

Pivot Pins

Lock Nut with Extra Low Hex Socket Head

■ Features: Thinner shoulder design ensures use in limited spaces.

Type	M Material	H Hardness	S Surface Treatment	A Accessory
CLBK	S45C	-	Black Oxide	Nut 1 pc.
CLBKH	Equivalent	40~45HRC		
SCLBK	SUS304	-		MSUS304
SCLBKH	SUS400C Equivalent	45~50HRC		

⚠ CLBK may have identification grooves on the side in order to distinguish it from Hardened Type.
 ⚠ Relief dimension under the shoulder is for reference.
 $\frac{25}{\sqrt{1.6}}$
 ⚠ For L Dimension, Standard Machining Tolerances (Class: Medium) is used.
 ⚠ This type may have centering holes depending on dimensions.

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

Part Number Type	D	L=0.1mm Increment	A	T	F	B	E	u	(n)	M (Coarse)	Unit Price					
											CLBK	CLBKH	SCLBK	SCLBKH		
CLBK CLBKH SCLBK SCLBKH	4	10.0~50.0	7	1.5	6	2	2	3.9	1.5	M3						
	5	10.0~60.0	9													
	6	10.0~100.0	10													
	8	10.0~100.0	13	2.5	9	3	2	4.9	1.5	M4						
	10	15.0~100.0	16													
	12	15.0~200.0	18													
	13	25.0~200.0	24	2.5	18	4	3	11.8	1.5	M6						
	14															
	15															
	16	30.0~200.0	27	2.5	24	5	3	12.8	1.5	M8						
	20															
	25															

⚠ SCLBKH may be discolored by hardening.

Ordering Example: Part Number - L
CLBK15 - 120.3

Alterations: Part Number - L - (FC...etc.)
CLBK10 - 50.5 - FC8

Alterations	Thread Part Length	Thread Diameter	L Dimension Tolerance	Shoulder Diameter Cut
Code	FC	MC	LKC	HC
Spec.	[Ordering Code]FC4 ⚠ FC=1mm Increment ⚠ M(MC)≤FC≤M(MC)×3	[Ordering Code]MC3 D MC (Selection Range) 5 3 6 3 4 8 3 4 5 10 4 5 6 12 5 6 8 13-16 6 8 10 20 8 10 12 25 10 12 ⚠ When ordering MC5 for D12, also specify Alteration FC. ⚠ Not applicable to D4.	[Ordering Code]LKC Changes L dimension tolerance to ±0.05.	[Ordering Code]HC ⚠ D=4~10 HC=A/2-1 ⚠ D=12~25 HC=A/2-2

Pivot Pins

Tapped with Shoulder / Tapped, Hex Socket Head with Shoulder

Type	M Material	H Hardness	S Surface Treatment	D Tolerance (g6)
HCLBM	S45C Equivalent	-	Black Oxide	6 -0.004 -0.012
HCLBHM		40~45HRC		8, 10 -0.005 -0.014
PHCLBM		-	Electroless Nickel Plating	12-18 -0.006 -0.017
PHCLBHM		40~45HRC		20-25 -0.007 -0.020
GHCLBM	SUS304	-		
SHCLBM		45~50HRC		
SHCLBHM	SUS400C Equivalent	45~50HRC	Hard Chrome Plating	
GSHCLBHM	SUS400C Equivalent	45~50HRC	Hard Chrome Plating	

⚠ For L Dimension, Standard Machining Tolerances (Class: Medium) is used.
 ⚠ HCLBM, PHCLBM may have identification grooves on the side in order to distinguish them from Hardened Type.
 ⚠ Relief dimension under the shoulder is for reference.

Part Number Type	D	L=0.1mm Increment	A	B	u	T	(n)	M (Coarse)	Unit Price								
									HCLBM	HCLBHM	PHCLBM	PHCLBHM					
HCLBM HCLBHM PHCLBM PHCLBHM GHCLBM SHCLBM SHCLBHM GSHCLBHM	6	15.0~100.0	10	8	5.8	5	1.5	M3									
	8	15.0~100.0	13	10	7.8												
	10	20.0~100.0	16	13	9.8												
	12	20.0~200.0	18	14	11.8	24	21	M4									
	13	25.0~200.0	24	2.5	18				4	3	12.8	1.5	M5				
	14																
	15																
	16	30.0~200.0	27	2.5	24	5	3	13.8	1.5	M6							
	17																
	18																
	20	35.0~200.0	30	27	23	6	4	14.8	1.5	M8							
	22																
	25																

⚠ SHCLBHM and GSHCLBHM may be discolored by hardening.

Type	M Material	H Hardness	S Surface Treatment	D Tolerance (g6)
CLBRM	S45C Equivalent	-	Black Oxide	6 -0.004 -0.012
CLBRHM		40~45HRC		8, 10 -0.005 -0.014
PCLBRM		-	Electroless Nickel	12-18 -0.006 -0.017
PCLBRHM		40~45HRC		20-25 -0.007 -0.020
GCLBRM	SUS304	-		
SCLBRM		45~50HRC		
SCLBRHM	SUS400C Equivalent	45~50HRC		

⚠ For L Dimension, Standard Machining Tolerances (Class: Medium) is used.
 ⚠ CLBRM, PCLBRM may have identification grooves on the side in order to distinguish them from Hardened Type.
 ⚠ Relief dimension under the shoulder is for reference.

Part Number Type	D	L=0.1mm Increment	A	T	B	E	u	(n)	M (Coarse)	Unit Price											
										CLBRM	CLBRHM	PCLBRM	PCLBRHM								
CLBRM CLBRHM PCLBRM PCLBRHM GCLBRM SCLBRM SCLBRHM	6	15.0~100.0	10	3	2	5.8	5	1.5	M3												
	8	20.0~100.0	13	5	3	7.8															
	10	25.0~100.0	16	6	4	9.8															
	12	25.0~200.0	18	24	5	4	3	11.8	1.5	M4											
	13	30.0~200.0	24								2.5	18	4	3	12.8	1.5	M5				
	14																				
	15																				
	16	35.0~200.0	27	2.5	24	5	3	13.8	1.5	M6											
	17																				
	18																				
	20	40.0~200.0	30	27	10	6	4	14.8	1.5	M8											
	22																				
	25																				

⚠ SCLBRHM may be discolored by hardening.

Type	M Material	H Hardness	S Surface Treatment	D Tolerance (g6)
HCLBHM	S45C Equivalent	-	Black Oxide	6 -0.004 -0.012
HCLBHM		40~45HRC		8, 10 -0.005 -0.014
PHCLBHM		-	Electroless Nickel	12-18 -0.006 -0.017
PHCLBHM		40~45HRC		20-25 -0.007 -0.020
GCLBHM	SUS304	-		
SCLBHM		45~50HRC		
SCLBHM	SUS400C Equivalent	45~50HRC		

⚠ For L Dimension, Standard Machining Tolerances (Class: Medium) is used.
 ⚠ HCLBHM, PHCLBHM may have identification grooves on the side in order to distinguish them from Hardened Type.
 ⚠ Relief dimension under the shoulder is for reference.

Part Number Type	D	L=0.1mm Increment	A	T	B	E	u	(n)	M (Coarse)	Unit Price											
										HCLBHM	HCLBHM	PHCLBHM	PHCLBHM								
HCLBHM HCLBHM PHCLBHM PHCLBHM GCLBHM SCLBHM SCLBHM	6	15.0~100.0	10	3	2	5.8	5	1.5	M3												
	8	20.0~100.0	13	5	3	7.8															
	10	25.0~100.0	16	6	4	9.8															
	12	25.0~200.0	18	24	5	4	3	11.8	1.5	M4											
	13	30.0~200.0	24								2.5	18	4	3	12.8	1.5	M5				
	14																				
	15																				
	16	35.0~200.0	27	2.5	24	5	3	13.8	1.5	M6											
	17																				
	18																				
	20	40.0~200.0	30	27	10	6	4	14.8	1.5	M8											
	22																				
	25																				

⚠ SCLBHM may be discolored by hardening.

Type	M Material	H Hardness	S Surface Treatment	D Tolerance (g6)
HCLBHM	S45C Equivalent	-	Black Oxide	6 -0.004 -0.012
HCLBHM		40~45HRC		8, 10 -0.005 -0.014
PHCLBHM		-	Electroless Nickel	12-18 -0.006 -0.017
PHCLBHM		40~45HRC		20-25 -0.007 -0.020
GCLBHM	SUS304	-		
SCLBHM		45~50HRC		
SCLBHM	SUS400C Equivalent	45~50HRC		

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										HCLBHM	HCLBHM	PHCLBHM	PHCLBHM								
HCLBHM HCLBHM PHCLBHM PHCLBHM GCLBHM SCLBHM SCLBHM	6	15.0~100.0	10	3	2	5.8	5	1.5	M3												
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	10	25.0~100.0	16	6	4	9.8															
	12	25.0~200.0	18	24	5	4	3	11.8	1.5	M4											
	13	30.0~200.0	24								2.5	18	4	3	12.8	1.5	M5				
	14																				
	15																				
	16	35.0~200.0	27	2.5	24	5	3	13.8	1.5	M6											
	17																				
	18																				
	20	40.0~200.0	30	27	10	6	4	14.8	1.5	M8											
	22																				
	25																				

⚠ SCLBHM may be discolored by hardening.

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PHCLBHM		-	Electroless Nickel	12-18 -0.006 -0.017
PHCLBHM		40~45HRC		20-25 -0.007 -0.020
GCLBHM	SUS304	-		
SCLBHM		45~50HRC		
SCLBHM	SUS400C Equivalent	45~50HRC		

⚠ For L Dimension, Standard Machining Tolerances (Class: Medium) is used.
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										HCLBHM	HCLBHM	PHCLBHM	PHCLBHM
HCLBHM HCLBHM PHCLBHM PHCLBHM GCLBHM SCLBHM SCLBHM	6	15.0~100.0	10	3	2	5.8	5	1.5	M3				