

Cantilever Shafts – Tapped Shafts–



Cantilever Shafts are generally used in combination with rotary bearings, pulleys or as swivel mechanisms. They are often used as the idler portion of a rotary system and are mounted on a flat surface. Choose from a 1045 carbon steel or 304 stainless steel. See the application example on P.246 for mounting suggestions.

See application example on P.246.

Retaining Ring Groove

Material	Surface Treatment	Type
1045 Steel	Black Oxide	U-FXHA
	Electroless Nickel Plating	U-PFXHA
304 Stainless Steel	-	U-SFXHA

Material Characteristics P.628, 629

Groove Details

Flat width when $Y \geq 0.750$

Surface Roughness: Unless otherwise specified $Ra \leq 0.625$

General Tolerance

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.

Type	Part No.			Choose in 0.001" Increments		T (Thread)		T ₁	L	H	W
	Callout	Nominal	Tolerance	Y	F	Size	Major Dia.				
U-FXHA U-PFXHA U-SFXHA	0.25	1/4	0.2498 0.2494	0.125 ~ 2.250	0.250 ~ 3.875	#6-32	0.138	0.21	Y+F+n	0.50	0.438
	0.38	3/8	0.3748 0.3744	0.125 ~ 2.250	0.250 ~ 3.875	#10-32	0.190	0.29	Y+F+n	0.59	0.500
	0.50	1/2	0.4998 0.4994	0.125 ~ 2.250	0.250 ~ 3.875	1/4-20	0.250	0.38	Y+F+n	0.69	0.560
	0.63	5/8	0.6248 0.6244	0.125 ~ 2.250	0.375 ~ 5.750	3/8-16	0.375	0.56	Y+F+n	0.81	0.688
	0.75	3/4	0.7497 0.7492	0.156 ~ 2.875	0.375 ~ 5.750	1/2-13	0.500	0.75	Y+F+n	1.00	0.875
	1.00	1"	0.9997 0.9992	0.156 ~ 2.875	0.375 ~ 5.750	5/8-11	0.625	0.94	Y+F+n	1.25	1.125

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

Part No.

Type

U-FXHA 0.50 - Y 1.375 - F 1.000

Selection Criteria: T = #6, #10, 1/4 and 3/8: When $T_1 + 0.200 \geq Y + F$, pilot hole of tap may be through.
 T = 1/2 and 5/8: When $T_1 + 0.280 \geq Y + F$, pilot hole of tap may be through.
 When $T_1 \geq Y + F$, T tap may be through.

Retaining Ring Groove Tolerance & Details

D	Diameter	d		m		n	R1 max	Compatible Retaining Rings (ASME B18.27-1998)	
		Tolerance	Width	Tolerance					
0.25	0.230	0.2315	0.2285	0.029	0.032	0.029	0.094	0.003	NA1- 25
0.38	0.352	0.3540	0.3500	0.029	0.032	0.029	0.125	0.005	NA1- 37
0.50	0.468	0.4700	0.4660	0.039	0.042	0.039	0.156	0.005	NA1- 50
0.63	0.588	0.5910	0.5850	0.039	0.042	0.039	0.156	0.005	NA1- 62
0.75	0.704	0.7070	0.7010	0.046	0.049	0.046	0.156	0.005	NA1- 75
1.00	0.940	0.9430	0.9370	0.046	0.049	0.046	0.156	0.005	NA1-100

Days to Ship **6** Days (Standard) **4** Days (Express) \$ 8.00/piece P.30

Optional Modifications (Ordering Code) (YKC, WSC)

Quantity Discount Rate

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

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

Optional Modifications	Y Dimension Tolerance	Wrench Flats Added
Ordering Code	YKC	WSC
Details	Changes the Y dimension tolerance to ± 0.002 . Example: YKC	Wrench flats have been changed from 2 sides to 4 sides. Example: WSC
\$ Price Adder	4.00	4.00

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

D	\$ Unit Price		
	U-FXHA	U-PFXHA	U-SFXHA
0.25	10.80	13.00	16.30
0.38	12.40	14.90	18.50
0.50	13.90	16.70	20.80
0.63	16.20	19.40	24.20
0.75	20.80	25.20	31.20
1.00	24.70	29.50	37.00

Related Components

- Idler Pulleys - Timing Belt- P.303
- Idler Pulleys P.305
- Collars P.499

Tapped End

Material	Surface Treatment	Type
1045 Steel	Black Oxide	U-FXHB
	Electroless Nickel Plating	U-PFXHB
304 Stainless Steel	-	U-SFXHB

Material Characteristics P.628, 629

Flat width when $Y \geq 0.750$

Surface Roughness: Unless otherwise specified $Ra \leq 0.625$

General Tolerance

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.

Type	Part No.			Choose in 0.001" Increments		TA Thread Selection (Callout)						T (Thread)		T ₁	L	H	W		
	Callout	Nominal	Tolerance	Y	F	#6-32	#8-32	#10-32	1/4-20	5/16-18	3/8-16	1/2-13	5/8-11					Size	Major Dia.
U-FXHB U-PFXHB U-SFXHB	0.25	1/4	0.2498 0.2494	0.125 ~ 2.250	0.250 ~ 3.875	6								#6-32	0.138	0.21	Y+F	0.50	0.438
	0.38	3/8	0.3748 0.3744	0.125 ~ 2.250	0.250 ~ 3.875	6	8							#10-32	0.190	0.29	Y+F	0.59	0.500
	0.50	1/2	0.4998 0.4994	0.125 ~ 2.250	0.250 ~ 3.875	8	10	0.25						1/4-20	0.250	0.38	Y+F	0.69	0.560
	0.63	5/8	0.6248 0.6244	0.125 ~ 2.250	0.375 ~ 5.750	10	0.25	0.31						3/8-16	0.375	0.56	Y+F	0.81	0.688
	0.75	3/4	0.7497 0.7492	0.156 ~ 2.875	0.375 ~ 5.750	0.25	0.31	0.38						1/2-13	0.500	0.75	Y+F	1.00	0.875
	1.00	1"	0.9997 0.9992	0.156 ~ 2.875	0.375 ~ 5.750	0.31	0.38	0.50	0.63					5/8-11	0.625	0.94	Y+F	1.25	1.125

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

Part No.

Type

U-FXHB 0.50 - Y 1.375 - F 1.000 - TA 10

Selection Criteria: Select Y and F, "t" in the drawing does not become smaller than the table below. When the pilot holes interferes, it becomes through.

Technical Information

TA (Thread)				"t" Minimum	
Callout	Thread Size	Major Dia.	TA ₁ (Depth)	T (Thread)	t min.
6	#6-32	0.138	0.28	#6-32	0.438
8	#8-32	0.164	0.33	#10-32	0.500
10	#10-32	0.190	0.38	1/4-20	0.563
0.25	1/4-20	0.250	0.50	3/8-16	0.781
0.31	5/16-18	0.313	0.63	1/2-13	1.000
0.38	3/8-16	0.375	0.75	5/8-11	1.219
0.50	1/2-13	0.500	1.00		
0.63	5/8-11	0.625	1.25		

Days to Ship **6** Days (Standard) **4** Days (Express) \$ 8.00/piece P.30

Optional Modifications (Ordering Code) (YKC, WSC)

Quantity Discount Rate

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

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

Price

Quantity	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

D	\$ Unit Price		
	U-FXHB	U-PFXHB	U-SFXHB
0.25	13.00	15.60	19.40
0.38	14.90	17.80	22.30
0.50	16.70	19.90	25.00
0.63	19.40	23.30	29.20
0.75	25.20	30.10	37.60
1.00	29.50	35.60	44.40

Optional Modifications	Y Dimension Tolerance	Wrench Flats Added
Ordering Code	YKC	WSC
Details	Changes the Y dimension tolerance to ± 0.002 . Example: YKC	Wrench flats have been changed from 2 sides to 4 sides. Example: WSC
\$ Price Adder	4.00	4.00

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

Express Options P.30

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