

# Precision Pivot Pins

Both Ends Tapped, Both Ends Threaded

**Precision Pivot Pins – Both Ends Tapped**

Type	Material	Hardness	Surface Treatment
CLBM	1045 Carbon Steel or Equivalent	40–45 HRC min.	Black Oxide
CLBHM			Electroless Nickel Plating
PCLBM		40–45 HRC min.	Electroless Nickel Plating
PCLBHM			
SCLBM	304 Stainless Steel	—	—
SCLBHM	440C Stainless Steel Equivalent	45–50 HRC min.	—

Ⓢ CLBM, PCLBM may have identification grooves on the side in order to distinguish them from Hardened Type.  
Ⓢ For L Dimension, Standard Machining Tolerances (Class: Medium) are used.

D Tolerance (g6)	
6	-0.004 -0.012
8, 10	-0.005 -0.014
12–18	-0.006 -0.017
20–25	-0.007 -0.020

RoHS10

Type	Part Number	D	L 0.1mm Increment	M (Coarse Thread)	N (Coarse Thread)
CLBM CLBHM PCLBM PCLBHM SCLBM SCLBHM		6	20.0–100.0	M3	M3
		8	25.0–100.0	M5	M5
		10	25.0–200.0	M6	M6
		12	35.0–200.0	M8	M8
		13			
		14			
		15			
		16	40.0–200.0	M10	M10
		17			
		18			
	20				
	22	50.0–200.0	M12	M12	
	25				
				M16	M16

Ⓢ SCLBHM may be discolored by hardening. Ⓢ For full length L, Mx2+Nx2≤L is required.

**Precision Pivot Pins – Both Ends Threaded**

Type	Material	Hardness	Surface Treatment	Accessories
CLBN	1045 Carbon Steel or Equivalent	40–45 HRC min.	Black Oxide	Nut 2 Pcs. Material SWRCH Carbon Steel
CLBHN				
SCLBN	304 Stainless Steel	—	—	
SCLBHN	440 Stainless Steel Equivalent	40–45 HRC min.	—	

Ⓢ CLBN may have identification grooves on the side in order to distinguish it from Hardened Type.  
Ⓢ For L Dimension, Standard Machining Tolerances (Class: Medium) are used.

D Tolerance (g6)	
6	-0.004 -0.012
8, 10	-0.005 -0.014
12–18	-0.006 -0.017
20–25	-0.007 -0.020

RoHS10

Type	Part Number	D	L 0.1 mm Increment	F / T	M (Coarse Thread)
CLBN CLBHN SCLBN SCLBHN		6	15.0–100.0	9	M5
		8	20.0–100.0		M6
		10	25.0–100.0	16	M8
		12	25.0–200.0		M10
		13			
		14			
		15	30.0–200.0	18	M12
		16			
		17			
		18			
	20	35.0–200.0	24	M16	
	22				
	25				
					M20

Part Number Example: CLBM15 - L 120.3

Part Number Alterations: CLBM10 - L 50 - MC5

Alterations	Thread Diameter	Thread Diameter																																			
	MC / NC	NMC / NNC																																			
Code	MC / NC	NMC / NNC																																			
Spec.	Ordering Code: MC3	Ordering Code: NMC8																																			
	<table border="1"> <thead> <tr> <th>D</th> <th>MC / NC (Selection Range)</th> </tr> </thead> <tbody> <tr><td>8</td><td>3 4</td></tr> <tr><td>10</td><td>4 5</td></tr> <tr><td>12</td><td>4 5</td></tr> <tr><td>13–14</td><td>5 6</td></tr> <tr><td>15</td><td>5 6 8</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> </tbody> </table> <p>Ⓢ Not applicable to D6. Ⓢ L ≥ MCx2 + NCx2 Ⓢ Not applicable to Both Ends Threaded Type.</p>	D	MC / NC (Selection Range)	8	3 4	10	4 5	12	4 5	13–14	5 6	15	5 6 8	16–18	6 8	20, 22	8 10	25	10 12	<table border="1"> <thead> <tr> <th>D</th> <th>NMC / NNC (Selection Range)</th> </tr> </thead> <tbody> <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>12–13</td><td>4 5 6 8</td></tr> <tr><td>14</td><td>4 5 6 8 10</td></tr> <tr><td>15–17</td><td>5 6 8 10</td></tr> <tr><td>18, 20</td><td>6 8 10 12</td></tr> <tr><td>22, 25</td><td>8 10 12 16</td></tr> </tbody> </table> <p>Ⓢ Not applicable to Both Ends Tapped Type.</p>	D	NMC / NNC (Selection Range)	6	3 4	8	3 4 5	10	4 5 6	12–13	4 5 6 8	14	4 5 6 8 10	15–17	5 6 8 10	18, 20	6 8 10 12	22, 25
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# Precision Pivot Pins / Keys for Precision Pivot Pins

With Key Groove

**Precision Pivot Pins – With Key Groove**

Type	Material	Hardness	Surface Treatment
CLKK	1045 Carbon Steel or Equivalent	40–45 HRC min.	Black Oxide
CLKKH			Electroless Nickel Plating
PCLKK		40–45 HRC min. Plating Hardness 750 HV min.	Hard Chrome Plating
PCLKGH			
SCLKK	304 Stainless Steel Equivalent	—	—
SCLKGH	440C Stainless Steel Equivalent	45–50 HRC min.	—

Ⓢ CLKK has identification grooves on the side in order to distinguish it from Hardened Type. (CLKG and PCLKG may also have identification grooves.)  
Ⓢ This type may have centering holes depending on dimensions.  
Ⓢ For L Dimension, Standard Machining Tolerances (Class: Medium) are used.

D Tolerance (g6)	
3	-0.002 -0.008
4–6	-0.004 -0.012
8, 10	-0.005 -0.014
12–18	-0.006 -0.017
20–25	-0.007 -0.020

RoHS10

## L Dimension Selectable

Part Number	Type	D	L					ℓ	M	N				
			CLKK	CLKKH	SCLKK									
Hardened CLKK CLKKH	3	10	14	18	20	12	20	10	15	20	8	2.5	1 1.5	
	4	10				10	18	20	10	12				14
	5	20				10	12	20	10	20				
	6	15	16	20	30	24	25	30	25	30				
	8	18	30	35	40	45	50	24	25	30	35	40		45
Stainless SCLKK	10	30	35	40	45	50	20	24	30	35	40	45	50	
	12	24	30	35	40	45	50	30	35	40	45	50		

## L Dimension Configurable

Part Number	Type	D	L 0.1 mm Increment	ℓ	M	N	Available Types						
							CLKG	CLKGH	PCLKG	PCLKGH	GCLKG	SCLKG	SCLKGH
CLKG CLKGH PCLKG PCLKGH GCLKG SCLKG SCLKGH	3	10	50.0	8	2.5	1	•	•	•	•	•	•	•
	4	10.0–50.0	•				•	•	•	•	•		
	5	10.0–60.0	•				•	•	•	•	•		
	6	10.0–100.0	•				•	•	•	•	•		
	8	10.0–100.0	•				•	•	•	•	•		
	10	15.0–100.0	•				•	•	•	•	•		
	12	15.0–200.0	•				•	•	•	•	•		
	13	25.0–200.0	•				•	•	•	•	•		
	14		•				•	•	•	•	•		
	15		•				•	•	•	•	•		
16	30.0–200.0	•	•	•	•	•	•						
17		•	•	•	•	•	•						
18		•	•	•	•	•	•						
20		•	•	•	•	•	•						
22		•	•	•	•	•	•						
25	•	•	•	•	•	•							

Part Number Example: CLKK8 - L 30  
CLKG15 - L 120.3

Ⓢ SCLKGH may be discolored by hardening. Ⓢ Part Number CLKGH has been changed to CLKGGH.

**Precision Pivot Pins – Keys**

Type	Material	Surface Treatment
HPK	Low Carbon Steel	Black Oxide
WHPK		
SHPK	304 Stainless Steel	—
WSHPK		

1-Hole Type: HPK (Stainless Steel), SHPK (Stainless Steel)  
2-Hole Type: WHPK (Stainless Steel), WSHPK (Stainless Steel)

RoHS10

Part Number	Type	T
HPK	2	3.2
Stainless Steel SHPK	2	3

Part Number	Type	No.	A	B	C	D	E	T
Stainless Steel WHPK WSHPK	4	10	18	10	4.5	6	2.0	
	5	14	24	15	5.5	8		
	6	16	30	18	6.5	10	3.2 (3.0)	
	7	15		7	12	2.0		
8	20	40	25	7	12	3.2 (3.0)		

Part Number Example: HPK2

( ) are the dimensions for WSHPK plate thickness T.