

# Pivot Pins

## Cotter Pins

**RoHS10**

Type	Material	Hardness	Surface Treatment	Accessory
CMG, CLGN	S45C (CMG) S45C Equivalent (CLGN)	-	Black Oxide	Cotter Pin 2 pcs. SWRM or Low carbon steel
CMGH, CLGHN	S45C (CMGH) S45C Equivalent (CLGHN)	40~45HRC	Black Oxide	
PCLGN	S45C Equivalent (PCLGN)	-	Electroless Nickel Plating	SUS304
PCLGHN	S45C Equivalent (PCLGHN)	40~45HRC	Electroless Nickel Plating	SUS304
GCLGN	S45C Equivalent	Plating Hardness 750HV~	Hard Chrome Plating: Plating Thickness 3µm or more	SWRM or Low carbon steel
SCMG, SCLGN	SUS304 Equivalent	-	-	SUS304
SCLGHN	SUS440C Equivalent	45~50HRC	-	SUS304

**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

2-C 0.5 or Less, 1/8, 2-d, D<sub>g6</sub>, L, L<sub>1</sub>, N

CMG, CLGN, PCLGN Identification Groove

\* Dg6 Tolerance is available for L dimensions only. Others are general tolerance.  
 There are identification grooves on the side of CMG, CLGN and PCLGN to be distinguished from Hardened Type.  
 This type may have centering holes depending on dimensions.  
 For L Dimension, Standard Machining Tolerances (Class: Medium) is used.

**L Dimension Selectable**

Part Number	Type	D	L Selection	L <sub>1</sub>	N	d	Included Cotter Pin		Unit Price		
							CMG, CMGH	SCMG	CMG	CMGH	SCMG
3	CMG	3	10 12 14 15 16 18 20	L+4.8	2	0.8	NPN0.8-8	NSPN0.8-8			
			4 10 12 14 15 16 18 20	L+6	2.5	1	NPN1-10	NSPN1-10			
5	CMGH	5	10 12 14 15 16 18 20	L+7.2	3	1.2	NPN1.2-10	NSPN1.2-10			
			6 15 16 18 20 22 24 25 30	L+8.6	3.5	1.6	NPN1.6-10	NSPN1.6-10			
8	SCMG	8	18 20 22 24 25 30 35 40 45 50	L+10	4	2	NPN2-12	NSPN2-12			
			10 12 14 15 16 18 20	L+12.5	5	2.5	NPN2.5-15	NSPN2.5-15			
12	SCLGHN	12	22 24 25 30 35 40 45 50	L+15.2	6	3.2	NPN3.2-20	NSPN3.2-20			

**L Dimension Configurable Type (0.1mm Increment)**

Part Number	Type	D	L=0.1mm Increment	L <sub>1</sub>	N	d	Included Cotter Pin		Unit Price							
							CLGN, CLGHN, GCLGN	PCLGN, PCLGHN, SCLGN, SCLGHN	CLGN	CLGHN	PCLGN	PCLGHN	GCLGN	SCLGN	SCLGHN	
3	CLGN, CLGHN, PCLGN, PCLGHN, GCLGN, SCLGN, SCLGHN	3	5.0~ 50.0	L+4.8	2	0.8	NPN0.8-8	NSPN0.8-8								
							L+6	2.5	1	NPN1-10	NSPN1-10					
							L+7.2	3	1.2	NPN1.2-10	NSPN1.2-10					
							L+8.6	3.5	1.6	NPN1.6-10	NSPN1.6-10					
							L+10	4	2	NPN2-12	NSPN2-12					
5	CLGN, CLGHN, PCLGN, PCLGHN, GCLGN, SCLGN, SCLGHN	5	10.0~ 70.0	L+12.5	5	2.5	NPN2.5-15	NSPN2.5-15								
							L+15.2	6	3.2	NPN3.2-20	NSPN3.2-20					
							L+18	7	4	NPN4-20	NSPN4-20					
8	CLGN, CLGHN, PCLGN, PCLGHN, GCLGN, SCLGN, SCLGHN	8	25.0~ 200.0	L+18	7	4	NPN4-20	NSPN4-20								
							L+22	8.5	5	NPN5-35	NSPN5-35					
							L+22	8.5	5	NPN5-35	NSPN5-35					

Ordering Example: Part Number - L  
 CMG8 - 30  
 CLGN15 - 120.3

Alterations: Part Number - L - (NC)  
 CLGN15 - 120.3 - NC3  
 Applicable to L Dimension Configurable Type.

**Cotter Pin Hole Position**

Alteration: NC

Code: NC

Spec.:

Ordering Code	NC3
D	NC (Selection Range)
3	1.5
4	1.5 2
5	1.5 2 2.5
6, 8	2 2.5 3
10	2.5 3 4
12	3 4 5
13-18	3 4 5 6
20-25	4 5 6 7

L<sub>1</sub>=L+NCx2+d

# Pivot Pins

## Straight Retaining Ring

**RoHS10**

Type	Material	Hardness	Surface Treatment	Accessory
CDG, CCG	S45C (CDG) S45C Equivalent (CCG)	-	Black Oxide	Retaining Ring 2 pcs. Spring Steel
CDGH, CCGH	S45C (CDGH) S45C Equivalent (CCGH)	40~45HRC	Black Oxide	
PCCG	S45C Equivalent (PCCG)	-	Electroless Nickel Plating	SUS304
PCCGH	S45C Equivalent (PCCGH)	40~45HRC	Electroless Nickel Plating	SUS304
GCCG	S45C Equivalent	Plating Hardness 750HV~	Hard Chrome Plating: Plating Thickness 3µm or more	Spring Steel
SCDG, SCCG	SUS304 Equivalent	-	-	SUS304
SCCGH, GCCGH	SUS440C Equivalent	45~50HRC	Hard Chrome Plating: Plating Thickness 3µm or more	SUS304

**D Tolerance (g6)**

2, 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

2-C 0.5 or Less, 1/8, 2-d, D<sub>g6</sub>, L, L<sub>1</sub>, N, m

CDG, CCG, PCCG Identification Groove

\* Dg6 Tolerance is available for L dimensions only. Others are general tolerance.  
 There are identification grooves on the side of CDG, CCG and PCCG to be distinguished from Hardened Type.  
 This type may have centering holes depending on dimensions.

**L Dimension Selectable**

Part Number	Type	D	L Selection	m	N	d	Included Retaining Ring	Unit Price		
								Shape	JIS Nominal	CDG
3	CDG	3	10 12 14 15 16 18 20 22 24 25 30	0.5	2	2	E Type	No. 2		
								No. 3		
5	CDGH	5	15 16 18 20 22 24 25 30 35 40 45 50	0.7	3	3	E Type	No. 4		
								No. 5		
8	SCDG	8	18 20 22 24 25 30 35 40 45 50	0.9	4	4	C Type	No. 7		
								No. 10		
12	SCCGH	12	22 24 25 30 35 40 45 50	1.15	4	11.5	C Type	No.12		
								No.12		

**L Dimension Configurable Type (0.1mm Increment)**

Part Number	Type	D	L=0.1mm Increment	m	N	d	Included Retaining Ring	Unit Price						
								Shape	JIS Nominal	CCG	CCGH	PCCG	PCCGH	GCCG
2	CCG, CCGH, PCCG, PCCGH, GCCG, SCCG, SCCGH, GSCCGH	2	5.0~ 30.0	0.5	2	1.5	E Type	No. 1.5						
								No. 2						
								No. 3						
								No. 4						
								No. 5						
5	CCG, CCGH, PCCG, PCCGH, GCCG, SCCG, SCCGH, GSCCGH	5	10.0~ 60.0	0.7	3	3	E Type	No. 7						
								No. 10						
								No. 12						
8	CCG, CCGH, PCCG, PCCGH, GCCG, SCCG, SCCGH, GSCCGH	8	25.0~ 200.0	0.9	4	4	C Type	No. 13						
								No. 14						
								No. 15						
12	CCG, CCGH, PCCG, PCCGH, GCCG, SCCG, SCCGH, GSCCGH	12	30.0~ 200.0	1.35	4	11.5	C Type	No. 16						
								No. 17						
								No. 18						

Ordering Example: Part Number - L  
 CDG8 - 30  
 CCG15 - 120.3

Alterations: Part Number - L - (NC)  
 CCG15 - 120.3 - NC3  
 Applicable to L Dimension Configurable Type.

**Retaining Ring Groove Position**

Alteration: NC

Code: NC

Spec.:

Ordering Code	NC3
D	NC (Selection Range)
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+NCx2.