

Rotary Shafts

One End Stepped with Retaining Ring Groove / Both Ends Stepped with Retaining Ring Grooves

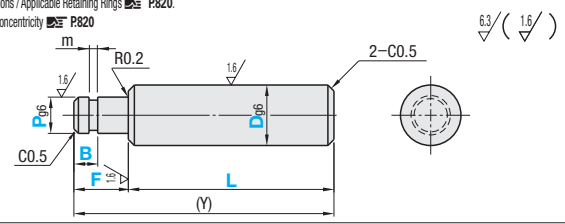
One End Stepped with Retaining Ring Groove



RoHS10

Type	Material	Surface Treatment
SFRX	S45C Equivalent	Black Oxide
PSFRX	S45C Equivalent	Electroless Nickel Plating
SSFRX	SUS304	-

For Retaining Ring Groove Detailed Dimensions / Applicable Retaining Rings P820.
Circularity, Straightness, Perpendicularity, Concentricity P820



Type	Part Number	Dg6	0.1mm Increment		1mm Increment			(Y) max.				
			L	F	B	P						
SFRX	6	-0.004	20.0~298.0	F≤P×5	When P≤6, 2≤B	3 ≤P<D	300					
	8	-0.005	20.0~398.0				400					
	10	-0.014	20.0~498.0				500					
	12	-0.006	25.0~598.0				600					
	13		25.0~598.0				600					
	15	-0.017	25.0~698.0				700					
	16	PSFRX	-0.017				25.0~798.0	F≤P×5	When 6<P≤10, 3≤B	5≤P<D	800	
	17						30.0~798.0				800	
	18						30.0~798.0					
	20						-0.007				30.0~798.0	When 10<P≤20, 4≤B
22	-0.020			30.0~798.0								
25	SSFRX			-0.020	30.0~798.0	F≤P×5	When 20<P, 5≤B				16≤P<D	800
30					40.0~798.0							
35					-0.009							40.0~798.0
40					-0.025							40.0~798.0
50					40.0~798.0							

When D-P≤2, chamfer C at the step is 0.2 or less. For P dimension, 27, 31, 33, 34, 36, 37, 38, 39, 41, 42, 43, 44, 46, 47, 48 and 49 cannot be specified. For m Dimension, see P820.

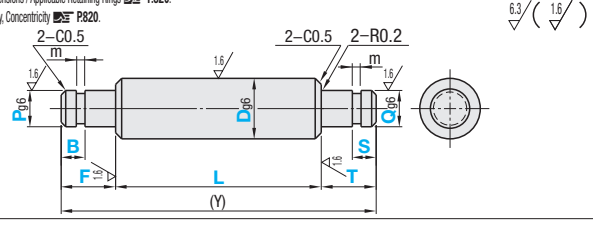
Both Ends Stepped with Retaining Ring Grooves



RoHS10

Type	Material	Surface Treatment
SFRZ	S45C Equivalent	Black Oxide
PSFRZ	S45C Equivalent	Electroless Nickel Plating
SSFRZ	SUS304	-

For Retaining Ring Groove Detailed Dimensions / Applicable Retaining Rings P820.
Circularity, Straightness, Perpendicularity, Concentricity P820



Type	Part Number	Dg6	0.1mm Increment		1mm Increment			(Y) max.				
			L	F, T	B, S	P, Q						
SFRZ	6	-8.872	20.0~296.0	F≤P×5 T≤Q×5	When P, Q≤6, 2≤B, S	3 ≤P, Q<D	300					
	8	-0.005	20.0~396.0				400					
	10	-0.014	20.0~496.0				500					
	12	-0.006	25.0~596.0				600					
	13		25.0~596.0				600					
	15	-0.017	25.0~696.0				700					
	16	PSFRZ	-0.017				25.0~796.0	F≤P×5 T≤Q×5	When 6<P and Q≤10, 3≤B, S	5≤P, Q<D	800	
	17						30.0~796.0					
	18						30.0~796.0					
	20						-0.007				30.0~796.0	When 10<P and Q≤20, 4≤B, S
22	-0.020			30.0~796.0								
25	SSFRZ			-0.020	30.0~796.0	F≤P×5 T≤Q×5	When 20<P, Q, 5≤B, S				16≤P, Q<D	800
30					40.0~796.0							
35					-0.009							40.0~796.0
40					-0.025							40.0~796.0
50					40.0~796.0							

When D-P(Q)≤2, chamfer C at the step is 0.2 or less. For P and Q dimensions, 27, 31, 33, 34, 36, 37, 38, 39, 41, 42, 43, 44, 46, 47, 48 and 49 cannot be specified. For m Dimension, see P820.

Ordering Example

Part Number - L - F - B - P

SFRX30 - 500 - F20 - B10 - P15

Part Number - L - F - B - P - T - S - Q

PSFRZ30 - 340 - F13 - B9 - P8 - T12 - S10 - Q8

One End Stepped with Retaining Ring Groove

Type	SFRX							PSFRX							SSFRX									
	Min. L	L50.1	L100.1	L150.1	L200.1	L300.1	L400.1	L600.1	Min. L	L50.1	L100.1	L150.1	L200.1	L300.1	L400.1	L600.1	Min. L	L50.1	L100.1	L150.1	L200.1	L300.1	L400.1	L600.1
D	50.0	100.0	150.0	200.0	300.0	400.0	600.0	798.0	50.0	100.0	150.0	200.0	300.0	400.0	600.0	798.0	50.0	100.0	150.0	200.0	300.0	400.0	600.0	798.0
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Both Ends Stepped with Retaining Ring Grooves

Type	SFRZ							PSFRZ							SSFRZ									
	Min. L	L50.1	L100.1	L150.1	L200.1	L300.1	L400.1	L600.1	Min. L	L50.1	L100.1	L150.1	L200.1	L300.1	L400.1	L600.1	Min. L	L50.1	L100.1	L150.1	L200.1	L300.1	L400.1	L600.1
D	50.0	100.0	150.0	200.0	300.0	400.0	600.0	796.0	50.0	100.0	150.0	200.0	300.0	400.0	600.0	796.0	50.0	100.0	150.0	200.0	300.0	400.0	600.0	796.0
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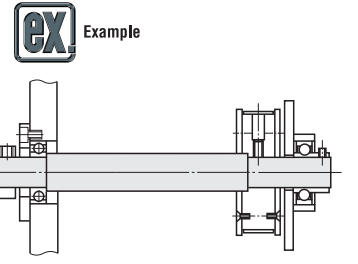
Alterations

Part Number - L - F - B - P - (LKC, FC...etc.)

SFRX30 - 500 - F20 - B10 - P15 - LKC

Part Number - L - F - B - P - T - S - Q - (LKC, FC...etc.)

PSFRZ30 - 340 - F13 - B9 - P8 - T12 - S10 - Q8 - LKC



Alterations	Keyway	Set Screw Flat	2 Set Screw Flats (Angle Specified)	Slit Cam Groove	L Dimension Tolerance
Alterations	<ul style="list-style-type: none"> 1 Keyway: KC 2 Keyways: WKC 	<ul style="list-style-type: none"> 1 Set Screw Flat: FC 2 Set Screw Flats: WFC 	<ul style="list-style-type: none"> 1 Set Screw Flat at any desired angle besides the datum plane (P1) KFC: G=1mm Increment, AG=15° Increment, G=50 FC: G, WFC, J, W, V = 1mm Increment, G, J, V=50 	<ul style="list-style-type: none"> Adds a slit cam groove. UC = 1mm Increment UC10 UC=4±1L LKC=1 Not applicable to D13 or more. 	<ul style="list-style-type: none"> LKC: Changes L dimension tolerance. LKC L<500→±0.05 L≥500→±0.1
Code	KC, WKC	FC, WFC	KFC	UC	LKC
Spec.	<ul style="list-style-type: none"> KC: Adds a keyway. Ordering Code KC50-A10 WKC: Adds two keyways. Ordering Code WKC50-C3-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, R is not applied. 	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> Adds a set screw flat at any desired angle besides the datum plane (P1). KFC: G=1mm Increment, AG=15° Increment, G=50 FC: G, WFC, J, W, V = 1mm Increment, G, J, V=50 	<ul style="list-style-type: none"> Adds a slit cam groove. UC = 1mm Increment UC10 UC=4±1L LKC=1 Not applicable to D13 or more. 	<ul style="list-style-type: none"> LKC: Changes L dimension tolerance. LKC L<500→±0.05 L≥500→±0.1

*Keyway(s) and set screw flats are added in the same plane. When the distance of the alterations are over 50mm, ±2 degree phase differential may occur.