

# Locating Pins - Tip Shape Selectable

## Tapped (Large Head / Straight)

**Features:** The tip shape is selectable from three types. To be mounted from back using bolts. Improved maintainability compared to the press fit type.

Material No.	Material	Surface Treatment	Hardness	Round	Diamond	Straight
①	SKS3 Equivalent	-	Treated Hardness: 55 ~ 60HRC Treated Hardness: 50 ~ 55HRC Plating Hardness: 750HV ~	LPGJ	LPDGJ	LPCJ
②	SKS3 Equivalent	Hard Chrome Plating	-	LPGG	LPDGG	LPCG
③	S45C Equivalent (LPG)	S45C Equivalent (LPG)	Treated Hardness: 45 ~ 50HRC	LPG	LPDG	LPC
④	S45C Equivalent (LPGB)	S45C Equivalent (LPCB)	Black Oxide	LPGB	LPDGB	LPCB
⑤	S45C Equivalent (LPG)	S45C Equivalent (LPG)	Treated Hardness: 45 ~ 50HRC Treated Hardness: 45 ~ 50HRC Plating Hardness: 750HV ~	LPGR	LPDGR	LPCR
⑥	SUS304	-	-	LPGS	LPDGS	LPCS
⑦	SUS304	Hard Chrome Plating	Plating Hardness: 750HV ~	LPGD	-	LPCD
⑧	SUS440C or 13Cr stainless	-	Treated Hardness: 50 ~ 55HRC	LPGC	LPDGC	LPCC

**• Round**

**• Straight**

**• Diamond**

**Tip Shape**

**Shape A**

**Shape B**

**Shape C**

**Tip Shape Selection:** Select from the diagram on the right.

**Relief dimension is a reference value.**

**Material Note:** SUS440C or 13Cr stainless of Round Type and Diamond Type has an identification groove at any position on D part.

### Large Head

Type	Tip Shape	D	D dim. Tolerance	P		B		R		G		L	M	* Tightening Torque Ncm	(W)
				0.01mm Increment	0.1mm Increment	1mm Increment	1mm Increment	1mm Increment	1mm Increment						
(Round) LPGJ	(Diamond) LPDGJ	6	-0.004	6.50-12.00	2.0-40.0(12.0)	Shape A R=P/2	Shape B G=P	6-12	M3	98	3	3	3	3	
LPGG	LPDGG	8	-0.012	9.00-15.00	2.0-40.0(15.0)										M2.6
LPG	LPDG	10	-0.005	11.00-20.00	3.0-50.0(20.0)	Shape C R=P/2	Shape B G=P	8-16	M4	225	3.5	4	4	4	
LPGB	LPDGB	12	-0.014	13.00-20.00	3.0-50.0(20.0)										M5
LPGR	LPDGR	16	-0.006	17.00-25.00	5.0-50.0(20.0)	Shape A R=P/2	Shape B G=P	10(12)-20	M4	225	4	4	4	4	
LPGD	LPDGD	12	-0.017	11.00-20.00	3.0-50.0(20.0)										M5
LPGC	LPDGC	20	-0.007	21.00-35.00	5.0-50.0(20.0)	Shape C R=P/2	Shape B G=P	12(12)-18	M4	225	5	5	5	5	
		20T	-0.020	21.00-35.00	5.0-50.0(20.0)										M8
								16-32	M8	1911	7	7	7	7	
								10(14)-24	M6	784	7	7	7	7	
								20-40	M8	1911	9	9	9	9	
								12(18)-30	M6	784	9	9	9	9	

**Notes:**

- Pins of D dimension with T have one size smaller thread diameter and larger wall thickness. (Actual D dimension is the number without "T".)
- B dimensions in ( ) and L dimensions in ( ) are for Diamond Shape. **⚠ Note the strength of under-head part. ⚠ P1566** **⚠ Please confirm pilot hole depth on ⚠ P1566.** Holes may go through.
- \*The tightening torque (ref. value) for hardened products is strength class 8.8. (See technical data on **⚠ P.2297**) Not applicable when using locking agents or spring washers. Not applicable when using locking materials or lock washers.

D	Round Shape Unit Price						Diamond Shape Unit Price								
	①SKS3 Hardened LPGJ	②Hard SKS3 LPGG	③S45C LPG	④S45C Black Oxide LPGB	⑤Hard S45C LPGR	⑥SUS304 LPGS	⑦Hard SUS304 LPGD	⑧SUS440C or 13Cr stainless LPGC	①SKS3 Hardened LPGJ	②Hard SKS3 LPDGG	③S45C LPDG	④S45C Black Oxide LPDGB	⑤Hard S45C LPDGR	⑥SUS304 LPDGS	⑧SUS440C or 13Cr stainless LPDGC
6															
6T															
8															
10															
10T															
12															
12T															
16															
16T															
20															
20T															

### Straight

Type	Tip Shape	M	P		B		R		G		Unit Price					
			0.1mm Increment	0.1mm Increment	1mm Increment	1mm Increment	1mm Increment	1mm Increment	①SKS3 Hardened LPCJ	②Hard SKS3 LPCC	③S45C LPC	④S45C Black Oxide LPCB	⑤Hard S45C LPCR	⑥SUS304 LPCS	⑦Hard SUS304 LPCD	⑧SUS440C or 13Cr stainless LPCC
LPCJ	A	3	6.0-10.0	10.0-25.0	Shape A R=P/2	Shape B G=P	6-12	M3	98	3	3	3	3	3	3	3
LPC	A	4	7.0-12.0	11.0-25.0												
LPCG	A	5	8.0-16.0	13.0-30.0	Shape C R=P/2	Shape B G=P	8-16	M4	225	3.5	4	4	4	4	4	4
LPCB	B	6	9.0-20.0	15.0-40.0												
LPCR	B	8	11.0-20.0	19.0-50.0	Shape A R=P/2	Shape B G=P	10(12)-20	M4	225	4	4	4	4	4	4	4
LPCB	C	10	14.0-20.0	23.0-50.0												
LPCR	C	12	18.0-25.0	28.0-60.0	Shape C R=P/2	Shape B G=P	12(12)-18	M4	225	5	5	5	5	5	5	5
LPCD	C	16	22.0-30.0	35.0-60.0												
LPCC	C	20	26.0-30.0	44.0-60.0												

The tightening torque (ref. value) for hardened products is strength class 8.8. (See technical data on **⚠ P.2365**) Not applicable when using locking agents or spring washers.

**Ordering Example**

Part Number	-	P	-	B	-	R	-	G	-	L
LPGA6	-	P10.0	-	B25.0	-	R6	-	L6		
LPG10	-	P16.0	-	B50.0	-	G13	-	L16		
LPGA6	-	P10.0	-	B25.0	-	R6				

**Alterations**

Part Number	-	P	-	B	-	R	-	G	-	L	-	(SC, LAC, LTE)
LPGA6	-	P10.0	-	B25.0	-	R6	-	L6				LAC

**Alterations are not available in Diamond Shape.**

Alterations	Wrench Flats	Wrench Hole (Ø3.5)	Wrench Hole (Ø2.5)
	Code	SC	LAC
Spec.	SC=1mm Increment ⚠ For Round Type: P-3<SC<P-1, SC<D ⚠ For Straight: M+3<SC<P-1 ⚠ When B<11, adds wrench flats on the tip.	Adds a Ø3.5 hole. ⚠ Applicable when B<10 and P<8.	Adds a Ø2.5 hole. ⚠ Applicable when B<8 and 7<P<15.