

Shafts

Surface Fully Plated Type

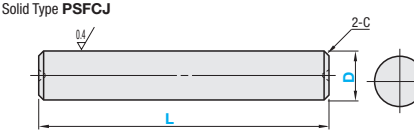
☞ Surface treatment is also applied to shaft ends.



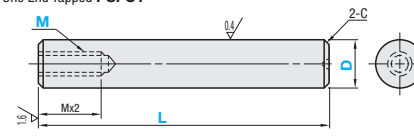
RoHS 10

Type					D Tol.	Material	Hardness	Surface Treatment
Solid	One End Tapped	One End Stepped and Tapped	One End Threaded	One End Threaded with O.D. same as Shaft O.D.				
PSFCJ	PSFCT	PSFCG	PSFCN	PSFCQ	g6	EN 1.3505 Equiv.	Effective Hardened Depth of Induction Hardening $\geq$ P.112 58HRC-	Electroless Nickel Plating

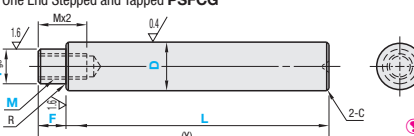
Solid Type PSFCJ



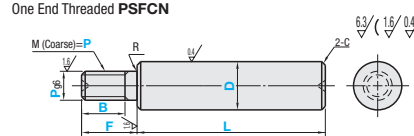
One End Tapped PSFCT



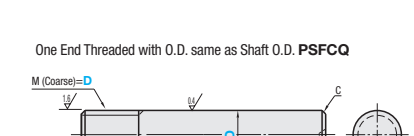
One End Stepped and Tapped PSFCG



One End Threaded PSFCN



One End Threaded with O.D. same as Shaft O.D. PSFCQ



☞ L does not include incomplete threads.

☞ Use "Oil-Free Bushings" for sliding applications. P.369~402 (Using rolling ball elements such as linear ball bushings on electroless nickel plated shafts may result in flaking of the nickel plating layer.)

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

Part Number	1mm Increment			Selection					(Y) Max.	R	C
	Type	D	L (Solid / One End Tapped)	L (One End Stepped and Tapped)	F	P	M (One End Tapped)	M (One End Stepped and Tapped)			
Solid Type PSFCJ	8	20~ 800	25~798			6	3 4 5	3	800		0.5 or Less
	10	20~ 800	25~798			6~ 8	3 4 5 6	3 4 5	800		
	12	20~1000	25~998			6~10	4 5 6 8	3 4 5 6	1000		
	15	25~1000	25~998			6~13	4 5 6 8 10	3 4 5 6 8 10	1000		
One End Tapped PSFCT	20	30~1000	25~998			6~17	4 5 6 8 10 12	4 5 6 8 10 12	1000		
	25	35~1000	25~998			8~22	4 5 6 8 10 12 16	4 5 6 8 10 12 16	1000		
	30	35~1000	25~998			9~27	6 8 10 12 16 20	5 6 8 10 12 16 20	1000		
One End Stepped and Tapped PSFCG	35	35~1000	25~998			9~32	8 10 12 16 20 24	5 6 8 10 12 16 20 24	1000		
	40	50~1000	25~998			11~37	10 12 16 20 24 30	6 8 10 12 16 20 24 30	1000		
	50	65~1000	25~998			11~47	12 16 20 24 30	6 8 10 12 16 20 24 30	1000		

• One End Tapped Type ☞ When $M \times 2.5 + 4 \geq L$, tap pilot holes may go through. • One End Stepped and Tapped ☞ $P \geq M + 3$ ☞ When $M \times 2.5 + 4 \geq Y$, tap pilot holes may go through.

One End Threaded

Part Number	1mm Increment			P Selection	(Y) Max.	R	C
	Type	D	L	F	B		
One End Threaded PSFCN	8	25~798					
	10	25~798					
	12	25~998					
	15	25~998					
	20	25~998					
	25	25~998					
	30	25~998					
	35	25~998					
One End Threaded PSFCQ	40	25~998					
	50	25~998					

One End Threaded with O.D. same as Shaft O.D.

Part Number	1mm Increment			M	(Y) Max.	R	C
	Type	D	L	B	M	P	M
One End Threaded with O.D. same as Shaft O.D. PSFCQ	8	25~793	7~40	8	800		0.5 or Less
	10	25~795	8~50	10	800		
	12	25~991	9~60	12	1000		
	20	25~987	13~100	20	1000		
	30	25~982	18~150	30	1000		

☞ For shafts with O.D. same as Shaft O.D., L dimension has priority, thus the effective thread length will be B-(Pitchx2).

Solid Type

Part Number	Unit Price									
	Type	D	Min. L	L51	L101	L151	L201	L301	L401	L501
PSFCJ	8	50	100	150	200	300	400	500	600	800
	10									
	12									
	15									
	20									
	25									
	30									
	35									
	40									
	50									

One End Tapped Type

Part Number	Unit Price									
	Type	D	Min. L	L51	L101	L151	L201	L301	L401	L501
PSFCT	8	50	100	150	200	300	400	500	600	800
	10									
	12									
	15									
	20									
	25									
	30									
	35									
	40									
	50									

One End Stepped and Tapped Type

Part Number	Unit Price									
	Type	D	Min. L	L51	L101	L151	L201	L301	L401	L501
PSFCG	8	50	100	150	200	300	400	500	600	800
	10									
	12									
	15									
	20									
	25									
	30									
	35									
	40									
	50									



Alterations

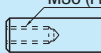
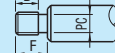
Part Number - [L] - [F] - [B] - [P (PMC, PMS)] - [M (MSC)] - (LKC~etc.)

PSFCN30 - 250 - F40 - B30 - P10 - M (MSC) - (LKC)~etc.

☞ When selecting multiple alteration additions, the distance between machined areas should be greater than 2mm. $\geq$ P.114

☞ Alterations may lower hardness. See $\geq$ P.112

Alterations	Alteration to L dimension tolerance	Wrench Flats	Set Screw Flat																								
																											
Code	LKC	SC	FC																								
Spec.	Changes L tolerance. Ordering Code LKC ☺ L<200→L±0.03 200≤L<500→L±0.05 L≥500→L±0.1 ☺ L dimensions can be specified in 0.1mm increment for LKC. ☒ Not applicable to One End Threaded Type when D-P≤2. ☒ Not applicable to One End Threaded with O.D. same as Shaft O.D.	Adds wrench flats. Ordering Code SC5 ☺ SC=1mm Increment ☺ SC+L1≤L SC≥0 <table><thead><tr><th>D</th><th>W</th><th>l1</th></tr></thead><tbody><tr><td>8</td><td>7</td><td rowspan="2">8</td></tr><tr><td>10</td><td>8</td></tr><tr><td>12</td><td>10</td><td rowspan="2">15</td></tr><tr><td>15</td><td>13</td></tr><tr><td>20</td><td>17</td><td>20</td></tr></tbody></table>	D	W	l1	8	7	8	10	8	12	10	15	15	13	20	17	20	Adds a screw flat. Ordering Code FC10-E8 ☺ FC, E=1mm Increment ☺ FC≤Dx3 ☺ When 1.5xD<FC, FC≤L/2 ☺ E=0 or E≥2 <table><thead><tr><th>D</th><th>h</th></tr></thead><tbody><tr><td>8~15</td><td>1</td></tr><tr><td>20~40</td><td>2</td></tr><tr><td>50</td><td>3</td></tr></tbody></table>	D	h	8~15	1	20~40	2	50	3
D	W	l1																									
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Alterations	Fine Tap	Undercut	Fine Thread																																																			
	 MSC (Fine)	 PC	 PMC, PMS (Fine)																																																			
Code	MSC	PC	PMC, PMS																																																			
Spec.	Changes tapped threads to fine tapped threads shown in the table below. Ordering Code MSC14 ☞ Applicable to One End Tapped Type and One End Stepped and Tapped Type. ☞ Specify in reference to D dimensions for One End Threaded Shafts; P dimensions for One End Stepped and Tapped Shafts.	Adds an undercut to P. Ordering Code PC ☞ For detailed undercut dimensions, see P.111. ☞ Applicable to One End Threaded Type only. ☞ Not applicable to M3~M5.	Changes the threads to fine threads shown in the table below. (PMC→Applicable to bearing nut fine thread pitches.) (PMS→Applicable to cylinder fine thread pitches.) Ordering Code PMC17 ☞ Applicable to One End Threaded Type only.																																																			
	<table border="1"><thead><tr><th>D, P</th><th>MSC</th></tr></thead><tbody><tr><td>12</td><td>8 10</td></tr><tr><td>15</td><td>8 10</td></tr><tr><td>20</td><td>8 10 12 14</td></tr><tr><td>25~35</td><td>8 10 12 14 18</td></tr><tr><td>40</td><td>10 12 14 18</td></tr><tr><td>50</td><td>12 14 18</td></tr><tr><td>Pitch</td><td>1.0 1.25 1.5</td></tr></tbody></table> ☞ Specify M dimensions with MSC. ☞ M dimension is equal to MSC.	D, P	MSC	12	8 10	15	8 10	20	8 10 12 14	25~35	8 10 12 14 18	40	10 12 14 18	50	12 14 18	Pitch	1.0 1.25 1.5		<table border="1"><thead><tr><th>D</th><th>PMC</th><th>PMS</th></tr></thead><tbody><tr><td>8</td><td>3 4 5 6</td><td></td></tr><tr><td>10</td><td>4 5 6 8</td><td></td></tr><tr><td>12</td><td>5 6 8 10</td><td>10</td></tr><tr><td>15</td><td>5 6 8 10 12</td><td>10 12</td></tr><tr><td>20</td><td>6 8 10 12 15 17</td><td>10 12 14 18</td></tr><tr><td>25</td><td>8 10 12 15 17 20</td><td>10 12 14 18</td></tr><tr><td>30</td><td>8 10 12 15 17 20 25</td><td>10 12 14 18</td></tr><tr><td>35</td><td>10 12 15 17 20 25 30</td><td>10 12 14 18</td></tr><tr><td>40</td><td>12 15 17 20 25 30</td><td>12 14 18</td></tr><tr><td>50</td><td>15 17 20 25 30</td><td>14 18</td></tr><tr><td>Pitch</td><td>0.35 0.5 0.75 1.0 1.5 1.25 1.5</td><td></td></tr></tbody></table> ☞ Specify P dimensions with PMC (PMS). ☞ P dimension is equal to that of PMC(PMS).	D	PMC	PMS	8	3 4 5 6		10	4 5 6 8		12	5 6 8 10	10	15	5 6 8 10 12	10 12	20	6 8 10 12 15 17	10 12 14 18	25	8 10 12 15 17 20	10 12 14 18	30	8 10 12 15 17 20 25	10 12 14 18	35	10 12 15 17 20 25 30	10 12 14 18	40	12 15 17 20 25 30	12 14 18	50	15 17 20 25 30	14 18	Pitch	0.35 0.5 0.75 1.0 1.5 1.25 1.5
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