Shafts
Surface Fully Plated Type

Surface treatment is also applied to shaft ends.

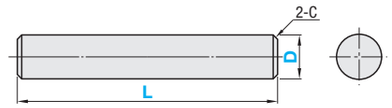
RoHS10

- L Dimension Tolerance, Circularity, Straightness, Perpendicularity, Concentricity and Changes in Hardness P.141
- Annealing may lower hardness at shaft end machined areas (effective thread length + approx. 10mm).
- Shafts may have centering holes at end faces depending on shapes.

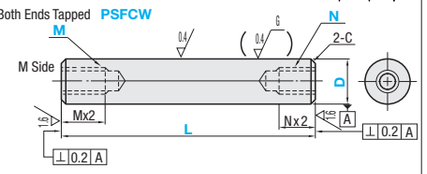
Type					D Tol.	M Material	H Hardness	S Surface Treatment
Solid	One End Tapped	Both Ends Tapped	One End Stepped and Tapped	One End Stepped, Both Ends Tapped				
PSFCJ	PSFCT	PSFCW	PSFCG	PSFCA	g6	SUJ2 Equivalent	Effective Hardened Depth of Induction Hardening P.142 SUJ2 Equivalent 58HRC~	Electroless Nickel Plating

The surface roughness of D part is 0.4.

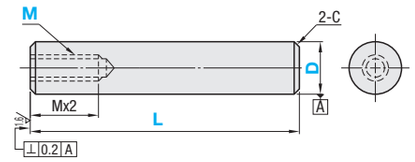
Solid Type **PSFCJ**



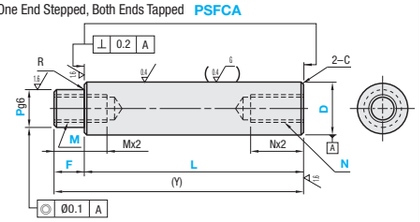
Both Ends Tapped **PSFCW**



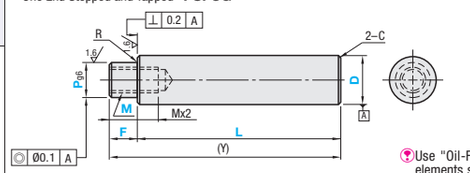
One End Tapped **PSFCT**



One End Stepped, Both Ends Tapped **PSFCA**



One End Stepped and Tapped **PSFCG**



Use "Oil-Free Bushings" for sliding applications. P.415~436 (Using rolling ball elements such as linear ball bushings on electroless nickel plated shafts may result in flaking of the nickel plating layer.)

Solid / One End Tapped / Both Ends Tapped

Part Number Type	D	1mm Increments L	Selection M	Selection N (Both Ends Tapped Type only)	C
Solid Type PSFCJ	8	20~ 800	3 4 5	3 4 5	0.5 or Less
	10	20~ 800	3 4 5 6	3 4 5 6	
	12	20~1000	4 5 6 8	4 5 6 8	
	15	25~1000	4 5 6 8 10	4 5 6 8 10	
One End Tapped PSFCT	20	30~1000	4 5 6 8 10 12	4 5 6 8 10 12	1.0 or Less
	25	35~1000	4 5 6 8 10 12 16	4 5 6 8 10 12 16	
Both Ends Tapped PSFCW	30	35~1000	6 8 10 12 16 20	6 8 10 12 16 20	
	35	35~1000	8 10 12 16 20 24	8 10 12 16 20 24	
	40	50~1000	10 12 16 20 24 30	10 12 16 20 24 30	
	50	65~1000	12 16 20 24 30	12 16 20 24 30	

- For One End Tapped Type, when Mx2.5+4≥L, tap pilot holes may go through.
- For Both Ends Tapped Type, when Mx2.5+4x2≥L, tap pilot holes may go through and the effective length of the smaller tap part may be shortened.

One End Stepped and Tapped / One End Stepped, Both Ends Tapped

Part Number Type	D	1mm Increments L	F	P	Selection M	Selection N (One End Stepped, Both Ends Tapped Type only)	(Y)Max.	R	C
One End Stepped and Tapped PSFCG	8	25~798	2≤F≤Px4	6	3	3 4 5	800	0.4 or Less	0.5 or Less
	10	25~798		6~ 8	3 4 5	3 4 5 6	800		
	12	25~998		6~10	3 4 5 6	4 5 6 8	1000		
	15	25~998		6~13	3 4 5 6 8 10	4 5 6 8 10	1000		
One End Stepped, Both Ends Tapped PSFCA	20	25~998		8~17	4 5 6 8 10 12	4 5 6 8 10 12	1000		1.0 or Less
	25	25~998		8~22	4 5 6 8 10 12 16	4 5 6 8 10 12 16	1000		
	30	25~998		9~27	5 6 8 10 12 16 20 24	6 8 10 12 16 20	1000		
	35	25~998		9~32	5 6 8 10 12 16 20 24	8 10 12 16 20 24	1000	0.5 or Less	
	40	25~998		11~37	6 8 10 12 16 20 24 30	10 12 16 20 24 30	1000		
	50	25~998		11~47	6 8 10 12 16 20 24 30	12 16 20 24 30	1000		

- For One End Stepped and Tapped Type, when P≥M+3 and Mx2.5+4≥Y, tap pilot holes may go through.
- For One End Stepped, Both Ends Tapped Type, when P≥M+3 and Mx2.5+4x2≥Y, tap pilot holes may go through and the effective length of the smaller tap part may be shortened.

Ordering Example

Part Number	-	L	-	F	-	P	-	M	-	N
PSFCJ20	-	75								
PSFCT20	-	525					-	M8		
PSFCW20	-	525					-	M8	-	N8
PSFCG20	-	400	-	F25	-	P16	-	M10		
PSFCA20	-	400	-	F25	-	P16	-	M10	-	N10

Solid

Part Number Type	D	Unit Price Min. L ~50	L51 ~100	L101 ~150	L151 ~200	L201 ~300	L301 ~400	L401 ~500	L501 ~600	L601 ~800	L801 ~1000
PSFCJ	8										-
	10										-
	12										
	15										
	20										
	25										
	30										
	35										
	40										
	50	-									

Both Ends Tapped

Part Number Type	D	Unit Price Min. L ~50	L51 ~100	L101 ~150	L151 ~200	L201 ~300	L301 ~400	L401 ~500	L501 ~600	L601 ~800	L801 ~1000
PSFCW	8										-
	10										-
	12										
	15										
	20										
	25										
	30										
	35										
	40										
	50	-									

One End Tapped

Part Number Type	D	Unit Price Min. L ~50	L51 ~100	L101 ~150	L151 ~200	L201 ~300	L301 ~400	L401 ~500	L501 ~600	L601 ~800	L801 ~1000
PSFCT	8										-
	10										-
	12										
	15										
	20										
	25										
	30										
	35										
	40										
	50	-									

One End Stepped, Both Ends Tapped

Part Number Type	D	Unit Price Min. L ~50	L51 ~100	L101 ~150	L151 ~200	L201 ~300	L301 ~400	L401 ~500	L501 ~600	L601 ~800	L801 ~1000
PSFCA	8										-
	10										-
	12										
	15										
	20										
	25										
	30										
	35										
	40										
	50	-									

One End Stepped and Tapped

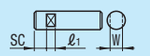
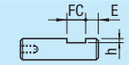
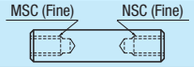
Part Number Type	D	Unit Price Min. L ~50	L51 ~100	L101 ~150	L151 ~200	L201 ~300	L301 ~400	L401 ~500	L501 ~600	L601 ~800	L801 ~1000
PSFCG	8										-
	10										-
	12										
	15										
	20										
	25										
	30										
	35										
	40										
	50	-									

Alterations

Ordering Example

Part Number	-	L	-	M	-	N	-	(SC FC---etc.)
PSFCW20	-	525	-	M8	-	N8	-	SC0

- Surface treatment will be also applied to altered areas.
- Alterations may lower hardness. See P.142.
- When selecting multiple alteration additions, the distance between machined areas should be greater than 2mm. P.144

Alterations	Alteration to L dimension tolerance	Wrench Flats	Set Screw Flat	Fine Tap
				
Code	LKC	SC	FC	MSC, NSC
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 with O.D. same as Shaft O.D.	Adds wrench flats. Ordering Code SC5 SC = 1mm Increment SC+ℓ1≤L SC≥0	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	Changes tapped threads to fine tapped threads shown in the table below. Ordering Code MSC14 Specify in reference to D dimensions for One End Threaded Shafts; P dimensions for One End Stepped and Tapped Shafts. Specify M dimensions with MSC. M dimension is equal to MSC.

SC

D	W	ℓ1
8	7	8
10	8	
12	10	10
15	13	
20	17	

D	W	ℓ1
25	22	10
30	27	15
35	30	
40	36	20
50	41	

FC

D	h
8~15	1
20~40	2
50	3

MSC, NSC

D, P	MSC, NSC			
12	8			
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	