

# SF-1 (F-1) Grooved Flange Adapter



The SF-1 Flange enables class 125/150 flange end components to be connected directly into a grooved end piping system. A special gasket provides a permanent seal between the pipe and the mating flange. Integral closing tabs on the O.D. of the flange facilitate assembly.

All products are UL & ULC listed as well as FM approved. Maximum working pressure for these products is 300 PSI.



## MATERIAL SPECIFICATIONS

### HOUSING:

Ductile Iron conforming to ASTM A-536, Grade 65-45-12.

### STAINLESS STEEL BOLTS & NUTS:

Stainless steel bolts and nuts are also available. Contact an AnvilStar Representative for more information.

### COATINGS:

Rust inhibiting paint Color: ORANGE (standard)  
Hot Dipped Zinc Galvanized (optional)  
Other available options: Example: RAL3000 or RAL9000 Series  
For other Coating requirements contact an AnvilStar Representative.

### LUBRICATION:

Standard Gruvlok  
Gruvlok Xtreme™ Required for dry pipe systems and freezer applications.

### GASKETS: Materials

Properties as designated in accordance with ASTM D-2000.

#### Grade "E" EPDM (Green color code) NSF-61 Certified

-40°F to 230°F (Service Temperature Range)(-40°C to 110°C)

Recommended for water service, diluted acids, alkalis solutions, oil-free air and many chemical services.

NOT FOR USE IN PETROLEUM APPLICATIONS.

#### Grade "T" Nitrile (Orange color code)

-20°F to 180°F (Service Temperature Range)(-29°C to 82°C)

Recommended for petroleum applications, air with oil vapors and vegetable and mineral oils.

NOT FOR USE IN HOT WATER OR HOT AIR.

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Nominal Size	Pipe O.D.	Max. Working Pressure	Max. End Load	Range Dimensions			Sealing Surface		Mating Flange Bolts				Approx. Wt. Ea.
				X	Y	Z	A Max.	B Min.	Mating Flange Bolts		Specified Torque §		
									Qty.	Size (ANSI)	Min.	Max.	
2	2.375	300	1,329	6	8	3/4	2 3/8	3 1/4	4	5/8 x 2 3/4	110	140	3.2
50	60.3	20.7	5.91	152	203	19	60.3	83.1			149	190	1.5
2 1/2	2.875	300	1,948	7	9 1/6	7/8	2 7/8	3 3/4	4	5/8 x 3	110	140	4.6
65	73.0	20.7	8.67	178	230	22	73.0	95.8			149	190	2.1
3	3.500	300	2,886	7 1/2	9 1/2	1 5/16	3 1/2	4 3/8	4	5/8 x 3	110	140	5.7
80	88.9	20.7	12.84	191	241	24	88.9	111.6			149	190	2.6
4	4.500	300	4,771	9	11	1 5/16	4 1/2	5 3/8	8	5/8 x 3	110	140	7.9
100	114.3	20.7	21.22	229	279	24	114.3	137.0			149	190	3.6
6	6.625	300	10,342	11	13	1	6 5/8	7 1/2	8	3/4 x 3 1/2	220	250	10.0
150	76.1	20.7	46.00	279	330	25	168.3	191.0			298	339	4.5
8	8.625	300	17,528	13 1/2	15 1/2	1 1/8	8 5/8	9 7/8	8	3/4 x 3 1/2	220	250	15.7
200	219.1	20.7	77.97	343	394	29	219.1	250.8			298	339	7.1
10	10.750	300	27,229	16	18 1/2	1 3/16	10 3/4	12	12	7/8 x 4	320	400	47.0
250	273.1	20.7	121.12	406	470	30	273.1	304.8			439	542	21.3
12	12.750	300	38,303	19	21 1/2	1 1/4	12 3/4	14	12	7/8 x 4	320	400	69.0
300	323.9	20.7	170.37	483	546	32	323.9	355.6			439	542	31.3

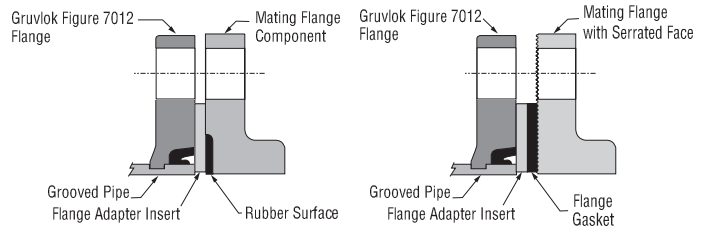
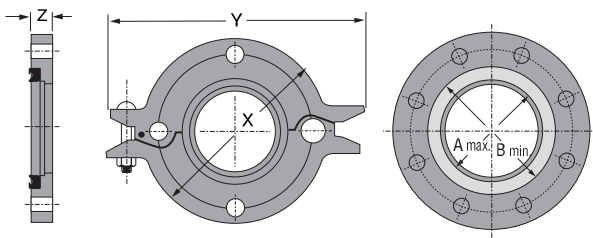
- Working pressure and/or end load are total allowable, based on standard weight steel pipe, roll or cut grooved.
- One time field test pressure may be increased to 1.5 times the figures listed above.
- Required flange bolts to be supplied by installer.

\*THE EFFECTIVE SEALING AREA OF THE MATING FLANGE MUST BE FREE FROM GOUGES OR DEFORMITIES OF ANY TYPE TO ENSURE PROPER SEALING OF THE GASKET.

§ – For additional Bolt Torque information see Technical Data Section.  
Other sizes available, contact an AnvilStar Representative.



**For dry pipe systems and freezer applications lubrication of the gasket is required, Gruvlok® Xtreme™ Lubricant is Required.**



- The sealing surfaces A Max. to B Min. of the mating flange must be free from gouges, undulations and deformities of any type to ensure proper sealing of the gasket.
- SPF Flanges are to be assembled on butterfly valves so as not to interfere with actuator or handle operation.
- Do not use SPF Flanges within 90 degrees of one another on standard fittings because the outside dimensions may cause interference.
- SPF Flanges should not be used as anchor points for tie-rods across non-restrained joints.
- Fig. SF-1 SPF Flange sealing gaskets require a hard flat surface for adequate sealing. The use of a SPF Flange Adapter Insert is required for applications against rubber faced valves or other equipment. The SPF Flange Adapter Insert is installed between the SPF Flange sealing gasket and the mating flange or surface to provide a good sealing surface area.
- SPF Flanges are not recommended for use against formed rubber flanges.
- An additional bolt is recommended for the hinge side of the 2" - 12" Fig. SF-1 when connection to lug valves.
- Contact AnvilStar for Di-Electric Flange connections.

### Applications which require a SPF Flange Adapter Insert:

- When mating to a wafer valve (lug valve), if the valve is rubber faced in the area designated by the sealing surface dimensions (A Max. to B Min.), place the SPF Flange Adapter Insert between the valve and the SPF flange.
- When mating to a rubber-faced metal flange, the SPF Flange Adapter Insert is placed between the SPF Flange and the rubber-faced flange.
- When mating to a serrated flange surface, a standard full-faced flange gasket is installed against the serrated flange face and the SPF Flange Adapter Insert is placed between the SPF Flange and the standard Flange gasket.
- When mating to valves or other component equipment where the flange face has an insert, use procedure described in note 3.