Tank bottom diaphragm valve with manually operated actuator

- Valve body and diaphragm are available in various materials and variants
- Wetted surfaces from Ra ≤ 0.38 µm...≤ 1.6 µm (optionally electropolished)
- Available in all common connection sizes and variants

Product variants described in the data sheet may differ from the product presentation and description.

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Can be combined with

Type SV02
Diaphragms

Type 2975
Tank bottom diaphragm valve with manually operated actuator (FullFunction)

Type 2935
Tank bottom diaphragm valve with manually operated actuator (basic)

Type 2103
2/2-way diaphragm valve with pneumatic stainless steel actuator (Type ELEMENT) for decentralised automation

Type 2036
Robolux multiway diaphragm valve, pneumatically operated

Type 8098
FLOWave SAW flowmeter

Type description

The manually operated diaphragm valve Type 3235 consists of a manually operated actuator, a diaphragm and a tank bottom valve body. The manual actuator, optionally with a plastic or stainless steel handwheel, ensures use in hygienic or aggressive ambient conditions. The flow-efficient valve bodies with little dead space enable high flow rates and a wide range of possible uses. The valve body and the diaphragm are available in all common materials and variants. The actuator has a compact, autoclavable design and is compatible with all other Bürkert diaphragm valves. An explosion-proof ATEX/IECEx device variant is available.

The diaphragm bonnet and the handwheel are optionally available in plastic or stainless steel and are equipped with an integrated optical position indicator. The manual actuator can be optionally equipped with a stroke limiter, sensors for position feedback and a locking function.

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Visit product website

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1. General technical data

Product properties	
Dimensions	Further information can be found in chapter "4. Dimensions" on page 6.
Material [1.]	
Block body (VH) [1.]	Bloc material 1.4435 accordding to DIN EN 10088 and 316 l according to ASTM A479 / A479M
Block body (VI) [1.]	Bloc material 1.4435 according to BN2 and 316L according to ASME BPE table DT- 3
Diaphragm	EPDM (AD) [1.], PTFE/EPDM (EA) [1.], Advanced PTFE/EPDM (EU) [1.], laminate of GYLON® and EPDM (ER) [1.]
Actuator (diaphragm bonnet/ handwheel) Diaphragm size 8...50	PPS/PPS (stainless steel/PPS or stainless steel/stainless steel)
Actuator (diaphragm bonnet/ handwheel) Diaphragm size 65...100	Stainless steel/stainless steel
Diaphragm size	8...100
Standard surface quality [2.]	
Block body (VH/VI) [1.]	Internally electrically polished: Ra ≤ 0.38 µm (NO17) [1.] (ASME BPE SF4 / DIN HE4) (externally Ra ≤ 1.6 µm) Internally mechanically polished: Ra ≤ 0.5 µm (NO14) [1.] (ASME BPE SF1) (externally Ra ≤ 1.6 µm)
Medium data	
Process medium	Neutral gases and fluids, highly purified, sterile, aggressive or abrasive mediums (see **resistance chart** ▶)
Medium temperature	
EPDM (AD) [1.]	- 10...+ 143 °C (steam sterilisation + 150 °C for 60 min)
PTFE/EPDM (EA) [1.]	- 10...+ 130 °C (steam sterilisation + 140 °C for 60 min)
Advanced PTFE/EPDM (EU) [1.]	- 5...+ 143 °C (steam sterilisation + 150 °C for 60 min)
Laminate of GYLON® and EPDM (ER) [1.]	- 5...+ 130 °C (steam sterilisation + 140 °C for 60 min)
Process/Port connection & communication	
Nominal diameter (port connection)	DN 06...DN 100 (⅛"...4")
Port connection for stainless steel body [2.]	
Welded connection [2.]	DIN EN ISO 1127 / ISO 4200 / DIN 11866 series B DIN 11850 - 2 / DIN 11866 series A / DIN EN 10357 series A ASME BPE / DIN 11866 series C
Clamp connection [2.]	DIN 32676 series A (DIN pipe) DIN 32676 series B (ISO pipe) ASME BPE
Environment and installation	
Installation position	See **operating manual Type 3235** ▶
Ambient temperature: actuator (diaphragm bonnet/handwheel) [3.]	
PPS/PPS	0...+ 130 °C (short-term up to + 150 °C)
Stainless steel/PPS	0...+ 130 °C (short-term up to + 150 °C)
Stainless steel/stainless steel	- 10...+ 140 °C (short-term up to + 150 °C)

1.) This information is part of the product key (see "6.3. Bürkert Product Enquiry Form" on page 9).
2.) Further variants are available on request.
3.) With plastic housings, a temperature limitation due to housing material is possible.

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2. Approvals and conformities

2.1. General notes

- The approvals and conformities listed below must be stated when making enquiries. This is the only way to ensure that the product complies with all required specifications.
- Not all available versions can be supplied with the below mentioned approvals or conformities.

2.2. Conformity

In accordance with the Declaration of Conformity, the product is compliant with the EU Directives.

2.3. Standards

The applied standards which are used to demonstrate compliance with the EU Directives are listed in the EU-Type Examination Certificate and/or the EU Declaration of Conformity.

2.4. Explosion protection

Approval	Description
	Optional: Explosion protection (valid for the variable code PX51) As a category 2 device suitable for zone 1/21 and zone 2/22. **ATEX:** EPS 18 ATEX 2 008 X II 2G Ex h IIC T4...T2 Gb II 2D Ex h IIIC T135 °C...T300 °C Db **IECEx:** IECEx EPS 18.0007X Ex h IIC T4...T2 Gb Ex h IIIC T135 °C...T300 °C Db

Temperature class	T2	T3	T4
Permissible surface temperature	+ 300 °C	+ 200 °C	+ 135 °C
Ambient temperature	- 40...+ 130 °C	- 40...+ 130 °C	- 40...+ 100 °C
Maximum medium temperature	+ 285 °C	+ 185 °C	+ 125 °C

2.5. Foods and beverages/Hygiene

Conformity	Description
	3-A Sanitary Standards Inc. (valid for the variable code PE05) The products comply with 3-A Sanitary Standards Inc (3-A SSI) as per certificate.
FDA	**FDA – Code of Federal Regulations** The diaphragms made of EPDM (AD), PTFE/EPDM (EA), Advanced PTFE/EPDM (EU) and laminate of GYLON® and EPDM (ER) comply with the Code of Federal Regulations published by the FDA (Food and Drug Administration, USA).
USP	**United States Pharmacopeial Convention (USP)** The diaphragms made of EPDM (AD), PTFE/EPDM (EA), Advanced PTFE/EPDM (EU) and laminate of GYLON® and EPDM (ER) are tested according to USP Class VI.
	EC Regulation 1935/2004 of the European Parliament and of the Council The diaphragms made of EPDM (AD), PTFE/EPDM (EA), Advanced PTFE/EPDM (EU) and laminate of GYLON® and EPDM (ER) are suitable for use with food and beverages (according to EC Regulation 1935/2004/EC).

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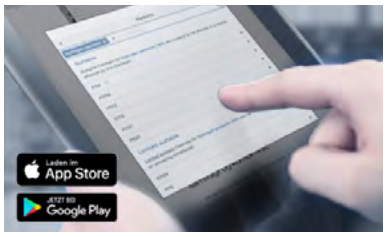
2.6. Others

Conformity	Description
TA Luft	Technical instruction on air quality control (valid for the variable code PM01)

3. Materials

3.1. Bürkert resistApp



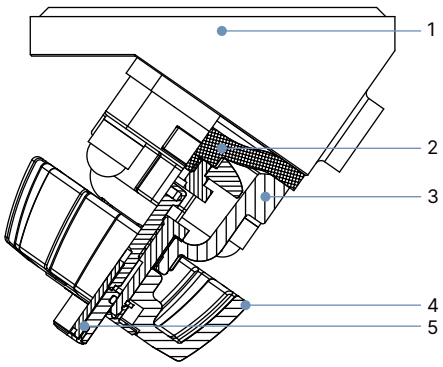
Bürkert resistApp – Chemical resistance chart

You want to ensure the reliability and durability of the materials in your individual application case? Verify your combination of media and materials on our website or in our resistApp.

Start chemical resistance check

3.2. Material specifications

Note:
Your product variant may differ from this illustration depending on the housing and interface options.



No.	Element	Material
1	Valve body	See "1. General technical data" on page 3
2	Diaphragm	EPDM (AD), PTFE/EPDM (EA), Advanced PTFE/EPDM (EU), laminate of GYLON® and EPDM (ER)
3	(diaphragm bonnet/ handwheel)	Diaphragm size 8...50: polyphenylene sulphide PPS (stainless steel on request) Diaphragm size 65...100: stainless steel
4	(diaphragm bonnet/ handwheel)	Diaphragm size 8...50: polyphenylene sulphide PPS (stainless steel on request) Diaphragm size 65...100: stainless steel
5	Optical position indicator	Diaphragm size 15...50: polyoxymethylene Diaphragm size 65...100: stainless steel

3.3. Example of available membrane materials

The diaphragms have been developed to meet the unique challenges of hygienic and sterile requirements. Bürkert offers diaphragms with precise material composition and high accuracy. Bürkert diaphragms are available in a wide range of materials which have been tested and proven in applications in the food and beverage, biotechnology, pharmaceutical and cosmetics industries. The diaphragms are tested during development and production to ensure reliability under difficult process conditions.

- EPDM (AD)
- PTFE/EPDM (EA)
- Advanced PTFE/EPDM (EU)
- Laminate of GYLON® and EPDM (ER)

For further information please refer to our flyer "Diaphragm competence for hygienic applications" on our **website** ▶.

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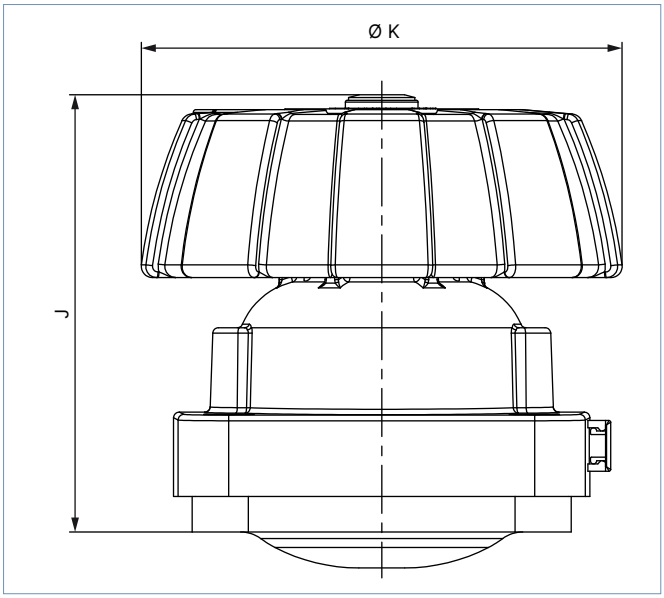
4. Dimensions

4.1. Actuator

Handwheel

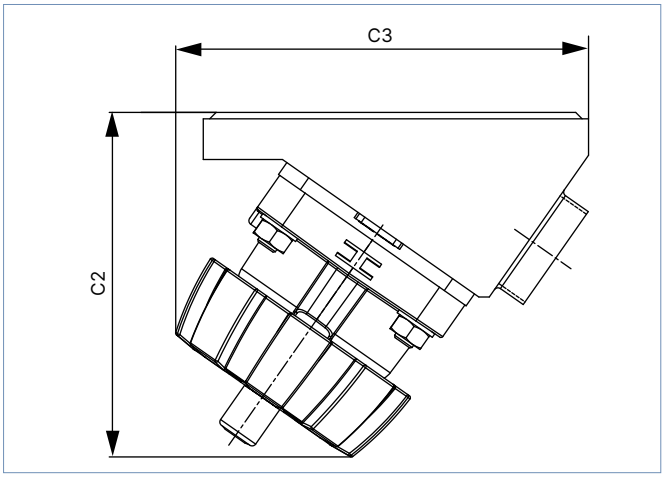
Note:
Dimensions in mm



Diaphragm size	ØK	J
8	35	48
15	85	74
20	86	82
25	86	78
32	114	101
40	114	100
50	114	117
65	272	188
80	272	196
100	272	207

Hand wheel with tank bottom body

Note:
Dimensions in mm



Diaphragm size	C2	C3
8	66	67
15	103	106
20	113	117
25	110	124
40	149	177
50	163	192
65	265	305
80	336	278
100	300	370

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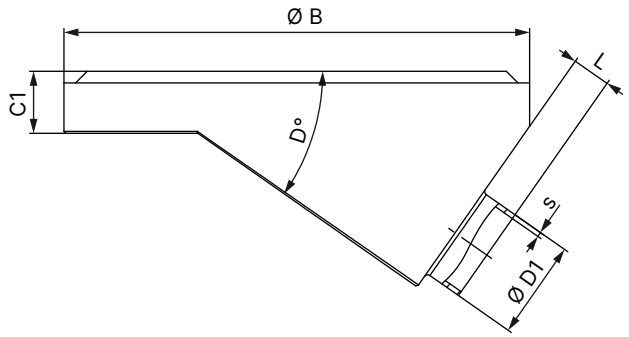
4.2. Tank bottom body with welded connection

Note:
Dimensions in mm



Diaphragm size	Port connection DN	ØB	C1	D	ØD1	s	L	Product key [1.)]
DIN EN ISO 1127 / ISO 4200 / DIN 11866 series B								
8	8	50	8	35°	13.5	1.6	5	SA40
15	15	65	12	35°	21.3	1.6	4	SA42
		85					8	SA42
20	20	85	12	35°	26.9	1.6	5.6	SA43
25	25	120	16	35°	33.7	2	8	SA44
40	32	150	18	35°	42.4 (Port 32)	2	20	SA45
	40				48.3		15	SA46
50	50	180	22	35°	60.3	2	12	SA47
80	65	225	20	40°	76.1	2	16	SA48
	80				88.9	2.3	10	SA49
100	100	298	30	40°	114.3	2.3	16.5	SA39
DIN 11850 - 2 / DIN 11866 series A / DIN EN 10357 series A								
8	10	50	8	35°	13	1.5	5	SD40
15	15	85	12	35°	19	1.5	8	SD42
20	20	85	12	35°	23	1.5	7	SD43
25	25	120	16	35°	29	1.5	8	SD44
40	40	150	18	35°	41	1.5	20	SD46
50	50	180	22	35°	53	1.5	15	SD47
80	80	225	20	40°	85	2	16	SD49
100	100	298	30	40°/35°s	104	2	14	SD50
ASME BPE / DIN 11866 series C								
8	¼"	50	8	35°	6.35	0.89	6	SA90
15	½"	85	12	35°	12.7	1.65	10	SA92
20	¾"	85	12	35°	19.05	1.65	8	SA93
25	1"	120	16	35°	25.4	1.65	12	SODF
40	1½"	150	18	35°	38.1	1.65	15	SODH
50	1½"	180	22	35°	38.1	1.65	25	SODH
	2"				50.8		15	SODI
	2½"				63.5		11	SODJ
80	2½"	225	20	40°	63.5	1.65	25	SODJ
	3"				76.2		16	SODK
100	4"	298	30	40°	101.6	2.11	14	SODL
SMS 3008								
25	25	120	16	35°	25	1.2	8	SA60
40	40	150	18	35°	38	1.2	20	SA62
50	50	180	22	35°	51	1.2	15	SA63

1.) This information is part of the product key (see "6.3. Bürkert Product Enquiry Form" on page 9).

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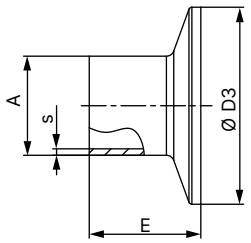
4.3. Tank bottom body with clamp connection

Note:
The clamp dimensions must be added to the welded connection dimensions.



Port connection		A	s	D3	E	Product key [1.)]
[mm]	[inch]					
DIN 32676 series A (DIN pipe)						
10	–	18	1.5	34.0	18.0	TD41
15	–	19	1.5	34.0	18.0	TD42
20	–	23	1.5	34.0	18.0	TD43
25	–	29	1.5	50.5	21.5	TD44
32	–	35	1.5	50.5	21.5	TD45
40	–	41	1.5	50.5	21.5	TD46
50	–	53	1.5	64.0	21.5	TD47
65	–	70	2.0	91.0	28.0	TD48
80	–	85	2.0	106.0	28.0	TD49
100	–	104	2.0	119.0	28.0	TD50
DIN 32676 series B (ISO pipe)						
8	–	13.5	1.6	25.0	28.6	TC40
8	–	13.5	1.6	34.0 [2.)]	28.6	TC51 [2.)]
10	–	17.2	1.6	34.0 [2.)]	28.6	TC41 [2.)]
15	–	21.3	1.6	34.0 [2.)]	28.6	TC42 [2.)]
15	–	21.3	1.6	50.5	28.6	TC52
20	–	26.9	1.6	50.5	28.6	TC43
25	–	33.7	2.0	50.5	28.6	TC44
32	–	42.4	2.0	50.5 [2.)]	28.6	TC45 [2.)]
40	–	48.3	2.0	64.0	28.6	TC46
50	–	60.3	2.0	77.5	28.6	TC47
65	–	76.1	2.0	91.0	28.6	TC48
80	–	88.9	2.3	106.0	28.6	TC49
100	–	114.3	2.3	130.0	28.6	TC50
ASME BPE						
8	¼"	6.35	0.89	25.0	28.6	TG50
10	⅜"	9.53	0.89	25.0	28.6	TG01
15	½"	12.7	1.65	25.0	28.6	TG02
20	¾"	19.05	1.65	25.0	28.6	TG03
25	1"	25.4	1.65	50.5	28.6	TG04
40	1½"	38.1	1.65	50.5	28.6	TG05
50	2"	50.8	1.65	64.0	28.6	TG06
65	2½"	63.5	1.65	77.5	28.6	TG07
80	3"	76.2	1.65	91.0	28.6	TG08
100	4"	101.6	2.11	119.0	28.6	TG09

1.) This information is part of the product key (see "6.3. Bürkert Product Enquiry Form" on page 9).
2.) Deviating from standard because of a different outer clamp diameter

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5. Performance specifications

5.1. Medium pressure

Diaphragm size	Actuator material	Maximum operating pressure for seal material
		EPDM, PTFE/EPDM, advanced PTFE/EPDM, laminated GYLON®/EPDM
DN		[bar]
8...80	Stainless steel/stainless steel	10
100	Stainless steel/stainless steel	6
8...50	Stainless steel/PPS	10
8...40	PPS/PPS	10
50	PPS/PPS	7

6. Ordering information

6.1. Bürkert eShop

Bürkert eShop – Easy ordering and quick delivery

You want to find your desired Bürkert product or spare part quickly and order directly? Our online shop is available for you 24/7. Sign up and enjoy all the benefits.

Order online now

6.2. Bürkert product filter

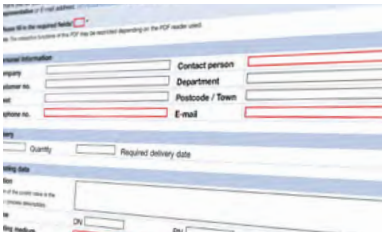
Bürkert product filter – Get quickly to the right product

You want to select products comfortably based on your technical requirements?
Use the Bürkert product filter and find suitable articles for your application quickly and easily.

Try out our product filter

6.3. Bürkert Product Enquiry Form

Note:
Please see our Product Enquiry Form for a full explanation of our specification key.



Bürkert Product Enquiry Form – Your enquiry quickly and compactly

Would you like to make a specific product enquiry based on your technical requirements? Use our Product Enquiry Form for this purpose. There you will find all the relevant information for your Bürkert contact. This will enable us to provide you with the best possible advice.

Fill out the form now

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