

Shafts

Both Ends Tapped

High Precision Linear Shafts for High Precision Assembly
Features: Perpendicularity $\perp 0.03$

P.221

For High Precision Linear Shafts with high perpendicular precision of the shaft end ($\perp 0.03$), see P.221. For Shafts with Wrench Flats and Cross-Drilled Hole, see P.149.

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

Type	D Tol. g6	D Tol. h5	D Tol. f8	Material	Hardness	Surface Treatment
SFJW	SFUW	-	-	SUJ2 Equivalent	-	-
SSFJW	SSFUW	-	-	SUS440C or 13Cr stainless	Effective Hardened Depth of Induction Hardening P.142	Hard Chrome Plating - Plating Hardness: HV750 -, Plating Thickness: 5µ or More
PSFJW	PSFUW	-	-	SUJ2 Equivalent	SUS440C or 13Cr stainless 58HRC-	Low Temp. Black Chrome Plating
PSSFJW	PSSFUW	-	-	SUS440C or 13Cr stainless	SUS440C or 13Cr stainless 58HRC-	Hard Chrome Plating - Plating Hardness: HV750 -, Plating Thickness: 10µ or More
RSFJW	-	-	-	SUJ2 Equivalent	-	-
-	-	PSFGW	-	S45C Equivalent	-	-
-	-	PSSFGW	-	SUS304	-	-

For plated products, the surface roughness of D part is $\frac{0.4}{\sqrt{R}}$ and for unplated products, it is $\frac{0.4}{\sqrt{R}}$.

RoHS 10

- Annealing may lower hardness at shaft end machined areas (effective thread length + approx. 10mm). P.142
- Full Length Hardness Guaranteed Shafts P.155
- Dimension Tolerance, Circularity, Straightness, Perpendicularity, Concentricity and Changes in Hardness P.141
- Features of Low Temp. Black Chrome Plating P.156

Part Number Type	D	L specified in 1mm Increments	M (Coarse), N (Coarse) Selection	C
(D Tol. g6) SFJW SSFJW PSFJW PSSFJW RSFJW (D≤30, L≤500)	4	20~ 300	2	0.2 or Less
	5	20~ 400	2.6 3	
	6	20~ 800	3	
	8	20~1000	3 4 5	
	10	20~1000	3 4 5 6	
	12	20~1200	4 5 6 8	
	13	25~1200	4 5 6 8	
	15	25~1200	4 5 6 8 10	
	16	30~1200	4 5 6 8 10	
	18	30~1200	4 5 6 8 10 12	
(D Tol. f8) PSFGW PSSFGW	20	30~1200	4 5 6 8 10 12	1.0 or Less
	25	35~1200	4 5 6 8 10 12 16	
	30	35~1500	6 8 10 12 16 20	
	35	35~1500	8 10 12 16 20 24	
	40	50~1500	10 12 16 20 24 30	
	50	65~1500	12 16 20 24 30	

L requires Mx2+Nx2≤L. When Mx2.5+4+Nx2.5+4≥L, tap pilot holes may go through and the effective length of the smaller tap part may be shortened.

Ordering Example

Part Number - L - M - N

SFJW8 - 200 - M4 - N4

SSFJW20 - 500 - M6 - N10

Alterations

Part Number - L - M(MSC, MD) - N(NSC, MD) - (LKC--etc.)

SFJW30 - 500 - M8 - N10 - LKC

Alterations	Code	Spec.
LKC	LKC	Alteration to L dimension tolerance (Ordering Code) LKC L dimensions can be specified in 0.1mm increment for LKC. L<200 → L±0.03 200≤L<500 → L±0.05 L≥500 → L±0.1
M Side WSC	WSC	Wrench Flats at Two Locations (Ordering Code) WSC12-X8 (Application Notes) Applicable to D=6 or more. WSC, X=1mm Increment WSC+X+φ1x2<L WSC(X)≥0 Orientation between two set screw flats is not coplanar. Not available in combination with FC.
FC	FC	Set Screw Flat at One Location (Ordering Code) FC10-A8 FC, A=1mm Increment D=30:FC≤5xD, D=35:FC≤3xD E=0 or A≥2 Not available in combination with WFC.
WFC	WFC	Set Screw Flats at Two Locations (Ordering Code) WFC8-A8-E2 WFC, A, E=1mm Increment D=30:WFC≤5xD, D=35:WFC≤3xD A(E)=0 or A(E)≥2 Orientation between set screw flats is not coplanar. Not available in combination with FC.

Alterations	Code	Spec.
Keyway at one location.	KC	Keyway (Ordering Code) KC10-G10 KC10-G10 WKC10-C8-KC10-G10 (Application Notes) Only applicable to D=12, 16, 20, 25 and 30. This Alteration cannot be applied to any tapped thread (Mx2.5+4).
Keyways at two locations.	WKC	
MSC (Fine) NSC (Fine)	MSC NSC	Change to Fine Tapped Thread (Ordering Code) MSC14 MSC14 (M is changed to MSC) NSC14 (N is changed to NSC) (Application Notes) Applicable to D=12 or more.
RC	RC	90-deg. Set Screw Flat at One Location (Ordering Code) RC10 (Application Notes) Only applicable to D=10~30. Not available in combination with WRC.
WRC	WRC	90-deg. Set Screw Flats at Two Locations (Ordering Code) WRC10-Y10 (Application Notes) Only applicable to D=10~30. Not available in combination with WRC. Orientation between two set screw flats is not coplanar.
MD(Nx3) ND(Nx3)	MD ND	Change the effective tap depth to M(N)x3. (Ordering Code) MD6/ND6 (M is changed to MD, N is changed to ND) (Application Notes) Only applicable to D=10~30 and M (N) = 6~20 One End Tapped: MDx3.5+4≤L Both Ends Tapped: MDx3.5+4+NDx3.5+4≤L Not available in combination with KC, WSC.

Please see Shaft Alteration Overview for details if provided. P.143

When selecting multiple alteration additions, the distance between machined areas should be greater than 2mm. P.144

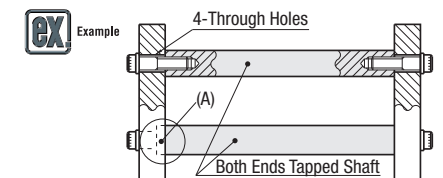
Alterations may lower hardness. See P.142.

Part Number	Type	D	Unit Price																										
			Min. L	L51	L101	L151	L201	L251	L301	L351	L401	L451	L501	L551	L601	L651	L701	L751	L801	L851	L901	L951	L1001	L1101	L1201	L1301	L1401		
SFJW	SFUW	4																											
		5																											
		6																											
		8																											
		10																											
		12																											
		13																											
		15																											
		16																											
		18																											
SSFJW	SSFUW	4																											
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PSFJW	PSFUW	4																											
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PSSFJW	PSSFUW	4																											
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		12																											
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		18																											

For D tolerance h5, add the relevant surcharge to the prices above.

Part Number	D	Min. L	L51	L101	L151	L201	L301	L401
RSFJW	4	50	100	150	200	300	400	500
	5							
	6							
	8							
	10							
	12							
	13							
	15							
	16							
	18							

Part Number	D	Min. L	L101	L201	L401	L601	L801	L1001	L1201
PSFGW	6	100	200	400	600	800	1000	1200	1500
	8								
	10								
	12, 13								
	15, 16								
	18, 20								
	25								
	30								
	35								
	40								



Part Number	D	Min. L	L101	L201	L401	L601	L801	L1001	L1201
PSSFGW	6	100	200	400	600	800	1000	1200	1500
	8								
	10								
	12, 13								
	15, 16								
	18, 20								
	25								
	30								
	35								
	40								