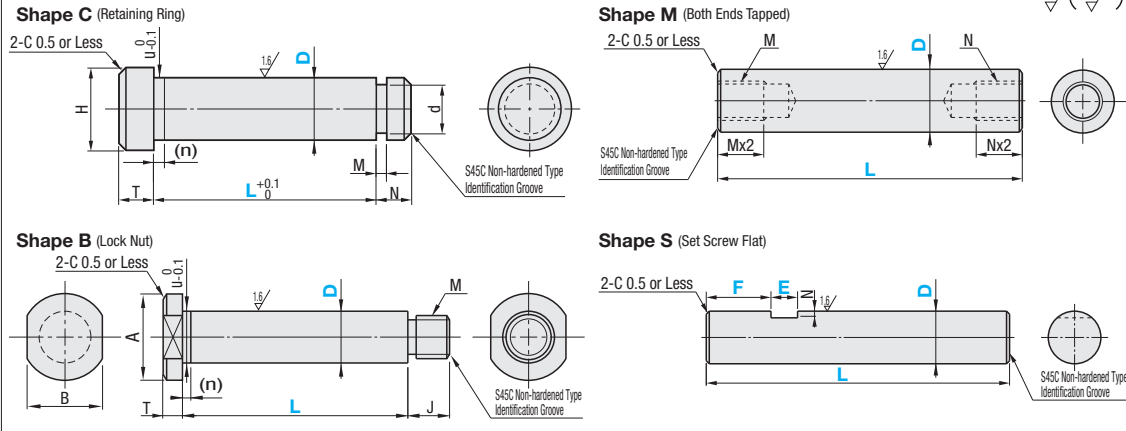


Pivot Pins - Diameter Tolerance Selectable

Type	Material	Hardness	Surface Treatment	Accessory Shape C (Retaining Ring)	Accessory Shape B (Lock Nut)
KCL□□ KCLH□□ PKCL□□ PKCLH□□ KCLS□□ KCLSH□□	S45C Equivalent	40~45HRC	Black Oxide	M Spring Steel	M SWRCH
	SUS304	-	Electroless Nickel Plating	M SUS304	M SUS304
	SUS440C Equivalent	45~50HRC	-	M SUS304	M SUS304

D	Tolerance Selection					*LF
	M	P	H	F	C	
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	+0.012 +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.
 * This type may have centering holes depending on dimensions.
 * For L Dimension, Standard Machining Tolerances (Class: Medium) is used.



Alterations Part Number - L - (NC, TC...etc.)
 KCLCF15 - 120.3 - NC3.5 - TC3.5

Alterations	Retaining Ring Groove Position	Shoulder Thickness	Thread Part Length	Thread Diameter	Shoulder Thickness	L Dimension Tolerance
Shape C	NC	TC	FC	MC	TC	LKC
Code	NC	TC	FC	MC	TC	LKC
Spec.	Ordering Code: NC3.5 D NC (0.1mm Increment) 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 Overall Length is L+NC+T.	Ordering Code: TC3 TC=0.5mm Increment T<TC≤5 Overall Length is L+N+TC.	Ordering Code: FC4 FC=1mm Increment M (MC) ≤ FC ≤ M (MC) x3	Ordering Code: MC3 D MC (Selection Range) 5 3 6 3 4 8 3 4 5 10 4 5 6 8 12 5 6 8 13-18 6 8 10 20, 22 8 10 12 25 10 12 When ordering MC5 for D12, also specify Alteration FC. Not applicable to D4.	Ordering Code: TC3 TC=0.5mm Increment 2≤TC≤5	Ordering Code: LKC Changes L dimension tolerance to ±0.05.

Alterations	Thread Diameter	Tapping
Shape M	MC	NC
Shape S	MMC	
Code	MC, NC	MMC
Spec.	Ordering Code: MC3 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 Not applicable to D6. L≤MC2+NC2	Ordering Code: MMC D M (Coarse) l 6 M3 6 8-14 M4 8 15-22 M6 12 25 M8 16 Not applicable to D3-5. (D-M)/2 - 1, F>Mx2. L>Mx3

Part Number	D Tolerance	D	L=0.1mm Increment	M Tolerance	N	u (n)	d Tolerance	T	H	Included Retaining Ring Shape		Unit Price					
										JIS Nominal	Shape	KCLC	KCLHC	PKCLC	PKCLHC	KCLSC	KCLSHC
M (m6)	2	2	5.0~30.0	0.5	1.9	1.5	1.5	4.5	1.5	No. 1.5							
P (p6)	4	4	5.0~50.0	0.7	2.9	2.0	2.0	5.5	1.5	No. 2							
H (h7)	8	8	10.0~60.0	0.9	3.9	3.0	3.0	6.5	1.5	No. 3							
F (f8)	12	12	15.0~200.0	1.15	4.9	4.0	4.0	8	1.5	No. 4							
C (c9)	16	16	25.0~200.0	1.35	5.8	5.0	5.0	9	1.5	No. 5							
LF (for Bushings)	20	20	30.0~200.0	1.35	7.8	7.0	7.0	12	1.5	No. 7							
	22	22			8.8	8.0	8.0	14	1.5	No. 10							
	25	25			9.8	9.0	9.0	17	1.5	No. 12							
					11.8	11.5	11.5	17	1.5	No. 12							
					12.8	12.4	12.4	18	1.5	No. 13							
					13.8	13.4	13.4	19	1.5	No. 14							
					14.8	14.3	14.3	20	1.5	No. 15							
					15.8	15.2	15.2	21	1.5	No. 16							
					16.8	16.2	16.2	22	1.5	No. 17							
					17.8	17	17	23	1.5	No. 18							
					19.8	19	19	26	1.5	No. 20							
					21.8	21	21	27	1.5	No. 22							
					24.8	23.9	23.9	31	1.5	No. 25							

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

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

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

Ordering Example Part Number - L - F - E
 Type D Tolerance Selection D
 KCLC M 15 - 120.3
 KCLS F 15 - 50.5 - F0 - E10

* For details, see P2303.