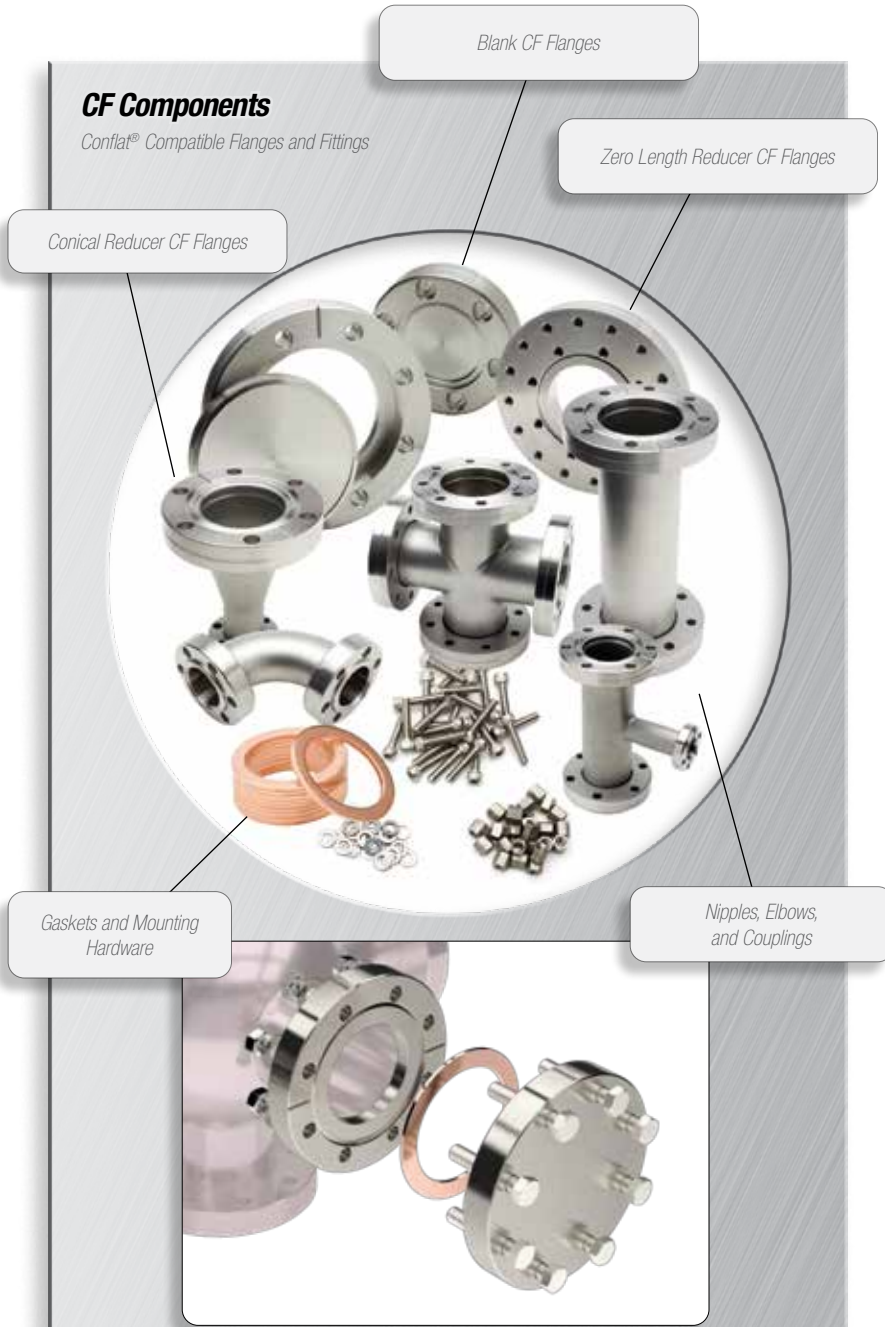




CF Components

Conflat® Compatible Flanges and Fittings



Blank CF Flanges

Zero Length Reducer CF Flanges

Conical Reducer CF Flanges

Gaskets and Mounting Hardware

Nipples, Elbows, and Couplings

Features

- 304 Stainless Steel
- UHV Compatible to 1×10^{-13} Torr
- Bakeable to 450°C

Specifications

Vacuum Range

UHV, Ultrahigh vacuum	1×10^{-13} Torr
-----------------------	--------------------------

Temperature Range^{1,2}

304 Stainless Steel	450°C
---------------------	-------

Notes

1. Overall assembly ratings must be adjusted to that of its lowest rated component.
 2. Anti-seizing thread lubricants or compounds are recommended when fastening stainless steel components. Silver-plated bolts are an ideal solution for in-vacuum use, while various paint-on thread lubricating solutions for air-service applications are commercially available. Contact factory for more information on thread lubricating solutions.
- § Unless specified otherwise, dimensional units in all sections of this catalog are expressed in inches.

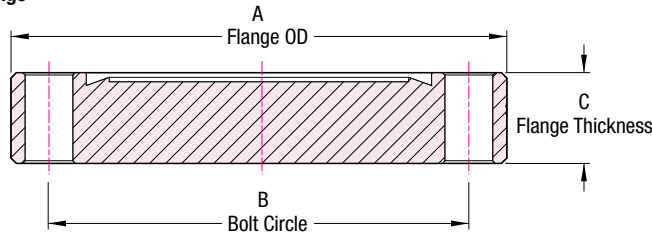
CF Components

Accu-Glass Products' line of Conflat® compatible CF style blank flanges, fittings and hardware are designed to incorporate the industry standard "captured copper gasket" sealing principle. This is the standard ultrahigh vacuum, UHV sealing method used throughout the industrial and scientific vacuum communities.

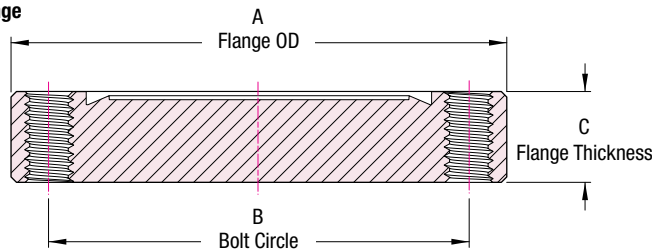
Our range of products include numerous CF flanged parts from conical reducers, zero length reducers, nipples, elbows and other fittings, plus mounting hardware including fasteners, copper and Viton® gaskets.



CF, Clearance Hole Flange



CF, Threaded Hole Flange



200000 / 1.33 CF Flange
Clearance Holes



200122 / 4.50 CF Flange
Clearance Holes



200009 / 1.33 CF Flange
Threaded Holes



200126 / 4.50 CF Flange
Threaded Holes

Non-Rotatable¹ — Blank CF Flange / 450°C / UHV to 1x10⁻¹⁰ Torr

Flange	A Flange OD	B Bolt Circle	Bolt Holes		C Flange Thickness	Model Number	Part Number
			Quantity	Diameter			

Clearance — Bolt Hole

133 CF	1.33	1.062	6	0.17	0.30	CF133-000-N	200000
212 CF	2.12	1.625	4	0.26	0.47	CF212-000-N	200040
275 CF	2.73	2.312	6	0.26	0.50	CF275-000-N	200060
338 CF	3.36	2.850	8	0.33	0.69	CF338-000-N	200110
450 CF	4.50	3.628	8	0.33	0.69	CF450-000-N	200122
462 CF	4.62	4.030	10	0.33	0.81	CF462-000-N	200138
600 CF	6.00	5.128	16	0.33	0.78	CF600-000-N	200150
675 CF	6.75	5.969	18	0.33	0.84	CF675-000-N	200158
800 CF	8.00	7.128	20	0.33	0.87	CF800-000-N	200170
1000 CF	10.00	9.128	24	0.33	0.97	CF1000-000-N	200178
1200 CF	12.00	11.180	32	0.33	1.12	CF1200-000-N	200186
1325 CF	13.25	12.060	30	0.39	1.12	CF1325-000-N	200194
1400 CF	14.00	12.809	30	0.39	1.12	CF1400-000-N	200206
1450 CF	14.50	13.311	32	0.39	1.12	CF1450-000-N	200214
1650 CF	16.50	15.310	36	0.39	1.12	CF1650-000-N	200222

Threaded — Bolt Hole

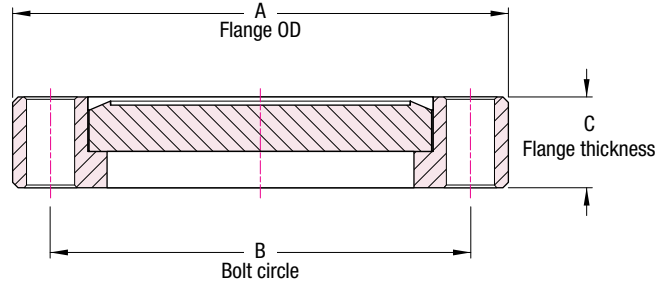
133 CF	1.33	1.062	6	8-32	0.30	CF133-000-NT	200009
212 CF	2.12	1.625	4	1/4-28	0.47	CF212-000-NT	200045
275 CF	2.73	2.312	6	1/4-28	0.50	CF275-000-NT	200070
450 CF	4.50	3.628	8	5/16-24	0.69	CF450-000-NT	200126
600 CF	6.00	5.128	16	5/16-24	0.78	CF600-000-NT	200152
675 CF	6.75	5.969	18	5/16-24	0.84	CF675-000-NT	200161

1. Gaskets and mounting hardware see pages 234 and 235.

Vacuum Hardware



200018 / CF Flange
Clearance Holes



Rotatable¹ — Blank CF Flange / Clearance / 450°C / UHV to 1×10^{-10} Torr

Flange	A Flange OD	B Bolt Circle	Bolt Holes		C Flange Thickness	Model Number	Part Number
			Quantity	Diameter			

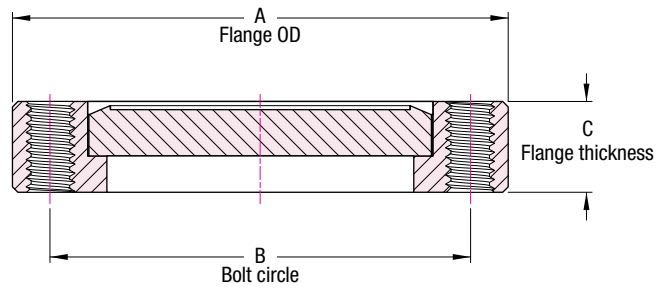
Clearance — Bolt Hole

133 CF	1.33	1.062	6	0.17	0.30	CF133-000-R	200018
275 CF	2.73	2.312	6	0.26	0.50	CF275-000-R	200080
450 CF	4.50	3.628	8	0.33	0.75	CF450-000-R	200130

1. Gaskets and mounting hardware see pages 234 and 235.



200130 / CF Flange
Clearance Holes



Rotatable¹ — Blank CF Flange / Threaded / 450°C / UHV to 1×10^{-10} Torr

Flange	A Flange OD	B Bolt Circle	Bolt Holes		C Flange Thickness	Model Number	Part Number
			Quantity	Thread			

Threaded — Bolt Hole

133 CF	1.33	1.062	6	8-32	0.30	CF133-000-RT	200026
275 CF	2.73	2.312	6	1/4-28	0.50	CF275-000-RT	200100
450 CF	4.50	3.628	8	5/16-24	0.75	CF450-000-RT	200134

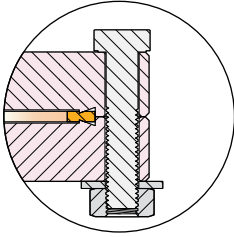
1. Gaskets and mounting hardware see pages 234 and 235.



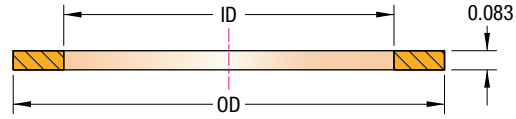
200026 / CF Flange
Threaded Holes



200134 / CF Flange
Threaded Holes



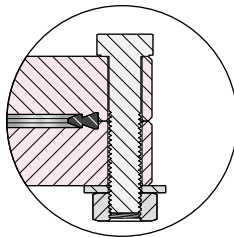
200850 / Copper Gasket



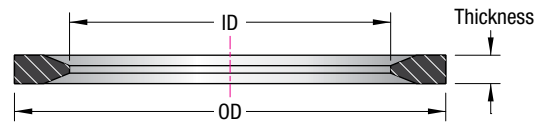
Copper Gaskets¹ — CF Flange / 450°C / UHV to 1x10⁻¹⁰ Torr

CF Flange	Gasket ID	Gasket OD	Package Quantity	Model Number	Part Number
133 CF	0.64	0.84	10	CG-064-133	200730
212 CF	1.00	1.29	10	CG-100-212	200740
275 CF	1.53 ²	1.90	10	CG-153-275	200761
275 CF	1.45	1.90	10	CG-145-275	200760
338 CF	2.01	2.43	10	CG-201-338	200780
450 CF	2.51	3.24	10	CG-251-450	200810
450 CF	2.80 ²	3.24	10	CG-280-450	200820
462 CF	3.01	3.60	10	CG-301-462	200830
600 CF	4.01	4.74	10	CG-401-600	200850
600 CF	4.12 ²	4.74	10	CG-4125-600	200851
675 CF	5.01	5.57	10	CG-501-675	200870
800 CF	6.01	6.74	10	CG-601-800	200880
1000 CF	8.00	8.74	10	CG-800-1000	200900
1200 CF	10.00	10.74	1	CG-1000-1200-1	200921
1325 CF	10.87	11.56	1	CG-1087-1325-1	200911
1400 CF	11.56	12.33	1	CG-1156-1400-1	200931
1650 CF	14.11	14.84	1	CG-1411-1650-1	200941

1. Call factory for larger size gaskets. 2. Recommended for flanges with multiple feedthroughs



200763 / Viton® Gasket



Viton® Gaskets¹ — CF Flange / 150°C / HV to 1x10⁻⁸ Torr

CF Flange	Gasket ID	Gasket OD	Thickness	Package Quantity	Model Number	Part Number
133 CF	0.62	0.84	0.08	5	VG-062-133	200731
212 CF	1.02	1.29	0.12	5	VG-102-212	200741
275 CF	1.68	1.90	0.12	5	VG-168-275	200763
338 CF	2.19	2.43	0.12	1	VG-219-338	200782
450 CF	3.02	3.24	0.12	1	VG-302-450	200812
462 CF	3.36	3.60	0.12	1	VG-336-462	200832
600 CF	4.51	4.74	0.12	1	VG-451-600	200852

1. Call factory for larger size gaskets.



CF Gasket Clip Set — 2x Clips Included in Set

Accu-Glass stainless steel gasket clip set is a simple and convenient way of supporting any size CF gaskets in place during difficult or unusual Conflat® CF flange installations. Ideal for vertical or inverted installations, and when working against gravity.

Gasket Clips — CF Flange / 20°C / Air Service

CF Flange	Description	Model Number	Part Number
-----------	-------------	--------------	-------------

Gasket Clips — Gasket Installation Tool

All Sizes	Set includes 2x Stainless Steel Clips	GC-CF-2	113290
-----------	---------------------------------------	---------	---------------



113290 / Gasket Clips for use with CF Flanges

CF Fastener Kits — Includes Bolts, Nuts, and Washers

CF Fastener Kits are supplied with 18-8 stainless steel hardware to closely match the linear expansion of standard CF flanges. Listed bolt lengths are for clearance hole CF flanges only.

Caution: Threaded bolt hole flanges require shorter bolt lengths. A small amount of anti-seize lubricant should be applied before assembly.

Kits include bolts, nuts and washers. With exception of 1.33 CF kits, all bolts have hexagonal heads, 133 CF bolts have socket cap heads. Each package includes enough hardware to mount the number of flanges listed in the table below.

Fastener Kits¹ — CF Flange / 450°C / UHV to 1x10⁻¹⁰ Torr

CF Flange	Bolt / Nut Threads	Bolt Length	Package Quantity Each	Mounts number of flanges	Model Number	Part Number
-----------	--------------------	-------------	-----------------------	--------------------------	--------------	-------------

Clearance — Hole CF Flanges / Kit includes bolts, nuts and washers

133 CF ²	8-32	0.75	24	4	CFH-133	200735
212 CF	1/4-28	1.25	16	4	CFH-212	200742
275 CF	1/4-28	1.25	24	4	CFH-275	200764
338 CF	5/16-24	1.75	32	4	CFH-338	200783
450 CF	5/16-24	2.00	32	4	CFH-450	200813
462 CF ³	5/16-24	2.00	40	4	CFH-462	200833
600 CF ³	5/16-24	2.00	32	2	CFH-600	200853
675 CF	5/16-24	2.25	36	2	CFH-675	200873
800 CF	5/16-24	2.25	40	2	CFH-800	200883
1000 CF	5/16-24	2.50	48	2	CFH-1000	200903
1200 CF	5/16-24	3.00	32	1	CFH-1200	200923
1325 CF	3/8-24	3.00	30	1	CFH-1325	200933
1400 CF	3/8-24	3.00	30	1	CFH-1400	200943
1450 CF	3/8-24	3.00	32	1	CFH-1450	200953
1650 CF	3/8-24	3.00	36	1	CFH-1650	200963

1. Anti-seize thread lubricants or compounds are recommended when fastening stainless steel components. Silver-plated bolts are an ideal solution for in-vacuum use, while various paint-on thread lubricating solutions for air-service applications are commercially available. Contact factory for more information on thread lubricating solutions. 2. Supplied with socket head cap screws. 3. For rotatable clearance hole flanges of this size, use part number 200873, as they require slightly longer bolts, 2.25 inch length.



200735 / 133 CF Mounting Hardware



200813 / 450 CF Mounting Hardware