

Locating Pins - Tip Shape Selectable

Threaded

☞ For products uncovered by e-Catalog Standard, see P.131.

Features: Tip shape is selectable and L=0 is available.

(Alteration SC)

Material No.	Material	Surface Treatment	Hardness	Round	Diamond
(1)	SKS3 Equivalent	-	Treated Hardness: 55~60HRC	LPAJ	LPDAJ
(2)	SKS3 Equivalent	Hard Chrome Plating	Treated Hardness: 50~55HRC Plating Hardness: 750HV~	LPAG	LPDAG
(3)	S45C Equivalent	-	Treated Hardness: 45~50HRC	LPA	LPDA
(4)	S45C Equivalent	Black Oxide	Treated Hardness: 45~50HRC	LPAB	LPDAB
(5)	S45C Equivalent	Hard Chrome Plating	Treated Hardness: 45~50HRC Plating Hardness: 750HV~	LPAR	LPDAR
(6)	SUS304	-	-	LPAS	LPDAS
(7)	SUS304	Hard Chrome Plating	Plating Hardness: 750HV~	LPAD	LPDAD
(8)	SUS440C or 13Cr stainless	-	Treated Hardness: 50~55HRC	LPAC	-

• Round

• Diamond

☞ When L < Pitch x 2, the incomplete threaded portion (Pitch x 2) is included in M x 1.5. For Coarse Thread Pitch Dims., see P.2360.

☞ Fully Threaded Type of L=0 w/o Pilot is available. P.1661

☞ Polished, centering hole is sometimes not available for SUS304.

Locating Pins - Tip Shape Selectable

Tip Length Configurable - Threaded

☞ For products uncovered by e-Catalog Standard, see P.131.

Features: While it has the same shape as conventional Tip Shape Selectable Type (Shapes A and C only), its configurable range is different therefrom. Overall length of insertion guide, R length and tapered section length are configurable.

(Alteration SC) (Alteration NNC)

Material No.	Material	Surface Treatment	Hardness	Type
(1)	SKS3 Equivalent	-	Treated Hardness: 55~60HRC	LPALJ
(2)	SKS3 Equivalent	Hard Chrome Plating	Treated Hardness: 50~55HRC Plating Hardness: 750HV~	LPALG
(3)	S45C Equivalent	-	Treated Hardness: 45~50HRC	LPAL
(4)	S45C Equivalent	Black Oxide	Treated Hardness: 45~50HRC	LPALB
(5)	S45C Equivalent	Hard Chrome Plating	Treated Hardness: 45~50HRC Plating Hardness: 750HV~	LPALR
(6)	SUS304	-	-	LPALS
(7)	SUS304	Hard Chrome Plating	Plating Hardness: 750HV~	LPALD
(8)	SUS440C or 13Cr stainless	-	Treated Hardness: 50~55HRC	LPALC

• Tip Shape

☞ Relief dimension is a reference value.

☞ When L < Pitch x 2, the incomplete threaded portion (Pitch x 2) is included in M x 1.5. For Coarse Thread Pitch Dims., see P.2360.

☞ Fully Threaded Type of L=0 w/o Pilot is available. P.1661

☞ Polished, centering hole is sometimes not available for SUS304.

Part Number	Type	Tip	D	D dim. Tolerance	P	B	R	G	L	M	Tightening Torque	(W)
(Round)	(Diamond)	A	3	-0.002 -0.008	4.00~ 8.00	3.5~25.0(10.0)	Shape A R≥P/2	Shape B G≤P	0~10	M3	98	1.5
LPAJ	LPDAJ		4	-0.004	5.00~ 9.00	3.5~25.0(10.0)				M4	225	1.8
LPAG	LPDAG	B	5	-0.012	6.00~10.00	3.5~30.0(10.0)	Shape C R≥P/2		0~20	M5	461	2.2
LPA	LPDA		6	-0.005	7.00~12.00	3.5~40.0(12.0)				M6	784	3
LPAB	LPDAB	C	8	-0.014	9.00~15.00	3.5~40.0(15.0)			0~20	M8	1911	3.5
LPAR	LPDAR		10	-0.006	11.00~20.00	5.0~50.0(20.0)				M10	3783	4
LPAS	LPDAS		12	-0.017	13.00~20.00	5.0~50.0(20.0)			0~25	M12	6605	5
LPAD	LPDAD		16	-0.022	17.00~27.00	5.0~50.0(20.0)				M16	16366	7
LPAC			20	-0.027	21.00~30.00	5.0~50.0(20.0)				M20	32928	9

Part Number		P	B	C	A	E	L	M	Tightening Torque
Type	Tip	0.01mm Increment	0.1mm Increment	1mm Increment	Selection	1mm Increment	1mm Increment	(Coarse)	N · cm
LPALJ	A	3	4.00~8.00	5.0~30.0	Shape A 1≤C≤P/2	Shape C 15 30 45	0~10	M3	98
LPALG		4	5.00~9.00	5.0~30.0				M4	225
LPAL	5	6.00~10.00	5.0~35.0	M5				461	
LPALB	6	7.00~12.00	5.0~45.0	M6				784	
LPALR	8	9.00~15.00	5.0~45.0	M8				1911	
LPALS	10	11.00~20.00	5.0~55.0	M10				3783	
LPALD	12	13.00~20.00	5.0~55.0	M12			6605		
LPALC	16	17.00~27.00	5.0~60.0	M16			16366		
	20	21.00~30.00	5.0~60.0	M20			32928		

☞ B dimension in () is for Diamond Shape. ☞ For full thread, specify L = 0 and alteration NNC.

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

Ordering Example: Part Number - P - B - R - G - L - L

LPAAS - P10.0 - B12.0 - R6 - G - L5 - L

LPAJB10 - P15.0 - B17.0 - - G10 - L10

☞ For full thread, specify L = 0 and alteration NNC.

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

Ordering Example: Part Number - P - B - C - A - E - L - L

LPALJA10 - P12.00 - B6.5 - C5 - A15 - E10 - L

LPALC16 - P20.00 - B7.0 - - A15 - E10 - L5

D	Round Shape Unit Price							Diamond Shape Unit Price						
	(1)Treated SKS3	(2)Hard SKS3	(3)S45C	(4)S45C Black Oxide	(5)Hard S45C	(6)SUS304	(7)Hard SUS304	(1)Treated SKS3	(2)Hard SKS3	(3)S45C	(4)S45C Black Oxide	(5)Hard S45C	(6)SUS304	(7)Hard SUS304
3	LPAJ	LPAG	LPA	LPAB	LPAR	LPAS	LPAD	LPDAJ	LPDAG	LPDA	LPDAB	LPDAR	LPDAS	LPDAD
4														
5														
6														
8														
10														
12														
16														
20														

Details of E Dimension Configurable Range

P	E 1mm Increment		
	A 15	A 30	A 45
5.00~8.00	4~6	3	-
8.01~12.00	6~12	4, 5	3
12.01~16.00	8~16	5~9	4, 5
16.01~20.00	10~20	7~12	5~7
20.01~25.00	12~24	8~15	6~9
25.01~30.00	14~28	10~18	7~11

D	Unit Price							
	(1)Treated SKS3	(2)Hard SKS3	(3)S45C	(4)S45C Black Oxide	(5)Hard S45C	(6)SUS304	(7)Hard SUS304	(8)SUS440C or 13Cr stainless
3	LPALJ	LPALG	LPAL	LPALB	LPALR	LPALS	LPALD	LPALC
4								
5								
6								
8								
10								
12								
16								
20								

Alterations: Part Number - P - B - R - G - L - L (SC, DRC, etc.)

LPAAS - P10.0 - B12.0 - R6 - L5 - MC3

Alterations: Part Number - P - B - C - A - E - L - L (SC, DRC, etc.)

LPALB8 - P10.00 - B5.0 - C3 - A15 - E10 - L - NNC

Alterations	Wrench Flats	Wrench Hole (Ø3.5)	Wrench Hole (Ø2.5)	Screwdriver Slot	Thread Dia.	Relief
Code	SC	LAC	LTE	DRC	MC	NNC
Spec.	SC = 1mm increment ☞ When B≤11, adds wrench flats on the tip. ☞ Not applicable to Diamond Shape. ☞ P-3≤SC≤P-1, SC≥D	Adds a Ø3.5 hole. ☞ Applicable when B≥10 and P≥8. ☞ Not applicable to Diamond Shape.	Adds a Ø2.5 hole. ☞ Applicable when B≥8 and 7≤P≤15. ☞ Not applicable to Diamond Shape.	Width 0.8mm Depth 1mm	☞ D/3≤MC<D ☞ MC≥3 [Ordering Code] MC4 ☞ The incomplete threaded portion (Pitch x 2) is included.	Adds a relief at the thread end. ☞ Applicable when L=0.

Alterations	Wrench Flats	Wrench Hole (Ø3.5)	Wrench Hole (Ø2.5)	Screwdriver Slot	Thread Dia.	Relief
Code	SC	LAC	LTE	DRC	MC	NNC
Spec.	SC = 1mm increment ☞ When B-C or B-E ≤ 11, adds wrench flats on the tip. ☞ P-3≤SC≤P-1, SC≥D	Adds a Ø3.5 hole. ☞ Applicable when B-C or B-E ≥ 10 and when P≥8.	Adds a Ø2.5 hole. ☞ Applicable when B-C or B-E ≥ 8 and when 7≤P≤15.	Width 0.8mm Depth 1mm	Changes the thread diameter to MC. ☞ D/3≤MC<D ☞ MC≥3 [Ordering Code] MC4 ☞ The incomplete threaded portion (Pitch x 2) is included.	Adds a relief at the thread end. ☞ Applicable when L=0.