

1 Vacuum Fittings - Adapters - Bolt Kits

CF - Conflat

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.

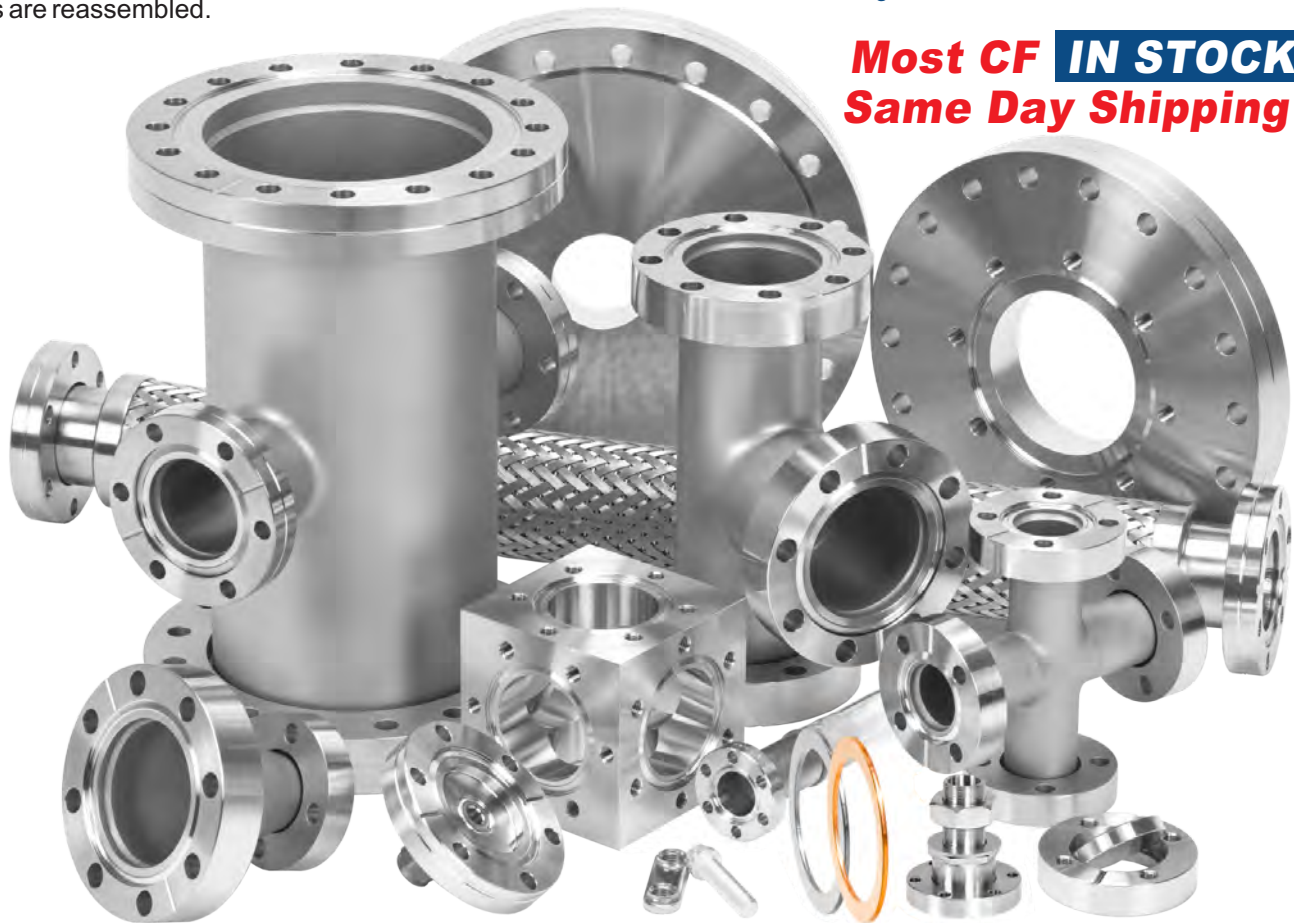
Viton elastomer gaskets can be used over and over but restricts pump down capabilities to 10⁻⁸ and bake-out only to 150 °C. Viton elastomer gaskets torque value is much less than metal gaskets at 84-120 in.lbs.

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.

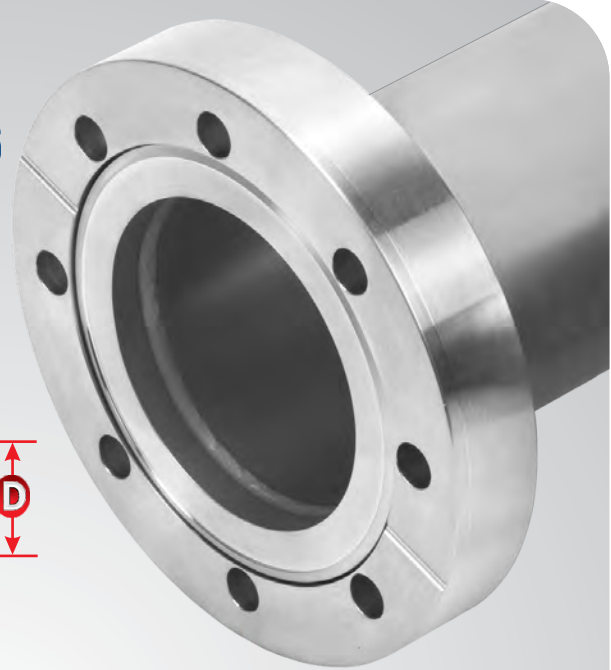
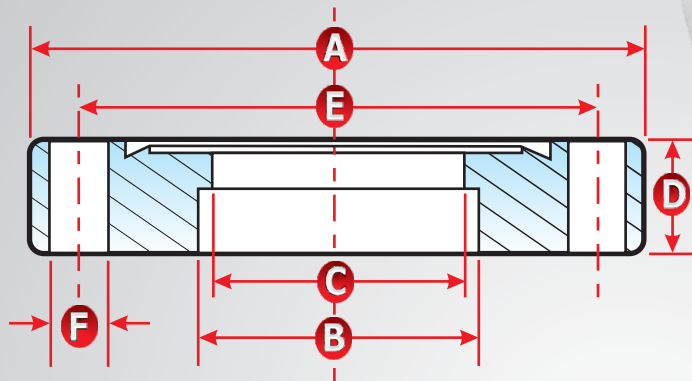
Most CF IN STOCK
Same Day Shipping



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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.	Tube Size	All dimensions in inches			F Bolt Hole Diameter		Bolt Holes	Torque In. lbs.
A	B	C	D	E	smooth	(thread)		
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

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CF - Conflat

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 450°C)

Best balance of desirable properties, best all around for UHV pressures.

Silver Plated Copper

BAKE OUT (-200°C to 450°C)

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 150°C)

Can be used multiple times. Low temperature range compared to metal gaskets and much less pressure range. Pumps down only to 10⁻⁸ torr.

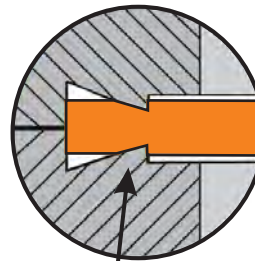
NOTE: Metal gaskets are one time use and not reusable and must be replaced at reassembly.

Gaskets & Torque in.(mm)

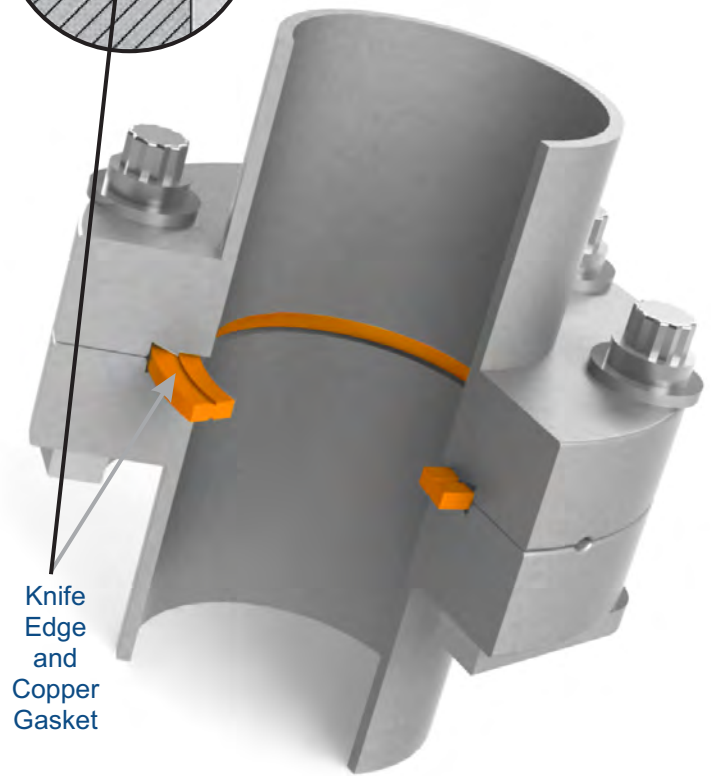
CF Flange Size	Copper / Silver Plated Copper Metal Gasket Dimensions		Torque Value in.lbs
	O.D.	I.D.	
1-1/3"	0.84(21)	0.64(16)	28
2-1/8"	1.29(33)	1.01(26)	110
2-3/4"	1.90(48)	1.45(37)	110
3-3/8"	2.43(62)	2.01(51)	190
4-1/2"	3.42(82)	2.51(64)	190
4-5/8"	3.60(91)	3.01(46)	190
6"	4.74(120)	4.01(102)	190
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.



Knife Edge and Copper Gasket

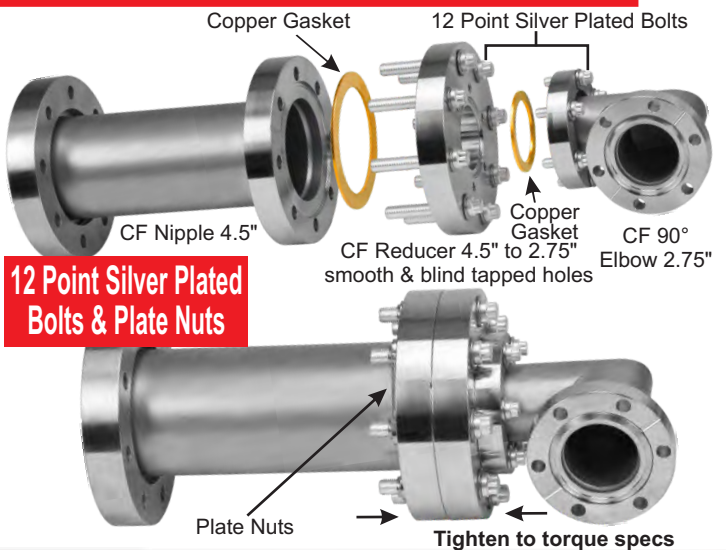
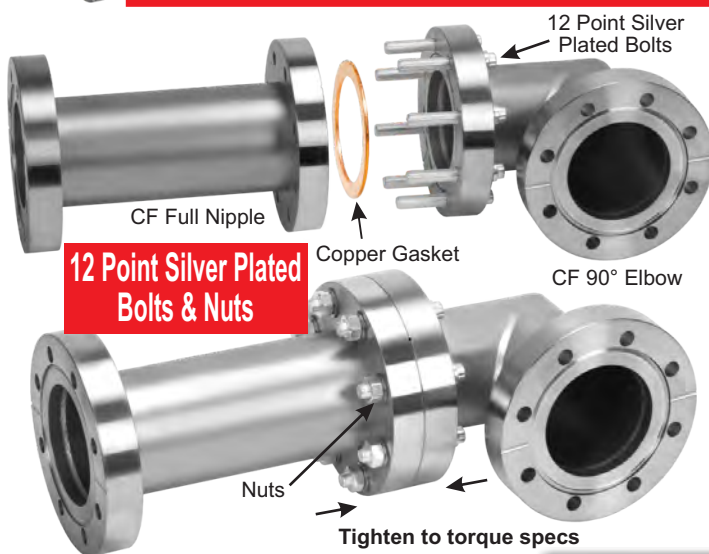
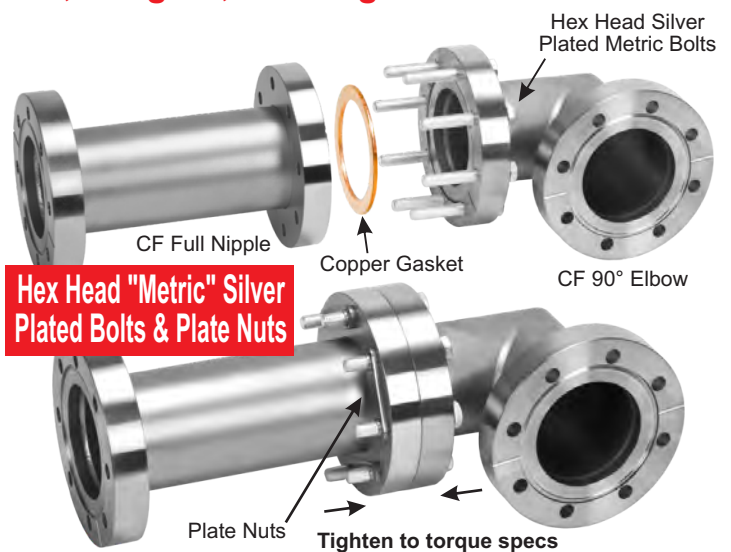
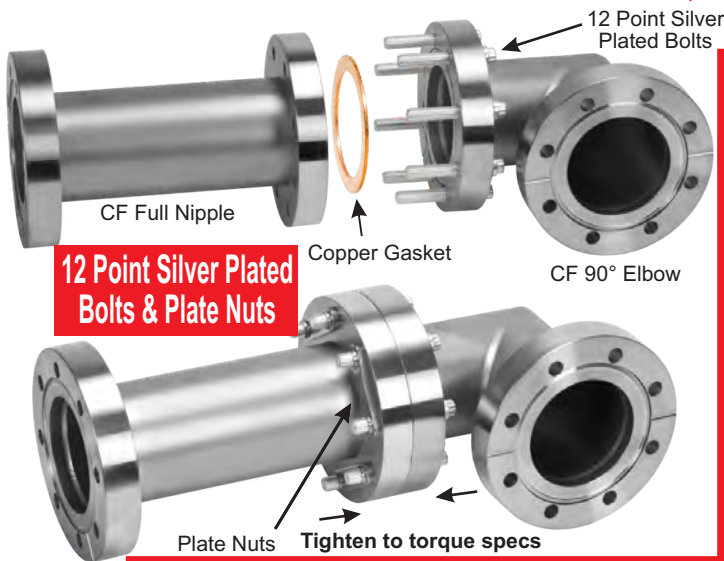
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Conflat CF Flange Assembly / Installation

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.

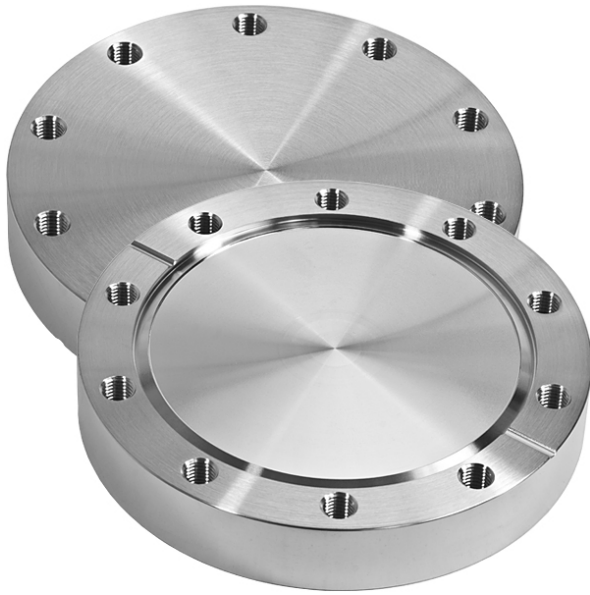
For Hardware Combinations, Sizes, Lengths, See Page on Bolt Kits



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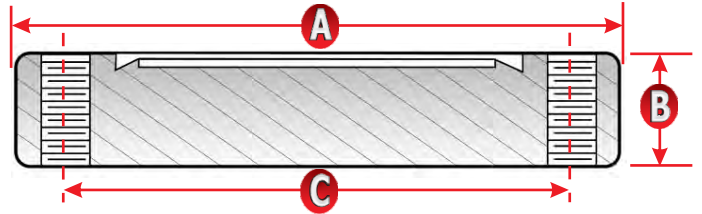
1 Vacuum Fittings - Adapters - Bolt Kits

CF - Conflat - Fittings -



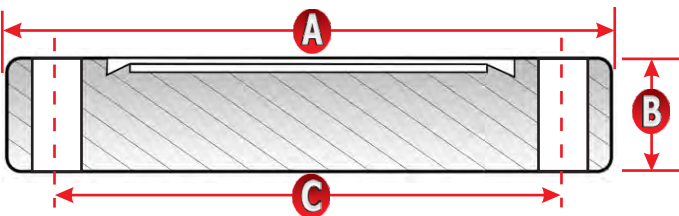
CF Blank Tapped Holes Non-Rotatable Stainless Steel

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



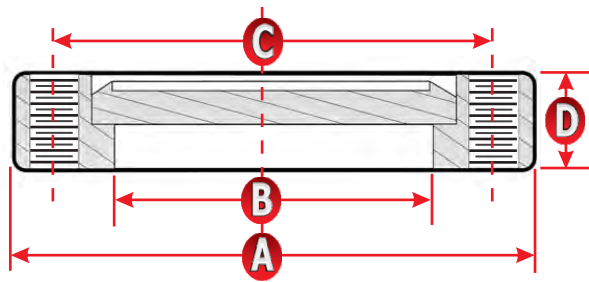
* Catalog Pricing
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Vacuum Fittings - Adapters - Bolt Kits **1**

- Fittings - CF - Conflat

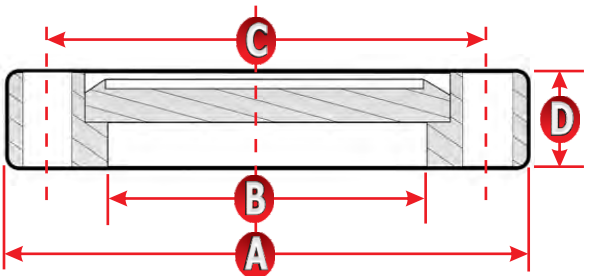


CF Blank Tapped Holes Rotatable Stainless Steel



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

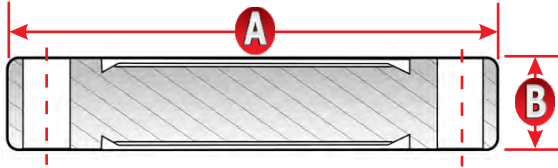


A CF - Outer Diameter	B	C	D	Through Bolt Holes	IDEAL VACUUM P/N	Price*
1-1/3"	3/4"	1-1/16"	5/16"	6	P104580	\$11.40
2-1/8"	1-1/8"	1-5/8"	1/2"	4	P104581	\$18.60
2-3/4"	1-3/4"	2-5/16"	9/16"	6	P104582	\$24.25
3-3/8"	2-3/16"	2-7/8"	11/16"	8	P104583	\$48.55
4-1/2"	2-3/16"	3-5/8"	3/4"	8	P104584	\$81.38
4-5/8"	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
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1 Vacuum Fittings - Adapters - Bolt Kits

CF - Conflat - Fittings -

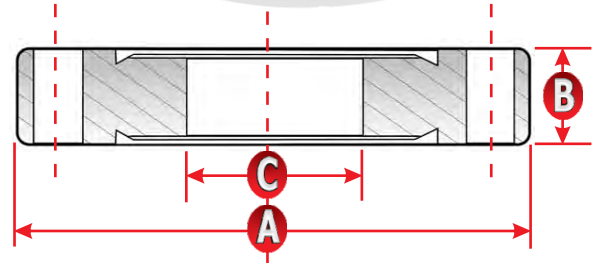
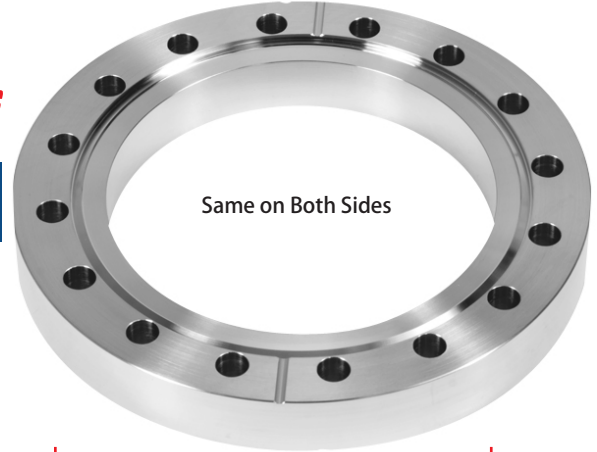


CF Blank Double Sided Through Holes Stainless Steel

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 Through Holes Non-Rotatable Stainless Steel

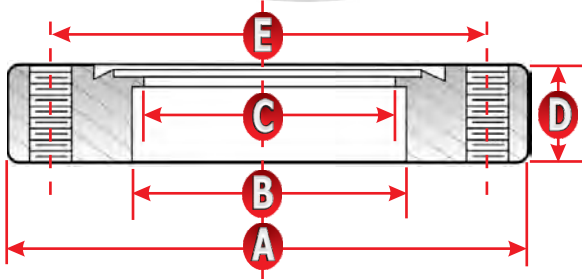
A CF - Outer Diameter	B	BORE C	Through Holes	IDEAL VACUUM P/N	Price*
1-1/3"	5/16"	3/4"	6	P104740	\$12.48
2-1/8"	7/8"	1"	4	P104741	\$19.65
2-3/4"	1-1/2"	1/2"	6	P104742	\$22.67
3-3/8"	5/8"	2"	8	P104743	\$39.08
4-1/2"	11/16"	2-3/4"	8	P104744	\$62.02
4-5/8"	3/4"	3"	10	P104745	\$71.55
6.00"	3/4"	4"	16	P104746	\$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



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Vacuum Fittings - Adapters - Bolt Kits **1**

- Fittings - CF - Conflat

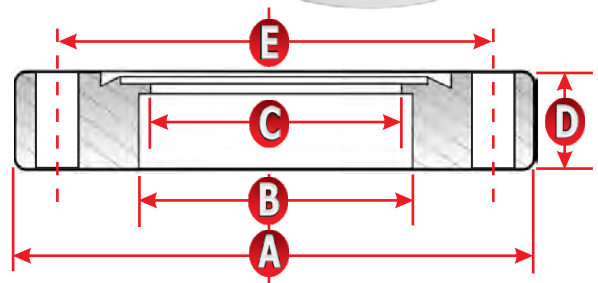


CF Blank Bored *Tapped Holes* *Non-Rotatable* *Stainless Steel*

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* *Non-Rotatable* *Stainless Steel*

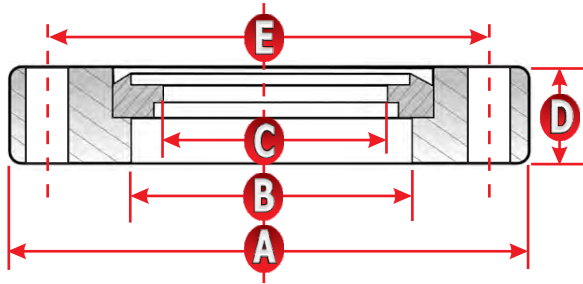
A CF - Outer Diameter	BORE B	C	D	E	Through Holes	IDEAL VACUUM P/N	Price*
1-1/3"	3/8"	na	5/16"	1-1/16"	6	P104651	\$16.00
1-1/3"	1/2"	na	5/16"	1-1/16"	6	P104652	\$17.50
1-1/3"	3/4"	5/8"	5/16"	1-1/16"	6	P104633	\$17.00
2-1/8"	1"	15/16"	1/2"	1-5/8"	4	P104654	\$20.00
2-3/4"	3/4"	11/16"	9/16"	2-5/16"	6	P104655	\$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



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1 Vacuum Fittings - Adapters - Bolt Kits

CF - Conflat - Fittings -

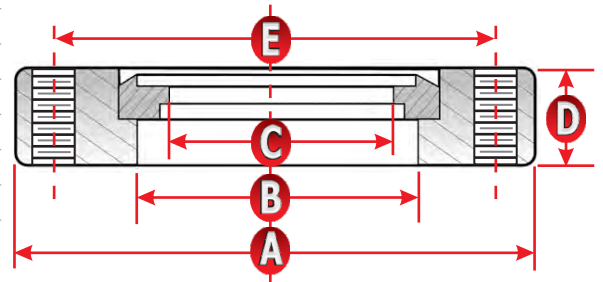


CF Blank Bored Through Holes Rotatable Stainless Steel

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	

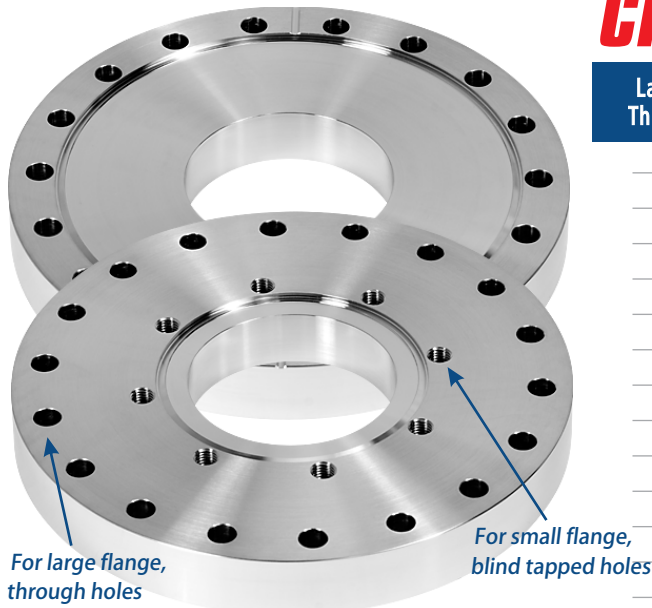


* Catalog Pricing
Subject to Change

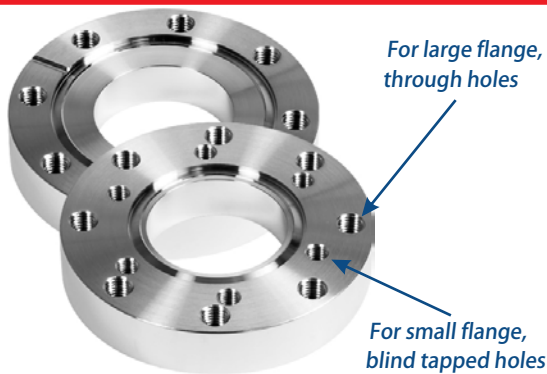
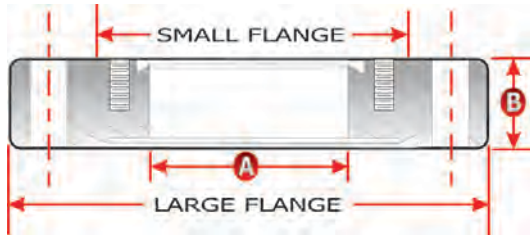
Vacuum Fittings - Adapters - Bolt Kits 1

- Fittings - CF - Conflat

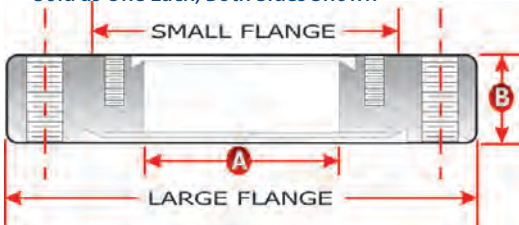
Stainless Steel CF Zero Length Reducer *Through & Tapped*



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

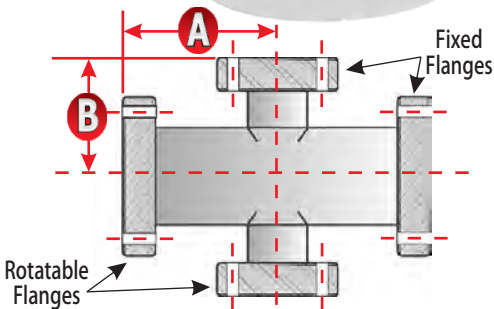
* Catalog Pricing
Subject to Change

1 Vacuum Fittings - Adapters - Bolt Kits

CF - Conflat - Fittings -



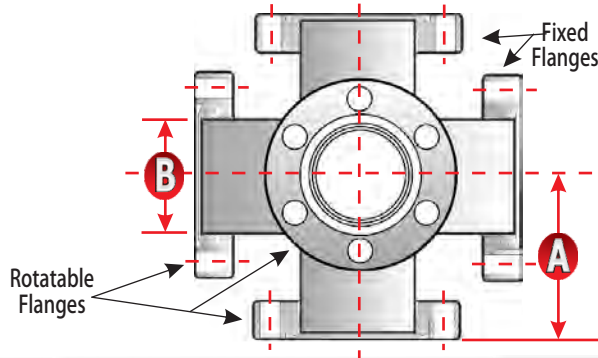
CF 4 Way Reducer Cross *Stainless Steel*



Flange Sizes 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



* Catalog Pricing
Subject to Change

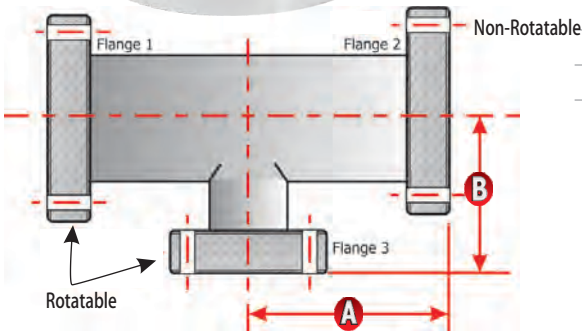
Vacuum Fittings - Adapters - Bolt Kits 1

- Fittings - CF - Conflat



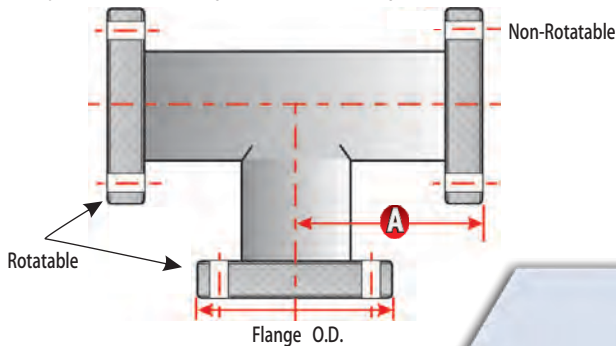
CF Tee Adaptive Reducer Stainless Steel

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

1 Vacuum Fittings - Adapters - Bolt Kits

CF - Conflat - Fittings -

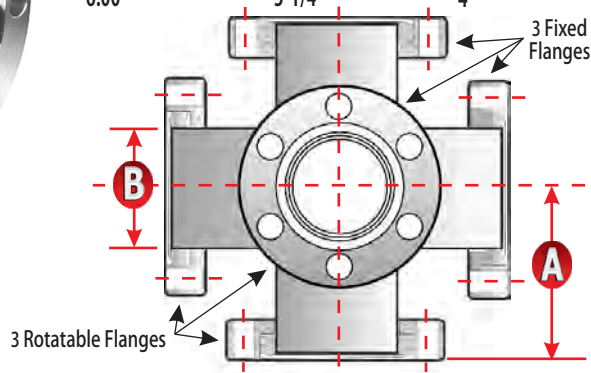


Fitting

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

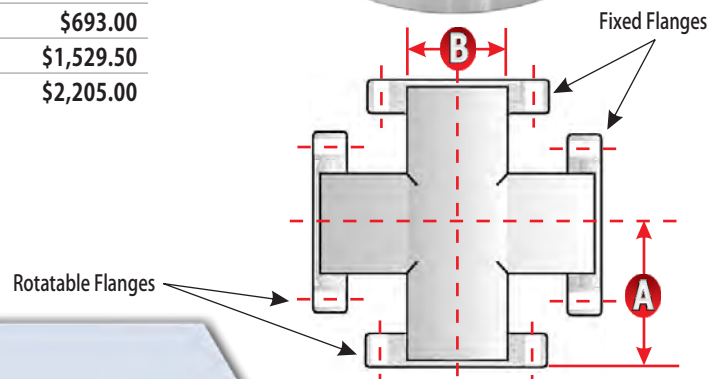


Fitting

CF 4 Way Cross

Stainless Steel

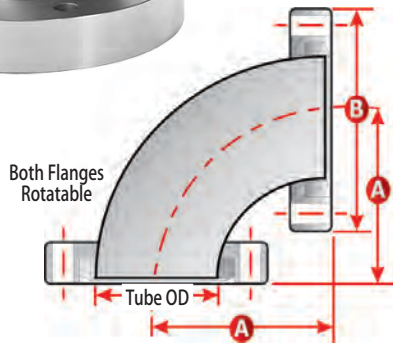
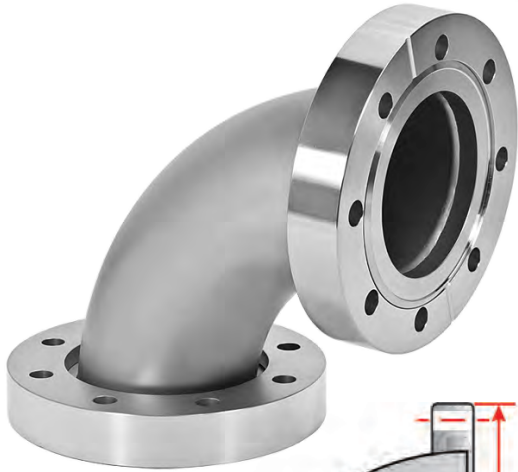
Flange Size O.D.	A	B	IDEAL VACUUM P/N	Price*
1-1/3"	1-1/2"	3/4"	P102184	\$113.07
2-1/8"	2"	1"	P104692	\$147.23
2-3/4"	2-1/2"	1-1/2"	P102185	\$139.15
3-3/8"	3-1/4"	2"	P102186	\$340.40
4-1/2"	4-1/8"	2-1/2"	P102187	\$435.18
4-5/8"	3-1/2"	3"	P104691	\$435.18
6.00"	5-1/4"	4"	P102188	\$693.00
8.00"	6-1/2"	6"	P102189	\$1,529.50
10.00"	8"	8"	P102190	\$2,205.00



* Catalog Pricing
Subject to Change

Vacuum Fittings - Adapters - Bolt Kits 1

- Fittings - CF - Conflat



Fitting

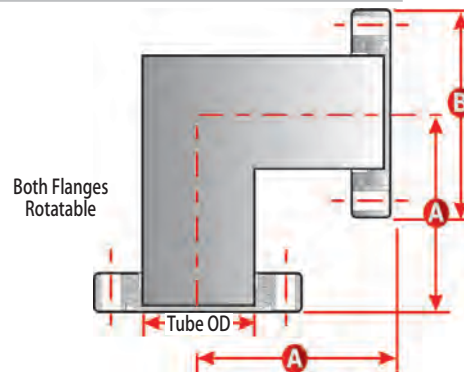
CF Elbow 90° Stainless Steel

Flange Size O.D.	A	B	Tube O.D.	IDEAL VACUUM P/N	Price*
1-1/3"	1"	1-1/3"	3/4"	P102179	\$88.07
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	\$70.21
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

Fitting

CF Elbow Mitered 90° Stainless Steel

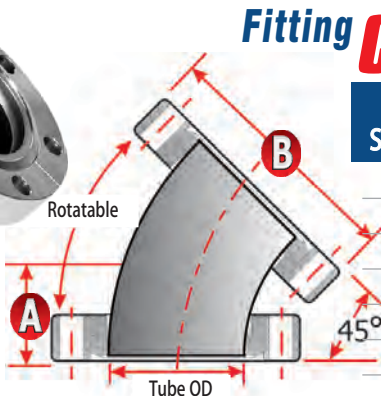
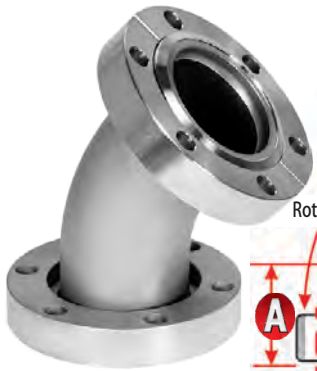
Flange Size O.D.	A	B	Tube O.D.	IDEAL VACUUM P/N	Price*
1-1/3"	1.5"	1-1/3"	3/4"	P104834	\$93.60
2-1/8"	2-1/8"	2-1/8"	1"	P104835	\$93.60
2-3/4"	2-7/4"	2-3/4"	1-1/2"	P104836	\$73.78
3-3/8"	3-1/4"	3-3/4"	2"	P104837	\$149.00
4-1/2"	3-3/8"	4.5"	2.5"	P104838	\$225.00
4-5/8"	4-1/2"	4-5/8"	3"	P104839	\$255.00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



* Catalog Pricing
Subject to Change

1 Vacuum Fittings - Adapters - Bolt Kits

CF - Conflat - Fittings -



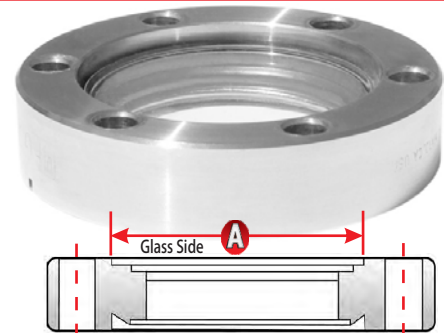
Fitting **CF Elbow 45°**

Stainless Steel

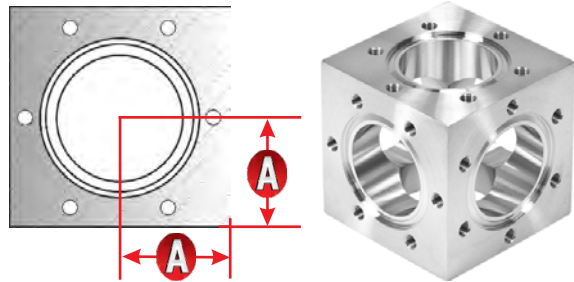
Flange Size O.D.	A	B	Tube O.D.	IDEAL VACUUM P/N	Price*
1-1/3"	1"	1-1/3"	3/4"	P104841	\$93.60
2-1/8"	1-1/4"	2-1/8"	1"	P104842	\$93.60
2-3/4"	1-3/4"	2-3/4"	1-1/2"	P104843	\$73.78
3-3/8"	2-1/8"	3-3/8"	2"	P104844	\$149.00
4-1/2"	3-3/8"	4.5"	2.5"	P104845	\$225.00
4-5/8"	4"	4-5/8"	3"	P104846	\$250.00
6.00"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

Fitting **CF Glass Viewport**

Stainless Steel



Flange Size O.D.	A Diameter	IDEAL VACUUM P/N	Price*
1-1/3"	3/4"	P102276	\$140.30
2-3/4"	1-1/2"	P102262	\$151.80
4-1/2"	2-1/2"	P102263	\$296.70



Fitting **CF 6 Way Cube**

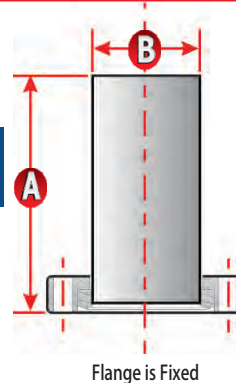
Stainless Steel

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

Fitting **CF Half Nipple**

Stainless Steel

Flange Size O.D.	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	\$40.47
3-3/8"	3-1/4"	2"	P102201	\$80.93
4-1/2"	4-1/8"	2-1/2"	P102202	\$123.05
4-5/8"	3-1/2"	3"	P104829	\$167.37
6.00"	4-3/8"	4"	P102203	\$157.55
8.00"	6-1/2"	6"	P102204	\$285.20
10.00"	8"	8"	P102205	\$379.50



* Catalog Pricing
Subject to Change

Vacuum Fittings - Adapters - Bolt Kits **1**

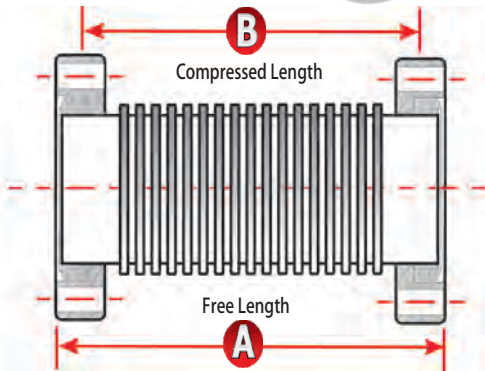
- Fittings - CF - Conflat



Fitting

CF Flexible Coupling

Stainless Steel



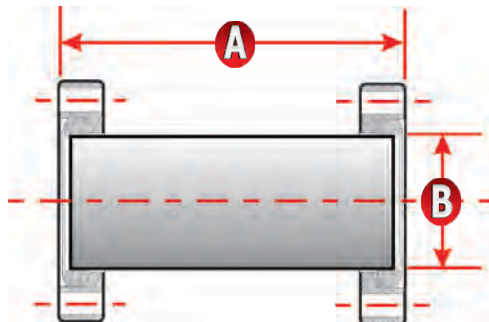
Flange Size O.D.	A Free Length	B Compressed Length	IDEAL VACUUM P/N	Price*
1-1/3"	12"	10.90"	P102226	\$132.25
1-1/3"	24"	22"	P102227	\$155.25
1-1/3"	48"	46"	P102228	\$216.20
2-3/4"	12"	10.90"	P102229	\$174.80
2-3/4"	24"	22"	P102230	\$221.95
2-3/4"	48"	46"	P102231	\$320.85
3-3/8"	12"	10.90"	P102232	\$290.95
4-1/2"	12"	10.90"	P102233	\$419.75
4-1/2"	24"	22"	P102234	\$448.50
6.00"	12"	10.90"	P102235	\$641.70
6.00"	24"	22"	P102236	\$681.95

Fitting

CF Full Nipple

Stainless Steel

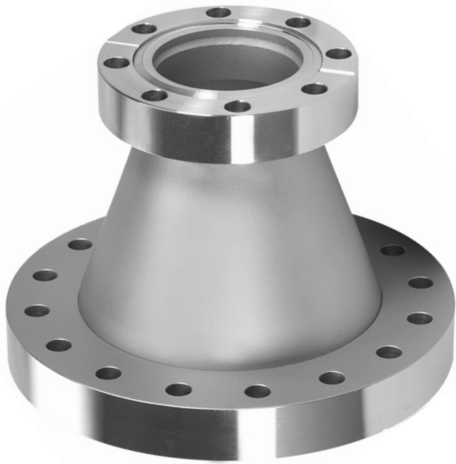
Flange Size O.D.	A	B	IDEAL VACUUM P/N	Price*
1-1/3"	3.00"	3/4"	P102206	\$70.00
2-1/8"	4-1/16"	1-3/8"	P104826	\$58.50
2-3/4"	5"	1-3/4"	P102207	\$81.67
3-3/8"	6-1/2"	2"	P102208	\$174.80
4-1/2"	8-1/4"	2-1/2"	P102209	\$232.30
4-5/8"	7-1/16"	3"	P104827	\$294.45
6.00"	8-3/4"	4"	P102210	\$302.45
8.00"	11"	6"	P102212	\$601.45
10.00"	15"	8"	P102211	\$994.50



* Catalog Pricing
Subject to Change

1 Vacuum Fittings - Adapters - Bolt Kits

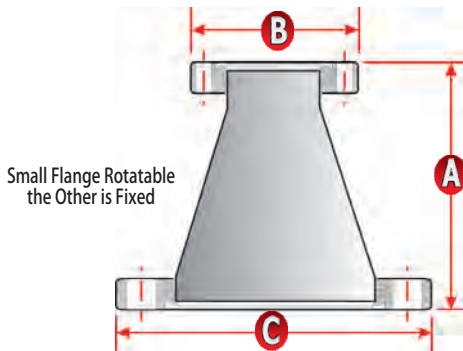
CF - Conflat - Fittings -



Fitting

Stainless Steel

CF Reducing Nipple "conical"

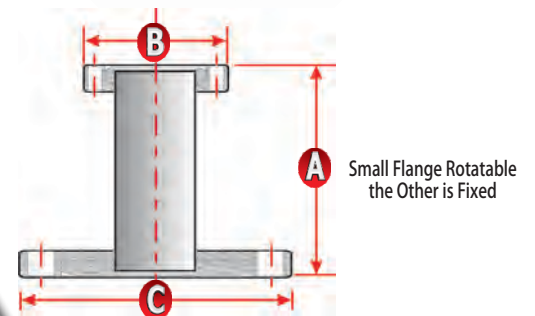


C	B	A	IDEAL VACUUM P/N	Price*
2-1/8"	to 1-1/3"	2-1/16"	P104787	\$104.50
2-3/4"	to 1-1/3"	3-1/16"	P104788	\$130.00
2-3/4"	to 2-1/8"	2-3/4"	P104789	\$130.00
3-3/8"	to 2-1/8"	2-3/4"	P104732	\$140.00
3-3/8"	to 2-3/4"	2-3/4"	P104731	\$135.00
4-1/2"	to 2-3/4"	2-15/16"	P104733	\$160.00
4-5/8"	to 2-3/4"	4-1/8"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

Fitting

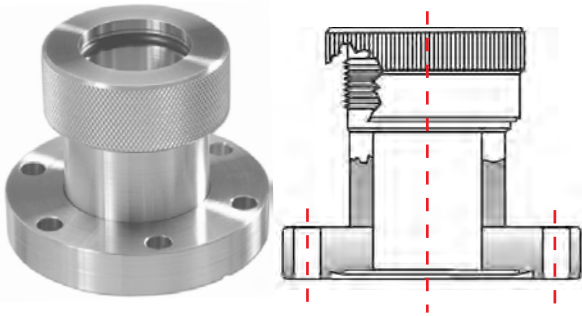
CF Reducing Nipple "straight"

C	B	A	IDEAL VACUUM P/N	Price*
2-3/4"	to 1-1/3"	2-1/2"	P102213	\$87.52
4-1/2"	to 1-1/3"	2-1/2"	P102214	\$139.15
6.00"	to 1-1/3"	2-1/2"	P102216	\$202.40
4-1/2"	to 2-3/4"	2-3/4"	P102215	\$151.80
6.00"	to 2-3/4"	5.00"	P102217	\$213.90
8.00"	to 2-3/4"	5.00"	P102219	\$391.00
10.00"	to 2-3/4"	5.00"	P102225	\$656.17
6.00"	to 4-1/2"	2-1/2"	P102218	\$316.25
8.00"	to 4-1/2"	5.00"	P102220	\$442.75
10.00"	to 4-1/2"	5.00"	P102224	\$585.00
8.00"	to 6.00"	5.00"	P102221	\$455.40
10.00"	to 6.00"	5.00"	P102223	\$635.25
10.00"	to 8.00"	5.00"	P102222	\$763.10



Vacuum Fittings - Adapters - Bolt Kits 1

- Adapters - CF - Conflat



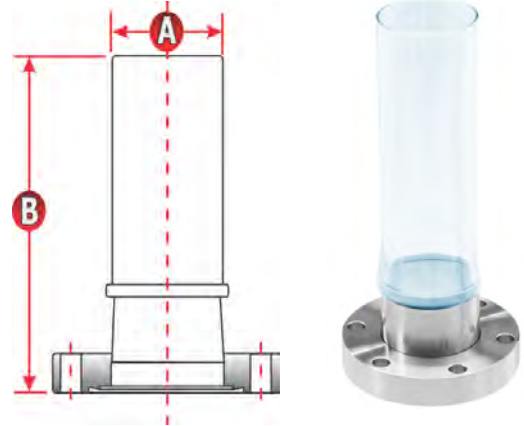
Adapter CF Compression Port

Stainless Steel

CF - Conflat Port	Compression Port	Tube Size	IDEAL VACUUM P/N	Price*
1-1/3"	1/4"	1/4"	P102272	\$99.18
2-3/4"	1/4"	1/4"	P102273	\$99.18
2-3/4"	1/2"	1/2"	P102274	\$110.85
2-3/4"	1"	1"	P102275	\$119.60

Adapter CF to Pyrex Glass to Kovar

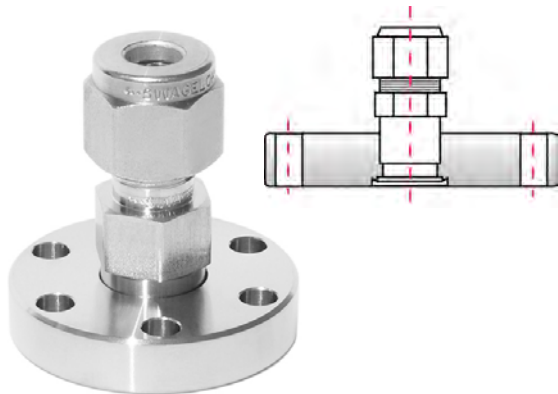
Stainless Steel CF Flange



CF - Conflat Port	A Glass Diameter	B Total Length	IDEAL VACUUM P/N	Price*
1-1/3"	1/4"	3.94"	P102260	\$101.53
1-1/3"	1/2"	4.88"	P102259	\$174.80
2-3/4"	1"	3.94"	P102261	\$177.10

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	\$70.22
1-1/3"	3/8"	3/8"	P102257	\$73.78
2-3/4"	1/4"	1/4"	P102254	\$76.17
2-3/4"	3/8"	3/8"	P102258	\$105.01
2-3/4"	1/2"	1/2"	P102255	\$117.30
2-3/4"	1"	1"	P102256	\$163.30

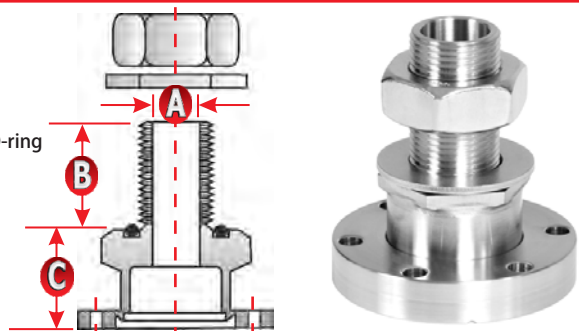
Adapter CF to Baseplate

Stainless Steel

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

with Viton O-ring

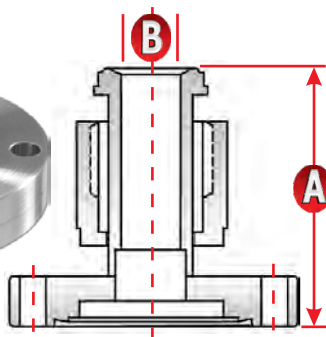
CF - Conflat Port	A	B	C	IDEAL VACUUM P/N	Price*
2-1/8"	0.75"	1.620"	1.280"	P105370	\$266.00
2-3/4"	0.75"	1.620"	1.280"	P105369	\$286.00



* Catalog Pricing
Subject to Change

1 Vacuum Fittings - Adapters - Bolt Kits

CF - Conflat - Adapters -



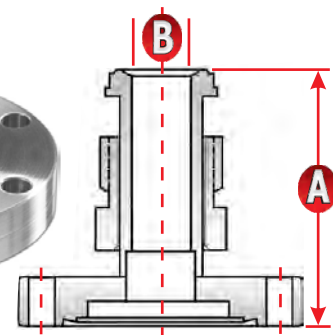
Adapter CF to VCR Female

Stainless Steel

CF - Conflat Port	VCR Female Port	A Total Height	B Tube Size	IDEAL VACUUM P/N	Price*
1-1/3"	1/4"	1.36"	1/4"	P102268	\$93.33
1-1/3"	1/2"	1.55"	1/2"	P102270	\$99.18
2-3/4"	1/4"	1.55"	1/4"	P102269	\$99.18
2-3/4"	1/2"	1.75"	1/2"	P102271	\$105.01

Adapter CF to VCR Male

Stainless Steel



CF - Conflat Port	VCR Male Port	A Total Height	B Tube Size	IDEAL VACUUM P/N	Price*
1-1/3"	1/4"	1.36"	1/4"	P102264	\$70.22
1-1/3"	1/2"	1.55"	1/2"	P102266	\$105.01
2-3/4"	1/4"	1.55"	1/4"	P102265	\$93.33
2-3/4"	1/2"	1.75"	1/2"	P102267	\$117.30

Adapter CF to KF

Straight or Conical

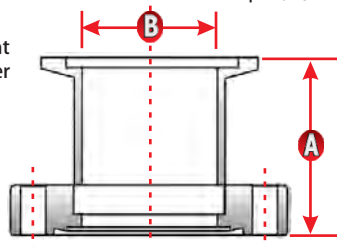
Stainless Steel

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 3-3/8" 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

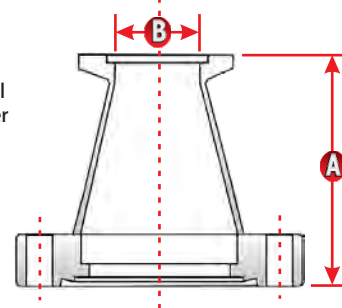
Conflat to KF Size	Adapter Type	A	B	IDEAL VACUUM P/N	Price*
CF 3-3/8" to KF40	STRAIGHT	1.18"	1.38"	P103766	\$135.75
CF 3-3/8" to KF40	CONICAL	2.50"	1.39"	P103821	\$130.48
CF 4-1/2" to KF40	CONICAL	2.93"	1.38"	P103822	\$168.07
CF 4-5/8" to KF40	CONICAL	4.12"	1.39"	P103823	\$211.11
CF 1-1/3" to KF50	STRAIGHT	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	\$420.70



Straight Adapter



Conical Adapter



* Catalog Pricing
Subject to Change

Vacuum Fittings - Adapters - Bolt Kits ¹ - Gaskets - CF - Conflat

CF Copper Gaskets

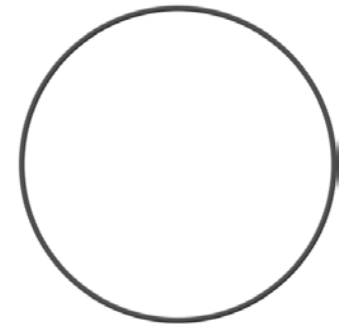
(Sold as One Each)



CF Flange Size	Outer Diameter In.	Inner Diameter In.	IDEAL VACUUM P/N	Price*
1-1/3"	0.838	0.640	P102277	\$2.60
2-1/8"	1.25	1.00	P104337	\$2.90
2-3/4"	1.895	1.451	P102278	\$3.10
3-3/8"	2.425	2.010	P102279	\$3.50
4-1/2"	3.242	2.506	P102280	\$4.40
4-5/8"	3.625	3.00	P104336	\$5.00
6.00"	4.743	4.010	P102281	\$5.64
6-3/4"	5.5625	5.03125	P104338	\$6.30
8.00"	6.743	6.007	P102282	\$7.41
10.00"	8.743	8.007	P102283	\$9.23
12.00"	10.75	10.00	P102284	\$41.60
13-3/4"	11.55	10.84	P102286	\$52.51
16-1/2"	14.75	14.00	P104830	\$54.90

CF Viton Elastomer Gaskets

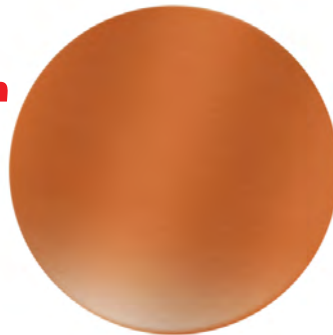
(Sold as One Each)



CF Flange Size	Outer Diameter In.	Inner Diameter In.	IDEAL VACUUM P/N	Price*
1-1/3"	0.838	0.640	P104339	\$9.00
2-1/8"	1.29	1.00	P104340	\$11.00
2-3/4"	1.895	1.451	P104341	\$14.00
3-3/8"	2.425	2.010	P104342	\$19.95
4-1/2"	3.242	2.506	P104343	\$24.95
4-5/8"	3.598	3.00	P104344	\$25.95
6.00"	4.743	4.010	P104345	\$29.95
6-3/4"	5.5625	5.03125	P104346	\$38.95
8.00"	6.743	6.007	P104347	\$42.00
10.00"	8.743	8.007	P104348	\$46.00

CF Blank Solid Copper Gaskets

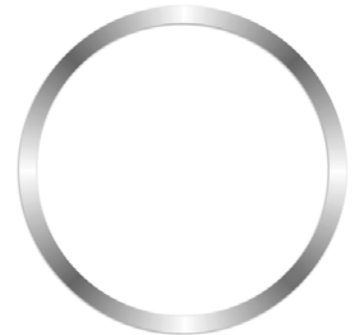
(Sold as One Each)



CF Flange Size	Outer Diameter In.	Inner Diameter In.	IDEAL VACUUM P/N	Price*
1-1/3"	0.838	0.640	P104349	\$4.99
2-3/4"	1.895	1.451	P104350	\$6.75
3-3/8"	2.425	2.010	P104351	\$11.00
4-1/2"	3.243	2.506	P104352	\$16.35

CF Silver Plated Copper Gaskets

(Sold as One Each)



CF Flange Size	Outer Diameter In.	Inner Diameter In.	IDEAL VACUUM P/N	Price*
1-1/3"	0.838	0.640	P103982	\$5.50
2-3/4"	1.895	1.451	P103983	\$6.00
3-3/8"	2.425	2.010	P103984	\$8.98
4-1/2"	3.242	2.506	P104178	\$11.00
6.00"	4.743	4.010	P103985	\$12.00
8.00"	6.743	6.007	P103986	\$16.95
10.00"	8.743	8.007	P104179	\$23.00

* Catalog Pricing
Subject to Change

1 Vacuum Fittings - Adapters - Bolt Kits

CF - Conflat - Bolt Kits -

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	QUANTITY Bolts	Platenuts	Washers	IDEAL VACUUM P/N	Price*
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	QUANTITY Bolts	Washers	IDEAL VACUUM P/N	Price*
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



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 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

CF Hex Bolt Kit

"METRIC"

SilverPlated BOLTS

(for Smooth Bolt Holes)



Used on Conflat CF Flange Size	Thread Size	QUANTITY Bolts	Platenuts	Washers	IDEAL VACUUM P/N	Price*
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

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

* Catalog Pricing
Subject to Change