

## Pneumatic operated 2/2-way Diaphragm Valve



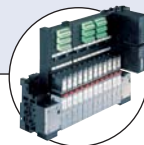
- Light tube valve body
- Flow optimised body in stainless steel
- Zero dead volume
- Easy to weld

Type 2031 can be combined with...



**Type 8697**

Electrical position feedback



**Type 8640/8644**

Valve block



**Type 6012/6014 P**

Pilot valve



**Type 8311**

Pressure Sensor/  
Switch

The externally piloted diaphragm valve consists of a pneumatically operated piston actuator, a diaphragm and a 2-way tube valve body.

Bürkert's patented hydroforming technology allows the manufacturing of a flow optimized stainless steel valve body with high surface quality. A laser-welded mounting interface ensures robustness and hygienic design.

The reliable actuator is made of PPS, a very resistant polymer. The different Bürkert diaphragms are optimized for a high lifetime.

The diaphragm valve with tube body is perfect for hygienic application in the food and beverage, pharma, and cosmetic industries. It is designed with zero dead leg and a high cleanability certified by EHEDG.



Technical data	
<b>Port connection size</b>	DN08-50 (1/4" - 2")
<b>Diaphragm size</b>	8 - 50
<b>Port connections</b> Weld ends	ASME BPE/DIN 11866 C DIN EN ISO 1127/ISO 4200/DIN11866 B
<b>Diaphragm materials</b>	EPDM (AB), PTFE/EPDM (EA) EPDM (AD), advanced PTFE/EPDM (EU), GYLON®/EPDM laminated (ER) and FKM (FF) on request
<b>Materials</b> Body Actuator Pilot air ports	Stainless steel 316L / 1.4435 / BN2 PPS (PA on request) Stainless steel 1.4435
<b>Fluid</b>	Neutral gases and liquids, high purity, sterile, aggressive or abrasive fluids
<b>Viscosity</b>	up to viscous
<b>Surface finishes (inner surface)</b> Electro polished	Ra ≤ 0.38 µm (ASME BPE SF4)
<b>Media temperature</b> EPDM (AB), PTFE/EPDM (EA) EPDM (AD), advanced PTFE/EPDM (EU) GYLON®/EPDM laminated (ER) FKM (FF)	-10 to +130 °C (steam sterilisation +140 °C for 60 min) -5 to +143 °C (steam sterilisation +150 °C for 60 min) -5 to +130 °C (steam sterilisation +140°C for 60 min) 0 to +130 °C (not recommended for steam)
<b>Ambient temperature</b> PPS actuator  PA actuator (on request)	+5 to +140 °C for actuator size <100 mm +5 to +90 °C for actuator size ≥100 mm (briefly up to +140 °C) -10 to +60 °C
<b>Control fluid</b>	Neutral gases; air
<b>Installation</b>	as required, preferably with actuator in upright position

Technische Daten, Fortsetzung

Port Connection DN		Diaphragm size	Actuator size	Pilot pressure min	Max. operating pressure [bar]		Kv-Value [m³/h]		
[mm]	[inch]				[mm]	[bar]	EPDM	PTFE, advanced PTFE, GYLON®	DIN EN ISO 1127 ISO 4200 DIN 11866 RB
8	1/4"	8	40	5.0...7	10	10	2.1	-	
15	1/2"	8	40	5.0...7	10	10	-	2	
			50	5.0...7	8	-	6.7	-	
			63	5.0...7	-	10	-	-	
20	3/4"	15	50	5.0...7	8	-	-	6.5	
			63	5.0...7	-	10	-	-	
		20	63	5.5...7	9	-	13	-	
			80	5.0...7	-	10	-	-	
25	1"	20	63	5.5...7	9	-	-	12.5	
			80	5.0...7	-	10	-	-	
		25	80	5.5...7	10	7.5	17.5	-	
32	1 1/4"	32	100	5.5...7	10	8	36	-	
40	1 1/2"	32	100	5.5...7	10	8	-	30	
			40	100	5.5...7	6.5	-	47	-
			125	5.5...7	-	10	-	-	
50	2"	40	100	5.5...7	6.5	-	-	40	
			125	5.5...7	-	10	-	-	
		50	125	5.5...7	8	7	70	-	

**Flow rate:** Kv value water [m³/h]: Measured at +20°C, 1 bar pressure at valve inlet and free outlet.

**Pressure valves [bar]:** Overpressure to the atmospheric pressure

Installation for self-draining operation

$\alpha = 15^\circ$  up to  $35^\circ$  plus  $3^\circ$  to  $5^\circ$  inclination to the pipe axis.  
 Drain marks permanently marked on both sides of the valve body show the correct mounting position to optimise drainability.

Body label

Material: 1.4435 316L VPS  
 Nominal pressure: PN16 / CWP150  
 Heat number: XXXXXXXXXX  
 Port connection & Tube dimensions  
 Serial number (optional)  
 Code surface finish / customized text (optional)  
 Company logo  
 Heat number

## Approvals

### Suitability for foodstuffs / sterile applications



- The composition of the EPDM (AB), EPDM (AD), PTFE/EPDM (EA), advanced PTFE (EU) and GYLON®/EPDM laminated (ER) diaphragms corresponds to the Code of Federal Regulations, published by the FDA (Food and Drug Administration, USA).

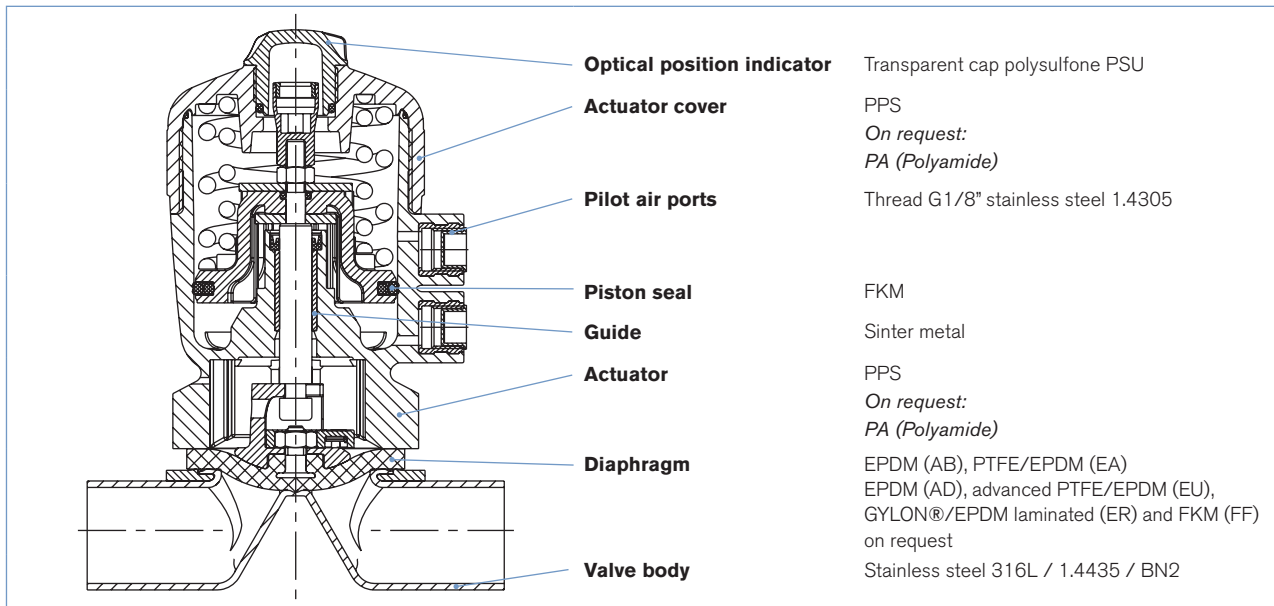


- The composition of the EPDM (AB), EPDM (AD), PTFE/EPDM (EA), advanced PTFE (EU) and GYLON®/EPDM laminated (ER) diaphragms is suitable for the application with food and beverage (acc. to EC-Regulation 1935/2004/EC)



- The composition of the EPDM (AB), EPDM (AD), PTFE/EPDM (EA), advanced PTFE (EU) and GYLON®/EPDM laminated (ER) diaphragms are approved acc. USP Class VI
- Approval according to TA-air (Port size DN4-50)
- The diaphragm valve with tube valve body and EPDM or PTFE has been evaluated for compliance with the *Hygienic Equipment Design Criteria* of the EHEDG

## Materials



## Ordering information for valve system On/Off Classic Type 8801-DB

An **diaphragm valve Type 2031** can be combined with the **feedback Type 8697** to form a **valve system On/Off CLASSIC**.

The valve system On/Off CLASSIC is composed of:

- a feedback **Type 8697** (see separate datasheet)
- an diaphragm valve **Type 2031** (see ordering chart p. 6)

For the configuration of further valve systems please use the "Request for quotation" on p. 8-9. [go to page](#)

You order two components and receive a complete assembled and certified valve.

### Diaphragm valve Type 2031 Tube Valve Body



### Feedback Type 8697



### Electrical position feedback



### Type 8697

Actuator size 40 to 125

The pneumatic control unit Type 8697 is designed for integrated mounting on CLASSIC series 20XX process valves suiting the requirements of hygienic process environment. Mechanical or inductive limit switches register the position of the valve.

### Features

- Compact design
- LED position indicator
- Mechanical or inductive limit switches for end position registering
- Easy to clean chemically resistant housing featuring IP65 / IP67, 4X Rating
- Optional intrinsically safe version acc. to ATEX

### Benefits

- Easy and quick installation
- High level of signal reliability thanks to self adjusting limit switches
- Signal safety through the automatic adjustment of the limit switches
- Minimised space requirement in the plant piping for more flexibility in plant design

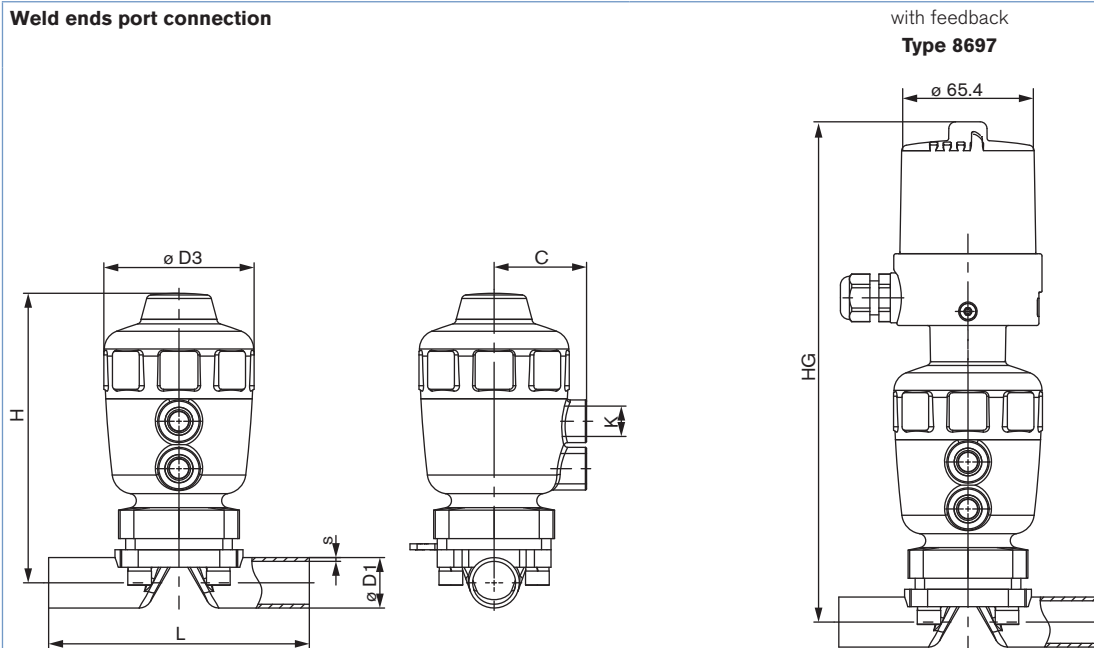
### Valve System On/Off CLASSIC



**Type 8801-DB-U**  
**2031 + 8697**

Dimensions [mm] - Diaphragm valve type 2031 and valve system On/Off Classic

Weld ends port connection



ASME BPE/DIN 11866 C

Port Connection DN		Diaphragm size	Actuator size Ø	L	ØD1	s	ØD3	C	K	H	HG Feedback
[mm]	[inch]										
15	1/2"	8	40	90	12.7	1.65	53	34	G1/8	94	176
20	3/4"		50	117	19.05	1.65	64	39	G1/8	121	216
25	1"	20	63	117	19.05	1.65	80	52	G1/4	138	233
			63	127	25.4	1.65	80	52	G1/4	146	241
40	1 1/2"	32	80	127	25.4	1.65	101	60	G1/4	167	262
			100	159	38.1	1.65	127	73	G1/4	225	320
50	2"	40	100	190	50.8	1.65	127	73	G1/4	235	330
			125	190	50.8	1.65	153	86	G1/4	273	368

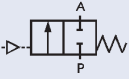
DIN EN ISO 1127/ ISO 4200/ DIN11866 B

Port Connection DN		Diaphragm size	Actuator size Ø	L	ØD1	s	ØD3	C	K	H	HG Feedback
[mm]	[inch]										
8	1/4"	8	40	90	13.5	1.6	53	34	G1/8	94	176
15	1/2"	15	50	110	21.3	1.6	64	39	G1/8	122	217
			63	110	21.3	1.6	80	52	G1/4	139	234
20	3/4"	20	63	119	26.9	1.6	80	52	G1/4	147	242
			80	119	26.9	1.6	101	60	G1/4	168	263
25	1"	25	80	129	33.7	2.0	101	60	G1/4	176	272
32	1 1/4"	32	100	148	42.4	2.0	127	73	G1/4	227	322
40	1 1/2"	40	100	161	48.3	2.0	127	73	G1/4	234	329
			125	161	48.3	2.0	153	86	G1/4	272	367
50	2"	50	125	192	60.3	2.0	153	86	G1/4	277	373

## Ordering chart diaphragm Valve Type 2031

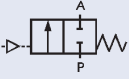
### Welded connection ASME BPE/DIN 11866 C

electropolished Ra <= 0,38 micrometer and Certification of Conformity for Raw Material EN-ISO 10204 3.1 (included in delivery)

Control function	Port Connection DN		Diaphragm size [mm]	Actuator size [mm]	Kv-value [m³/h]	Pilot pressure [bar]	Max. operating pressure [bar]	Item no. EPDM (AB) seal material	Item no. PTFE/EPDM (EA) seal material
	[mm]	[inch]							
A 2/2-way valve, normally closed (NC) 	15	1/2"	8	40	1.7	5.0 ... 7	10	275 388	275 390
	20	3/4"	15	50	6.8	5.0 ... 7	8	275 391	-
				63	6.8	5.0 ... 7	10	-	275 392
	25	1"	20	63	12.5	5.5 ... 7	9	278 879	-
				80	12.5	5.0 ... 7	10	-	278 880
	40	1 1/2"	32	100	30	5.5 ... 7	10	278 881	-
					30	5.5 ... 7	8	-	278 882
	50	2"	40	100	40	5.5 ... 7	6.5	278 883	-
125				40	5.5 ... 7	10	-	278 884	

### Welded connection acc. DIN EN ISO 1127/ISO 4200/DIN11866 B

electropolished Ra <= 0,38 micrometer and Certification of Conformity for Raw Material EN-ISO 10204 3.1 (included in delivery)

Control function	Port Connection DN		Diaphragm size [mm]	Actuator size [mm]	Kv-value [m³/h]	Pilot pressure [bar]	Max. operating pressure [bar]	Item no. EPDM (AB) seal material	Item no. PTFE/EPDM (EA) seal material
	[mm]	[inch]							
A 2/2-way valve, normally closed (NC) 	8	1/4"	8	40 mm	2.1	5.0...7	10	290 447	290 448
	15	1/2"	15	50 mm	6.7	5.0...7	8	290 452	-
				63 mm	6.7	5.0...7	10	-	290 454
	20	3/4"	20	63 mm	13	5.5...7	9	290 455	-
				80 mm	13	5.0...7	10	-	290 457
	25	1"	25	80 mm	17.5	5.5...7	10	290 458	-
					17.5	5.5...7	7.5	-	290 460
	32	1 1/4"	32	100 mm	36	5.5...7	10	290 461	-
					36	5.5...7	8	-	290 462
	40	1 1/2"	40	100 mm	47	5.5...7	6.5	290 463	-
				125 mm	47	5.5...7	10	-	290 465
	50	2"	50	125 mm	70	5.5...7	8	290 466	-
70				5.5...7	7	-	290 467		

#### **i** Further versions on request



#### Control function

B (normally open: NO)



#### Materials

Diaphragms for sterilization with steam EPDM (AD), advanced PTFE/EPDM (EU) and GYLON®/EPDM laminated (ER)



#### Additional

Versions with reduces spring force