



2.75 CF Flange



NW-16, 25, 40, 50



For 1" Base Plate Hole



Pipe Thread

- Rotary and Push/Pull in the Same Feedthrough
- High Torque. Use Either Solid or Hollow Shafts
- High Speeds. Tested at 1100 RPM, 24/7 for 90 Days
- Leak Rate Better Than 5×10^{-10} Standard cc/sec
- All Feedthroughs (RoHS) 2015/863/EU Compliant
- 300 Series Stainless Steel or Nickel Plated Brass
- Easy to Replace Viton®, Buna-N, or Kalrez® Seals
- Conflat®, NW or Pipe Thread Connection to System
- Available in Four Shaft Diameters: 1/4", 3/8", 1/2", 5/8"
- Includes Frelon® Bushing on Atmosphere Side

Test Results

These very rugged and reliable seals have been in production for 50 years and have been tested extensively.

- **800,000 Reciprocal Motions**

Leak rate less than 5×10^{-10} scc/sec after 800,000 reciprocal motions of 1 inch.

- **90 Days at 1,100 RPM**

Feedthrough operated at 1100 RPM for 90 days, 24/7. Leak rate was also less than 5×10^{-10} scc/sec.

- **15 Years on Test Chamber**

Feedthrough on a chamber testing ion thrusters was left under vacuum and unmoved for 15 years.

Feedthrough still did not leak when finally used.

Shaft finish and hardness should be 4 to 12 RMS with a minimum surface hardness of RC 50 for best results. Softer shafting can be used, but both bearing and shafting may wear at accelerated rates. For any given RMS value radiused or polished peaks will provide best rate of wear so electropolished shafts give best results.

Lubrication with a vacuum grease or oil can reduce friction and improve the seal life. Silicone and fluoro-carbon lubricants are not recommended as these lubricant types can inhibit heat flow, increase the seal temperature, and shorten seal life. You may want to consider the products of TorrLube: www.torrLube.com

Connection to System	Description	Price with Viton® Seals (For Kalrez® add the cost of a pair of Kalrez seals)	Description	Price with Viton® Seals (For Kalrez® add the cost of a pair of Kalrez seals)	Description	Price with Viton® Seals (For Kalrez® add the cost of a pair of Kalrez seals)	Price with Viton® Seals (For Kalrez® add the cost of a pair of Kalrez seals)
Optimum Shaft Specification	1/4 inch* .2495, (-.0000, +.0005)	1/4"	3/8 inch* .3745 (-.0000, +.0005)	3/8"	1/2 inch* .4995 (-.0000, +.0005) 5/8 inch* .6245 (-.0000, +.0005)	1/2"	5/8"
2.75" Conflat®	Model No. 2.75-B01-SS 300 Series Stainless Steel	\$494	Model No. 2.75-B02-SS 300 Series Stainless Steel	\$527	Model No. 2.75-B03-SS 300 Series Stainless Steel	\$533	\$716
NW-16	Model No. 16-B01-SS 300 Series Stainless Steel	\$488	Model No. 16-B02-SS 300 Series Stainless Steel	\$533	Model No. 16-B03-SS 300 Series Stainless Steel	\$533	\$689
NW-25	Model No. 25-B01-SS 300 Series Stainless Steel	\$533	Model No. 25-B02-SS 300 Series Stainless Steel	\$533	Model No. 25-B03-SS 300 Series Stainless Steel	\$533	\$689
NW-40	Model No. 40-B01-SS 300 Series Stainless Steel	\$585	Model No. 40-B02-SS 300 Series Stainless Steel	\$582	Model No. 40-B03-SS 300 Series Stainless Steel	\$599	\$761
NW-50	Model No. 50-B01-SS 300 Series Stainless Steel	\$637	Model No. 50-B02-SS 300 Series Stainless Steel	\$631	Model No. 50-B03-SS 300 Series Stainless Steel	\$665	\$834
Pipe Thread	Model No. P-B01-NB Nickle Plated Brass	\$254	Model No. P-B02-NB Nickle Plated Brass	\$274	Model No. P-B03-NB Nickle Plated Brass	\$286	\$448
	Model No. P-B01-SS 300 Series Stainless Steel	\$533	Model No. P-B02-SS 300 Series Stainless Steel	\$553	Model No. P-B03-SS 300 Series Stainless Steel	\$586	\$749
For 1" Baseplate Through Hole	Model No. 1in-B01-SS 300 Series Stainless Steel	\$794	Model No. 1in-B02-SS 300 Series Stainless Steel	\$813	Model No. 1in-B03-SS 300 Series Stainless Steel	\$865	
Replacement Seal Washers (2 required)	Bruna-N, P/N X701101-B Viton®, P/N X701101-V Kalrez®, P/N X701101-K	\$6/pair \$11/pair \$73/pair	Bruna-N, P/N X701102-B Viton®, P/N X701102-V Kalrez®, P/N X701102-K	\$6/pair \$11/pair \$110/pair	Bruna-N, P/N X701103-B Viton®, P/N X701103-V Kalrez®, P/N X701103-K	\$11/pair \$17/pair \$180/pair	

***Shaft Diameter:** Shaft is not included. Best performance will result when your shaft diameter is held to these diameters, but smaller diameters are acceptable. See below for optional shaft material.

Shaft Diameter	NW-16			NW-25			NW-50			PIPE THREAD		
	A	B	C	A	B	C	A	B	C	A	B	C
1/4" shaft	2.35	1.00	1.00	2.26	.09	1.00	2.26	.09	1.0	1/4" NPT		
										2.73	1.39	1.00 Across Flats
3/8" shaft	2.35	1.00	1.13	2.35	1.00	1.13	2.80	1.50	1.13	3/8" NPT		
										2.75	1.38	1.125 Across Flats
1/2" & 5/8" shaft	2.38	1.00	1.25	2.38	1.00	1.25	2.50	1.13	1.25	1/2" NPT		
										2.76	1.38	1.25 Across Flats

Optional Precision Shaft Material*

Size	Part Number	Price
1/4" O.D. X 18" (457mm) long	P/N: SHFT-.25-18-316	\$39 ea
3/8" O.D. X 18" (457mm) long	P/N: SHFT-.37-18-316	\$83 ea
1/2" O.D. X 18" (457mm) long	P/N: SHFT-.50-18-316	\$96 ea

*The shaft is not included with the feedthrough. Most customers provide their own shaft but we offer this material as a convenience.

