


Precision Pivot Pins

Cotter Pin

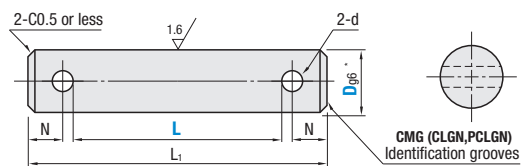
Precision Pivot Pins – Cotter Pin



RoHS 10

Type		Material	Hardness	Surface Treatment	Accessories
L Dim. Selectable	L Dim. Configurable				
CMG	CLGN	1045 Carbon Steel or Equivalent	40-45 HRC min.	Black Oxide	SWRM or Low carbon steel
CMGH	CLGHN				
—	PCLGN				
—	PCLGHN	1045 Carbon Steel or Equivalent	40-45 HRC min.	Electroless Nickel Plating	Material 304 Stainless Steel
—	GCLGN				
—	GCLGHN				
SCMG	SCLGN	304 Stainless Steel Equivalent	45-50 HRC min.	—	Material 304 Stainless Steel
—	SCLGHN	440C Stainless Steel Equivalent			

25/(1.6/)



CMG (CLGN, PCLGN) Identification grooves

*The tolerance Dg6 is only available for the diameter over the length L. The front diameter has a negative tolerance.

- ① CMG has identification grooves on the side in order to distinguish it from Hardened Type. (CLGN and PCLGN may also have identification grooves.)
- ② This type may have centering holes depending on dimensions.
- ③ For L Dimension, Standard Machining Tolerances (Class: Medium) are used.

L Dimension Selectable

Part Number Type	D	L Selection	L ₁	N	d	Attached Cotter Pins	
						CMG, CMGH	SCMG
CMG (The L dimensions marked with * are not available.)	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	10 12 14 15 16 18 20	L+7.2	3	1.2	NPN1.2-10	NSPN1.2-10
Hardened CMGH	6	15 16 18 20 22 24 25 30	L+8.6	3.5	1.6	NPN1.6-10	NSPN1.6-10
	8	18 20 22 24 25 30 35 40 45 50	L+10	4	2	NPN2-12	NSPN2-12
Stainless Steel SCMG	10	18 20 22 24 25 30 35 40 45 50	L+12.5	5	2.5	NPN2.5-15	NSPN2.5-15
	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


Part Number Type	D	L 0.1 mm Increment	L ₁	N	d	Attached Cotter Pins	
						CLGN, CLGHN, GCLGN	PCLGN, PCLGHN, SCLGN, SCLGHN
CLGN CLGHN PCLGN PCLGHN GCLGN SCLGN SCLGHN	3	5.0-50.0	L+4.8	2	0.8	NPN0.8-8	NSPN0.8-8
	4	5.0-50.0	L+6	2.5	1	NPN1-10	NSPN1-10
	5	10.0-70.0	L+7.2	3	1.2	NPN1.2-10	NSPN1.2-10
	6	10.0-100.0	L+8.6	3.5	1.6	NPN1.6-10	NSPN1.6-10
	8	10.0-100.0	L+10	4	2	NPN2-12	NSPN2-12
	10	15.0-110.0	L+12.5	5	2.5	NPN2.5-15	NSPN2.5-15
	12	15.0-200.0	L+15.2	6	3.2	NPN3.2-20	NSPN3.2-20
	13	25.0-200.0	L+18	7	4	NPN4-20	NSPN4-20
14	30.0-200.0	L+22	8.5	5	NPN5-35	NSPN5-35	
15							
16							
17							
18							
20							
22							
25							

① SCLGHN may be discolored by hardening.

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

Part Number Alterations
 Part Number - L - (NC)
 CLGN15 - 120.3 - NC3

① Applicable to L Dimension Configurable Type.


Alteration	Cotter Pin Hole Position	
		
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	

① L₁=L+NCx2+d

Precision Pivot Pins

Straight Retaining Ring

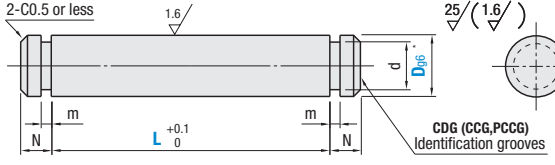
Precision Pivot Pins – Straight Retaining Ring



RoHS 10

Type		Material	Hardness	Surface Treatment	Accessory
L Dim. Selectable	L Dim. Configurable				
CDG	CCG	1045 Carbon Steel or Equivalent	40-45 HRC min.	Black Oxide	Material Spring Steel
CDGH	CCGH				
—	PCCG				
—	PCCGH	1045 Carbon Steel or Equivalent	40-45 HRC min.	Electroless Nickel Plating	Material 304 Stainless Steel
—	GCCG				
—	GCCGH				
—	SCCG	304 Stainless Steel Equivalent	45-50 HRC min.	—	Material 304 Stainless Steel
—	SCCGH	440C Stainless Steel Equivalent			
—	GSCCGH	440C Stainless Steel Equivalent	45-50 HRC min. Plating Hardness 750 HV min.	Hard Chrome Plating	Material 304 Stainless Steel

25/(1.6/)



CDG (CCG, PCCG) Identification grooves

*The tolerance Dg6 is only available for the diameter over the length L. The front diameter has a negative tolerance.

- ① CDG has identification grooves on the side in order to distinguish it from Hardened Type. (CCG and PCCG may also have identification grooves.)
- ② This type may have centering holes depending on dimensions.

L Dimension Selectable

Part Number Type	D	L Selection	m Tolerance	N	d Tolerance	Attached Retaining Ring			
						Shape	JIS Nominal*	Spring Steel	304 SS
Hardened CDG CDGH	3	10 12 14 15 16 18 20 22 24 25 30	0.5 +0.05 0	2	2 +0.06 0	E Type	No. 2	NETW2	NETWS2
	4						No. 3	NETW3	NETWS3
	5						No. 4	NETW4	NETWS4
6	No. 5	NETW5	NETWS5						
Stainless Steel SCDG	8	15 16 18 20 22 24 25 30 35 40 45 50	0.7 +0.1 0	3	7 +0.09 0		No. 7	NETW7	NETWS7
	10	18 20 22 24 25 30 35 40 45 50				C Type	No.10	STWN10	STWS10
	12	22 24 25 30 35 40 45 50	9.6 0 -0.09	No.12	STWN12		STWS12		
	15	22 24 25 30 35 40 45 50	11.5 +0.14 0	No.15	STWN15		STWS15		

① For details, please refer to P.4021.

L Dimension Configurable Type

Part Number Type	D	L 0.1 mm Increment	m Tolerance	N	d Tolerance	Attached Retaining Ring			
						Shape	JIS Nominal*	Spring Steel	304 SS
CCG CCGH PCCG PCCGH GCCG SCCG SCCGH GSCCGH	2	5.0-30.0	0.5 +0.05 0	2	1.5 +0.06 0	E Type	No.1.5	NETW1.5	NETWS1.5
	3	5.0-30.0					No.2	NETW2	NETWS2
	4	5.0-50.0	No.3	NETW3	NETWS3				
	5	10.0-60.0	No.4	NETW4	NETWS4				
	6	10.0-60.0	No.5	NETW5	NETWS5				
	8	10.0-100.0	0.7 +0.1 0	3	7 +0.09 0	No.7	NETW7	NETWS7	
	10	15.0-100.0				C Type	No.10	STWN10	STWS10
	12	15.0-200.0	9.6 0 -0.09	No.12	STWN12		STWS12		
	13	25.0-200.0	1.15 +0.14 0	4	11.5 +0.14 0		No.13	STWN13	STWS13
	14	25.0-200.0				No.14	STWN14	STWS14	
	15	25.0-200.0				No.15	STWN15	STWS15	
	16	25.0-200.0				No.16	STWN16	STWS16	
	17	25.0-200.0				No.17	STWN17	STWS17	
	18	25.0-200.0				No.18	STWN18	STWS18	
	20	30.0-200.0				No.20	STWN20	STWS20	
	22	30.0-200.0				No.22	STWN22	STWS22	
	25	30.0-200.0				No.25	STWN25	STWS25	

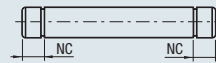
① For details, please refer to P.4021.

② SCCGH and GSCCGH may be discolored by hardening.

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

Part Number Alterations
 Part Number - L - (NC)
 CCG15 - 120.3 - NC3

① Applicable to L Dimension Configurable Type.

Alteration	Retaining Ring Groove Position	
		
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

① Overall Length is L+NCx2.