



**I Application**

Diaphragm valves, manually or pneumatically operated, are specially designed for use in hygienic and aseptic processes in the food-processing and pharmaceutical industries. The valve is excellent for flow control as well as for open/close duties.

**I Operating principle**

The diaphragm provides the body seal as well as the seat seal. There are no paths to the outside environment and, as such, the valve is suitable for aseptic processes. When the valve is being closed, a pressure pad which supports the diaphragm moves towards the sealing face on the body. As the pressure plate moves, the diaphragm flexes and is forced down onto the seat area in the centre of the body, thus, closing off the flow path through the body. The inter-relationship of body to the pressure plate prevents over compression of the diaphragm.

The valve can be actuated either manually or pneumatically and controlled by control tops and solenoid valves.

**I Design and features**

- Straight through flow path. High Kv factor.
- Controlled compression of sealing.
- Compact actuator.
- Normally closed (NC) pneumatic actuator (standard).
- Sealed actuator with no maintenance required (stainless steel version).
- Leak detector.
- Position indicator.
- Interchangeability of parts.
- Ergonomic handle.
- Standard connections: weld and clamp OD / DIN.
- Traceability of components.



Traceability of components

**I Materials**

Parts in contact with the product	AISI 316L
Other stainless steel parts	AISI 304
Plastic parts	PP + 30 GF
Diaphragm	EPDM according to FDA 177.2600 and USP Class VI
Internal surface finish	Ra ≤ 0,5 µm
External surface finish	mirror polish

**I Options**

- Manual or pneumatic actuation.
- Handle: stainless steel or plastic.
- Bonnet: stainless steel or plastic.
- Pneumatic actuator: stainless steel or plastic.
- Available surface finish: satin, blasted, electropolished, etc.
- Diaphragm: FPM, VMQ (according to FDA 177.2600 and USP Class VI) and PTFE / EPDM separate (according to FDA 177.2600).
- Connections: DIN, SMS and RJT.
- Tank bottom valve.
- NDL valve (Non Dead Leg T Valve).
- Digital modulating control valve.
- Normally open (NO) double-acting pneumatic actuator.
- Control box with switches and solenoid valves.
- Materials and roughness certificates.
- BPE 2007 (length of clamp bodies is different from the one shown on the tables; consult special codes).



Straight through flow path

**I Technical specifications**

Available sizes

Max. working temperature (St.St. actuator)

Max. working temperature (plastic actuator)

Max. working pressure (according to the model)

Compressed air pressure

DN ¼" - DN 2"

-20 °C to +90 °C (EPDM)

+140 °C (SIP, max. 30 min)

+80 °C (EPDM)

10 bar

6-8 bar

-4 °F to 194 °F

284 °F

176 °F

145 PSI

87-116 PSI



stainless steel  
pneumatic actuator



stainless steel  
bonnet and handle



plastic  
bonnet and handle

Pressure in bar / PSI for various combinations of bonnets, handles and actuators.

DN		PLASTIC HANDLE				ST.ST. HANDLE		PNEUMATIC ACTUATOR	
		PLASTIC BONNET		ST.ST. BONNET		ST.ST. BONNET		INOXIDABLE	
mm	inches	[bar]	[PSI]	[bar]	[PSI]	[bar]	[PSI]	[bar]	[PSI]
6	¼"	8	116	10	145	10	145	8	116
8	⅜"								
10	½"								
15	⅝"								
20	¾"	8	116	10	145	10	145	6	87
25	1"								
40	1 ½"	8	116	10	145	10	145	6	87
50	2"	-	-	-	-	6	87	4	58

Values valid for EPDM gaskets (other materials to be consulted).

Performance in vacuum to be consulted.



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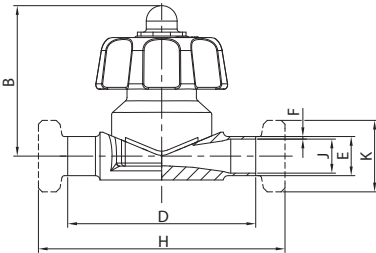
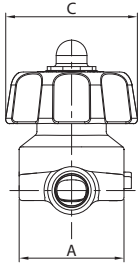
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## I General dimensions

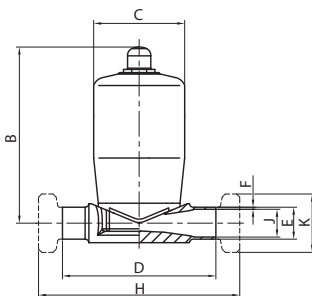
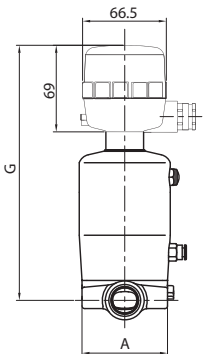
### Manual actuator



SIZE	DN	A	B	C	WELD			CLAMP OD			MALE SMS			
					D	E	F	H	J	K	H	J	K	
N°1	1/4"	38	63	59,6	86	1,65	86	25,4	6,4	3,1	---	---	---	
	3/8"								9,5					
	1/2"								12,7					
	5/8"								15,9					
N°2	3/4"	68	115	88,9	122	1,65	114	25,4	19	15,8	25,4	---	---	---
	1"								25,4					
N°3	1 1/2"	95	120	88,9	160	38,1	1,65	140	34,8	50,5	206	35,5	60	
N°4	2"	130	187	134,1	191	50,8	1,65	159	47,5	64	237	48,5	70	

SIZE	DN	A	B	C	WELD			CLAMP DIN			MALE DIN		
					D	E	F	H	J	K	H	J	K
N°1	6	38	63	59,6	86	1	86	25,4	8	6,2	---	---	---
	8								10				
	10								12				
N°2	15	68	115	88,9	122	1,6	158	34	19	16	156	16	34
	20								23				
	25								29				
N°3	32	95	120	88,9	160	1,5	140	50,5	35	32	204	32	58
	40								41				
N°4	50	130	187	134,1	191	53	1,5	159	50	64	237	50	78

### Stainless steel pneumatic actuator



SIZE	DN	A	B	C	G	WELD			CLAMP OD			MALE SMS			
						D	E	F	H	J	K	H	J	K	
N°1	1/4"	38	111,3	57,2	180,5	86	1,65	86	25,4	6,4	3,1	---	---	---	
	3/8"									9,5					
	1/2"									12,7					
	5/8"									15,9					
N°2	3/4"	68	143,1	72,4	201,7	122	1,65	114	25,4	19	15,8	25,4	---	---	---
	1"									25,4					
N°3	1 1/2"	95	211	108,2	269,5	160	38,1	1,65	140	34,8	50,5	206	35,5	60	
N°4	2"	130	286,7	135	326,7	191	50,8	1,65	159	47,5	64	237	48,5	70	

SIZE	DN	A	B	C	G	WELD			CLAMP DIN			MALE DIN		
						D	E	F	H	J	K	H	J	K
N°1	6	38	111,3	57,2	180,5	86	1	86	25,4	8	6,2	---	---	---
	8									10				
	10									12				
N°2	15	68	143,1	72,4	201,7	122	1,6	158	34	19	16	156	16	34
	20									23				
	25									29				
N°3	32	95	211	108,2	269,5	160	1,5	140	50,5	35	32	204	32	58
	40									41				
N°4	50	130	286,7	135	326,7	191	53	1,5	159	50	64	237	50	78



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