



Item # 1/2"/41-4-B/M, Butt Weld Manual Stainless Steel Diaphragm Valves (Unlined)

Wide Selection — available in a wide variety of body materials, linings and end connections. By utilizing such highly resistant linings as Saran, Polypropylene, Kynar, Tefzel, Glass, Rubber, etc., virtually any chemical service within the pressure/temperature limits of the valve can be handled safely and economically.

No Stem Leakage — since the diaphragm isolates the fluid stream there is no need for a packing gland — no atmospheric contamination, no leakage or waste, no expensive maintenance of stem, seats or stuffing box.

Bubble-Tight Shut Off — results when the downward thrust of the stem and compressor assembly molds the flexible diaphragm against the weir. The diaphragm will accommodate itself to rust, scale, slurry, or fibrous material.

Streamline Flow — with minimum pressure drop because of the absence of grooves, pockets or sharp changes in direction of flow.

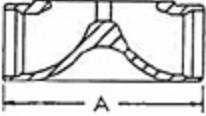
Cost Saving — simple in-line maintenance. In less time than it takes to remove and replace a conventional valve, a new body diaphragm can be installed. Thus providing essentially a brand new valve at a tiny fraction of the cost of a new or repaired conventional valve — all without removing the valve body from the line.

Flow Control — the automated diaphragm valve provides an excellent means of handling the changing flow requirements in most process installations. By the addition of a positioner to the actuator, even more precise control can be achieved, especially in the handling of slurries, or viscous and fibrous materials.

Body Materials — available in cast iron, ductile iron, carbon steel, stainless steel, Alloy-20, aluminum and bronze

[Specifications](#) · [Diaphragm Selection](#) · [Standard Actuator Features](#)

Specifications

| | |
|---------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| Body Material | Stainless Steel |
| Temperature Range | -15 to 212 °F |
| Typical Applications | Acids and Alkalies |
| Lining Options | Unlined |
| Material/Lining Classification | Metal Unlined |
| End Connection |  (4) Butt Weld Ends larger image |
| End to End Dimension A | 2 1/2 in |
| Valve Size [Fraction] | 1/2 in |
| Valve Size [Decimal] | 0.50 in 12.70 mm |
| Diaphragm Control Valve Options | 730-RV , Pilot Operated Controller Option |
| Line Pressure Conditions¹ | 0% P.D. 100% P.D. |




¹ 100% P.D. means that downstream pressure falls to 0 psig.

0% P.D. means that downstream pressure remains at, or returns to essentially the same as the upstream pressure.

Diaphragm Selection

| | |
|---------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Diaphragm Material | Butyl |
| Diaphragm Material Description | Elastomeric - built like a tire - especially compounded materials - ruggedly reinforced with fabric plies and designed to take a great deal of physical abuse. The sealing bead provides a greater sealing ability by localizing closing forces for bubble-tight shut-off. |

Standard Actuator Features

| | |
|----------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>Actuator Size Number</p> | <p>0, Actuator Size "0" 1, Actuator Size "1" 2, Actuator Size "2" 2A, Actuator Size "2A" 3, Actuator Size "3" 4, Actuator Size "4" 5, Actuator Size "5"</p> |
| <p>Action of Actuator¹</p> | <div style="display: flex; flex-direction: column; align-items: center;"> <div style="text-align: center;">  <p>(TYPE C) Air to Open - Air to Close larger image</p> </div> <div style="text-align: center;">  <p>(TYPE H) Spring to Open - Air to Close larger image</p> </div> <div style="text-align: center;">  <p>(TYPE HRT) Spring to Close - Air to Open larger image</p> </div> </div> |

¹ The choice of actuator size is determined by the line pressure through the valve and the available operating air pressure. Some operating conditions call for substantial line pressure downstream when the valve closes.

After the valve closes, if the downstream pressure is less than 30 % of the upstream pressure - this condition is 100% Δ P. If the downstream pressure is 30% or more of the upstream pressure - the condition is 0% Δ P.