

# Shafts

## One End Two Tapped Holes

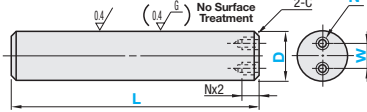


RoHS 10

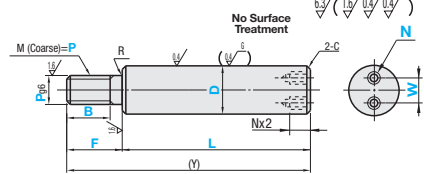
- Annealing may lower hardness at shaft end machined areas (effective thread length + approx. 10mm). **P112**
- L Dimension Tolerance, Circularity, Straightness, Perpendicularity, Concentricity and Changes in Hardness **P111**

Type				D Tol.	Material	Hardness	Surface Treatment
Solid Type	Tapped Type	Stepped and Tapped Type	Threaded Type				
SFDJ	SFDT	SFDG	SFDN	g6	SUJ2 Equivalent SUS440C or 13Cr stainless	Effective Hardened Depth of Induction Hardening <b>P112</b>	-
SSFJ	SSFDT	SSFJG	SSFJN				
PSFDJ	PSFDT	PSFDG	PSFDN				

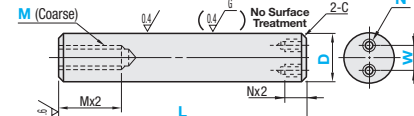
Solid Type SFDJ, (S, R, P, PS) SFDJ



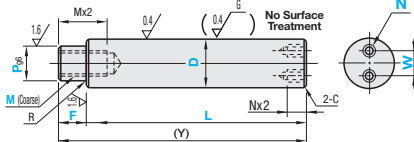
Threaded Type SFDN, (S, R, P, PS) SFDN



Tapped Type SFDT, (S, R, P, PS) SFDT



Stepped and Tapped Type SFDG, (S, R, P, PS) SFDG



### Solid Type, One End Tapped Type, One End Stepped and Tapped Type

Part Number		1mm Increment				Selection		W specified in 1mm Increment	N Selection	(Y) Max.	R	C
Type	Type	L (Solid / Tapped)	L (Stepped and Tapped)	F	P	M (Tapped)	M (Stepped and Tapped)					
Solid Type	Tapped Type	15	25-750	25-750	2sF≤P×4	6-13	4 5 6 8 10	3 4 5 6 8 10	D-W-N≥4	802	0.5 or Less	0.3 or Less
		16	30-800	25-800		6-14	4 5 6 8 10	3 4 5 6 8 10				
		18	30-900	25-900		8-16	4 5 6 8 10 12	4 5 6 8 10 12				
		20	30-1000	25-1000		8-17	4 5 6 8 10 12	4 5 6 8 10 12				
		25	35-1200	25-1198		8-22	4 5 6 8 10 12 16	4 5 6 8 10 12 16				
		30	35-1500	25-1498		9-27	6 8 10 12 16 20	5 6 8 10 12 16 20 24				
		35	35-1500	25-1498		9-32	8 10 12 16 20 24	5 6 8 10 12 16 20 24				
		40	50-1500	25-1498		11-37	10 12 16 20 24 30	6 8 10 12 16 20 24 30				
		50	50-1500	25-1498		11-47	12 16 20 24 30	6 8 10 12 16 20 24 30				

• Tapped Type **P112** Not applicable when Mx2.5+4+Nx2.5+4≤L. • Stepped and Tapped Type **P112** Not applicable when Mx2.5+4+Nx2.5+4≤L.

### Threaded Type

Part Number		1mm Increment				P Selection	W specified in 1mm Increment	N Selection	(Y) Max.	R	C
Type	Type	L	F	B (Threaded)							
Threaded Type	SFDN SSFJN PSFDN	15	25-750	2sF≤P×5	(When P=5, 6) B≤F-2	5 6 8 10 12	D-W-N≥4	4 5 6 8 10 12	825	0.5 or Less	0.3 or Less
		*16	25-800		(When P=8, 10) B≤F-3	5 6 8 10 12					
		18	25-900		(When P=12) B≤F-5	5 6 8 10 12 16					
		*20	25-1000		B≤PITCH×3	6 8 10 12 16					
		25	25-1198			8 10 12 16 20 24					
		*30	25-1498		8 10 12 16 20 24						
		35	25-1498		10 12 16 20 24 30						
		40	25-1498		12 16 20 24 30						
		50	25-1498		16 20 24 30						

**P112** D>P

Ordering Example	Part Number	L	F	B	P	M	W	N
	SFDJ20	75					W10	N4
	SFDT20	525					W17	N4
	SFDG20	400	F25		P16	M8	W12	N4
	PSFDN20	500	F30	B20	P16	M10	W6	N4

Alterations	Part Number	L	F	B	P (PMC, PMS)	M (MSC)	W	N
	SFDN30	250	F40	B30	PMC10		W10	N4

**P112** Alterations may lower hardness. See **P112**

Coarse Thread Dimension	Coarse Thread Dimension	
	M	Pitch
3	0.5	12 1.75
4	0.7	16 2.0
5	0.8	20 2.5
6	1.0	24 3.0
8	1.25	30 3.5
10	1.5	

Alterations	Alteration to L dimension tolerance	Fine Tap MSC (Fine)	Fine Thread PMC, PMS (Fine)																																																																																																																			
	Code	LKC	MSC	PMC, PMS																																																																																																																		
Spec.	<p>Changes L tolerance.</p> <p>Ordering Code: LKC</p> <ul style="list-style-type: none"> <li>L&lt;200 → L±0.03</li> <li>200≤L&lt;500 → L±0.05</li> <li>L≥500 → L±0.1</li> <li>L dimensions can be specified in 0.1mm increment for LKC.</li> <li>Not applicable when D&gt;P=2.</li> </ul>	<p>Changes tapped threads to fine tapped threads shown in the table below.</p> <p>Ordering Code: MSC14</p> <ul style="list-style-type: none"> <li>Applicable to Tapped Type</li> <li>Specify M dimensions with MSC.</li> <li>M dimension is equal to MSC.</li> <li>Not applicable to Stepped and Tapped Type.</li> </ul> <table border="1"> <thead> <tr> <th>D</th> <th colspan="3">MSC</th> </tr> </thead> <tbody> <tr> <td>15, 16</td> <td>8</td> <td>10</td> <td></td> </tr> <tr> <td>18</td> <td>8</td> <td>10</td> <td>12</td> </tr> <tr> <td>20</td> <td>8</td> <td>10</td> <td>12 14</td> </tr> <tr> <td>25-35</td> <td>8</td> <td>10</td> <td>12 14 18</td> </tr> <tr> <td>40</td> <td>10</td> <td>12</td> <td>14 18</td> </tr> <tr> <td>50</td> <td>10</td> <td>12</td> <td>14 18</td> </tr> <tr> <td>Pitch</td> <td>1.0</td> <td>1.25</td> <td>1.5</td> </tr> </tbody> </table>	D	MSC			15, 16	8	10		18	8	10	12	20	8	10	12 14	25-35	8	10	12 14 18	40	10	12	14 18	50	10	12	14 18	Pitch	1.0	1.25	1.5	<p>Changes the threads to fine threads shown in the table below.</p> <p>(PMC is for bearing nut fine thread pitches.)</p> <p>(PMS is for cylinder fine thread pitches.)</p> <p>Ordering Code: PMC17</p> <ul style="list-style-type: none"> <li>Applicable to Threaded Type only.</li> <li>Specify P dimensions with PMC (PMS).</li> <li>P dimension is equal to that of PMC(PMS).</li> </ul> <table border="1"> <thead> <tr> <th rowspan="2">D</th> <th colspan="3">PMC</th> <th colspan="3">PMS</th> </tr> <tr> <th>5</th> <th>6</th> <th>8</th> <th>10</th> <th>12</th> <th>14</th> </tr> </thead> <tbody> <tr> <td>15</td> <td>5</td> <td>6</td> <td>8</td> <td>10</td> <td>12</td> <td>14</td> </tr> <tr> <td>16</td> <td>5</td> <td>6</td> <td>8</td> <td>10</td> <td>12</td> <td>14</td> </tr> <tr> <td>18</td> <td>5</td> <td>6</td> <td>8</td> <td>10</td> <td>12</td> <td>14</td> </tr> <tr> <td>20</td> <td>5</td> <td>6</td> <td>8</td> <td>10</td> <td>12</td> <td>14</td> </tr> <tr> <td>25</td> <td>8</td> <td>10</td> <td>12</td> <td>15</td> <td>17</td> <td>20</td> </tr> <tr> <td>30</td> <td>8</td> <td>10</td> <td>12</td> <td>15</td> <td>17</td> <td>20</td> </tr> <tr> <td>35</td> <td>10</td> <td>12</td> <td>15</td> <td>17</td> <td>20</td> <td>25</td> </tr> <tr> <td>40</td> <td>10</td> <td>12</td> <td>15</td> <td>17</td> <td>20</td> <td>25</td> </tr> <tr> <td>50</td> <td>15</td> <td>17</td> <td>20</td> <td>25</td> <td>30</td> <td>30</td> </tr> <tr> <td>Pitch</td> <td>0.5</td> <td>0.75</td> <td>1.0</td> <td>1.5</td> <td>1.25</td> <td>1.5</td> </tr> </tbody> </table>	D	PMC			PMS			5	6	8	10	12	14	15	5	6	8	10	12	14	16	5	6	8	10	12	14	18	5	6	8	10	12	14	20	5	6	8	10	12	14	25	8	10	12	15	17	20	30	8	10	12	15	17	20	35	10	12	15	17	20	25	40	10	12	15	17	20	25	50	15	17	20	25	30	30	Pitch	0.5	0.75	1.0	1.5	1.25	1.5
D	MSC																																																																																																																					
15, 16	8	10																																																																																																																				
18	8	10	12																																																																																																																			
20	8	10	12 14																																																																																																																			
25-35	8	10	12 14 18																																																																																																																			
40	10	12	14 18																																																																																																																			
50	10	12	14 18																																																																																																																			
Pitch	1.0	1.25	1.5																																																																																																																			
D	PMC			PMS																																																																																																																		
	5	6	8	10	12	14																																																																																																																
15	5	6	8	10	12	14																																																																																																																
16	5	6	8	10	12	14																																																																																																																
18	5	6	8	10	12	14																																																																																																																
20	5	6	8	10	12	14																																																																																																																
25	8	10	12	15	17	20																																																																																																																
30	8	10	12	15	17	20																																																																																																																
35	10	12	15	17	20	25																																																																																																																
40	10	12	15	17	20	25																																																																																																																
50	15	17	20	25	30	30																																																																																																																
Pitch	0.5	0.75	1.0	1.5	1.25	1.5																																																																																																																