

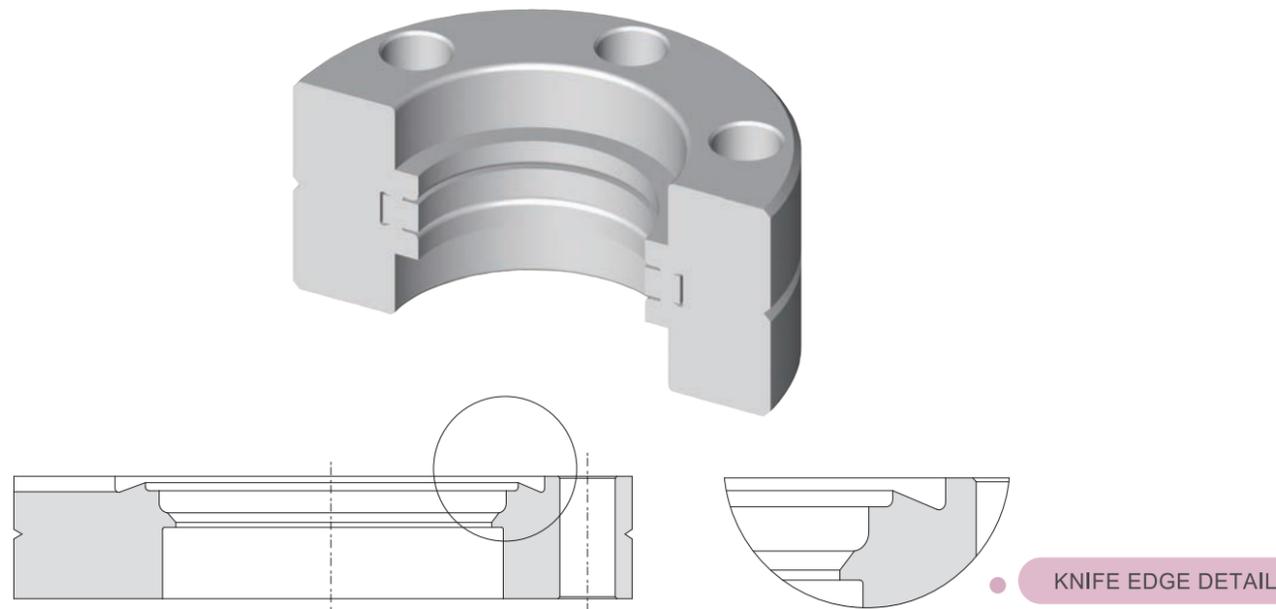
03

SECTION CONTENTS

CF-FLANGE SERIES

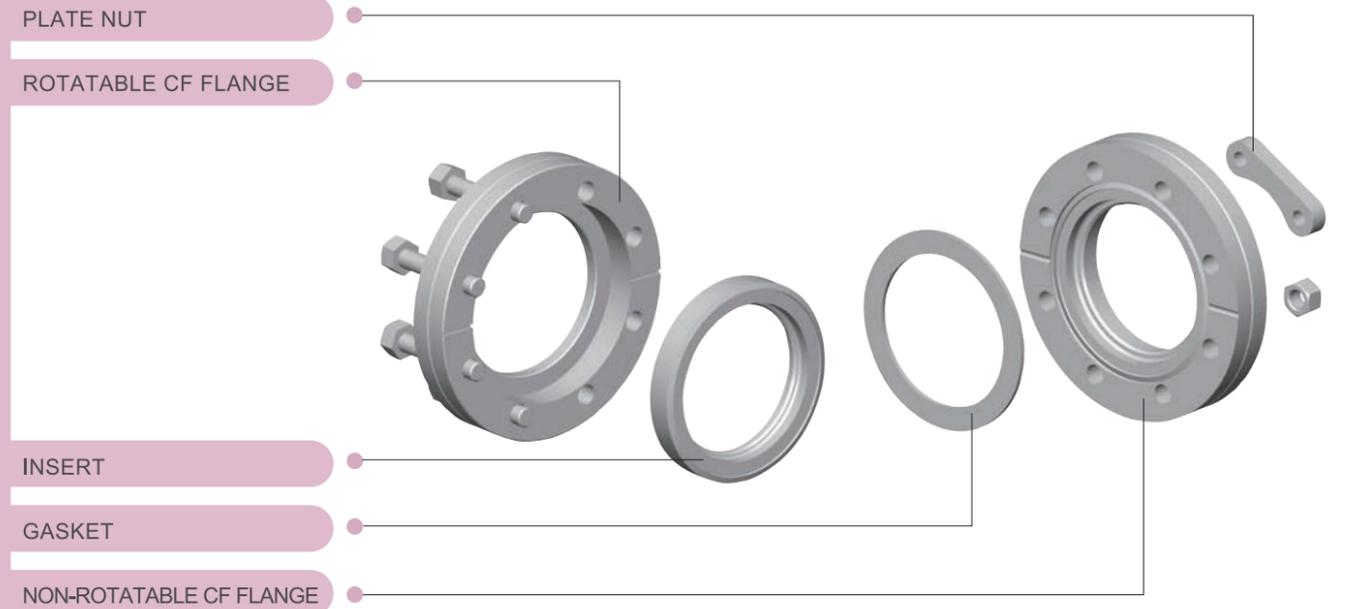
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03 CHAPTER CF-FLANGE SERIES



Features

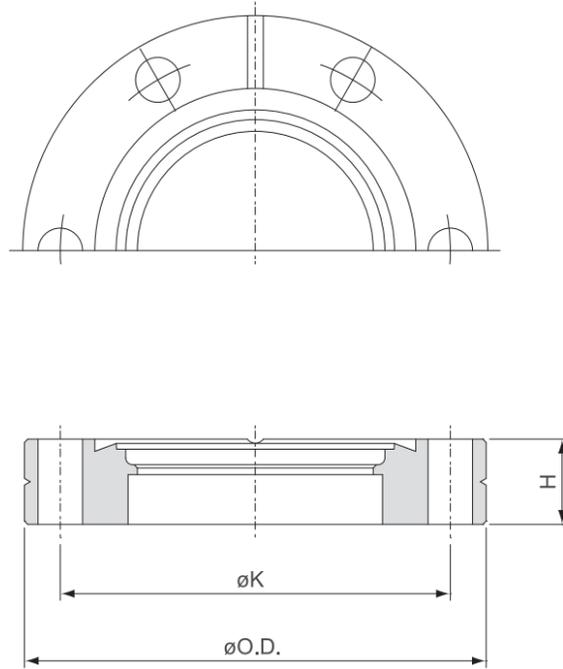
- The high sealing effect and the low leak rates performance of CF flange connections is a result of gasket material. When assembling the CF flange connect, the knife edge is pressed into the flat copper gasket and force the seal material both axially as well as radially outwards to the flange. The material is enclosed and cannot flow even at high bakeout temperature. Due to this deformation of the seal such connections may sometimes stick together. They can be easily separated with a special tool or screwdriver.
- Offered in both rotatable and nonrotatable versions with through holes and tapped bolt holes. Metric tapped holes and untapped holes flanges are identical products. UNC or UNF or other tapped holes can be ordered as specials.



Specifications

- Blanks & Flanges : 304 S.S. (Other material available upon request)
- Gaskets : OFHC Copper or Viton
- Bolt : 304 S.S.
- Temp. Range : -200 °C ~ 450 °C (OFHC Copper)
- Vacuum Range : 10^{-13} torr
- Torque Rating : CF35 and smaller 220 kgf-cm
CF63 and larger 360 kgf-cm
- Larger or special size available upon request

Technical Data



DN	CF	16	40	63	100	160	200	250
Outside diameter O.D.	inch	1 5/16"	2 3/4"	4 1/2"	6"	8"	10"	13 1/4"
Outside diameter O.D.	mm	33.8	69.5	113.6	151.6	202.5	253.2	336.6
Bolt circle diameter K	mm	26.9	58.7	92.1	130.3	181	231.8	306.5
Height H	mm	7.5	12.7	18	20	22	24.7	28.5
Number of holes	mm	6	6	8	16	20	24	30
Hole diameter	mm	4.3	6.7	8.4	8.4	8.4	8.4	8.4

Applications for CF Components

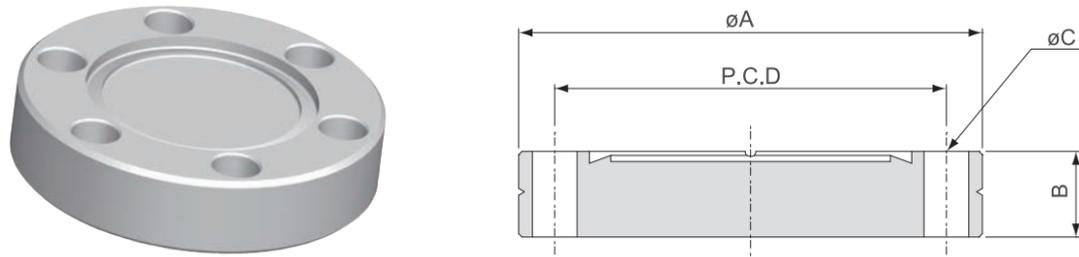
Assembly

- The CF flange connection consists of two identical flanges with a flat gasket made of OFHC copper, bolts, nuts. Because the applications are UHV environments, so the preparation work is very important before installation. Surface cleaning guarantees the lowest possible outgassing and leak rates.
- Using clean lint free gloves, place pre-cleaned OFHC copper gasket against knife edge seal, preferably the flange most likely to hold and support gasket from falling. With gasket in place fit mating flange with desired bolt orientation; if flanges are fitted with leak test grooves, they should be aligned.
- With flanges aligned, insert proper size bolt and hand tighten. Repeat this procedure with remaining bolts. After hand tightening all bolts, support bolt and tighten nut using two closed-end box wrenches. (washer are used on nut side)

CF flanges are suited for use in applications requiring a very clean environment, ultrahigh vacuum conditions, high temperature or where critical or dangerous materials must be contained or excluded. This include:

- 1 Difficult applications with corrosive radioactive, toxic or air sensitive materials.
- 2 Materials creation and processing such as molecular beam epitaxy.
- 3 Analytical instrumentation including Auger electron spectrometers and electron microscopes.
- 4 High energy physics installations such as accelerators and fusion devices.

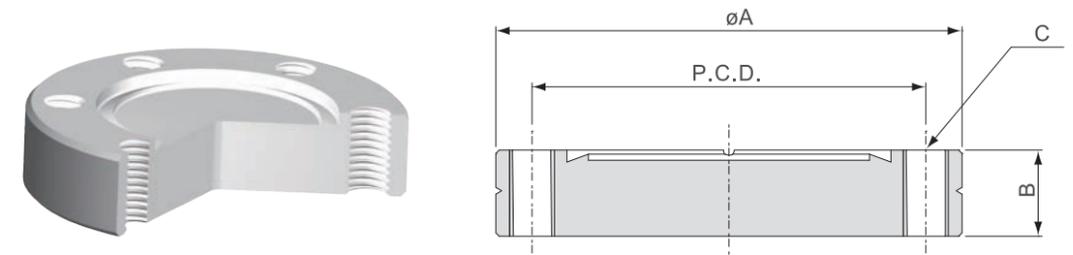
Blank



Nonrotatable

Model No.	Material	A	B	C *No	P.C.D	Parts No.
CF16B	304 S.S.	33.8	7.5	4.4*6	26.9	154102003
CF35B	304 S.S.	69.5	12.7	6.7*6	58.7	154104003
CF63B	304 S.S.	113.6	18	8.4*8	92.1	154107003
CF100B	304 S.S.	151.6	20	8.4*16	130.3	154109003
CF150B	304 S.S.	202.5	22	8.4*20	181	154111003
CF200B	304 S.S.	253.2	24.7	8.4*24	231.8	154113003
CF250B	304 S.S.	336.5	28.5	10.3*30	306.5	154114003
CF300B	304 S.S.	355.6	28.5	10.3*30	325.7	154115003
CF350B	304 S.S.	419.1	28.5	10.3*36	388.9	154117003
CF16B-316	316 S.S.	33.8	7.5	4.4*6	26.9	154102005
CF35B-316	316 S.S.	69.5	12.7	6.7*6	58.7	154104005
CF63B-316	316 S.S.	113.6	18	8.4*8	92.1	154107005
CF100B-316	316 S.S.	151.6	20	8.4*16	130.3	154109005
CF150B-316	316 S.S.	202.5	22	8.4*20	181	154111005
CF200B-316	316 S.S.	253.2	24.7	8.4*24	231.8	154113005
CF250B-316	316 S.S.	336.5	28.5	10.3*30	306.5	154114005
CF300B-316	316 S.S.	355.6	28.5	10.3*30	325.7	154115005
CF350B-316	316 S.S.	419.1	28.5	10.3*36	388.9	154117005

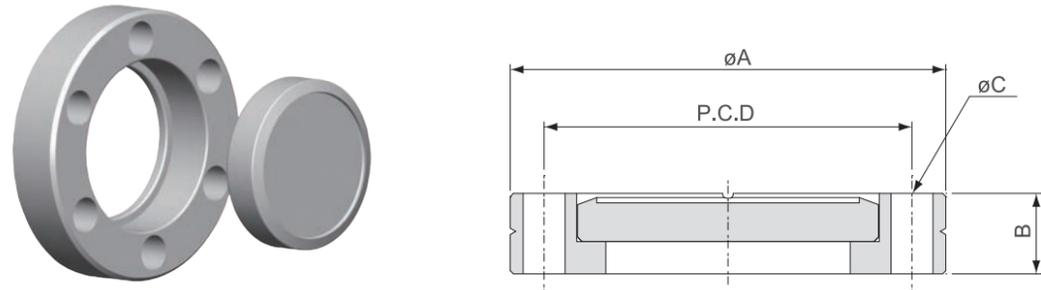
Blank



Nonrotatable-Tapped Bolt Holes

Model No.	Material	A	B	C *No	P.C.D	Parts No.
CF16BTAP	304 S.S.	33.8	7.5	M4*6	26.9	154202003
CF35BTAP	304 S.S.	69.5	12.7	M6*6	58.7	154204003
CF63BTAP	304 S.S.	113.6	18	M8*8	92.1	154207003
CF100BTAP	304 S.S.	151.6	20	M8*16	130.3	154209003
CF150BTAP	304 S.S.	202.5	22	M8*20	181	154211003
CF200BTAP	304 S.S.	253.2	24.7	M8*24	231.8	154213003
CF250BTAP	304 S.S.	336.5	28.5	M10*30	306.5	154214003
CF300BTAP	304 S.S.	355.6	28.5	M10*30	325.7	154215003
CF350BTAP	304 S.S.	419.1	28.5	M10*36	388.9	154217003
CF16BTAP-316	316 S.S.	33.8	7.5	M4*6	26.9	154202005
CF35BTAP-316	316 S.S.	69.5	12.7	M6*6	58.7	154204005
CF63BTAP-316	316 S.S.	113.6	18	M8*8	92.1	154207005
CF100BTAP-316	316 S.S.	151.6	20	M8*16	130.3	154209005
CF150BTAP-316	316 S.S.	202.5	22	M8*20	181	154211005
CF200BTAP-316	316 S.S.	253.2	24.7	M8*24	231.8	154213005
CF250BTAP-316	316 S.S.	336.5	28.5	M10*30	306.5	154214005
CF300BTAP-316	316 S.S.	355.6	28.5	M10*30	325.7	154215005
CF350BTAP-316	316 S.S.	419.1	28.5	M10*36	388.9	154217005

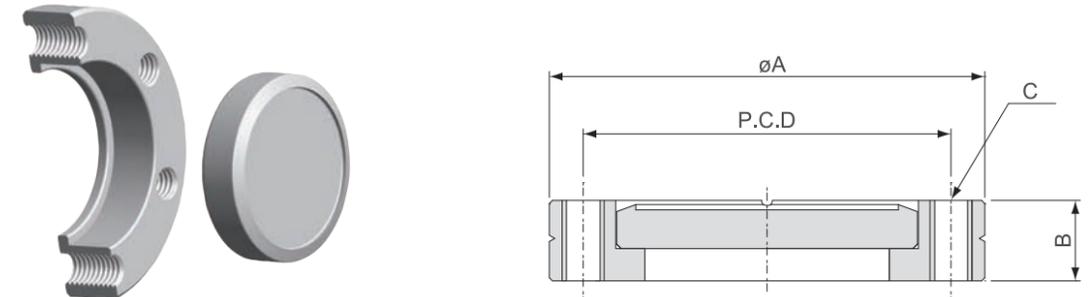
Blank



Rotatable

Model No.	Material	A	B	C *No	P.C.D	Parts No.
CR16B	304 S.S.	33.8	7.5	4.4*6	26.9	154302003
CR35B	304 S.S.	69.5	12.7	6.7*6	58.7	154304003
CR63B	304 S.S.	113.6	19	8.4*8	92.1	154307003
CR100B	304 S.S.	151.6	21.5	8.4*16	130.3	154309003
CR150B	304 S.S.	202.5	24	8.4*20	181	154311003
CR200B	304 S.S.	253.2	24.7	8.4*24	231.8	154313003
CR250B	304 S.S.	336.5	28.5	10.3*30	306.5	154314003
CR300B	304 S.S.	355.6	28.5	10.3*30	325.7	154315003
CR350B	304 S.S.	419.1	28.5	10.3*36	388.9	154317003
CR16B-316	316 S.S.	33.8	7.5	4.4*6	26.9	154302005
CR35B-316	316 S.S.	69.5	12.7	6.7*6	58.7	154304005
CR63B-316	316 S.S.	113.6	19	8.4*8	92.1	154307005
CR100B-316	316 S.S.	151.6	21.5	8.4*16	130.3	154309005
CR150B-316	316 S.S.	202.5	24	8.4*20	181	154311005
CR200B-316	316 S.S.	253.2	24.7	8.4*24	231.8	154313005
CR250B-316	316 S.S.	336.5	28.5	10.3*30	306.5	154314005
CR300B-316	316 S.S.	355.6	28.5	10.3*30	325.7	154315005
CR350B-316	316 S.S.	419.1	28.5	10.3*36	388.9	154317005

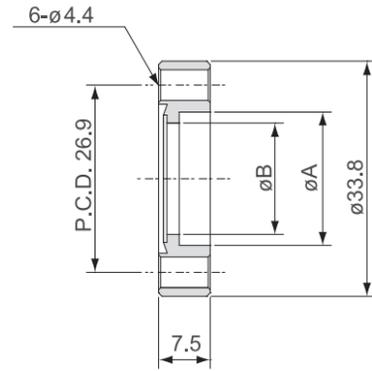
Blank



Rotatable-Tapped Bolt Holes

Model No.	Material	A	B	C *No	P.C.D	Parts No.
CR16BTAP	304 S.S.	33.8	7.5	M4*6	26.9	154402003
CR35BTAP	304 S.S.	69.5	12.7	M6*6	58.7	154404003
CR63BTAP	304 S.S.	113.6	19	M8*8	92.1	154407003
CR100BTAP	304 S.S.	151.6	21.5	M8*16	130.3	154409003
CR150BTAP	304 S.S.	202.5	24	M8*20	181	154411003
CR200BTAP	304 S.S.	253.2	24.7	M8*24	231.8	154413003
CR250BTAP	304 S.S.	336.5	28.5	M10*30	306.5	154414003
CR300BTAP	304 S.S.	355.6	28.5	M10*30	325.7	154415003
CR350BTAP	304 S.S.	419.1	28.5	M10*36	388.9	154417003
CR16BTAP-316	316 S.S.	33.8	7.5	M4*6	26.9	154402005
CR35BTAP-316	316 S.S.	69.5	12.7	M6*6	58.7	154404005
CR63BTAP-316	316 S.S.	113.6	19	M8*8	92.1	154407005
CR100BTAP-316	316 S.S.	151.6	21.5	M8*16	130.3	154409005
CR150BTAP-316	316 S.S.	202.5	24	M8*20	181	154411005
CR200BTAP-316	316 S.S.	253.2	24.7	M8*24	231.8	154413005
CR250BTAP-316	316 S.S.	336.5	28.5	M10*30	306.5	154414005
CR300BTAP-316	316 S.S.	355.6	28.5	M10*30	325.7	154415005
CR350BTAP-316	316 S.S.	419.1	28.5	M10*36	388.9	154417005

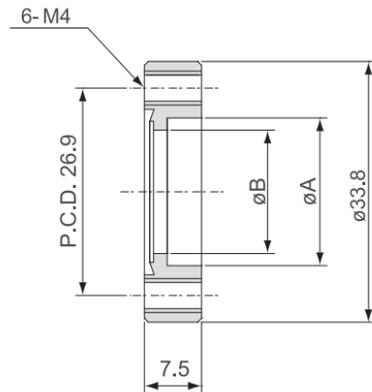
Bored Blank (CF16)



Nonrotatable

Model No.	Material	A	B	Parts No.
CF16B7	304 S.S.	6.5	5.5	154502043
CF16B12	304 S.S.	12.9	10.4	154502073
CF16B19	304 S.S.	19.15	16	154502093
CF16B7-316	316 S.S.	6.5	5.5	154502045
CF16B12-316	316 S.S.	12.9	10.4	154502075
CF16B19-316	316 S.S.	19.15	16	154502095

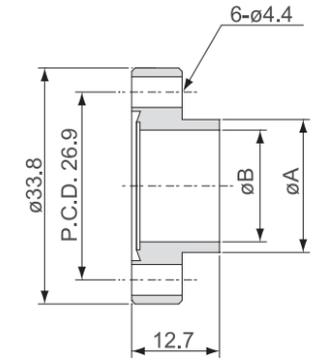
Bored Blank (CF16)



Nonrotatable-Tapped Bolt Holes

Model No.	Material	A	B	Parts No.
CF16B7TAP	304 S.S.	6.5	5.5	154602043
CF16B12TAP	304 S.S.	12.9	10.4	154602073
CF16B19TAP	304 S.S.	19.15	16	154602093
CF16B7TAP-316	316 S.S.	6.5	5.5	154602045
CF16B12TAP-316	316 S.S.	12.9	10.4	154602075
CF16B19TAP-316	316 S.S.	19.15	16	154602095

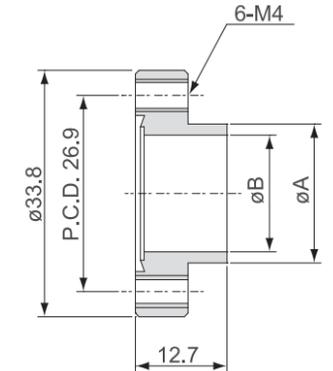
Bored Blank-Neck (CF16)



Nonrotatable

Model No.	Material	A	B	Parts No.
CF16B7N	304 S.S.	6.35	4.5	154902043
CF16B12N	304 S.S.	12.7	9.5	154902073
CF16B19N	304 S.S.	19.05	16	154902093
CF16B7N-316	316 S.S.	6.35	4.5	154902045
CF16B12N-316	316 S.S.	12.7	9.5	154902075
CF16B19N-316	316 S.S.	19.05	16	154902095

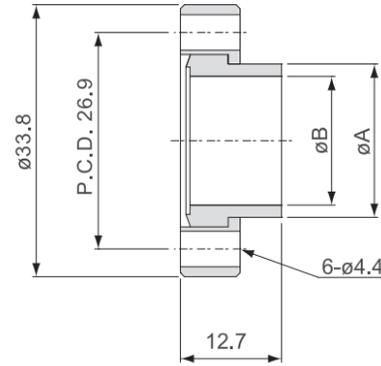
Bored Blank-Neck (CF16)



Nonrotatable-Tapped Bolt Holes

Model No.	Material	A	B	Parts No.
CF16B7TAPN	304 S.S.	6.35	4.5	155002043
CF16B12TAPN	304 S.S.	12.7	9.5	155002073
CF16B19TAPN	304 S.S.	19.05	16	155002093
CF16B7TAPN-316	316 S.S.	6.35	4.5	155002045
CF16B12TAPN-316	316 S.S.	12.7	9.5	155002075
CF16B19TAPN-316	316 S.S.	19.05	16	155002095

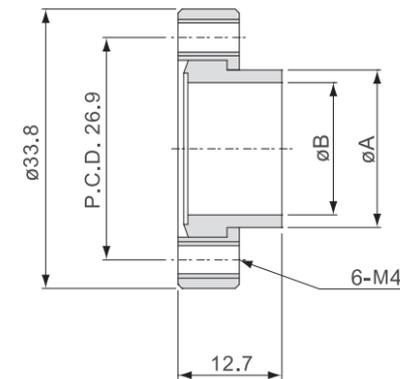
Bored Blank-Neck (CR16)



Rotatable

Model No.	Material	A	B	Parts No.
CR16B7N	304 S.S.	6.35	4.5	155102043
CR16B12N	304 S.S.	12.7	9.5	155102073
CR16B19N	304 S.S.	19.05	16	155102093
CR16B7N-316	316 S.S.	6.35	4.5	155102045
CR16B12N-316	316 S.S.	12.7	9.5	155102075
CR16B19N-316	316 S.S.	19.05	16	155102095

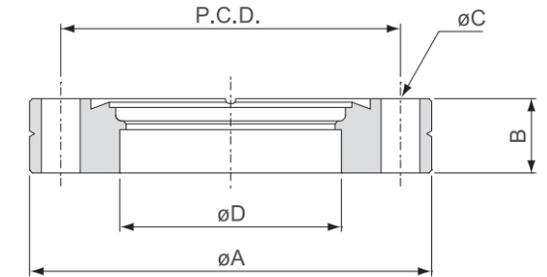
Bored Blank-Neck (CR16)



Rotatable-Tapped Bolt Holes

Model No.	Material	A	B	Parts No.
CR16B7TAPN	304 S.S.	6.35	4.5	155202043
CR16B12TAPN	304 S.S.	12.7	9.5	155202073
CR16B19TAPN	304 S.S.	19.05	16	155202093
CR16B7TAPN-316	316 S.S.	6.35	4.5	155202045
CR16B12TAPN-316	316 S.S.	12.7	9.5	155202075
CR16B19TAPN-316	316 S.S.	19.05	16	155202095

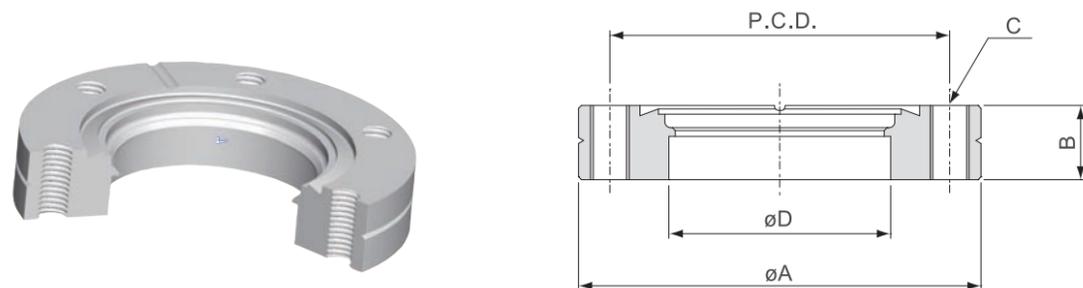
Bored Flange



Nonrotatable

Model No.	Material	A	B	C *No	D	P.C.D	Parts No.
CF35B25	304 S.S.	69.5	12.7	6.7*6	25.6	58.7	154504113
CF35B38	304 S.S.	69.5	12.7	6.7*6	38.3	58.7	154504133
CF35B42	304 S.S.	69.5	12.7	6.7*6	42.9	58.7	154504AG3
CF63B51	304 S.S.	113.6	18	8.4*8	51.1	92.1	154507143
CF63B63	304 S.S.	113.6	18	8.4*8	63.7	92.1	154507153
CF100B102	304 S.S.	151.6	20	8.4*16	101.8	130.3	154509183
CF150B153	304 S.S.	202.5	22	8.4*20	153.1	181	154511203
CF200B204	304 S.S.	253.2	24.7	8.4*24	203.7	231.8	154513213
CF250B255	304 S.S.	336.5	28.5	10.3*30	254.5	306.5	154514223
CF300B305	304 S.S.	355.6	28.5	10.3*30	305.4	325.7	154515233
CF350B356	304 S.S.	419.1	28.5	10.3*36	356.1	388.9	154517243
CF35B25-316	316 S.S.	69.5	12.7	6.7*6	25.6	58.7	154504115
CF35B38-316	316 S.S.	69.5	12.7	6.7*6	38.3	58.7	154504135
CF35B42-316	316 S.S.	69.5	12.7	6.7*6	42.9	58.7	154504AG5
CF63B51-316	316 S.S.	113.6	18	8.4*8	51.1	92.1	154507145
CF63B63-316	316 S.S.	113.6	18	8.4*8	63.7	92.1	154507155
CF100B102-316	316 S.S.	151.6	20	8.4*16	101.8	130.3	154509185
CF150B153-316	316 S.S.	202.5	22	8.4*20	153.1	181	154511205
CF200B204-316	316 S.S.	253.2	24.7	8.4*24	203.7	231.8	154513215
CF250B255-316	316 S.S.	336.5	28.5	10.3*30	254.5	306.5	154514225
CF300B305-316	316 S.S.	355.6	28.5	10.3*30	305.4	325.7	154515235
CF350B356-316	316 S.S.	419.1	28.5	10.3*36	356.1	388.9	154517245

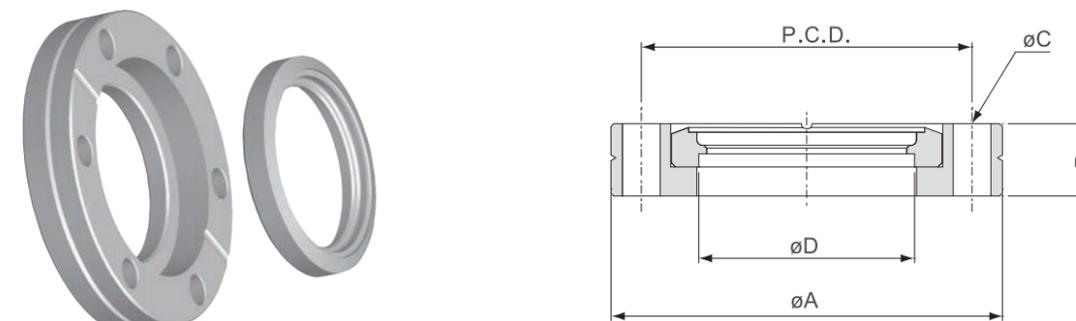
Bored Flange



Nonrotatable-Tapped Bolt-Holes

Model No.	Material	A	B	C*No	D	P.C.D	Parts No.
CF35B25TAP	304 S.S.	69.5	12.7	M6*6	25.6	58.7	154604113
CF35B38TAP	304 S.S.	69.5	12.7	M6*6	38.3	58.7	154604133
CF35B42TAP	304 S.S.	69.5	12.7	M6*6	42.9	58.7	154604AG3
CF63B51TAP	304 S.S.	113.6	18	M8*8	51.1	92.1	154607143
CF63B63TAP	304 S.S.	113.6	18	M8*8	63.7	92.1	154607153
CF100B102TAP	304 S.S.	151.6	20	M8*16	101.8	130.3	154609183
CF150B153TAP	304 S.S.	202.5	22	M8*20	153.1	181	154611203
CF200B204TAP	304 S.S.	253.2	24.7	M8*24	203.7	231.8	154613213
CF250B255TAP	304 S.S.	336.5	28.5	M10*30	254.5	306.5	154614223
CF300B305TAP	304 S.S.	355.6	28.5	M10*30	305.4	325.7	154615233
CF350B356TAP	304 S.S.	419.1	28.5	M10*36	356.1	388.9	154617243
CF35B25TAP-316	316 S.S.	69.5	12.7	M6*6	25.6	58.7	154604115
CF35B38TAP-316	316 S.S.	69.5	12.7	M6*6	38.3	58.7	154604135
CF35B42TAP-316	316 S.S.	69.5	12.7	M6*6	42.9	58.7	154604AG5
CF63B51TAP-316	316 S.S.	113.6	18	M8*8	51.1	92.1	154607145
CF63B63TAP-316	316 S.S.	113.6	18	M8*8	63.7	92.1	154607155
CF100B102TAP-316	316 S.S.	151.6	20	M8*16	101.8	130.3	154609185
CF150B153TAP-316	316 S.S.	202.5	22	M8*20	153.1	181	154611205
CF200B204TAP-316	316 S.S.	253.2	24.7	M8*24	203.7	231.8	154613215
CF250B255TAP-316	316 S.S.	336.5	28.5	M10*30	254.5	306.5	154614225
CF300B305TAP-316	316 S.S.	355.6	28.5	M10*30	305.4	325.7	154615235
CF350B356TAP-316	316 S.S.	419.1	28.5	M10*36	356.1	388.9	154617245

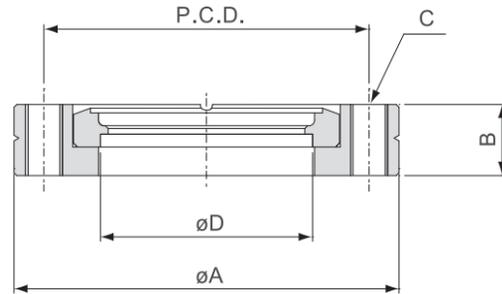
Bored Flange



Rotatable

Model No.	Material	A	B	C*No	D	P.C.D	Parts No.
CR35B25	304 S.S.	69.5	12.7	6.7*6	25.6	58.7	154704113
CR35B38	304 S.S.	69.5	12.7	6.7*6	38.3	58.7	154704133
CR35B42	304 S.S.	69.5	12.7	6.7*6	42.9	58.7	154704AG3
CR63B51	304 S.S.	113.6	19	8.4*8	51.1	92.1	154707143
CR63B63	304 S.S.	113.6	19	8.4*8	63.7	92.1	154707153
CR100B102	304 S.S.	151.6	21.5	8.4*16	101.8	130.3	154709183
CR150B153	304 S.S.	202.5	24	8.4*20	153.1	181	154711203
CR200B204	304 S.S.	253.2	24.7	8.4*24	203.7	231.8	154713213
CR250B255	304 S.S.	336.5	28.5	10.3*30	254.5	306.5	154714223
CR300B305	304 S.S.	355.6	28.5	10.3*30	305.4	325.7	154715233
CR350B356	304 S.S.	419.1	28.5	10.3*36	356.1	388.9	154717243
CR35B25-316	316 S.S.	69.5	12.7	6.7*6	25.6	58.7	154704115
CR35B38-316	316 S.S.	69.5	12.7	6.7*6	38.3	58.7	154704135
CR35B42-316	316 S.S.	69.5	12.7	6.7*6	42.9	58.7	154704AG5
CR63B51-316	316 S.S.	113.6	19	8.4*8	51.1	92.1	154707145
CR63B63-316	316 S.S.	113.6	19	8.4*8	63.7	92.1	154707155
CR100B102-316	316 S.S.	151.6	21.5	8.4*16	101.8	130.3	154709185
CR150B153-316	316 S.S.	202.5	24	8.4*20	153.1	181	154711205
CR200B204-316	316 S.S.	253.2	24.7	8.4*24	203.7	231.8	154713215
CR250B255-316	316 S.S.	336.5	28.5	10.3*30	254.5	306.5	154714225
CR300B305-316	316 S.S.	355.6	28.5	10.3*30	305.4	325.7	154715235
CR350B356-316	316 S.S.	419.1	28.5	10.3*36	356.1	388.9	154717245

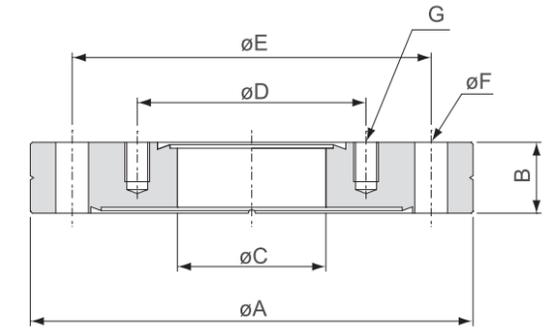
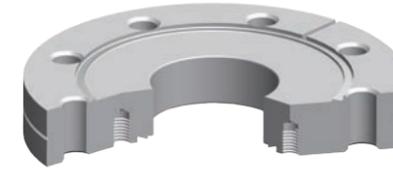
Bored Flange



Rotatable-Tapped Bolt-Holes

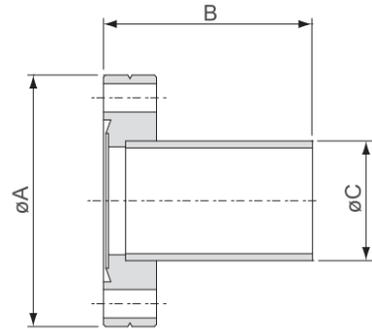
Model No.	Material	A	B	C *No	D	P.C.D	Parts No.
CR35B25TAP	304 S.S.	69.5	12.7	M6*6	25.6	58.7	154804113
CR35B38TAP	304 S.S.	69.5	12.7	M6*6	38.3	58.7	154804133
CR35B42TAP	304 S.S.	69.5	12.7	M6*6	42.9	58.7	154804AG3
CR63B51TAP	304 S.S.	113.6	19	M8*8	51.1	92.1	154807143
CR63B63TAP	304 S.S.	113.6	19	M8*8	63.7	92.1	154807153
CR100B102TAP	304 S.S.	151.6	21.5	M8*16	101.8	130.3	154809183
CR150B153TAP	304 S.S.	202.5	24	M8*20	153.1	181	154811203
CR200B204TAP	304 S.S.	253.2	24.7	M8*24	203.7	231.8	154813213
CR250B255TAP	304 S.S.	336.5	28.5	M10*30	254.5	306.5	154814223
CR300B305TAP	304 S.S.	355.6	28.5	M10*30	305.4	325.7	154815233
CR350B356TAP	304 S.S.	419.1	28.5	M10*36	356.1	388.9	154817243
CR35B25TAP-316	316 S.S.	69.5	12.7	M6*6	25.6	58.7	154804115
CR35B38TAP-316	316 S.S.	69.5	12.7	M6*6	38.3	58.7	154804135
CR35B42TAP-316	316 S.S.	69.5	12.7	M6*6	42.9	58.7	154804AG5
CR63B51TAP-316	316 S.S.	113.6	19	M8*8	51.1	92.1	154807145
CR63B63TAP-316	316 S.S.	113.6	19	M8*8	63.7	92.1	154807155
CR100B102TAP-316	316 S.S.	151.6	21.5	M8*16	101.8	130.3	154809185
CR150B153TAP-316	316 S.S.	202.5	24	M8*20	153.1	181	154811205
CR200B204TAP-316	316 S.S.	253.2	24.7	M8*24	203.7	231.8	154813215
CR250B255TAP-316	316 S.S.	336.5	28.5	M10*30	254.5	306.5	154814225
CR300B305TAP-316	316 S.S.	355.6	28.5	M10*30	305.4	325.7	154815235
CR350B356TAP-316	316 S.S.	419.1	28.5	M10*36	356.1	388.9	154817245

Reducing Flange



Model No.	Material	A	B	C	D	E	F *No	G *No	Parts No.
CF35RF16	304 S.S.	69.5	12.7	15.8	26.9	58.7	6.7*6	M4*6	17480409052
CF63RF16	304 S.S.	113.6	18	15.8	26.9	92.1	8.4*8	M4*6	17480709052
CF63RF35	304 S.S.	113.6	18	38.1	58.7	92.1	8.4*8	M6*6	17480709082
CF100RF35	304 S.S.	151.6	20	38.1	58.7	130.3	8.4*16	M6*6	17480909082
CF100RF63	304 S.S.	151.6	20	63.5	92.1	130.3	8.4*16	M8*8	17480909132
CF150RF35	304 S.S.	202.5	22	38.1	58.7	181	8.4*20	M6*6	17481109082
CF150RF63	304 S.S.	202.5	22	63.5	92.1	181	8.4*20	M8*8	17481109132
CF150RF100	304 S.S.	202.5	22	101.6	130.3	181	8.4*20	M8*16	17481109152
CF200RF35	304 S.S.	253.2	24.7	38.1	58.7	231.8	8.4*24	M6*6	17481309082
CF200RF63	304 S.S.	253.2	24.7	63.5	92.1	231.8	8.4*24	M8*8	17481309132
CF200RF100	304 S.S.	253.2	24.7	101.6	130.3	231.8	8.4*24	M8*16	17481309152
CF200RF150	304 S.S.	253.2	24.7	152.4	181	231.8	8.4*24	M8*20	17481309172
CF250RF35	304 S.S.	336.5	28.5	38.1	58.7	306.5	10.3*30	M6*6	17481409082
CF250RF63	304 S.S.	336.5	28.5	63.5	92.1	306.5	10.3*30	M8*8	17481409132
CF250RF100	304 S.S.	336.5	28.5	101.6	130.3	306.5	10.3*30	M8*16	17481409152
CF250RF150	304 S.S.	336.5	28.5	152.4	181	306.5	10.3*30	M8*20	17481409172
CF250RF200	304 S.S.	336.5	28.5	203.2	231.8	306.5	10.3*30	M8*24	17481409192

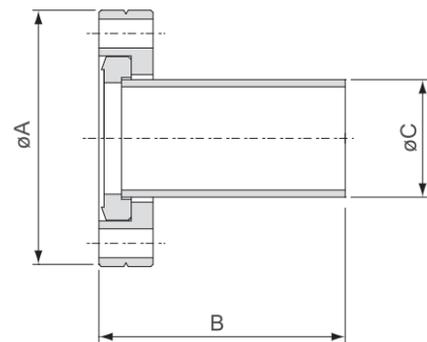
Half Nipple



Nonrotatable

Model No.	Material	A	B	C	Parts No.
CF16HN	304 S.S.	33.8	38	19.05	155502093
CF35HN	304 S.S.	69.5	63	38.1	155504133
CF63HN	304 S.S.	113.6	105	63.5	155507153
CF100HN	304 S.S.	151.6	135	101.6	155509183
CF150HN	304 S.S.	202.5	167	152.4	155511203
CF200HN	304 S.S.	253.2	167	203.2	155513213

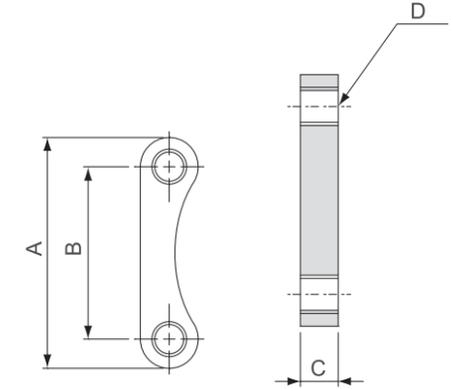
Half Nipple



Rotatable

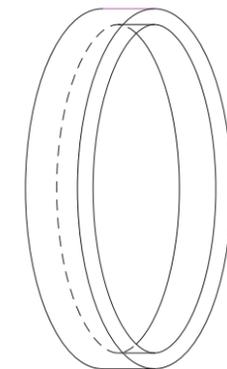
Model No.	Material	A	B	C	Parts No.
CR16HN	304 S.S.	33.8	38	19.05	155702093
CR35HN	304 S.S.	69.5	63	38.1	155704133
CR63HN	304 S.S.	113.6	105	63.5	155707153
CR100HN	304 S.S.	151.6	135	101.6	155709183
CR150HN	304 S.S.	202.5	167	152.4	155711203
CR200HN	304 S.S.	253.2	167	203.2	155713213

Plate Nut



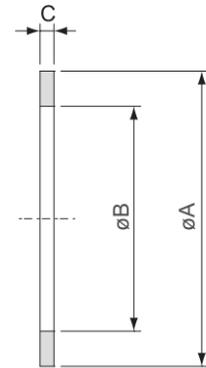
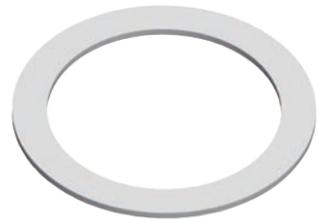
Model No.	Material	A	B	C	D	Parts No.
CF16PN	304 S.S.	19.5	13.5	4	M4	21320541
CF35PN	304 S.S.	39.5	29.5	6	M6	21320741
CF63PN	304 S.S.	50.2	35.2	8	M8	21321041

Cap



Model No.	Material	Fits Flange	Parts No.
CF16CAP	Polyethylene	CF16	5085EZ
CF35CAP	Polyethylene	CF35	5085GZ
CF63CAP	Polyethylene	CF63	5085H0
CF100CAP	Polyethylene	CF100	5085HY
CF150CAP	Polyethylene	CF150	5085HZ
CF200CAP	Polyethylene	CF200	5085LZ

Copper Gasket



Model No.	Fix Flange	Pack Quantity	A	B	C	Parts No.
CF16CG	CF16	10	21	16	2	21310581
CF35CG	CF35	10	48	37	2	21310781
CF63CG	CF63	10	82	63	2	21311081
CF100CG	CF100	10	120	101	2	21311281
CF150CG	CF150	5	171	152	2	21311481
CF200CG	CF200	5	222	203	2	21311681
CF250CG	CF250	5	294	269	2	21311781