

Diaphragm Valve, Pneumatically Operated

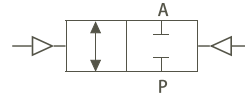
Series DM (DM10 Tri-Clamp, Dm20 Weld Ends)

2/2-way Diaphragm Valve, Cast Valve body, weld ends and clamp connection, port connection DN 4-50

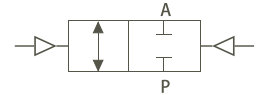
- Hermetical separation of fluids from the operating mechanism by diaphragm;
- Zero dead volume;
- Various surface finishes;
- universal accessory program up to control heads;

◆ Symbol

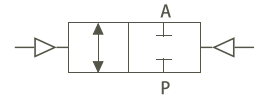
Control function A
(closed by spring force in rest position)



Control function B
(open by spring force in rest position)



Control function I
(double-acting actuator)



◆ How to Order



EPV100P040NCS

DM10 P 015 NC [] [] x 63mm

Body Material

Blank	Cast stainless steel 316L/1.4435
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Seal Material

AB	EPDM in food grade
AD	EPDM
EA	PTFE/EPDM
FF	FKM
EU	advanced PTFE/EPDM in two pieces

Control Function

NC	Normally closed by spring action
NO	Normally open by spring action
DA	Double acting

Nominal Diameter

4	/	6	/
8	G 1/4	10	G 3/8
15	G 1/2	20	G 3/4
25	G 1	32	G 1 1/4
40	G 1 1/2	50	G 2

Actuator Material Code

P	PA Actuator
R	PPS Actuator

Model

DM10	10	Diaphragm valve (tri-clamp)
DM20	20	Diaphragm valve (weld ends)

◆ Applications

- Water treatment
- Biotechnology
- Food industry

◆ Actuator Size

Port Size	Standard Actuator Size (mm)	
		Connection
DN 4	40	weld
DN 6	40	weld
DN 8	40	weld
DN10	40	weld & tri-clamp
DN15	50,63	weld & tri-clamp
DN20	63,80	weld & tri-clamp
DN25	63,80	weld & tri-clamp
DN32	90,100	weld
DN40	90,100	weld & tri-clamp
DN50	90,100	weld & tri-clamp

The externally piloted diaphragm valve consists of a pneumatically operated piston actuator, a diaphragm and a 2-way valve housing made of investment cast stainless steel;

The standard material of the actuator is PPS, with its favourable flow characteristics and zero dead volume, the valve housing enables high flow capacities and a variety of applications to be realized

Maintenance free, compatible with various accessories, direction indicating, stroke limiting or manual switching can be achieved conveniently.

Diaphragm Valve, Pneumatically Operated

Series DM(DM10 Tri-Clamp, Dm20 Weld Ends)

◆ Specifications

Model / Specifications	DN 4/6	DN 8	DN10	DN15	DN20	DN25	DN32	DN40	DN50
Control Function	2/2 way normally closed(NC)/open (open)								
Actuator Material	PA/PPS Actuator								
Valve Body Material	Stainless steel 316L								
Nominal Pressure	PN16(body)								
Pilot Pressure	max.7 bar.								
Diaphragm Materials	EPDM(AB),PTFE/EPDM(EA),EPDM(AD),advanced PTFE/EPDM(EU) and FKM(FF) on request								
Operating Method	Plunger Pilot								
Medium	Neutral Gases and liquids,high purity,sterile,aggressive or abrasive fluids								
Viscosity	up to viscous								
Medium Temperature	EPDM(AB) PTFE/EPDM(EA)	- 10 ~130°C (steam sterilisation +140°C for 60min)							
	EPDM(AD) advanced PTFE/ EPDM(EU)	- 5~143°C (steam sterilisation +150°C for 60min)							
	FKM(FF)	- 0~130°C (not recommended for steam)							
Ambient Temperature	PA Actuator: - 10 ~120°C								
Installation	As required, preferably with actuator in upright position								
Control Medium	Neutral gases,air								

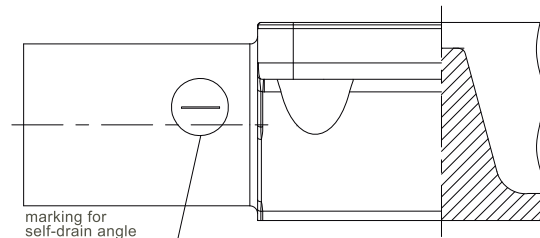
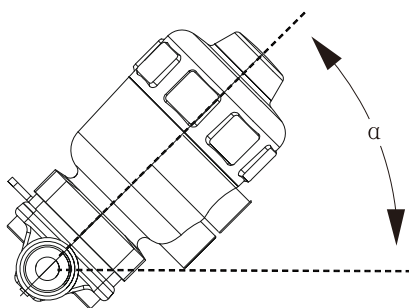
◆ Kv-values

Port Size	DN (mm)	Actuator (mm)	Orifice Diaphragm size (mm)	Kv-value water ¹⁾ (m ³ /h)	Pilot pressure (bar)		Max.operating pressure for seal material (bar)	
					min.	max.	EPDM,FKM	PTFE/EPDM,advanced PTFE/EPDM
/	DN 4/6	40	8	0.8	5.0	7.0	10.0	10.0
1/4"	DN 8	40	8	1.0	5.0	7.0	10.0	10.0
3/8"	DN10	40	8	1.0	5.0	7.0	10.0	10.0
1/2"	DN15	50	15	4.0	5.0	7.0	8.5	5.0
		63	15	4.5	5.0	7.0	10.0	10.0
3/4"	DN20	80	20	7.5	5.0	7.0	10.0	10.0
1"	DN25	80	25	12.0	5.5	7.0	10.0	7.5
1-1/4"	DN32	90	32	30.0	5.5	7.0	6.5	6.0
1-1/2"	DN40	90	40	30.0	5.5	7.0	10.0	10.0
2"	DN50	100	50	51.5	5.5	7.0	4.5	2.5

¹⁾ Measured at +20°, 1bar pressure at valve inlet and free outlet.

Remark: For low operating pressures we recommend reduced spring versions.

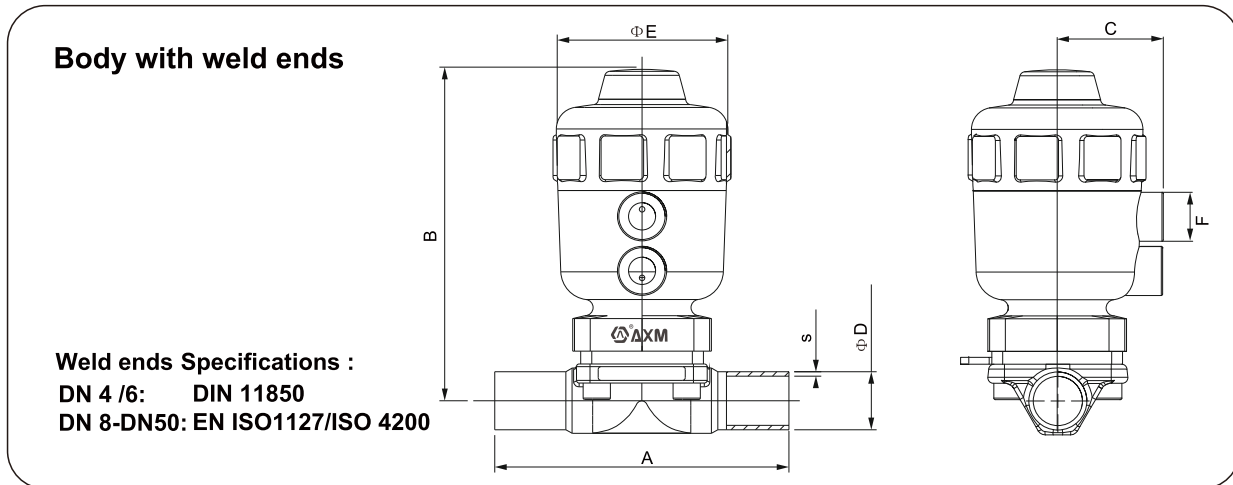
◆ Installation for self-draining operation



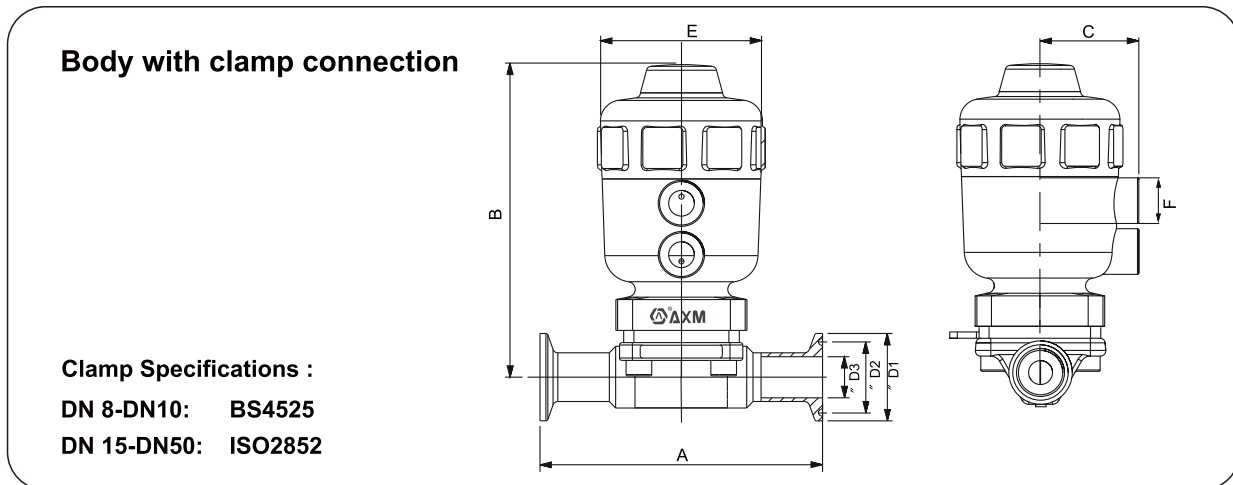
a=15 up to 35 (Marking must face upwards, 12 o'clock position)
plus 1 to 5 inclination to the pipe axis
Drain marks permanently marked on both sides of the valve body
show the correct mounting position to optimise drain ability.

Diaphragm Valve, Pneumatically Operated Series GM(DM10 Tri-Clamp, Dm20 Weld Ends)

◆ Dimensions [mm]



Port Size	DN(mm)	Actuator	A	B	C	D	S	E	F
/	DN 4	40	90	100	34	6.0	1.0	53	G 1/8
/	DN 6	40	90	100	34	8.0	1.0	53	G 1/8
1/4"	DN 8	40	90	100	34	13.5	1.6	53	G 1/8
3/8"	DN10	40	90	100	34	17.2	1.6	53	G 1/8
1/2"	DN15	50	110	121	39	21.3	1.6	64	G 1/8
		63	110	138	52	21.3	1.6	80	G 1/8
3/4"	DN20	63	119	148	52	26.9	1.6	80	G 1/8
		80	119	174	60	26.9	1.6	101	G 1/4
1"	DN25	63	129	157	52	33.7	2.0	80	G 1/8
		80	129	177	60	33.7	2.0	101	G 1/4
1-1/4"	DN32	90	161	203	65	42.4	2.0	115	G 1/4
		100	161	233	73	42.4	2.0	127	G 1/4
1-1/2"	DN40	90	161	203	65	48.3	2.0	115	G 1/4
		100	161	233	73	48.3	2.0	127	G 1/4
2"	DN50	90	192	214	65	60.3	2.0	115	G 1/4
		100	192	244	73	60.3	2.0	127	G 1/4



Port Size	DN(mm)	Actuator(mm)	A	B	C	D1	D2	D3	E	F
1/4"	DN 8	40	89	100	34	25	20.22	7.1	53	G 1/8
3/8"	DN10	40	89	100	34	25	20.22	10.3	53	G 1/8
1/2"	DN15	50	110	121	39	34	27.5	16.0	64	G 1/8
		63	110	138	52	34	27.5	16.0	80	G 1/8
3/4"	DN20	63	119	148	52	34	27.5	20.0	80	G 1/8
		80	119	174	60	34	27.5	20.0	101	G 1/4
1"	DN25	63	129	157	52	50.5	43.5	22.6	80	G 1/8
		80	129	177	60	50.5	43.5	22.6	101	G 1/4
1-1/2"	DN40	90	161	203	65	50.5	43.5	35.6	115	G 1/4
		100	161	233	73	50.5	40.5	35.6	127	G 1/4
2"	DN50	90	192	214	65	64	56.5	48.6	115	G 1/4
		100	192	244	73	64	56.5	48.6	127	G 1/4