

2031
NPT stainless steel

2/2-way, 1/4" – 2"
Diaphragm valve – stainless steel



- Hermetic isolation of fluid from the atmosphere
- Corrosion resistant
- Long service life even with “dirty” or high viscosity fluids

DTS 1000082559 EN Version: A Status: RL (released | freigegeben | validé) printed: 09.02.2010

This diaphragm valve with stainless steel body is an alternative to ball valves for polluted, dirty, abrasive or high viscosity fluids. High flow rates are attained with the 2-way stainless steel body.

The diaphragm between the actuator and body hermetically isolates the fluid from the actuator. The maintenance-free and robust valves can be fitted with a comprehensive range of accessories

for position indication, stroke limitation or hand wheel operation.

Operating Data (valve)	
Fluid temperature depending on diaphragm material	
EPDM	14°F to 284°F
PTFE	14°F to 284°F
Valve body	316 L stainless steel
Body surfaces	Internally Ra 40 to Ra 88
Diaphragm material	EPDM, PTFE
On request	Digital electro-pneumatic positioner

Operating data	
Material	PA (Polyamide) PPS (Polyphenylsulfide)
Ambient temperature	PA 14°F to 140°F PPS ¹⁾ 40°F to 190°F <small>¹⁾ Temp. to 280°F max. for short intervals only</small>
Control pressure Max. admissible control pressure	145 PSI (PA) 100 PSI (PPS)
Circuit function A (spring to close) Min. required control pressure	80 PSI
Circuit function I (no spring) The following min. control pressures are required to provide max. operating pressure	87 PSI
Control fluid	neutral gas, air

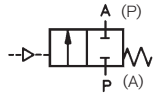
Applications

- Pollution control equipment
- Chemical processing equipment
- Water treatment
- Textile dyeing
- Paint spraying equipment

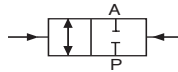
Technical data

Control Functions

A – 2/2-way valve,
normally closed by spring action.



I – 2/2-way valve, with double-acting actuator.

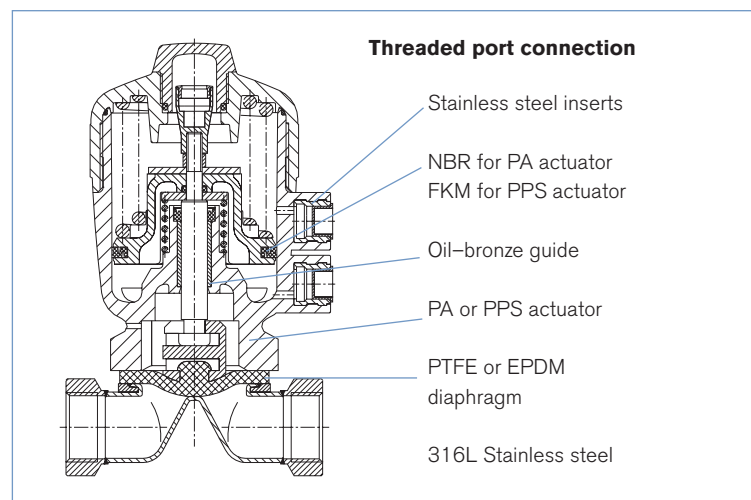


B – 2/2-way valve, normally open
by spring action

Specifications

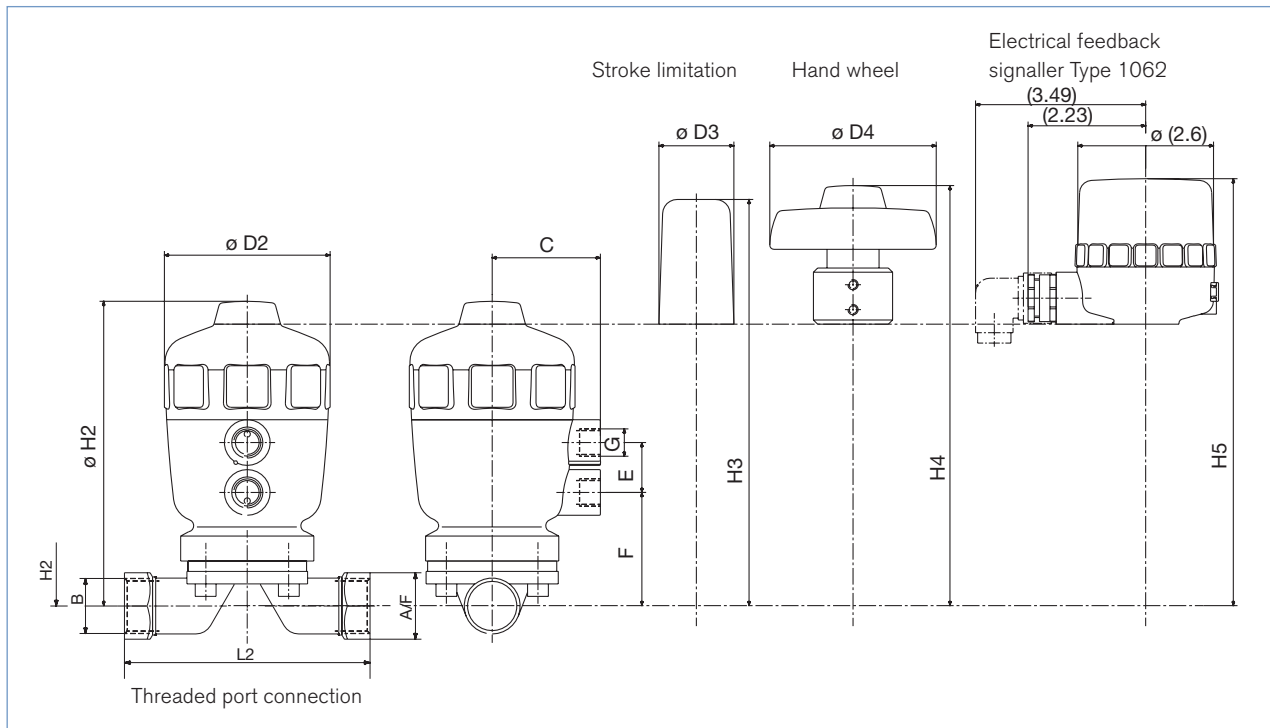
Port Connections [inch]	Orifice [inch]	C _v -Rating	Operating Pressure Diaphragm		Actuator size [ø inch]	Weight [lbs.]
			EPDM [PSI]	PTFE [PSI]		
1/4	5/16	1.2	145	145	1.58	.9
1/2	9/16	7.6	100	--	1.97	1.5
1/2	9/16	7.6	145	145	2.48	2.1
3/4	3/4	15.2	145	140	3.15	4.4
1	1	24.5	70	--	2.48	2.9
1	1	24.5	145	100	3.15	4.8
1-1/4	1-1/4	38.6	145	115	3.94	8.6
1-1/2	1-1/2	53.8	94	--	3.94	9.2
1-1/2	1-1/2	53.8	145	140	4.93	16.5
2	2	82.0	115	100	4.93	16.7

Materials



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Dimensions [inch]



Orifice [inch]	Actuator [inch]	B NPT"	C	Ø D2	Ø D3	Ø D4	E	F	G	H2	H3	H4	H5	L2	A/F
5/16	1.58	1/4	1.34	2.09	-	-	0.65	1.14	G 1/8	3.35	-	-	-	3.35	0.66
9/16	1.97	1/2	1.54	2.52	1.54	3.15	0.79	1.73	G 1/8	4.81	6.78	7.01	7.13	4.02	1.06
9/16	2.48	1/2	2.05	3.15	1.54	3.15	0.95	1.69	G 1/4	5.48	7.45	7.68	7.80	4.02	1.06
3/4	2.48	3/4	2.05	3.15	1.54	3.15	0.95	2.13	G 1/4	5.75	7.80	8.04	8.16	4.45	1.26
3/4	3.15	3/4	2.36	3.98	1.54	3.15	0.95	2.44	G 1/4	6.86	8.83	9.06	9.18	4.45	1.26
1	3.15	1	2.36	3.98	1.54	3.15	0.95	2.56	G 1/4	6.97	8.94	9.18	9.30	5.00	1.62
1 1/4	3.94	1 1/4	2.88	5.00	2.09	5.91	0.95	3.19	G 1/4	9.06	11.94	11.82	11.27	5.75	1.97
1 1/2	3.94	1 1/2	2.88	5.00	2.09	5.91	0.95	3.35	G 1/4	9.26	12.14	12.02	11.47	6.26	2.36
1 1/2	4.93	1 1/2	3.39	6.03	2.09	5.91	1.18	3.66	G 1/4	10.80	13.67	13.55	13.00	6.26	2.36
2	4.93	2	3.39	6.03	2.09	5.91	1.18	3.90	G 1/4	10.95	13.83	13.71	13.16	7.53	2.76

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Accessories and options on request

- Pilot Valves
- Digital electro-pneumatic positioner
- Electrical feedback signaller Type 1062
- Magnetic-inductive proximity sensors for position sensing mounted to the actuator
- Independently adjustable stroke limitation:
 - for maximum flow
 - for minimum flow
- Hand wheel
- Control function B, normally opened by spring

Ordering charts (other versions on request)

**Control Function A, normally closed by spring,
NPT port connection, PA-actuator**

Port Connection	Orifice [inch]	Diaphragm	Operating pressure [PSI]	Actuator Size [inch]	Item no.
NPT 1/4	5/16	EPDM	145	1.58	Use PPS
NPT 1/4	5/16	PTFE/EPDM	145	1.58	Use PPS
NPT 1/2	9/16	EPDM	123	1.97	459 023 Y
NPT 1/2	9/16	EPDM	145	2.48	459 024 Z
NPT 1/2	9/16	PTFE/EPDM	145	2.48	459 027 U
NPT 3/4	3/4	EPDM	145	2.48	459 025 S
NPT 3/4	3/4	EPDM	145	3.15	459 026 T
NPT 3/4	3/4	PTFE/EPDM	145	3.15	459 028 D
NPT 1	1	EPDM	43	2.48	458 587 S
NPT 1	1	EPDM	145	3.15	458 588 B
NPT 1	1	PTFE/EPDM	108	3.15	458 595 S
NPT 1 1/4	1 1/4	EPDM	145	3.94	459 029 C
NPT 1 1/4	1 1/4	PTFE/EPDM	115	3.94	459 031 Y
NPT 1 1/2	1 1/2	EPDM	94	3.94	458 601 Q
NPT 1 1/2	1 1/2	EPDM	145	4.93	458 603 J
NPT 1 1/2	1 1/2	PTFE/EPDM	145	4.93	458 607 N
NPT 2	2	EPDM	115	4.93	458 609 Y
NPT 2	2	PTFE/EPDM	100	4.93	458 613 B

**Control Function A, normally closed by spring,
NPT port connection, PPS-actuator**

Port Connection	Orifice [inch]	Diaphragm	Operating pressure [PSI]	Actuator Size [inch]	Item no.
NPT 1/4	5/16	EPDM	145	1.58	135 444 N
NPT 1/4	5/16	PTFE/EPDM	145	1.58	135 448 S
NPT 1/2	9/16	EPDM	123	1.97	TBD
NPT 1/2	9/16	EPDM	145	2.48	TBD
NPT 1/2	9/16	PTFE/EPDM	145	2.48	TBD
NPT 3/4	3/4	EPDM	145	2.48	TBD
NPT 3/4	3/4	EPDM	145	3.15	TBD
NPT 3/4	3/4	PTFE/EPDM	145	3.15	TBD
NPT 1	1	EPDM	43	2.48	TBD
NPT 1	1	EPDM	145	3.15	TBD
NPT 1	1	PTFE/EPDM	108	3.15	TBD
NPT 1 1/4	1 1/4	EPDM	145	3.94	TBD
NPT 1 1/4	1 1/4	PTFE/EPDM	115	3.94	TBD
NPT 1 1/2	1 1/2	EPDM	94	3.94	TBD
NPT 1 1/2	1 1/2	EPDM	145	4.93	TBD
NPT 1 1/2	1 1/2	PTFE/EPDM	145	4.93	TBD
NPT 2	2	EPDM	115	4.93	TBD
NPT 2	2	PTFE/EPDM	100	4.93	TBD

**Control Function I, double-acting actuator,
NPT port connection, PA-actuator**

Port Connection	Orifice [inch]	Diaphragm	Operating pressure [PSI]	Actuator Size [inch]	Item no.
NPT 1/4	5/16	EPDM	145	1.58	Use PPS
NPT 1/4	5/16	PTFE/EPDM	145	1.58	Use PPS
NPT 1/2	9/16	EPDM	145	1.97	459 032 Z
NPT 1/2	9/16	PTFE/EPDM	145	2.48	459 035 U
NPT 3/4	3/4	EPDM	145	2.48	459 033 S
NPT 3/4	3/4	EPDM	145	3.15	459 034 T
NPT 3/4	3/4	PTFE/EPDM	145	3.15	459 036 V
NPT 1	1	EPDM	145	3.15	459 213 B
NPT 1	1	PTFE/EPDM	145	3.15	458 620 N
NPT 1 1/4	1 1/4	EPDM	145	3.94	459 037 W
NPT 1 1/4	1 1/4	PTFE/EPDM	145	3.94	459 068 F
NPT 1 1/2	1 1/2	EPDM	145	3.94	458 622 C
NPT 1 1/2	1 1/2	PTFE/EPDM	145	4.93	458 624 E
NPT 2	2	EPDM	145	4.93	458 625 F
NPT 2	2	PTFE/EPDM	145	4.93	458 626 G

**Control Function I, double-acting actuator,
NPT port connection, PPS-actuator**

Port Connection	Orifice [inch]	Diaphragm	Operating pressure [PSI]	Actuator Size [inch]	Item no.
NPT 1/4	5/16	EPDM	145	1.58	457 270 N
NPT 1/4	5/16	PTFE/EPDM	145	1.58	457 271 B
NPT 1/2	9/16	EPDM	145	1.97	TBD
NPT 1/2	9/16	PTFE/EPDM	145	2.48	TBD
NPT 3/4	3/4	EPDM	145	2.48	TBD
NPT 3/4	3/4	EPDM	145	3.15	TBD
NPT 3/4	3/4	PTFE/EPDM	145	3.15	TBD
NPT 1	1	EPDM	145	3.15	TBD
NPT 1	1	PTFE/EPDM	145	3.15	TBD
NPT 1 1/4	1 1/4	EPDM	145	3.94	TBD
NPT 1 1/4	1 1/4	PTFE/EPDM	145	3.94	TBD
NPT 1 1/2	1 1/2	EPDM	145	3.94	TBD
NPT 1 1/2	1 1/2	PTFE/EPDM	145	4.93	TBD
NPT 2	2	EPDM	145	4.93	TBD
NPT 2	2	PTFE/EPDM	145	4.93	TBD

In case of special application conditions, please consult for advice.

We reserve the right to make technical changes without notice.

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