

Flanges & Fittings - CF Flange Hardware

1 $\frac{1}{3}$, 2 $\frac{1}{8}$, 2 $\frac{3}{4}$ & 3 $\frac{5}{8}$ Inch Nominal OD



CF Mini Flange Hardware - 1 $\frac{1}{3}$ Inch Nominal OD

MODEL NUMBER	DESCRIPTION
G-133	(10) OFHC copper gaskets
G-133-SP	(10) Silver plated copper gaskets
G-133V	(5) Viton gaskets
B-133	(25) SS 8-32 x .75" bolts, nuts & washers
B-133T	(25) SS 8-32 x .56" bolts & washers
B-133-SP	(25) Silver plated SS 8-32 x .75" bolts, nuts & washers
B-133T-SP	(25) Silver plated SS 8-32 x .56" bolts & washers
NP-075	(24) 8-32 plate nuts. See page 63.
KNP-075	(12) Plate nuts and (24) 8-32 x .75" bolts

CF Flange Hardware - 2 $\frac{1}{8}$ Inch Nominal OD

MODEL NUMBER	DESCRIPTION
G-212	(10) OFHC copper gaskets
G-212V	(5) Viton gaskets
B-212	(25) SS $\frac{1}{4}$ -28 x 1 $\frac{1}{4}$ " bolts, nuts & washers
B-212T	(25) SS $\frac{1}{4}$ -28 x $\frac{7}{8}$ " bolts & washers
B-212-12	(25) SS 12-pt. $\frac{1}{4}$ -28 x 1 $\frac{1}{4}$ " bolts, nuts & washers
B-212T-12	(25) SS 12-pt. $\frac{1}{4}$ -28 x $\frac{7}{8}$ " bolts & washers

CF Flange Hardware - 2 $\frac{3}{4}$ Inch Nominal OD

MODEL NUMBER	DESCRIPTION
G-275	(10) OFHC copper gaskets
G-275V	(5) Viton gaskets
G-275-SP	(10) Silver plated copper gaskets
B-275	(25) SS $\frac{1}{4}$ -28 x 1 $\frac{1}{4}$ " bolts, nuts & washers
B-275T	(25) SS $\frac{1}{4}$ -28 x 1" bolts & washers
B-275-12	(25) SS 12-pt. $\frac{1}{4}$ -28 x 1 $\frac{1}{4}$ " bolts, nuts & washers
B-275-12-SP	(25) Silver plated SS 12-pt. $\frac{1}{4}$ -28 x 1 $\frac{1}{4}$ " bolts, nuts & washers
B-275T-12	(25) SS 12-pt. $\frac{1}{4}$ -28 x 1" bolts & washers
B-275T-12-SP	(25) Silver plated SS 12-pt. $\frac{1}{4}$ -28 x $\frac{7}{8}$ " bolts & washers
B-275T-M	(25) SS (metric) M6 x 1.00 x 25mm bolts & washers
NP-150	(24) $\frac{1}{4}$ -28 plate nuts. See page 63
KNP-150	(12) Plate nuts, (24) $\frac{1}{4}$ -28 x 1 $\frac{1}{4}$ " bolts & washers
KNP-150-12	(12) Plate nuts, (24) 12-pt. $\frac{1}{4}$ -28 x 1 $\frac{1}{4}$ " bolts & washers

CF Flange Hardware - 3 $\frac{5}{8}$ Inch Nominal OD

MODEL NUMBER	DESCRIPTION
G-338	(10) OFHC copper gaskets
G-338-SP	(10) Silver plated copper gaskets
G-338V	(1) Viton gasket
B-338	(25) SS $\frac{5}{16}$ -24 x 1 $\frac{3}{4}$ " bolts, nuts & washers
B-338T	(25) SS $\frac{5}{16}$ -24 x 1 $\frac{1}{4}$ " bolts & washers
B-338-12	(25) SS 12-pt. $\frac{5}{16}$ -24 x 1 $\frac{3}{4}$ " bolts, nuts & washers
B-338T-12	(25) SS 12-pt. $\frac{5}{16}$ -24 x 1 $\frac{1}{4}$ " bolts & washers
B-338-12-SP	(25) Silver plated SS 12-pt. $\frac{5}{16}$ -24 x 1 $\frac{3}{4}$ " bolts, nuts & washers
B-338T-12-SP	(25) Silver plated SS 12-pt. $\frac{5}{16}$ -24 x 1 $\frac{1}{4}$ " bolts, washers
NP-200	(24) $\frac{5}{16}$ -24 plate nuts.
KNP-200	(16) Plate nuts, (32) $\frac{5}{16}$ -24 x 1 $\frac{3}{4}$ " bolts & washers
KNP-200-12	(16) Plate nuts, (32) 12-pt. $\frac{5}{16}$ -24 x 1 $\frac{3}{4}$ " bolts & washers

SPECIFICATIONS

General: Mounting hardware for flanges with Rotatable and nonrotatable with tapped or clearance bolt holes

Materials

Flanges: 304 stainless steel

(316L available upon request)

Gaskets: Copper, Viton or silver plated

Bolts: 18-8 stainless steel or silver plated

Nut plate: Stainless steel

Torque: Specifications in table below

Vacuum range

Metal seal: $\geq 1 \times 10^{-13}$ Torr - UHV

Elastomer seal: $\geq 1 \times 10^{-8}$ Torr - High vacuum

Temperature Range

Metal seal: -200°C to 450°C

Elastomer seal: -20°C to 150°C



Torque Specifications*

NOMINAL OD	BOLT SIZE	TORQUE IN INCH / LBS
1 $\frac{1}{3}$	8-32	28
2 $\frac{1}{8}$	$\frac{1}{4}$ - 28	110
2 $\frac{3}{4}$	$\frac{1}{4}$ - 28	110
3 $\frac{3}{8}$	$\frac{5}{16}$ - 24	190
4 $\frac{1}{2}$	$\frac{5}{16}$ - 24	190
4 $\frac{5}{8}$	$\frac{5}{16}$ - 24	190
6	$\frac{5}{16}$ - 24	190
6 $\frac{3}{4}$	$\frac{5}{16}$ - 24	190
8	$\frac{5}{16}$ - 24	190
10	$\frac{5}{16}$ - 24	190
12	$\frac{5}{16}$ - 24	190
13 $\frac{1}{4}$	$\frac{3}{8}$ - 24	345
14	$\frac{3}{8}$ - 24	345
14 $\frac{1}{2}$	$\frac{3}{8}$ - 24	345
16 $\frac{1}{2}$	$\frac{3}{8}$ - 24	345

*Specifications for Nor-Cal supplied fasteners only.

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