

Locating Pins - Shouldered

Tapered Press Fit

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

Features: Shouldered Standard Tapered Head allows for height adjustment of the locating target.

Material No.	Material	Surface Treatment	Hardness	P Selectable		P, L, B Configurable	
				Type	Shape Code	Type	Shape Code
(1)	SKS3 Equivalent	-	Treated Hardness: 60-63HRC	JP	JB (Round)	FP	JA (Round)
(3)	SUS304	-	-	SJP	DJ (Diamond)	SFP	JD (Diamond)
(5)	SUS440C or 13Cr stainless	-	Treated Hardness: 50-55HRC	-	-	CFP	-

When D (P) ≥ 3 a=1.0 d=D(P)-0.2
When D(P) < 3 a=0.5 d=D(P)-0.1
Relief dimension is a reference value.

SUS440C or 13Cr stainless has an identification groove at any position on D part.
SUS304 may not be polished and may have no centering hole.

P Selectable

Type	Shape	D	D dim. Tolerance m6	P Selection	L	B	C	m	H	W	Unit Price Round Shape		Unit Price Diamond Shape	
											(1)Treated SKS3 JPJB	(3)SUS304 SJPJB	(1)Treated SKS3 JPDJ	(3)SUS304 SJPDJ
JP SJP	JB (Round) DJ (Diamond)	2	+0.008	1 2	4	2	0.5	0.5	-	-	-	-	-	-
		3	+0.002	2 3 4	5	3	1	6	1.0	-	-	-	-	-
		4	+0.012	2 3 4 5	10	5	1	2	8	1.5	-	-	-	-
		5	+0.004	3 4 5 6	10	5	1	2	8	1.8	-	-	-	-
		6	+0.015	4 5 6	15	6	1.5	11	2.2	-	-	-	-	-
		8	+0.006	5 6 8	15	6	1.5	11	2.2	-	-	-	-	-
		10	+0.018	8 10	22	8	2	15	3.2	-	-	-	-	-
		12	+0.007	8 10 12	22	8	2	15	3.2	-	-	-	-	-
		13	+0.018	8 10 12 13	22	8	2	15	3.2	-	-	-	-	-
		16	+0.021	13 14 15 16	30	10	3	19	4	-	-	-	-	-
		20	+0.008	16 20	30	10	3	19	4	-	-	-	-	-

P, L, B Configurable

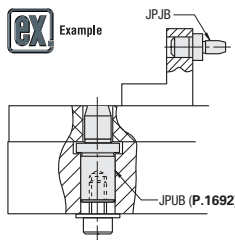
Type	Shape	D	D dim. Tolerance m6	P	L	B	C	m	H	W	Unit Price Round Shape			Unit Price Diamond Shape		
											(1)Treated SKS3 FPJA	(3)SUS304 SFPJA	(5)SUS440C or 13Cr stainless CFPJA	(1)Treated SKS3 FPJD	(3)SUS304 SFPJD	(5)SUS440C or 13Cr stainless CFPJD
FP SFP CFP	JA (Round) JD (Diamond)	2	+0.008	1.00-2.00	2-4	2.0-10.0	0.5	0.5	-	-	-	-	-	-	-	
		3	+0.002	2.00-4.00	3-6	2.0-10.0	0.5	1	6	1.0	-	-	-	-	-	
		4	+0.012	2.00-5.00	4-8	2.0-10.0	1	2	8	1.5	-	-	-	-	-	
		5	+0.004	3.00-6.00	5-10	2.0-15.0(10.0)	1	2	8	1.8	-	-	-	-	-	
		6	+0.015	4.00-7.00	5-12	2.0-15.0	1.5	11	2.2	-	-	-	-	-	-	
		8	+0.006	5.00-9.00	5-16	2.0-20.0(15.0)	1.5	11	2.2	-	-	-	-	-	-	
		10	+0.018	7.00-12.00	8(10)-20	3.0-30.0(25.0)	3	13	3	-	-	-	-	-	-	
		12	+0.007	7.00-12.00	10-24	3.0-30.0(25.0)	2	15	3.2	-	-	-	-	-	-	
		13	+0.018	8.00-13.00	13-26	5.0-30.0(25.0)	4	16	3.5	-	-	-	-	-	-	
		16	+0.021	13.00-16.00	16-32	5.0-30.0	3	19	4	-	-	-	-	-	-	
		20	+0.008	16.00-20.00	20-40	5.0-30.0	5	23	5.5	-	-	-	-	-	-	

L, B dimensions in () are applicable to Diamond Shape.

Ordering Example: Part Number - P - L - B
 JP JB 6 - 4
 FP JD 12 - P11.97 - L12 - B5.5

Alterations: Part Number - P - L - B - (HC, TC, RC)
 FPUA6 - P4.01 - L8 - B3.5 - HC7.0

Alterations	Wrench Flats Alteration	Length of Tapered Point	Sphere Tip																														
Spec.	<p>HC = 0.5mm Increment HC > D HC > P Ordering Code: HC10.0</p>	<p>Changes the m dimension. Ordering Code: TC8 (1mm increment)</p> <table border="1"> <tr> <th>D</th> <th>TC</th> <th>D</th> <th>TC</th> <th>D</th> <th>TC</th> </tr> <tr> <td>2</td> <td>1</td> <td>6</td> <td>3-11</td> <td>13</td> <td>5-22</td> </tr> <tr> <td>3</td> <td>2-5</td> <td>8</td> <td>4-14</td> <td>16</td> <td>6-23</td> </tr> <tr> <td>4</td> <td>2-7</td> <td>10</td> <td>4-18</td> <td>20</td> <td>6-23</td> </tr> <tr> <td>5</td> <td>3-9</td> <td>12</td> <td>4-20</td> <td></td> <td></td> </tr> </table>	D	TC	D	TC	D	TC	2	1	6	3-11	13	5-22	3	2-5	8	4-14	16	6-23	4	2-7	10	4-18	20	6-23	5	3-9	12	4-20			<p>Changes the relief to R0.5 Ordering Code: RC</p>
D	TC	D	TC	D	TC																												
2	1	6	3-11	13	5-22																												
3	2-5	8	4-14	16	6-23																												
4	2-7	10	4-18	20	6-23																												
5	3-9	12	4-20																														



Locating Pins - Shouldered

Tapered, Tapped

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

Features: Shouldered with the shape designed to be mounted from back using bolts. Improved maintainability compared to Press Fit Type.

Material No.	Material	Surface Treatment	Hardness	P Selectable		P, L, B Configurable	
				Type	Shape	Type	Shape
(1)	SKS3 Equivalent	-	Treated Hardness: 60-63HRC	JP	UB (Round)	FP	UA (Round)
(2)	SKS3 Equivalent	Hard Chrome Plating	Treated Hardness: 50-55HRC Plating Hardness: 750HV	SJP	DU (Diamond)	GFP	UD (Diamond)
(3)	SUS304	-	-	-	-	SFP	-

When D (P) ≥ 3 a=1.0 d=D(P)-0.2
When D(P) < 3 a=0.5 d=D(P)-0.1
Relief dimension is a reference value.

A machining step remains on the shoulder top for Diamond Shape.
SUS304 may not be polished and may have no centering hole.

P Selectable

Type	Shape	D	P Selection	L	B	Unit Price Round Shape		Unit Price Diamond Shape	
						(1)Treated SKS3 JPUB	(3)SUS304 SJPUB	(1)Treated SKS3 JPDU	(3)SUS304 SJPDU
JP SJP	UB (Round) DU (Diamond)	5	3 4 5 6	10	5	-	-	-	-
		6	4 5 6	10	5	-	-	-	-
		6T	4 5 6	10	5	-	-	-	-
		8	5 6 8	15	6	-	-	-	-
		8T	5 6 8	15	6	-	-	-	-
		10	8 10	22	8	-	-	-	-
		12	8 10 12	22	8	-	-	-	-
		13	8 10 12 13	22	8	-	-	-	-
		16	13 14 15 16	30	10	-	-	-	-
		20	16 20	30	10	-	-	-	-

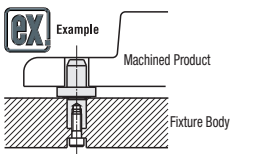
P, L, B Configurable

Type	Shape	D	P	L	B	Unit Price Round Shape			Unit Price Diamond Shape		
						(1)Treated SKS3 FPUA	(2)Hard SKS3 GFPUA	(3)SUS304 SFPUA	(1)Treated SKS3 FPUD	(2)Hard SKS3 GFUD	(3)SUS304 SFUD
FP GFP SFP	UA (Round) UD (Diamond)	5	3.00-6.00	5-10	2.0-15.0	-	-	-	-	-	-
		6	4.00-7.00	6(9)-12	2.0-15.0	-	-	-	-	-	-
		6T	4.00-7.00	6(9)-12	2.0-15.0	-	-	-	-	-	-
		8	5.00-9.00	8(12)-16	2.0-20.0	-	-	-	-	-	-
		8T	5.00-9.00	8(12)-16	2.0-20.0	-	-	-	-	-	-
		10	7.00-12.00	10(12)-20	2.0-30.0	-	-	-	-	-	-
		10T	7.00-12.00	10(12)-20	2.0-30.0	-	-	-	-	-	-
		12	7.00-12.00	12-24	3.0-30.0	-	-	-	-	-	-
		12T	7.00-12.00	12-24	3.0-30.0	-	-	-	-	-	-
		13	8.00-13.00	10(14)-20	3.0-30.0	-	-	-	-	-	-
		13T	8.00-13.00	13(14)-26	3.0-30.0	-	-	-	-	-	-
		16	13.00-16.00	16-32	5.0-30.0	-	-	-	-	-	-
16T	13.00-16.00	10(14)-24	5.0-30.0	-	-	-	-	-	-		
20	16.00-20.00	20-40	5.0-30.0	-	-	-	-	-	-		
20T	16.00-20.00	12(18)-30	5.0-30.0	-	-	-	-	-	-		

Pins of D dimension with T have one size smaller thread diameter and larger wall thickness. (Actual D dimension is the number without "T")

L dimension in () is applicable to Diamond Shape. Notes on the strength of under-head part. P.1618 Please confirm pilot hole depth on P.1618. Holes may go through.

Ordering Example: Part Number - P - L - B
 JPUB8 - 6
 FPUA6 - P4.01 - L8 - B3.5



Alterations: Part Number - P - L - B - (HC, TC, RC, RAC, LAC)
 FPUA6 - P4.01 - L8 - B3.5 - HC7.0

Alterations	Wrench Flats Alteration	Length of Tapered Point	Sphere Tip	Hex Socket Machining	Wrench Hole Machining																																																																																																									
Code	HC	TC	RC	RAC	LAC																																																																																																									
Spec.	<p>HC = 0.5mm Increment HC > D HC > P Ordering Code: HC10.0</p>	<p>Changes the m dimension. Ordering Code: TC8 (1mm increment)</p> <table border="1"> <tr> <th>D</th> <th>TC</th> <th>D</th> <th>TC</th> <th>D</th> <th>TC</th> </tr> <tr> <td>5</td> <td>3-9</td> <td>12</td> <td>4-20</td> <td></td> <td></td> </tr> <tr> <td>6</td> <td>3-11</td> <td>13</td> <td>5-22</td> <td></td> <td></td> </tr> <tr> <td>8</td> <td>4-14</td> <td>16</td> <td>5-22</td> <td></td> <td></td> </tr> <tr> <td>10</td> <td>4-18</td> <td>20</td> <td>6-23</td> <td></td> <td></td> </tr> </table>	D	TC	D	TC	D	TC	5	3-9	12	4-20			6	3-11	13	5-22			8	4-14	16	5-22			10	4-18	20	6-23			<p>Changes the relief to R0.5. Ordering Code: RC</p>	<p>Machines hex sockets. Ordering Code: RAC</p> <table border="1"> <tr> <th rowspan="2">D</th> <th colspan="3">Applicable Dimension Tapped</th> <th colspan="2">Hex Hole Dimensions</th> </tr> <tr> <th>P</th> <th>L</th> <th>B</th> <th>E</th> <th>S</th> </tr> <tr> <td>8 8T</td> <td>6.00-13-</td> <td>13-</td> <td></td> <td>2</td> <td>3</td> </tr> <tr> <td>10 10T</td> <td>7.00-13-</td> <td>13-</td> <td></td> <td>2</td> <td>3</td> </tr> <tr> <td>12 12T</td> <td>7.00-13-</td> <td>13-</td> <td></td> <td>2</td> <td>3</td> </tr> <tr> <td>13 13T</td> <td>9.00-15-</td> <td>15-</td> <td>6.0-</td> <td>2.5</td> <td>4</td> </tr> <tr> <td>16 16T</td> <td>13.00-17-</td> <td>17-</td> <td></td> <td>3</td> <td>5</td> </tr> <tr> <td>20 20T</td> <td>16.00-20-</td> <td>20-</td> <td></td> <td>4</td> <td>6</td> </tr> </table>	D	Applicable Dimension Tapped			Hex Hole Dimensions		P	L	B	E	S	8 8T	6.00-13-	13-		2	3	10 10T	7.00-13-	13-		2	3	12 12T	7.00-13-	13-		2	3	13 13T	9.00-15-	15-	6.0-	2.5	4	16 16T	13.00-17-	17-		3	5	20 20T	16.00-20-	20-		4	6	<p>Machines wrench holes. Ordering Code: LAC</p> <table border="1"> <tr> <th>D</th> <th>Applicable Dim.</th> <th>P</th> <th>Q</th> </tr> <tr> <td>8 8T</td> <td>5.0-</td> <td>6.00-9.99</td> <td>2</td> </tr> <tr> <td>10 10T</td> <td>5.0-</td> <td>10.00-16.99</td> <td>3.5</td> </tr> <tr> <td>12 12T</td> <td>5.0-</td> <td>17.00-</td> <td>5</td> </tr> <tr> <td>13 13T</td> <td>5.0-</td> <td></td> <td></td> </tr> <tr> <td>16 16T</td> <td>5.0-</td> <td></td> <td></td> </tr> <tr> <td>20 20T</td> <td>10.0-</td> <td></td> <td></td> </tr> </table>	D	Applicable Dim.	P	Q	8 8T	5.0-	6.00-9.99	2	10 10T	5.0-	10.00-16.99	3.5	12 12T	5.0-	17.00-	5	13 13T	5.0-			16 16T	5.0-			20 20T	10.0-		
D	TC	D	TC	D	TC																																																																																																									
5	3-9	12	4-20																																																																																																											
6	3-11	13	5-22																																																																																																											
8	4-14	16	5-22																																																																																																											
10	4-18	20	6-23																																																																																																											
D	Applicable Dimension Tapped			Hex Hole Dimensions																																																																																																										
	P	L	B	E	S																																																																																																									
8 8T	6.00-13-	13-		2	3																																																																																																									
10 10T	7.00-13-	13-		2	3																																																																																																									
12 12T	7.00-13-	13-		2	3																																																																																																									
13 13T	9.00-15-	15-	6.0-	2.5	4																																																																																																									
16 16T	13.00-17-	17-		3	5																																																																																																									
20 20T	16.00-20-	20-		4	6																																																																																																									
D	Applicable Dim.	P	Q																																																																																																											
8 8T	5.0-	6.00-9.99	2																																																																																																											
10 10T	5.0-	10.00-16.99	3.5																																																																																																											
12 12T	5.0-	17.00-	5																																																																																																											
13 13T	5.0-																																																																																																													
16 16T	5.0-																																																																																																													
20 20T	10.0-																																																																																																													