

# Rotary Shafts

—One Threaded End—One Tapped End (For Inch Bearings)—



Mostly used as drive or idler shafts in rotary motion applications. Available in 1045 carbon steel and 304 stainless steel. Choose from a wide variety of modifications. Simply add the modification ordering code to the end of the part number. The "L" length can be specified with 0.01" increments. MISUMI's Rotary Shafts are delivered with complete shaft end machining, fine surface finish, and can fit into your system right out of the box.

Material	Surface Treatment	Type
1045 Steel	Black Oxide	U-SFRDA
	Electroless Nickel Plating	U-PSFRDA
304 Stainless Steel	-	U-SSFRDA

Material Characteristics P.628, 629

Tolerance of L and Y P.203

General Tolerance  
Unless otherwise specified use the table below.

From	To	Tolerance
0.000	5.000	±0.01
5.001	16.000	±0.02
16.001	60.000	±0.05

Thread or hole location tolerance: ±0.005" non-cumulative.

Surface Roughness: Unless otherwise specified P.203

Circularity, Straightness, Perpendicularity and Concentricity P.203

Part No.	Choose in 0.01" Increments				T (=P)					U															
	D	L	F	B	Inch Thread Selection (Callout)					Inch Thread Selection (Callout)															
U-SFRDA U-PSFRDA U-SSFRDA	0.25	1/4	0.75 - 11.00	0.095F <sub>T</sub> Dia x 7	0.25B <sub>S</sub> T Dia x 3	10	1/4-20	3/8-16	1/2-13	5/8-11	3/4-10	7/8-9	1-8	5	5-40	#6-32	#8-32	#10-32	1/4-20	5/16-18	3/8-16	1/2-13	5/8-11	3/4-10	
	0.38	3/8	0.75 - 19.00	(When T≤0.25)	&	10 0.25									6	8	10								
	0.50	1/2	1.00 - 23.00		B≤F-0.09	10 0.25 0.38									10	0.25	0.31								
	0.63	5/8	1.50 - 25.00	0.13F <sub>S</sub> T Dia x 7	(When T≤0.25)	B≤F-0.13	10 0.25 0.38 0.50								0.25	0.31	0.38								
	0.75	3/4	1.50 - 29.00	(When 0.38≤T≤0.50)		0.25 0.38 0.50 0.63									0.31	0.38									
	1.00	1"	1.75 - 29.00		(When 0.38≤T≤0.50)	0.38 0.50 0.63 0.75									0.38	0.50	0.63								
	1.25	1-1/4	1.75 - 29.00	0.19F <sub>S</sub> T Dia x 7		0.38 0.50 0.63 0.75 0.88									0.50	0.63	0.75								
	1.50	1-1/2	2.00 - 29.00	(When 0.63≤T)	(When 0.63≤T)	0.50 0.63 0.75 0.88 1.00									0.63	0.75									

**Order Example** The part number consists only of the fields with blue characters. Please refer to the table below for technical information.

Part No. — L — F — B — T — U

Type D

U-SFRDA 1.00 — L 20.00 — F 1.00 — B 0.75 — T 0.50 — U 0.38

**Technical Information**

Callout	D		(Y)	T (=P)			P			Compatible Inch Bearing	U (Thread)		
	Nominal	Tolerance		Callout	Thread Size	Nominal	Tolerance	Callout	Thread Size		Diameter	Thread Depth	
0.25	1/4	0.2498 - 0.2494	12.00	10	#10-24	3/16	0.1875 - 0.1870	RA3	5	#5-40	0.125	0.25	
0.38	3/8	0.3748 - 0.3744	20.00	0.25	1/4-20	1/4	0.2500 - 0.2494	R4, RA4	6	#6-32	0.138	0.28	
0.50	1/2	0.4998 - 0.4994	24.00	0.38	3/8-16	3/8	0.3750 - 0.3744	R6	8	#8-32	0.164	0.33	
0.63	5/8	0.6248 - 0.6244	26.00	0.50	1/2-13	1/2	0.5000 - 0.4993	R8	10	#10-32	0.190	0.38	
0.75	3/4	0.7497 - 0.7492	30.00	0.63	5/8-11	5/8	0.6250 - 0.6243	R10	0.25	1/4-20	0.250	0.50	
1.00	1"	0.9997 - 0.9992	30.00	0.75	3/4-10	3/4	0.7500 - 0.7492	R12	0.31	5/16-18	0.313	0.63	
1.25	1-1/4	1.2496 - 1.2490	30.00	0.88	7/8-9	7/8	0.8750 - 0.8742	R14	0.38	3/8-16	0.375	0.75	
1.50	1-1/2	1.4996 - 1.4990	30.00	1.00	1-8	1"	1.0000 - 0.9992	R16	0.50	1/2-13	0.500	1.00	
				0.63	5/8-11	0.625	1.25		0.75	3/4-10	0.750	1.50	

**Selection Criteria:** L ≥ U<sub>1</sub> × 1.5

**Days to Ship** Standard 6 Days (Non-Returnable P.30) Example

**Express** 4 Days (Specify Express A) \$ 8.00/piece P.30

A flat charge of \$21.60 for 3 or more identical pieces.

Optional Modifications

Part No. — L — F — B — T (TC) — U — (Ordering Code: TC) (SC, LKC, KC...etc)

Type D

U-SFRDA 1.00 — L 20.125 — F 1.00 — B 0.69 — TC 0.50 — U 0.50 — SC 1.00 — LKC

Optional Modifications	Key Groove	Set Screw Flat	Two Set Screw Flats at Angle	Wrench Flats	Length Tolerance	Concentricity	Inch Fine Thread																		
Key Groove: KC	Set Screw Flat: FC	Two Set Screw Flats at Angle	Wrench Flats	Length Tolerance	Concentricity	Inch Fine Thread																			
2 Key Grooves: WKC	Two Set Screw Flats: WFC																								
Ordering Code	KC, WKC	FC, WFC	KFC	SC	LKC	CKC	TC																		
Details	<p>Example: KC2.00-A0.50</p> <p>KC: Adds one key groove. WKC: Adds two key grooves.</p> <p>KC, A, C, E ≤ 4.00</p> <p>D = 0.25 is not available</p> <p>Key Groove Dimensions: Please refer to specifications on P.204.</p> <p>When 3 key grooves are required, please use both KC and WKC. Please see P.204.</p>	<p>Example: FC1.00-G0.13</p> <p>FC: Adds one set screw flat. WFC: Adds two set screw flats.</p> <p>FC, G, WFC, J, W, V = 0.01" Increments</p> <p>0.01 ≤ G, J, V ≤ 2.00</p> <p>FC, WFC, W = 0 or FC, WFC, W ≥ 0.02</p>	<p>Example: KFC1.00-G0.13-A6120</p> <p>Adds a flat at the base face (D°), and another at the designated angle.</p> <p>KFC, G = 0.01" Increments</p> <p>AG = 15° Increments</p> <p>0.01 ≤ G ≤ 2.00</p> <p>KFC = 0 or KFC ≥ 0.02</p>	<p>Example: SC1.00</p> <p>Adds wrench flats.</p> <p>SC = 0.01" Increments</p> <p>SC + Δ ≤ L</p> <p>SC = 0 or SC ≥ 0.05</p>	<p>Example: LKC</p> <p>Changes the length tolerance.</p> <p>If the LKC is used, 0.001" Increments can be specified for L dimension.</p> <p>Please refer to order example.</p>	<p>Example: CKC</p> <p>Changes the concentricity to dia 0.0008.</p> <p>Available with L dimension range in a table below.</p>	<p>Example: TC0.50</p> <p>Changes to inch fine thread in a table below.</p> <table border="1"> <thead> <tr> <th>D</th> <th>TC (Inch Fine Thread)</th> </tr> </thead> <tbody> <tr> <td>0.25</td> <td>10</td> </tr> <tr> <td>0.38</td> <td>10 0.25</td> </tr> <tr> <td>0.50</td> <td>10 0.25 0.38</td> </tr> <tr> <td>0.63</td> <td>10 0.25 0.38 0.50</td> </tr> <tr> <td>0.75</td> <td>0.25 0.38 0.50 0.63</td> </tr> <tr> <td>1.00</td> <td>0.38 0.50 0.63 0.75</td> </tr> <tr> <td>1.25</td> <td>0.38 0.50 0.63 0.75 0.88</td> </tr> <tr> <td>1.50</td> <td>0.50 0.63 0.75 0.88 1.00</td> </tr> </tbody> </table> <p>Thread Size #10-32   #14-28   #18-24   #20-12   #22-14   #24-11   #28-11</p> <p>P dimension is the same with TC.</p> <p>Change T to TC to specify fine threads like the order example.</p>	D	TC (Inch Fine Thread)	0.25	10	0.38	10 0.25	0.50	10 0.25 0.38	0.63	10 0.25 0.38 0.50	0.75	0.25 0.38 0.50 0.63	1.00	0.38 0.50 0.63 0.75	1.25	0.38 0.50 0.63 0.75 0.88	1.50	0.50 0.63 0.75 0.88 1.00
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1.50	0.50 0.63 0.75 0.88 1.00																								
\$ Price Adder	KC: 4.00 WKC: 8.00	FC: 2.00 WFC: 4.00	6.00	4.00	4.00	8.00	3.00																		

When using Optional Modifications, add the "Price Adder" to the standard "Unit Price".

Price

Quantity	Discount Rate
1	—
2-4	5%
5-19	10%
20-	15%

For larger quantity orders "Days to Ship" may differ from published catalog term. P.29

Part No.	\$ Unit Price									
	D	Min. L	L2.01	L4.01	L6.01	L8.01	L12.01	L16.01	L24.01	L24.01
U-SFRDA	0.25	9.60	10.50	11.90	13.10	18.50	-	-	-	-
	0.38	9.60	10.50	11.90	13.10	18.50	21.00	24.20	-	-
	0.50	11.00	12.80	13.50	14.30	19.70	22.40	30.80	-	-
	0.63	11.90	13.80	14.60	15.60	21.30	24.30	33.30	38.90	-
	0.75	13.40	16.80	17.40	19.40	26.90	30.20	40.40	48.00	-
	1.00	15.90	19.70	22.40	24.80	30.50	37.40	50.60	59.70	-
	1.25	17.00	21.30	24.30	26.90	35.60	41.40	54.80	66.50	-
	1.50	25.60	32.00	35.60	39.50	52.80	64.80	86.60	103.50	-
U-PSFRDA	0.25	10.50	12.20	13.70	14.90	20.40	-	-	-	-
	0.38	10.50	12.20	13.70	14.90	20.40	23.40	26.60	-	-
	0.50	11.90	14.10	14.40	16.10	21.60	24.60	34.80	-	-
	0.63	12.90	15.30	15.60	17.40	23.40	26.60	37.80	42.60	-
	0.75	15.60	19.70	20.70	23.00	31.20	35.60	46.50	70.10	-
	1.00	19.20	23.90	26.40	29.40	38.60	44.00	57.50	72.40	-
	1.25	20.30	25.40	28.40	31.70	41.30	46.80	65.90	75.00	-
	1.50	29.60	37.10	40.80	45.30	59.90	73.20	96.30	117.20	-
U-SSFRDA	0.25	14.00	15.50	17.60	19.30	29.00	-	-	-	-
	0.38	14.00	15.50	17.60	19.30	29.00	32.40	36.00	-	-
	0.50	16.40	19.30	20.00	22.10	31.90	35.50	44.60	-	-
	0.63	17.80	20.90	21.80	23.90	34.60	38.30	48.40	61.40	-
	0.75	18.70	23.20	24.10	25.60	37.40	41.40	57.60	65.90	-
	1.00	20.30	25.60	29.20	32.20	41.40	52.00	79.90	89.60	-
	1.25	27.00	30.40	34.40	38.20	53.80	61.00	96.80	97.70	-
	1.50	42.70	48.10	54.40	60.10	85.10	96.80	135.90	154.80	-

**Related Components**

- Shaft Collars P.139
- Bearing Locknuts P.275
- Timing Pulleys P.293
- Keyless Bushings P.311

**Express Options** P.30

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