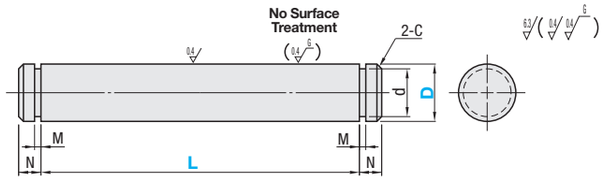
Shafts
With Retaining Ring Grooves

RoHS 10

- L Dimension Tolerance, Circularity, Straightness, Perpendicularity, Concentricity and Changes in Hardness P.111
- Features of Low Temp. Black Chrome Plating P.128
- For O.D. tolerance f8 type, D needs to be 6 or more.

Type			Material	Hardness	Surface Treatment
D Tol. g6	D Tol. h5	D Tol. f8			
SFAR	SFUR	-	SUJ2	Effective Hardened Depth of Induction Hardening P.112 SUJ2 58HRC~ SUS440C Equivalent 56HRC~	-
SSFAR	SSFUR	-	SUS440C Equivalent		Hard Chrome Plating Plating Hardness: HV750 ~ Plating Thickness: 5μ or More ~
PSFAR	PSFUR	-	SUJ2		
PSSFAR	PSSFUR	-	SUS440C Equivalent		
RSFAR	-	-	SUJ2		Low Temp. Black Chrome Plating
-	-	PSFGR	S45C Equivalent	-	Hard Chrome Plating Plating Hardness: HV750 ~ Plating Thickness: 10μ or More ~
-	-	PSSFGR	SUS304		



D	D Tol. g6	D Tol. h5	D Tol. f8
3	-0.002 -0.008	0 -0.004	-
4	-0.004 -0.012	0 -0.005	
5			
6			-0.010 -0.028
8	-0.005 -0.014	0 -0.006	-0.013 -0.035
10			
12	-0.006 -0.017	0 -0.008	-0.016 -0.043
13			
15			
16			
18			
20	-0.007 -0.020	0 -0.009	-0.020 -0.053
25			
30			

Part Number		L	N	M		d		Applicable Retaining Ring	C
Type	D	specified in 1mm Increment			Tolerance		Tolerance		
(D Tolerance g6) (D Tolerance h5) SFAR SFUR SSFAR SSFUR PSFAR PSFUR PSSFAR PSSFUR RSFAR (L≤500) (D Tolerance f8) PSFGR (D≥6) PSSFGR (D≥6)	3	10~400	2	0.5	+0.05 0	2	+0.06 0	NETW□2	0.5 or Less
	4	10~400		0.7	+0.1 0	3		NETW□3	
	5	10~400				4	+0.075 0	NETW□4	
	6	20~600				5		NETW□5	
	8	20~800	3	0.9		7	+0.09 0	NETW□7	
	10	20~800		1.15		9.6	0 -0.09	STW□10	
	12	20~1000	4			11.5	0 -0.11	STW□12	
	13	25~1000				12.4		STW□13	
	15	25~1200				14.3		STW□15	
	16	30~1200				15.2		STW□16	
	18	30~1200		1.35		17		STW□18	
	20	30~1200				19	0 -0.21	STW□20	1.0 or Less
	25	35~1200	5			23.9		STW□25	
	30	35~1200		1.65		28.6		STW□30	

For E Type Retaining Rings, see **P.2302**; and for C Type Retaining Rings, see **P.2303**.

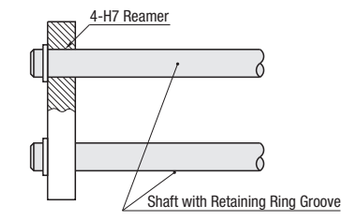
Ordering Example: Part Number (SFAR20) - L (300)

Alterations: Part Number (SFAR20) - L(LLC) (LLC300) - (NWC)

Alterations	One End w/o Retaining Ring Groove	Length Leader Position Change
Code	NWC	LLC
Spec.	One end will be left w/o retaining ring groove. Ordering Code NWC	Dimensioning leader position of L dimension will be altered to the outside of retaining ring grooves. Ordering Code LLC300 Specify L dimensions with LLC. LLC=1mm Increment

Alterations may lower hardness. See P.112

Part Number		Unit Price										
Type	D	Min. L ~ 50	L51 ~ 100	L101 ~ 150	L151 ~ 200	L201 ~ 300	L301 ~ 400	L401 ~ 500	L501 ~ 600	L601 ~ 800	L801 ~ 1000	L1001 ~ 1200
SFAR SFUR	3, 4, 5							-	-	-	-	-
	6									-	-	-
	8										-	-
	10										-	-
	12											-
	13											-
	15, 16											
	18											
	20											
	25											
	30											
SSFAR SSFUR	3, 4, 5							-	-	-	-	-
	6									-	-	-
	8										-	-
	10										-	-
	12											-
	13											-
	15, 16											
	18, 20											
	25											
	30											
PSFAR PSFUR	3, 4, 5							-	-	-	-	-
	6									-	-	-
	8										-	-
	10										-	-
	12, 13											-
	15, 16											
	18, 20											
	25											
	30											
PSSFAR PSSFUR	3, 4, 5							-	-	-	-	-
	6									-	-	-
	8, 10										-	-
	12											-
	13											-
	15, 16											
	18, 20											
	25											
	30											
RSFAR	3, 4, 5							-				
	6											
	8											
	10											
	12											
	13											
	15											
	16											
	18											
	20											
	25											
	30											

Part Number		Unit Price						
Type	D	Min. L ~ 100	L101 ~ 200	L201 ~ 400	L401 ~ 600	L601 ~ 800	L801 ~ 1000	L1001 ~ 1200
PSFGR	6					-	-	-
	8						-	-
	10						-	-
	12							-
	13							-
	15, 16							
	18, 20							
	25							
	30							
PSSFGR	6					-	-	-
	8						-	-
	10						-	-
	12							-
	13							-
	15, 16							
	18, 20							
	25							
	30							

Example