

Locating Pins (Shoulder)

Set Screw Mounting Shank



RoHS 10

- ℓ3 is the recommended dimension of the position of set screw tip.
- Select set screw position X or Y for Notched Diamond Type and Set Screw Flat Diamond Type.
- A slight machined step will remain on the Diamond Shape.
- L > A + G + 1



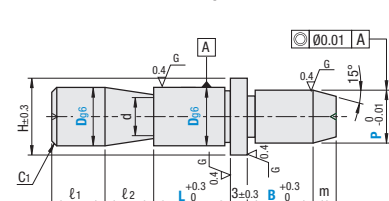
When D < 3
a = 0.5
d = D - 0.1

When D ≥ 3
a = 1.0
d = D - 0.2

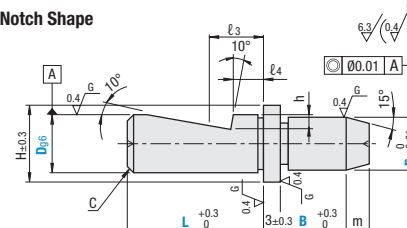
Relief dimension is reference value.

Material No.	Material	Surface Treatment	Hardness	Type			Shape Code
				Circumference Groove	Notch	Set Screw Flat	
(1)	O1 Tool Steel Equivalent	—	Treated Hardness: 60-63 HRC min.	JPGJ	JPCJ	JPDJ	S (Round) D (Diamond)

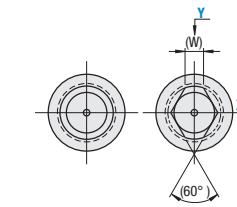
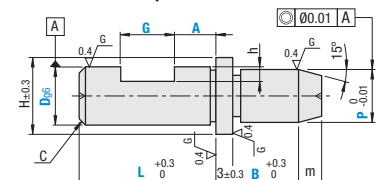
Circumference Groove Shape



Notch Shape



Set Screw Flat Shape



Circumference Groove Shape

Part Number	Type	Shape Code	D	D Tolerance g6	P 0.01 mm Increment	L 1 mm Increment	B 0.1 mm Increment	d	ℓ ₁	ℓ ₂	C ₁	m	H	(W)	
														When D < P	When D ≥ P
JPGJ	S Round D Diamond	6	-0.004 -0.012	2.00-6.00	3-12	2.0-20.0	4.5	5	5	1	3	8	3	1.5	
		8	-0.005 -0.014	3.00-8.00	2-12	4-16	6.5	6	6	0.5	4	11	3.5	1.8	
		8S	-0.005 -0.014	3.00-8.00	3-16	3.0-20.0	8	8	8	0.5	4	13	4	2.2	
		10	-0.006 -0.017	5.00-12.00	4-20	3.0-25.0	10	10	10	0.5	5	15	5	2.5	
		10S	-0.006 -0.017	5.00-12.00	5-24	3.0-20.0	14	14	14	0.5	5	19	7	4	
		12	-0.007 -0.020	10.00-16.00	5-24	5.0-25.0	18	18	18	0.5	5	23	9	5	
		12S	-0.007 -0.020	10.00-16.00	7-32	5.0-20.0									
		16	-0.007 -0.020	13.00-20.00	7-32	5.0-20.0									
		16S	-0.007 -0.020	13.00-20.00	7-32	5.0-20.0									
		20	-0.007 -0.020	13.00-20.00	7-32	5.0-20.0									

Pins of D dimension with S are for Limited Space with shorter mounting shaft (L and ℓ₁). Actual D dimension is the number without "s"

Notch Shape / Set Screw Flat Shape

Part Number	Type	Shape Code	D	D Dim. Tolerance g6	P 0.01 mm Increment	L 1 mm Increment	B 0.1 mm Increment	G 1 mm Increment	A 0.1 mm Increment	Flat Position	ℓ ₃	ℓ ₄	h	c	m	H	Applicable Set Screws	*Tightening Torque N·cm	(W)		
																			When D < P	When D ≥ P	
Notched JPCJ	Set Screw Flat	S Round D Diamond	6	-0.004 -0.012	5.00-7.00	12-20	5.0-20.0	3-9	2.0-8.0	2.0-12.0	X Y	5.5	2.5	1.0	1	3	8	M4	333	3	1.5
			8	-0.005 -0.014	5.00-9.00	14-22	5.0-30.0 (15.0)					7.5	3.5	1.2	1.5	4	11	M5	676	3.5	1.8
			10	-0.006 -0.017	5.00-12.00	15-25	5.0-20.0 (25.0)					7.5	3.5	1.2	2	4	13	M6	1156	4	2.2
			12	-0.007 -0.020	5.00-12.00	15-25	5.0-20.0 (25.0)					7.5	3.5	1.2	2	4	15	M6	1156	5	2.5
			16	-0.007 -0.020	10.00-16.00	24-35	5.0-20.0 (30.0)					10.5	5.5	2.0	3	5	19	M8	2803	7	4
			20	-0.007 -0.020	13.00-20.00	27-40	5.0-20.0 (30.0)					13.5	8.5	2.0	3	5	23	M8	2803	9	5

Applicable set screws in the table are the recommended sizes for Notch Shape.
* Tightening torque will be within Strength Class of 10.9 as indicated in the Technical Data P.4016 * Not applicable when using locking adhesives or lock washers.

Part Number Example

Part Number	JPGJS10	- P9.05	- L6	- B3.5	- G	- A	- Flat Position
Part Number	JPDJD8	- P5.05	- L20	- B10.1	- G5	- A8.2	- X

Locating Pins

Selectable Pilot & Mounting Shape / Configurable Shoulder Thickness / Tip Shape Selectable

Feature: Useable for lifting work objects that require isolation from metal contacts.



RoHS 10

L Selectable	Type			Material	
	L Configurable	L, B Configurable	Main Body	Tip	
—	LPCE	LPFCE	304 Stainless Steel	Ceramic (Alumina 99)	
LPEPK	LPPK	LPFPK		PEEK	
—	LPMC	LPFMC		MC Nylon	

L Selectable Type

Part Number	Type	D	L	B	M (Coarse)	H	W	SR
LPEPK	3	3	25	4.5	3	6	5	1.2
	4	4	50	6	4	8	7	1.2
	5	5	75	7.5	5	9	7	2
	6	6	100	9	6	10	8	2
	8	8	120	12	8	12	10	3.2
	10	10	150	15	10	15	13	3.2

L Configurable Type

Part Number	Type	D	L mm Increment	B	M (Coarse)	H	W	SR
LPCE	3	3	15-120	4.5	3	6	5	1.2
	4	4	15-120	6	4	8	7	1.2
	5	5	15-120	7.5	5	9	7	2
	6	6	15-120	9	6	10	8	2
	8	8	15-120	12	8	12	10	3.2
	10	10	15-120	15	10	15	13	3.2

L, B Configurable Type

Part Number	Type	D	L mm Increment	B mm Increment	M (Coarse)	H	W	SR
LPFCE	3	3	15-120	5.0-9.0	3	6	5	1.2
	4	4	15-120	6.5-12.0	4	8	7	1.2
	5	5	15-120	8.0-15.0	5	9	7	2
	6	6	15-120	9.5-18.0	6	10	8	2
	8	8	15-120	12.5-24.0	8	12	10	3.2
	10	10	15-120	15.5-30.0	10	15	13	3.2

Part Number Example

Part Number	LPEK3	- L20
Part Number	LPCE4	- 72
Part Number	LPFCE5	- 75 - B9.0

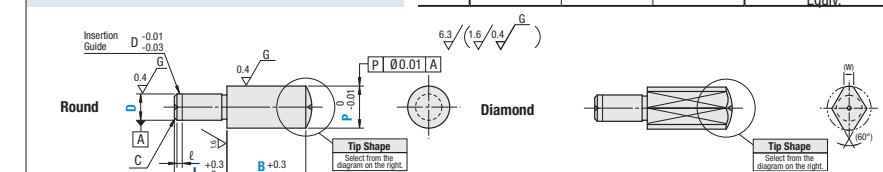
L Selectable
L Configurable
L, B Configurable

Locating Pins – Tip Shape Selectable



RoHS 10

Material No.	Round		Diamond	Material	Surface Treatment	Hardness
	d Tolerance m6	d Tolerance p6	d Tolerance m6			
(1)	LPEJ	LPPEJ	LPDEJ	O1 Tool Steel Equiv.	—	Treated Hardness: 55-60 HRC min.
(2)	LPEG	LPPEG	LPDEG	O1 Tool Steel Equiv.	Hard Chrome Plating Plating Thickness: 3 μm or more	Hardness: 50-55 HRC min. Plating Hardness 750 HV min.
(3)	LPE	LPPE	LPDE	1045 Carbon Steel Equiv.	—	Treated Hardness: 45-50 HRC min.
(4)	LPBE	LPPEB	LPDEB	1045 Carbon Steel Equiv.	Black Oxide	Treated Hardness: 45-50 HRC min.
(5)	LPER	LPPER	LPDER	1045 Carbon Steel Equiv.	Hard Chrome Plating Plating Thickness: 3 μm or more	Treated Hardness: 45-50 HRC min. Plating Hardness 750 HV min.
(6)	LPES	LPPEES	LPDES	304 Stainless Steel Equiv.	—	—
(7)	LPED	LPPEED	LPDED	304 Stainless Steel Equiv.	Hard Chrome Plating Plating Thickness: 3 μm or more	Plating Hardness 750 HV min.
(8)	LPEC	LPPEC	LPDEC	440C Stainless Steel Equiv.	—	Treated Hardness: 50-55 HRC min.



- 440C Stainless Steel has an identification groove on D part.
- Polished, centering hole is sometimes not available for 304 Stainless Steel.

Pilot-Tip Shape Selection

A Shape	B Shape	C Shape
$\ell_1 = R \sqrt{\frac{P^2}{4} - R^2}$ $R \leq P/2$	$\ell_2 = \frac{P-G}{2 \tan 30^\circ}$ Reference: $2 \tan 30^\circ = 1.15$ $G \leq P$ When G=P, add about C0.2 chamfering.	$\ell_3 = \frac{P}{2} / \tan 30^\circ + R / (\sin 30^\circ)$ $R \leq P/2$ Reference: $\tan 30^\circ = 0.577$ $\sin 30^\circ = 0.5$

B dimension in () and L dimension in () are for the Diamond Type.

Part Number Example

Part Number	LPPEJB10	- P15.00	- B27.0	- R	- G12	- L10
-------------	----------	----------	---------	-----	-------	-------

Part Number Alterations

Part Number	LPEA5	- P10.00	- B12.0	- R6	- L5	- LTE
-------------	-------	----------	---------	------	------	-------

Alteration is not available for P Selectable Type.

Alterations	Wrench Flats	Wrench Hole (Ø3.5)	Wrench Hole (Ø2.5)
	Code	SC	LAC
Spec.	SC=1 mm Increment When B ≤ 11, adds wrench flats on the tip P-3 ≤ SC ≤ P-1, SC ≥ D	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.