

Features

- Pressure rated 150 PSI (10 Bar) at 73°F (23°C)
- Full isolation of mechanical parts from fluid path
- Linear flow characteristics
- Lockable handwheel in over 300 positions
- Integral anchoring bracket allows simple panel or wall mounting
- Lockout-capable handle prevents tampering
- True Union design with socket and NPT threaded end connectors included

Applications

Diaphragm valves are suitable for controlling flow of abrasive or dirty liquids. Since there is no relative motion between the diaphragm and the valve body, abrasives will not wear the seals like other valve designs. All mechanical parts are isolated from the fluid path, so the fluid contacts only the diaphragm and valve body. This allows suitability for a wide range of fluids that might not otherwise be compatible with other types of valves. The weir design features improved flow vs. previous designs, as well as a linear flow characteristic, thereby enabling precise flow regulation through the valve's entire range of operation.

PVC diaphragm valves should never be used for compressed gas applications.

Operation

Turning the handwheel compresses the diaphragm against the valve body which in turn regulates fluid flow. Valve position is displayed by a graduated indicator in the center of the handwheel. Integral metal inserts allow for easy wall or panel mounting. The valve can be locked in any position by simply lifting up on the handwheel.

Construction

Valve Body	PVC cell class 12454 per ASTM D1784 (dark gray)
Bonnet & Handwheel	PP-GR
Diaphragm	EPDM, FPM or PTFE
End Connectors and Lock Nuts	PVC cell class 12454 per ASTM D1784
End Connector O-Ring Gaskets	EPDM (EPDM Models), FPM (FPM & PTFE Models)



Description

Industrial grade PVC diaphragm valves are available in sizes from 1/2 to 2 inches. Standard diaphragm material is EPDM, and PTFE or FPM diaphragms are also available as an option. The circular sealing angle design reduces operating torque and mechanical stress while reducing the risk of accumulating deposits or contamination. True union fittings allow for easy removal and maintenance. All metal parts are sealed or covered, greatly reducing the risk of corrosion. The innovative handwheel design can adjust and lock out the valve in over 300 positions.

Options

- Air Actuators
- PTFE or FPM diaphragms
- 3-Way, 2-Position Pilot Solenoid Valves
- Wall/Base Mounting Kits

Construction Features

Tamper proof position lock for lockout-tagout

Fluid media contacts only PVC body and diaphragm seal, broadening uses, even with dirty or abrasive fluids

Weir design for uniform distribution on the seal, reducing stress on components and improving linear flow characteristics over standard ball valves

Valves include both glue socket and threaded NPT end connectors

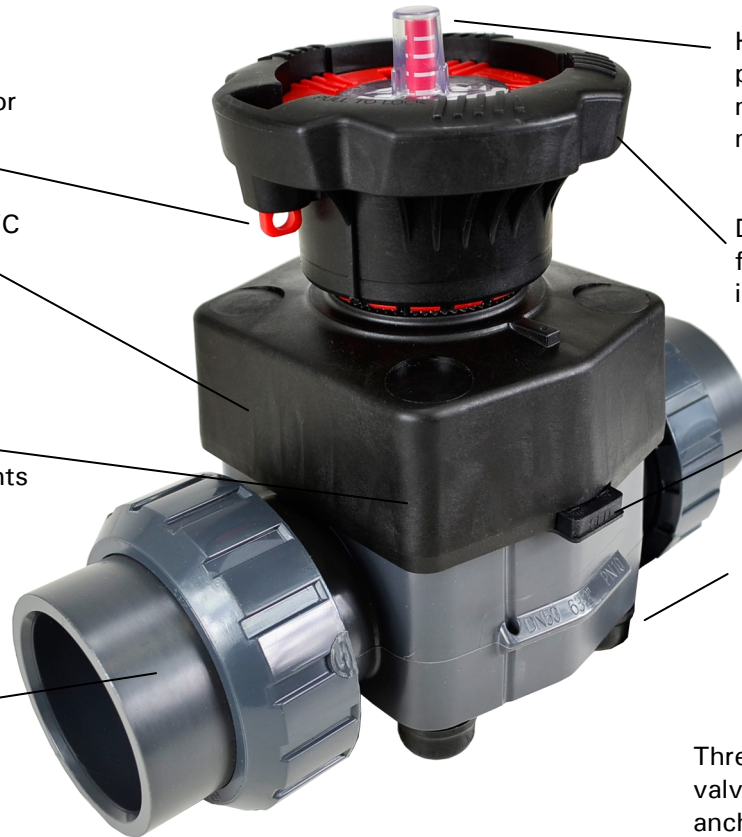
Highly visible graduated position indicator (All tick marks visible: valve *Open*, none visible: valve *Closed*)

Durable handle allows for fine adjustment and locking in over 300 positions

Leak free diaphragm seal design available in multiple material types

All metal parts are isolated from the fluid path

Threaded metal inserts on the valve bottom permit the direct anchoring of valve body via an integrated bracket



Closeup Handle View

Pressure/Temperature

Pressure Rating*: 150 PSI (10 Bar) at 73°F (23°C)

Temperature Rating: 32 to 140°F (0 to 60°C)

*See P/T chart



Interior View (Diaphragm Closed)



Bottom View

Pressure/Temperature Chart

P/T Chart (PSI/°F)							
PSI	150	150	150	110	80	60	35
°F	32	50	70	90	110	120	140

P/T Chart (BAR/°C)							
Bar	16	16	16	12	10	7	2.4
°C	0	10	21	32	43	49	60

Specifications (English units)

Stock Number	Pipe Size* (inches)	Cv	Orifice Type	Pressure (PSI)**	Body Material	Seal Materials***
PVC DIAPHRAGM VALVE, EPDM/PTFE/FPM SEALS						
551902	1/2	7.8	Weir Design	150	PVC	EPDM/PTFE/FPM
551904	3/4	18.1	Weir Design	150	PVC	EPDM/PTFE/FPM
551906	1	30.8	Weir Design	150	PVC	EPDM/PTFE/FPM
551908	1-1/2	75.3	Weir Design	150	PVC	EPDM/PTFE/FPM
551910	2	114.2	Weir Design	150	PVC	EPDM/PTFE/FPM

* Includes both IPS glue socket and NPT end connectors.

** Pressure at 32 to 73° F (reduced pressure at higher temperatures—see P/T chart)

Cv = The GPM of water at 60° F that will pass through the valve with 1 PSI pressure drop

Specifications (Metric units)

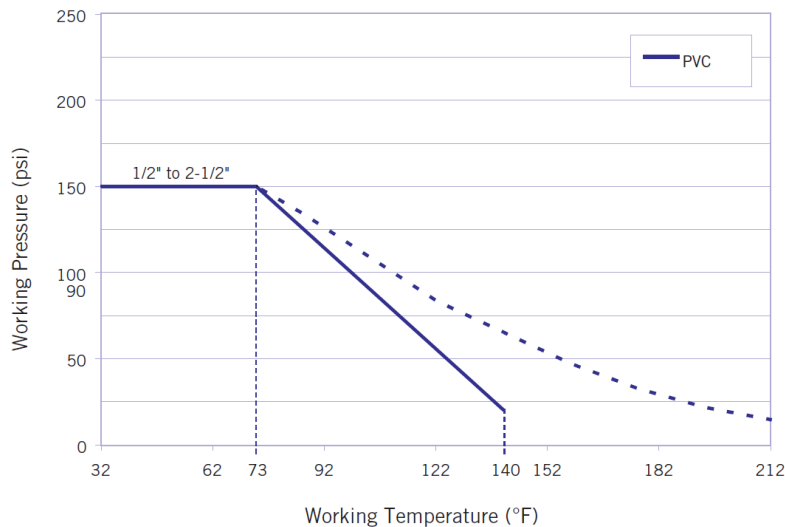
Stock Number	Pipe Size* (inches)	Kv	Orifice Type	Pressure (Bar)**	Body Material	Seal Materials***
PVC DIAPHRAGM VALVE, EPDM/PTFE/FPM SEALS						
551902	1/2	6.7	Weir Design	10	PVC	EPDM/PTFE/FPM
551904	3/4	15.7	Weir Design	10	PVC	EPDM/PTFE/FPM
551906	1	26.5	Weir Design	10	PVC	EPDM/PTFE/FPM
551908	1-1/2	65.1	Weir Design	10	PVC	EPDM/PTFE/FPM
551910	2	98.8	Weir Design	10	PVC	EPDM/PTFE/FPM

* Includes both IPS glue socket and female NPT end connectors.

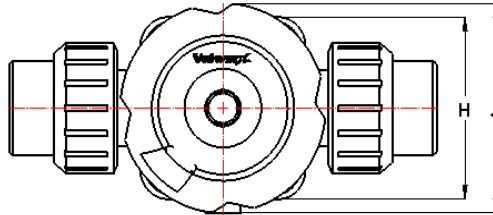
** Pressure at 0 to 23° C (reduced pressure at higher temperatures—see P/T chart)

*** FPM & PTFE diaphragm valves supplied with FPM O-rings.

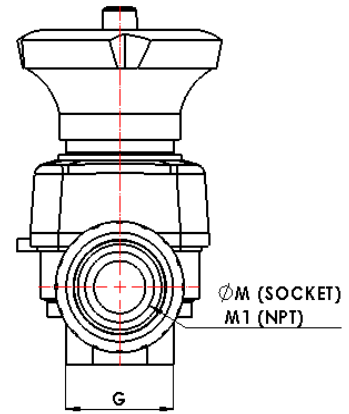
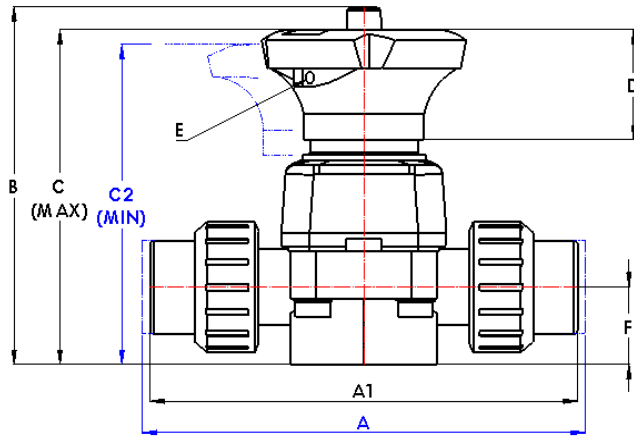
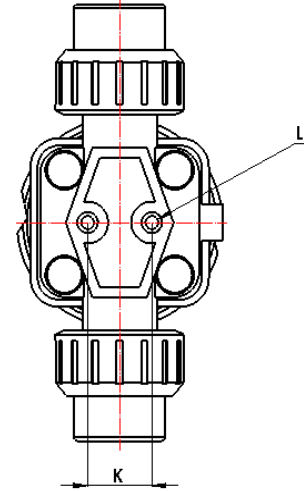
Pressure Temperature Chart



Dimensions:



BOTTOM VIEW



Pipe Size		A (Socket)	A1 (NPT)	B	C	C2	D	E (Lockhole)	F	G	H	J	K	L	M	M1	Weight
1/2	inch	5.63	5.39	5.0	4.65	4.45	1.65	0.18	0.98	1.65	2.74	3.15	0.98	M6 X 6	0.85	1/2"	1.1 lb
	mm	143	137	127	118	113	42	4.5	25	42	69.5	80	25		21.5	—	0.50 kg
3/4	inch	6.57	6.10	5.31	5.04	4.80	1.65	0.18	1.18	1.65	2.74	3.15	0.98	M6 X 6	1.06	3/4"	1.2 lb
	mm	167	155	135	128	122	42	4.5	30	42	69.5	80	25		26.9	—	0.54 kg
1	inch	7.09	6.85	5.79	5.51	5.31	1.65	0.18	1.30	1.65	3.15	3.36	0.98	M6 X 6	1.33	1"	1.7 lb
	mm	180	174	147	140	135	42	4.5	33	42	80	85.4	25		33.7	—	0.77 kg
1-1/2	inch	9.21	8.58	7.24	6.50	6.30	2.32	0.26	1.38	2.54	4.53	2.36	1.77	M8 X 7	1.91	1-1/2"	3.8 lb
	mm	234	218	184	165	160	59	6.5	35	64.5	115	60	45		48.4	—	1.72 kg
2	inch	10.7	10.2	8.72	8.13	7.81	2.32	0.26	1.93	5.0	5.39	4.72	1.77	M8 X 7	2.38	2"	6.1 lb
	mm	272	260	221.5	206.5	198.5	59	6.5	49	127	137	120	45		60.5	—	2.76 kg