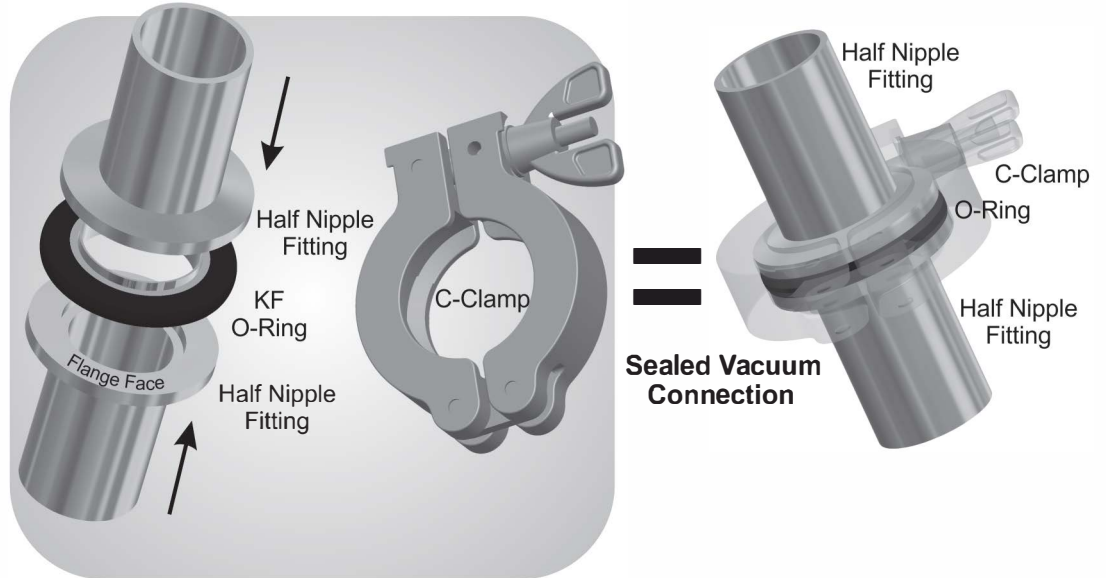


1 Vacuum Fittings and Adapters

KF (Quick Flange)

KF (Quick Flange) are ISO standard vacuum fittings and have a flange size of KF-10, KF-16, KF-25, KF-40, and KF-50. They are commonly used to build foreline vacuum plumbing and process systems. They are quick to assemble and require no tools for assembly. A C-Clamp and centering O-ring form the vacuum seal between the connecting flanges. The mating flanges compress an O-ring while the C-clamp is tightened. This seals the connection and allows the vacuum pump to create the vacuum. The seal can be used in vacuum applications up to 10^{-8} Torr. KF Quick Flange Fittings are made of type 304 stainless steel and some fittings come in aluminum.

QUICK and EASY Vacuum Connections with NO TOOLS Required
(KF Quick Flange) For applications to 10^{-8} Torr



For KF Flange Assembly / Installation

Mate 2 same size KF flange faces (fittings may be different) to each other by means of a KF O-ring in between flange faces. Wrap a C-Clamp around the connection and hand tighten. The flange face surfaces compress the O-Ring creating the vacuum seal.

Ideal Vacuum takes pride in making some KF Fittings here in the USA!



Can't find that KF Fitting/Adapter? We Will Make It!

Most KF IN STOCK
Same Day Shipping

Vacuum Fittings and Adapters **1**

KF (Quick Flange)

KF Elastomer O-Ring Comparisons

BUNA Advantage **BAKE OUT 80°C(176°F)**
 Good balance of desirable properties, excellent oil & fuel resistance, good water resistance. Lowest cost.
Disadvantage Poor weather resistance, moderate heat resistance.

VITON Advantage **BAKE OUT 150°C(302°F)**
 Excellent chemical & heat resistance. Good mechanical & compression set resistance.

Disadvantage Not recommended for steam, polar solvents, hot hydrofluoric or chlorosulfonic acids.

SILICONE Advantage **BAKE OUT 185°C(365°F)**
 Excellent temperature extremes & compression set resistance.
Disadvantage Poor physical strength and abrasion resistance.

KF Specifications

Max. Positive Pressure
 with over pressure ring

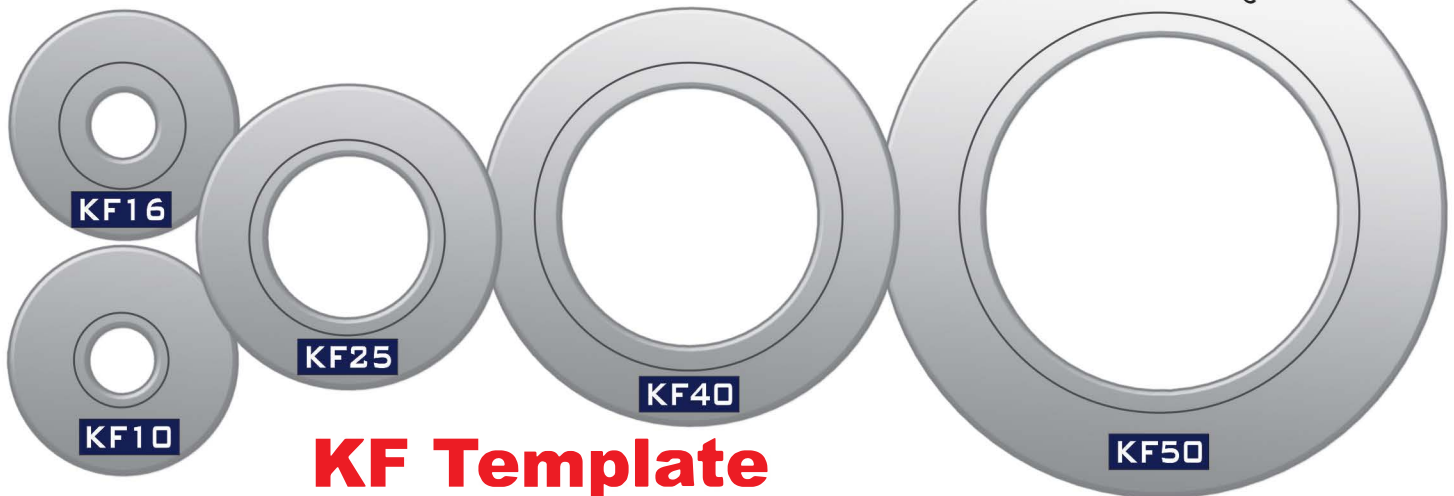
Flange Size	Max. Pressure
KF 10, 16, 25	100 psig
KF 40	75 psig
KF 50	50 psig

Min. Pressure 10^{-9} Torr

Leak Check $<10^{-9}$ std-cc/s

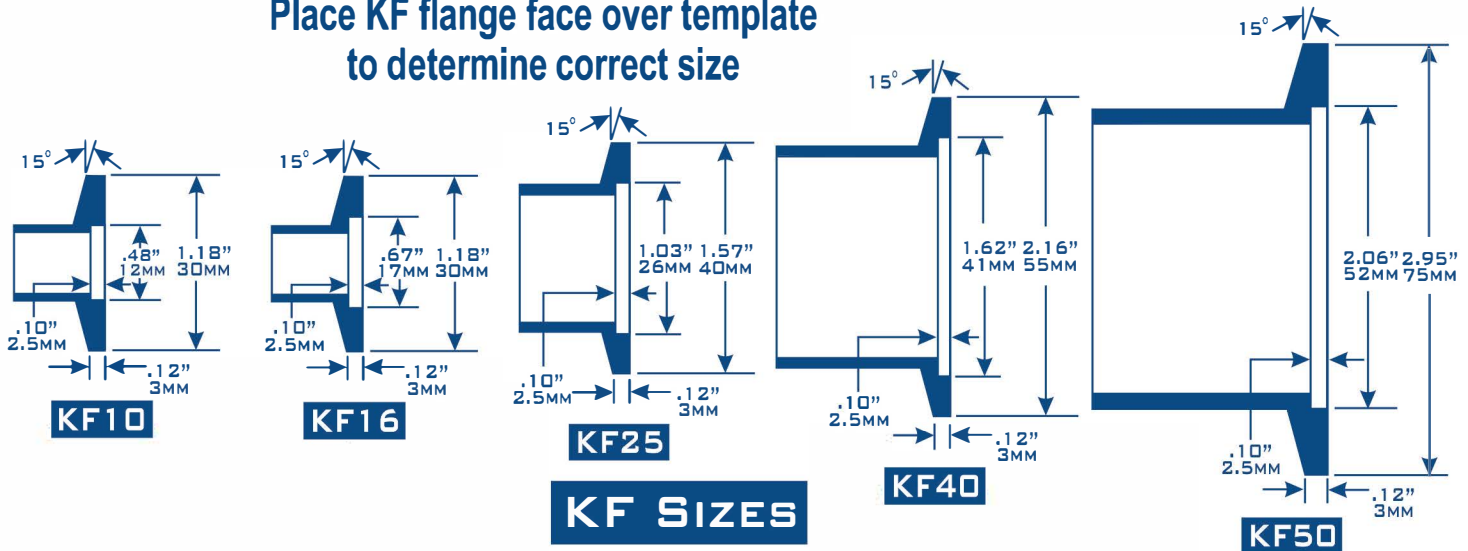
Materials

304 Stainless Steel, Yellow Brass, Aluminum, Viton, Silicone, Buna-N



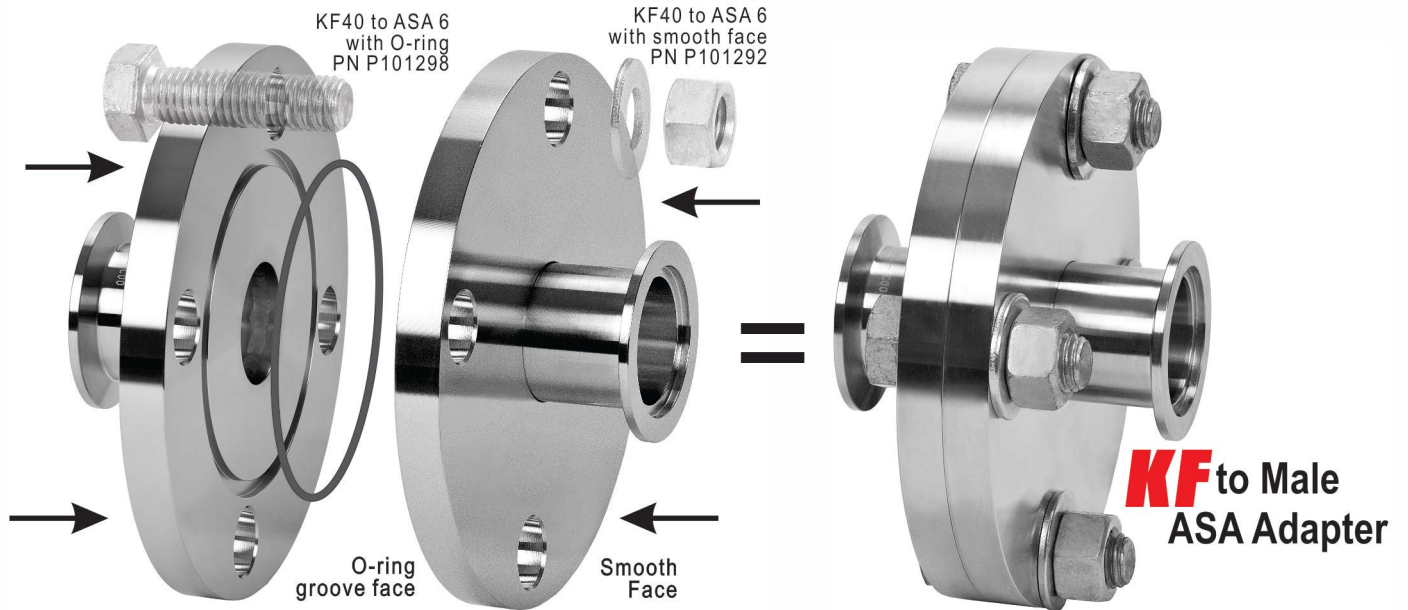
KF Template

Place KF flange face over template to determine correct size



1 Vacuum Fittings and Adapters

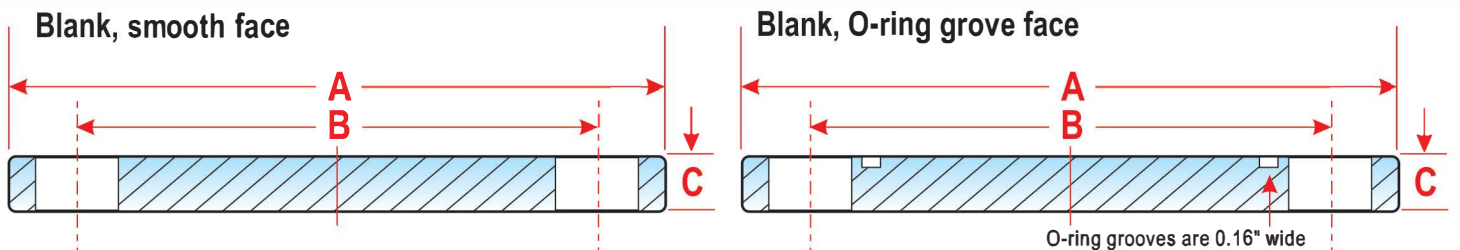
KF (Quick Flange)



Must be mated with only one side having O-ring groove

ASA DIMENSIONS are for BLANK smooth face and O-ring groove flanges.

ANSI	ASA (OD) A	All Dimensions in INCHES				Bolt Holes		O-Ring		TORQUE ft. lbs.
		B	C	Bolt Sizes	NO.	DIA.	I.D.	width		
1	4.25	3.125	0.50	9/16-12 x 2	4	0.625	1.875	0.120	14	
1.5	5.00	3.880	0.50	9/16-12 x 2	4	0.625	2.500	0.120	14	
2	6.00	4.750	0.50	5/8-11 x 2	4	0.750	3.500	0.120	14	
3	7.50	6.000	0.50	5/8-11 x 2	4	0.750	4.625	0.120	14	
4	9.00	7.500	0.50	5/8-11 x 2	8	0.750	6.000	0.120	14	
6	11.00	9.500	0.75	3/4-10 x 2.25	8	0.812	8.000	0.120	24	
8	13.50	11.750	0.75	3/4-10 x 2.25	8	0.812	10.000	0.120	24	
10	16.00	14.250	0.75	3/4-10 x 2.25	12	0.812	12.000	0.120	24	



Vacuum Fittings and Adapters 1

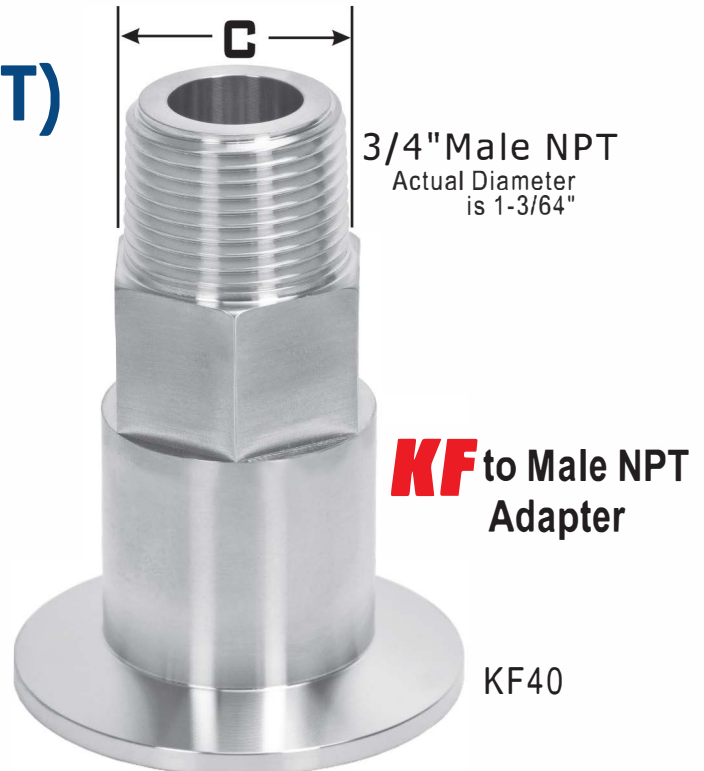
KF (Quick Flange)

NPT PIPE THREAD

If you've ever had a problem measuring pipe thread, you are not alone. The reason is, National Pipe Thread (NPT) does not refer to the actual inside or outside diameter of the pipe fitting. It refers to the industry designation, NOT THE ACTUAL SIZE. For instance, the actual measurement of "C" diameter in yellow highlight below is 1-3/64" but the NPT size designation is 3/4". See Chart below for other conversions.

National Pipe Thread (NPT)

DIMENSIONS		
C (Actual Size)		NPT SIZE
Fraction	Decimal	
5/16"	0.3125	1/16"
13/32"	0.4050	1/8"
35/64"	0.5400	1/4"
43/64"	0.6750	3/8"
27/32"	0.8400	1/2"
1 3/64"	1.0500	3/4"
1 5/16"	1.3150	1"
1 21/32"	1.6600	1 1/4"
1 29/32"	1.9000	1 1/2"



NOTE:

PTFE Pipe Thread Tape is recommended for proper seal of National Pipe Thread (NPT).

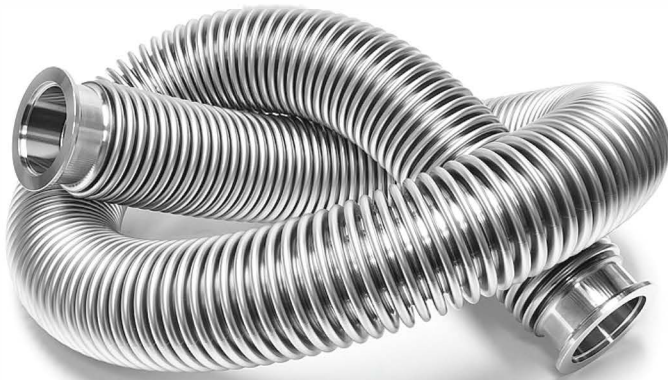
TAPE WRAPPING SPECIFICATIONS

NPT SIZE	TAPE WIDTH	WRAP TAPE
1/16" - 1/8" - 1/4" - 3/8"	1/4"	1 to 2 turns
1/2" - 3/4"	1/2"	2 to 3 turns
1" - 1-1/4"	1/2"	3 to 4 turns
1-1/2" and larger	3/4"	3 to 4 turns

PTFE Teflon Tape Pipe Thread (1/4" X 576") roll P/N P104552 \$12.50
 PTFE Teflon Tape Pipe Thread (1/2" X 288") roll P/N P104553 \$12.50

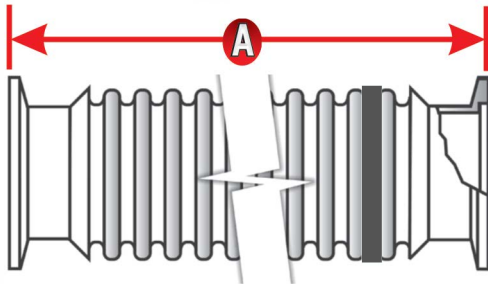
1 Vacuum Fittings and Adapters

KF (Quick Flange)



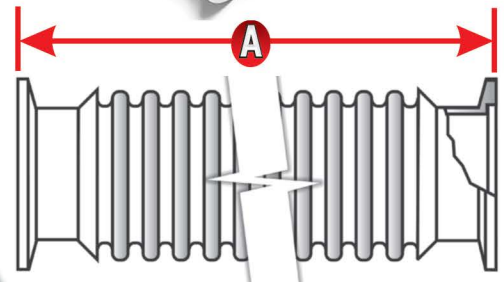
KF Bellows Hose *Stainless Steel* *Extra Thin Wall*

KF Flange Size	A	IDEAL VACUUM P/N	Price*
KF16	10"	P103700	\$165.00
KF16	20"	P103702	\$250.00
KF16	40"	P103704	\$325.00
KF25	10"	P103718	\$199.50
KF25	20"	P103720	\$299.00
KF25	40"	P103722	\$425.00
KF40	10"	P103706	\$210.00
KF40	20"	P103708	\$255.65
KF40	40"	P103710	\$390.00
KF50	10"	P103712	\$275.00
KF50	20"	P103714	\$325.00
KF50	40"	P103716	\$425.00



KF Bellows Hose *Stainless Steel* *Thin Wall*

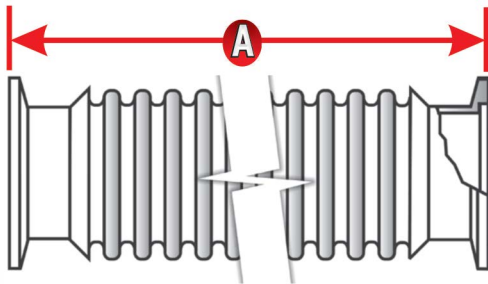
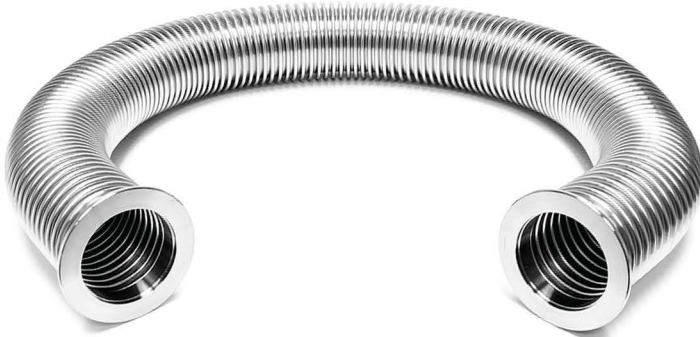
KF Flange Size	A	IDEAL VACUUM P/N	Price*
KF16	10"	P103699	\$125.00
KF16	20"	P103701	\$189.50
KF16	40"	P103703	\$289.50
KF25	10"	P103717	\$149.50
KF25	20"	P103719	\$225.00
KF25	40"	P103721	\$325.00
KF40	10"	P103705	\$165.00
KF40	20"	P103707	\$221.65
KF40	40"	P103709	\$375.00
KF50	10"	P103711	\$250.00
KF50	20"	P103713	\$250.00
KF50	40"	P103715	\$405.00



*Catalog Pricing
Subject to Change

Vacuum Fittings and Adapters **1**

KF (Quick Flange)

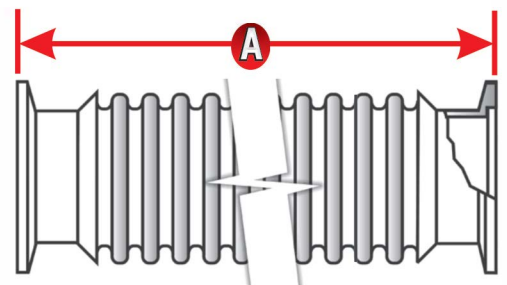


KF Bellows Hose **Stainless Steel Medium Wall**

KF Flange Size	A	IDEAL VACUUM P/N	Price*
KF16	10"	P101657	\$96.60
KF16	20"	P101653	\$144.90
KF16	40"	P101646	\$243.60
KF25	10"	P101656	\$109.20
KF25	20"	P101652	\$171.15
KF25	40"	P101647	\$278.25
KF40	10"	P101655	\$121.80
KF40	20"	P101651	\$181.65
KF40	40"	P101649	\$289.50
KF50	10"	P101654	\$152.25
KF50	20"	P101650	\$212.10
KF50	40"	P101648	\$334.95

KF Bellows Hose **Stainless Steel Thick Wall**

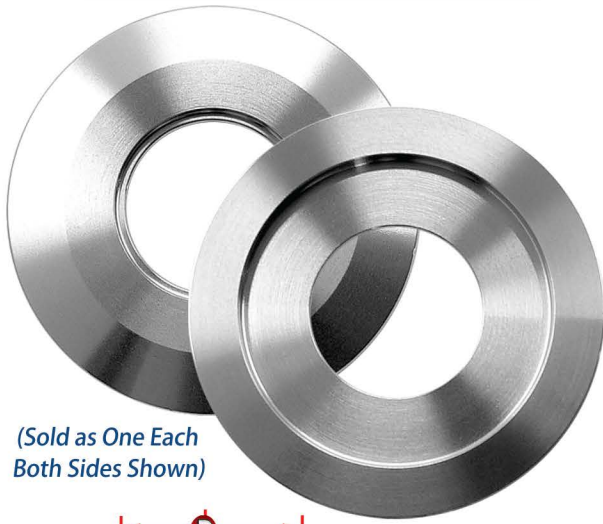
KF Flange Size	A	IDEAL VACUUM P/N	Price*
KF16	4"	P101237	\$56.70
KF16	10"	P101241	\$51.70
KF16	20"	P101254	\$72.45
KF16	40"	P101258	\$123.90
KF25	4"	P101238	\$68.25
KF25	10"	P101262	\$65.10
KF25	20"	P101255	\$96.60
KF25	40"	P101259	\$148.05
KF40	4"	P101239	\$77.70
KF40	10"	P101252	\$81.90
KF40	20"	P101256	\$123.90
KF40	40"	P101260	\$204.75
KF50	4"	P101240	\$95.55
KF50	10"	P101253	\$100.80
KF50	20"	P101257	\$185.85
KF50	40"	P101261	\$259.35



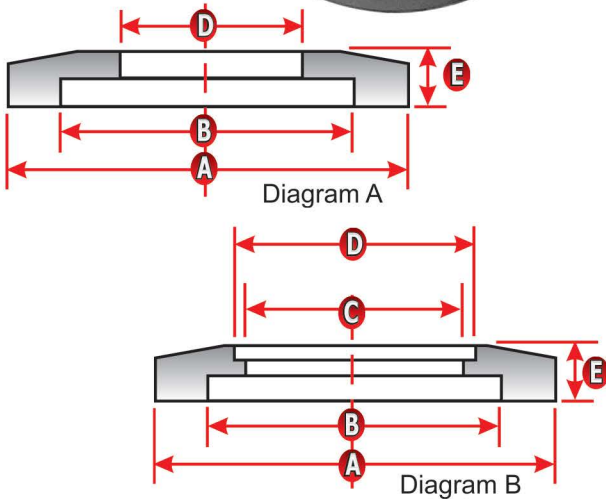
*Catalog Pricing
Subject to Change

1 Vacuum Fittings and Adapters

KF (Quick Flange)



(Sold as One Each
Both Sides Shown)



KF Bored Weld On stainless Steel

KF Flange and Bore	Diagram	Dimensions in inches					IDEAL VACUUM P/N	Price*
		A	B	C	D	E		
KF10-3/8"	A	1.18	0.50	-	0.38	0.20	P103473	\$9.85
KF16-1/4"	A	1.18	0.67	-	0.26	0.20	P103474	\$9.85
KF16-3/8"	A	1.18	0.67	-	0.38	0.20	P103472	\$9.85
KF16-1/2"	B	1.18	0.67	0.39	0.50	0.20	P103475	\$9.85
KF16-3/4"	B	1.18	0.67	0.65	0.76	0.18	P103476	\$9.85
KF25-1/4"	A	1.57	1.02	-	0.25	0.20	P103461	\$11.38
KF25-3/8"	A	1.57	1.02	-	0.38	0.20	P103462	\$12.38
KF25-1/2"	B	1.57	1.02	0.39	0.50	0.20	P101278	\$9.85
KF25-3/4"	B	1.57	1.02	0.65	0.76	0.20	P101279	\$9.85
KF25-1.0"	B	1.57	1.02	0.91	1.00	0.19	P103463	\$12.85
KF40-1/4"	A	2.17	1.61	-	.026	0.20	P103464	\$12.95
KF40-3/8"	A	2.17	1.61	-	0.38	0.20	P103465	\$13.98
KF40-1/2"	B	2.17	1.61	0.39	0.50	0.20	P101280	\$13.95
KF40-3/4"	B	2.17	1.61	0.65	0.76	0.20	P101281	\$13.95
KF40-1.0"	B	2.17	1.61	0.91	0.22	0.20	P101282	\$13.95
KF40-1.5"	B	2.17	1.61	1.40	38.35	0.20	P103466	\$16.24
KF50-1/4"	A	2.95	2.05	-	6.50	0.20	P103467	\$18.95
KF50-3/8"	A	2.95	2.05	-	9.65	0.20	P103468	\$19.25
KF50-1/2"	B	2.95	2.05	0.39	12.95	0.20	P103469	\$19.50
KF50-3/4"	B	2.95	2.05	0.65	19.30	0.20	P101283	\$20.25
KF50-1.0"	B	2.95	2.05	0.91	25.65	0.20	P101284	\$20.25
KF50-1.5"	B	2.95	2.05	1.40	38.35	0.20	P101285	\$20.25
KF50-2.0"	B	2.95	2.05	1.89	51.05	0.20	P103470	\$21.35

KF Blank Off Flange stainless Steel

KF Flange Size	A	IDEAL VACUUM P/N	Price*
KF10	.20"	P102321	\$7.60
KF16	.20"	P101202	\$7.60
KF25	.20"	P101203	\$8.30
KF40	.20"	P101204	\$13.55
KF50	.20"	P102320	\$16.60



(Sold as One Each
Both Sides Shown)



Vacuum Fittings and Adapters **1**

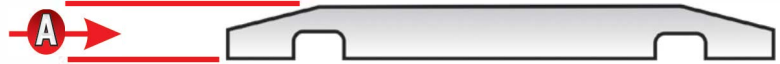
KF (Quick Flange)



(Sold as One Each
Both Sides Shown)

KF Blank Off Flange ALUMINUM

KF Flange Size	A	IDEAL VACUUM P/N	Price*
KF10	.20"	P104091	\$12.28
KF16	.20"	P104090	\$12.28
KF25	.20"	P104089	\$13.28
KF40	.20"	P104088	\$15.28
KF50	.20"	P104087	\$16.28

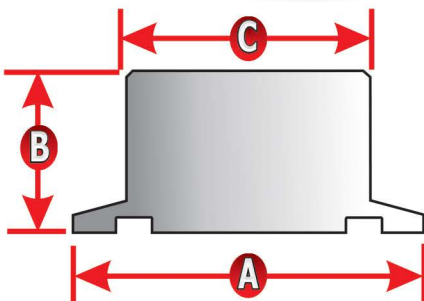


KF Blank Off Flange Yellow Brass

KF Flange Size	A	IDEAL VACUUM P/N	Price*
KF16	.20"	P101202	\$7.60
KF25	.20"	P101203	\$8.30
KF40	.20"	P101204	\$13.55
KF50	.20"	P102320	\$16.60



(Sold as One Each
Both Sides Shown)



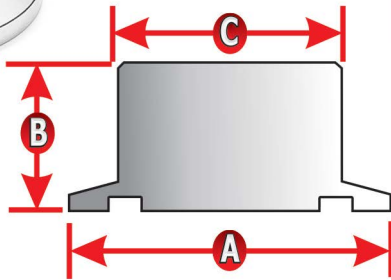
*Catalog Pricing
Subject to Change

KF Stub Blank Stainless Steel

KF Flange	A	B	C	IDEAL VACUUM P/N	Price*
KF10	1-3/16"	9/16"	3/4"	P103490	\$12.75
KF16	1-3/16"	9/16"	3/4"	P103587	\$12.75
KF16	1-3/16"	3/4"	3/4"	P101274	\$12.75
KF25	1-9/16"	3/4"	1.00"	P101275	\$15.05
KF25	1-9/16"	3/4"	1-1/4"	P103588	\$15.05
KF40	2-3/8"	1.00"	1-1/2"	P101276	\$20.80
KF40	2-3/8"	1.00"	1-3/4"	P103589	\$20.80
KF50	2-15/16"	1.00"	2.00"	P101277	\$29.00
KF50	2-15/16"	1.00"	2-1/4"	P103590	\$29.00

1 Vacuum Fittings and Adapters

KF (Quick Flange)

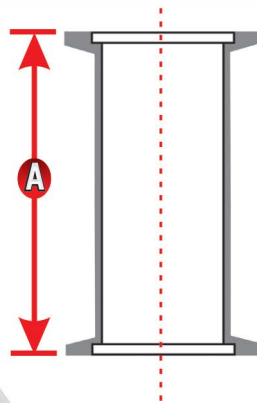
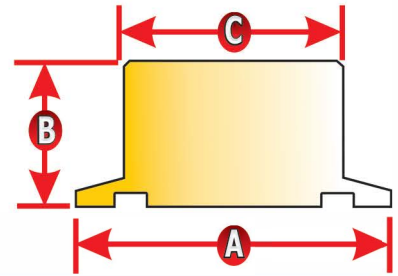


KF Stub Blank ALUMINUM

KF Flange & Stub Width	A	B	C	IDEAL VACUUM P/N	Price*
KF10	1-3/16"	9/16"	3/4"	P104096	\$19.85
KF16	1-3/16"	3/4"	3/4"	P104095	\$19.85
KF25	1-9/16"	3/4"	1.00"	P104094	\$20.85
KF40	2-3/8"	1.00"	1-1/2"	P104093	\$22.85
KF50	2-15/16"	1.00"	2.00"	P104092	\$23.85

KF Stub Blank Yellow Brass

KF Flange & Stub Width	A	B	C	IDEAL VACUUM P/N	Price*
KF16	1-3/16"	3/4"	3/4"	P104214	\$19.85
KF25	1-9/16"	3/4"	1.00"	P104215	\$22.85
KF40	2-3/8"	1.00"	1-1/2"	P104216	\$24.85
KF50	2-15/16"	1.00"	2.00"	P104217	\$29.85



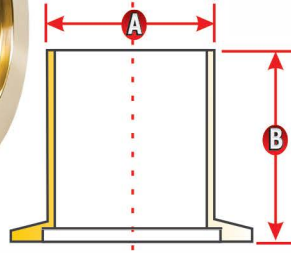
KF Full Nipple Stainless Steel

KF Flange Size	A	IDEAL VACUUM P/N	Price*
KF10	2.50"	P103445	\$39.70
KF16	2.30"	P103441	\$39.70
KF16	3.15"	P101233	\$39.70
KF16	12.6"	P103446	\$41.75
KF25	3.94"	P101234	\$45.50
KF25	4.00"	P103442	\$45.50
KF25	12.6"	P103448	\$53.95
KF40	4.80"	P103443	\$56.70
KF40	5.12"	P101235	\$56.70
KF40	12.6"	P103449	\$79.95
KF50	5.51"	P101236	\$68.25
KF50	6.30"	P103444	\$68.25
KF50	12.6"	P103450	\$89.95

Vacuum Fittings and Adapters **1**

KF (Quick Flange)

KF Braze Half Nipple **Yellow Brass**

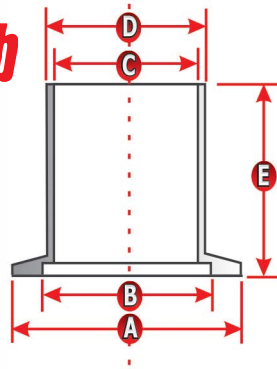


KF Flange Size	For Tubing O.D.	A	B	IDEAL VACUUM P/N	Price*
KF16	1/2"	0.50"	1.00"	P104218	\$20.40
KF16	5/8"	0.62"	1.00"	P104219	\$20.40
KF16	3/4"	0.75"	1.00"	P104220	\$20.40
KF25	1.00"	1.00"	1.38"	P104221	\$25.40
KF25	1-1/8"	1.13"	1.38"	P104222	\$25.40
KF40	1-5/8"	1.63"	1.58"	P104223	\$29.40
KF50	2.00"	2.00"	1.58"	P104224	\$39.40
KF50	2-1/8"	2.13"	1.58"	P104225	\$39.40

Stainless Steel

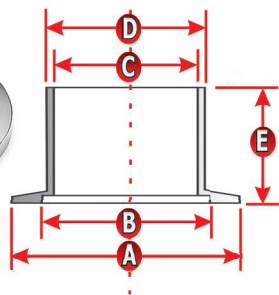
KF Half Nipple Long Weld Stub

KF Flange Size	Tubing O.D.	A	B	C	D	E	IDEAL VACUUM P/N	Price*
KF10	1/2"	1.18"	0.48"	0.37"	0.50"	1.57"	P103478	\$14.40
KF16	5/8"	1.18"	0.67"	0.67"	0.50"	1.57"	P103842	\$14.40
KF16	3/4"	1.18"	0.67"	0.63"	0.76"	1.57"	P101217	\$14.40
KF25	1.00"	1.57"	1.03"	0.87"	1.00"	1.57"	P101218	\$16.60
KF40	1-1/2"	2.16"	1.62"	1.37"	1.50"	1.57"	P101220	\$18.80
KF50	2.00"	2.95"	2.06"	1.87"	2.00"	1.57"	P101222	\$29.90



Stainless Steel

KF Half Nipple Short Weld Stub

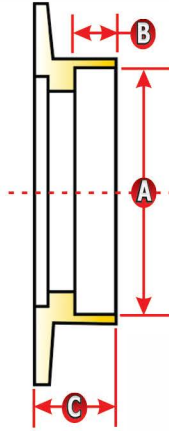


KF Flange Size	Tubing O.D.	A	B	C	D	E	IDEAL VACUUM P/N	Price*
KF10	1/2"	1.18"	0.48"	0.37"	0.50"	0.50"	P103169	\$9.25
KF16	1/2"	1.18"	0.67"	0.37"	0.50"	0.50"	P101266	\$9.25
KF16	3/4"	1.18"	0.67"	0.62"	0.75"	0.50"	P102540	\$9.25
KF25	1.00"	1.57"	1.03"	0.87"	0.98"	0.50"	P101267	\$10.85
KF40	1-1/2"	2.17"	1.62"	1.34"	1.50"	0.75"	P101268	\$14.10
KF50	2.00"	2.95"	2.05"	1.87"	2.00"	0.75"	P101269	\$20.40

*Catalog Pricing
Subject to Change

1 Vacuum Fittings and Adapters

KF (Quick Flange)

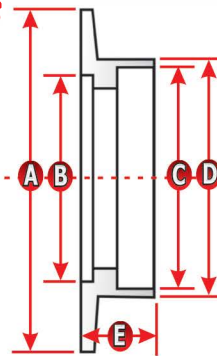


KF Braze Socket Yellow Brass

KF Flange Size	For Tubing O.D.	A	B	C	IDEAL VACUUM P/N	Price*
KF16	1/2"	0.50"	0.25"	0.50"	P104258	\$20.40
KF16	5/8"	0.62"	0.25"	0.50"	P104229	\$20.40
KF16	3/4"	0.75"	0.25"	0.62"	P104230	\$20.40
KF25	1.00"	1.00"	0.25"	0.50"	P104231	\$25.40
KF25	1-1/8"	1.13"	0.25"	0.62"	P104232	\$25.40
KF40	1-5/8"	1.63"	0.50"	1.00"	P104233	\$29.40
KF50	2.00"	2.00"	0.50"	1.00"	P104234	\$36.40
KF50	2-1/8"	2.13"	0.50"	1.00"	P104235	\$36.40

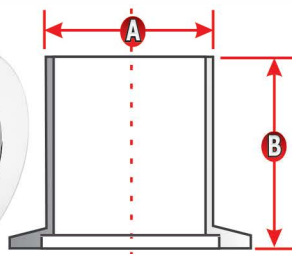
KF Weld Socket Flange Stainless Steel

KF Flange Size	Tubing O.D.	A	B	C	D	E	IDEAL VACUUM P/N	Price*
KF10	1/2"	1.18"	0.48"	0.52"	0.61"	0.50"	P103477	\$9.90
KF16	5/8"	1.18"	0.67"	0.67"	0.79"	0.50"	P101270	\$9.90
KF16	3/4"	1.18"	0.67"	0.76"	0.87"	0.50"	P103591	\$9.90
KF25	1.00"	1.57"	1.03"	1.02"	1.13"	0.50"	P101271	\$11.50
KF40	1-1/2"	2.17"	1.17"	1.52"	1.75"	0.50"	P101272	\$13.25
KF50	2.00"	2.95"	2.05"	1.52"	2.25"	0.50"	P101273	\$19.85



ALUMINUM

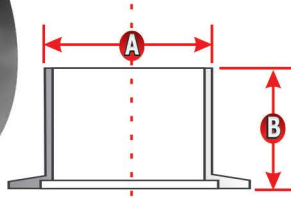
KF Half Nipple Long Weld Stub



KF Flange Size	Tubing O.D.	A	B	IDEAL VACUUM P/N	Price*
KF16	1/2"	0.50"	1.58"	P104607	\$18.40
KF25	1.00"	1.00"	1.58"	P104608	\$22.40
KF40	1-1/2"	1.50"	1.58"	P104609	\$24.40
KF50	2.00"	2.00"	1.58"	P104610	\$24.40

Vacuum Fittings and Adapters **1**

KF (Quick Flange)

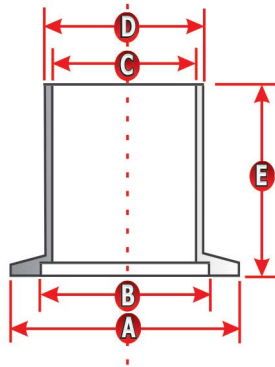
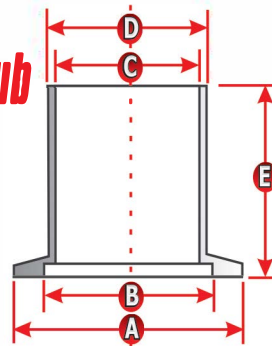


Stainless Steel KF Half Nipple Short Weld Stub

KF Flange Size	Tube Size	A	B	IDEAL VACUUM P/N	Price*
KF16	1/2"	0.50"	0.50"	P104602	\$14.40
KF16	3/4"	0.75"	0.50"	P104603	\$14.40
KF25	1.00"	1.00"	0.50"	P104604	\$16.40
KF40	1-1/2"	1.50"	0.75"	P104605	\$18.40
KF50	2.00"	2.00"	0.75"	P104606	\$23.40

Stainless Steel (Uses Standard KF O-Rings and Clamps, METRIC Tube Sizes) METRIC European Half Nipple Short Weld Stub

KF Flange Size	Tubing O.D.mm	A	B	C	D	E	IDEAL VACUUM P/N	Price*
DN/KF10	14	1.18"	0.48"	0.40"	0.56"	1.18"	P103479	\$14.40
DN/KF16	20	1.18"	0.67"	0.64"	0.79"	1.18"	P103480	\$14.95
DN/KF25	28	1.57"	1.03"	0.95"	1.10"	1.18"	P103481	\$18.80
DN/KF40	44.50	2.17"	1.65"	1.65"	1.75"	1.18"	P103482	\$19.75
DN/KF50	57	2.98"	2.06"	2.06"	2.30"	1.18"	P103483	\$29.90

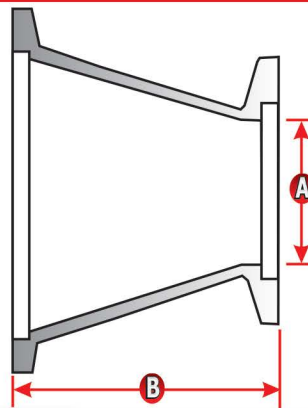


Stainless Steel (Uses Standard KF O-Rings and Clamps, METRIC Tube Sizes) METRIC European Half Nipple Long Weld Stub

KF Flange Size	Tubing O.D.mm	A	B	C	D	E	IDEAL VACUUM P/N	Price*
DN/KF10	14	1.18"	0.48"	0.40"	0.56"	2.17"	P103484	\$19.95
DN/KF16	20	1.18"	0.67"	0.64"	0.79"	2.17"	P103485	\$19.95
DN/KF25	28	1.57"	1.03"	0.95"	1.10"	2.17"	P103486	\$21.95
DN/KF40	44.50	2.17"	1.65"	1.65"	1.75"	2.17"	P103487	\$25.95
DN/KF50	57	2.98"	2.06"	2.06"	2.26"	2.17"	P103488	\$36.98

Stainless Steel KF to KF Reducer "conical"

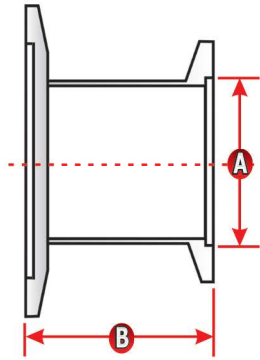
KF Flange Size	A	B	IDEAL VACUUM P/N	Price*
KF16 to KF25	0.62"	1.57"	P101227	\$39.70
KF16 to KF40	0.62"	1.57"	P101228	\$43.05
KF16 to KF50	0.62"	1.57"	P101229	\$45.70
KF25 to KF40	0.87"	1.57"	P101230	\$44.65
KF25 to KF50	0.87"	1.57"	P101231	\$48.00
KF40 to KF50	1.34"	1.57"	P101232	\$51.90



*Catalog Pricing
Subject to Change

1 Vacuum Fittings and Adapters

KF (Quick Flange)

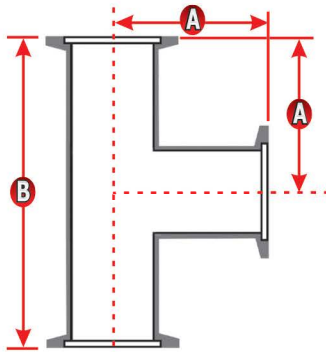
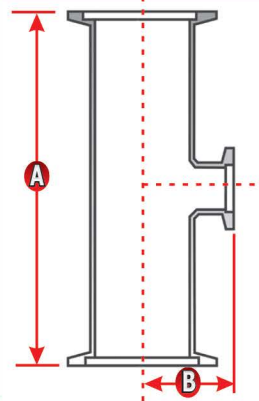


Stainless Steel KF to KF Reducer "straight"

KF Flange Size	A	B	IDEAL VACUUM P/N	Price*
KF16 to KF25	0.62"	1.57"	P103455	\$39.70
KF16 to KF40	0.62"	1.57"	P103456	\$43.05
KF16 to KF50	0.62"	1.57"	P103457	\$45.70
KF25 to KF40	0.87"	1.57"	P103458	\$44.65
KF25 to KF50	0.87"	1.57"	P103459	\$48.00
KF40 to KF50	1.34"	1.57"	P103460	\$51.90

Stainless Steel KF TEE Reducer

KF Flange Size	A	B	IDEAL VACUUM P/N	Price*
KF16 to KF25	3.94"	1.10"	P101263	\$74.55
KF16 to KF40	5.12"	1.33"	P101264	\$87.15
KF16 to KF50	5.51"	1.58"	P101265	\$105.00
KF25 to KF40	4.80"	2.30"	P101633	\$112.35
KF25 to KF50	5.5"	2.5"	P101634	\$116.55
KF40 to KF50	6.3"	2.7"	P101635	\$131.25

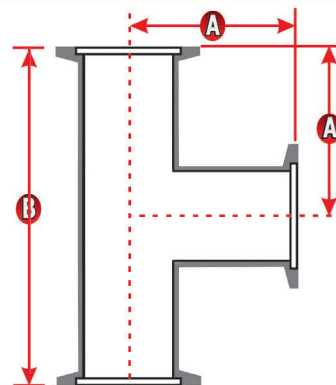


Stainless Steel KF TEE

KF Flange Size	A	B	IDEAL VACUUM P/N	Price*
KF16	1.57"	3.15"	P101209	\$72.45
KF25	1.97"	3.94"	P101210	\$82.95
KF40	2.56"	5.12"	P101211	\$93.45
KF50	2.76"	5.51"	P101212	\$127.05

KF TEE ALUMINUM Machined Cast

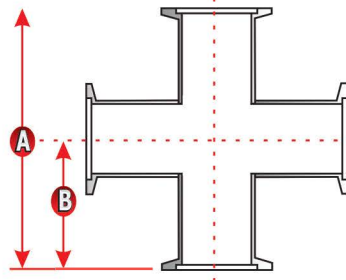
KF Flange Size	A	B	IDEAL VACUUM P/N	Price*
KF16	1.57"	3.15"	P103431	\$72.45
KF25	1.97"	3.94"	P103432	\$82.95
KF40	2.56"	5.12"	P103433	\$93.45



*Catalog Pricing
Subject to Change

Vacuum Fittings and Adapters **1**

KF (Quick Flange)

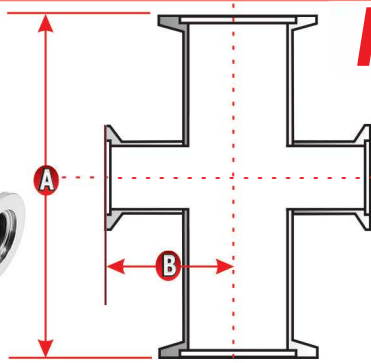
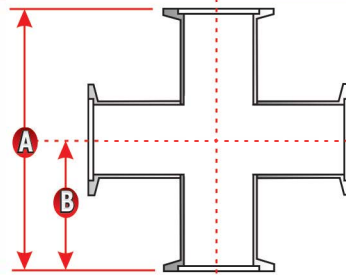


KF 4 Way Cross Stainless Steel

KF Flange Size	A	B	IDEAL VACUUM P/N	Price*
KF16	3.15"	1.57"	P101205	\$105.00
KF25	3.94"	1.97"	P101206	\$121.80
KF40	5.12"	2.56"	P101207	\$149.10
KF50	5.50"	2.75"	P101208	\$198.45

KF 4 Way Cross ALUMINUM Machined Cast

KF Flange Size	A	B	IDEAL VACUUM P/N	Price*
KF16	3.15"	1.57"	P103434	\$105.00
KF25	3.94"	1.97"	P103435	\$121.80
KF40	5.12"	2.56"	P103436	\$149.10

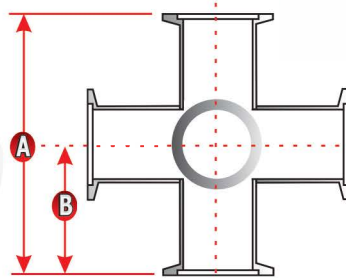
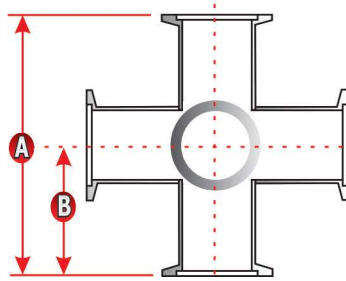


KF Reducer Cross Stainless Steel

KF Flange Size	A	B	IDEAL VACUUM P/N	Price*
KF25 to KF16	3.94"	1.70"	P102654	\$125.00
KF40 to KF16	5.12"	1.95"	P102655	\$145.00
KF40 to KF25	5.12"	2.25"	P102656	\$155.00
KF50 to KF16	5.50"	2.25"	P102657	\$195.00
KF50 to KF25	5.50"	2.50"	P102658	\$200.00
KF50 to KF40	5.50"	2.80"	P102659	\$205.00

KF 5 Way Cross Stainless Steel

KF Flange Size	A	B	IDEAL VACUUM P/N	Price*
KF16	3.15"	1.60"	P102638	\$225.00
KF25	4.00"	2.00"	P102639	\$195.00
KF40	5.20"	2.55"	P102640	\$220.00
KF50	5.50"	2.25"	P102641	\$290.00



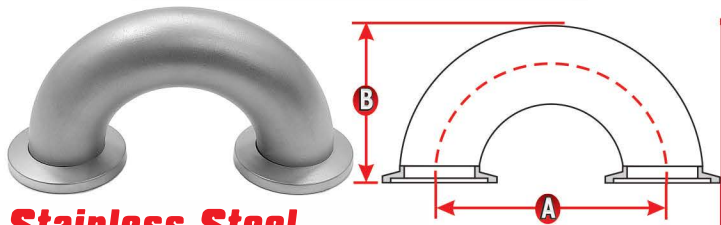
KF 6 Way Cross Stainless Steel

KF Flange Size	A	B	IDEAL VACUUM P/N	Price*
KF16	3.15"	1.60"	P102642	\$195.00
KF25	4.00"	2.00"	P102643	\$220.00
KF40	5.20"	2.55"	P102644	\$430.00
KF50	5.50"	2.25"	P102645	\$475.00

*Catalog Pricing Subject to Change

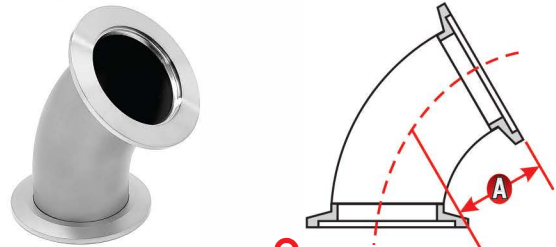
1 Vacuum Fittings and Adapters

KF (Quick Flange)



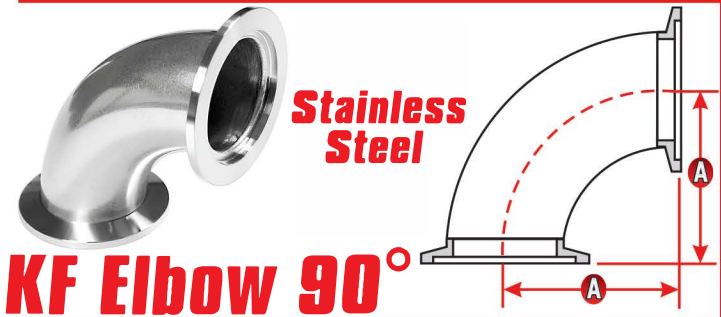
Stainless Steel
KF Elbow 180° Return

KF Flange Size	A	B	IDEAL VACUUM P/N	Price*
KF16	2.25"	1.67"	P102650	\$78.00
KF25	3.00"	2.71"	P102651	\$83.00
KF40	5.12"	2.71"	P102652	\$105.00
KF50	6.00"	4.17"	P102653	\$130.00



Stainless Steel
KF Elbow 45°

KF Flange Size	A	IDEAL VACUUM P/N	Price*
KF16	0.91"	P101213	\$50.75
KF25	1.12"	P101214	\$58.80
KF40	1.68"	P101215	\$91.35
KF50	2.00"	P101216	\$97.65



Stainless Steel
KF Elbow 90°

KF Flange Size	A	IDEAL VACUUM P/N	Price*
KF16	1.15"	P101226	\$44.10
KF25	1.65"	P101225	\$49.70
KF40	2.40"	P101224	\$69.30
KF50	3.15"	P101223	\$88.20



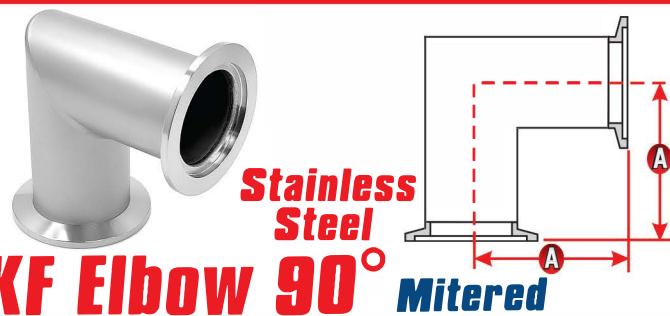
Stainless Steel
KF Elbow 90° Long Radius

KF Flange Size	A	IDEAL VACUUM P/N	Price*
KF16	2.65"	P104169	\$79.95
KF25	3.56"	P103440	\$86.50
KF40	5.12"	P102334	\$93.45
KF50	5.50"	P102335	\$110.25



ALUMINUM Machined Cast
KF Elbow 90°

KF Flange Size	A	IDEAL VACUUM P/N	Price*
KF16	1.60"	P103437	\$44.10
KF25	2.00"	P103438	\$49.70
KF40	2.55"	P103439	\$69.30

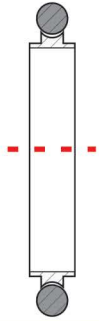


Stainless Steel
KF Elbow 90° Mitered

KF Flange Size	A	IDEAL VACUUM P/N	Price*
KF16	1.57"	P102646	\$48.00
KF25	1.97"	P102647	\$54.00
KF40	5.12"	P102648	\$72.00
KF50	3.10"	P102649	\$93.00

Vacuum Fittings and Adapters **1**

KF (Quick Flange)



KF Centering Ring **Stainless Steel with Buna Rubber**

KF Flange Size	IDEAL VACUUM P/N	Price*
KF10	P101959	\$5.15
KF16	P101960	\$5.15
KF25	P101961	\$6.20
KF40	P101962	\$9.05
KF50	P101963	\$10.85

KF Centering Ring **Stainless Steel with Viton Rubber**

KF Flange Size	IDEAL VACUUM P/N	Price*
KF10	P101958	\$5.90
KF16	P101242	\$5.90
KF25	P101243	\$6.95
KF40	P101244	\$10.50
KF50	P101245	\$13.65



KF Centering Ring **Stainless Steel with Viton Rubber**

Adaptive for obsolete bore sizes

KF Flange Size	IDEAL VACUUM P/N	Price*
KF10 to KF16	P101246	\$8.85
KF20 to KF25	P101247	\$11.55
KF32 to KF40	P101248	\$15.05

KF Centering Ring **Stainless Steel with Viton Rubber**

KF Flange Size	IDEAL VACUUM P/N	Price*
KF16	P103489	\$18.90
KF25	P101630	\$18.90
KF40	P101631	\$19.45
KF50	P101632	\$23.90

Overpressure Rings



Overpressure KF Centering Ring **Stainless Steel with Viton Rubber**



KF Flange Size	IDEAL VACUUM P/N	Price*
KF16	P103180	\$26.05
KF25	P103181	\$29.95
KF40	P103182	\$39.75
KF50	P103183	\$49.48

*Catalog Pricing
Subject to Change

1 Vacuum Fittings and Adapters

KF (Quick Flange)



BUNA Rubber KF Centering Ring Replacement

KF Flange Size	IDEAL VACUUM P/N	Price*
KF10	P103645	\$.99
KF16	P103647	\$1.55
KF25	P103648	\$2.55
KF40	P103649	\$3.10
KF50	P103650	\$3.99

Viton Rubber KF Centering Ring Replacement

KF Flange Size	IDEAL VACUUM P/N	Price*
KF10	P102322	\$2.10
KF16	P101249	\$2.75
KF25	P101250	\$3.40
KF40	P101219	\$4.10
KF50	P101251	\$5.25

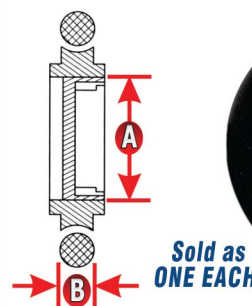


Red Silicone Rubber KF Centering Ring Replacement

KF Flange Size	IDEAL VACUUM P/N	Price*
KF10	P103651	\$.99
KF16	P103652	\$1.65
KF25	P103653	\$2.45
KF40	P103654	\$2.99
KF50	P103655	\$4.25

Stainless Steel with Viton Rubber Ring KF Centering Ring w/ Screen

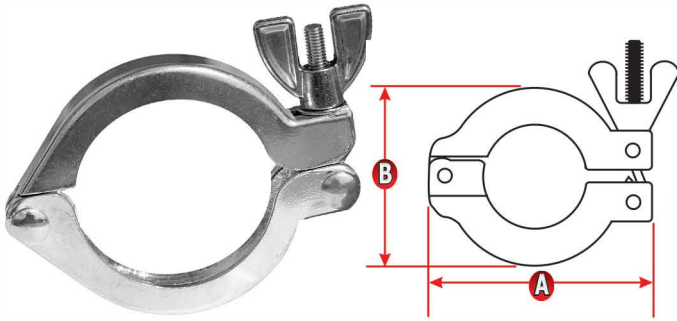
KF Flange Size	A	B	IDEAL VACUUM P/N	Price*
KF16	0.3125"	0.2125"	P102536	\$25.45
KF25	0.500"	0.2125"	P102537	\$29.00
KF40	0.865"	0.2125"	P102538	\$33.60
KF50	1.450"	0.2125"	P102539	\$37.10



Vacuum Fittings and Adapters **1**

KF (Quick Flange)

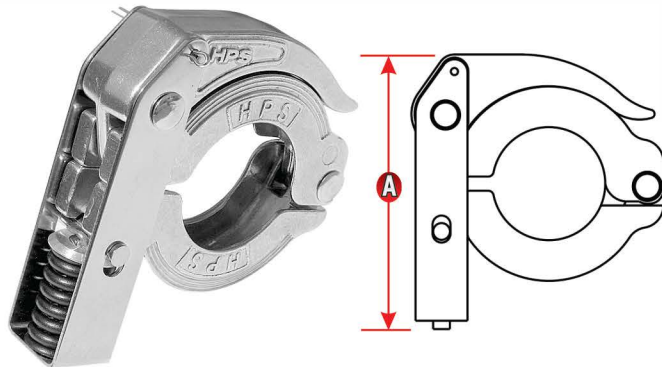
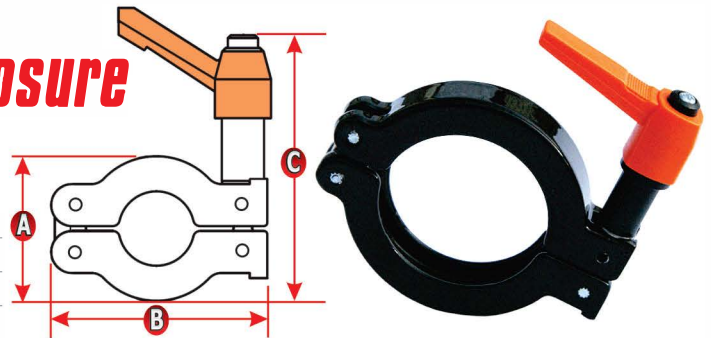
ALUMINUM KF Hinge Clamp Wing Nut



KF Flange Size	A	B	IDEAL VACUUM P/N	Price*
KF10/KF16	2.25"	1.69"	P101198	\$5.60
KF25	2.75"	2.17"	P101199	\$7.75
KF40	3.39"	2.75"	P101200	\$8.85
KF50	4.33"	3.75"	P101201	\$14.95

ALUMINUM with Black Finish KF Quick Clamp w/ Ratchet Closure

KF Flange Size	A	B	C	IDEAL VACUUM P/N	Price*
KF10/KF16	1.68"	2.52"	3.09"	P102581	\$20.23
KF25	2.07"	2.92"	3.29"	P102582	\$16.50
KF40	2.67"	3.51"	3.59"	P102583	\$23.81
KF50	3.52"	4.30"	4.00"	P102584	\$26.19

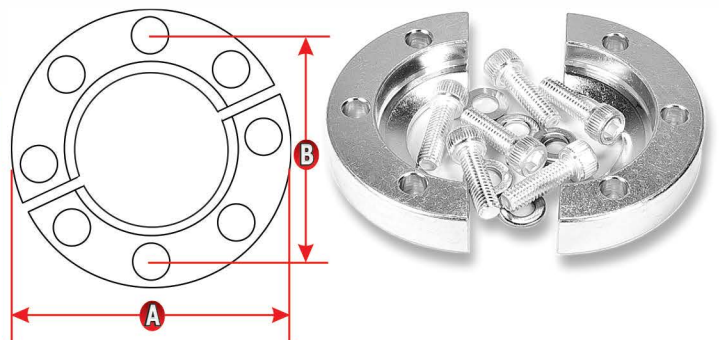


ALUMINUM with Cotter Pin KF Toggle Clamp

KF Flange Size	A	IDEAL VACUUM P/N	Price*
KF10/KF16	2.50"	P101638	\$13.25
KF25	2.96"	P101639	\$15.45
KF40	3.29"	P101640	\$16.60
KF50	4.73"	P101641	\$18.80

ALUMINUM with Nuts and Bolts KF Bulkhead Clamp

KF Flange Size	A	B	IDEAL VACUUM P/N	Price*
KF10/KF16	2.00"	1.50"	P104598	\$32.00
KF25	2.38"	1.90"	P104599	\$35.00
KF40	2.94"	2.44"	P104600	\$38.00
KF50	3.75"	3.25"	P104601	\$42.00



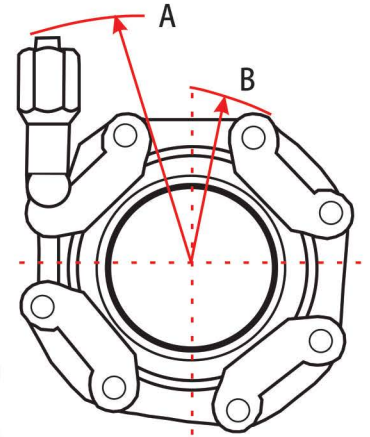
*Catalog Pricing
Subject to Change

1 Vacuum Fittings and Adapters

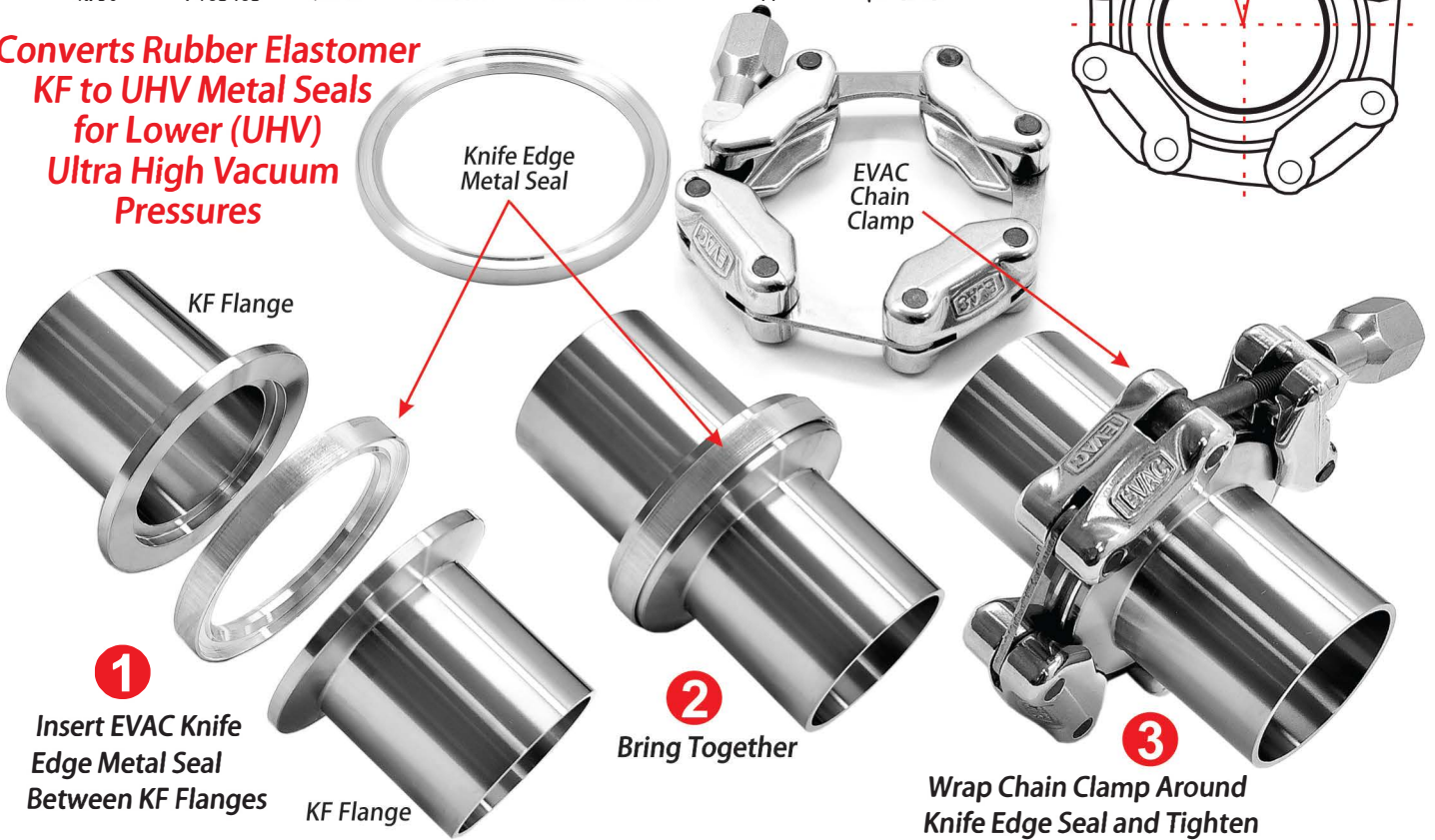
KF (Quick Flange)

KF EVAC Knife Edge Metal Seal and Chain Clamp **ALUMINUM**

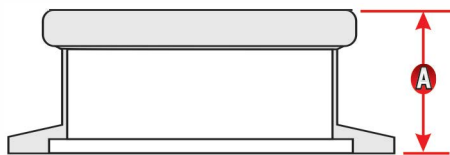
KF Flange Size	Metal Seal IDEAL VACUUM P/N	Price*	Chain Clamp IDEAL VACUUM P/N	A	B	Torque (lb. in.)	Price*
KF10/KF16	P103400	\$38.95	P103396	4.53"	2.36"	22	\$84.95
KF25	P103401	\$46.95	P103397	4.92"	2.76"	26	\$94.95
KF40	P103402	\$56.95	P103398	5.32"	3.35"	39	\$109.95
KF50	P103403	\$69.88	P103399	5.98"	4.13"	44	\$135.95



Converts Rubber Elastomer
KF to UHV Metal Seals
for Lower (UHV)
Ultra High Vacuum
Pressures



Stainless Steel KF View Port



(Max. Temp 150°C, Optical
Quality Borosilicate Glass)

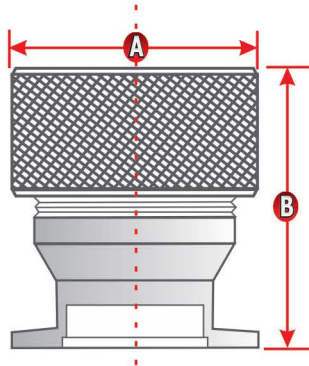
KF Flange Size	A	IDEAL VACUUM P/N	Price*
KF40	1"	P101636	\$215.25
KF50	1.25"	P101637	\$247.80



*Catalog Pricing
Subject to Change

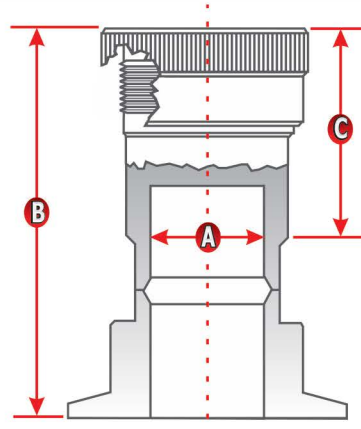
Vacuum Fittings and Adapters **1**

KF (Quick Flange)



Adapter
Stainless Steel **LOW PROFILE**
KF to Compression Port

KF Flange Size	Port I.D.	A	B	IDEAL VACUUM P/N	Price*
KF16	to 1/2"	1.35"	1.50"	P103919	\$143.25
KF16	to 3/4"	1.68"	1.81"	P103920	\$70.35
KF25	to 1/2"	2.00"	1.50"	P103773	\$67.20
KF25	to 5/8"	1-15/16"	1-5/8"	P103771	\$77.80
KF25	to 3/4"	1-9/16"	1-3/16"	P103770	\$71.40
KF25	to 1"	2.00"	2.00"	P103772	\$146.00
KF25	to 1-1/8"	2.00"	2.00"	P103769	\$120.00
KF40	to 1/2"	1.37"	1.50"	P103774	\$72.45
KF40	to 3/4"	1.62"	1.81"	P103775	\$75.60
KF40	to 1"	1.81"	2.00"	P103776	\$87.15
KF40	to 1-1/8"	2.00"	2.00"	P103777	\$115.50
KF40	to 1-1/4"	2.12"	2.00"	P103922	\$125.00
KF40	to 1-3/8"	2.12"	2.00"	P104168	\$135.00
KF40	to 1-1/2"	2.37"	2.37"	P103921	\$145.00
KF50	to 1/2"	1.38"	1.5"	P103778	\$87.15
KF50	to 3/4"	1.63"	1.81"	P103779	\$87.15
KF50	to 1.00"	1.88"	2.00"	P103780	\$97.65
KF50	to 1-1/8"	2.00"	2.00"	P103781	\$127.05
KF50	to 1-1/2"	2.38"	2.38"	P103782	\$139.50
KF50	to 2.00"	2.88"	2.40"	P103783	\$165.00

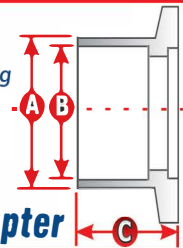


Adapter
Stainless Steel
KF to Compression Port

KF Flange Size	Port I.D.	A	B	C	IDEAL VACUUM P/N	Price*
KF16	to 3/4"	0.62"	2.40"	0.94"	P101317	\$143.25
KF25	to 1/2"	0.41"	2.40"	0.80"	P101318	\$125.00
KF25	to 3/4"	0.62"	2.50"	0.94"	P101319	\$165.00
KF25	to 1.00"	0.88"	2.4"	0.94"	P101320	\$197.75
KF40	to 1/2"	0.41"	2.6"	0.80"	P101322	\$146.00
KF40	to 3/4"	0.62"	2.8"	0.94"	P101323	\$153.00
KF40	to 1.00"	0.88"	2.8"	0.94"	P101324	\$200.00
KF40	to 1-1/8"	1.50"	2.90"	1.94"	P101325	\$202.00
KF50	to 3/4"	0.62"	2.8"	0.94"	P101326	\$159.00
KF50	to 1"	0.88"	2.8"	0.94"	P101327	\$209.00
KF50	to 1-1/8"	1.14"	2.90"	0.94"	P101328	\$185.75

Made of Schedule 80 Polyvinyl Chloride
Requires Cement for Bonding

KF to PVC Tubing Adapter

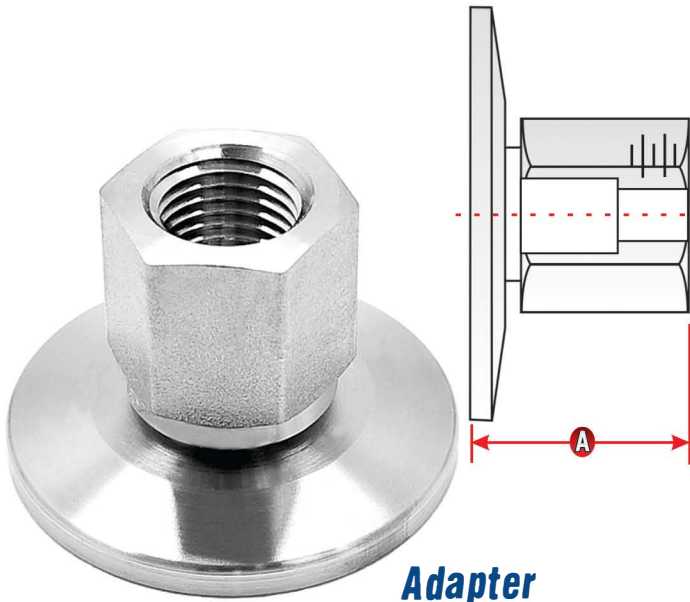


KF to PVC Plastic Tubing	A	B	C	IDEAL VACUUM P/N	Price*
KF16 to 3/4" tubing	1.31"	1.05"	1.75"	P101385	\$11.00
KF25 to 3/4" tubing	1.20"	1.06"	1.17"	P101386	\$12.00
KF40 to 1" tubing	1.70"	1.32"	1.21"	P101387	\$16.00
KF50 to 1-1/2" tubing	2.20"	1.91"	1.23"	P101388	\$23.00

*Catalog Pricing
Subject to Change

1 Vacuum Fittings and Adapters

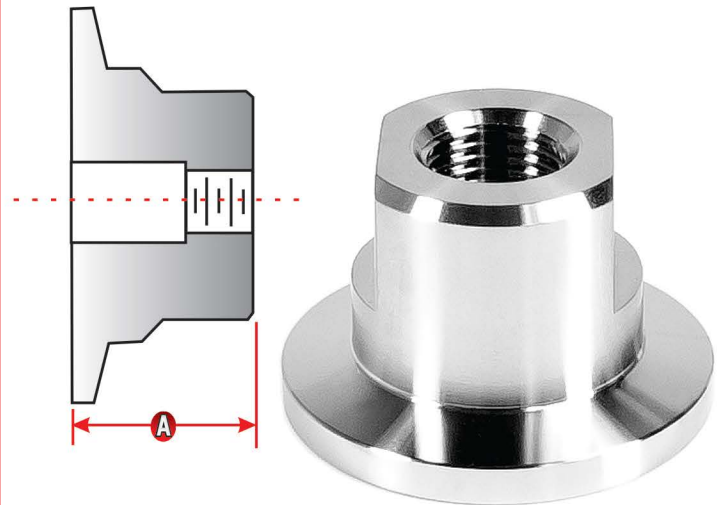
KF (Quick Flange)



Adapter

Hex Head Grip Tight Stainless Steel KF To NPT Female Pipe Adapter

KF Flange Size	NPT Female Size	A	IDEAL VACUUM P/N	Price*
KF10	1/8"	0.92"	P103071	\$49.50
KF10	1/4"	1.07"	P103072	\$56.25
KF16	1/8"	0.92"	P103073	\$49.50
KF16	1/2"	1.44"	P103070	\$61.95
KF25	1/8"	0.92"	P103074	\$55.90
KF25	1/4"	0.92"	P103075	\$59.00
KF25	1/2"	1.39"	P103076	\$65.40
KF25	3/4"	1.45"	P103105	\$73.96
KF25	1.00"	1.57"	P103104	\$125.00
KF40	1/8"	0.92"	P103106	\$59.65
KF40	1/4"	1.07"	P103081	\$64.95
KF40	1/2"	1.39"	P103082	\$66.95
KF40	3/4"	1.45"	P103108	\$75.96
KF40	1.00"	1.57"	P103107	\$132.50
KF50	1/8"	0.92"	P103078	\$61.25
KF50	1/4"	1.07"	P103077	\$66.95
KF50	1/2"	1.39"	P103079	\$72.95
KF50	3/4"	1.45"	P103080	\$125.00
KF50	1.00"	1.57"	P103109	\$144.00

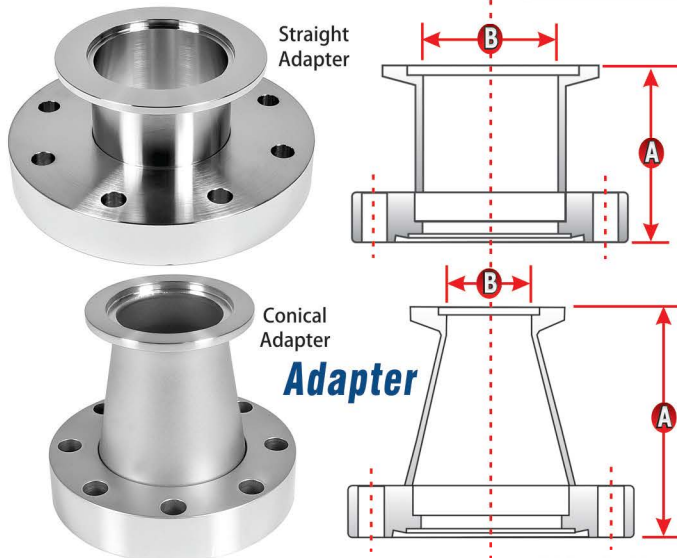


Machined Stainless Steel Adapter KF To NPT Female Pipe Adapter

KF Flange Size	NPT Female Size	A	IDEAL VACUUM P/N	Price*
KF10	1/8"	0.75"	P103744	\$17.55
KF10	1/4"	0.75"	P103743	\$17.55
KF16	1/8"	0.75"	P101315	\$17.55
KF16	1/4"	0.75"	P101308	\$18.50
KF25	1/8"	0.75"	P101309	\$21.00
KF25	1/4"	0.75"	P101310	\$21.95
KF40	1/8"	1.00"	P101311	\$29.55
KF40	1/4"	1.00"	P101312	\$31.00
KF40	1/2"	1.00"	P103745	\$66.95
KF40	3/4"	1.00"	P103746	\$75.96
KF50	1/8"	1.00"	P101313	\$38.65
KF50	1/4"	1.00"	P101314	\$40.55
KF50	1/2"	1.00"	P103747	\$72.95

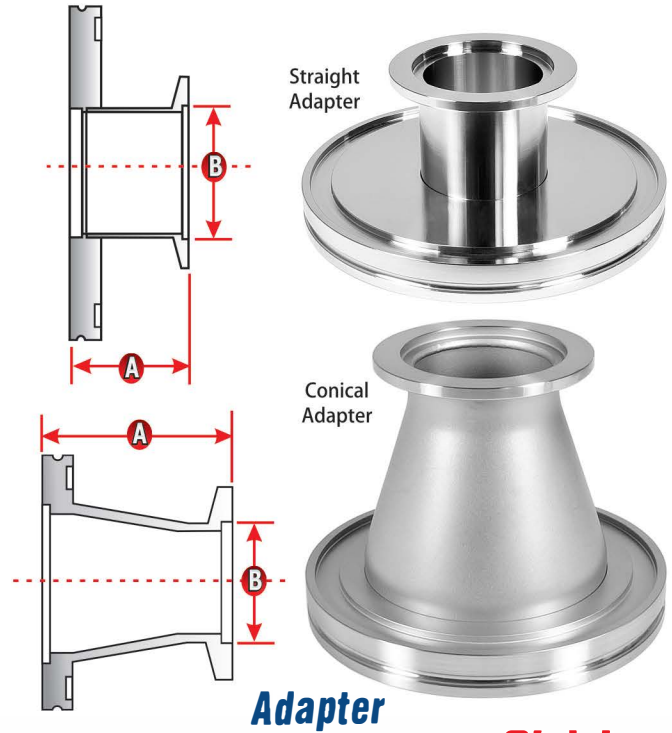
Vacuum Fittings and Adapters **1**

KF (Quick Flange)



KF To CF Conflat Adapter *Stainless Steel*

KF to CF Size	Adapter Type	A	B	IDEAL VACUUM P/N	Price*
KF16 to CF 1-1/3	STRAIGHT	2.08"	0.62"	P101286	\$60.90
KF16 to CF 2-1/8	CONICAL	1.69"	0.87"	P103814	\$67.25
KF16 to CF 2-3/4	STRAIGHT	2.08"	0.62"	P101290	\$64.05
KF16 to CF 2-3/4	CONICAL	2.75"	0.62"	P103815	\$76.44
KF25 to CF 1-1/3	CONICAL	1.70"	0.87"	P103816	\$78.80
KF25 to CF 2-1/8	STRAIGHT	1.81"	0.95"	P103765	\$78.95
KF25 to CF 2-3/4	STRAIGHT	1.37"	0.87"	P101287	\$68.25
KF25 to CF 2-3/4	CONICAL	2.75"	0.82"	P103817	\$91.35
KF25 to CF 3-1/3	CONICAL	2.75"	1.39"	P103818	\$107.52
KF40 to CF 1-1/3	CONICAL	2.50"	1.39"	P103819	\$82.40
KF40 to CF 2-1/8	CONICAL	2.50"	1.39"	P103820	\$95.96
KF40 to CF 2-3/4	STRAIGHT	1.78"	1.33"	P101288	\$77.70
KF40 to CF 3-1/3	STRAIGHT	1.18"	1.38"	P103766	\$135.75
KF40 to CF 3-1/3	CONICAL	2.50"	1.39"	P103821	\$130.48
KF40 to CF 4-1/2	CONICAL	2.93"	1.38"	P103822	\$168.07
KF40 to CF 4-5/8	CONICAL	4.12"	1.39"	P103823	\$211.11
KF50 to CF 1-1/3	STRAIGHT	2.00"	1.07"	P103790	\$69.70
KF50 to CF 2-1/8	CONICAL	2.68"	1.38"	P103824	\$86.31
KF50 to CF 2-3/4	STRAIGHT	1.78"	1.30"	P101966	\$95.55
KF50 to CF 2-3/4	CONICAL	2.68"	1.39"	P103825	\$109.65
KF50 to CF 3-1/3	STRAIGHT	1.58"	1.39"	P103764	\$144.50
KF50 to CF 4-1/2	STRAIGHT	1.95"	1.83"	P101289	\$154.35
KF50 to CF 4-1/2	CONICAL	2.92"	1.39"	P103826	\$180.49
KF50 to CF 4-5/8	CONICAL	4.12"	1.45"	P103827	\$231.32
KF50 to CF 6.00	CONICAL	4.25"	1.37"	P103976	\$251.64
KF50 to CF 8.00	STRAIGHT	1.95"	1.83"	P105217	\$420.70



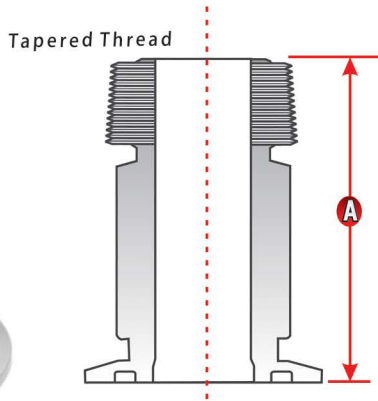
KF To LF NW ISO Adapter *Stainless Steel*

KF to LF NW ISO	Adapter Type	A	B	IDEAL VACUUM P/N	Price*
KF16 to ISO-LF NW63	STRAIGHT	1.77"	0.62"	P101361	\$146.05
KF25 to ISO-LF NW63	STRAIGHT	1.77"	1.00"	P101360	\$151.80
KF40 to ISO-LF NW63	STRAIGHT	1.77"	1.37"	P103767	\$137.40
KF40 to ISO-LF NW63	CONICAL	3.39"	1.37"	P101354	\$154.40
KF50 to ISO-LF NW63	STRAIGHT	1.77"	1.80"	P103768	\$148.85
KF50 to ISO-LF NW63	CONICAL	3.39"	1.87"	P101355	\$165.90
KF25 to ISO-LF NW80	STRAIGHT	1.77"	1.00"	P101362	\$196.75
KF40 to ISO-LF NW80	STRAIGHT	1.87"	1.37"	P104046	\$165.32
KF40 to ISO-LF NW80	CONICAL	4.54"	1.37"	P101363	\$181.70
KF50 to ISO-LF NW80	STRAIGHT	1.87"	1.87"	P104047	\$169.95
KF50 to ISO-LF NW80	CONICAL	4.67"	1.87"	P101364	\$193.20
KF25 to ISO-LF NW100	STRAIGHT	1.77"	0.62"	P101356	\$232.30
KF40 to ISO-LF NW100	STRAIGHT	1.77"	1.37"	P101365	\$238.05
KF50 to ISO-LF NW100	STRAIGHT	1.77"	1.35"	P103813	\$212.12
KF50 to ISO-LF NW100	CONICAL	4.64"	1.87"	P101357	\$215.30
KF40 to ISO-LF NW160	STRAIGHT	1.77"	1.37"	P101358	\$267.95
KF50 to ISO-LF NW160	STRAIGHT	1.77"	1.87"	P101359	\$221.50

*Catalog Pricing
Subject to Change

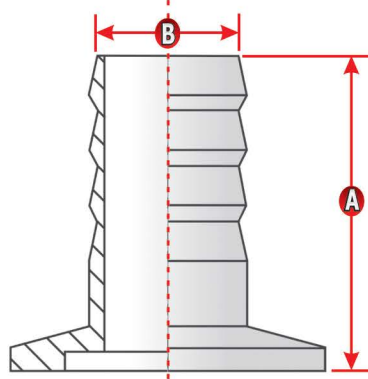
1 Vacuum Fittings and Adapters

KF (Quick Flange)



Stainless Steel Adapter KF To NPT Male Adapter

KF to NPT Male	A	IDEAL VACUUM P/N	Price*
KF10 to 1/8"	0.89"	P103069	\$55.90
KF10 to 1/4"	1.10"	P103066	\$55.90
KF16 to 1/8"	1.57"	P101366	\$47.15
KF16 to 1/4"	1.97"	P101367	\$50.00
KF16 to 1/4"	1.10"	P103068	\$56.25
KF16 to 1/2"	1.35"	P103067	\$61.95
KF25 to 1/8"	1.57"	P101368	\$48.55
KF25 to 1/4"	1.97"	P101369	\$58.32
KF25 to 1/2"	2.95"	P101972	\$57.75
KF25 to 3/4"	2.95"	P101606	\$80.85
KF25 to 1"	2.00"	P101605	\$99.99
KF40 to 1/8"	1.97"	P101370	\$68.00
KF40 to 1/4"	1.97"	P101371	\$53.55
KF40 to 1/2"	2.95"	P101971	\$64.05
KF40 to 3/4"	2.95"	P101970	\$85.05
KF40 to 1"	2.95"	P101969	\$105.00
KF40 to 1-1/4"	2.97"	P101607	\$115.50
KF40 to 1-1/2"	2.97"	P101604	\$126.00
KF40 to 2"	2.25"	P106111	\$128.50
KF50 to 1/8"	1.97"	P101372	\$51.50
KF50 to 1/4"	1.97"	P101373	\$59.85
KF50 to 1/2"	2.95"	P101968	\$68.25
KF50 to 3/4"	2.95"	P101967	\$93.45
KF50 to 1"	2.95"	P102535	\$110.25
KF50 to 2"	2.97"	P102336	\$131.25



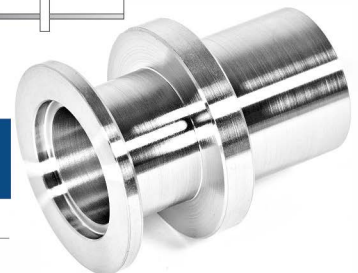
Aluminum or Stainless Steel Adapter KF To Rubber Hose Adapter

KF to Rubber Hose O.D.	Material Type	A	B	IDEAL VACUUM P/N	Price*
KF10 to 8mm or 1/4"	Stainless	1.56"	1/4"	P103748	\$28.95
KF10 to 12mm or 1/2"	Stainless	1.56"	1/2"	P103749	\$29.95
KF10 to 1/2" to 5/8"	Aluminum	1.17"	5/8"	P102325	\$19.95
KF16 to 12mm or 1/2"	Stainless	1.56"	1/2"	P103750	\$29.95
KF16 to 1/2" to 5/8"	Aluminum	1.65"	5/8"	P102323	\$19.95
KF16 to 5/8" to 3/4"	Aluminum	1.65"	3/4"	P101348	\$19.95
KF25 to 12mm or 1/2"	Stainless	1.57"	1/2"	P103751	\$29.95
KF25 to 1/2" to 5/8"	Aluminum	1.65"	5/8"	P102324	\$21.95
KF25 to 16mm or 5/8"	Stainless	1.57"	5/8"	P103752	\$29.95
KF25 to 3/4" to 7/8"	Aluminum	1.73"	7/8"	P101349	\$22.95
KF25 to 20mm or 13/16"	Stainless	1.57"	13/16"	P103754	\$34.99
KF40 to 12mm or 1/2"	Stainless	1.57"	1/2"	P103753	\$39.95
KF40 to 16mm or 5/8"	Stainless	1.57"	5/8"	P103755	\$39.95
KF40 to 20mm or 13/16"	Stainless	1.57"	13/16"	P103756	\$39.95
KF40 to 25mm or 1"	Stainless	1.57"	1.00"	P103757	\$42.25
KF40 to 1-1/2" to 1-5/8"	Aluminum	2.17"	1-5/8"	P101350	\$26.95
KF50 to 25mm or 1"	Stainless	1.57"	1.00"	P103758	\$47.99
KF50 to 1-1/2" to 1-5/8"	Aluminum	2.17"	1-5/8"	P101351	\$29.95

Stainless Steel KF to Leak Detector Port



KF to O.D. Port	IDEAL VACUUM P/N	Price*
KF25 to 1-1/8"	P101353	\$58.00
KF40 to 1-1/8"	P101352	\$63.00



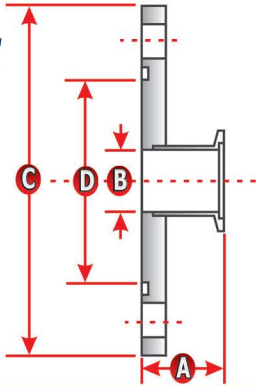
*Catalog Pricing
Subject to Change

Vacuum Fittings and Adapters **1**

KF (Quick Flange)



Adapter



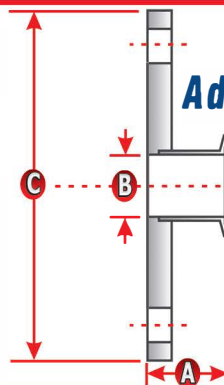
Stainless Steel

KF to ASA with O-Ring Groove

KF Flange to ASA	A	B	C	D	IDEAL VACUUM P/N	Price*
KF40 to ASA 1.5"	1.81"	1.33"	5.00"	2.66"	P101297	\$149.10
KF40 to ASA 2.0"	1.81"	1.33"	6.00"	3.42"	P101298	\$203.70
KF40 to ASA 3.0"	1.81"	1.33"	7.50"	4.69"	P101299	\$247.80
KF50 to ASA 1.5"	1.81"	1.83"	5.00"	2.66"	P101300	\$160.65
KF50 to ASA 2.0"	1.81"	1.83"	6.00"	2.42"	P101301	\$220.50
KF50 to ASA 3.0"	1.81"	1.83"	7.50"	4.69"	P101302	\$264.60
KF50 to ASA 6.0"	1.81"	1.58"	11.00"	8.00"	P105220	\$644.90

KF to ASA without O-Ring Groove

KF Flange to ASA	A	B	C	IDEAL VACUUM P/N	Price*
KF40 to ASA 1.5"	1.81"	1.33"	5.00"	P101291	\$127.05
KF40 to ASA 2.0"	1.81"	1.33"	6.00"	P101292	\$181.65
KF40 to ASA 3.0"	1.81"	1.33"	7.50"	P101293	\$225.75
KF50 to ASA 1.5"	1.81"	1.83"	5.00"	P101294	\$138.60
KF50 to ASA 2.0"	1.81"	1.83"	6.00"	P101295	\$198.45
KF50 to ASA 3.0"	1.81"	1.83"	7.50"	P101296	\$242.55



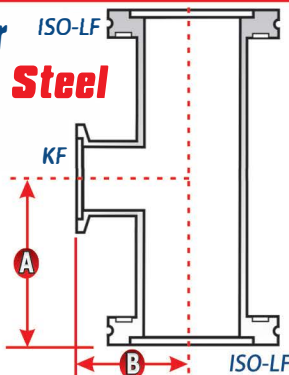
Adapter



Stainless Steel



Adapter
Stainless Steel

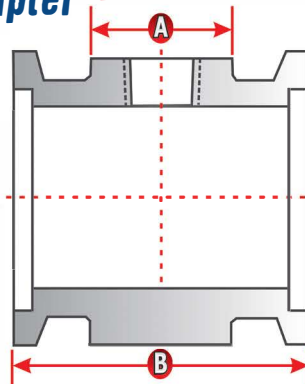


Adaptive Reducing Tee ISO KF to LF

ISO LF to KF	A	B	IDEAL VACUUM P/N	Price*
ISO LF63 to KF 25	4.00"	3.09"	P103579	\$286.00
ISO LF63 to KF 40	3.25"	2.90"	P103734	\$245.00
ISO LF80 to KF 40	3.50"	3.15"	P103453	\$265.00
ISO LF100 to KF 25	5.12"	3.84"	P103452	\$385.00
ISO LF100 to KF 40	4.13"	3.65"	P103733	\$295.00
ISO LF160 to KF 40	5.38"	4.65"	P103454	\$365.00

KF Tee to NPT Female Pipe Adapter **Stainless Steel**

KF Flange to NPT Female	A	B	IDEAL VACUUM P/N	Price*
KF16 to NPT 1/8"	0.76"	1.57"	P101329	\$39.70
KF16 to NPT 1/4"	0.76"	1.57"	P101330	\$40.85
KF25 to NPT 1/8"	0.76"	1.57"	P101331	\$45.30
KF25 to NPT 1/4"	0.76"	1.57"	P101332	\$46.35
KF40 to NPT 1/8"	0.76"	1.57"	P101333	\$61.95
KF40 to NPT 1/4"	0.76"	1.57"	P101334	\$63.00
KF50 to NPT 1/8"	0.76"	1.57"	P101335	\$80.85
KF50 to NPT 1/4"	0.76"	1.57"	P101336	\$81.90



*Catalog Pricing
Subject to Change

1 Vacuum Fittings and Adapters

KF (Quick Flange)



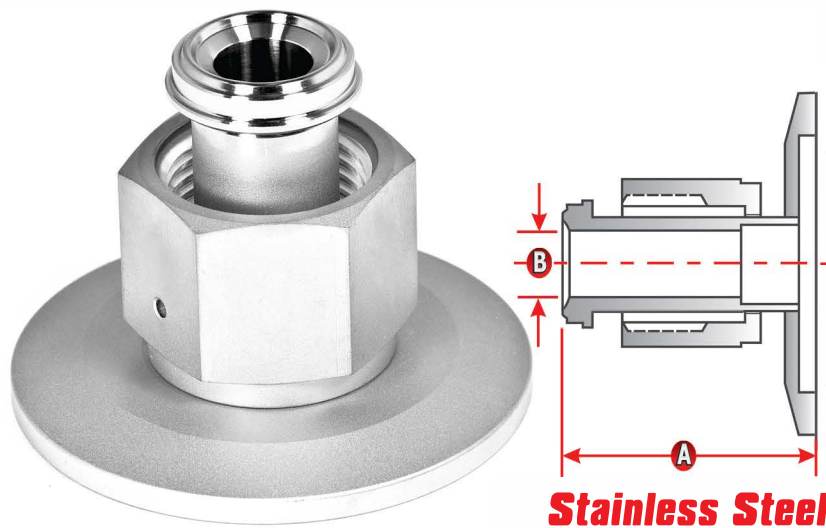
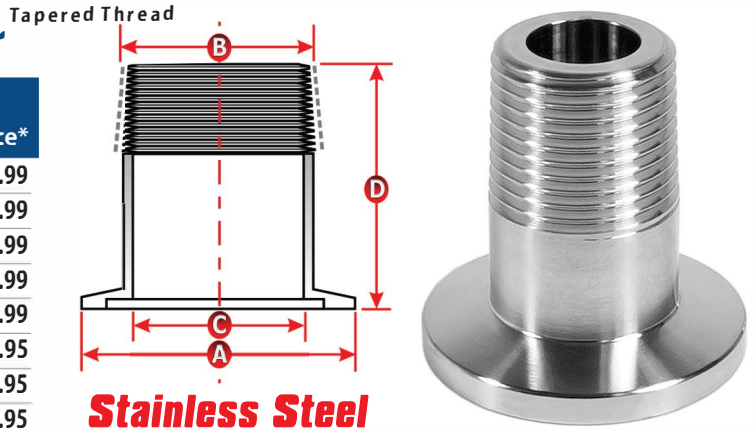
Stainless Steel

KF to BSPP G (British Standard Pipe Parallel Straight Thread) Adapter

KF Flange to BSPP	A	B	C	D	IDEAL VACUUM P/N	Price*
KF10 to 1/4" Male BSPP	1-3/16"	1/2"	3/8"	1-3/16"	P103759	\$26.95
KF10 to 3/8" Male BSPP	1-3/16"	5/8"	3/8"	1-3/16"	P103834	\$26.99
KF16 to 1/8" Male BSPP	<small>(Fits Pfeiffer Diaphragm Pumps inlet & exhaust MVP 015-2, inlet only MVP 020-3AC, MVP 020-3DC)</small>				P103352	\$74.95
KF16 to 1/4" Male BSPP	<small>(Fits Pfeiffer Diaphragm Pumps inlet & exhaust MVP 035-2, exhaust only MVP 055-3)</small>				P103353	\$84.95
KF16 to 3/8" Male BSPP	<small>(Fits any vacuum pump with a BSPP inlet or outlet connection, Black Color)</small>				P103355	\$69.95
KF16 to 1/2" Male BSPP	<small>(Fits any vacuum pump with a BSPP inlet or outlet connection, Black Color)</small>				P103252	\$79.95
KF16 to 1/2" Male BSPP	1-3/16"	13/16"	5/8"	1-3/16"	P103760	\$29.95
KF25 to 3/4" Male BSPP	1-9/16"	1-1/16"	13/16"	1-3/16"	P103763	\$29.95
KF25 to 1.00" Male BSPP	1-9/16"	1-1/4"	15/16"	1-3/16"	P103761	\$32.95
KF40 to 1-1/4" Male BSPP	2-3/16"	1-15/16"	1-5/8"	1-3/16"	P103762	\$39.99
KF40 to 1-1/2" Male BSPP	2-3/16"	1-3/8"	1-1/8"	1-3/16"	P103835	\$49.99
KF50 to 2.00" Male BSPP	2-15/16"	2-3/8"	2.00"	1-3/8"	P104078	\$65.99

KF to BSPT (British Standard Pipe Tapered Thread) Adapter

KF Flange to BSPT	A	B	C	D	IDEAL VACUUM P/N	Price*
KF10 to 1/4" Male BSPT	1-3/16"	1/2"	3/8"	1-3/16"	P103841	\$25.99
KF10 to 3/8" Male BSPT	1-3/16"	11/16"	3/8"	1-3/16"	P103836	\$26.99
KF16 to 1/2" Male BSPT	1-3/16"	13/16"	7/16"	1-3/16"	P103837	\$29.99
KF25 to 3/4" Male BSPT	1-9/16"	1.00"	3/4"	1-3/16"	P103839	\$33.99
KF25 to 1.00" Male BSPT	1-9/16"	1-1/16"	15/16"	1-3/16"	P103838	\$35.99
KF40 to 1-1/4" Male BSPT	2-3/16"	1-5/8"	1-3/8"	1-3/16"	P104077	\$39.95
KF40 to 1-1/2" Male BSPT	2-1/8"	1-7/8"	1-5/8"	1-3/16"	P103840	\$49.95
KF50 to 2.00" Male BSPT	2-15/16"	2-3/8"	2.00"	2.00"	P104076	\$69.95



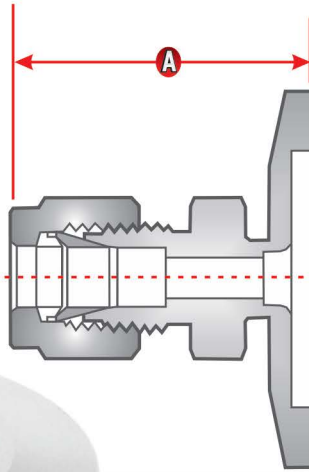
KF to VCR Female Adapter

KF Flange to VCR Female	A	B	IDEAL VACUUM P/N	Price*
KF16 to 4 VCR(1/4")	1.40"	0.19"	P101337	\$55.65
KF16 to 8 VCR(1/2")	1.63"	0.41"	P101338	\$77.70
KF25 to 4 VCR(1/4")	1.40"	0.19"	P101339	\$60.90
KF25 to 8 VCR(1/2")	1.60"	0.41"	P101340	\$77.70
KF25 to 12 VCR(3/4")	2.14"	0.62"	P101341	\$121.80
KF40 to 4 VCR(1/4")	1.40"	0.19"	P101342	\$66.15
KF40 to 8 VCR(1/2")	1.60"	0.41"	P101343	\$82.95
KF40 to 12 VCR(3/4")	2.10"	0.62"	P101344	\$127.05
KF50 to 4 VCR(1/4")	1.40"	0.19"	P101345	\$66.15
KF50 to 8 VCR(1/2")	1.60"	0.41"	P101346	\$82.95
KF50 to 12 VCR(3/4")	2.10"	0.62"	P101347	\$132.30

Vacuum Fittings and Adapters **1**

KF (Quick Flange)

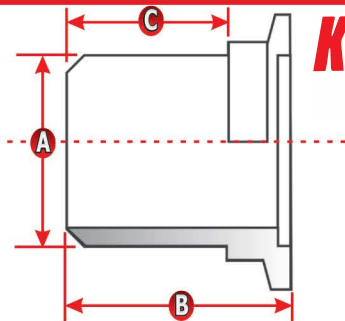
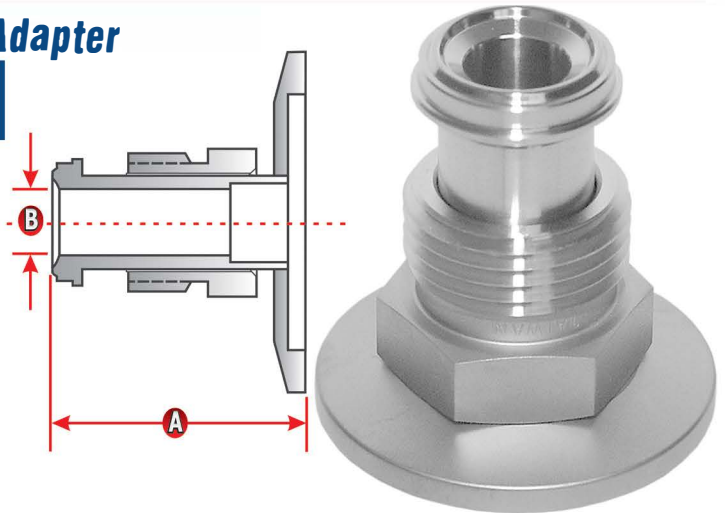
Adapter **KF to Swagelok Stainless Steel**



KF to Swagelok	A	Tube Size	IDEAL VACUUM P/N	Price*
KF10 to 1/4"	1.28"	1/4"	P105417	\$49.95
KF16 to 1/4"	1.28"	1/4"	P101608	\$64.26
KF16 to 3/8"	1.81"	3/8"	P102081	\$75.84
KF16 to 1/2"	1.81"	1/2"	P102086	\$81.69
KF25 to 1/4"	1.28"	1/4"	P101609	\$70.22
KF25 to 3/8"	1.28"	3/8"	P102082	\$81.67
KF25 to 1/2"	1.72"	1/2"	P101610	\$93.33
KF40 to 1/4"	1.28"	1/4"	P101611	\$76.17
KF40 to 3/8"	1.28"	3/8"	P102083	\$82.12
KF40 to 1/2"	1.65"	1/2"	P101612	\$99.19
KF40 to 3/4"	1.91"	3/4"	P101613	\$134.55
KF40 to 1"	2.33"	1.00"	P101614	\$221.95
KF50 to 1/4"	1.28"	1/4"	P101615	\$93.33
KF50 to 3/8"	1.28"	3/8"	P102084	\$99.18
KF50 to 1/2"	1.65"	1/2"	P101616	\$110.85
KF50 to 3/4"	1.91"	3/4"	P101617	\$105.01
KF50 to 1.00"	2.33"	1.00"	P101618	\$233.45

Adapter **KF to VCR Male Stainless Steel**

KF Flange to VCR Male	A	B	IDEAL VACUUM P/N	Price*
KF16 to 4 VCR(1/4")	1.40"	0.19"	P101374	\$55.65
KF16 to 8 VCR(1/2")	1.63"	0.41"	P101375	\$71.40
KF25 to 4 VCR(1/4")	1.40"	0.19"	P101376	\$60.90
KF25 to 8 VCR(1/2")	1.60"	0.41"	P101377	\$71.40
KF25 to 12 VCR(3/4")	2.14"	0.62"	P101378	\$105.00
KF40 to 4 VCR(1/4")	1.40"	0.19"	P101379	\$60.90
KF40 to 8 VCR(1/2")	1.60"	0.41"	P101380	\$77.70
KF40 to 12 VCR(3/4")	2.10"	0.62"	P101381	\$110.25
KF50 to 4 VCR(1/4")	1.40"	0.19"	P101382	\$66.15
KF50 to 8 VCR(1/2")	1.60"	0.41"	P101383	\$77.70
KF50 to 12 VCR(3/4")	2.10"	0.62"	P101384	\$115.50



Adapter **KF to PVC Hose Stainless Steel**

KF to PVC Hose	A	B	C	IDEAL VACUUM P/N	Price*
KF16 to 1/2" PVC	0.50"	1.26"	0.79"	P101393	\$21.45
KF16 to 3/4" PVC	0.75"	1.26"	0.79"	P101389	\$21.45
KF25 to 1.00" PVC	1.00"	1.50"	1.02"	P101390	\$27.45
KF40 to 1.50" PVC	1.50"	1.97"	1.50"	P101391	\$32.25
KF50 to 2.00" PVC	2.00"	2.17"	1.61"	P101392	\$41.70

*Catalog Pricing
Subject to Change

1 Vacuum Fittings and Adapters

KF (Quick Flange)

KF to PVC Hose Sur-Seal Adapter



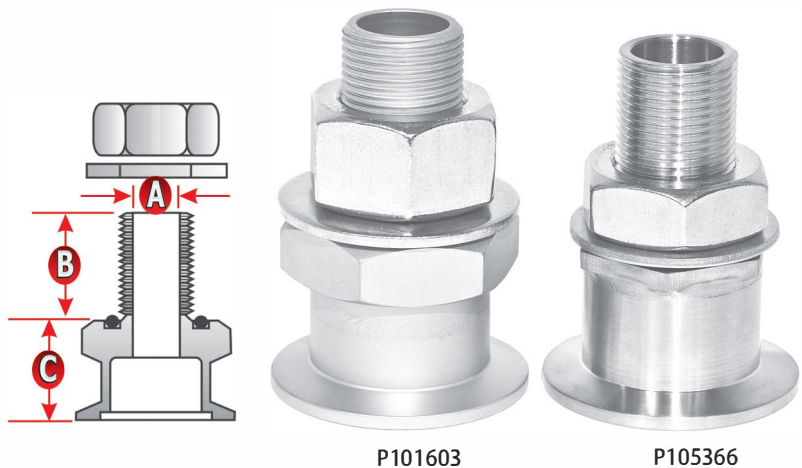
KF to PVC Hose	A	B	C	IDEAL VACUUM P/N	Price*
KF16 to 1/8" ID PVC	0.125"	0.875"	0.37"	P105202	\$19.95
KF16 to 3/16" ID PVC	0.190"	1.00"	0.52"	P105204	\$20.09
KF16 to 1/4" ID PVC	0.250"	1.25"	0.77"	P105203	\$20.25
KF16 to 3/8" ID PVC	0.380"	1.50"	1.02"	P105205	\$20.50
KF16 to 1/2" ID PVC	0.500"	1.50"	1.02"	P105206	\$22.50
KF16 to 5/8" ID PVC	0.630"	1.50"	1.02"	P105194	\$24.40
KF16 to 3/4" ID PVC	0.750"	1.50"	1.02"	P105207	\$25.40
KF16 to 1" ID PVC	1.000"	1.50"	1.02"	P105208	\$26.40
KF25 to 1/8" ID PVC	0.125"	1.50"	1.02"	P105173	\$21.95
KF25 to 3/16" ID PVC	0.190"	1.50"	1.02"	P105172	\$22.90

KF to PVC Hose	A	B	C	IDEAL VACUUM P/N	Price*
KF25 to 1/4" ID PVC	0.250"	1.50"	1.02"	P105193	\$24.90
KF25 to 3/8" ID PVC	0.380"	1.50"	1.02"	P105171	\$23.65
KF25 to 1/2" ID PVC	0.500"	1.50"	1.02"	P105170	\$24.40
KF25 to 5/8" ID PVC	0.630"	1.50"	1.02"	P105167	\$24.40
KF25 to 3/4" ID PVC	0.750"	1.50"	1.02"	P105168	\$25.40
KF25 to 1" ID PVC	1.000"	1.50"	1.02"	P105169	\$26.40
KF25 to 1-1/8" ID PVC	1.125"	1.50"	1.02"	P105192	\$32.40
KF25 to 1-1/4" ID PVC	1.250"	1.50"	1.02"	P105191	\$33.40
KF25 to 1-1/2" ID PVC	1.500"	1.63"	1.02"	P105190	\$36.40

Stainless Steel KF Feedthrough Baseplate with Viton O-ring

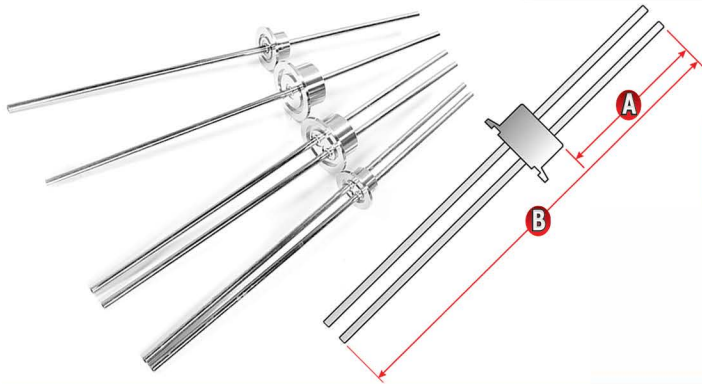
Fits through 1 inch diameter ports on baseplates up to 1 inch thick

KF to Feedthrough Baseplate	A	B	C	IDEAL VACUUM P/N	Price*
KF25	0.75"	1.62"	1.26"	P101602	\$165.90
KF25	0.75"	1.62"	1.28"	P105367	\$234.00
KF40	0.75"	1.62"	1.50"	P101603	\$181.65
KF40	0.75"	1.62"	1.28"	P105366	\$253.50



Vacuum Fittings and Adapters **1**

KF (Quick Flange)

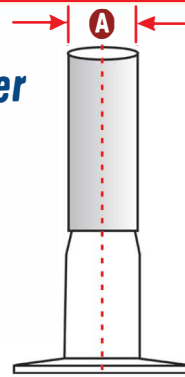


Adapter KF to Feedthrough **Stainless Steel**

KF Flange to Feedthrough	Tube	Tube O.D.	A	B	IDEAL VACUUM P/N	Price*
KF25 to Feedthrough	Single	1/4"	9.10"	15.70"	P104210	\$135.00
KF25 to Feedthrough	Double	1/4"	9.10"	15.70"	P104211	\$195.00
KF40 to Feedthrough	Single	1/4"	9.10"	15.70"	P104212	\$185.00
KF40 to Feedthrough	Double	1/4"	9.10"	15.70"	P104213	\$225.00

KF to Pyrex Glass **Stainless Steel** Adapter

KF to Pyrex Glass	A	IDEAL VACUUM P/N	Price*
KF16 to Pyrex	1/2"	P101973	\$60.90
KF16 to Pyrex	3/4"	P101974	\$65.10
KF25 to Pyrex	1.00"	P101975	\$71.40
KF40 to Pyrex	1-1/2"	P101976	\$79.80



For Edwards Vacuum Pumps E2M40 and E2M80 with nuts, bolts and washers

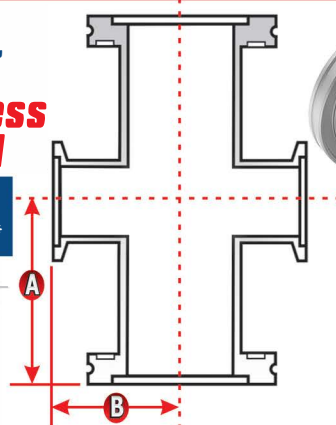
Adapter KF to Edwards C Clamps **Stainless Steel**



KF Flange to C Clamp	Vacuum Pump Ports	IDEAL VACUUM P/N	Price*
KF10/16 to C Clamp	Inlet/Outlet Edwards Pumps	P102697	\$23.00
KF25 to C Clamp	Outlet Port Edwards E2M40/E2M80	P102698	\$29.95
KF40 to C Clamp	Inlet Port Edwards E2M40/E2M80	P102696	\$45.00

KF to ISO NW LF Cross **Stainless Steel** Adapter

KF to ISO NW LF Cross	A	B	IDEAL VACUUM P/N	Price*
KF25 to ISO NW LF 63	4.00"	3.09"	P103578	\$356.50
KF25 to ISO NW LF 100	5.12"	3.84"	P103451	\$465.50



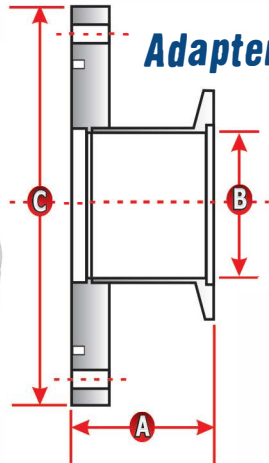
*Catalog Pricing
Subject to Change

1 Vacuum Fittings and Adapters

KF (Quick Flange)



Stainless Steel



Adapter

For Edwards Dry Vacuum Pump Inlets -
iQDP40, QDP40, DP40, iQDP80, QDP80, DP80

KF to Edwards ISO-F 40/63 Inlets

KF to NW ISO-F	A	B	C	IDEAL VACUUM P/N	Price*
K40 to ISO 40-F	2.73"	1.57"	3.93"	P102699	\$435.00
K40 to ISO 63-F	2.67"	1.57"	5.11"	P102701	\$512.00
K50 to ISO 40-F	1.96"	1.61"	3.93"	P102700	\$400.00
K50 to ISO 63-F	1.96"	1.96"	5.11"	P102702	\$594.00

Bolt Kit for ISO-F 40/63 Inlet Adapters

Bolt Kit and C Clamps for ISO-F 40/63/100	IDEAL VACUUM P/N	Price*
For iQDP40/80 Pumps - ISO-F 40/63 Bolts (4 in kit)	P102704	\$17.30
Claw Clamp for Edwards Manifolds on iQDP pumps ISO-F40/63/100 (1ea.)	P103427	\$21.50



(4 included)



(1 each)

Stainless Steel

For Edwards Dry Vacuum Pump Inlet Manifold -
iQD80 with ISO-F 63

Bolt Intake Adapter Kit for ISO-F

ISO-F Intake Adapter Kit	IDEAL VACUUM P/N	Price*
For iQDP80 Pump with ISO-F 63	P104937	\$135.00

(Includes ring, o-ring and nuts & bolts.
Manifold and conical reducer KF 40 to ISO 63 not included.)



Adapter



For Edwards Dry Vacuum Pump Inlet Manifolds -
iQD80 with ISO-F 63 and iQDP40 ISO-F 40

Intake O-Ring for ISO-F 40/63 Manifold

ISO-F O-Ring for ISO-F Manifold	IDEAL VACUUM P/N	Price*
For iQDP40 Pump with ISO-F 40	P103739	\$19.99
For iQDP80 Pump with ISO-F 63	P104938	\$39.99

(This is the O-Ring only)

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1 Vacuum Fittings and Adapters

ISO LF (Large Flange)

ISO NW LF Specifications

Max. Positive Pressure 30 psig
over pressure centering ring

Torque Rating 7-10 lbs/ft. clamps and bolts

Max. Vacuum Pressure 10⁻⁸ Torr

Leak Check <10⁻⁹ std-cc/s

Materials 304 Stainless Steel, Aluminum, Viton, Silicone, Buna-N

ISO NW LF Elastomer O-Ring Comparisons

BUNA **BAKE OUT** 80°C(176°F)
Advantage Good balance of desirable properties, excellent oil & fuel resistance, good water resistance. Lowest cost.

Disadvantage Poor weather resistance, moderate heat resistance.

VITON **BAKE OUT** 150°C(302°F)
Advantage Excellent chemical & heat resistance. Good mechanical & compression set resistance.

Disadvantage Not recommended for steam, polar solvents, hot hydrofluoric or chlorosulfonic acids.

SILICONE **BAKE OUT** 185°C(365°F)
Advantage Excellent temperature extremes & compression set resistance.

Disadvantage Poor physical strength and abrasion resistance.

LF (Large Flange or MF) are International Standards Organization (ISO) vacuum fittings and have a flange size of 63 mm to 1000 mm. There are two flange face types, the ISO-K (no bolt holes) which use claw clamps for mating connections and the ISO-F (smooth bolt holes) which use nuts and bolts for the mating connection. They are sexless with a centering ring mating two identical flange faces together. This Large Flange is used in a variety of industries from process manufacturing to semiconductor where large throughput is necessary. Some examples are, roughing and foreline plumbing for large vacuum systems, high vacuum, high conductance, modular systems which can be modified frequently and experimental systems in research laboratories. Elastomer seal O-rings for ISO NW LF are made of Buna, Viton and Silicone. Typical limits of the vacuum are normally down to 10⁻⁶ Torr. Baked systems using Viton or Silicone elastomer seals can be pumped down to 10⁻⁸ Torr. ISO NW LF flanges are made of type 304 stainless steel. Four installation connection procedures are listed on the next pages.

For applications to 10⁻⁸ Torr



Most ISO LF IN STOCK
Same Day Shipping

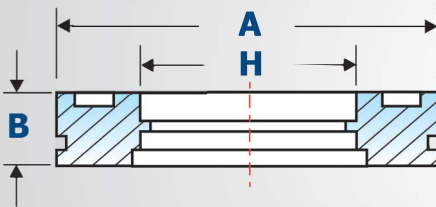
Vacuum Fittings and Adapters **1**

ISO LF (Large Flange)

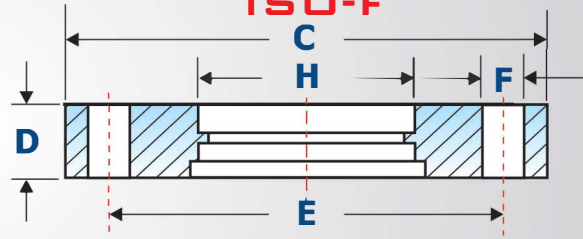
ISO LF LARGE FLANGE DIMENSIONS (LF)



ISO LF MULTI FASTENER FLANGE
ISO-K



ISO LF BOLTED FLANGE
ISO-F



Flange Size	Pipe O.D. and Wall Thickness in inches H	NW LF ISO-K NO BOLT HOLES			Pipe O.D. and Wall Thickness in inches H	NW LF ISO-F WITH BOLT HOLES				
		inches (mm) A (O.D.)	B (Thickness)	# Clamps Needed		inches (mm) C (O.D.)	D (Thickness)	E Bolt Distances	F Bolt Holes	# Holes
LF63	2.5 x .065	3.74 (95)	.47 (12)	(3-4)	2.5 x .065	5.12 (130)	.47 (12)	4.33 (110)	.35 (9)	4
LF80	3.0 x .065	4.33 (110)	.47 (12)	(4-8)	3.0 x .065	5.17 (145)	.47 (12)	4.92 (125)	.35 (9)	8
LF100	4.0 x .065	5.12 (130)	.47 (12)	(4-8)	4.0 x .065	6.50 (165)	.47 (12)	5.71 (145)	.35 (9)	8
LF160	6.0 x .083	7.09 (180)	.47 (12)	(4-8)	6.0 x .083	8.86 (225)	.63 (16)	7.87 (200)	.43 (11)	8
LF200	8.0 x .120	9.45 (240)	.47 (12)	(6-12)	8.0 x .120	11.22 (285)	.63 (16)	10.24 (260)	.43 (11)	12
LF250	10.0 x .125	11.42 (290)	.47 (12)	(6-12)	10.0 x .125	13.19 (335)	.63 (16)	12.20 (310)	.43 (11)	12
LF320	12.75 x .165	14.57 (370)	.67 (17)	(8-12)	12.75 x .165	16.73 (425)	.79 (20)	15.55 (395)	.55 (14)	12
LF400	16.0 x .188	17.72 (450)	.67 (17)	(8-16)	16.0 x .188	20.08 (510)	.79 (20)	18.90 (480)	.55 (14)	16
LF500	20.0 x .188	21.65 (550)	.67 (17)	(12-16)	20.0 x .188	24.02 (610)	.79 (20)	22.83 (580)	.55 (14)	16
LF630	25.0 x .250	NA	NA	NA	25.0 x .250	29.53 (750)	.94 (24)	28.35 (720)	.55 (14)	20

1 Vacuum Fittings and Adapters

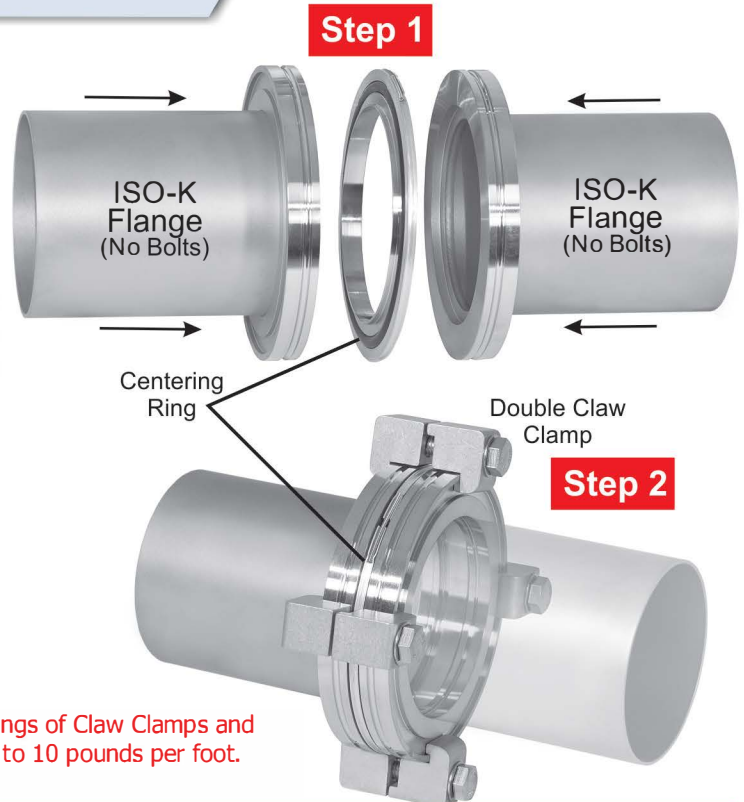
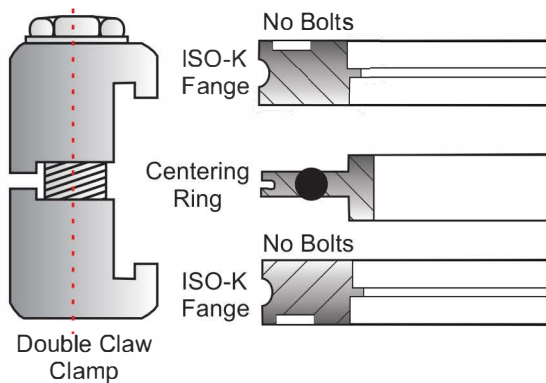
ISO LF (Large Flange)

4 Ways to Connect LF

ISO-K to ISO-K

1 Connect 2 Like LF NW Flange Faces Together

To connect 2 like flanges: An ISO-K to ISO-K. Use double claw clamps. Step 1, bring together with centering ring. Step 2, add double claw clamps and tighten (The larger the flange size the more double claw clamps needed)

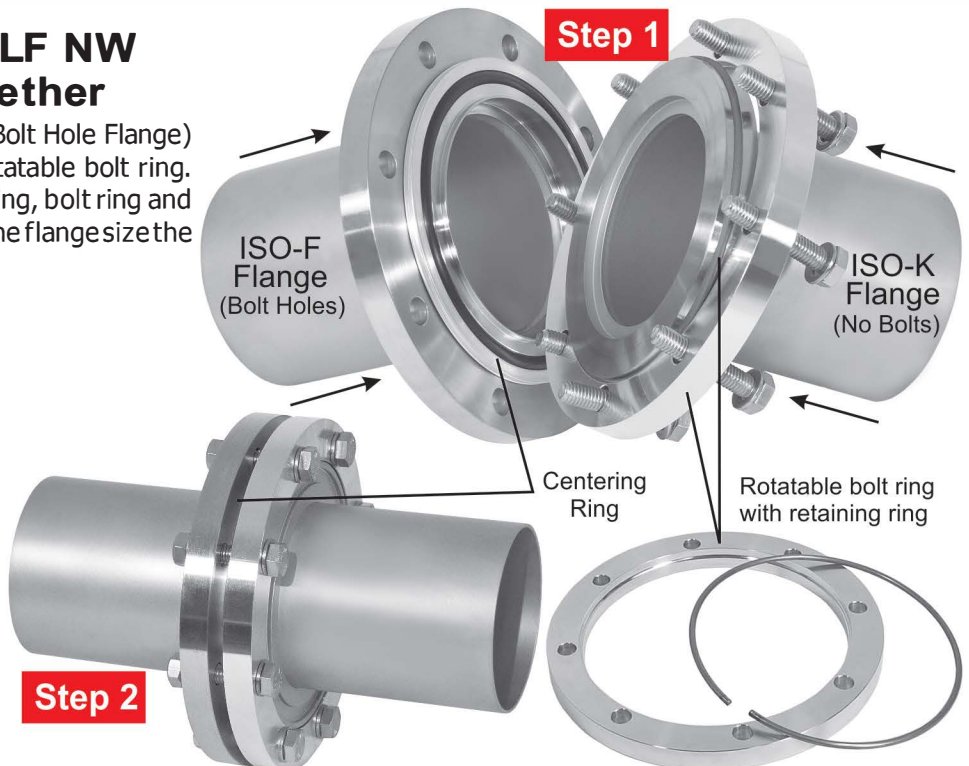
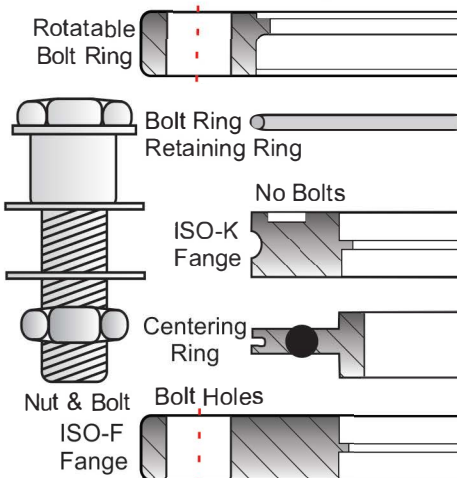


Torque ratings of Claw Clamps and Bolts is 7 to 10 pounds per foot.

ISO-F to ISO-K

2 Connect 2 Unlike LF NW Flange Faces Together

To connect 2 unlike flanges: An ISO-F (Bolt Hole Flange) with a ISO-K (No Bolt Flange) use a rotatable bolt ring. Figure 1, bring together with centering ring, bolt ring and bolts. Step 2, tighten bolts. (The larger the flanges size the more bolts and nuts needed)



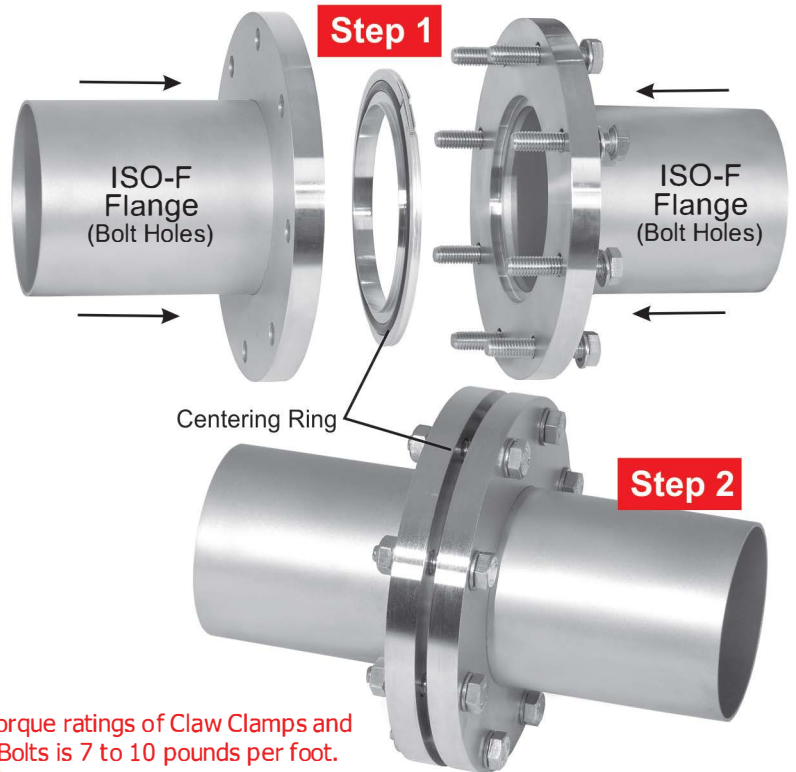
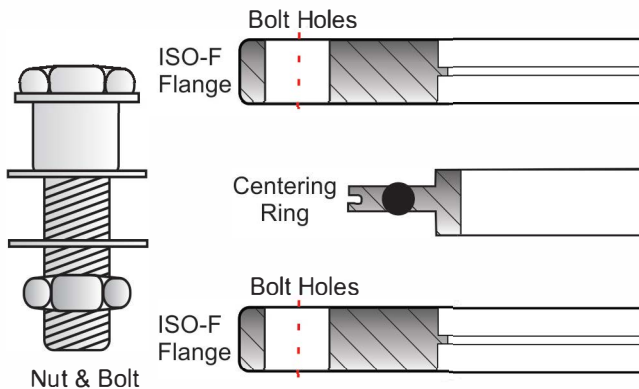
Vacuum Fittings and Adapters 1

ISO LF (Large Flange)

ISO-F to ISO-F

3 Connect 2 Like LF NW Flange Faces Together

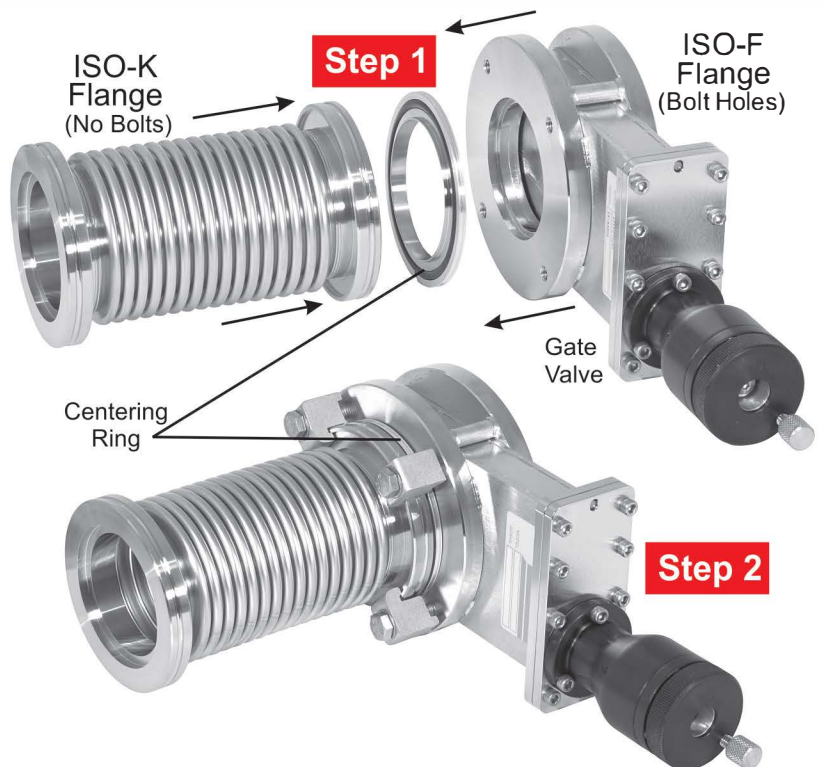
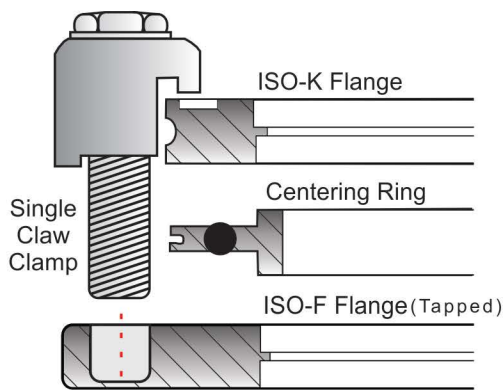
To connect 2 like flanges: An ISO-F to ISO-F. Use nuts and bolts. Step 1, bring together with centering ring, nuts and bolts. Step 2, tighten nuts and bolts. Using nuts and bolts is the strongest of all the LF connections. (The larger the flange size the more nuts and bolts needed)



ISO-K to ISO-F

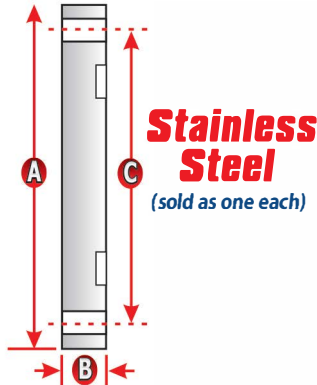
4 Connect 2 Unlike LF NW Flange Faces Together

To connect 2 unlike flanges: An ISO-K to ISO-F (tapped) use single claw clamps. Step 1, bring together with centering ring. Step 2, add single claw clamps and tighten. A ring bolt with bolts could also be used instead of single claw clamps. This configuration is for gate valves and vacuum pump inlets/outlets with a ISO-F face being mated to a ISO-K face. (The larger the flange size the more single claw clamps needed)



1 Vacuum Fittings and Adapters

ISO LF (Large Flange)

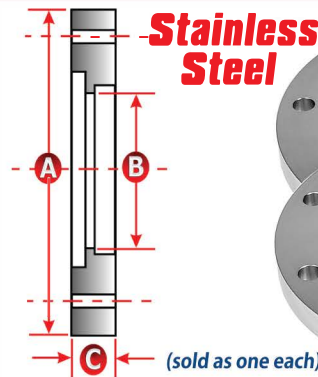


LF ISO-F NW Blank Flange Bolted

LF ISO-F NW	Bolt Holes	A	B	C	IDEAL VACUUM P/N	Price*
ISO-F LF NW-63	4	5.12"	0.50"	4.37"	P104038	\$119.95
ISO-F LF NW-80	8	5.68"	0.50"	4.88"	P104039	\$129.00
ISO-F LF NW-100	8	6.50"	0.50"	5.75"	P103996	\$139.00
ISO-F LF NW-160	8	8.87"	0.68"	7.87"	P104040	\$269.00
ISO-F LF NW-200	12	11.25"	0.68"	10.25"	P104041	\$309.00
ISO-F LF NW-250	12	13.18"	0.68"	12.1"	P104042	\$379.00

LF ISO-F NW Weld Flange Bored

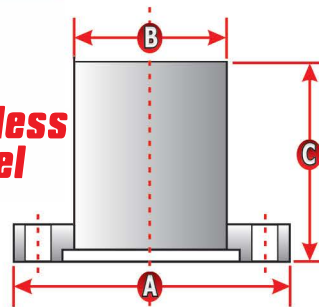
LF ISO-F NW Blank	Bolt Holes	A	B	C	IDEAL VACUUM P/N	Price*
ISO-F LF NW-63	4	5.12"	2.43"	0.50"	P101750	\$64.75
ISO-F LF NW-80	8	5.56"	2.93"	0.50"	P101751	\$91.30
ISO-F LF NW-100	8	6.50"	3.87"	0.50"	P101754	\$99.00
ISO-F LF NW-160	8	8.87"	5.87"	0.62"	P101752	\$154.25
ISO-F LF NW-200	12	11.12"	7.87"	0.62"	P101753	\$189.50
ISO-F LF NW-250	12	13.18"	9.87"	0.62"	P104114	\$215.00



LF ISO-F NW Half Nipple Bored

LF ISO-F NW	Bolt Holes	A	B	C	IDEAL VACUUM P/N	Price*
ISO-F LF NW-63	4	5.11"	2.48"	3.93"	P101725	\$99.75
ISO-F LF NW-80	8	5.70"	3.00"	3.93"	P101726	\$143.90
ISO-F LF NW-100	8	6.50"	4.00"	3.93"	P101727	\$165.00
ISO-F LF NW-160	8	8.85"	6.00"	3.93"	P101728	\$260.00
ISO-F LF NW-200	12	11.22"	8.00"	3.93"	P101729	\$299.00

Stainless Steel



Makes Non Bolted ISO-K Flanges into ISO-F Smooth Bolt Holes

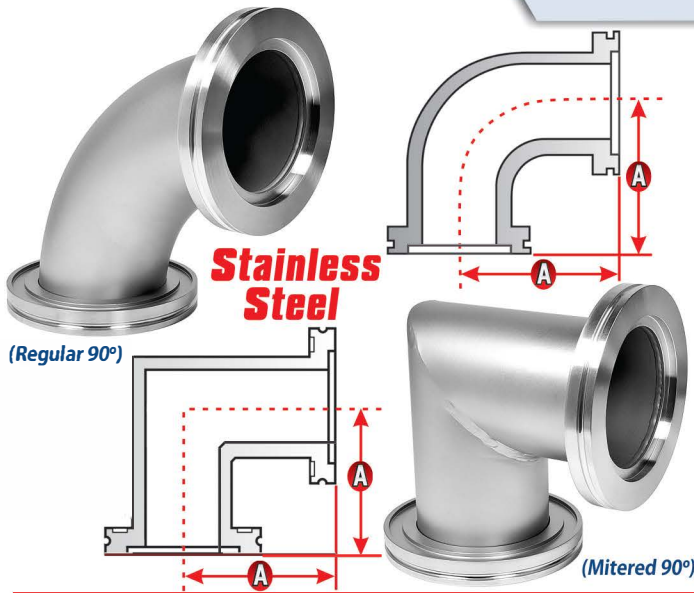
LF ISO-K NW Rotatable Bolt Ring Adapter

LF ISO-K to ISO-F NW Blank	Bolts	IDEAL VACUUM P/N	Price*
ISO-K to ISO-F NW-63	4	P101720	\$52.25
ISO-K to ISO-F NW-80	8	P101721	\$85.20
ISO-K to ISO-F NW-100	8	P101722	\$95.50
ISO-K to ISO-F NW-160	8	P101723	\$160.00
ISO-K to ISO-F NW-200	12	P101724	\$154.25

ALUMINUM

Vacuum Fittings and Adapters **1**

ISO LF (Large Flange)

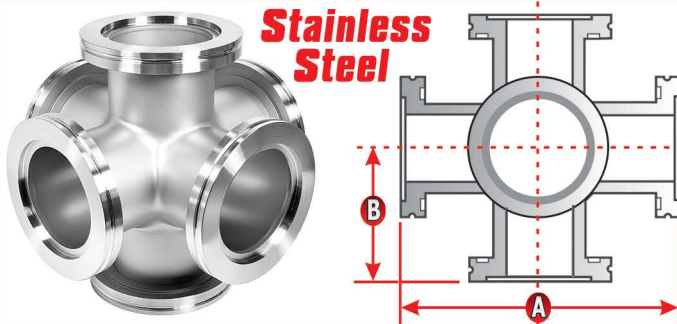
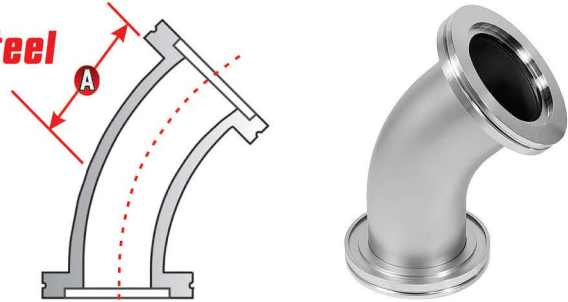


LF ISO-K NW Elbow 90°

LF ISO-K NW	Type Elbow	A	IDEAL VACUUM P/N	Price*
ISO-K LF NW-63	Regular	4.00"	P101700	\$125.00
ISO-K LF NW-63	Mitered	3.25"	P104017	\$133.00
ISO-K LF NW-63H	Mitered	3.50"	P103980	\$145.99
ISO-K LF NW-80	Regular	4.74"	P101701	\$155.00
ISO-K LF NW-80	Mitered	3.25"	P104018	\$143.00
ISO-K LF NW-80	Mitered	4.25"	P104019	\$153.00
ISO-K LF NW-100	Regular	6.25"	P101702	\$185.00
ISO-K LF NW-100	Mitered	4.12"	P104020	\$203.00
ISO-K LF NW-100	Mitered	4.25"	P104021	\$225.00
ISO-K LF NW-160	Regular	9.24"	P102292	\$560.05
ISO-K LF NW-160	Mitered	5.43"	P103992	\$355.00

LF ISO-K NW Elbow 45° Stainless Steel

LF ISO-K NW	A	IDEAL VACUUM P/N	Price*
ISO-K LF NW-63	3.25"	P101696	\$194.50
ISO-K LF NW-80	3.93"	P101697	\$219.00
ISO-K LF NW-100	5.03"	P101698	\$255.00
ISO-K LF NW-160	5.49"	P101699	\$465.00

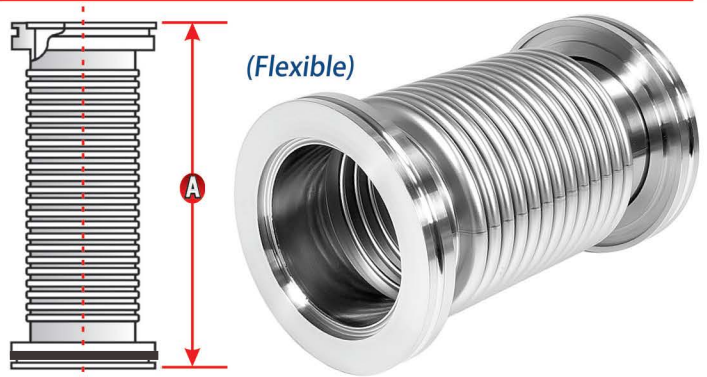


LF ISO-K NW 6-Way Cross

LF ISO-K NW Six Way Cross	A	B	IDEAL VACUUM P/N	Price*
ISO-K LF NW-63	6.5"	3.25"	P103989	\$415.00
ISO-K LF NW-80	7.00"	3.50"	P103990	\$510.00
ISO-K LF NW-100	8.25"	4.12"	P103991	\$665.00
ISO-K LF NW-160	10.5"	5.25"	P104099	\$975.00

LF ISO-K NW Bellows Stainless Steel

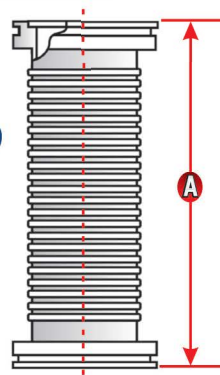
LF ISO-K NW Bellows	A	IDEAL VACUUM P/N	Price*
ISO-K LF NW-63	6.00"	P101704	\$255.00
ISO-K LF NW-80	6.00"	P101705	\$299.00
ISO-K LF NW-100	6.00"	P101706	\$346.75
ISO-K LF NW-160	8.00"	P101707	\$485.50
ISO-K LF NW-200	10.0"	P101708	\$845.00
ISO-K LF NW-250	12.0"	P101709	\$1,049.00



*Catalog Pricing
Subject to Change

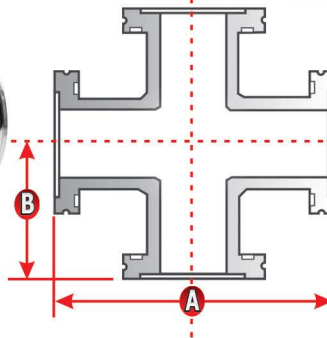
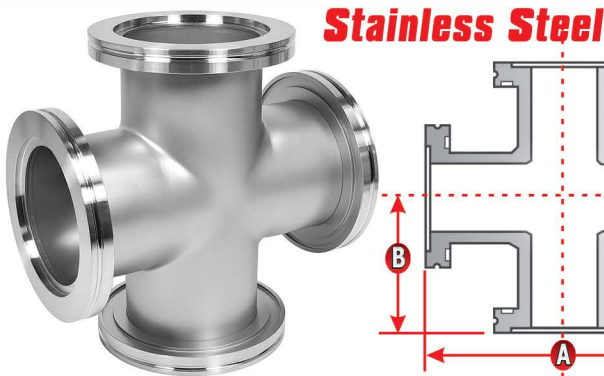
1 Vacuum Fittings and Adapters

ISO LF (Large Flange)



LF ISO-K NW Bellows Thin & Thick Wall

LF ISO-K NW Bellows	A	IDEAL VACUUM P/N	Price*
ISO-K LF NW-63 (thin wall)	10.0"	P101755	\$269.00
ISO-K LF NW-80 (thin wall)	10.0"	P101756	\$321.00
ISO-K LF NW-100 (thin wall)	10.0"	P101757	\$367.50
ISO-K LF NW-63 (thick wall)	20.0"	P101758	\$292.50
ISO-K LF NW-80 (thick wall)	20.0"	P101759	\$312.30
ISO-K LF NW-100 (thick wall)	20.0"	P101760	\$348.75

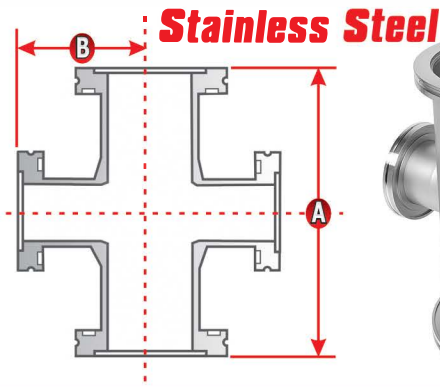


LF ISO-K NW 4-Way Cross

LF ISO-K NW Four Way Cross	A	B	IDEAL VACUUM P/N	Price*
ISO-K LF NW-63	6.50"	3.26"	P101691	\$357.75
ISO-K LF NW-80	7.00"	3.50"	P104015	\$476.00
ISO-K LF NW-80H	7.68"	3.86"	P101692	\$556.00
ISO-K LF NW-100	8.25"	4.12"	P104016	\$576.00
ISO-K LF NW-100H	8.5"	4.25"	P101693	\$565.00
ISO-K LF NW-160	10.50"	5.25"	P101694	\$775.00
ISO-K LF NW-200	13.22"	6.61"	P101695	\$1,685.00

LF ISO-K NW Reducing 4-Way Cross

LF ISO-K NW Reducer Cross	A	B	IDEAL VACUUM P/N	Price*
ISO-K LF NW-63 to NW-80	7.00"	3.50"	P104052	\$295.00
ISO-K LF NW-63 to NW-100	8.25"	4.00"	P103576	\$355.00
ISO-K LF NW-63 to NW-160	10.50"	5.00"	P104054	\$425.00
ISO-K LF NW-80 to NW-100	8.25"	4.00"	P104053	\$385.00
ISO-K LF NW-80 to NW-160	10.5"	5.00"	P104055	\$455.00
ISO-K LF NW-100 to NW-160	10.5"	5.12"	P104056	\$495.00



LF ISO-K NW Short Weld Flange

LF ISO-K NW Blank	A	B	C	IDEAL VACUUM P/N	Price*
ISO-K LF NW-63	3.75"	2.36"	2.51"	P101745	\$44.00
ISO-K LF NW-80	4.33"	2.87"	3.03"	P101746	\$56.20
ISO-K LF NW-100	5.11"	3.85"	4.01"	P101747	\$64.75
ISO-K LF NW-160	7.08"	7.04"	6.02"	P101748	\$89.50
ISO-K LF NW-200	9.44"	7.75"	8.03"	P101749	\$139.00
ISO-K LF NW-250	11.40"	9.72"	10.0"	P104022	\$169.00

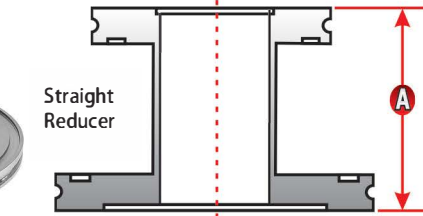
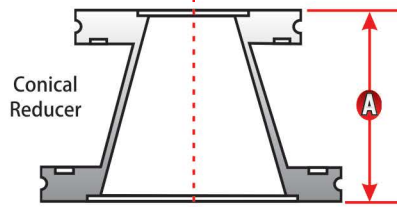


Vacuum Fittings and Adapters 1

ISO LF (Large Flange)



Stainless Steel



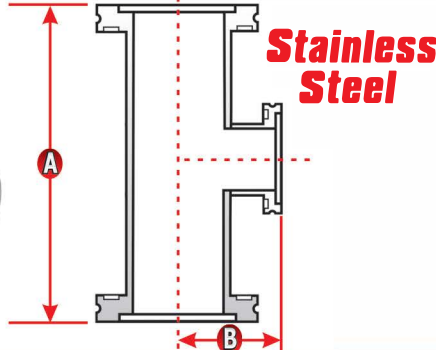
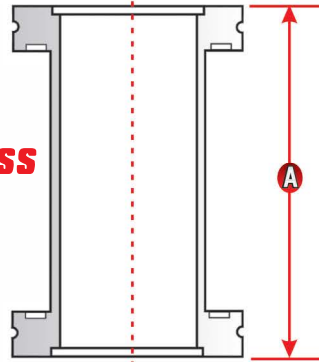
LF ISO-K NW to LF Reducer

LF ISO-KNW to NW	Type Adapter	A	IDEAL VACUUM P/N	Price*
ISO-K LF NW-63 to NW-80	Conical	4.12"	P104043	\$154.00
ISO-K LF NW-63 to NW-100	Conical	4.12"	P104044	\$167.00
ISO-K LF NW-80 to NW-100	Conical	4.12"	P104045	\$199.00
ISO-K LF NW-63 to NW-80	Straight	3.00"	P101730	\$136.00
ISO-K LF NW-63 to NW-100	Straight	3.00"	P101731	\$164.95
ISO-K LF NW-63 to NW-160	Straight	3.00"	P101732	\$187.00
ISO-K LF NW-80 to NW-100	Straight	3.00"	P101733	\$169.00
ISO-K LF NW-80 to NW-160	Straight	3.00"	P101735	\$364.40
ISO-K LF NW-100 to NW-160	Straight	3.00"	P103337	\$345.00
ISO-K LF NW-160 to NW-200	Straight	3.00"	P101734	\$375.00

LF ISO-K NW Straight Nipple

LF ISO-K NW	A	IDEAL VACUUM P/N	Price*
ISO-K LF NW-63	6.50"	P101710	\$165.00
ISO-K LF NW-80	7.00"	P101711	\$208.00
ISO-K LF NW-100	4-3/16"	P101712	\$199.50
ISO-K LF NW-100	8.25"	P104013	\$245.00
ISO-K LF NW-160	12.60"	P101713	\$484.15
ISO-K LF NW-200	4.25"	P101714	\$525.00

Stainless Steel



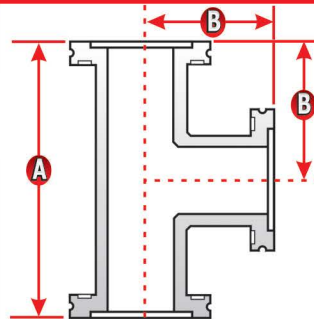
Stainless Steel

LF ISO-K NW to LF Tee Reducer

LF ISO-K NW Reducer Tee	A	B	IDEAL VACUUM P/N	Price*
ISO-K LF NW-63 to NW-80	8.25"	4.00"	P104023	\$254.00
ISO-K LF NW-63 to NW-100	8.25"	4.00"	P103577	\$269.00
ISO-K LF NW-80 to NW-100	8.25"	4.00"	P104024	\$295.00
ISO-K LF NW-63 to NW-160	10.25"	5.00"	P104025	\$395.00
ISO-K LF NW-80 to NW-160	10.5"	5.00"	P104026	\$399.95
ISO-K LF NW-100 to NW-160	10.5"	5.12"	P104027	\$425.00

LF ISO-K NW Tee Stainless Steel

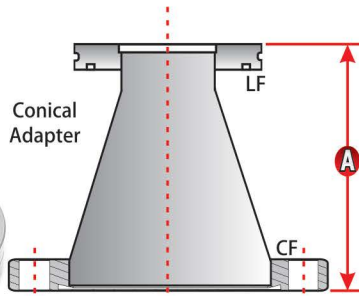
LF ISO-K NW Tee	A	B	IDEAL VACUUM P/N	Price*
ISO-K LF NW-63	6.93"	3.43"	P101686	\$189.50
ISO-K LF NW-80	7.68"	3.37"	P101687	\$266.40
ISO-K LF NW-100	8.25"	3.87"	P101688	\$275.75
ISO-K LF NW-160	10.50"	5.25"	P101689	\$345.00
ISO-K LF NW-200	13.22"	6.61"	P101690	\$935.00



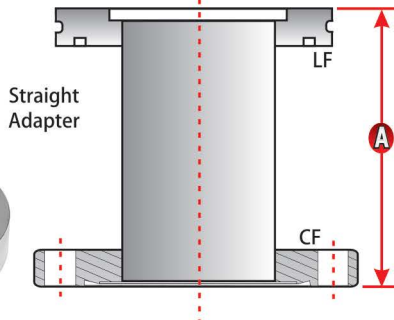
*Catalog Pricing Subject to Change

1 Vacuum Fittings and Adapters

ISO LF (Large Flange)



Stainless Steel Adapter



Straight Adapter

LF ISO-K NW to CF Adapter

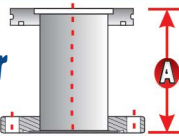
LF ISO-K NW to CF	Type Adapter	A	IDEAL VACUUM P/N	Price*
ISO-K LF NW-63 to CF 2.75"	Conical	2.83"	P103828	\$131.73
ISO-K LF NW-63 to CF 3.38"	Conical	2.87"	P104051	\$155.88
ISO-K LF NW-63 to CF 4.62"	Conical	4.17"	P104050	\$208.47
ISO-K LF NW-63 to CF 6.00"	Conical	4.33"	P103560	\$355.95
ISO-K LF NW-80 to CF 2.75"	Conical	4.05"	P103829	\$162.45
ISO-K LF NW-80 to CF 3.38"	Conical	4.09"	P104049	\$184.17
ISO-K LF NW-80 to CF 4.50"	Conical	4.25"	P104108	\$217.83
ISO-K LF NW-80 to CF 6.00"	Conical	4.33"	P103830	\$246.56
ISO-K LF NW-100 to CF 3.38"	Conical	4.09"	P103831	\$229.11
ISO-K LF NW-100 to CF 4.50"	Conical	4.25"	P103832	\$256.56
ISO-K LF NW-100 to CF 4.62"	Conical	4.17"	P103833	\$299.52
ISO-K LF NW-63 to CF 4.50"	Straight	4.33"	P101736	\$185.25
ISO-K LF NW-80 to CF 4.62"	Straight	4.33"	P104048	\$219.58
ISO-K LF NW-80 to CF 6.00"	Straight	4.33"	P101737	\$246.56
ISO-K LF NW-100 to CF 6.00"	Straight	4.33"	P101738	\$247.50
ISO-K LF NW-160 to CF 8.00"	Straight	4.44"	P101739	\$396.00
ISO-K LF NW-200 to CF 10.00"	Straight	4.44"	P101740	\$609.00



Stainless Steel Adapter

Without O-Ring Groove

LF ISO-K NW to ASA

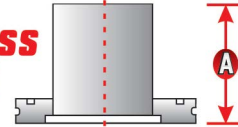


LF ISO-K NW to ASA	A	IDEAL VACUUM P/N	Price*
ISO-K LF NW-63 to ASA 2"	4.18"	P101741	\$260.00
ISO-K LF NW-100 to ASA 2"	4.18"	P101742	\$247.50
ISO-K LF NW-100 to ASA 4"	4.18"	P103792	\$435.00
ISO-K LF NW-160 to ASA 4"	4.18"	P101743	\$442.75
ISO-K LF NW-100 to ASA 6"	5.00"	P103791	\$655.00
ISO-K LF NW-200 to ASA 6"	4.42"	P101744	\$647.50



Stainless Steel

LF ISO-K NW Half Nipple



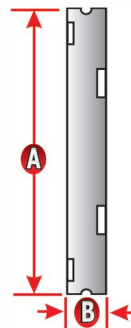
LF ISO-K NW	A	IDEAL VACUUM P/N	Price*
ISO-K LF NW-63	3.93"	P101715	\$78.00
ISO-K LF NW-80	3.93"	P101718	\$89.80
ISO-K LF NW-100	3.93"	P101716	\$99.00
ISO-K LF NW-160	3.93"	P101717	\$138.00
ISO-K LF NW-200	3.93"	P101719	\$249.00
ISO-K LF NW-250	3.93"	P104014	\$495.00

LF ISO-K NW Blank Flange

LF ISO-K NW Blank	A	B	IDEAL VACUUM P/N	Price*
ISO-K LF NW-63	3.74"	0.47"	P101681	\$47.50
ISO-K LF NW-80	4.33"	0.47"	P101682	\$67.95
ISO-K LF NW-100	5.11"	0.47"	P101683	\$70.00
ISO-K LF NW-160	7.08"	0.47"	P101684	\$99.50
ISO-K LF NW-200	9.44"	0.47"	P101685	\$159.75

Stainless Steel

(sold as one each)



*Catalog Pricing Subject to Change

Vacuum Fittings and Adapters **1**

ISO LF (Large Flange)

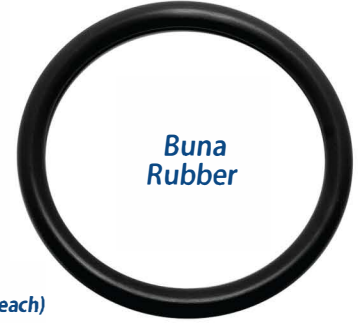
LF Centering Ring O-Ring Replacement (Viton Rubber)



(sold as one each)

LF ISO-K NW	I.D.	IDEAL VACUUM P/N	Price*
ISO-K LF NW -63	2.85"	P101787	\$10.30
ISO-K LF NW -80	3.35"	P101788	\$12.80
ISO-K LF NW -100	4.10"	P101789	\$22.00
ISO-K LF NW -160	6.22"	P101790	\$27.50
ISO-K LF NW -200	8.2"	P101791	\$29.00
ISO-K LF NW -250	9.96"	P104310	\$32.50
ISO-K LF NW -320	12.95"	P104327	\$50.00
ISO-K LF NW -400	15.94"	P104315	\$48.50
ISO-K LF NW -500	19.92"	P104309	\$52.50
ISO-K LF NW -630	25.90"	P104320	\$55.50

LF Centering Ring O-Ring Replacement (Buna Rubber)



(sold as one each)

LF ISO-K NW	I.D.	IDEAL VACUUM P/N	Price*
ISO-K LF NW -63	2.85"	P103659	\$4.95
ISO-K LF NW -80	3.35"	P103660	\$6.95
ISO-K LF NW -100	4.10"	P103661	\$6.99
ISO-K LF NW -160	6.22"	P104313	\$10.75
ISO-K LF NW -200	8.2"	P104321	\$13.50
ISO-K LF NW -250	9.96"	P104311	\$14.00
ISO-K LF NW -320	12.95"	P104317	\$14.50
ISO-K LF NW -400	15.94"	P104314	\$24.50
ISO-K LF NW -500	19.92"	P104323	\$17.50
ISO-K LF NW -630	25.90"	P104312	\$27.50

LF Centering Ring O-Ring Replacement (Red Silicone Rubber)



(sold as one each)

LF ISO-K NW	I.D.	IDEAL VACUUM P/N	Price*
ISO-K LF NW -63	2.85"	P103656	\$5.98
ISO-K LF NW -80	3.35"	P103657	\$6.95
ISO-K LF NW -100	4.10"	P103658	\$9.21
ISO-K LF NW -160	6.22"	P104324	\$13.75
ISO-K LF NW -200	8.2"	P104316	\$15.50
ISO-K LF NW -250	9.96"	P104318	\$16.50
ISO-K LF NW -320	12.95"	P104319	\$17.50
ISO-K LF NW -400	15.94"	P104326	\$34.50
ISO-K LF NW -500	19.92"	P104325	\$37.50
ISO-K LF NW -630	25.90"	P104322	\$39.50

LF EVAC Metal Knife Edge Seal

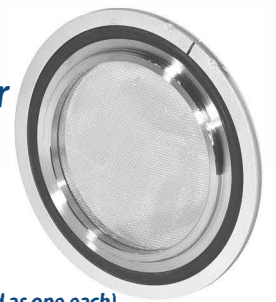
Converts Elastomer Rubber Seals to (UHV) Ultra High Vacuum



(sold as one each)

LF ISO-K NW	IDEAL VACUUM P/N	Price*
ISO-K LF NW -63	P103404	\$89.95
ISO-K LF NW -80	P103405	\$99.95
ISO-K LF NW -100	P103406	\$119.95

LF Centering Ring (With Viton Rubber and Screen)



LF ISO-K NW	IDEAL VACUUM P/N	Price*
ISO-K LF NW -63	P105304	\$259.00
ISO-K LF NW -80	P105305	\$295.00
ISO-K LF NW -100	P105306	\$330.00

(sold as one each) **Stainless Steel**

*Catalog Pricing
Subject to Change

www.idealvac.com (505)872-0037

Ideal LLC
vacuum products **1-40**

1 Vacuum Fittings and Adapters

ISO LF (Large Flange)

LF Edwards Co-Seals

Designed to Seal ISO-F or ISO-K Vacuum Flanges
Down to 10⁻⁸ Torr (sold as one each)



Used on Large ISO Flange Size	Color	Material	IDEAL VACUUM P/N	Price*
ISO-F NW 40	Black	Nylon Nitrile	P103907	\$50.52
ISO-K NW 63	Black	Nylon Nitrile	P104098	\$58.92
ISO-K NW 100	Black	Nylon Nitrile	P103902	\$69.56
ISO-K NW 160	Black	Nylon Nitrile	P103901	\$90.16
ISO-F NW 40	Red	Viton Rubber	P103905	\$54.72
ISO-K NW 63	Red	Viton Rubber	P103904	\$73.76
ISO-K NW 100	Red	Viton Rubber	P103906	\$82.20
ISO-K NW 160	Red	Viton Rubber	P103903	\$96.84

LF Centering Ring

Stainless Steel
(No Outer Spacer)

(sold as one each)



LF ISO-K NW	I.D.	IDEAL VACUUM P/N	Price*
ISO-K LF NW -63	2.63"	P104070	\$35.00
ISO-K LF NW -80	3.14"	P104071	\$52.00
ISO-K LF NW -100	3.89"	P104072	\$53.00
ISO-K LF NW -160	5.90"	P104073	\$56.99
ISO-K LF NW -200	8.26"	P104074	\$80.99
ISO-K LF NW -250	10.20"	P104075	\$90.00

LF Centering Ring

(sold as one each)

ALUMINUM



LF ISO-K NW	I.D.	IDEAL VACUUM P/N	Price*
ISO-K LF NW -63	2.63"	P102315	\$29.00
ISO-K LF NW -80	3.14"	P102316	\$34.70
ISO-K LF NW -100	3.89"	P102317	\$40.50
ISO-K LF NW -160	5.90"	P102318	\$46.20
ISO-K LF NW -200	8.26"	P102319	\$63.80

LF Centering Ring

Stainless Steel
(sold as one each)



LF ISO-K NW	I.D.	IDEAL VACUUM P/N	Price*
ISO-K LF NW -80	3.14"	P103993	\$84.70
ISO-K LF NW -100	3.89"	P103994	\$94.70
ISO-K LF NW -160	5.90"	P103995	\$104.70

LF Centering Ring

(sold as one each)

ALUMINUM



LF ISO-K NW	I.D.	IDEAL VACUUM P/N	Price*
ISO-K LF NW -63	2.63"	P101766	\$29.00
ISO-K LF NW -80	3.14"	P101767	\$34.70
ISO-K LF NW -100	3.89"	P101768	\$34.70
ISO-K LF NW -160	5.90"	P101769	\$46.20
ISO-K LF NW -200	8.26"	P101770	\$63.80

LF Centering Ring

(sold as one each)

Stainless Steel



LF ISO-K NW	I.D.	IDEAL VACUUM P/N	Price*
ISO-K LF NW -63	2.63"	P101761	\$49.80
ISO-K LF NW -80	3.14"	P101762	\$63.80
ISO-K LF NW -100	3.89"	P101763	\$63.80
ISO-K LF NW -160	5.90"	P101764	\$78.00
ISO-K LF NW -200	8.26"	P101765	\$110.00

Vacuum Fittings and Adapters **1**

ISO LF (Large Flange)

LF Double Claw Clamp

(sold as one each)



LF Single Claw Clamp

(sold as one each)



ISO LF NW Clamp Fits Size Flange	Material	Bolt	Total Height	IDEAL VACUUM P/N	Price*
ISO-LF NW 63, 80, 100	Aluminum	Metric 8X45L	1.93"	P101771	\$5.70
ISO-LF NW 63, 80, 100	Aluminum	5/16"-18	1.93"	P104066	\$5.70
ISO-LF NW ^{63, 80, 100,} _{160, 200, 250}	Stainless Steel	Metric 10 Bolt	2.37"	P104068	\$12.95
ISO-LF NW ^{63, 80, 100,} _{160, 200, 250}	Zinc Plated Steel	Metric 10 Bolt	2.37"	P104069	\$14.95
ISO-LF NW 160, 200, 250	Aluminum	Metric 10X45L	2.50"	P101772	\$6.00
ISO-LF NW 160, 200, 250	Aluminum	5/16"-18	2.50"	P104067	\$6.00
ISO-LF NW 160, 200, 250	Aluminum	Metric 12x60L	2.56"	P101773	\$12.75
ISO-LF NW 320	Aluminum	Metric 12x60L	2.56"	P101774	\$13.60

ISO LF NW Clamp Fits Size Flange	Material	Bolt	Height Minus Bolt	IDEAL VACUUM P/N	Price*
ISO-LF NW 63, 80, 100	Aluminum	Metric 8X35L	0.93"	P101786	\$5.20
ISO-LF NW 63, 80, 100	Zinc Plated Steel	Metric 8X35L	0.93"	P104064	\$7.50
ISO-LF NW 63, 80, 100	Aluminum	5/16"-18	0.93"	P104063	\$6.75
ISO-LF NW 160, 200, 250	Aluminum	Metric 10X50L	0.93"	P101783	\$6.40
ISO-LF NW 160, 200, 250	Aluminum	5/16"-18	0.93"	P104065	\$7.95
ISO-LF NW 320	Aluminum	Metric 12x60L	0.93"	P101785	\$8.70
ISO-LF NW 400, 450	Aluminum	Metric 12x60L	0.93"	P101784	\$9.00

LF Bolt and Nut Set Stainless Steel

(For Smooth ISO-F Bolt Hole Flanges)



LF Bolt Set Stainless Steel

(For Tapped Threaded ISO-F Bolt Hole Flanges)



LF ISO-K NW	Bolt	Set of	IDEAL VACUUM P/N	Price*
ISO-F LF NW -63	Metric 8X40L	4	P101775	\$7.40
ISO-F LF NW -80, 100	Metric 8X40L	8	P101776	\$11.90
ISO-F LF NW -160	Metric 10X50L	8	P101777	\$20.70
ISO-F LF NW -200, 250	Metric 10X50L	12	P101778	\$31.10

LF ISO-K NW	Bolt	Set of	IDEAL VACUUM P/N	Price*
ISO-F LF NW -63	Metric 8X30L	4	P101779	\$5.30
ISO-F LF NW -80, 100	Metric 8X30L	8	P101780	\$11.00
ISO-F LF NW -160	Metric 10X35L	8	P101781	\$12.40
ISO-F LF NW -200, 250	Metric 10X35L	12	P101782	\$17.90

LF Centering Ring

(Rubber O-Ring Not Included)

Stainless Steel (sold as one each)



LF Retaining Ring

(For Bolt Ring)

Stainless Steel (sold as one each)



LF ISO-K NW	I.D.	IDEAL VACUUM P/N	Price*
ISO-K LF NW -63	2.63"	P104057	\$28.00
ISO-K LF NW -80	3.14"	P104058	\$32.00
ISO-K LF NW -100	3.89"	P104059	\$34.50
ISO-K LF NW -160	5.90"	P104060	\$56.00
ISO-K LF NW -200	8.26"	P104061	\$72.00
ISO-K LF NW -250	10.20"	P104062	\$85.00

LF ISO-K NW	IDEAL VACUUM P/N	Price*
ISO-K LF NW -63	P101792	\$26.30
ISO-K LF NW -80	P101793	\$31.50
ISO-K LF NW -100	P101794	\$31.50
ISO-K LF NW -160	P101795	\$33.10
ISO-K LF NW -200	P101796	\$35.00

*Catalog Pricing
Subject to Change

1 Vacuum Fittings and Adapters

CFF CF (Conflat Flange)

CF Conflat flanges (CF) are used for ultra-high vacuum pressure applications. These fittings use a gasket and CF knife-edge flange. When the gasket is compressed with the required torque (see following pages) between the knife edges of the CF flanges, its material flows to fill surface blemishes. An ultra high vacuum pressure seal with proper bake-out (450°C) can be achieved down to 10⁻¹³ torr. North American flange sizes are given by flange outer diameter in inches: 1-1/3 ("mini conflat"), 2-1/8, 2-3/4, 3-3/8, 4-1/2, 4-5/8, 6, 6-3/4, 8, 10, 12, 13-1/4, 14, 14-1/2 and 16-1/2.

Conflat fittings come in rotatable or non-rotatable versions with through bolt holes or tapped bolt holes. All fittings with two or more flanges come with at least one rotatable flange. Gaskets for conflat flanges CF are made of Copper (most widely used), Silver Plated Copper (for frequent high temperature bake out), or Viton elastomer (for frequent assembly and disassembly).

Note: We recommend replacing metal gaskets each time fittings are reassembled.

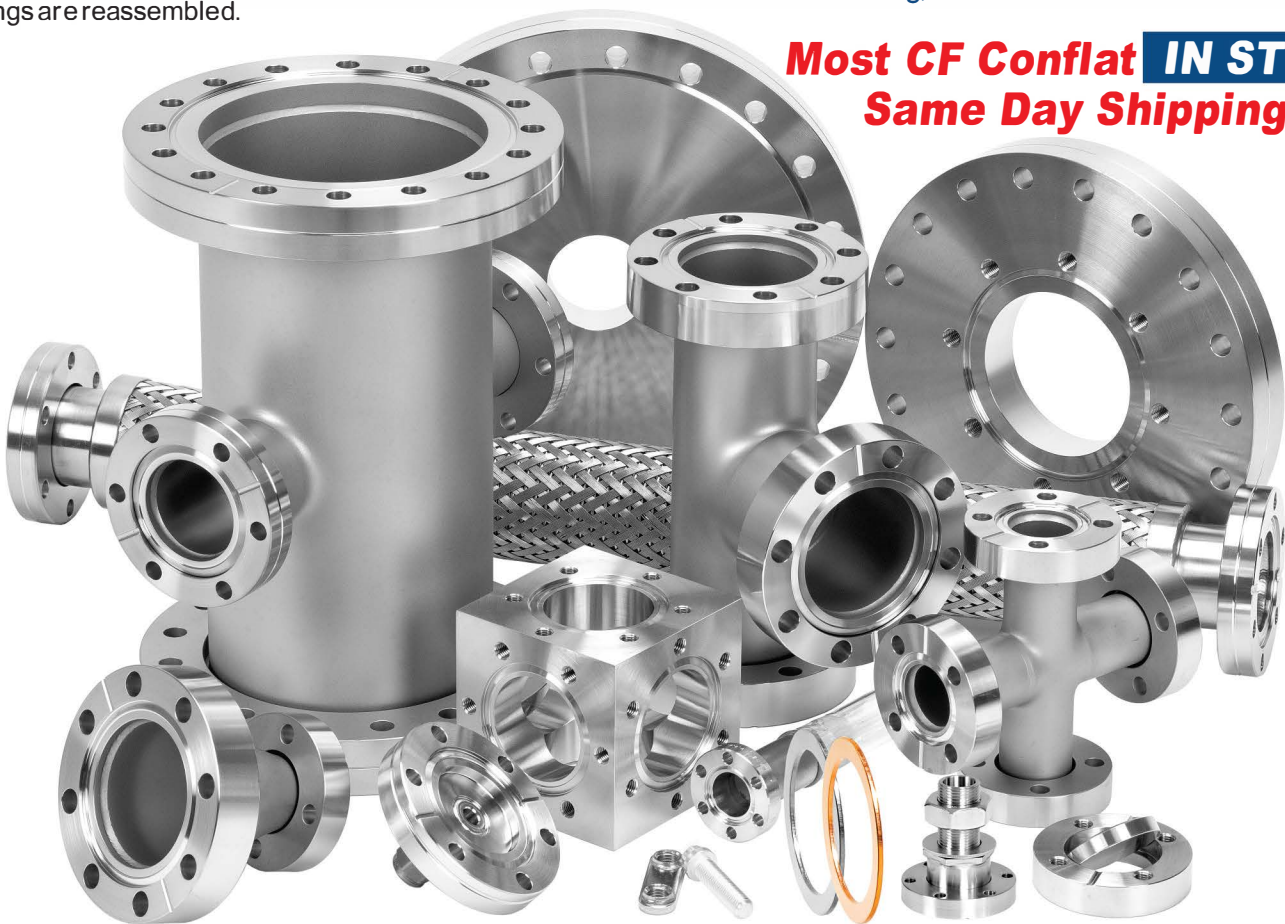
Viton elastomer gaskets can be used over and over but restricts pump down capabilities to 10⁻⁸ and bake-out only to 150 °C. Viton elastomer gaskets torque value is much less than metal gaskets at 84-120 in.lbs.

We only carry silver plated nuts and bolts for assembly and recommend this hardware be used. Silver plated nuts and bolts eliminate the need for special thread lubricant and prevent seizing and galling of the installed hardware. (for installation hardware procedures, see following pages).

Conflat flange CF fittings come in reducers, adapters and standard components. These vacuum fittings are made of corrosive resistant 304 stainless steel. Type 304 stainless steel is suitable for tungsten inert gas (TIG) welding: simple fusing welding without filler metal is desirable. (for specifications of these fittings see the following pages).

Good for UHV applications to 10⁻¹³ Torr with proper fittings, flanges, gaskets, hardware, helium leak testing, bake out and time.

Most CF Conflat IN STOCK
Same Day Shipping

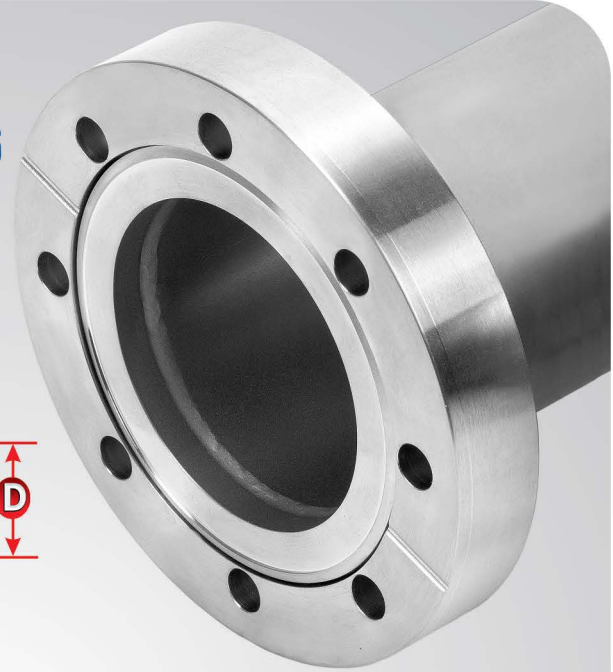
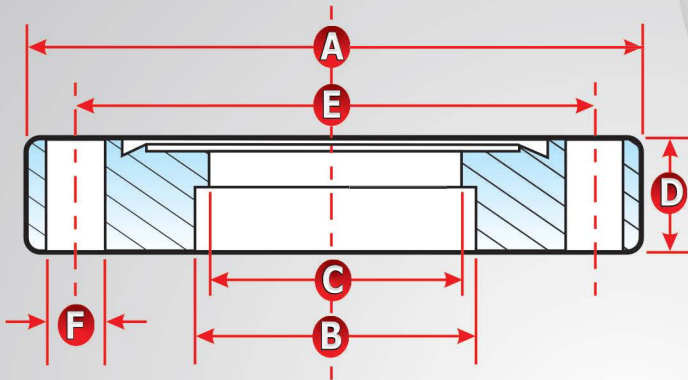


Vacuum Fittings and Adapters **1**

CFF **CF** (Conflat Flange)

CF CONFLAT FLANGE DIMENSIONS

For applications down to 10^{-13} Torr



CF DIMENSIONS

Can be smooth or threaded bolt holes, rotatable or non-rotatable flanges.

O.D. A	Tube Size B	All dimensions in inches			F Bolt Hole Diameter smooth (thread)	Bolt Holes	Torque In. lbs.
A	B	C	D	E			
1.33	0.38	0.25	0.30	1.06	.172 (8-32)	6	28
1.33	0.50	0.38	0.30	1.06	.172 (8-32)	6	28
1.33	0.75	0.62	0.30	1.06	.172 (8-32)	6	28
2.12	1.00	0.94	0.46	1.62	.265 (1/4-28)	4	110
2.75	0.75	0.62	0.50	2.31	.265 (1/4-28)	6	110
2.75	1.00	0.98	0.50	2.31	.265 (1/4-28)	6	110
2.75	1.50	1.44	0.50	2.31	.265 (1/4-28)	6	110
3.38	2.00	1.94	0.68	2.85	.332 (5/16-24)	8	190
4.50	2.50	2.44	0.68	3.62	.332 (5/16-24)	8	190
4.62	3.00	2.94	0.81	4.02	.332 (5/16-24)	10	190
6.00	4.00	3.92	0.78	5.12	.332 (5/16-24)	16	190
6.75	5.00	4.87	0.84	5.96	.332 (5/16-24)	18	190
8.00	6.00	5.92	0.87	7.12	.332 (5/16-24)	20	190
10.00	8.00	7.88	0.96	9.12	.332 (5/16-24)	24	190
12.00	10.0	9.87	1.01	11.18	.332 (5/16-24)	32	190
13.25	10.0	9.87	1.12	12.05	.390 (3/8-24)	30	345
14.00	12.0	11.87	1.12	12.80	.390 (3/8-24)	30	345
14.50	12.0	11.87	1.12	13.31	.390 (3/8-24)	32	345
16.50	14.0	13.87	1.12	15.30	.390 (3/8-24)	36	345

1 Vacuum Fittings and Adapters

CFF CF (Conflat Flange)

CF Conflat Specifications

Minimum Pressure with metal gaskets & optimum conditions **10⁻¹³ Torr***

Leak Check <10⁻⁹ std-cc/s

Materials

Fitting/Flange	Type 304 stainless steel
Gaskets	Copper, Silver Plated Copper, Viton
Nuts & Bolts	Silver Plated
Plate Nuts	Stainless Steel

Metal Gasket Thickness .08" (2mm)

* with metal gaskets & optimum conditions

CF Gasket Comparison

Copper

BAKE OUT (-200°C to 450C°)
Best balance of desirable properties, best all around for UHV pressures.

Silver Plated Copper

BAKE OUT (-200°C to 450C°)
Same as copper gaskets except when frequent bake outs are performed. Silver Plated Copper Gaskets help prevent oxides from forming during bake outs, possibly contaminating the system.

Viton Elastomer

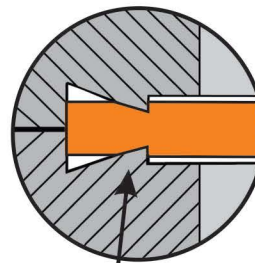
BAKE OUT (-20°C to 150C°)
Can be used multiple times. Low temperature range compared to metal gaskets and much less pressure range. Pumps down only to 10⁻⁸ torr.

NOTE: Metal gaskets are one time use and not reusable and must be replaced at reassembly.

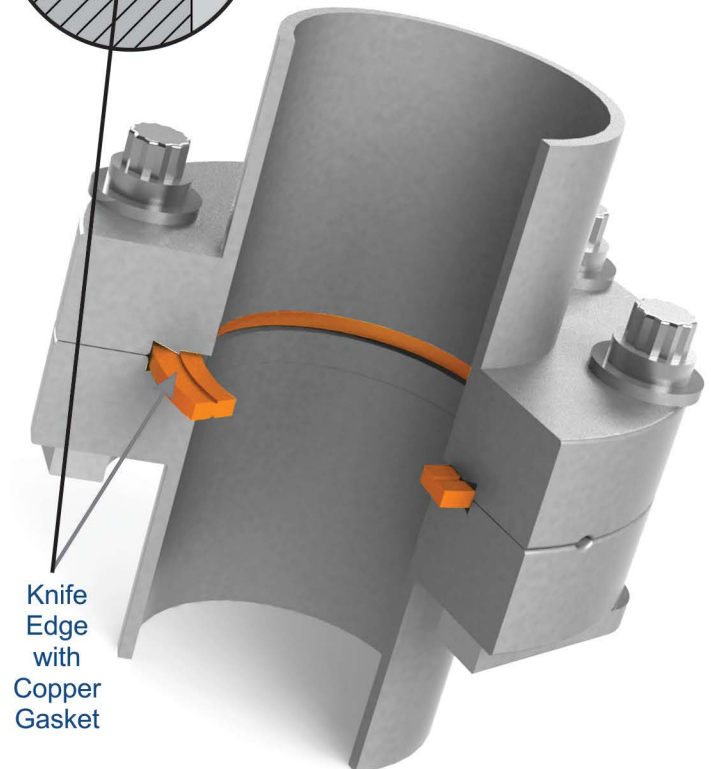
Gaskets & Torque in.(mm)

CF Flange Size O.D.	Copper or Silver Plated Copper Metal Gasket Dimensions		Torque Value in.lbs
	O.D.	I.D.	
1-1/3"	0.84(21)	0.64(16)	28
2-1/8"	1.29(33)	1.01(26)	110
2-3/4"	1.90(48)	1.45(37)	110
3-3/8"	2.43(62)	2.01(51)	190
4-1/2"	3.42(82)	2.51(64)	190
4-5/8"	3.60(91)	3.01(46)	190
6"	4.74(120)	4.01(102)	190
6-3/4"	5.56(141)	5.03(128)	190
8"	6.74(171)	6.01(153)	190
10"	8.74(222)	8.01(203)	190
12"	10.74(273)	10.00(254)	190
13.25"	11.55(293)	10.84(275)	345
14"	12.31(313)	11.81(300)	345
14.5"	12.81(325)	12.11(307)	345
16.5"	14.75(374)	14.00(355)	345

Metal Gasket Thickness 0.8" (2mm)
Viton Elastomer Gaskets Torque Value 84-120 in. lbs.



Cross Section of CF fitting with copper gasket being compressed with knife edge for the UHV seal.



Vacuum Fittings and Adapters 1

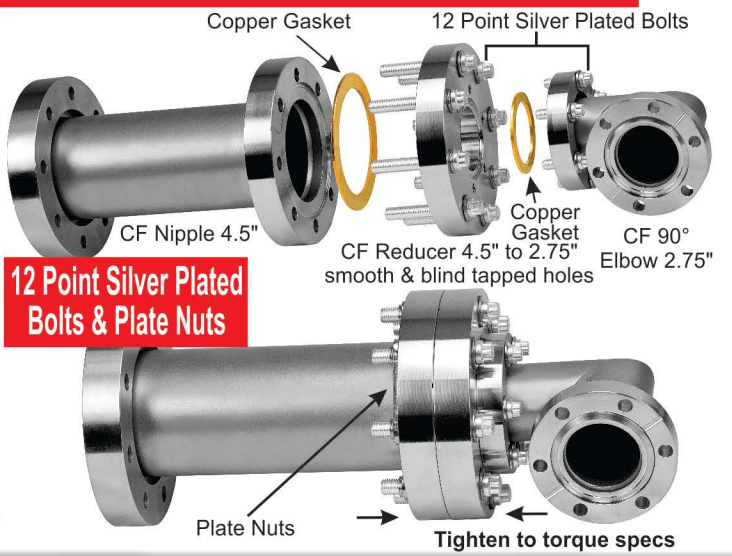
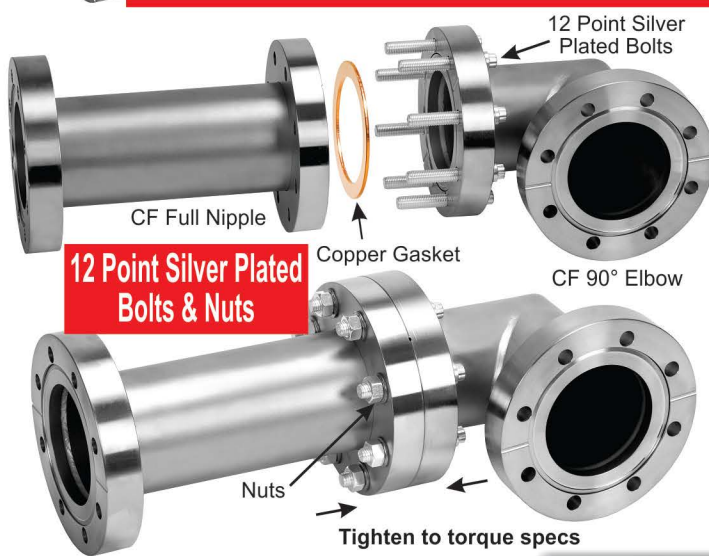
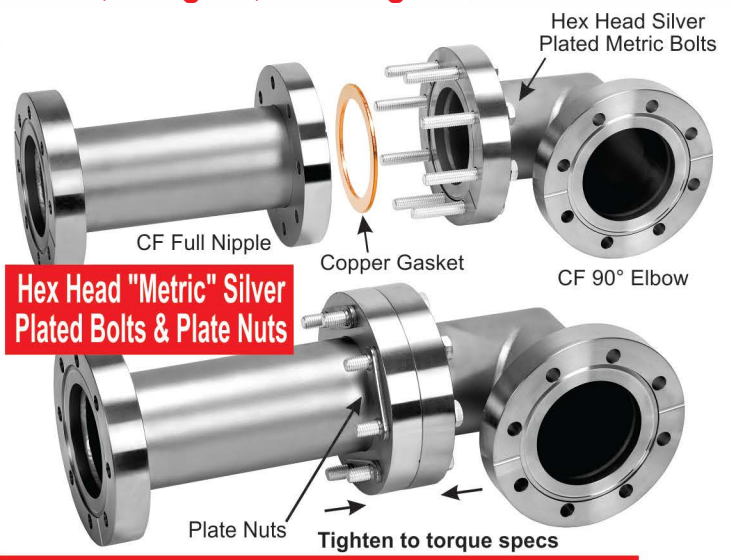
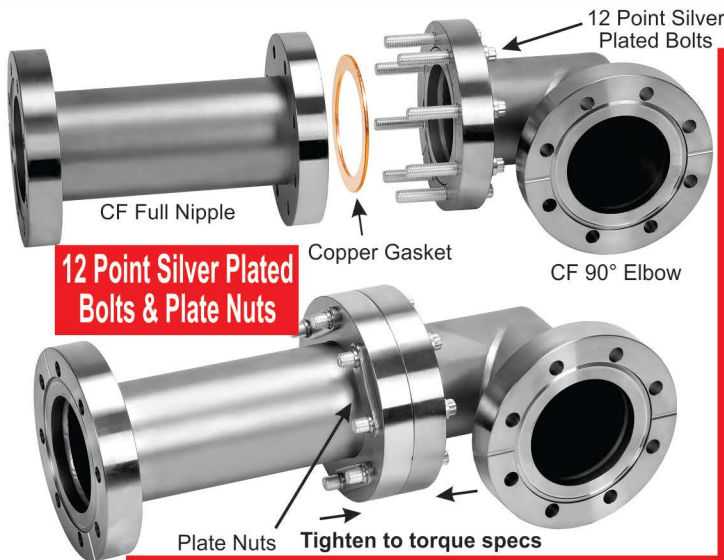
CFF CF (Conflat Flange)

Conflat CF Flange Assembly / Installation

Conflat CF flanges are assembled together by inserting a copper, silver plated copper or Viton elastomer gasket between two flange faces. Bolts and nuts or bolts and plate nuts are used to fasten the flanges together. Through hole flanges (clearance) or tapped hole flanges (threaded) can be used. The two flange faces are brought together and bolts tightened diagonally opposed to sequentially around the flange face. The bolts should be torqued to specs listed on following pages. While the bolts are being tightened together a knife edge on the flanges penetrates into the soft metal gasket, filling the slightest imperfections of the flanges creating the ultra high vacuum seal needed for a pump down of 10^{-13} Torr.

We only carry silver plated nuts and bolts which greatly reduce the risk of lock up, galling or breakage. If possible we recommend using through hole flanges opposed to threaded flanges. With through holes a bolt and plate nut are used and only one wrench to tighten the bolt head. Clearance needed is half that of a regular nut. This eliminates the need for costlier threaded flanges. Below are examples of assembly with through & tapped hole flanges. Note: Flange faces can be rotatable or non-rotatable for more flexibility while installing. All fittings with more than two flanges come with at least one rotatable flange.

For Install Hardware Combinations, Sizes, Lengths, See Page 1-63 on Bolt Kits



1 Vacuum Fittings and Adapters

CFF **CF** (Conflat Flange)

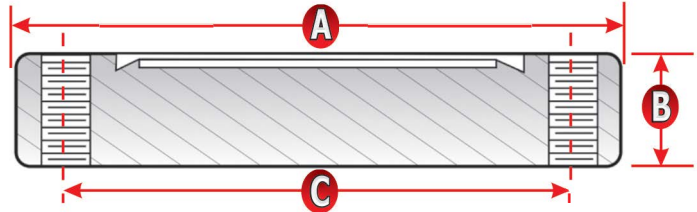


CF Blank

Tapped Holes Non-Rotatable

Stainless Steel

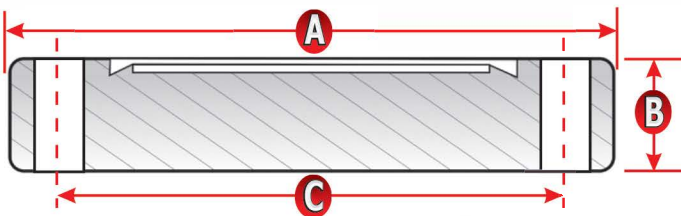
A CF - Outer Diameter	B	C	Tapped Bolt Holes	IDEAL VACUUM P/N	Price*
1-1/3"	5/16"	1-1/16"	6	P104554	\$16.93
2-1/8"	7/16"	1-5/8"	4	P104555	\$20.00
2-3/4"	1/2"	2-5/16"	6	P104265	\$22.00
3-3/8"	7/16"	2-7/8"	8	P104556	\$49.50
4-1/2"	11/16"	3-5/8"	8	P104557	\$63.00
4-5/8"	3/4"	4"	10	P104558	\$73.00
6.00"	3/4"	5-1/4"	16	P104559	\$100.00
6-3/4"	7/8"	6"	18	P104560	\$115.00
8.00"	7/8"	7-1/8"	20	P104561	\$165.95
10.00"	1"	9-1/8"	24	P104562	\$375.00



CF Blank Through Holes Non-Rotatable

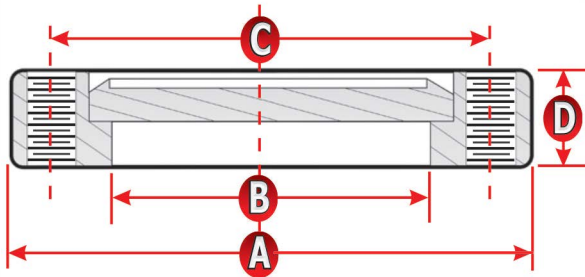
Stainless Steel

A CF - Outer Diameter	B	C	Through Bolt Holes	IDEAL VACUUM P/N	Price*
1.33"	5/16"	1-1/16"	6	P102245	\$15.47
2-1/8"	7/16"	1-5/8"	4	P104564	\$18.85
2-3/4"	1/2"	2-5/16"	6	P102246	\$22.33
3-3/8"	7/16"	2-7/8"	8	P102247	\$42.85
4-1/2"	11/16"	3-5/8"	8	P102248	\$70.00
4-5/8"	3/4"	4"	10	P104565	\$70.00
6.00"	3/4"	5-1/4"	16	P102249	\$105.01
6-3/4"	7/8"	6"	18	P104566	\$110.00
8.00"	7/8"	7-1/8"	20	P102250	\$163.30
10.00"	1"	9-1/8"	24	P102251	\$362.25
13.25"	1-1/4"	12"	30	P102252	\$816.50



Vacuum Fittings and Adapters **1**

CFF **CF** (Conflat Flange)

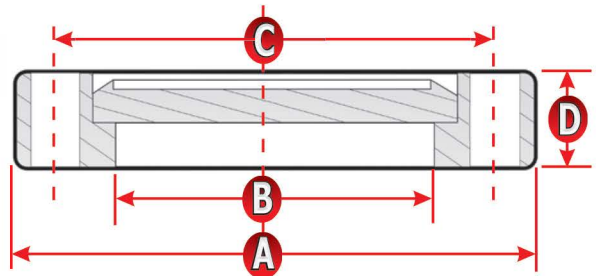


CF Blank Tapped Holes Rotatable **Stainless Steel**

A CF - Outer Diameter	B	C	D	Tapped Bolt Holes	IDEAL VACUUM P/N	Price*
1-1/3"	3/4"	1-1/16"	5/16"	6	P104567	\$13.88
2-1/8"	1-1/8"	1-5/8"	1/2"	4	P104568	\$21.35
2-3/4"	1-3/4"	2-5/16"	9/16"	6	P104569	\$26.98
3-3/8"	2-3/16"	2-7/8"	11/16"	8	P104570	\$51.70
4-1/2"	2-3/16"	3-5/8"	3/4"	8	P104571	\$86.78
4-5/8"	3-1/8"	4"	7/8"	10	P104572	\$100.13
6.00"	4-1/8"	5-1/8"	7/8"	16	P104573	\$169.33
6-3/4"	5"	6"	7/8"	18	P104574	\$220.55
8.00"	6"	7-1/4"	15/16"	20	P104575	\$280.00
10.00"	8"	9-1/8"	15/16"	24	P104576	\$470.00
12.00"	10-1/16"	11-3/16"	1-1/16"	32	P104577	\$564.00
13.25"	10-1/16"	12-1/6"	1-1/8"	30	P104578	\$672.00
14.00"	12"	12-3/4"	1-1/8"	30	P104579	\$758.00

CF Blank Through Holes Rotatable **Stainless Steel**

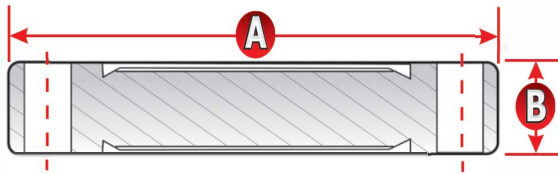
A CF - Outer Diameter	B	C	D	Through Bolt Holes	IDEAL VACUUM P/N	Price*
1-1/3"	3/4"	1-1/16"	5/16"	6	P104580	\$11.40
2-1/8"	1-1/8"	1-5/8"	1/2"	4	P104581	\$18.60
2-3/4"	1-3/4"	2-5/16"	9/16"	6	P104582	\$24.25
3-3/8"	2-3/16"	2-7/8"	11/16"	8	P104583	\$48.55
4-1/2"	2-3/16"	3-5/8"	3/4"	8	P104584	\$81.38
4-5/8"	3-1/8"	4"	7/8"	10	P104585	\$94.70
6.00"	4-1/8"	5-1/8"	7/8"	16	P104586	\$162.35
6-3/4"	5"	6"	7/8"	18	P104587	\$214.22
8.00"	6"	7-1/4"	15/16"	20	P104588	\$272.50
10.00"	8"	9-1/8"	15/16"	24	P104589	\$462.50
12.00"	10-1/16"	11-3/16"	1-1/16"	32	P104590	\$554.00
13.25"	10-1/16"	12-1/6"	1-1/8"	30	P104591	\$658.00
14.00"	12"	12-3/4"	1-1/8"	30	P104592	\$740.00



*Catalog Pricing
Subject to Change

1 Vacuum Fittings and Adapters

CFF CF (Conflat Flange)



CF Blank

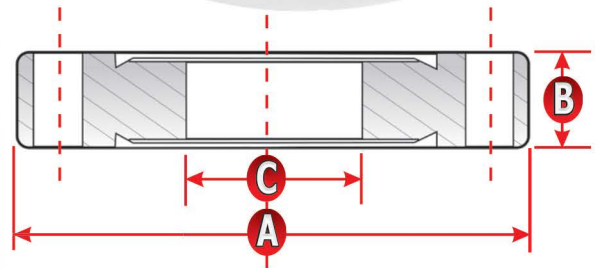
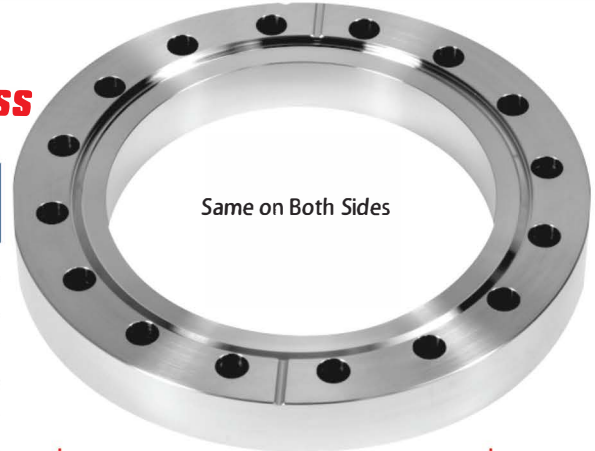
Double Sided Through Holes

Stainless Steel

A CF - Outer Diameter	B	Through Bolt Holes	IDEAL VACUUM P/N	Price*
1-1/3"	5/16"	6	P104722	\$12.48
2-1/8"	7/16"	4	P104723	\$19.65
2-3/4"	1/2"	6	P104724	\$28.72
3-3/8"	7/16"	8	P104725	\$41.32
4-1/2"	11/16"	8	P104726	\$62.02
6.00"	3/4"	16	P104727	\$111.63
6-3/4"	7/8"	18	P104728	\$171.72
8.00"	7/8"	20	P104729	\$233.13
10.00"	1"	24	P104730	\$352.50
13-1/4"	1-1/8"	30	P104831	\$564.00

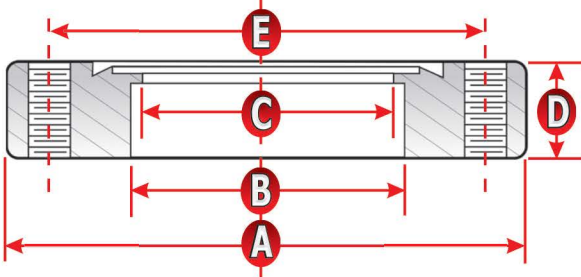
CF Bored Double Sided Tapped Holes Non-Rotatable Stainless Steel

A CF - Outer Diameter	B	BORE C	Through Holes	IDEAL VACUUM P/N	Price*
1-1/3"	5/16"	3/4"	6	P104740	\$12.48
2-1/8"	7/8"	1"	4	P104741	\$19.65
2-3/4"	1-1/2"	1/2"	6	P104742	\$22.67
3-3/8"	5/8"	2"	8	P104743	\$39.08
4-1/2"	11/16"	2-3/4"	8	P104744	\$62.02
4-5/8"	3/4"	3"	10	P104745	\$71.55
6.00"	3/4"	4"	16	P104746	\$111.63
6-3/4"	13/16"	5"	18	P104747	\$161.30
8.00"	7/8"	6"	20	P104748	\$224.33
10.00"	1"	8"	24	P104749	\$327.50



Vacuum Fittings and Adapters **1**

CFF **CF** (Conflat Flange)

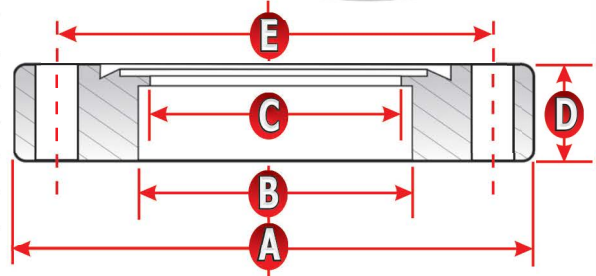


CF Blank Bored Tapped Holes **Stainless Steel** Non-Rotatable

A CF - Outer Diameter	BORE B	C	D	E	Tapped Holes	IDEAL VACUUM P/N	Price*
1-1/3"	3/8"	na	5/16"	1-1/16"	6	P104631	\$17.50
1-1/3"	1/2"	na	5/16"	1-1/16"	6	P104636	\$17.00
1-1/3"	3/4"	5/8"	5/16"	1-1/16"	6	P104637	\$17.00
2-1/8"	1"	15/16"	1/2"	1-5/8"	4	P104638	\$22.00
2-3/4"	3/4"	11/16"	9/16"	2-5/16"	6	P104639	\$24.00
2-3/4"	1"	15/16"	9/16"	2-5/16"	6	P104640	\$25.00
2-3/4"	1-1/2"	1-7/16"	9/16"	2-5/16"	6	P104642	\$25.50
3-3/8"	2"	1-15/16"	11/16"	2-13/16"	8	P104641	\$47.50
4-1/2"	2-1/2"	2-7/16"	11/16"	3-5/8"	8	P104643	\$65.00
4-5/8"	3"	2-15/16"	9/16"	4-1/16"	10	P104644	\$71.00
6.00"	4"	3-15/16"	3/4"	5-1/8"	16	P104645	\$92.00
6-3/4"	5"	4-7/8"	13/16"	6"	18	P104646	\$98.00
8.00"	6"	5-7/8"	7/8"	7-1/8"	20	P104647	\$165.00
10.00"	8"	7-7/8"	1"	9-1/8"	24	P104648	\$325.00
12.00"	10"	9-7/8"	1"	11-1/8"	32	P104649	\$348.00
13-1/4"	10"	9-7/8"	1-1/16"	12"	30	P104650	\$474.00

CF Blank Bored Through Holes **Stainless Steel** Non-Rotatable

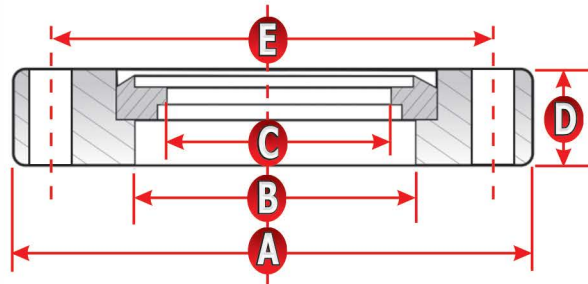
A CF - Outer Diameter	BORE B	C	D	E	Through Holes	IDEAL VACUUM P/N	Price*
1-1/3"	3/8"	na	5/16"	1-1/16"	6	P104651	\$16.00
1-1/3"	1/2"	na	5/16"	1-1/16"	6	P104652	\$17.50
1-1/3"	3/4"	5/8"	5/16"	1-1/16"	6	P104633	\$17.00
2-1/8"	1"	15/16"	1/2"	1-5/8"	4	P104654	\$20.00
2-3/4"	3/4"	11/16"	9/16"	2-5/16"	6	P104655	\$23.00
2-3/4"	1"	15/16"	9/16"	2-5/16"	6	P104656	\$24.00
2-3/4"	1-1/2"	1-7/16"	9/16"	2-5/16"	6	P104657	\$25.00
3-3/8"	2"	1-15/16"	11/16"	2-13/16"	8	P104658	\$45.50
4-1/2"	2-1/2"	2-7/16"	11/16"	3-5/8"	8	P104634	\$59.00
4-5/8"	3"	2-15/16"	9/16"	4-1/16"	10	P104660	\$68.00
6.00"	4"	3-15/16"	3/4"	5-1/8"	16	P104661	\$89.00
6-3/4"	5"	4-7/8"	13/16"	6"	18	P104662	\$95.00
8.00"	6"	5-7/8"	7/8"	7-1/8"	20	P104663	\$148.00
10.00"	8"	7-7/8"	1"	9-1/8"	24	P104635	\$292.50
12.00"	10"	9-7/8"	1"	11-1/8"	32	P104680	\$338.00
13-1/4"	10"	9-7/8"	1-1/16"	12"	30	P104681	\$460.00



*Catalog Pricing
Subject to Change

1 Vacuum Fittings and Adapters

CFF CF (Conflat Flange)

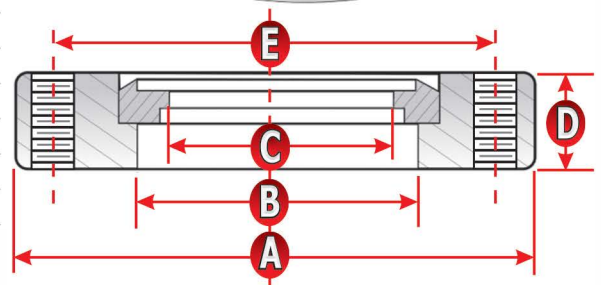


CF Blank Bored Through Holes Rotatable Stainless Steel

A	CF - Outer Diameter	BORE B	C	D	E	Through Holes	IDEAL VACUUM P/N	Price*
1-1/3"	1/2"	9/32"	1/4"	1-1/16"	6	P104701	\$11.40	
1-1/3"	3/4"	33/64"	1/4"	1-1/16"	6	P104702	\$11.40	
2-1/8"	1"	15/16"	1/2"	1-39/64"	4	P104703	\$18.60	
2-3/4"	3/4"	5/8"	1/2"	2-9/32"	6	P104705	\$22.23	
2-3/4"	1-1/2"	1-27/64"	1/2"	2-9/32"	6	P104704	\$22.23	
3-3/8"	2"	1-59/64"	7/8"	2-53/64"	8	P104664	\$50.58	
4-1/2"	2-1/2"	2-7/16"	3/4"	3-5/8"	8	P104665	\$79.23	
4-5/8"	3"	2-61/64"	3/4"	4-1/64"	10	P104706	\$109.30	
6.00"	4"	3-15/16"	13/16"	5-1/8"	16	P104707	\$154.95	
6-3/4"	5"	4-59/64"	13/16"	5-15/16"	18	P104708	\$204.08	
8.00"	6"	5-29/32"	15/16"	7-1/8"	20	P104709	\$255.00	
10.00"	8"	7-7/8"	1"	9-3/32"	24	P104710	\$365.00	
12.00"	10"	9-27/32"	1-1/16"	11-3/16"	32	P104711	\$635.00	
13-1/4"	10"	9-27/32"	1-1/16"	12-3/64"	30	P104693	\$767.50	

CF Blank Bored Tapped Holes Rotatable Stainless Steel

A	CF - Outer Diameter	BORE B	C	D	E	Tapped Holes	IDEAL VACUUM P/N	Price*
1-1/3"	1/2"	9/32"	1/4"	1-1/16"	6	P104671	\$13.90	
1-1/3"	3/4"	33/64"	1/4"	1-1/16"	6	P104672	\$13.90	
2-1/8"	1"	15/16"	1/2"	1-39/64"	4	P104673	\$21.35	
2-3/4"	3/4"	5/8"	1/2"	2-9/32"	6	P104674	\$24.98	
2-3/4"	1-1/2"	1-27/64"	1/2"	2-9/32"	6	P104675	\$24.98	
3-3/8"	2"	1-59/64"	7/8"	2-53/64"	8	P104676	\$53.90	
4-1/2"	2-1/2"	2-7/16"	3/4"	3-5/8"	8	P104677	\$83.68	
4-5/8"	3"	2-61/64"	3/4"	4-1/64"	10	P104694	\$114.60	
6.00"	4"	3-15/16"	13/16"	5-1/8"	16	P104695	\$159.70	
6-3/4"	5"	4-59/64"	13/16"	5-15/16"	18	P104696	\$210.15	
8.00"	6"	5-29/32"	15/16"	7-1/8"	20	P104697	\$260.00	
10.00"	8"	7-7/8"	1"	9-3/32"	24	P104698	\$372.50	
12.00"	10"	9-27/32"	1-1/16"	11-3/16"	32	P104699	\$647.50	
13-1/4"	10"	9-27/32"	1-1/16"	12-3/64"	30	P104700	\$785.00	

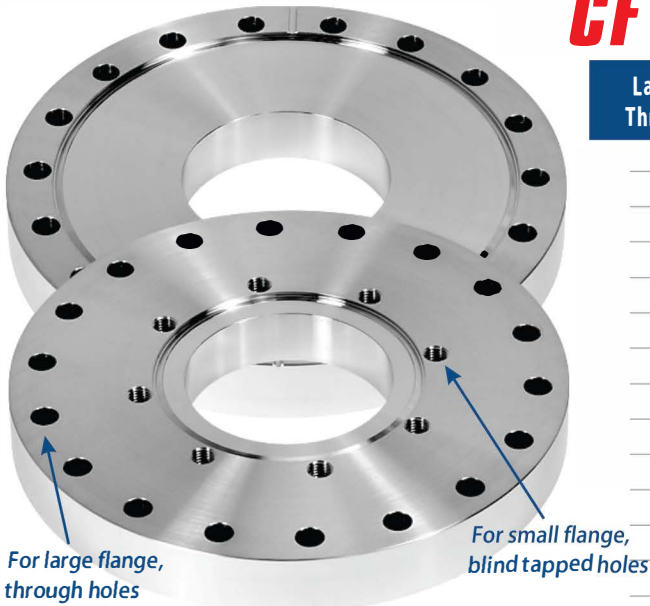


Vacuum Fittings and Adapters **1**

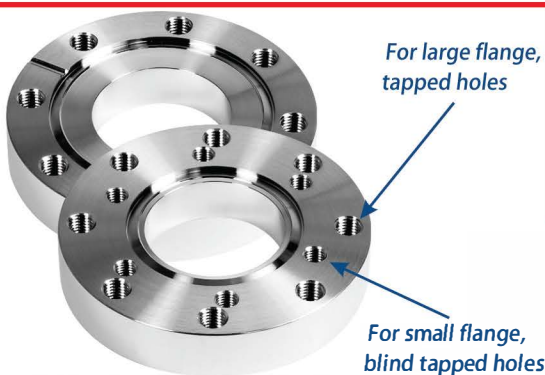
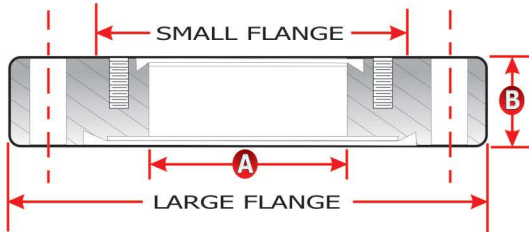
CFF **CF** (Conflat Flange)

Through Holes (outer) and Blind Tapped (inner)

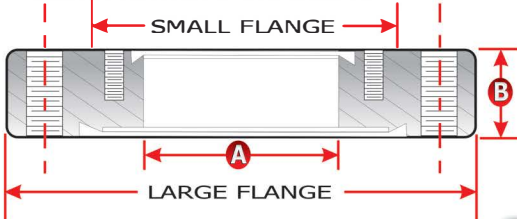
CF Zero Length Reducer **Stainless Steel**



Sold as One Each, Both Sides Shown



Sold as One Each, Both Sides Shown



Large Flange Through Holes	Small Flange Blind Tapped Holes	A	B	Tube Size	IDEAL VACUUM P/N	Price*
2-3/4"	to 1-1/3"	5/8"	1/2"	3/4"	P102237	\$83.31
3-3/8"	to 1-1/3"	5/8"	5/8"	3/4"	P104803	\$110.00
3-3/8"	to 2-1/8"	1.0"	5/8"	1.0"	P104804	\$112.00
4-1/2"	to 1-1/3"	5/8"	11/16"	3/4"	P102238	\$129.95
4-1/2"	to 2-1/8"	1.0"	5/8"	1.0"	P104809	\$136.50
4-1/2"	to 2-3/4"	1-1/2"	11/16"	1-1/2"	P102239	\$129.95
4-5/8"	to 1-1/3"	5/8"	3/4"	3/4"	P104810	\$146.50
4-5/8"	to 2-1/8"	1.0"	3/4"	1.0"	P104811	\$146.50
4-5/8"	to 2-3/4"	1-1/2"	3/4"	1-1/2"	P104812	\$146.50
4-5/8"	to 3-3/8"	2.0"	3/4"	2.0"	P104813	\$146.50
6.0"	to 1-1/3"	5/8"	13/16"	3/4"	P102240	\$169.00
6.0"	to 2-1/8"	1.0"	3/4"	1.0"	P104814	\$169.00
6.0"	to 2-3/4"	1-1/2"	5/8"	1-1/2"	P102241	\$158.70
6.0"	to 3-3/8"	2.0"	13/16"	2.0"	P102242	\$182.85
6.0"	to 4-1/2"	2-1/2"	13/16"	2-1/2"	P102243	\$182.85
6.0"	to 4-5/8"	3.0"	13/16"	3.0"	P104815	\$195.00
6-3/4"	to 2-3/4"	1-1/2"	5/8"	1-1/2"	P104816	\$225.00
6-3/4"	to 4-1/2"	2-1/2"	7/8"	2-1/2"	P104817	\$225.00
8.0"	to 1-1/3"	5/8"	15/16"	3/4"	P104818	\$223.60
8.0"	to 2-3/4"	1-1/2"	7/8"	1-1/2"	P104819	\$223.60
8.0"	to 4-1/2"	2-1/2"	7/8"	2-1/2"	P104820	\$223.60
8.0"	to 6.0"	4.0"	7/8"	4.0"	P102244	\$210.45
10.0"	to 1-1/3"	5/8"	1.0"	3/4"	P104821	\$375.00
10.0"	to 2-3/4"	1-1/2"	1.0"	1-1/2"	P104822	\$375.00
10.0"	to 4-1/2"	2-1/2"	1.0"	2-1/2"	P104823	\$375.00
10.0"	to 6.0"	4.0"	1.0"	4.0"	P104824	\$375.00
10.0"	to 8.0"	6.0"	1.0"	6.0"	P104825	\$375.00

Stainless Steel CF Zero Length Reducer **Tapped Holes**

Large Flange Tapped Holes	Small Flange Blind Tapped Holes	A	B	IDEAL VACUUM P/N	Price*
2-1/8"	to 1-1/3"	5/8"	1/2"	P104805	\$67.75
2-3/4"	to 2-1/8"	1.0"	1/2"	P104806	\$73.75
3-3/8"	to 2-3/4"	1-1/2"	5/8"	P104807	\$115.00
4-1/2"	to 3-3/8"	2.0"	11/16"	P104808	\$146.50

*Catalog Pricing
Subject to Change

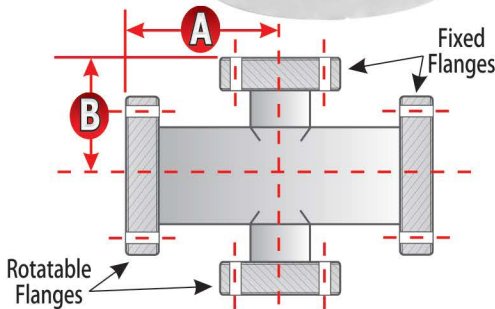
1 Vacuum Fittings and Adapters

CFF CF (Conflat Flange)



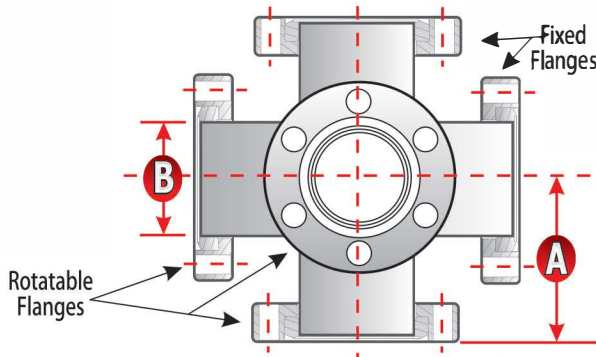
CF 4 Way Reducer Cross **Stainless Steel**

Flange Size O.D.	A	B	IDEAL VACUUM P/N	Price*
2-3/4" to 1-1/3"	2.5"	2"	P104792	\$145.99
2-3/4" to 2-1/8"	2.5"	2-1/4"	P104794	\$152.00
3-3/8" to 1-1/3"	3-1/4"	2-1/8"	P104799	\$185.00
3-3/8" to 2-3/4"	3-1/4"	2-3/4"	P104802	\$225.00
4-1/2" to 2-3/4"	3-3/8"	3"	P104791	\$265.00
4-1/2" to 3-3/8"	3-3/8"	3-1/2"	P104793	\$295.00
4-5/8" to 3-3/8"	3-1/2"	3-3/4"	P104801	\$385.00
4-5/8" to 4-1/2"	3-1/2"	3-3/4"	P104797	\$385.00
6.00" to 2-3/4"	4-3/8"	3-3/4"	P104795	\$404.00
6.00" to 3-3/8"	4-3/8"	4-1/4"	P104800	\$425.00
6.00" to 4-1/2"	4-3/8"	4-1/8"	P104796	\$465.00
6.00" to 4-5/8"	4-3/8"	4-1/8"	P104798	\$465.00



CF 5 Way Cross **Stainless Steel**

Flange Size O.D.	A	B	IDEAL VACUUM P/N	Price*
1-1/3"	1-1/2"	3/4"	P104686	\$139.00
2-1/8"	2"	1"	P104685	\$165.00
2-3/4"	2-1/2"	1-1/2"	P104687	\$275.00
3-3/8"	3-1/4"	2"	P104684	\$299.00
4-1/2"	3-3/8"	2"	P104688	\$445.00
4-5/8"	4-1/8"	3"	P104689	\$465.00
6.00"	5-1/4"	4"	P104690	\$745.00



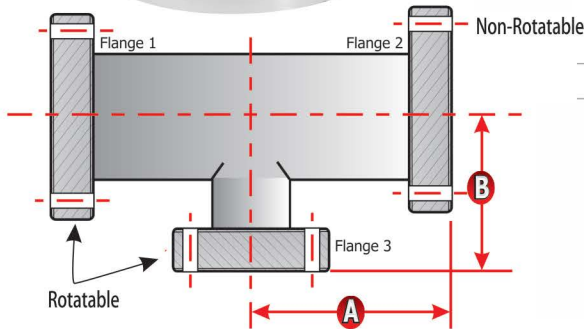
Vacuum Fittings and Adapters **1**

CFF **CF** (Conflat Flange)



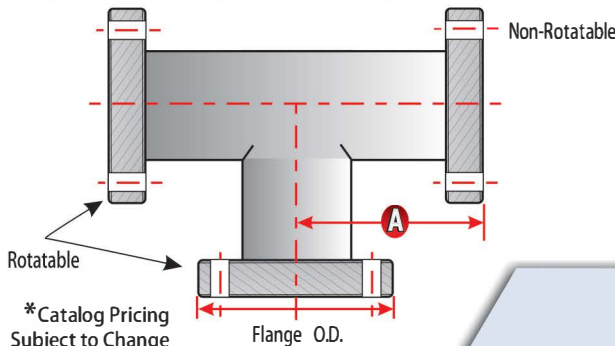
CF Tee Adaptive Reducer **Stainless Steel**

Flange 1 & 2 O.D.	Flange 3 O.D.	A	B	Tube O.D.	IDEAL VACUUM P/N	Price*
2-3/4"	to 1-1/3"	2-7/16"	1-7/8"	1-1/2" to 3/4"	P104850	\$89.00
2-3/4"	to 2-1/8"	2-7/16"	2-1/4"	1-1/2" to 1"	P104851	\$125.00
3-3/8"	to 1-1/3"	3-3/16"	2-1/8"	2" to 3/4"	P104852	\$189.00
3-3/8"	to 2-3/4"	3-3/16"	2-11/16"	2" to 1-1/2"	P104853	\$245.00
4-1/2"	to 2-3/4"	3-3/8"	3"	2-1/2" to 1-1/2"	P103788	\$255.00
4-1/2"	to 3-3/8"	3-3/16"	3-7/16"	2-1/2" to 2"	P104854	\$285.00
4-5/8"	to 3-3/8"	3-1/2"	3-11/16"	3" to 2"	P104855	\$335.00
4-5/8"	to 4-1/2"	3-1/2"	3-11/16"	3" to 2-1/2"	P104856	\$375.00
6.00"	to 2-3/4"	3-3/8"	3"	4" to 1-1/2"	P103789	\$455.00
6.00"	to 3-3/8"	4-5/16"	4-3/16"	4" to 2"	P104857	\$495.00
6.00"	to 4-1/2"	4-5/16"	4-1/8"	4" to 2-1/2"	P104858	\$525.00
6.00"	to 4-5/8"	4-5/16"	4"	4" to 3"	P104859	\$555.00



CF Tee **Stainless Steel**

Flange O.D.	A	Tube O.D.	IDEAL VACUUM P/N	Price*
1-1/3"	1-1/2"	3/4"	P102192	\$91.00
2-1/8"	2-1/8"	1"	P104848	\$101.00
2-3/4"	2-1/2"	1-1/2"	P102193	\$104.74
3-3/8"	3-1/4"	2"	P102194	\$241.38
4-1/2"	4-1/4"	2-1/2"	P102195	\$316.25
4-5/8"	3-1/2"	3"	P104849	\$344.50
6"	5-1/4"	4"	P102196	\$483.00
8"	6-1/2"	6"	P102197	\$1,321.35
10"	8"	8"	P102198	\$1,675.00



*Catalog Pricing Subject to Change



* Catalog Pricing Subject to Change

1 Vacuum Fittings and Adapters

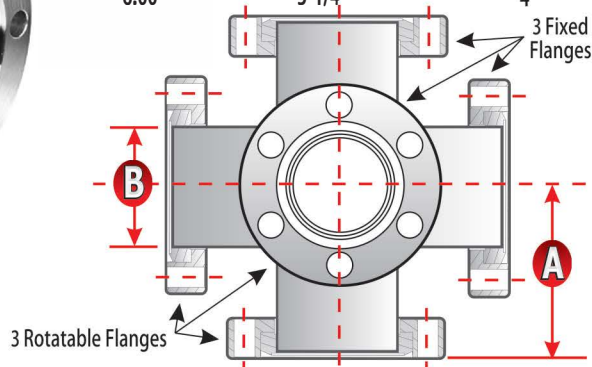
CFF CF (Conflat Flange)



CF 6 Way Cross

Stainless Steel

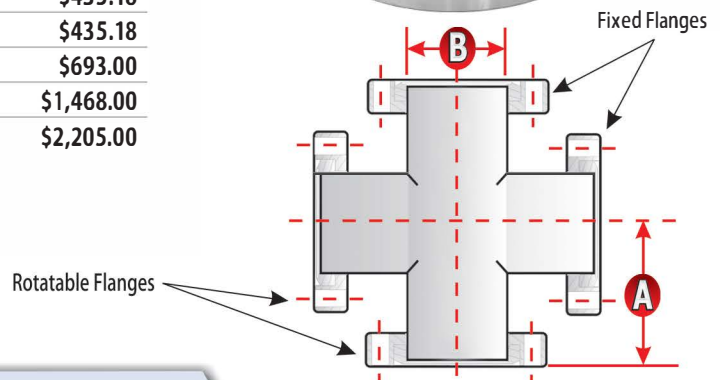
Flange Size O.D.	A	B	IDEAL VACUUM P/N	Price*
1-1/3"	1-1/2"	3/4"	P104716	\$180.00
2-1/8"	2"	1"	P104717	\$242.50
2-3/4"	2-1/2"	1-1/2"	P104718	\$290.00
3-3/8"	3-1/4"	2"	P104719	\$487.50
4-1/2"	3-3/8"	2.5"	P104720	\$590.00
4-5/8"	4-1/8"	3"	P104721	\$680.00
6.00"	5-1/4"	4"	P104249	\$1,162.00



CF 4 Way Cross

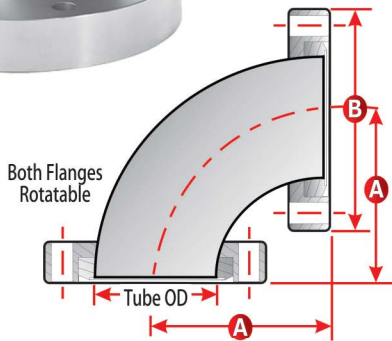
Stainless Steel

Flange Size O.D.	A	B	IDEAL VACUUM P/N	Price*
1-1/3"	1-1/2"	3/4"	P102184	\$120.58
2-1/8"	2"	1"	P104692	\$147.23
2-3/4"	2-1/2"	1-1/2"	P102185	\$147.23
3-3/8"	3-1/4"	2"	P102186	\$361.00
4-1/2"	4-1/8"	2-1/2"	P102187	\$435.18
4-5/8"	3-1/2"	3"	P104691	\$435.18
6.00"	5-1/4"	4"	P102188	\$693.00
8.00"	6-1/2"	6"	P102189	\$1,468.00
10.00"	8"	8"	P102190	\$2,205.00



Vacuum Fittings and Adapters **1**

CFF **CF** (Conflat Flange)

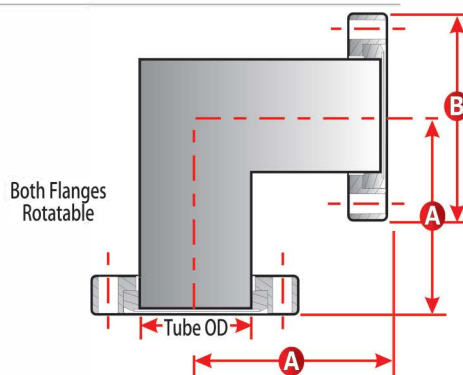


CF Elbow 90° Stainless Steel

Flange Size O.D.	A	B	Tube O.D.	IDEAL VACUUM P/N	Price*
1-1/3"	1"	1-1/3"	3/4"	P102179	\$93.60
2-1/8"	1-1/2"	2-1/8"	1"	P104832	\$93.60
2-3/4"	2-1/2"	2-3/4"	1-1/2"	P101703	\$73.78
3-3/8"	3-1/4"	3-3/8"	2"	P102180	\$149.00
4-1/2"	4-1/8"	4.5"	2.5"	P102181	\$199.95
4-5/8"	4-3/4"	4-5/8"	3"	P104833	\$224.00
6.00"	5-1/4"	6"	4"	P102182	\$332.00
8.00"	6-1/2"	8"	6"	P102183	\$598.00
10.00"	8"	10"	8"	P102191	\$1,312.50

CF Elbow Mitered 90° Stainless Steel

Flange Size O.D.	A	B	Tube O.D.	IDEAL VACUUM P/N	Price*
1-1/3"	1.5"	1-1/3"	3/4"	P104834	\$93.60
2-1/8"	2-1/8"	2-1/8"	1"	P104835	\$93.60
2-3/4"	2-7/4"	2-3/4"	1-1/2"	P104836	\$73.78
3-3/8"	3-1/4"	3-3/4"	2"	P104837	\$149.00
4-1/2"	3-3/8"	4.5"	2.5"	P104838	\$225.00
4-5/8"	4-1/2"	4-5/8"	3"	P104839	\$255.00
6.00"	4-3/8"	6"	4"	P104840	\$335.00



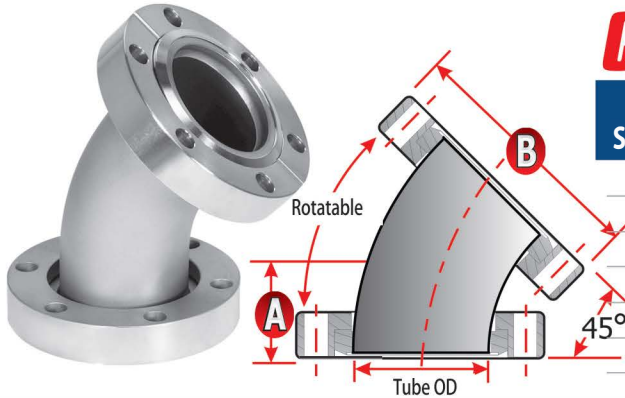
*Catalog Pricing
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1 Vacuum Fittings and Adapters

CFF CF (Conflat Flange)



CF Elbow 45°

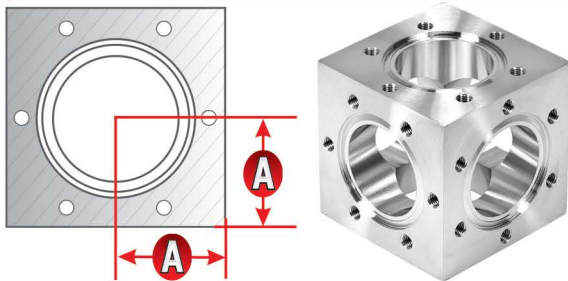
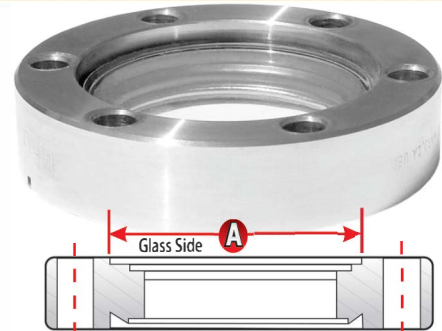
Stainless Steel

Flange Size O.D.	A	B	Tube O.D.	IDEAL VACUUM P/N	Price*
1-1/3"	1"	1-1/3"	3/4"	P104841	\$93.60
2-1/8"	1-1/4"	2-1/8"	1"	P104842	\$93.60
2-3/4"	1-3/4"	2-3/4"	1-1/2"	P104843	\$73.78
3-3/8"	2-1/8"	3-3/8"	2"	P104844	\$149.00
4-1/2"	3-3/8"	4.5"	2.5"	P104845	\$225.00
4-5/8"	4"	4-5/8"	3"	P104846	\$250.00
6.00"	5-1/4"	6"	4"	P104847	\$350.00

CF Glass Viewport

Stainless Steel

CF - Outer Diameter	A Diameter	IDEAL VACUUM P/N	Price*
1-1/3"	3/4"	P102276	\$127.07
2-3/4"	1-1/2"	P102262	\$179.95
4-1/2"	2-1/2"	P102263	\$281.12



CF 6 Way Cube

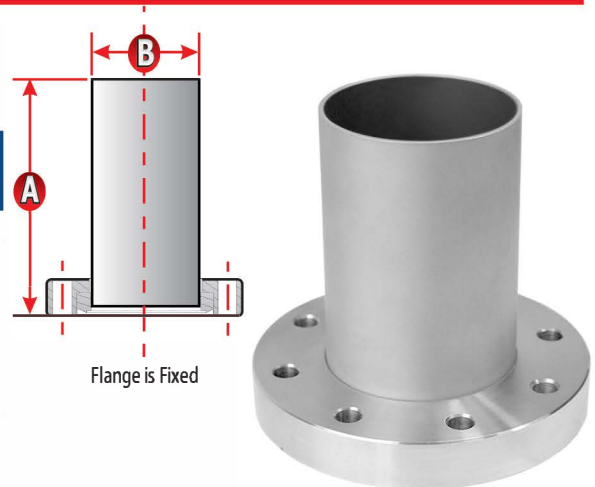
Stainless Steel

Flange Size O.D.	A	Tapped Bolt Holes	IDEAL VACUUM P/N	Price*
1-1/3"	11/16"	6	P104785	\$225.00
2-3/4"	1-3/8"	6	P104786	\$400.00

CF Half Nipple

Stainless Steel

CF - Outer Diameter	A	B	IDEAL VACUUM P/N	Price*
1-1/3"	1-1/2"	3/4"	P102200	\$46.80
2-1/8"	2-1/16"	1"	P104828	\$46.80
2-3/4"	2-1/2"	1.5"	P102199	\$42.90
3-3/8"	3-1/4"	2"	P102201	\$85.80
4-1/2"	4-1/8"	2-1/2"	P102202	\$130.00
4-5/8"	3-1/2"	3"	P104829	\$167.37
6.00"	4-3/8"	4"	P102203	\$167.37
8.00"	6-1/2"	6"	P102204	\$166.11
10.00"	8"	8"	P102205	\$338.00



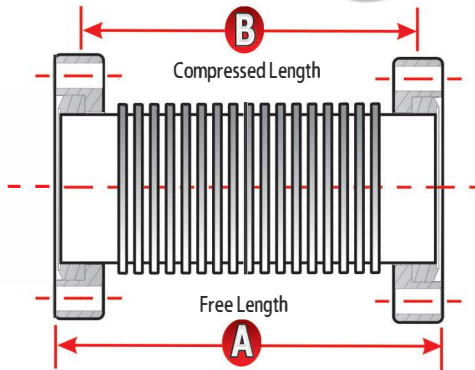
Vacuum Fittings and Adapters **1**

CFF **CF** (Conflat Flange)



CF Flexible Coupling

Stainless Steel



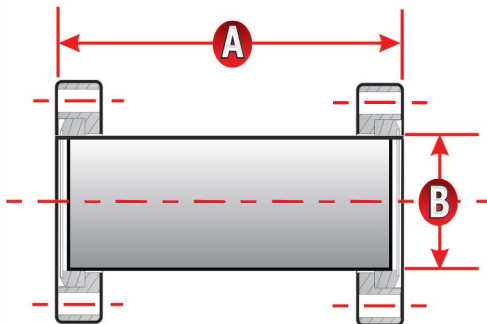
One Flange Rotatable
the Other is Fixed

CF Flange Size OD	A Free Length	B Compressed Length	IDEAL VACUUM P/N	Price*
1.33" / 1-1/3"	12"	10.90"	P102226	\$139.10
1.33" / 1-1/3"	24"	22"	P102227	\$165.10
1.33" / 1-1/3"	48"	46"	P102228	\$221.00
2.75" / 2-3/4"	12"	10.90"	P102229	\$180.70
2.75" / 2-3/4"	24"	22"	P102230	\$223.60
2.75" / 2-3/4"	48"	46"	P102231	\$306.80
3.375" / 3-3/8"	12"	10.90"	P102232	\$265.20
4.50" / 4-1/2"	12"	10.90"	P102233	\$445.90
4.50" / 4-1/2"	24"	22"	P102234	\$445.90
6.00"	12"	10.90"	P102235	\$530.40
6.00"	24"	22"	P102236	\$564.20

CF Full Nipple

Stainless Steel

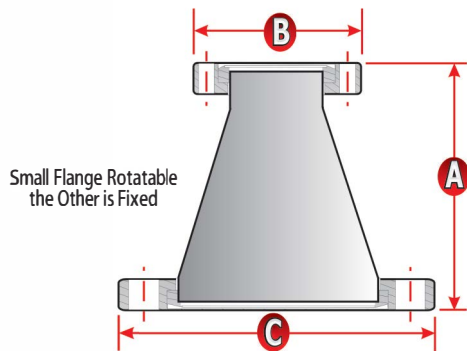
CF Flange Size OD	A	B	IDEAL VACUUM P/N	Price*
1-1/3"	3.00"	3/4"	P102206	\$60.13
2-1/8"	4-1/16"	1-3/8"	P104826	\$58.50
2-3/4"	5"	1-3/4"	P102207	\$58.50
3-3/8"	6-1/2"	2"	P102208	\$174.20
4-1/2"	8-1/4"	2-1/2"	P102209	\$247.65
4-5/8"	7-1/16"	3"	P104827	\$294.45
6.00"	8-3/4"	4"	P102210	\$294.45
8.00"	11"	6"	P102212	\$520.00
10.00"	15"	8"	P102211	\$994.50



*Catalog Pricing
Subject to Change

1 Vacuum Fittings and Adapters

CFF CF (Conflat Flange)

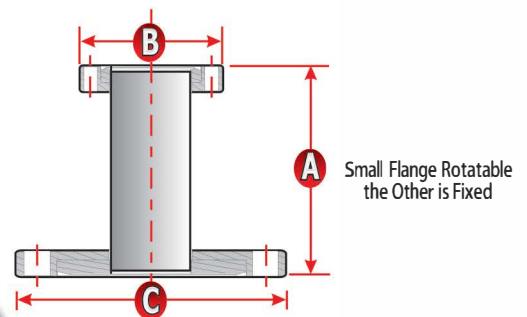


Stainless Steel CF Reducing Nipple "conical"

A	B _{O.D.}	C _{O.D.}	IDEAL VACUUM P/N	Price*
2-1/16"	1-1/3"	2-1/8"	P104787	\$104.50
3-1/16"	1-1/3"	2-3/4"	P104788	\$130.00
2-3/4"	2-1/8"	2-3/4"	P104789	\$130.00
2-3/4"	2-1/8"	3-3/8"	P104732	\$140.00
2-3/4"	2-3/4"	3-3/8"	P104731	\$135.00
2-15/16"	2-3/4"	4-1/2"	P104733	\$160.00
4-1/8"	2-3/4"	4-5/8"	P104790	\$170.00
2-15/16"	3-3/8"	4-1/2"	P104734	\$180.00
4-1/16"	3-3/8"	4-5/8"	P104735	\$195.00
4-5/16"	3-3/8"	6.00"	P104737	\$260.00
4-1/4"	4-1/2"	4-5/8"	P104736	\$270.00
4-7/16"	4-1/2"	6.00"	P104738	\$275.00
4-5/16"	4-5/8"	6.00"	P104739	\$285.00

Stainless Steel CF Reducing Nipple "straight"

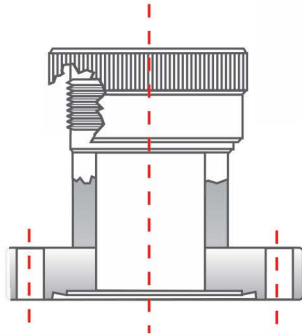
A	B _{O.D.}	C _{O.D.}	IDEAL VACUUM P/N	Price*
2-1/2"	1-1/3"	2-3/4"	P102213	\$115.00
2-1/2"	1-1/3"	4-1/2"	P102214	\$147.22
2-1/2"	1-1/3"	6.00"	P102216	\$214.17
2-3/4"	2-3/4"	4-1/2"	P102215	\$147.22
5.00"	2-3/4"	6.00"	P102217	\$227.50
5.00"	2-3/4"	8.00"	P102219	\$355.00
5.00"	2-3/4"	10.00"	P102225	\$656.17
2-1/2"	4-1/2"	6.00"	P102218	\$334.75
5.00"	4-1/2"	8.00"	P102220	\$428.35
5.00"	4-1/2"	10.00"	P102224	\$585.00
5.00"	6.00"	8.00"	P102221	\$448.50
5.00"	6.00"	10.00"	P102223	\$635.25
5.00"	8.00"	10.00"	P102222	\$763.10



*Catalog Pricing
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Vacuum Fittings and Adapters **1**

CFF **CF** (Conflat Flange)

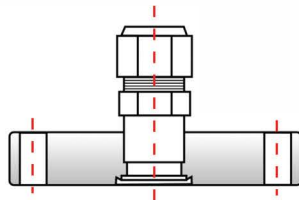
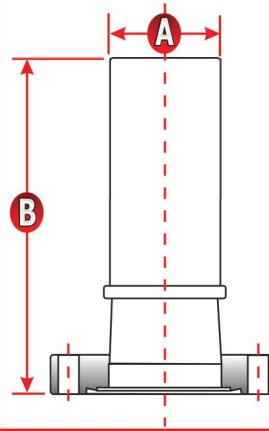


Adapter **CF Compression Port** **Stainless Steel**

CF - Conflat Port	Compression Port	Tube Size	IDEAL VACUUM P/N	Price*
1-1/3"	1/4"	1/4"	P102272	\$100.43
2-3/4"	1/4"	1/4"	P102273	\$100.43
2-3/4"	1/2"	1/2"	P102274	\$142.55
2-3/4"	1"	1"	P102275	\$149.95

Adapter **CF to Pyrex Glass to Kovar** **Stainless Steel**

CF - Conflat Port	A Glass Diameter	B Total Length	IDEAL VACUUM P/N	Price*
1-1/3"	1/4"	3.94"	P102260	\$91.00
1-1/3"	1/2"	4.88"	P102259	\$130.00
2-3/4"	1"	3.94"	P102261	\$189.00



Adapter **CF to Swagelok** **Stainless Steel**

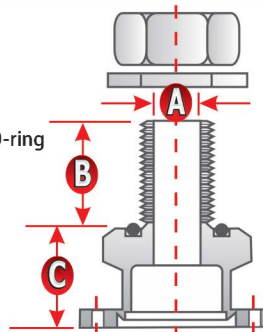
CF - Conflat Port	Swagelok Port	Tube Size	IDEAL VACUUM P/N	Price*
1-1/3"	1/4"	1/4"	P102253	\$73.78
1-1/3"	3/8"	3/8"	P102257	\$73.78
2-3/4"	1/4"	1/4"	P102254	\$80.28
2-3/4"	3/8"	3/8"	P102258	\$135.00
2-3/4"	1/2"	1/2"	P102255	\$100.43
2-3/4"	1"	1"	P102256	\$140.75

Adapter **CF to Baseplate** **Stainless Steel**

Fits through 1 inch diameter ports on baseplates up to 1 inch thick

with Viton O-ring

CF - Conflat Port	A	B	C	IDEAL VACUUM P/N	Price*
2.12" / 2-1/8"	0.75"	1.620"	1.280"	P105370	\$266.00
2.75" / 2-3/4"	0.75"	1.620"	1.280"	P105369	\$286.00



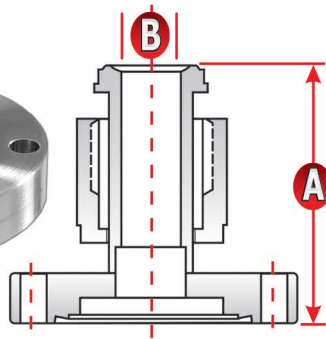
*Catalog Pricing
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1 Vacuum Fittings and Adapters

CFF CF (Conflat Flange)



Adapter CF to VCR Female

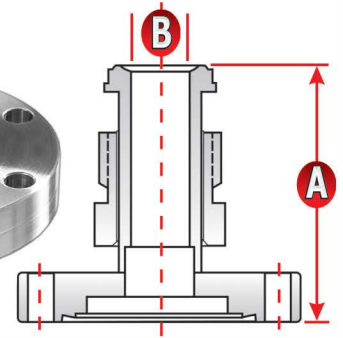
Stainless Steel

CF - Conflat Port	VCR Female Port	A Total Height	B Tube Size	IDEAL VACUUM P/N	Price*
1.33" / 1-1/3"	1/4"	1.36"	1/4"	P102268	\$73.78
1.33" / 1-1/3"	1/2"	1.55"	1/2"	P102270	\$80.28
2.75" / 2-3/4"	1/4"	1.55"	1/4"	P102269	\$80.28
2.75" / 2-3/4"	1/2"	1.75"	1/2"	P102271	\$136.95

Adapter CF to VCR Male

Stainless Steel

CF - Conflat Port	VCR Male Port	A Total Height	B Tube Size	IDEAL VACUUM P/N	Price*
1.33" / 1-1/3"	1/4"	1.36"	1/4"	P102264	\$86.50
1.33" / 1-1/3"	1/2"	1.55"	1/2"	P102266	\$93.60
2.75" / 2-3/4"	1/4"	1.55"	1/4"	P102265	\$119.95
2.75" / 2-3/4"	1/2"	1.75"	1/2"	P102267	\$145.00



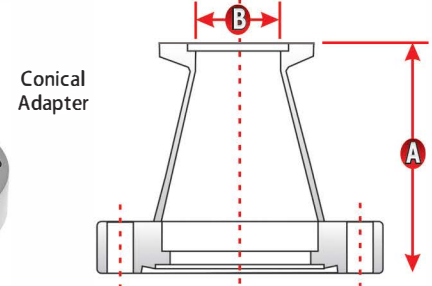
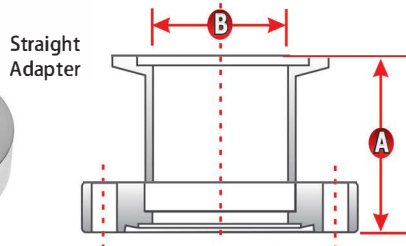
Adapter CF to KF

Straight or Conical

Stainless Steel

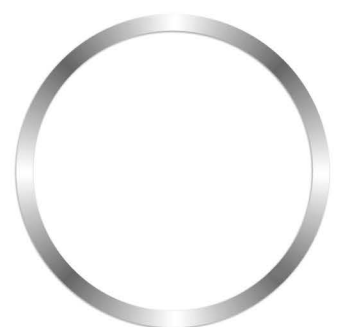
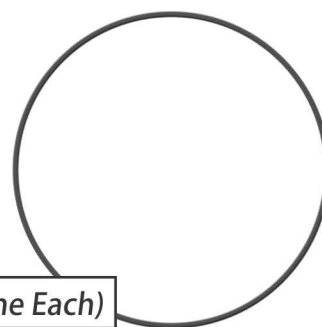
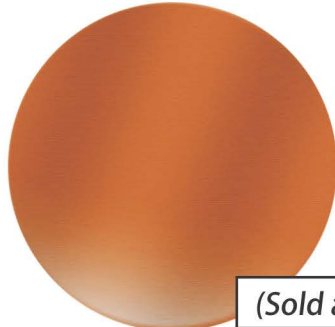
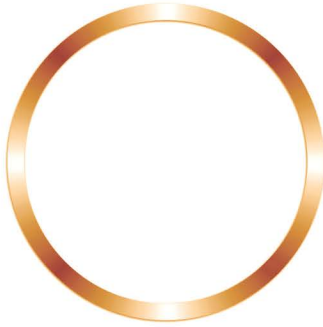
Conflat to KF Size	Adapter Type	A	B	IDEAL VACUUM P/N	Price*
CF 1-1/3 to KF16	STRAIGHT	2.08"	0.62"	P101286	\$60.90
CF 2-1/8 to KF16	CONICAL	1.69"	0.87"	P103814	\$67.25
CF 2-3/4 to KF16	STRAIGHT	2.08"	0.62"	P101290	\$64.05
CF 2-3/4 to KF16	CONICAL	2.75"	0.62"	P103815	\$76.44
CF 1-1/3 to KF25	CONICAL	1.70"	0.87"	P103816	\$78.80
CF 2-1/8 to KF25	STRAIGHT	1.81"	0.95"	P103765	\$78.95
CF 2-3/4 to KF25	STRAIGHT	1.37"	0.87"	P101287	\$68.25
CF 2-3/4 to KF25	CONICAL	2.75"	0.82"	P103817	\$91.35
CF 3-1/3 to KF25	CONICAL	2.75"	1.39"	P103818	\$107.52
CF 1-1/3 to KF 40	CONICAL	2.50"	1.39"	P103819	\$82.40
CF 2-1/8 to KF40	CONICAL	2.50"	1.39"	P103820	\$95.96
CF 2-3/4 to KF40	STRAIGHT	1.78"	1.33"	P101288	\$77.70

Conflat to KF Size	Adapter Type	A	B	IDEAL VACUUM P/N	Price*
CF 3-1/3 to KF40	STRAIGHT	1.18"	1.38"	P103766	\$135.75
CF 3-1/3 to KF40	CONICAL	2.50"	1.39"	P103821	\$130.48
CF 4-1/2 to KF40	CONICAL	2.93"	1.38"	P103822	\$168.07
CF 4-5/8 to KF40	CONICAL	4.12"	1.39"	P103823	\$211.11
CF 1-1/3 to KF50	STRAIGHT	2.00"	1.07"	P103790	\$69.70
CF 2-1/8 to KF50	CONICAL	2.68"	1.38"	P103824	\$86.31
CF 2-3/4 to KF50	STRAIGHT	1.78"	1.30"	P101966	\$95.55
CF 2-3/4 to KF50	CONICAL	2.68"	1.39"	P103825	\$109.65
CF 3-1/3 to KF50	STRAIGHT	1.58"	1.39"	P103764	\$144.50
CF 4-1/2 to KF50	STRAIGHT	1.95"	1.83"	P101289	\$154.35
CF 4-1/2 to KF50	CONICAL	2.92"	1.39"	P103826	\$180.49
CF 4-5/8 to KF50	CONICAL	1.45"	1.45"	P103827	\$231.32
CF 6 to KF 50	CONICAL	4.12"	1.37"	P103976	\$251.64
CF 8 to KF 50	STRAIGHT	1.95"	1.83"	P105217	\$412.20



Vacuum Fittings and Adapters **1**

CFF **CF** (Conflat Flange)



(Sold as One Each)

CF Copper Gaskets and Blanks

CF Flange Size	Outer Diameter In.	Inner Diameter In.	IDEAL VACUUM P/N	Price*
1.33" / 1-1/3"(Gasket)	0.838	0.640	P102277	\$2.60
2.125" / 2-1/8"(Gasket)	1.25	1.00	P104337	\$2.90
2.75" / 2-3/4"(Gasket)	1.895	1.451	P102278	\$3.10
3.375" / 3-3/8"(Gasket)	2.425	2.010	P102279	\$3.50
4.50" / 4-1/2"(Gasket)	3.242	2.506	P102280	\$4.40
4.625" / 4-5/8"(Gasket)	3.625	3.00	P104336	\$5.00
6.00"(Gasket)	4.743	4.010	P102281	\$5.64
6.75" / 6-3/4"(Gasket)	5.5625	5.03125	P104338	\$6.30
8.00"(Gasket)	6.743	6.007	P102282	\$7.41
10.00"(Gasket)	8.743	8.007	P102283	\$9.23
12.00"(Gasket)	10.75	10.00	P102284	\$41.60
13.75" / 13-3/4"(Gasket)	11.55	10.84	P102286	\$45.50
16.50" / 16-1/2"(Gasket)	14.75	14.00	P104830	\$54.90
1.33" / 1-1/3" (Blank)	0.838	NA	P104349	\$4.99
2.75" / 2-3/4" (Blank)	1.895	NA	P104350	\$6.75
3.375" / 3-3/8" (Blank)	2.425	NA	P104351	\$11.00
4.50" / 4-1/2" (Blank)	3.243	NA	P104352	\$16.35

CF Viton Elastomer Gaskets and Silver Plated Copper Gaskets

CF Flange Size	Outer Diameter In.	Inner Diameter In.	IDEAL VACUUM P/N	Price*
1.33" / 1-1/3"(Viton)	0.838	NA	P104339	\$9.00
2.125" / 2-1/8"(Viton)	1.29	NA	P104340	\$11.00
2.75" / 2-3/4"(Viton)	1.895	NA	P104341	\$14.00
3.375" / 3-3/8"(Viton)	2.425	NA	P104342	\$19.95
4.50" / 4-1/2"(Viton)	3.242	NA	P104343	\$24.95
4.625" / 4-5/8"(Viton)	3.598	NA	P104344	\$25.95
6.00"(Viton)	4.743	NA	P104345	\$29.95
6.75" / 6-3/4"(Viton)	5.5625	NA	P104346	\$38.95
8.00"(Viton)	6.743	NA	P104347	\$42.00
10.00"(Viton)	8.743	NA	P104348	\$46.00
1.33" / 1-1/3"(Silver)	0.838	0.640	P103982	\$5.50
2.75" / 2-3/4"(Silver)	1.895	1.451	P103983	\$6.00
3.375" / 3-3/8"(Silver)	2.425	2.010	P103984	\$8.98
4.50" / 4-1/2"(Silver)	3.242	2.506	P104178	\$11.00
6.00"(Silver)	4.743	4.010	P103985	\$12.00
8.00"(Silver)	6.743	6.007	P103986	\$16.95
10.00"(Silver)	8.743	8.007	P104179	\$23.00



VACUUM CHAMBER ACCESS DOOR

For quick access to a vacuum chamber. Often used for load-lock applications. With optical view port or without. Includes manual knob for tightening the door. Stainless steel with Viton O-ring.

Vacuum Range
10-8 Torr



No View Port



Glass View Port

CONFLAT CF Flange Size	IDEAL VACUUM P/N	Price*
CF 4.5" No View Port	P106069	\$799.00
CF 6" No View Port	P106070	\$959.00
CF 8" No View Port	P106071	\$1,199.00
CF 10" No View Port	P106072	\$1,450.00
CF 4.5" View Port	P106065	\$799.00
CF 6" View Port	P106066	\$899.00
CF 8" View Port	P106067	\$999.00
CF 10" View Port	P106068	\$1,299.00

* Catalog Pricing
Subject to Change

1 Vacuum Fittings and Adapters

CFF CF (Conflat Flange)

CF Bolt Kit

SilverPlated Bolts

(for Smooth Bolt Holes)

includes 12 point bolts
platenuts and washers



*1-1/3 CF is
Allen Head

Used on Conflat CF Flange Size	Bolt Size and Length	QTY.			IDEAL VACUUM P/N	Price*
		Bolts	Platenuts	Washers		
1-1/3"	* 8-32 X 0.75"	6	3	6	P104397	\$29.95
2-1/8"	1/4-24 X 1.25"	4	2	4	P104415	\$30.95
2-3/4"	1/4-28 X 1.25"	6	3	6	P104378	\$32.00
3-3/8"	5/16-24 X 1.75"	8	4	8	P104379	\$37.50
4-1/2"	5/16-24 X 2.00"	8	4	8	P104377	\$45.00
4-5/8"	5/16-24 X 2.00"	10	5	10	P104380	\$57.00
6.00"	5/16-24 X 2.00"	16	8	16	P104381	\$65.00
8.00"	5/16-24 X 2.25"	24	12	24	P104382	\$79.00
10.00"	5/16-24 X 2.50"	24	12	24	P104383	\$95.00

CF Bolt Kit

SilverPlated Bolts

(for Tapped Bolt Holes)

includes 12 point bolts
and washers



*1-1/3 CF is
Allen Head

Used on Conflat CF Flange Size	Bolt Size and Length	QTY.		IDEAL VACUUM P/N	Price*
		Bolts	Washers		
1-1/3"	* 8-32 X 0.50"	6	6	P104402	\$26.95
2-1/8"	1/4-28 X 0.875"	4	4	P104403	\$26.95
2-3/4"	1/4-28 X 0.875"	6	6	P104404	\$28.95
3-3/8"	5/16-24 X 1.25"	8	8	P104405	\$35.95
4-1/2"	5/16-24 X 1.25"	8	8	P104406	\$45.00
4-5/8"	5/16-24 X 1.25"	10	10	P104407	\$39.95
6.00"	5/16-24 X 1.25"	16	16	P104408	\$49.95
6-3/4"	5/16-24 X 1.25"	18	18	P104409	\$54.95
8.00"	5/16-24 X 1.75"	20	20	P104410	\$65.95
10.00"	5/16-24 X 1.75"	24	24	P104411	\$84.95

CF Platenuts

(for Smooth Bolt Holes)

includes platenuts
for one flange face



Used on Conflat CF Flange Size	Thread Size	QTY.	IDEAL VACUUM P/N	Price*
1-1/3"	8-32	3	P104385	\$16.95
2-1/8"	1/4-28	2	P104386	\$19.75
2-3/4"	1/4-28	3	P104387	\$23.75
3-3/8"	5/16-24	4	P104388	\$25.75
4-1/2"	5/16-24	4	P104389	\$25.75
4-5/8"	5/16-24	5	P104390	\$28.75
6.00"	5/16-24	8	P104391	\$30.75
8.00"	5/16-24	10	P104392	\$35.75
10.00"	5/16-24	12	P104393	\$35.75

CF Studs

SilverPlated
(for Tapped Bolt Holes)

for non-plated bolts



Used on Conflat CF Flange Size	Bolt Size and Length	QTY.	IDEAL VACUUM P/N	Price*
4-1/2, 4-5/8, 6, 8, 10, 12 in.	5/16-24 X 2.00"	25	P104396	\$59.95
4-1/2, 4-5/8, 6, 8, 10, 12 in.	5/16-24 X 2.50"	25	P104400	\$69.95
4-1/2, 4-5/8, 6, 8, 10, 12 in.	5/16-24 X 3.00"	25	P104401	\$75.95

CF Hex Bolt Kit

METRIC

SilverPlated Bolts

(for Smooth Bolt Holes)



Used on Conflat CF Flange Size	Thread Size	QTY.			IDEAL VACUUM P/N	Price*
		Bolts	Platenuts	Washers		
2-3/4"	M6 X 35mm	25	13	25	P104412	\$65.00
4-1/2"	M8 X 35mm	25	13	25	P104413	\$75.00
6.00"	M8 X 55mm	25	13	25	P104414	\$85.00

CF Hex Nuts

SilverPlated

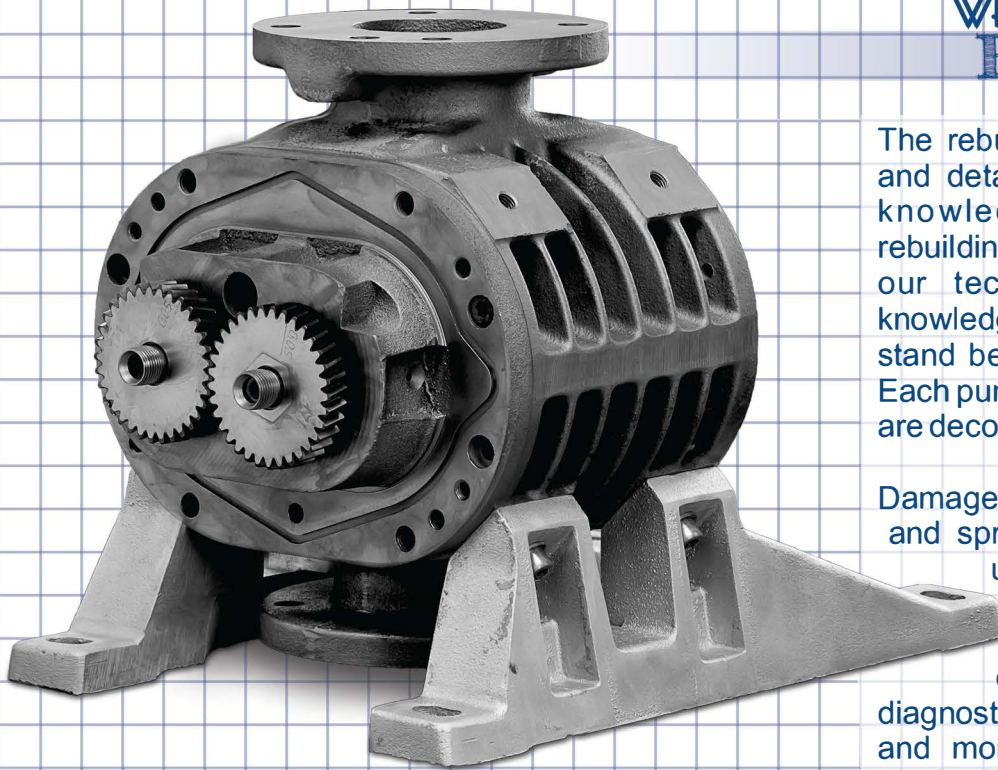
for non-plated bolts



Used on Conflat CF Flange Size	Thread Size	QTY.	IDEAL VACUUM P/N	Price*
2-1/8" & 2-3/4"	1/4-28	25	P104398	\$19.95
3-3/4" thru 12"	5/16-24	25	P104399	\$21.95

SilverPlated Bolts for DOUBLE FACED FLANGES
see website www.idealvac.com

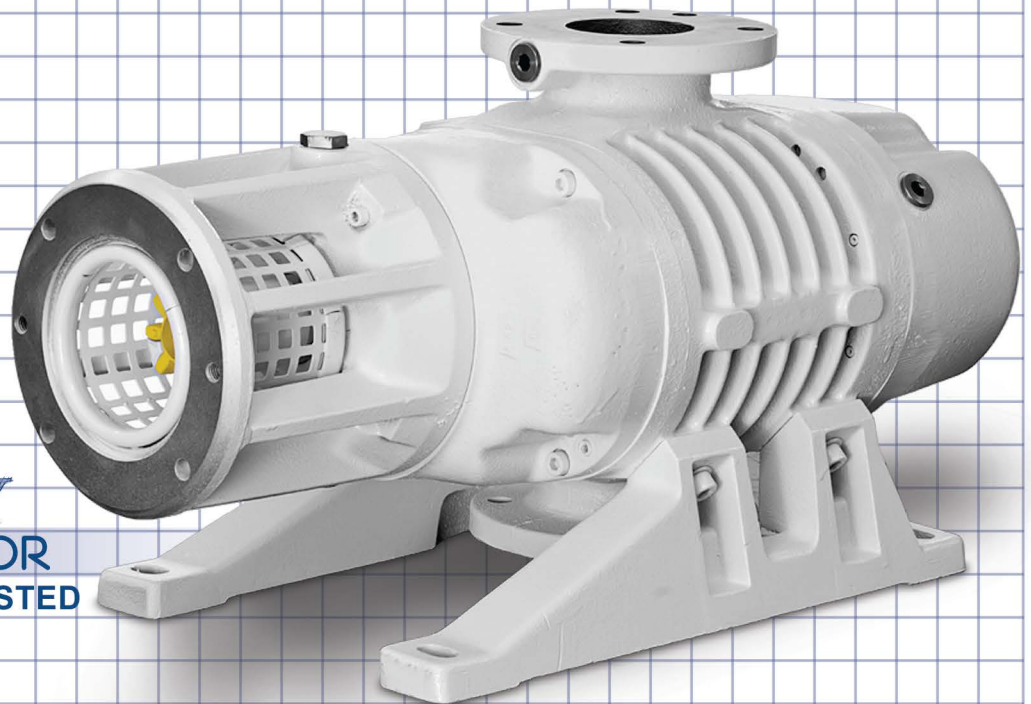
SERVICE DEPARTMENT



WE REBUILD ROOT BLOWERS BOOSTER PUMPS

The rebuilding procedure is rigorous and detailed that requires extensive knowledge and experience in rebuilding, repairing and testing. It is our technician's experience and knowledge that gives us confidence to stand behind the quality of our work. Each pump is fully dismantled, all parts are decontaminated and inspected.

Damaged or worn parts, o-rings, seals and springs are replaced. After the unit has been re-assembled and painted, the pump is attached to our computer controlled pressure diagnostics system, where it is tested and monitored for 72 hours under varying loads.



**90 DAYS
WARRANTY
ON PARTS & LABOR
UNITS ARE FULLY TESTED**

www.idealvac.com (505)872-0037

Ideal LLC
vacuum products 1-64

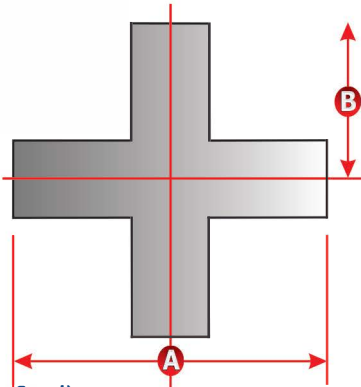
1 Vacuum Fittings and Adapters

Buttweld Tube Weld Fittings

4 Way Cross



(304 Stainless Steel)

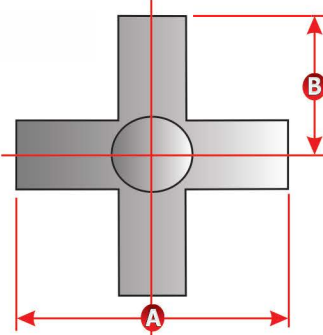


Tube O.D.	Wall Thickness	A	B	IDEAL VACUUM P/N	Price*
1/2"	0.065"	1.50"	0.75"	P105021	\$36.80
3/4"	0.065"	2.00"	1.00"	P105023	\$42.00
1.0"	0.065"	3.75"	1.87"	P105022	\$45.20
1.5"	0.065"	4.50"	2.25"	P105024	\$50.40
2.0"	0.065"	6.00"	3.00"	P105025	\$68.30
2.5"	0.065"	6.00"	3.00"	P105026	\$84.00
3.0"	0.065"	6.37"	3.25"	P105027	\$126.00
4.0"	0.083"	7.75"	3.87"	P105028	\$152.30
6.0"	0.109"	10.00"	5.00"	P105071	\$245.00

5 Way Cross



(304 Stainless Steel)

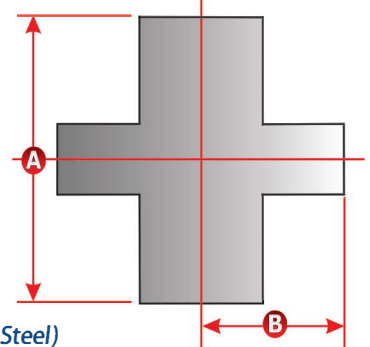


Tube O.D.	Wall Thickness	A	B	IDEAL VACUUM P/N	Price*
3/4"	0.065"	2.00"	1.00"	P105055	\$88.00
1.0"	0.065"	3.75"	1.87"	P105056	\$112.00
1.5"	0.065"	4.50"	2.25"	P105057	\$149.00
2.0"	0.065"	6.00"	3.00"	P105058	\$165.00
2.5"	0.065"	6.00"	3.00"	P105059	\$185.00
3.0"	0.065"	6.50"	3.25"	P105060	\$190.00
4.0"	0.083"	7.75"	3.87"	P105061	\$240.00
6.0"	0.083"	10.00"	5.00"	P105062	\$365.00

4 Way Cross Reducer



(304 Stainless Steel)



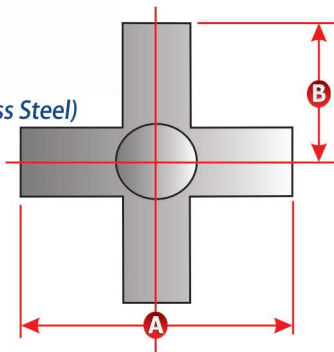
Tube O.D.	Wall Thickness	A	B	IDEAL VACUUM P/N	Price*
1.0" x 1/2"	0.065" x 0.065"	3.75"	1.00"	P105029	\$66.00
1.0" x 3/4"	0.065" x 0.065"	3.75"	1.12"	P105030	\$66.50
1.5" x 1/2"	0.065" x 0.065"	4.12"	1.25"	P105031	\$69.50
1.5" x 3/4"	0.065" x 0.065"	4.12"	1.37"	P105032	\$72.50
1.5" x 1.0"	0.065" x 0.065"	4.12"	2.12"	P105033	\$85.00
2.0" x 1/2"	0.065" x 0.065"	6.00"	1.50"	P105034	\$89.95
2.0" x 3/4"	0.065" x 0.065"	6.00"	1.62"	P105035	\$91.50
2.0" x 1.0"	0.065" x 0.065"	6.00"	1.62"	P105036	\$99.50
2.0" x 1.5"	0.065" x 0.065"	6.00"	2.50"	P105037	\$105.00
2.5" x 1.5"	0.065" x 0.065"	6.00"	2.75"	P105038	\$107.00
2.5" x 2.0"	0.065" x 0.065"	6.00"	3.25"	P105039	\$112.75
3.0" x 1.5"	0.065" x 0.065"	6.50"	3.00"	P105040	\$135.00
3.0" x 2.0"	0.065" x 0.065"	6.50"	3.50"	P105041	\$139.55
3.0" x 2.5"	0.065" x 0.065"	6.50"	3.25"	P105042	\$142.50
4.0" x 1.5"	0.083" x 0.065"	7.75"	3.50"	P105043	\$149.95
4.0" x 2.0"	0.083" x 0.065"	7.75"	4.00"	P105072	\$152.50
4.0" x 2.5"	0.083" x 0.065"	7.75"	3.75"	P105044	\$154.00
4.0" x 3.0"	0.083" x 0.065"	7.75"	3.75"	P105045	\$166.32
6.0" x 1.5"	0.083" x 0.065"	10.00"	4.12"	P105046	\$189.95
6.0" x 2.0"	0.083" x 0.065"	10.00"	5.00"	P105047	\$225.00
6.0" x 2.5"	0.083" x 0.065"	10.00"	4.75"	P105048	\$245.00
6.0" x 3.0"	0.083" x 0.065"	10.00"	4.75"	P105049	\$265.00
6.0" x 4.0"	0.083" x 0.083"	10.00"	4.87"	P105050	\$265.00

Vacuum Fittings and Adapters **1**

Buttweld Tube Weld Fittings

6 Way Cross

(304 Stainless Steel)



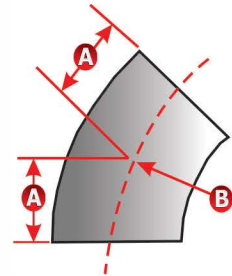
Tube O.D.	Wall Thickness	A	B	IDEAL VACUUM P/N	Price*
3/4"	0.065"	2.00"	1.00"	P105063	\$99.00
1.0"	0.065"	3.75"	1.87"	P105064	\$120.00
1.5"	0.065"	4.50"	2.25"	P105065	\$155.00
2.0"	0.065"	6.00"	3.00"	P105066	\$180.00
2.5"	0.065"	6.00"	3.00"	P105067	\$210.00
3.0"	0.065"	6.50"	3.25"	P105068	\$240.00
4.0"	0.083"	7.75"	3.87"	P105069	\$290.00
6.0"	0.109"	10.00"	5.00"	P105070	\$399.00

Elbow 45° (short)

Tumbled Unpolished or Polished



(304 Stainless Steel)



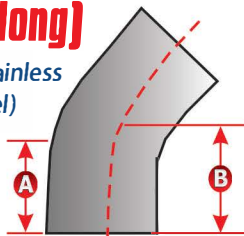
Tube O.D.	Wall Thickness	A	B	IDEAL VACUUM P/N	Price*
1/2" (unpolished)	0.065"	0.31"	0.75"	P105054	\$8.50
3/4" (unpolished)	0.065"	0.50"	1.14"	P105073	\$9.95
1.0" (unpolished)	0.065"	0.63"	1.50"	P105074	\$12.50
1.5" (unpolished)	0.065"	0.94"	2.25"	P103275	\$16.95
2.0" (polished)	0.065"	1.25"	3.00"	P103276	\$17.90
2.5" (polished)	0.065"	1.57"	3.75"	P105051	\$36.50
3.0" (polished)	0.065"	1.85"	4.50"	P105052	\$46.50
4.0" (polished)	0.083"	2.50"	6.00"	P105053	\$67.50

Elbow 45° with tangents (long)

Tumbled Unpolished (304 Stainless Steel)



(304 Stainless Steel)



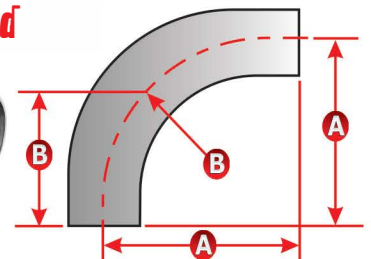
Tube O.D.	Wall Thickness	A	B	IDEAL VACUUM P/N	Price*
3/4"	0.065"	0.75"	1.12"	P104962	\$9.00
1.0"	0.065"	1.18"	1.50"	P104963	\$12.50
1.5"	0.065"	1.63"	2.25"	P103211	\$18.00
2.0"	0.065"	2.32"	3.00"	P104964	\$40.00
2.5"	0.065"	3.00"	3.75"	P104965	\$53.00
3.0"	0.065"	3.69"	4.12"	P104966	\$65.00
4.0"	0.083"	4.81"	6.00"	P104967	\$80.00

Elbow 90° with tangents (long)

Tumbled Unpolished



(304 Stainless Steel)



Tube O.D.	Wall Thickness	A	B	IDEAL VACUUM P/N	Price*
3/4"	0.065"	2.5"	1.10"	P104960	\$16.50
1.0"	0.065"	1.81"	1.50"	P104961	\$23.50
1.5"	0.065"	2.40"	2.25"	P103212	\$25.00
2.0"	0.065"	4.06"	3.00"	P104956	\$40.00
2.5"	0.065"	5.19"	3.75"	P104957	\$57.00
3.0"	0.065"	6.31"	4.50"	P104958	\$65.00
4.0"	0.083"	8.31"	6.00"	P104959	\$80.00

* Catalog Pricing
Subject to Change

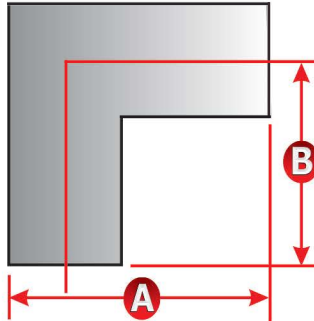
1 Vacuum Fittings and Adapters

Buttweld Tube Weld Fittings

Elbow 90° Mitered Tumbled Unpolished



(304 Stainless Steel)

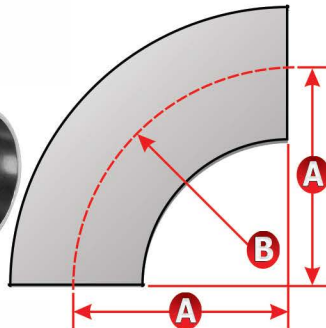


Tube O.D.	Wall Thickness	A	B	IDEAL VACUUM P/N	Price*
3/4"	0.065"	1.37"	1.00"	P104981	\$25.00
1.0"	0.065"	2.37"	1.87"	P104982	\$40.00
1.5"	0.065"	3.00"	2.25"	P104983	\$57.00
2.0"	0.065"	3.62"	2.62"	P104984	\$63.00
2.5"	0.065"	4.25"	3.00"	P104985	\$69.00
3.0"	0.065"	4.75"	3.25"	P104986	\$73.00
4.0"	0.083"	5.90"	3.92"	P104974	\$80.00
5.0"	0.083"	9.06"	6.05"	P104987	\$150.00

Elbow 90° Tumbled Unpolished



(304 Stainless Steel)

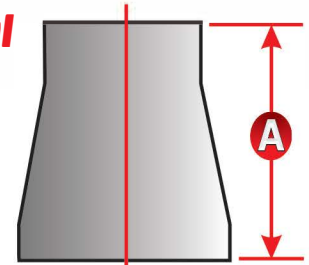


Tube O.D.	Wall Thickness	A	B	IDEAL VACUUM P/N	Price*
1/2"	0.065"	0.75"	0.75"	P104977	\$9.00
3/4"	0.065"	1.15"	1.15"	P104174	\$13.00
1.0"	0.065"	1.50"	1.50"	P103887	\$17.40
1.5"	0.065"	2.25"	2.25"	P103277	\$19.50
2.0"	0.065"	3.00"	3.00"	P103278	\$31.20
2.5"	0.065"	3.75"	3.75"	P104978	\$32.00
3.0"	0.065"	4.50"	4.50"	P104979	\$49.00
4.0"	0.083"	6.00"	6.00"	P104980	\$60.90

Concentric Reducer Conical



(304 Stainless Steel)

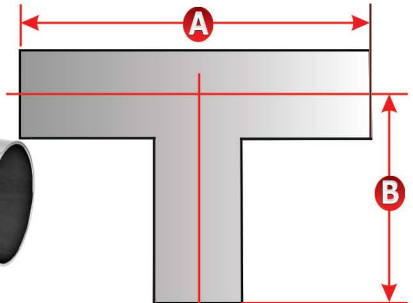


Tube O.D.	Wall Thickness	A	IDEAL VACUUM P/N	Price*
0.50" X 1.00"	0.065"	1.37"	P104993	\$29.95
0.75" X 1.00"	0.065"	2.37"	P104994	\$32.50
0.50" X 1.50"	0.065"	2.37"	P104995	\$45.95
0.75" X 1.50"	0.065"	2.37"	P104996	\$52.50
1.00" X 1.50"	0.065"	2.37"	P104029	\$35.95
1.00" X 2.00"	0.065"	2.37"	P104100	\$35.95
1.50" X 2.00"	0.065"	2.37"	P103271	\$34.14
1.50" X 2.50"	0.065"	2.37"	P104997	\$40.32
2.00" X 2.50"	0.065"	2.37"	P103279	\$39.36
1.50" X 3.00"	0.065"	3.62"	P104998	\$53.40
2.00" X 3.00"	0.065"	3.62"	P103272	\$49.98
2.50" X 3.00"	0.065"	3.62"	P103273	\$56.65
2.00" X 4.00"	0.083" X 0.065"	3.62"	P103274	\$59.95
2.50" X 4.00"	0.083" X 0.065"	3.62"	P104975	\$62.50
3.00" X 4.00"	0.083" X 0.065"	3.62"	P104999	\$74.50

3-Way Tee Tumbled Unpolished



(304 Stainless Steel)



Tube O.D.	Wall Thickness	A	B	IDEAL VACUUM P/N	Price*
1/2"	0.065"	1.50"	0.75"	P104988	\$17.90
3/4"	0.065"	3.75"	1.90"	P104992	\$18.90
1.0"	0.065"	4.8"	2.40"	P104173	\$20.00
1.5"	0.065"	4.5"	2.25"	P104989	\$29.40
2.0"	0.065"	6.00"	3.00"	P104028	\$32.60
2.5"	0.065"	6.00"	3.00"	P104991	\$50.40
3.0"	0.065"	6.50"	3.25"	P104550	\$57.80
4.0"	0.083"	8.00"	4.00"	P104990	\$84.00

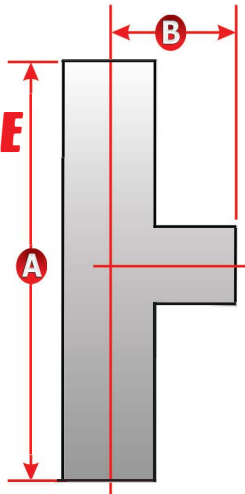
Vacuum Fittings and Adapters **1**

Buttweld Tube Weld Fittings

3 Way Reducing TEE



(304 Stainless Steel)



Tube O.D.	Wall Thickness	A	B	IDEAL VACUUM P/N	Price*
0.50" X 1.00"	0.065"	3.75"	1.00"	P105000	\$31.50
0.75" X 1.00"	0.065"	3.75"	1.10"	P105001	\$39.75
0.50" X 1.50"	0.065"	4.50"	1.25"	P103269	\$45.25
0.75" X 1.50"	0.065"	4.50"	1.38"	P105002	\$42.50
1.00" X 1.50"	0.065"	4.50"	2.13"	P103270	\$43.50
0.50" X 2.00"	0.065"	6.00"	1.50"	P105003	\$49.95
0.75" X 2.00"	0.065"	6.00"	1.61"	P105004	\$56.65
1.00" X 2.00"	0.065"	6.00"	2.36"	P105005	\$59.95
1.50" X 2.00"	0.065"	6.00"	2.50"	P105006	\$62.50
1.50" X 2.50"	0.065"	6.00"	2.75"	P105007	\$67.87
2.00" X 2.50"	0.065"	6.00"	3.25"	P105008	\$78.20
1.50" X 3.00"	0.065"	6.50"	3.00"	P105009	\$81.35
2.00" X 3.00"	0.065"	6.50"	3.50"	P105010	\$84.50
2.50" X 3.00"	0.065"	6.50"	3.25"	P105011	\$86.95
1.50" X 4.00"	0.083 X 0.065"	7.75"	3.50"	P105012	\$95.10
2.00" X 4.00"	0.083 X 0.065"	7.75"	4.00"	P105013	\$94.50
2.50" X 4.00"	0.083 X 0.065"	7.75"	3.75"	P105014	\$105.00
3.00" X 4.00"	0.083 X 0.065"	7.75"	3.75"	P105015	\$125.00
1.50" X 6.00"	0.083 X 0.065"	10.00"	4.50"	P105016	\$136.50
2.00" X 6.00"	0.083 X 0.065"	10.00"	5.00"	P105017	\$150.00
2.50" X 6.00"	0.083 X 0.065"	10.00"	4.75"	P105018	\$175.00
3.00" X 6.00"	0.083 X 0.065"	10.00"	4.75"	P105019	\$195.00
4.00" X 6.00"	0.083 X 0.083"	10.00"	4.88"	P105020	\$210.00

Tubing Mechanically Polished

(Sold per foot)



(304 Stainless Steel)

Tube O.D.	Wall Thickness	For Flange SIZE	IDEAL VACUUM P/N	Price*
1/2"	0.065"	NW10 KF10	P103723	\$29.50
3/4"	0.065"	NW16 KF16	P103724	\$32.50
1.0"	0.065"	NW25 KF25	P103725	\$32.50
1.5"	0.065"	NW40 KF40	P103726	\$32.99
2.0"	0.065"	NW50 KF50	P103727	\$45.00
2.5"	0.065"	ISO63 LF63	P103728	\$89.50
3.0"	0.065"	ISO80 LF80	P103729	\$69.50
4.0"	0.083"	ISO100 LF100	P103730	\$89.00

* Catalog Pricing
Subject to Change

1 Vacuum Fittings and Adapters

NPT PVC and Stainless

Adapter Plastic UNION

Female National Pipe Thread (FNPT) on Each End



FNPT to FNPT		IDEAL VACUUM P/N	Price*
1/2"	1/2"	P103543	\$14.95
3/4"	3/4"	P103544	\$15.55
1.0"	1.0"	P103540	\$15.95
1-1/4"	1-1/4"	P103542	\$24.95
1-1/2"	1-1/2"	P103541	\$29.95

Adapter Plastic Elbow 90°

Elbow Rubber Hose Barb to Female National Pipe Thread (FNPT)



Hose Barb to FNPT		IDEAL VACUUM P/N	Price*
1/2"	1/2"	P103518	\$6.95
3/4"	3/4"	P103519	\$7.55
1.0"	1/2"	P103533	\$7.55
1.0"	3/4"	P103531	\$7.55
1.0"	1.0"	P103520	\$8.55
1-1/2"	1-1/4"	P103532	\$12.95
1-1/2"	1-1/2"	P103517	\$13.95

Adapter Plastic Elbow 90°

Elbow Female National Pipe Thread (FNPT) on Each End



FNPT to FNPT		IDEAL VACUUM P/N	Price*
1/2"	1/2"	P103691	\$6.95
3/4"	3/4"	P103693	\$8.95
1.0"	1.0"	P103694	\$12.95
1-1/4"	1-1/4"	P103737	\$14.95
1-1/2"	1-1/2"	P103690	\$16.95
2.0"	2.0"	P103692	\$19.95

Adapter Plastic Hose Barb to FNPT

Rubber Hose Barb to Female National Pipe Thread (FNPT)



Hose Barb to FNPT		IDEAL VACUUM P/N	Price*
1/2"	1/2"	P103498	\$7.16
3/4"	3/4"	P103499	\$7.16
1-1/4"	1-1/4"	P103500	\$9.96
1-1/2"	1-1/2"	P103501	\$11.96
2.0"	2.0"	P103447	\$13.96

Vacuum Fittings and Adapters **1**

NPT PVC and Stainless

Adapter Plastic TEE

Female National Pipe Thread (FNPT)
on Each End

(Polyvinyl Chloride PVC)



FNPT to FNPT		IDEAL VACUUM P/N	Price*
1/2"	1/2"	P103697	\$9.95
3/4"	3/4"	P103696	\$12.95
1.0"	1.0"	P103695	\$14.95

Adapter Hose Barb Plug End

Hose Barb Plug to End Cap

(Polyvinyl Chloride PVC)

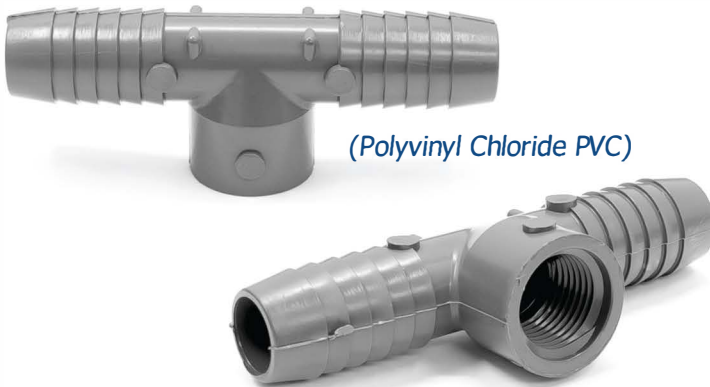


Hose Barb Plug	IDEAL VACUUM P/N	Price*
1/2"	P103546	\$6.95
3/4"	P103547	\$7.55
1.0"	P103545	\$7.95

Adapter Plastic TEE

TEE Rubber Hose Barb to Female National Pipe Thread (FNPT)

(Polyvinyl Chloride PVC)



Hose Barb to FNPT		IDEAL VACUUM P/N	Price*
1/2"	1/2"	P103510	\$6.95
3/4"	1/2"	P103513	\$7.25
3/4"	3/4"	P103511	\$8.25
1.0"	1/2"	P103514	\$8.55
1.0"	3/4"	P103512	\$8.55

Adapter Coupling Hose Barb to Hose Barb

Rubber Hose Barb to Hose Barb

(Polyvinyl Chloride PVC)



Hose barb	to	hose barb	IDEAL VACUUM P/N	Price*
3/4"		1/2"	P103502	\$6.95
3/4"		3/4"	P103506	\$6.95
1.0"		3/4"	P103504	\$6.95
1.0"		1.0"	P103508	\$6.95
1-1/4"		1.0"	P103503	\$6.95
1-1/4"		1-1/4"	P103509	\$9.99
1-1/2"		1-1/4"	P103505	\$8.95
1-1/2"		1-1/2"	P103687	\$12.95
2.0"		1-1/2"	P103688	\$15.95
2.0"		2.0"	P103689	\$18.95

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1 Vacuum Fittings and Adapters

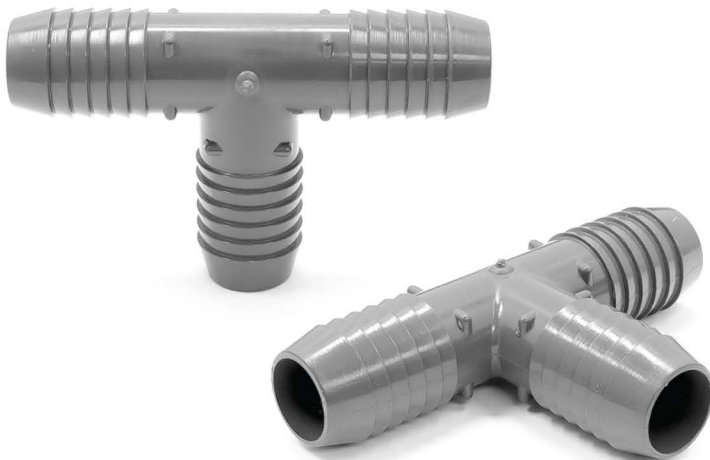
NPT PVC and Stainless

Adapter Plastic Hose Barb to MNPT Elbow (Polyvinyl Chloride PVC)
Rubber Hose Bard to Male National Pipe Thread 90° Elbow (MNPT)



Hose Barb to MNPT Elbow	IDEAL VACUUM P/N	Price*
3/4"	3/4"	P103516 \$6.95
1.0"	1.0"	P103534 \$8.25

Adapter Plastic TEE
TEE Rubber Hose Barb to /Rubber Hose Barb (Polyvinyl Chloride PVC)



Hose Barb all Ends	IDEAL VACUUM P/N	Price*
1/2"	P103538	\$6.95
3/4"	P103539	\$6.95
1.0"	P103535	\$7.25
1-1/4"	P103537	\$9.95
1-1/2"	P103536	\$11.35
2.0"	P103515	\$13.36

Adapter Plastic Hose Barb to MNPT (Polyvinyl Chloride PVC)
Rubber Hose Bard to Male National Pipe Thread (MNPT)



Hose Barb to MNPT	IDEAL VACUUM P/N	Price*
1/2" 1/2"	P103681	\$6.95
1/2" 3/4"	P103668	\$7.16
3/4" 3/4"	P103682	\$8.95
1.0" 1.0"	P103683	\$8.95
1.0" 1-1/4"	P103670	\$9.96
1-1/4" 1-1/4"	P103666	\$12.95
1-1/2" 1-1/2"	P103669	\$13.96
2.0" 2.0"	P103667	\$15.95

Male NPT Full Nipple PVC Adapter Full Nipple
Male National Pipe Thread (MNPT)
(Polyvinyl Chloride PVC)



MNPT Both Ends	Length	IDEAL VACUUM P/N	Price*
1/2"	4.0"	P103676	\$9.95
1/2"	8.0"	P103675	\$12.95
3/4"	8.0"	P103674	\$12.95
1.0"	8.0"	P103677	\$14.95
1-1/2"	8.0"	P103678	\$16.95
2.0"	2.0"	P103680	\$12.16
2.0"	8.0"	P103679	\$19.95

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Vacuum Fittings and Adapters **1**

NPT PVC and Stainless

(MNPT)

(Hose Barb)



Adapter Hose Barb to MNPT (Stainless Steel 304 SS)
Rubber Hose Barb to Male National Pipe Thread

Hose Barb to MNPT	Steel	IDEAL VACUUM P/N	Price*
1/8"	1/8"	304 SS P103525	\$14.95
1/4"	1/8"	304 SS P103523	\$16.95
1/8"	1/4"	304 SS P103524	\$17.95
1/4"	1/4"	304 SS P103895	\$18.95
1/4"	3/8"	304 SS P105400	\$22.50
1/4"	1/2"	304 SS P103526	\$29.95
3/8"	1/4"	304 SS P103497	\$19.95
3/8"	3/8"	304 SS P103527	\$19.95
3/8"	1/2"	304 SS P103321	\$28.95
1/2"	1/4"	304 SS P103522	\$28.95
1/2"	3/8"	304 SS P103528	\$29.95
1/2"	1/2"	304 SS P103529	\$33.50
1/2"	1/2"	316 SS P105574	\$23.50
3/4"	3/4"	304 SS P103530	\$44.25
3/4"	3/4"	316 SS P105576	\$23.50
1-1/4"	1-1/4"	316 SS P105577	\$30.00
1-1/2"	1-1/2"	316 SS P105575	\$34.50
2.0"	2.0"	316 SS P105578	\$47.50

Adapter MNPT to PVC Pipe Female Male National Pipe Thread to Polyvinyl Chloride PVC Pipe (Polyvinyl Chloride PVC)



MNPT to Female Pipe PVC	IDEAL VACUUM P/N	Price*
1.0" 1.0"	P103698	\$17.96

MNPT to MNPT (Stainless Steel)
 Male National Pipe Thread on Both Ends



MNPT to MNPT	IDEAL VACUUM P/N	Price*
1/8"	P105579	\$13.25
1/4"	P105580	\$14.75
3/8"	P105581	\$17.25
1/2"	P105582	\$18.50
3/4"	P105583	\$19.50
1.0"	P105584	\$20.75
1-1/4"	P105585	\$24.25
1-1/2"	P105586	\$26.50
2.0"	P105587	\$28.50

Adapter Plastic Elbow 90°
 Elbow Rubber Hose Barb to Hose Barb (Polyvinyl Chloride PVC)



Elbow Hose Barb Plug to Hose Barb	IDEAL VACUUM P/N	Price*
1/2"	P103672	\$6.95
3/4"	P103673	\$6.95
1.0"	P103671	\$6.95
1-1/4"	P103685	\$12.95
1-1/2"	P103684	\$16.95
2.0"	P103686	\$19.95

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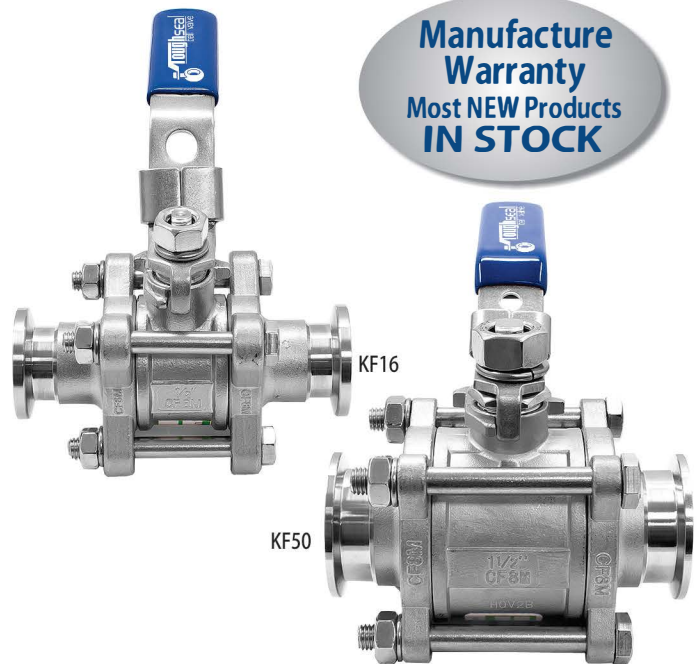
1 Vacuum Valves

Ball Valves

Ideal Vacuum Ball Valves KF (Manual)

Tough Seal Vacuum Ball Valves have the advantage of being turned completely off to on in one 90 degree rotation of the handle while offering high gas throughput and conductance. Our vacuum ball valves are designed to have a low leak rate, typically on the order of 1×10^{-9} std. cc/sec.Helium. These ball valves have a NWKF16 to NWKF50 vacuum flange for connection to the vacuum system, are manually operated, and made of stainless steel.

KF Model	IDEAL VAC P/N	Price*
Ball Valve KF16	P103568	\$223.25
Ball Valve KF25	P103569	\$253.00
Ball Valve KF40	P103570	\$329.50
Ball Valve KF50	P103575	\$369.50



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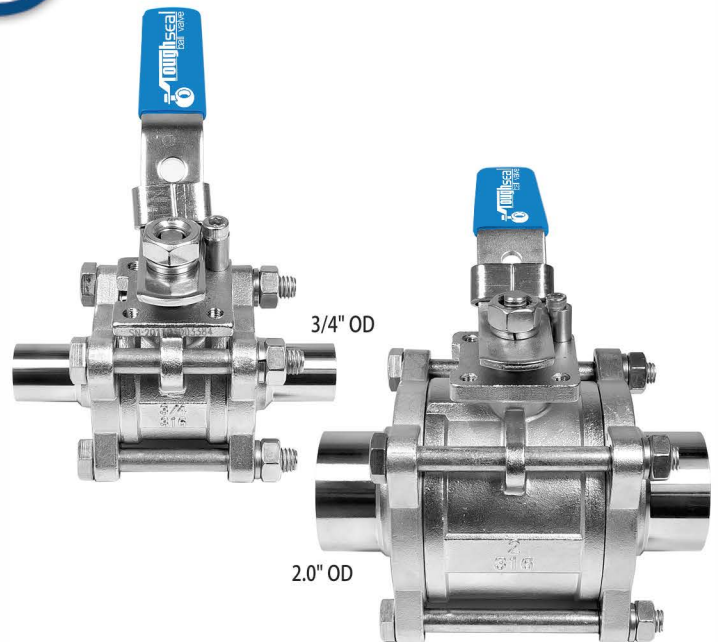
Ideal Vacuum Products



Ideal Vacuum Ball Valves WELD ON (Manual)

Tough Seal Vacuum Ball Valves have the advantage of being turned completely off to on in one 90 degree rotation of the handle while offering high gas throughput and conductance. Our vacuum ball valves are designed to have a low leak rate, typically on the order of 1×10^{-9} std. cc/sec.Helium. These ball valves are for weld on vacuum flanges for connection to the vacuum system, are manually operated, and made of stainless steel.

WELD ON Model	O.D.	Wall Thickness	IDEAL VAC P/N	Price*
Weld On Ball Valve	3/4"	0.065 (1/16")	P103931	\$123.75
Weld On Ball Valve	1.0"	0.065 (1/16")	P103932	\$145.00
Weld On Ball Valve	1.5"	0.065 (1/16")	P103933	\$258.75
Weld On Ball Valve	2.0"	0.065 (1/16")	P103934	\$371.25



* Catalog Pricing
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Vacuum Valves **1**

Butterfly Valves



BLUE Butterfly Valves
MADE IN THE USA
 by Ideal Vacuum Products

Manual Butterfly Valves NWKF - CF (conflat)

These manual butterfly valves provide a low-cost alternative to bellows sealed gate valves. These valves easily actuate from the fully-closed position to fully open with only a quarter turn of the knob. A patented design allows the sealing disk to center itself when closing, with even pressure around the Viton O-ring seal. This design also helps to lower the amount of scuffing or rolling of the O-ring. Quarter-turn actuation, small footprint and the shortest possible gas path make manual butterfly valves the preferred choice for many applications. These vacuum butterfly valves are designed to have a low leak rate, typically on the order of 1×10^{-9} std. cc/sec. Helium. We carry these butterfly valves in CF (conflat) and NWKF (quick flange) sizes.



CF Butterfly Valve

KF **BLUE** Butterfly Valve



KF/CF Model	IDEAL VAC P/N	Price*
Blue Butterfly Valve KF16	P104242	\$285.00
Blue Butterfly Valve KF25	P104243	\$299.95
Blue Butterfly Valve KF40	P104244	\$315.00
Blue Butterfly Valve KF50	P104245	\$345.00
Butterfly Valve CF Conflat 1.33"	P104246	\$335.00
Butterfly Valve CF Conflat 2.75"	P104247	\$425.00
Butterfly Valve CF Conflat 3.375"	P104248	\$475.00



KF 50



KF 40



KF 25

KF 16

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1-74

1 Vacuum Valves Bellows Valves

AGILENT Varian

Direct Acting Electromagnetic Block Bellows Valves KF

Agilent Varian aluminum direct acting electromagnetic block bellows valves are the valves of choice for medium and high-vacuum requirements. These low-cost, compact, and reliable valves are used for applications in semiconductor manufacturing, R&D, and industrial vacuum systems. Agilent Varian block valves will reliably achieve 300,000 cycles or more in most applications. This block valve has KF16 or KF25 size flanges and has wiring for 115 VAC or 24VDC.

KF	Model	IDEAL VAC P/N	Agilent P/N	Price*
Block Valve	KF16, 115VAC	P102718	L9940302	\$297.00
Block Valve	KF25, 115VAC	P102719	L9942302	\$365.00
Block Valve	KF16, 24VDC	P102720	L9940306	\$355.00
Block Valve	KF25, 24VDC	P102721	L9942306	\$335.00



KF Electromagnetic

Manufacture
Warranty
Most NEW Products
IN STOCK

Inline/Right Angle Manual Block Bellows Valves KF/CF

Agilent Varian aluminum bellows block valves are the valves of choice for medium and high-vacuum requirements. These low-cost, compact, and reliable valves are used for applications in semiconductor manufacturing, R&D, and industrial vacuum systems. Agilent Varian block valves will reliably achieve 300,000 cycles or more in most applications. These block valves have Inline or right angle configurations and have a hand operated manual knob.

KF/CF	Model	IDEAL VAC P/N	Agilent P/N	Price*
Block Valve	KF16, Rt.Angle	P102725	L6280301	\$276.60
Block Valve	KF25, Rt.Angle	P102726	L6280302	\$345.00
Block Valve	KF40, Rt.Angle	P102727	L6280303	\$374.95
Block Valve	KF16, In line	P102724	L9180301	\$363.00
Block Valve	KF25, In line	P102723	L9180302	\$374.00
Block Valve	KF40, In line	P102722	L9180303	\$437.80
Bonnet Valve	CF2.75" SS	P105077	L8679301	\$655.95



KF INLINE

KF Right Angle

Conflat CF 2.75" Bonnet Valve
Stainless Steel

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Vacuum Valves **1**

Bellows Valves

Edwards

Manual Lever Rt. Angle or Inline Bellows Valves KF Aluminum or SS

These manual inline or right angle lever operation bellows isolation valves are very quick acting. The lever, connected to a self lubricating plastic cam piston, actuates the valve stem and valve plate through PTFE bearings. The valve plate O-ring groove is vented to prevent gas bursts. This valve is designed to operate down to 10⁻⁹ mbar / 7.5 x 10⁻¹⁰ Torr and up to a pressure of 2100 mbar / 1575 Torr (30 psi). The O-Ring is Fluoroelastomer. The molecular conductance is 0.2 l/s and the baking temperature is 212 degrees Fahrenheit. These inline or right angel valves function reliably in applications ranging from semiconductor manufacturing to plasma physics research to nuclear accelerators. These valves are primarily for vacuum processes.

KF Model	IDEAL VAC P/N	Edwards P/N	Price*
Lever Valve KF16, Rt. Angle, ALU.	P103948	C31205000	\$297.44
Lever Valve KF25, Rt. Angle, ALU.	P103949	C31305000	\$323.44
Lever Valve KF40, Rt. Angle, ALU.	P103950	C31405000	\$665.00
Lever Valve KF16, In line, ALU.	P103973	C41218000	\$310.00
Lever Valve KF25, In line, ALU.	P103951	C41321000	\$328.64
Lever Valve KF40, In line, ALU.	P103945	C41420000	\$745.00
Lever Valve KF16, Rt. Angle, SS	P103947	C31215000	\$359.84
Lever Valve KF25, Rt. Angle, SS	P103952	C31315000	\$373.36
Lever Valve KF40, Rt. Angle, SS	P103946	C31415000	\$810.00
Lever Valve KF16, In line, SS	P103972	C41219000	\$386.16
Lever Valve KF25, In line, SS	P103943	C41322000	\$425.00
Lever Valve KF40, In line, SS	P103944	C41421000	\$863.78



Rt. Angle
KF16/25 Aluminum



INLINE KF16/25
Aluminum



Rt. Angle
KF40
Aluminum



INLINE
KF40 Aluminum



Rt. Angle
KF16/25 Stainless Steel



INLINE KF16/25
Stainless Steel



Rt. Angle
KF40
Stainless Steel



INLINE
KF40 Stainless Steel

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1 Vacuum Valves Bellows Valves

MKS Instruments Series 150 Manual Bellows Angle Valves CF - KF - NWISO

These NEW MKS Instruments CF, KF and NWISO Series 150 bellows angle valves are designed to insure product quality, reliability and value. These valves function reliably in applications ranging from semiconductor manufacturing to plasma physics research to nuclear accelerators. Sometimes the valves encounter pressures above atmospheric in gas handling, or in backfilled systems. These valves may be used over the pressure range from 10⁻⁹ Torr to 15 psig. The bellows design and closing force provide reliable operation to the maximum pressures stated. Made of Stainless Steel these angle valves are primarily for vacuum processes.

CF	Model	IDEAL VAC P/N	MKS P/N	Price*
Bellows Angle Valve CF 1 1/3"	P102328	151-0016C	\$320.50	
Bellows Angle Valve CF 2 1/8"	P102329	151-0025C	\$341.50	
Bellows Angle Valve CF 2 3/4"	P102330	151-0040C	\$352.00	
Bellows Angle Valve CF 3 3/8"	P102331	151-0050C	\$541.00	
Bellows Angle Valve CF 4 1/2"	P102332	151-0063C	\$640.50	
Bellows Angle Valve CF 4 5/8"	P102333	151-0080C	\$1,045.00	

KF	Model	IDEAL VAC P/N	MKS P/N	Price*
Bellows Angle Valve KF16	P101642	151-0016K	\$299.50	
Bellows Angle Valve KF25	P101643	151-0025K	\$315.00	
Bellows Angle Valve KF40	P101644	151-0040K	\$325.50	
Bellows Angle Valve KF50	P101645	151-0050K	\$488.50	

NWISO	Model	IDEAL VAC P/N	MKS P/N	Price*
Bellows Angle Valve NWISO63	P102326	151-0016K	\$609.00	
Bellows Angle Valve NWISO100	P102327	151-0025K	\$992.50	



CF Conflat Series 150



KF Series 150



ISO NW LF Series 150

Vacuum Valves 1

Bellows Valves

Ideal Vacuum Valves

Manual Bellows Angle and Inline Valves CF - KF - Tube Weld

These NEW Ideal Vacuum bellows angle, inline and tube weld valves are designed to insure product quality, reliability and value. These bellows valves function reliably in applications ranging from semiconductor manufacturing to plasma physics research to nuclear accelerators. Sometimes the valves encounter pressures above atmospheric in gas handling, or in backfilled systems. These valves may be used over the pressure range from 10⁻⁹ Torr to 15 psig. The bellows design and closing force provide reliable operation to the maximum pressures stated. These valves are primarily for vacuum processes and made of Stainless Steel.

CF Model	IDEAL VAC P/N	Price*
Bellows Angle Valve CF 1 1/3"	P103843	\$256.25
Bellows Angle Valve CF 2 1/8"	P103844	\$281.25
Bellows Angle Valve CF 2 3/4"	P103787	\$333.00
Bellows Angle Valve CF 3 3/8"	P103937	\$463.50

KF Model	IDEAL VAC P/N	Price*
Bellows Angle Valve KF16	P103785	\$225.00
Bellows Angle Valve KF25	P103784	\$261.05
Bellows Angle Valve KF40	P103936	\$299.99
Bellows Angle Valve KF50	P103935	\$397.25
Bellows Inline Valve KF16	P103786	\$268.00
Bellows Inline Valve KF25	P103845	\$299.00
Bellows Inline Valve KF40	P103908	\$346.50
Bellows Inline Valve KF50	P103977	\$490.50

Tube Weld Model	IDEAL VAC P/N	Price*
Bellows Angle Valve 3/4" O.D. Tube	P103846	\$216.00
Bellows Angle Valve 1.0" O.D. Tube	P103847	\$247.50
Bellows Angle Valve 1 1/2" O.D. Tube	P103812	\$283.50
Bellows Angle Valve 2.0" O.D. Tube	P103938	\$366.75
Bellows Inline Valve 3/4" O.D. Tube	P103939	\$321.75
Bellows Inline Valve 1.0" O.D. Tube	P103940	\$321.75
Bellows Inline Valve 1 1/2" O.D. Tube	P103941	\$328.50
Bellows Inline Valve 2.0" O.D. Tube	P103978	\$456.75



* Catalog Pricing
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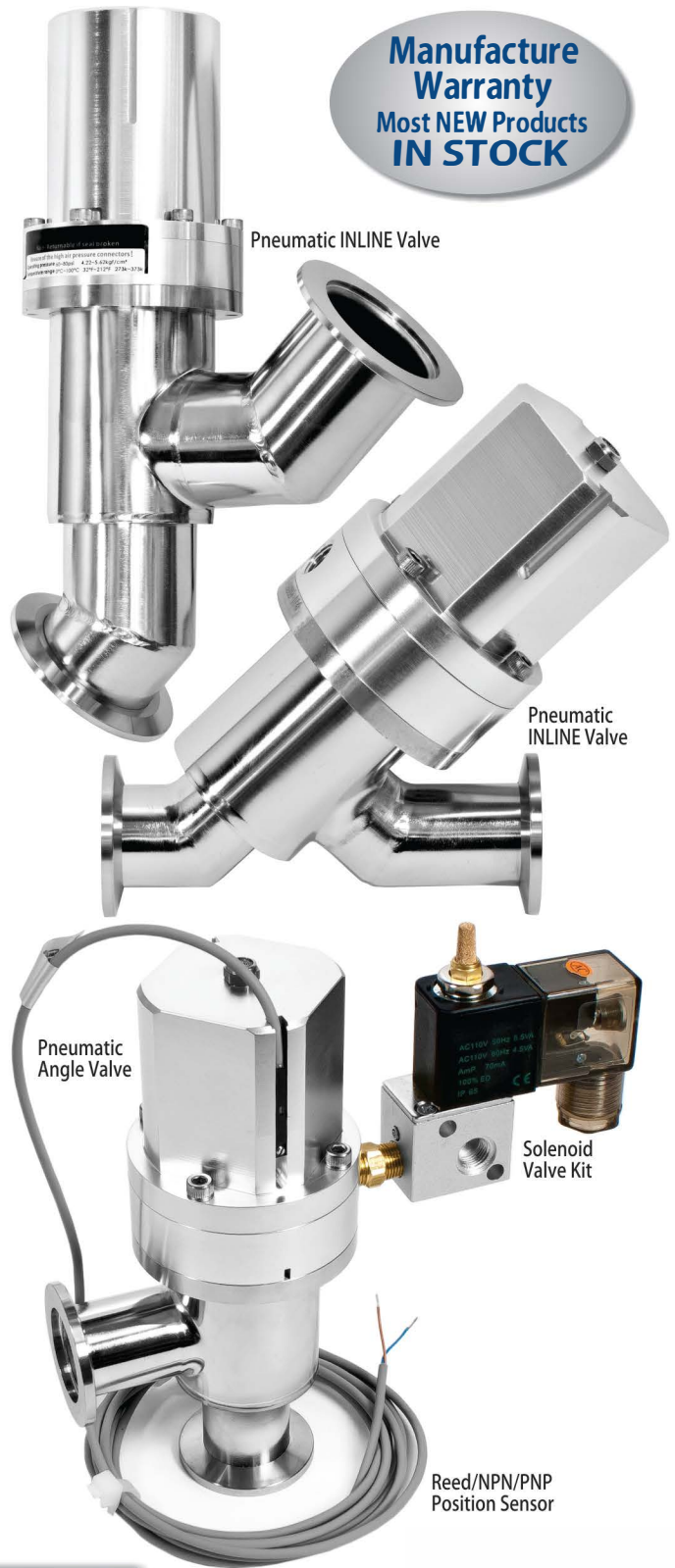
1 Vacuum Valves Bellows Valves

Ideal Vacuum Valves Pneumatic Bellows Angle and Inline Valves KF

These NEW Pneumatic Angle or Inline Valves Series are designed to insure product quality, reliability and value. These pneumatic valves function reliably in applications ranging from semiconductor manufacturing to plasma physics research to nuclear accelerators. These pneumatic valves are primarily for vacuum processes. Sometimes the valves encounter pressures above atmospheric in gas handling, or in backfilled systems. **These are air to open and spring to close.** These valves may be used over the pressure range from 10⁻⁹ Torr to 60-80 psig. The bellows design and closing force provide reliable operation to the maximum pressures stated. For proper operation a solenoid valve kit is required, sold for DC12VDC, DC24VDC, AC110VAC, AC220VAC. (sold separately)

KF Model	IDEAL VAC P/N	Price*
Pneumatic Bellows Angle Valve KF16	P103909	\$303.75
Pneumatic Bellows Angle Valve KF25	P103979	\$303.75
Pneumatic Bellows Angle Valve KF40	P103881	\$382.50
Pneumatic Bellows Angle Valve KF50	P103910	\$535.50
Pneumatic Bellows Inline Valve KF16	P103880	\$369.00
Pneumatic Bellows Inline Valve KF25	P105354	\$369.00
Pneumatic Bellows Inline Valve KF40	P103942	\$382.50
Pneumatic Bellows Inline Valve KF50	P105355	\$551.25
Solenoid Valve Kit DC 12V, 50/60hz.	P104183	\$40.50
Solenoid Valve Kit DC 24V, 50/60hz.	P104182	\$40.50
Solenoid Valve Kit AC 110V, 50/60hz.	P104181	\$40.50
Solenoid Valve Kit AC 220V, 50/60hz.	P104180	\$40.50
Reed-Type Position Sensor w/LED	P104194	\$16.65
NPN Type Position Sensor w/LED	P104195	\$16.65
PNP Type Position Sensor w/LED	P104196	\$16.65

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Vacuum Valves 1 Isolation Valves

All Metal Isolation Valves CF (Manual)

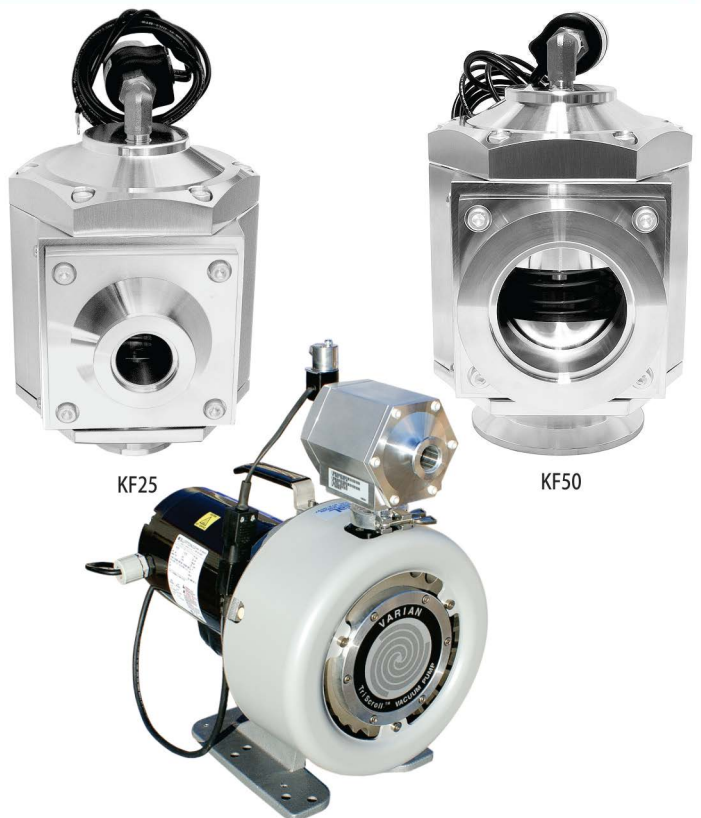
These all metal Isolation seal angle valves are intended for use in UHV or cryogenic applications where temperature extremes preclude the use of our elastomer seal valves. Approved for use in beamline facilities, these valves have a temperature operating range from -250°C to 400°C. The pulled-port method is used for the fabrication of the stainless steel bodies resulting in higher conductance and better cleanliness. These All metal isolation valves are designed to have a low leak rate, typically on the order of 1x10⁻¹⁰ std. cc/sec UHV. These Isolation valves have a CF Conflat 1.33 or 2.75 inch vacuum flange for connection to the vacuum system, are manually operated, and made of stainless steel.



CF	Model	IDEAL VAC P/N	Price*
	All metal Isolation angle valve 1.33"CF	P104364	\$825.95
	All metal Isolation angle valve 2.75"CF	P104365	\$849.95

Isolation Valves KF (Electrical)

Vacuum Pump Isolation Valves KF25 thru KF50 115 or 220 VAC. These valves close rapidly when power is interrupted to prevent oil backstreaming or particle migration into your vacuum system. The valves also vent the pump from the inlet side to push any debris towards the outlet, thereby preventing it from being swept into the system when restarting the pump. Made with lightweight aluminum construction and Viton seals. **Middle graphic shows possible electrical hookup.** Valve electrical hookup connectors are not supplied but are available upon request.



KF	Model	Voltage	IDEAL VAC P/N	Price*
	Pump isolation valve KF25	120 VAC	P103494	\$711.00
	Pump isolation valve KF25	220 VAC	P103493	\$732.00
	Pump isolation valve KF40	120 VAC	P103492	\$745.00
	Pump isolation valve KF40	220 VAC	P103491	\$766.00
	Pump isolation valve KF50	120 VAC	P103639	\$856.00
	Pump isolation valve KF50	220 VAC	P103640	\$900.00

* Catalog Pricing
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1 Vacuum Valves Isolation Valves

Oerlikon Leybold

SECUVAC Vacuum Safety Solenoid Isolation Right Angle Valves

ALUMINUM

Oerlikon Leybold SECUVAC Vacuum Pump Isolation Valve KF16 thru LF100 at 100-115 VAC or 200-230 VAC. Closes rapidly when power is interrupted to prevent oil backstreaming or particle migration into your vacuum system. The valves also vents the vacuum pump from the inlet side to push any debris towards the outlet, thereby preventing it from being swept into the system when restarting the pump. This valve is designed to operate down to 10^{-9} mbar / 7.7×10^{-10} Torr and up to a pressure of 2100 mbar / 1575 Torr (30psi). They are made of aluminum with FPM (KFM) Gaskets. Also available in 24VDC and 220VAC versions.

SECUVAC	IDEAL VAC P/N	Oerlikon P/N	Price*
KF 16 (110-115 VAC)	P105513	215016	\$895.00
KF 25 (110-115 VAC)	P105512	215066	\$995.00
KF40 (110-115 VAC)	P105514	215136	\$1,395.00
LF63 (200-230 VAC)	P105515	215207	\$1,895.00
ISO-LF100 (200-230 VAC)	P105516	215227	\$2,350.00



KF 16



KF 40



KF 25



ISO-LF63

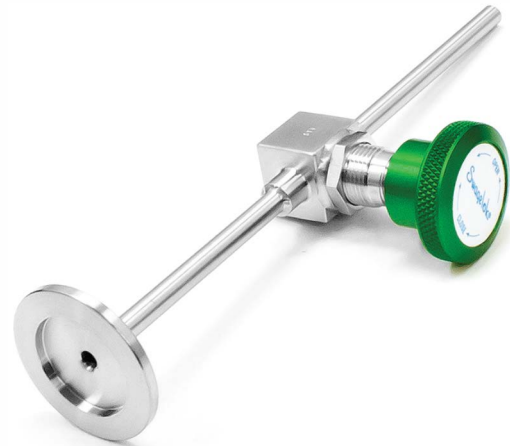


ISO-LF100

Swagelok

Tube Vent Backfill Valve 1/4 OD tube

Vent Valves are typically used to introduce air in to the vacuum chamber and bring the system up to atmospheric pressure. These vent valves can be used to fill the vacuum chamber with room air or a N2 gas supply can be plumbed to the 1/4 O.D. tube side of the valve. These vent valves have a KF-16, KF25, KF40, KF50 vacuum flange for connection to the vacuum system. They are manually operated, and made of stainless steel. 7.5" long.



KF Tube Vent Valve	IDEAL VAC P/N	Swagelok P/N	Price*
KF 16 Vent Valve 1/4" tube OD	P103565	MVV-10816	\$299.95
KF 25 Vent Valve 1/4" tube OD	P103566	MVV-10825	\$315.95
KF 40 Vent Valve 1/4" tube OD	P103567	MVV-10840	\$325.95
KF 50 Vent Valve 1/4" tube OD		MVV-10850	\$315.00

AGILENT Varian

Variable Leak Valve 2.75" X 1.33" CF

The variable leak valve with sapphire seal and captured metal gasket can be added to any vacuum system to establish an adjustable leak. It offers unprecedented control sensitivity and stability with leak rates as small as 1 x 10⁻¹⁰ Torr-litres per second. Leak rate adjustment is controlled with knurled knobs. The entire valve, including the drive mechanism, is bakeable to 450°C in either the open or closed position. Both components of the seal mechanism (sapphire assembly and gasket assembly) are easily replaceable. Flange sizes 2.75" X 1.33" CF Conflat. Comes with CD Instruction Manual.



Variable Leak Valve
2.75" CF X 1.33" CF Conflat
P105211

CF Variable Leak Valve & Accessories	IDEAL VAC P/N	Agilent P/N	Price*
Variable Leak Valve 2.75" X 1.33" CF	P105211	9515106	\$1,561.55
Tool Kit w/ Removal Tools	P105213	9620014	\$625.73
Sapphire Removal Tool	P105212	SR0061417400	\$120.91
Sapphire Assy.	P105214	9530072	\$502.50
Flare Fitting Adapter Kit for 1.33" CF	P105215	9515117	\$246.30
Gasket Assy.	P105241	9535050	\$403.64



Sapphire Assembly
P105214

Flare Fitting Adapter Kit 1.33" CF
P105215

Tool Kit
P105213

Gasket Assembly
P105241

Sapphire Seal Removal Tool
P105212

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1 Vacuum Valves

Diaphragm - Vent Valves

Edwards Speedivalve Diaphragm Valve

These Edwards Speedivalve come with Viton or Nitrile diaphragms and the valve bodies are made of aluminum alloy. The complete valve is leak tight to better than 10⁻⁶ mbar l s⁻¹ / 7.5 x 10⁻⁷ Torr l s⁻¹ at 1 bar differential. The mechanism is isolated from the system by the diaphragm resulting in an extremely rugged and "dirty" system tolerant valve.

KF Speedivalve Model	IDEAL VAC P/N	Edwards P/N	Price*
Diaphragm Valve KF16 (Viton)	P103953	C33255000	\$275.60
Diaphragm Valve KF25 (Viton)	P103954	C33355000	\$350.00
Diaphragm Valve KF40 (Viton)	P103957	C33455000	\$594.00
Diaphragm Valve KF16 (Nitrile)	P103955	C33205000	\$225.40
Diaphragm Valve KF25 (Nitrile)	P103956	C33305000	\$255.40
Diaphragm Valve KF40 (Nitrile)	P103958	C33405000	\$510.40



LV10K Fine Control Needle Valve

These Edwards LV10K manual inline Isolation valves are very quick acting. The LV10K needle valve provides fine control of gas bleed into a vacuum chamber or a regulated leak to control pressure in a vacuum system and is suitable for gas admission down to 10⁻⁵ mbar / 8 x 10⁻⁶ Torr. Seat brass BS2784 C2112, Needle Martensitic Stainless Steel EN56AM, Filter Brass BS249.

KF LV10K Model	IDEAL VAC P/N	Edwards P/N	Price*
LV10K Fine Control Needle Valve KF10	P103959	C37102000	\$495.00



AV10K Air Admittance Vent Valve

The Edwards AV10K is a manual operated air admittance vent valve. The valves are manufactured from aluminum alloy and have a control knob attached to a screw actuated plunger. The plunger is sealed onto the valve seat in the valve body by a Nitrile O ring. The AV10K can also be pipeline mounted. Maximum leak rate across valve seat: less than 1 x 10⁻⁷ mbar l s⁻¹.

KF AV10K Model	IDEAL VAC P/N	Edwards P/N	Price*
LV10K Manual Air Vent Valve KF10	P103899	C35103000	\$150.80



110 VAC IPVA10EK Air Admittance Vent Valve

The Edwards IPVA10EK is a solenoid operated vent valve designed for automatic admittance of air or vent gas into a vacuum system. The valve has two KF10 ports. One of the valve ports is connected to the vacuum system, the other port can be left open to atmosphere or connected to a vent gas supply. The vacuum system is isolated from atmosphere (or the vent gas supply) by a fluoroelastomer pad on the base of the valve plunger, which seals against the body of the valve. Maximum leak rate across body: 1 x 10⁻⁹ mbar l s⁻¹ / 8 x 10⁻¹⁰ Torr l s⁻¹. This is a normally closed version of the valve suitable for use with 110 VAC to suit your application. Made with aluminum.

KF IPVA10EK Model	IDEAL VAC P/N	Edwards P/N	Price*
110 VAC Air Admittance Vent Valve KF10	P103900	C41732000	\$373.36



* Catalog Pricing
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HVA

Series 11000 Manual Gate Valve CF

In the simplest of terms, HVA Conflat CF vacuum gate valves are devices that regulate the flow of gases, fluids or materials through a structure or aperture by opening, closing or obstructing a port or passageway. Gate valve assemblies consist of three key components: an actuator, a carriage/gate and a valve body. The actuator provides the power to position or transport the valve's carriage/gate. The actuator is attached to the valve's body via a rectangular bonnet flange. The gate closes or opens one of the valve's body ports. The valve body is a vacuum tight chamber that is screwed, flanged or welded into a larger vacuum vessel or system.

The 11000 Series Gate Valves feature a positive lock-over center mechanism. Linear actuation allows the use of a welded bellows to seal the actuator (i.e. no rotary seals). Shock and vibration are reduced to a minimum by a unique air cylinder design. This feature is extremely beneficial for semiconductor fabrication and other sensitive processing requiring operation which is relatively free of vibration.

The HVA stainless steel body offers one of the smallest interior surface areas in the vacuum valve industry. The body and all major internal components are vacuum furnace brazed at 1100C, at 1×10^{-6} Torr, ensuring maximum joint integrity. This eliminates the possibility of virtual leaks or entrapment areas and minimizes body distortion found in conventionally welded valves. For maintenance purposes, the carriage assembly can be removed from the body without removing the valve from the system.



CF	11000 Series	I.D. Opening	Bolt Holes	IDEAL VAC P/N	HVA P/N	Price*
Gate Valve	CF 1.33"	0.625"	6	P104197	11120-0060	\$995.00
Gate Valve	CF 2.75"	1.50"	6	P104200	11120-0150	\$1,337.00
Gate Valve	CF 3.375"	2.00"	8	P104238	11120-0200	\$1,374.00
Gate Valve	CF 4.50"	2.50"	8	P104198	11120-0250	\$1,579.00
Gate Valve	CF 6.00"	4.00"	16	P104237	11120-0400	\$2,216.00
Gate Valve	CF 8.00"	6.00"	20	P104236	11120-0600	\$2,700.00
Gate Valve	CF 10.00"	8.00"	24	P104199	11120-0800	\$3,763.00

For Complete Specifications on these Gate Valves, Type in the IDEAL VAC P/N in our Search Engine on our web site at: www.idealvac.com

* Catalog Pricing
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1 Vacuum Valves Gate Valves

HVA Series 11000 Manual Gate Valve KF/ISO

In the simplest of terms, HVA ISO LF and KF vacuum gate valves are devices that regulate the flow of gases, fluids or materials through a structure or aperture by opening, closing or obstructing a port or passageway. Gate valve assemblies consist of three key components: an actuator, a carriage/gate and a valve body. The actuator provides the power to position or transport the valve's carriage/gate. The actuator is attached to the valve's body via a rectangular bonnet flange. The gate closes or opens one of the valves body ports. The valve body is a vacuum tight chamber that is screwed, flanged or welded into a larger vacuum vessel or system.

The 11000 Series Gate Valves feature a positive lock-over center mechanism. Linear actuation allows the use of a welded bellows to seal the actuator (i.e. no rotary seals). Shock and vibration are reduced to a minimum by a unique air cylinder design. This feature is extremely beneficial for semiconductor fabrication and other sensitive processing requiring operation which is relatively free of vibration.

The HVA stainless steel body offers one of the smallest interior surface areas in the vacuum valve industry. The body and all major internal components are vacuum furnace brazed at 1100C, at 1x10⁻⁶ Torr, ensuring maximum joint integrity. This eliminates the possibility of virtual leaks or entrapment areas and minimizes body distortion found in conventionally welded valves. For maintenance purposes, the carriage assembly can be removed from the body without removing the valve



KF/ISO Series	I.D. Opening	Bolt Holes	IDEAL VAC P/N	HVA P/N	Price*
Gate Valve KF 16	0.625"	-	P104239	11110-0063	\$1,091.00
Gate Valve KF 40	1.50"	-	P104205	11110-0153	\$1,467.50
Gate Valve KF 50	2.00"	-	P104240	11110-0203	\$1,508.00
Gate Valve ISONWLF 63	2.50"	(4) M8x1.25	P104203	11110-0253	\$1,731.00
Gate Valve ISONWLF 100	4.00"	(8) M8x1.25	P104202	11110-0403	\$2,433.00
Gate Valve ISONWLF 160	6.00"	(8) M10x1.25	P104241	11110-0603	\$2,836.00
Gate Valve ISONWLF 200	8.00"	(12) M10x1.25	P104204	11110-0803	\$3,953.00

For Complete Specifications on these Gate Valves, Type the IDEAL VAC P/N in our Search Engine on our web site at: www.idealvac.com

Vacuum Chambers 1

Modular Chambers

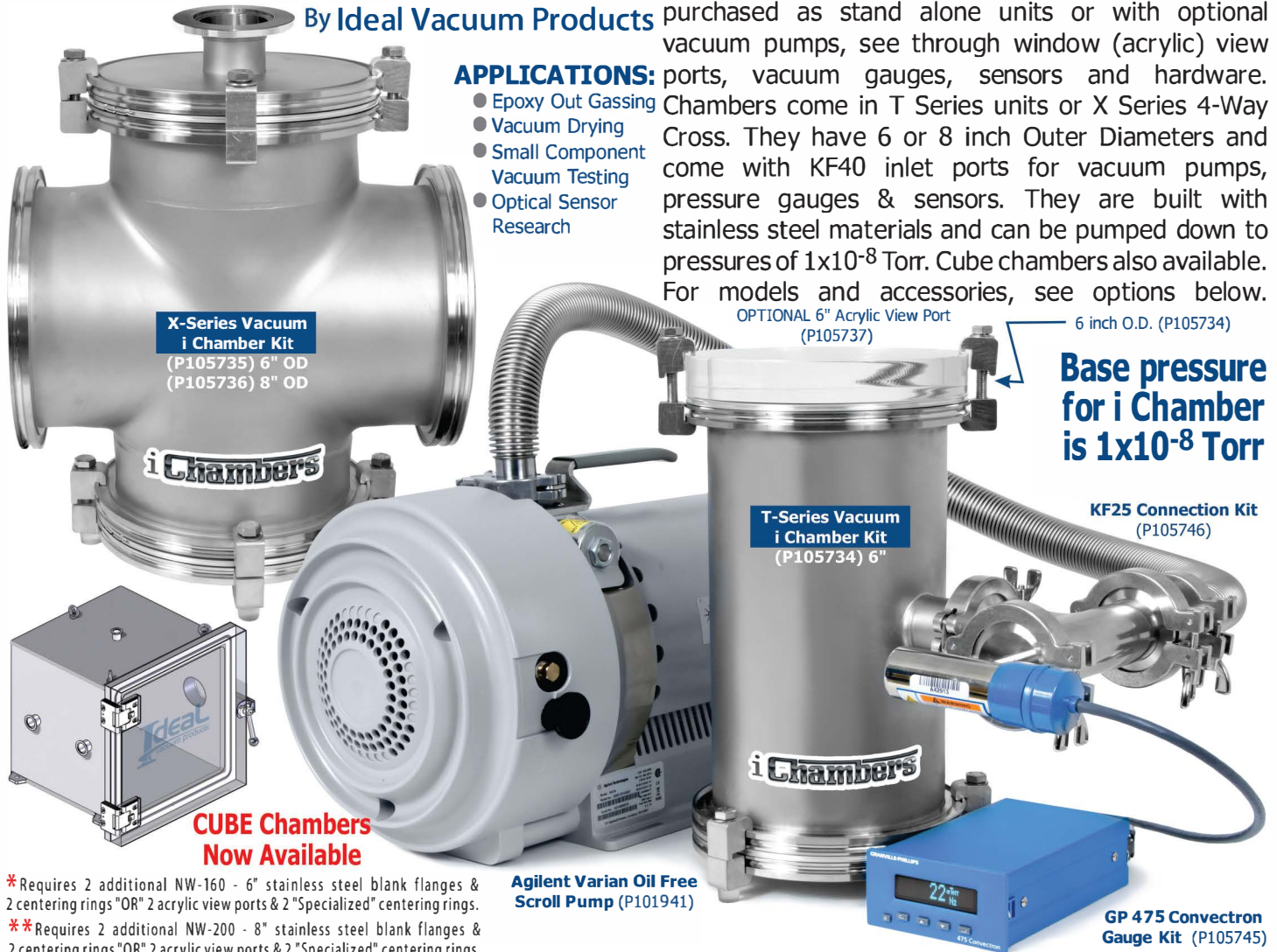
i Chambers

By Ideal Vacuum Products

APPLICATIONS:

- Epoxy Out Gassing
- Vacuum Drying
- Small Component Vacuum Testing
- Optical Sensor Research

These **NEW** Ideal Vacuum Products T or X - Series i-Chambers are excellent for vacuum research and many other experimental applications. Can be purchased as stand alone units or with optional vacuum pumps, see through window (acrylic) view ports, vacuum gauges, sensors and hardware. Chambers come in T Series units or X Series 4-Way Cross. They have 6 or 8 inch Outer Diameters and come with KF40 inlet ports for vacuum pumps, pressure gauges & sensors. They are built with stainless steel materials and can be pumped down to pressures of 1×10^{-8} Torr. Cube chambers also available. For models and accessories, see options below.



**CUBE Chambers
Now Available**

* Requires 2 additional NW-160 - 6" stainless steel blank flanges & 2 centering rings "OR" 2 acrylic view ports & 2 "Specialized" centering rings.

** Requires 2 additional NW-200 - 8" stainless steel blank flanges & 2 centering rings "OR" 2 acrylic view ports & 2 "Specialized" centering rings.

MODELS and ACCESSORIES

	IDEAL P/N	Price*
T-Series i Chamber Kit 6" (Contains: 1-KF40 & ISO 160 stainless steel T-Chamber ONLY, 4-rubber feet, 8-claw clamps, 2-centering rings and 2-stainless steel blank flanges)	P105734	\$705.00
X-Series i Chamber Kit 6" (Contains: 1-ISO 160 4-Way Cross stainless steel Chamber ONLY, 4-rubber feet, 8-claw clamps, 2-C-rings & 1-SS blank flange, 1-KF40 to NW160 adapter flange)*	P105735	\$1,279.90
X-Series i Chamber Kit 8" (Contains: 1-ISO 200 4-Way Cross stainless steel Chamber ONLY, 4-rubber feet, 8-claw clamps, 2-C-rings & 1-SS blank flange, 1-KF40 to NW200 adapter flange)**	P105736	\$2,376.30
Granville Phillips 475 Convectron Gauge Kit (With power cable, signal cable and KF40 convectron sensor)	P105745	\$1,099.95
KF25 Connection Kit (Contains: 2-KF25 clamps, 3-KF40 clamps, 1-KF40 blank, 1-KF40 Tee, 1-KF25 to KF40 reducer, 2-KF25 C-Rings, 3-KF40 C-Rings, 1-KF25 -40" bellows hose)	P105746	\$425.00
KF40 Connection Kit (Contains: 4-KF40 clamps, 1-KF40 blank, 1-KF40 Tee, 4-KF40 C-Rings, 1-KF40 -40" bellows hose)	P105747	\$425.00
Acrylic Clear View Port Blank ISO 160, O.D. 6" -1 each Use with i chambers P105734 (1 required) or P105735 (2 required)	P105737	\$395.00
Acrylic Clear View Port Blank ISO 200, O.D. 8" -1 each Use with i chamber P105736 (2 required)	P105740	\$495.00
"SPECIALIZED" ISO 160-6" Centering Ring for Acrylic View Port P105737 - 1 each (smooth on one side required for acrylic view port vacuum seal)	P105738	\$144.20
"SPECIALIZED" ISO 200-8" Centering Ring for Acrylic View Port P105740 - 1 each (smooth on one side required for acrylic view port vacuum seal)	P105739	\$199.20

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Ideal LLC
vacuum products **1-86**

1 Vacuum Chambers

Storage Containers

Ideal Vacuum Products Conflat Can Custom Storage Containers

We are proud to present a new material storage container product that is designed around Conflat vacuum sealing flanges. The Conflat Can has been used for storage of plutonium metal, thanks to its design and the copper gasket on a bolted flange, both maintains a long-time hermetic seal against oxidation of plutonium metal. This closure type has been standard in the high-vacuum industry for many years and has been certified to maintain a leak-tight seal under various temperature and pressure conditions. The Conflat Can is identified in National Laboratories as an inner container for the storage of plutonium metal. Conflat cans have been used periodically at some sites for special storage applications, but their use is not widespread or uniform. Each of our Conflat Can storage containers are made of 304 stainless steel, welded on flange will be tapped, includes copper gasket, and match through hole Conflat lid, flat bottomed end cap lid, assembled by two ID TIG welds, silver plated 6-point bolts, helium Leak tested at 1×10^{-8} atm cc/second and UHV rated. Each container and lid pair are both laser engraved with unique serial numbers. Each container is shipped with material specifications sheet and individual Conflat Can manufacturing datasheet.

Our IVP Conflat Can storage containers have been developed following consideration to the DOE 3013 Standard Container Design, the "safety envelope", which addresses design criteria for the containers; requirements for storage facility design, safeguards & security, and transportation. Our IVP Conflat Can storage containers are optimized for the storage of plutonium and other highly enriched uranium metals. We have developed proprietary TIG weld assemble techniques which produce smooth inner welded joints free of crack, crevices, and small opening fissure where stored materials could get trapped. This is very important when emptying the container as all contents can be completely removed. Our containers also use special high-quality 6-point bolts fasteners which do not have sharp edges for safe assembly under production conditions in a glove box and are made of silver-plated stainless steel being resistant to mechanical wear, seizure, or other mechanical failure. Each container and its corresponding Conflat lid are laser marked with a unique and permanent identification number following our customer's identification and record system, e.g., Oak Ridge National Laboratory (ORNL), Idaho National Laboratory (INL), Los Alamos National Laboratory (LANL), Savannah River Site (SRS), and Savannah River National Laboratory (SRNL).

Conflat Can Custom Storage Containers

Conflat 6" Dia. Hermetically Sealed Can with 16 bolts and CF copper seal
P/N P105753 Price \$1,136.98

Conflat 6-3/4" Dia. Hermetically Sealed Can with 18 bolts and CF copper seal
P/N P105754 Price \$1,299.56

Helium Leak Tested
to 1×10^{-8} atm cc/second
and UHV rated.

A can fabricated with a Varian-type Conflat flange results in a hermetically sealed, robust container that can be used to store plutonium metal. A copper gasket on a bolted flange closure is designed to maintain a long-term hermetic seal against oxidation of plutonium metal. This closure type has been standard in the high-vacuum industry for many years and has been certified to maintain a leak-tight seal under various temperature and pressure conditions. The Conflat can is identified in LANL's Comprehensive Nuclear Material Packaging and Stabilization Plan as the inner container for the storage of plutonium metal. The use of Conflat cans for storage of other nuclear materials requiring a sealed environment may also be appropriate. Conflat cans have been used periodically at some sites for special storage applications, but their use is not widespread or uniform.

On March 10, 2005, the Defense Nuclear Facilities Safety Board, in accordance with 42 U.S.C. 2286a, unanimously approved Recommendation 2005-1, Nuclear Material Packaging. This recommendation addresses issuance of a requirement that nuclear material packaging meet technically justified criteria for safe storage and handling outside of engineered contamination barriers.



Contact us for exact
measurements.
We can also make other
sizes to fit your requirements.