

# Aluminum Conflat® Flanges

Mate Directly with Stainless Steel Conflats®



**VRC** Vacuum Research

# Aluminum Conflat® Flanges



## Aluminum Conflat® Flanges

These Aluminum Conflat® Flanges made by Vacuum Research Corporation provide the reliability of the CF design (a reusable all metal seal) at a very reasonable cost. Made from aluminum alloy with a special temper, our flanges have been tested to more than 100 leak tight closures with no change whatsoever to the sealing knife edge or torque needed to seal. (Leak rate better than  $5 \times 10^{-10}$  scc/sec.)

## No Dissolved Hydrogen

Another feature that can be very important in some applications is that Aluminum Flanges do not have the dissolved hydrogen found in stainless steel. This results in a much lower hydrogen background which can be important in some types of analysis.

## Mate Directly with Stainless Steel

Using aluminum rather than copper gaskets these flanges mate directly to stainless steel CF flanges already in your system. Aluminum gaskets are competitive in price with copper gaskets, have similar leak rate and outgassing performance and have been successfully tested up to 400 °C (750 °F).

## Sizes From 1.33 to 14 Inch

Aluminum CF Flanges are available in the most popular CF flange sizes from 1.33 to 14 inch outside diameter. The bolt circle, number of holes, outside flange diameter and thickness are all the same as stainless steel CF flanges. Options such as tapped or through holes and rotatable or non-rotatable styles are also available.

## Protective Flange Covers

1.33 in., p/n V606121 ...\$0.50    6.00 in., p/n V606124 ...\$2.00  
 2.75 in., p/n V606122 .....0.75    8.00 in., p/n V606125 .....2.25  
 4.50 in., p/n V606123 .....1.25    10.00 in., p/n V606126 .....4.00

# Aluminum Conflat® Gaskets

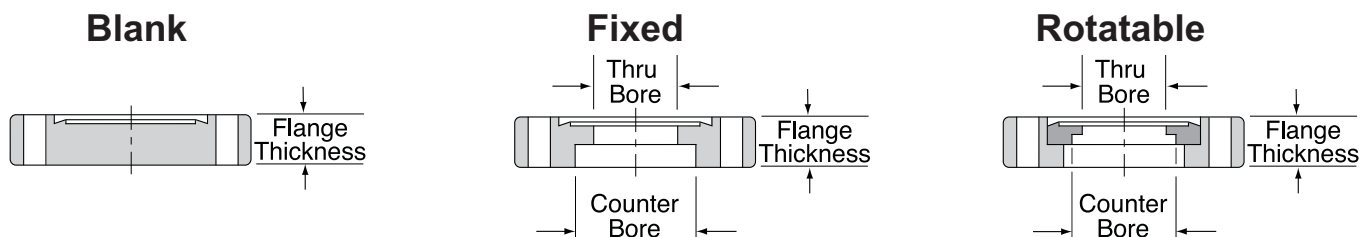


## Aluminum Conflat® Gaskets

The VRC high purity aluminum gaskets have leak tightness and outgassing characteristics similar to copper gaskets, and can be used with either aluminum or stainless steel CF flanges. Aluminum gaskets totally eliminate the water vapor permeation found in Viton and Buna-N O-rings and the cost of aluminum gaskets is competitive with copper gaskets of similar size. The leak rate for aluminum gaskets is less than  $5 \times 10^{-10}$  scc/sec., and the sealing torque is less than with copper gaskets.

Our aluminum gaskets have been tested to 400 °C (750 °F). To insure cleanliness, each gasket is washed with Methanol prior to shipment and then packed and sealed in its own individual plastic bag. These gaskets are available for most CF flange diameters from 1.33 to 14 inch.

CF Flange Outside Diameter	Gasket Outside Diameter	Gasket Part Number	Price, Pack of 10
1.33 in.	0.836 in.	X701G01.33A	\$26.
2.75 in.	1.892 in.	X701G02.75A	\$60.
4.50 in.	3.250 in.	X701G04.50A	\$100.
6.00 in.	4.750 in.	X701G06.00A	\$140.
8.00 in.	6.750 in.	X701G08.00A	\$200.
10.00 in.	8.750 in.	X701G10.00A	\$240.
12.00 in.	10.750 in.	X701G12.00A	\$320.
13.25 in.	11.575 in.	X701G13.25A	\$385.
14.00 in.	12.310 in.	X701G14.00A	contact factory


**2.75 Inch O.D. Aluminum Flange (Bolt Circle 2.312 inch; 58.7 mm)** *Dimensions shown in inch (mm)*

Type	Part Number	Counter Bore	Thru Bore	Thickness	Holes (no. X dia)	Price
Fixed, Through Holes	CFF02.75F-B	blank	blank	0.50 (12.7)	6 X 0.26	\$ 11.00
Fixed, Through Holes	CFF02.75F-1.5	1.75 (44.5)	1.5 (38.1)	0.50 (12.7)	6 X 0.26	13.00
Fixed, Tapped Holes	CFF02.75FT-B	blank	blank	0.50 (12.7)	6 X 1/4-28	15.00
Fixed, Tapped Holes	CFF02.75FT-1.5	1.75 (44.5)	1.5 (38.1)	0.50 (12.7)	6 X 1/4-28	17.00
Rotatable, Through Holes	CFF02.75R-B	blank	blank	0.50 (12.7)	6 X 0.26	15.00
Rotatable, Through Holes	CFF02.75R-1.5	1.75 (44.5)	1.5 (38.1)	0.50 (12.7)	6 X 0.26	17.00
Rotatable, Tapped Holes	CFF02.75RT-B	blank	blank	0.50 (12.7)	6 X 1/4-28	19.00
Rotatable, Tapped Holes	CFF02.75RT-1.5	1.75 (44.5)	1.5 (38.1)	0.50 (12.7)	6 X 1/4-28	19.00
<b>Aluminum Gaskets</b>	X701G02.75A	for Aluminum or Stainless Steel 2.75 inch O.D. CF Flanges, Pack of 10				60.00

**4.5 Inch O.D. Aluminum Flange (Bolt Circle 3.628 inch; 92.2 mm)** *Dimensions shown in inch (mm)*

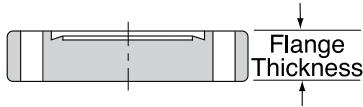
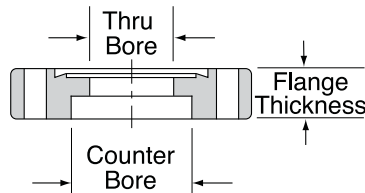
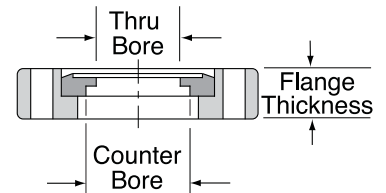
Type	Part Number	Counter Bore	Thru Bore	Thickness	Holes (no. X dia)	Price
Fixed, Through Holes	CFF04.50F-B	blank	blank	0.68 (17.3)	8 X 0.33	\$ 40.00
Fixed, Through Holes	CFF04.50F-2.3	2.75 (69.8)	2.38 (60.33)	0.68 (17.3)	8 X 0.33	42.00
Fixed, Tapped Holes	CFF04.50FT-B	blank	blank	0.68 (17.3)	8 X 5/16-24	52.00
Fixed, Tapped Holes	CFF04.50FT-2.3	2.75 (69.8)	2.38 (60.33)	0.68 (17.3)	8 X 5/16-24	56.00
Rotatable, Through Holes	CFF04.50R-B	blank	blank	0.68 (17.3)	8 X 0.33	55.00
Rotatable, Through Holes	CFF04.50R-2.3	2.75 (69.8)	2.38 (60.33)	0.68 (17.3)	8 X 0.33	57.00
Rotatable, Tapped Holes	CFF04.50RT-B	blank	blank	0.68 (17.3)	8 X 5/16-24	56.00
Rotatable, Tapped Holes	CFF04.50RT-2.3	2.75 (69.8)	2.38 (60.33)	0.68 (17.3)	8 X 5/16-24	58.00
<b>Aluminum Gaskets</b>	X701G04.50A	for Aluminum or Stainless Steel 4.5 inch O.D. CF Flanges, Pack of 10				100.00

**6.0 Inch O.D. Aluminum Flange (Bolt Circle 5.128 inch; 130 mm)** *Dimensions shown in inch (mm)*

Type	Part Number	Counter Bore	Thru Bore	Thickness	Holes (no. X dia)	Price
Fixed, Through Holes	CFF06.00F-B	blank	blank	0.78 (19.8)	16 X 0.33	\$ 64.00
Fixed, Through Holes	CFF06.00F-4.0	4.25 (108)	4.01 (101.8)	0.78 (19.8)	16 X 0.33	68.00
Fixed, Tapped Holes	CFF06.00FT-B	blank	blank	0.78 (19.8)	16 X 5/16-24	78.00
Fixed, Tapped Holes	CFF06.00FT-4.0	4.25 (108)	4.01 (101.8)	0.78 (19.8)	16 X 5/16-24	78.00
Rotatable, Through Holes	CFF06.00R-B	blank	blank	0.78 (19.8)	16 X 0.33	75.00
Rotatable, Through Holes	CFF06.00R-4.0	4.25 (108)	4.01 (101.8)	0.78 (19.8)	16 X 0.33	75.00
Rotatable, Tapped Holes	CFF06.00RT-B	blank	blank	0.78 (19.8)	16 X 5/16-24	80.00
Rotatable, Tapped Holes	CFF06.00RT-4.0	4.25 (108)	4.01 (101.8)	0.78 (19.8)	16 X 5/16-24	84.00
<b>Aluminum Gaskets</b>	X701G06.00A	for Aluminum or Stainless Steel 6.0 inch O.D. CF Flanges, Pack of 10				140.00

**8.0 Inch Aluminum O.D. Flange (Bolt Circle 7.128 inch; 181 mm)** *Dimensions shown in inch (mm)*

Type	Part Number	Counter Bore	Thru Bore	Thickness	Holes (no. X dia)	Price
Fixed, Through Holes	CFF08.00F-B	blank	blank	0.88 (22.3)	20 X 0.33	\$ 85.00
Fixed, Through Holes	CFF08.00F-6.0	6.25 (159)	6.02 (153)	0.88 (22.3)	20 X 0.33	85.00
Fixed, Tapped Holes	CFF08.00FT-B	blank	blank	0.88 (22.3)	20 X 5/16-24	98.00
Fixed, Tapped Holes	CFF08.00FT-6.0	6.25 (159)	6.02 (153)	0.88 (22.3)	20 X 5/16-24	98.00
Rotatable, Through Holes	CFF08.00R-B	blank	blank	0.88 (22.3)	20 X 0.33	90.00
Rotatable, Through Holes	CFF08.00R-6.0	6.25 (159)	6.02 (153)	0.88 (22.3)	20 X 0.33	90.00
Rotatable, Tapped Holes	CFF08.00RT-B	blank	blank	0.88 (22.3)	20 X 5/16-24	115.00
Rotatable, Tapped Holes	CFF08.00RT-6.0	6.25 (159)	6.02 (153)	0.88 (22.3)	20 X 5/16-24	115.00
<b>Aluminum Gaskets</b>	X701G08.00A	for Aluminum or Stainless Steel 8.0 inch O.D. CF Flanges, Pack of 10				200.00

**Blank****Fixed****Rotatable**

<b>10.0 Inch Aluminum O.D. Flange</b> (Bolt Circle 9.128 inch; 232 mm)						<i>Dimensions shown in inch (mm)</i>
Type	Part Number	Counter Bore	Thru Bore	Thickness	Holes (no. X dia)	Price
Fixed, Through Holes	CFF10.00F-B	blank	blank	0.97 (24.6)	24 X 0.33	\$168.00
Fixed, Through Holes	CFF10.00F-8.0	8.25 (209)	8.02 (203.7)	0.97 (24.6)	24 X 0.33	172.00
Fixed, Tapped Holes	CFF10.00FT-B	blank	blank	0.97 (24.6)	24 X 5/16-24	183.00
Fixed, Tapped Holes	CFF10.00FT-8.0	8.25 (209)	8.02 (203.7)	0.97 (24.6)	24 X 5/16-24	185.00
Rotatable, Through Holes	CFF10.00R-B	blank	blank	0.97 (24.6)	24 X 0.33	178.00
Rotatable, Through Holes	CFF10.00R-8.0	8.25 (209)	8.02 (203.7)	0.97 (24.6)	24 X 0.33	180.00
Rotatable, Tapped Holes	CFF10.00RT-B	blank	blank	0.97 (24.6)	24 X 5/16-24	190.00
Rotatable, Tapped Holes	CFF10.00RT-8.0	8.25 (209)	8.02 (203.7)	0.97 (24.6)	24 X 5/16-24	190.00
<b>Aluminum Gaskets</b>	X701G10.00A	for Aluminum or Stainless Steel 10.0 inch O.D. CF Flanges, Pack of 10				240.00

<b>12.0 Inch Aluminum O.D. Flange</b> (Bolt Circle 11.18 inch; 284 mm)						<i>Dimensions shown in inch (mm)</i>
Type	Part Number	Counter Bore	Thru Bore	Thickness	Holes (no. X dia)	Price
Fixed, Through Holes	CFF12.00F-B	blank	blank	1.02 (25.9)	32 X 0.33	\$255.00
Fixed, Through Holes	CFF12.00F-10.0	10.25 (260)	10.02 (254.5)	1.02 (25.9)	32 X 0.33	255.00
Fixed, Tapped Holes	CFF12.00FT-B	blank	blank	1.02 (25.9)	32 X 5/16-24	280.00
Fixed, Tapped Holes	CFF12.00FT-10.0	10.25 (260)	10.02 (254.5)	1.02 (25.9)	32 X 5/16-24	280.00
Rotatable, Through Holes	CFF12.00R-B	blank	blank	1.02 (25.9)	32 X 0.33	272.00
Rotatable, Through Holes	CFF12.00R-10.0	10.25 (260)	10.02 (254.5)	1.02 (25.9)	32 X 0.33	272.00
Rotatable, Tapped Holes	CFF12.00RT-B	blank	blank	1.02 (25.9)	32 X 5/16-24	290.00
Rotatable, Tapped Holes	CFF12.00RT-10.0	10.25 (260)	10.02 (254.5)	1.02 (25.9)	32 X 5/16-24	290.00
<b>Aluminum Gaskets</b>	X701G12.00A	for Aluminum or Stainless Steel 12.0 inch O.D. CF Flanges, Pack of 10				320.00

<b>13.25 Inch Aluminum O.D. Flange</b> (Bolt Circle 12.06 inch; 306 mm)						<i>Dimensions shown in inch (mm)</i>
Type	Part Number	Counter Bore	Thru Bore	Thickness	Holes (no. X dia)	Price
Fixed, Through Holes	CFF13.25F-B	blank	blank	1.12 (28.4)	30 X 0.39	\$275.00
Fixed, Through Holes	CFF13.25F-10.5	11.00 (279)	10.50 (267)	1.12 (28.4)	30 X 0.39	275.00
Fixed, Tapped Holes	CFF13.25FT-B	blank	blank	1.12 (28.4)	30 X 3/8-24	295.00
Fixed, Tapped Holes	CFF13.25FT-10.5	11.00 (279)	10.50 (267)	1.12 (28.4)	30 X 3/8-24	295.00
Rotatable, Through Holes	CFF13.25R-B	blank	blank	1.12 (28.4)	30 X 0.39	370.00
Rotatable, Through Holes	CFF13.25R-10.5	11.00 (279)	10.50 (267)	1.12 (28.4)	30 X 0.39	370.00
Rotatable, Tapped Holes	CFF13.25RT-B	blank	blank	1.12 (28.4)	30 X 3/8-24	380.00
Rotatable, Tapped Holes	CFF13.25RT-10.5	11.00 (279)	10.50 (267)	1.12 (28.4)	30 X 3/8-24	380.00
<b>Aluminum Gaskets</b>	X701G13.25A	for Aluminum or Stainless Steel 13.25 inch O.D. CF Flanges, Pack of 10				385.00

<b>14.0 Inch Aluminum O.D. Flange</b> (Bolt Circle 12.81 inch; 325 mm)						<i>Dimensions shown in inch (mm)</i>
Type	Part Number	Counter Bore	Thru Bore	Thickness	Holes (no. X dia)	Price
Fixed, Through Holes	CFF14.00F-B	blank	blank	1.12 (28.4)	30 X 0.39	contact factory
Fixed, Through Holes	CFF14.00F-11.7	12.00 (305)	11.75 (298.5)	1.12 (28.4)	30 X 0.39	contact factory
Fixed, Tapped Holes	CFF14.00FT-B	blank	blank	1.12 (28.4)	30 X 3/8-24	contact factory
Fixed, Tapped Holes	CFF14.00FT-11.7	12.00 (305)	11.75 (298.5)	1.12 (28.4)	30 X 3/8-24	contact factory
Rotatable, Through Holes	CFF14.00R-B	blank	blank	1.12 (28.4)	30 X 0.39	contact factory
Rotatable, Through Holes	CFF14.00R-11.7	12.00 (305)	11.75 (298.5)	1.12 (28.4)	30 X 0.39	contact factory
Rotatable, Tapped Holes	CFF14.00RT-B	blank	blank	1.12 (28.4)	30 X 3/8-24	contact factory
Rotatable, Tapped Holes	CFF14.00RT-11.7	12.00 (305)	11.75 (298.5)	1.12 (28.4)	30 X 3/8-24	contact factory
<b>Aluminum Gaskets</b>	X701G14.00A	for Aluminum or Stainless Steel 14.00 inch O.D. CF Flanges, Pack of 10				contact factory