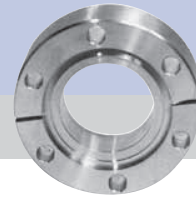


Flanges & Fittings

CF Flanges and Hardware

SECTION 2.5



CF Flanges - 14½ Inch (368mm) Nominal OD

MODEL NUMBER	TYPE	DIAGRAM	OD A	ID B	C	D	E	BOLT HOLES	DIAMETER OR THREAD
1450-000N	Blank	A	14.50 (368.30)	Blank	-	-	13.310 (338.07)	32	0.390
1450-1200N	Bored	B	14.50 (368.30)	11.875 (301.63)	12.020 (305.31)	0.500 (12.70)	13.310 (338.07)	32	0.390
1450-000NT	Blank	A	14.50 (368.30)	Blank	-	-	13.310 (338.07)	32	¾-24
1450-1200NT	Bored	B	14.50 (368.30)	11.875 (301.63)	12.020 (305.31)	0.500 (12.70)	13.310 (338.07)	32	¾-24
1450-000R	Blank	C	14.50 (368.30)	Blank	-	-	13.310 (338.07)	32	0.390
1450-1200R	Bored	D	14.50 (368.30)	11.875 (301.63)	12.020 (305.31)	0.500 (12.70)	13.310 (338.07)	32	0.390
1450-000RT	Blank	C	14.50 (368.30)	Blank	-	-	13.310 (338.07)	32	¾-24
1450-1200RT	Bored	D	14.50 (368.30)	11.875 (301.63)	12.020 (305.31)	0.500 (12.70)	13.310 (338.07)	32	¾-24

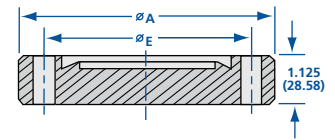


Diagram B

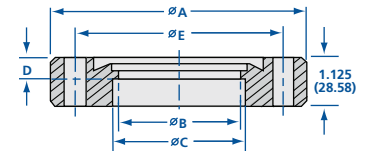


Diagram C

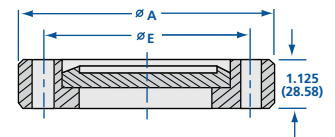


Diagram D

CF Flanges - 16½ Inch (419mm) Nominal OD

MODEL NUMBER	TYPE	DIAGRAM	OD A	ID B	C	D	E	BOLT HOLES	DIAMETER OR THREAD
1650-000N	Blank	A	16.50 (419.10)	Blank	-	-	15.310 (388.87)	36	0.390
1650-1400N	Bored	B	16.50 (419.10)	13.750 (349.25)	14.020 (356.11)	0.500 (12.70)	15.310 (388.87)	36	0.390
1650-000NT	Blank	A	16.50 (419.10)	Blank	-	-	15.310 (388.87)	36	¾-24
1650-1400NT	Bored	B	16.50 (419.10)	13.750 (349.25)	14.020 (356.11)	0.500 (12.70)	15.310 (388.87)	36	¾-24
1650-000R	Blank	C	16.50 (419.10)	Blank	-	-	15.310 (388.87)	36	0.390
1650-1400R	Bored	D	16.50 (419.10)	13.750 (349.25)	14.020 (356.11)	0.500 (12.70)	15.310 (388.87)	36	0.390
1650-000RT	Blank	C	16.50 (419.10)	Blank	-	-	15.310 (388.87)	36	¾-24
1650-1400RT	Bored	D	16.50 (419.10)	13.750 (349.25)	14.020 (356.11)	0.500 (12.70)	15.310 (388.87)	36	¾-24

Model Number Definitions

N = Nonrotatable, clearance bolt holes **NT** = Nonrotatable, tapped bolt holes **R** = Rotatable, clearance bolt holes
RT = Rotatable, tapped bolt holes **Add -M8** = Metric tapped bolt holes

CF Flange Hardware - 14½ Inch (368mm) Nominal OD

MODEL NUMBER	DESCRIPTION
G-1450	(1) OFHC copper gasket
B-1450	(32) SS ¾-24 x 3 inch bolts, nuts & washers
B-1450T	(32) SS ¾-24 x 2 inch bolts & washers



SPECIFICATIONS

General: Rotatable and nonrotatable with tapped or clearance bolt holes

Material
 Flanges: 304 stainless steel
 (316L available upon request)
 Gaskets: Copper, Viton
 Bolts: 18-8 stainless steel

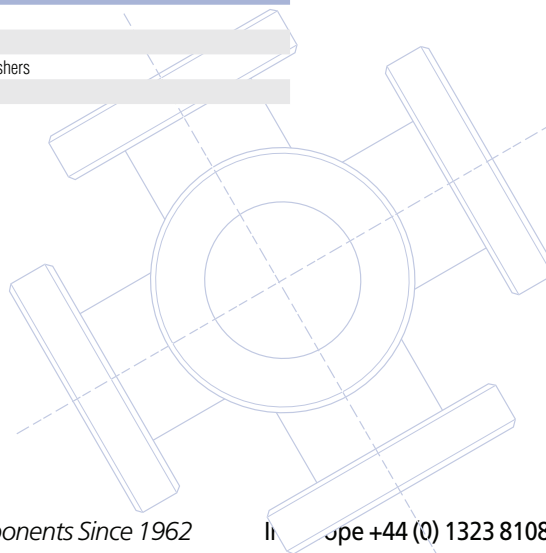
Torque: 39 Nm.

Vacuum range
 Metal seal: $\geq 1 \times 10^{-13}$ mbar - UHV
 Elastomer seal: $\geq 1 \times 10^{-8}$ mbar - High vacuum

Temperature range
 Metal seal: -200°C to 450°C
 Elastomer seal: -20°C to 150°C

CF Flange Hardware - 16½ Inch (419mm) Nominal OD

MODEL NUMBER	DESCRIPTION
G-1650	(1) OFHC copper gasket
G-1650V	(1) Viton gasket
B-1650	(36) SS ¾-24 x 3 inch bolts, nuts & washers
B-1650T	(36) SS ¾-24 x 2 inch bolts & washers



All dimensions are in inches (mm) & weights are in pounds (kg), unless otherwise noted.