

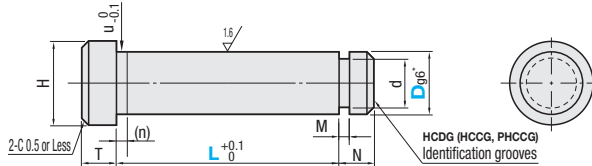
# Pivot Pins

## Retaining Ring with Shoulder



Type		Material	Hardness	Surface Treatment	Accessory
L Dimension Selectable	L Dimension Configurable				
HCDG	HCCG	S45C Equivalent (HCDG) S45C (HCCG)	-	Black Oxide	Retaining Ring 1 pc.
HCDGH	HCCGH	S45C Equivalent (HCDGH) S45C (HCCGH)	40~45HRC	Plating	
-	PHCCG	S45C Equivalent (PHCCG)	-	Electroless Nickel	Spring Steel
-	PHCCGH	S45C Equivalent (PHCCGH)	40~45HRC	Plating	
-	GHCCG	S45C Equivalent (GHCCG)	Plating Hardness 750HV~	Hard Chrome Plating	SUS304
SHCDG	SHCCG	SUS304	-	-	Spring Steel
-	SHCCGH	SUS440C Equivalent	45~50HRC	-	SUS304
-	GSHCCGH		45~50HRC Plating Hardness 750HV~	Hard Chrome Plating	

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



- \* The tolerance Dg6 is only available for the diameter over the length L. The front diameter has a negative tolerance.
- 🔴 HCDG has identification grooves on the side in order to distinguish it from Hardened Type. (HCCG and PHCCG may also have identification grooves.)
- 🔴 Relief dimension under the shoulder is for reference.
- 🔴 For L Dimension, Standard Machining Tolerances (Class: Medium) is used.
- 🔴 This type may have centering holes depending on dimensions.

### L Dimension Selectable

Part Number	D	L Selection	M Tolerance	N	u	(n)	d Tolerance	T	H	Included Retaining Ring Shape/JIS Nominal*	Unit Price				
HCDG	3	10 12 14 15 16 18 20 22 24 25 30	0.5 +0.05 0	2	2.9	1.5	2 +0.06	1.5	5.5	E Type	No. 2				
HCDGH	4										3.9	3	0	6.5	No. 3
(Hardened)	5										4.9	4	+0.075	8	No. 4
	6	15 16 18 20 22 24 25 30 35 40 45 50	0.9	3	5.8	1.5	5 0	2	12	C Type	No. 5				
	8										7.8	7	+0.09	9	No. 7
SHCDG	10										9.8	9.6	0	14	No. 10
(Stainless Steel)	12	22 24 25 30 35 40 45 50	1.15	0	11.8	11.5	-0.09 -0.11	3	17		No. 12				

\* For details, see P2303.

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

Part Number	D	L=0.1mm Increment	M Tolerance	N	u	(n)	d Tolerance	T	H	Included Retaining Ring Shape/JIS Nominal*	Unit Price		
HCCG	2	5.0~ 30.0	0.5 +0.05 0	2	1.9	1.5	1.5 +0.06 0	1.5	4.5	E Type	No. 1.5		
	3	2.9									5.5	5.5	No. 2
	4	3.9	3	6.5	No. 3								
	5	4.9	4	8	No. 4								
	6	5.8	5	9	No. 5								
HCCGH	8	10.0~ 100.0	0.9	2	7.8	1.5	7 +0.09 0	2	12	C Type	No. 7		
PHCCG	10	15.0~ 100.0									9.8	9.6	14
PHCCGH	12	15.0~ 200.0	11.8	11.5	17	No. 12							
GHCCG	13	20.0~ 200.0	1.15	3	12.8	1.5	12.4	3	18		No. 13		
SHCCG	14										13.8	13.4	19
	15									14.8	14.3	20	No. 15
SHCCGH	16	20.0~ 200.0	+0.14 0	3	15.8	1.5	15.2	0	21	No. 16			
	17									16.8	16.2	22	No. 17
	18									17.8	17	23	No. 18
	20									19.8	19	26	No. 20
GSHCCGH	22									21.8	21	27	No. 22
	25	24.8	23.9	30	No. 25								

\* For details, see P2303. 🔴 SHCCGH and GSHCCGH may be discolored by hardening.

Ordering Example	Part Number	L
	HCDG8	30
	HCCG15	120.3

Alterations Part Number - [ L ] - (NC, TC, HC) 🔴 Applicable to L Dimension Configurable Type.  
HCCG15 - 120.3 - NC3.5 - TC3.5

Alterations	Retaining Ring Groove Position	Shoulder Thickness	Shoulder Diameter Cut
Code	NC	TC	HC
Spec.	Ordering Code NC3.5 D 2-4 NC (0.1mm Increment) 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 HC • D=2~10 • HC=H/2-1 • D=12~25 • HC=H/2-2