Precision Pivot Pins

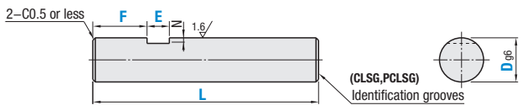
Set Screw Flat, Configurable / Flanged with Set Screw Flat

Precision Pivot Pins – Set Screw Flat, Configurable

RoHS 10

Type	Material	Hardness	Surface Treatment
CLSG	1045 Carbon Steel or Equivalent	—	Black Oxide
CLSGH		40~45 HRC min.	
PCLSG		—	Electroless Nickel Plating
PCLSGH		40~45 HRC min.	
SCLSG	304 Stainless Steel	—	—
SCLSGH	440C Stainless Steel Equivalent	45~50 HRC min.	

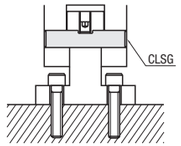
- **CLSG**, **PCLSG** may have identification grooves on the side in order to distinguish them from Hardened Type.
- This type may have centering holes depending on dimensions.
- For L Dimension, Standard Machining Tolerances (Class: Medium) are used.



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

Part Number Type	D	L 0.1 mm Increment	1 mm Increment F	1 mm Increment E	N
CLSG CLSGH PCLSG PCLSGH SCLSG SCLSGH	3	5.0–50.0	F=0 0≤F≤L/2	1≤E≤50	0.5
	4	5.0–50.0			
	5	10.0–60.0			
	6	10.0–100.0			1
	8	10.0–100.0			
	10	15.0–100.0			
	12	15.0–200.0			
	13	25.0–200.0			
	14	25.0–200.0			
	15	25.0–200.0			
	16	30.0–200.0			2
	17	30.0–200.0			
	18	30.0–200.0			
	20	30.0–200.0			
	22	30.0–200.0			
	25	30.0–200.0			

Application Example

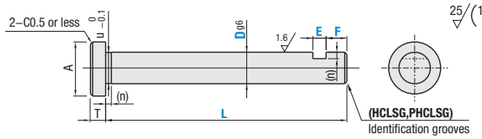


- SCLSGH may be discolored by hardening.

Precision Pivot Pins – Flanged with Set Screw Flat

RoHS 10

Type	D Tolerance	Material	Hardness	Surface Treatment
HCLSG	g6	1045 Carbon Steel or Equivalent	—	Black Oxide
HCLSGH			40~45 HRC min.	
PHCLSG			—	Electroless Nickel Plating
PHCLSGH			40~45 HRC min.	
SHCLSG		304 Stainless Steel	—	—
SHCLSGH		440C Stainless Steel Equivalent	45~50 HRC min.	



- **HCLSG**, **PHCLSG** may have identification grooves on the side in order to distinguish them from Hardened Type.
- Relief dimension under the shoulder is for reference.
- 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

Part Number Type	D	L 0.1 mm Increment	0.1 mm Increment E	0.1 mm Increment F	A	u	T	(n)	(N)
HCLSG HCLSGH PHCLSG PHCLSGH SHCLSG SHCLSGH	3	5.0–50.0	1≤E≤50	0≤F≤L/2	5.5	2.9	1.5	1.0	0.5
	4	5.0–50.0			6.5	3.9			
	5	10.0–60.0			8	4.9			
	6	10.0–100.0			9	5.8		1.5	1
	8	10.0–100.0			12	7.8	2		
	10	15.0–100.0			14	9.8			
	12	15.0–200.0			17	11.8	3		
	13	20.0–200.0			18	12.8			
	14	20.0–200.0			19	13.8			
	15	20.0–200.0			20	14.8			
	16	20.0–200.0			21	15.8			2
	17	20.0–200.0			22	16.8			
	18	20.0–200.0			23	17.8			
	20	20.0–200.0			26	19.8	4		
	22	20.0–200.0			27	21.8			
	25	20.0–200.0			30	24.8			

- SHCLSGH may be discolored by hardening.

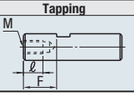
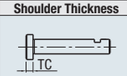
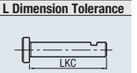
Part Number Example

Part Number	-	L	-	E/F	-	E/F
CLSGH15	-	100.0	-	F20	-	E10
HCLSG20	-	120.3	-	E10	-	F10

- For Set Screw Flat and Set Screw Flat with Flange Types, specifying order of E and F is reversed.

Part Number Alterations

Part Number	-	L	-	E/F	-	EF	- (MMC/ TC / LKC)
CLSGH15	-	100.0	-	F20	-	E10	- MMC

Alterations	Tapping	Shoulder Thickness	L Dimension Tolerance
			
Code	MMC	TC	LKC
Spec.	**Ordering Code:** MMC D / M (Coarse) / ℓ 6 / M3 / 6 8–14 / M4 / 8 15–22 / M6 / 12 25 / M8 / 16 Not applicable to Shouldered with Set Screw Type. Not applicable to D3–5. When $\frac{(D-M)}{2}$ -N≤1, F>Mx2 L≥Mx3 When L≤Mx3, the pilot hole for tapping might go through.	**Ordering Code:** TC3 TC = 0.5 mm Increment T<TC≤5 Not applicable to Set Screw Flat Type.	**Ordering Code:** LKC Changes L dimension tolerance to ±0.05. Not applicable to Set Screw Flat Type.

MiSUMi

Precision Pivot Pins

D-Cut

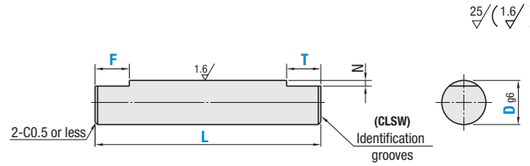
Feature: Two flats will effectively stop pins from rotating.

Precision Pivot Pins – D-Cut

RoHS 10

Type	Material	Hardness	Surface Treatment
CLSW	1045 Carbon Steel or Equivalent	—	Black Oxide
CLSWH		40~45 HRC min.	
SCLSW	304 Stainless Steel	—	—

- **CLSW** may have identification grooves on the side in order to distinguish it from Hardened Type.
- This type may have centering holes depending on dimensions.
- For L Dimension, Standard Machining Tolerances (Class: Medium) are used.



D Tolerance (g6)	
4–6	-0.004 -0.012
8, 10	-0.005 -0.014
12–16	-0.006 -0.017
20, 25	-0.007 -0.020

Part Number Type	D	L 0.1mm Increment	1mm Increment F	1mm Increment T	N
CLSW CLSWH SCLSW	4	10.0–50.0	2≤F≤20	2≤T≤20	0.5
	5	10.0–60.0			
	6	10.0–100.0	2≤F≤30	2≤T≤30	1
	8	10.0–100.0			
	10	15.0–100.0			
	12	15.0–200.0	5≤F≤30	5≤T≤30	
	13	25.0–200.0			
	14	25.0–200.0			
	15	25.0–200.0			
	16	30.0–200.0			2
	20	30.0–200.0			
	25	30.0–200.0			

- F+T≤L

Part Number Example

Part Number	-	L	-	F	-	T
CLSWH15	-	120.5	-	F30	-	T30

Application Example