table border="1"> <tr><th>D</th><th>M (Coarse Thread)</th><th>ℓ</th></tr> <tr><td>6-14</td><td>M3</td><td>6</td></tr> <tr><td>8-14</td><td>M4</td><td>8</td></tr> <tr><td>15-22</td><td>M6</td><td>12</td></tr> <tr><td>25</td><td>M8</td><td>16</td></tr> </table> <p>Not applicable to D3 ~ 5. When D=M, N≤1, F&gt;Mx2. L≥Mx2.</p> <p>Not applicable to D6. L≥MCx2+NCx2. When L≤Mx3, the pilot hole for tapping might go through.</p>	D	M (Coarse Thread)	ℓ	6-14	M3	6	8-14	M4	8	15-22	M6	12	25	M8	16
D	MC, NC (Selection Range)																														
8	3 4																														
10, 12	4 5																														
13-15	5 6																														
16-18	6 8																														
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D	M (Coarse Thread)	ℓ																													
6-14	M3	6																													
8-14	M4	8																													
15-22	M6	12																													
25	M8	16																													
Price Adder																															

**Shape C (Retaining Ring)**

\* For details P2009

Part Number	Type	D Tolerance	D	L 0.1mm Increment	M Tolerance	N	u (n)	d Tolerance	T	H	Attached Retaining Ring								
											Shape	JIS Nominal	KCLC	KCLHC	PKCLC	PKCLHC	KCLSC	KCLSHC	
KCLC KCLHC PKCLHC KCLSC KCLSHC	M(m6)		2	5.0~30.0	0.5	+0.05 0	2	1.9	1.0	1.5	4.5	E	No. 1.5						
			3	5.0~50.0				2.9										2	5.5
			4	5.0~50.0				3.9										3	6.5
	P(p6)			5	10.0~60.0	0.7	+0.1 0	2	4.9	1.5	8	No. 4							
				6	10.0~100.0				5.8									4	9
				8	10.0~100.0				7.8									5	12
	H(h7)			10	15.0~100.0	0.9	+0.14 0	3	9.8	1.5	2	12	C	No. 7					
				12	15.0~200.0				11.8									7	14
				13	15.0~200.0				12.8									8	17
	F(f8)			14	25.0~200.0	1.15	+0.14 0	3	13.8	1.5	3	19	Type	No. 12					
				15	25.0~200.0				14.8									9	20
				16	25.0~200.0				15.8									10	21
	C(c9)			17	30.0~200.0	1.35	+0.14 0	3	16.8	1.5	4	26	Type	No. 16					
				18	30.0~200.0				17.8									11	23
				19	30.0~200.0				18.8									12	24
LF (for Bushings)			20	30.0~200.0	1.35	+0.14 0	3	19.8	1.5	4	27	Type	No. 18						
			22	30.0~200.0				21.8									12	28	
			25	30.0~200.0				24.8									13	31	

**Shape B (Lock Nut)**

Part Number	Type	D Tolerance	D	L=0.1mm Increment	A	B	T	F	u (n)	M (Coarse Thread)	Included Nut	Unit Price											
												KCLB	KCLHB	PKCLB	PKCLHB	KCLSB	KCLSHB						
KCLB KCLHB PKCLB PKCLHB KCLSB KCLSHB	M(m6)		4	5.0~50.0	7	5	3	6	3.9	1.5	M 3	M 3x0.5											
			5	5.0~60.0													9	7	4	4.9	M 4	M 4x0.7	
			6	5.0~60.0													10	8		5.8	M 5	M 5x0.8	
	P(p6)			8	10.0~100.0	13	10		9	7.8	1.5	M 6	M 6x1.0										
				10	10.0~100.0													16	13		9.8	M 8	M 8x1.25
				12	15.0~200.0													18	14		11.8	M10	M10x1.5
	H(h7)			13	25.0~200.0	24	21	5	18	12.8	1.5	M12	M12x1.75										
				14	25.0~200.0													13.8					
				15	25.0~200.0													14.8					
	F(f8)			16	25.0~200.0	27	23		24	15.8	1.5	M16	M16x2.0										
17				25.0~200.0	16.8																		
18				25.0~200.0	17.8																		
C(c9)			19	30.0~200.0	30	27		24	18.8	1.5	M16	M16x2.0											
			20	30.0~200.0													19.8						
			22	30.0~200.0													21.8						
LF (for Bushings)			25	30.0~200.0	30	27		24	24.8	1.5	M16	M16x2.0											
			25	30.0~200.0													24.8						

**Shape M (Both Ends Tapped)**

Part Number	Type	D Tolerance	D	L=0.1mm Increment	M (Coarse Thread)	N (Coarse Thread)	Unit Price									
							KCLM	KCLHM	PKCLM	PKCLHM	KCLSM	KCLSHM				
KCLM KCLHM PKCLM PKCLHM KCLSM KCLSHM	M(m6)		6	20.0~100.0	M 3	M 3										
			8	20.0~100.0										M 5	M 5	
			10	25.0~100.0										M 6	M 6	
	P(p6)			12	25.0~200.0	M 6	M 6									
				13	25.0~200.0										M 8	M 8
				14	35.0~200.0											
	H(h7)			15	35.0~200.0	M 10	M 10									
				16	35.0~200.0											
				17	40.0~200.0											
	F(f8)			18	40.0~200.0	M 12	M 12									
19				40.0~200.0												
20				50.0~200.0												
C(c9)			22	50.0~200.0	M 16	M 16										
			25	50.0~200.0												
			25	50.0~200.0												

**Shape S (Set Screw Flat)**

Part Number	Type	D Tolerance	D	L 0.1mm Increment	1mm Increment		N	Unit Price						
					F	E		KCLS	KCLHS	PKCLS	PKCLHS	KCLSS	KCLSHS	
KCLS KCLHS PKCLS PKCLHS KCLSS KCLSHS	M(m6)		3	5.0~50.0	0≤F≤L/2	1≤E≤50	0.5							
			4	5.0~50.0										
			5	10.0~60.0										
	P(p6)			6	10.0~100.0	0≤F≤L/2	1≤E≤50	1						
				8	10.0~100.0									
				10	15.0~100.0									
	H(h7)			12	15.0~200.0	0≤F≤L/2	1≤E≤50	1						
				13	15.0~200.0									
				14	25.0~200.0									
	F(f8)			15	25.0~200.0	0≤F≤L/2	1≤E≤50	2						
				16	25.0~200.0									
				17	30.0~200.0									
	C(c9)			18	30.0~200.0	0≤F≤L/2	1≤E≤50	2						
				19	30.0~200.0									
				20	30.0~200.0									
LF (for Bushings)			22	30.0~200.0	0≤F≤L/2	1≤E≤50	2							
			25	30.0~200.0										

Ordering Example: Part Number - L - F - E

Days to Ship: [Configure Online](#)

Price: [Configure Online](#)