

Flange Gasket and Storage Recommendations Actuator Diaphragm Identification

Flange Gasket Recommendations

The use of a flange gasket is advisable when installing flanged diaphragm valves in a conventional piping system. Flange surfaces are best sealed with elastomeric type gaskets. However, the elastomeric gasket material must be chemically compatible with the service media, and must meet the applicable temperature and pressure requirements.

Plastic lined valves can be installed without a gasket when connecting to plastic lined piping. Installing a plastic lined valve to unlined piping must be avoided due to potential damage to the lining at the flange face, resulting in leakage.

Do not tighten each bolt in consecutive order either in a clockwise or counterclockwise direction. Use the criss-cross method when tightening flange bolts. Consult your piping supplier or piping engineer for the correct torque values to use.

Storage Recommendations Lined Valves

Lined piping and valves should be stored, between delivery and use, away from direct sunlight, heat or outdoor seasonal weathering. Products with flexible type linings may be stored outdoors, providing the components are covered with protective tarpaulins and are not subjected to extreme temperature conditions.

Equipment lined with semi hard and especially bone hard materials must be protected and stored, preferably indoors, and should never be subjected to extreme cold climatic conditions because thermal stress and expansion may introduce cracking.

Diaphragm Shelf Life and Storage Recommendations

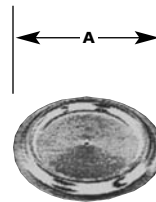
Diaphragm Material	Diaphragm Grade	Diaphragm Shelf Life
Buna N	DP & P	6 Years
Butyl	B & W1	10 Years
EPDM	M, M1 & 17	6 Years
Hypalon	C	8 Years
Natural Rubber	S	4 Years
Neoprene	T	6 Years
Polurethane	-	5 Years
Viton	V	10 Years
PTFE	TM, R2	14 Years

Storage Instructions:

Until the diaphragms are to be installed, they should be kept in a covered, adequately ventilated and dry location, preferably in their original containers. Storage temperatures should not cycle rapidly and should be maintained between 40° and 120° F.

Actuator Diaphragm Identification

Actuator Diaphragms							
Size	#12	#25	#50	#75	#101	#130	#250
A	6 ⁵ / ₈ "	9 ⁷ / ₈ "	13 ⁵ / ₁₆ "	14"	15 ¹ / ₁₆ "	14 ⁹ / ₁₆ "	21 ⁷ / ₁₆ "
Bolt Holes	12	18	← NONE →				
maximum recommended air pressure: 85 psi							



Facts and Recommended Guidelines

Dia-Flo Diaphragm Valve Facts you should be aware of...

All .75" flanged valves (except solid plastic) are identical to 1" valves except the body end flanges accommodate .75" flange dimensions. Therefore, bonnet assemblies and diaphragms for such bodies use 1" bonnet assemblies and diaphragms.

Similarly, 1.25" valves (flanged or unflanged) use 1.5" bonnet assemblies and diaphragms.

Diaphragm material properties become weaker with increasing temperature. Therefore, diaphragms operating at elevated temperatures are not to be used at maximum pressures. See pressure/temperature charts.

Cast iron, ductile iron and carbon steel should not be used below -20°F (-29°C) per ANSI standards.

Dia-Flo Diaphragm Airmotor actuators are designed to operate with air pressures up to 85 psi. The maximum pressure differential between upper and lower chambers is also 85 psi.

Maximum operating line pressure for valves equipped with dualrange bonnet assemblies is 100 psi.

Dualrange bonnet assemblies are only available on weir type valves, 1" through 6" size.

Straightway valves are not ideal for throttling service due to poor control capability.

Straightway valves are not recommended for vacuum service.

Actuated DiaFlo valves used on vacuum service applications will require an additional amount of actuation pressure in order to open the valve. The total amount applied will be higher than that found in the applicable sizing chart, in order to compensate for the effect of the vacuum.

Large fail close (#25 and above) actuators are supplied as standard with travel stops..

Fail open and double acting valves are not normally supplied with travel stops, so if the available supply pressure exceeds the required pressure to close the valve, then the actuator should be ordered with a travel stop option or the supply pressure should be reduced using a regulator.

A minimum of 20 psi line pressure is required to utilize the direct loaded bonnet assembly. Direct loaded bonnets are always provided with diaphragms in the "molded closed" position.

When you specify a double-acting actuator with a top-mounted, single-acting positioner, the standard arrangement is that the bottom chamber is supplied with a cushion regulator. This will result in a fail open valve.

Recommended Guidelines for Weir and Straightway Valves

Maximum Velocity: 15 - 20 ft/sec for clear liquids
8 - 10 ft/sec for slurries

Maximum Solids percentages: Weir Valves – not to exceed 15%
Straightway Valves* – up to 30%

* For solids between 30% and 50%, consult factory
50% and above - Not Recommended

Maximum allowable pressure drop across weir valve: 25% of P_{inlet} absolute