

Rotary Shafts

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

One End Threaded



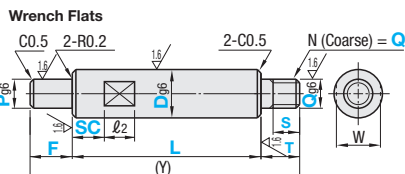
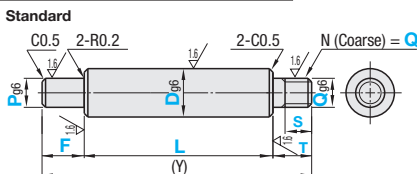
RoHS10

Type		Material	Surface Treatment
Standard	Wrench Flats		
SFRE	SFRES	EN 1.1191 Equiv.	Black Oxide
-	SSFRES	EN 1.4301 Equiv.	-

⚙ Circularity, Straightness, Perpendicularity, Concentricity ⚙ P820

D Tolerance (g6)	
6	-0.004 -0.012
8 · 10	-0.005 -0.014
12~18	-0.006 -0.017
20~30	-0.007 -0.020
35~50	-0.009 -0.025

6.3 / (1.6 /)



Part Number		0.1mm Increment		1mm Increment		Q Selection	1mm Increment SC Wrench Flats Type only	W	ℓ2	(Y) max.
Type	Wrench Flats	D	L	F	T					
SFRE	SFRES (D13, 16, 18 and 22 are not available for SSFRES.)	6	20.0~295.0	2≤F≤P×5	5≤T≤Q×7	3<P<D When Q≤6, S≤Q×3 & S≤T-2 When Q=8 or 10, S≤Q×3 & S≤T-3 When Q≥12, S≤Q×3 & S≤T-5	SC+ℓ2≤L SC=0 or SC≤1	5	8	300
		8	20.0~395.0					7	8	400
		10	20.0~495.0					8	8	500
		12	25.0~595.0					10	10	600
		13	30.0~595.0					11	11	600
		15	25.0~695.0					13	13	700
		16	40.0~795.0					14	14	800
		17	30.0~795.0					15	15	800
		18	40.0~795.0					16	16	800
		20	30.0~795.0					17	17	800
		22	40.0~795.0					19	19	800
		25	30.0~795.0					22	22	800
		30	30.0~795.0					27	27	800
		35	40.0~795.0					30	30	800
		40	40.0~795.0					36	36	800
		50	40.0~795.0					41	41	800

⚙ When D-P (Q)≤2, chamfer C at the step is 0.2 or less.

One End Threaded, One End Tapped



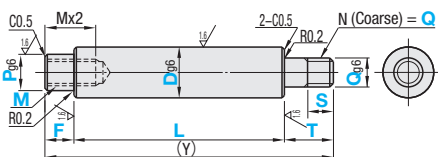
RoHS10

Type	Material	Surface Treatment
SFRB	EN 1.1191 Equiv.	Black Oxide
PSFRB	-	Electroless Nickel Plating

⚙ Circularity, Straightness, Perpendicularity, Concentricity ⚙ P820

D Tolerance (g6)	
6	-0.004 -0.012
8, 10	-0.005 -0.014
12~18	-0.006 -0.017
20~30	-0.007 -0.020
35~50	-0.009 -0.025

6.3 / (1.6 /)



Part Number		0.1mm Increment		1mm Increment		M (Coarse) Selection	Q Selection	(Y) max.
Type	D	L	F	T	S			
SFRB PSFRB	6	20.0~296.0	2≤F≤P×5	5≤T≤Q×7	5 When Q≤6, S≤Q×3 & S≤T-2 For M3~M8, M+2≤P<D For M10~16, M+3≤P<D For M20 or M24, M+4≤P<D For M30, M+5≤P<D	3 3 4 5 4 5 6 5 6 8 5 6 8 10 5 6 8 10 12 5 6 8 10 12 16 5 6 8 10 12 16 20 5 6 8 10 12 16 20 24 5 6 8 10 12 16 20 24 30 16 20 24 30	3 4 5 3 4 5 6 4 5 6 8 5 6 8 10 5 6 8 10 12 5 6 8 10 12 16 5 6 8 10 12 16 20 5 6 8 10 12 16 20 24 5 6 8 10 12 16 20 24 30 16 20 24 30	300 400 500 600
	8	20.0~396.0						
	10	20.0~496.0						
	12	30.0~496.0						
	13	30.0~496.0						
	15	25.0~496.0						
	16	40.0~496.0						
	17	30.0~496.0						
	18	40.0~496.0						
	20	30.0~496.0						
	22	50.0~496.0						
	25	30.0~496.0						
	30	30.0~496.0						
	35	40.0~496.0						
	40	40.0~496.0						
	50	40.0~496.0						

⚙ When D-P (Q)≤2, chamfer C at the step is 0.2 or less.

Ordering Example	Part Number	-	L	-	F	-	P	-	T	-	S	-	Q	-	SC
	SFRE25	-	300	-	F50	-	P20	-	T20	-	S15	-	Q10	-	SC70
	Part Number	-	L	-	F	-	P	-	M	-	T	-	S	-	Q
	SFRB20	-	400	-	F25	-	P16	-	M10	-	T20	-	S15	-	Q10

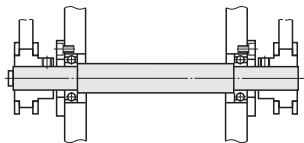
One End Threaded

Type	SFRE SFRES							SSFRES						
	Min. L	L50.1	L100.1	L150.1	L200.1	L300.1	L400.1	Min. L	L50.1	L100.1	L150.1	L200.1	L300.1	L400.1
D	50.0	100.0	150.0	200.0	300.0	400.0	600.0	50.0	100.0	150.0	200.0	300.0	400.0	600.0
6														
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50														

One End Threaded, One End Tapped

Type	SFRB							PSFRB						
	Min. L	L50.1	L100.1	L150.1	L200.1	L300.1	L400.1	Min. L	L50.1	L100.1	L150.1	L200.1	L300.1	L400.1
D	50.0	100.0	150.0	200.0	300.0	400.0	496.0	50.0	100.0	150.0	200.0	300.0	400.0	496.0
6														
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22														
25														
30														
35														
40														
50														

ex Example



Alterations	Part Number	-	L	-	F	-	P	-	T	-	S	-	Q	-	SC
	SFRE25	-	300	-	F50	-	P20	-	T20	-	S15	-	Q10	-	SC70
	Part Number	-	L	-	F	-	P	-	M	-	T	-	S	-	Q
	SFRB25	-	400	-	F25	-	P16	-	M10	-	T20	-	S15	-	Q10

Alterations	Keyway	Keyway on Shaft End	Set Screw Flat	2 Set Screw Flats (Angle Specified)	Slit Cam Groove	Undercut / L Dimension Tolerance	Concentricity	Fine Thread
	1 Keyway: KC 2 Keyways: WKC	PKC, QKC	1 Set Screw Flat: FC 2 Set Screw Flats: WFC	SFC	UC	PC, QC, LKC	CKC	QMC
Code	KC, WKC	PKC, QKC	FC, WFC	SFC	UC	PC, QC, LKC	CKC	QMC
Spec.	KC: Adds a keyway. [Ordering Code] KC50-A10 WKC: Adds two keyways. [Ordering Code] WKC50-C8-K40-E10 ⚙ KC, A, WKC, C, K, E = 1mm Increment ⚙ A, E, C: 100 ⚙ For Keyway Details, refer to P820 ⚙ If 3 keyways are required, use both KC and WKC. ⚙ When the keyway position is less than 1mm away from the end face, it is not applied. Ex.	PKC, QKC: Adds a keyway on the shaft end P (Q). [Ordering Code] PKC10(QKC10) ⚙ PKC, QKC = 1mm Increment ⚙ PKC, QKC≤50 PKC(QKC)≤F(T) ⚙ For Keyway Details, refer to P820 ⚙ Not applicable to P (Q)=5 or less. ⚙ PKC is not applicable for SFRB, PSFRB.	FC: Adds 1 set screw flat. [Ordering Code] FC10-G3 WFC: Adds 2 set screw flats. [Ordering Code] WFC10-J3-W10-V3 ⚙ FC, G, WFC, J, W, V = 1mm Increment ⚙ G, J, V: 50	Adds a flat at any designated angle besides the datum plane 0°. SFC: SG= 1mm Increment AG = 15° Increment ⚙ SG≤50 [Ordering Code] SFC10-SG3-AG90	Adds a slit cam groove. UC = 1mm Increment [Ordering Code] UC10 ⚙ UC: 4~1L ⚙ UC: 1 ⚙ Not applicable to D13 or more.	PC, QC: Adds an undercut on P and Q. [Ordering Code] PC ⚙ For detailed undercut dimensions, refer to P820. ⚙ F-B-Mx2 LKC: Changes L dimension tolerance. [Ordering Code] LKC ⚙ L<500→L±0.05 ⚙ L>500→L±0.1	Changes the concentricity to 0.02. [Ordering Code] CKC ⚙ Applicable within dimension L range in the table below. ⚙ Specify a value within dimension L range in the table below.	Changes threads to Fine Thread in the table below. [Ordering Code] QMC17