









Multifunction block solutions

- Flexible and compact design for individual applications
- Minimum dead space
- Easy integration of automation units with ELEMENT

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

Can be combined with

	Type SV02 Diaphragms	▶
	Type 2036 Robolux multiway diaphragm valve, pneumatically operated	▶
	Type 8690 Pneumatic control unit for decentralised automation of process valves ELEMENT	▶
	Type 8691 Control head for decentralised automation of ELEMENT process valves	▶
	Type 8692 Digital electro-pneumatic positioner for integrated mounting on process control valves	▶
	Type 8098 FLOWave SAW flowmeter	▶

Type description

These multi-port diaphragm valve blocks enable an almost infinite number of valve and process combinations. Multi-port valve systems realize an extremely compact, space-saving design and represent an alternative to the previous welding combinations, for example. Configurations can also be designed that cannot be produced as welded combinations.

The valve body is manufactured from a solid piece and is available in all standard materials and surface finishes. The use of multi-port diaphragm valve blocks reduces the number of weld seams, minimizes the effort and documentation required for validation and ultimately enables compliance with the 2D rule or 3D rule. Designs with the smallest dead spaces and the desired optimized draining are possible. All multi-port valve systems can be combined with the proven Bürkert actuator and automation concepts.

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1. General technical data

Product properties	
Material²⁾	
Block body (VH) ¹⁾	Bloc material 1.4435 according to DIN EN 10088 and 316 I 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⁾ , advanced PTFE/EPDM laminated (EK) ¹⁾
Actuator	
ELEMENT (Type 2103)	Actuator DN 08...65 PPSs DN 65...100 stainless steel 1.4308
	Actuator cover DN 08...65 stainless steel 1.4561 (316Ti) DN 65...100 stainless steel 1.4308
CLASSIC (Type 2031)	PPS, PA, socket in stainless steel 1.4308 / 1.4404
Stainless steel/INOX (Type 2063)	Stainless steel 1.4404, socket in stainless steel 1.4308
Robolux (Type 2036)	1.4308 stainless steel (CF8)
Manual (Type 2933)	Actuator (diaphragm base / hand wheel) Stainless steel / PPS, diaphragm size DN 8...50 PPS / PPS, diaphragm size DN 15...50
Manual (Types 2973)	Actuator (diaphragm base / hand wheel) Stainless steel / PPS, diaphragm size DN 15...50
Manual (Type 3233)	Actuator (diaphragm base / hand wheel) PPS / PPS, stainless steel / PPS or Stainless steel / stainless steel, diaphragm size DN 8...50 Stainless steel / stainless steel, diaphragm size DN 65...100
Diaphragm size	DN 08...DN 100
Standard surface quality	
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)
Automated component	Position feedback/control head/positioner/process controller
Performance data	
Maximum pilot pressure (CF A)	See "5.1. Medium pressure" on page 14
Pilot air port	Push-in connector Ø 6 mm/4 mm or ¼", thread G ⅛"/G ¼"
Medium data	
Process medium	Neutral gases and fluids, highly purified, sterile, aggressive or abrasive medium (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)
Robolux medium temperature	
EPDM (AD) ¹⁾	+5...+130 °C (steam sterilisation + 140 °C for 60 min)
Advanced PTFE/EPDM laminated (EK) ¹⁾	+5...+90 °C (not recommended for steam)
Laminate of GYLON® and EPDM (ER) ¹⁾	-5...+130 °C (steam sterilisation + 140 °C for 60 min)
Control medium	Neutral gases, air
Process/Port connection & communication	
Nominal diameter (port connection) ²⁾	DN 06...DN 100 (⅛"...4")
Port connection²⁾	
For stainless steel body²⁾	
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

Ambient temperature

ELEMENT	-10...+60 °C ^{4.)} , autoclavable
CLASSIC, PPS, actuator size ≤80 mm	+5...+140 °C ^{4.)}
CLASSIC, PPS, actuator size 100 mm, 125 mm	+5...+90 °C (short-term up to +140 °C) ^{4.)}
CLASSIC, PA, actuator size ≤125 mm	-10...+60 °C ^{4.)}
CLASSIC, PA, actuator size ≥175 mm	-10...+50 °C ^{4.)}
Stainless steel/INOX	0...+80 °C, autoclavable
Robolux	0...+60 °C
Manually operated (Type 2933)	Stainless steel / PPS, PPS / PPS -10...+130 °C (briefly up to +150 °C), autoclavable
Manually operated (Type 2973)	Stainless steel / PPS, PPS / PPS -10...+130 °C (briefly up to +150 °C), autoclavable
Manually operated (Type 3233)	PPS / PPS 0...+130 °C (briefly...+150 °C) ^{4.)}
	Stainless steel / PPS 0...+130 °C (briefly...+150 °C) ^{4.)}
	Stainless steel / stainless steel -10...+140 °C (briefly up to +150 °C) ^{4.)}

1.) This information is part of the product key.

2.) Other variants are available on request.

3.) For plastic enclosures, temperature limitation possible due to enclosure material

4.) For standard version, versions with higher temperatures possible

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 PX50) As a category 2 device suitable for zone 1/21 and zone 2/22.

2.5. Foods and beverages/Hygiene

Conformity	Description
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).

2.6. Certificates

Certificat
<ul style="list-style-type: none"> • Material test certificate according to DIN EN 10204 -3.1 • Surface roughness test according to DIN EN 10204 -3.1 • Fracture test according to DIN EN 10204 -3.1 • Test report according to DIN EN 10204 -2.2 • Diaphragm certificate according to DIN EN 10204 -2.1 • Welding procedure certificate

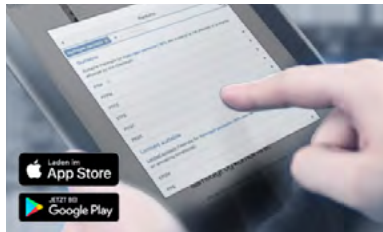
2.7. Others

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

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3. Materials

3.1. Bürkert resistApp



Bürkert resistApp – Chemical resistance chart

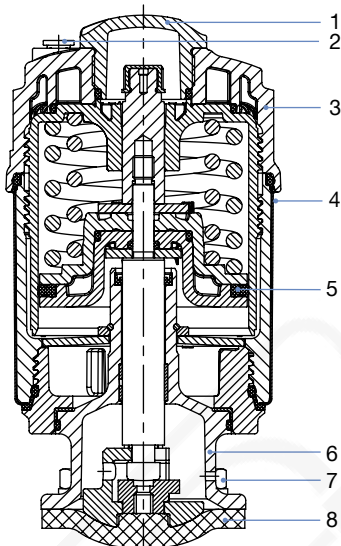
You want to ensure the reliability and durability of the materials in your individual application case? Verify your combination of media and materials on our website or in our resistApp.

[Start chemical resistance check](#)

3.2. Material specifications

Variant with ELEMENT actuator (Type 2103)

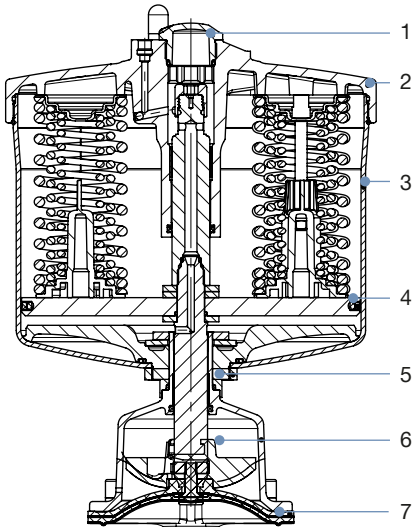
Diaphragm size: DN 08...DN 65



No.	Element	Material
1	Transparent cap	Polysulfone PSU
2	Pilot air ports	Push-in connector PP (standard) Thread 1/8" stainless steel 1.4305 (on request)
3	Actuator cover	PPS
4	Cover	Stainless steel 1.4561 (316Ti)
5	Piston seal	FKM
6	Socket	Stainless steel 1.4308
7	Screws	Stainless steel
8	Diaphragm	EPDM (AD), PTFE/EPDM (EA), Advanced PTFE/EPDM (EU), laminate of GYLON® and EPDM (ER)

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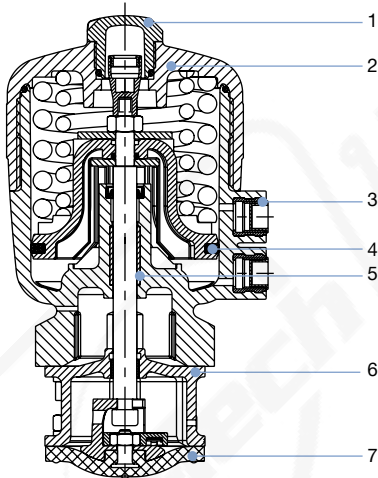
Diaphragm size: DN 65...DN 100



No.	Element	Material
1	Transparent cap	Polysulfon PSU
2	Actuator cover	Stainless steel 1.4308
3	Liner	Stainless steel 1.4404
4	Piston seal	FKM
5	Nut	Stainless steel 1.4301
6	Diaphragm socket	Stainless steel CF3M
7	Diaphragm	EPDM (AD), PTFE/EPDM (EA), Advanced PTFE/EPDM (EU), laminate of GYLON® and EPDM (ER)

Variant with CLASSIC actuator (Type 2031)

Actuator size DN 08...DN 65

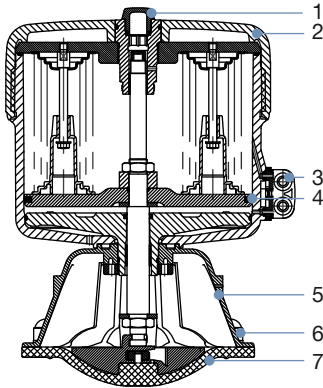


No.	Element	Material
1	Transparent cap	Polysulfone PSU
2	Cover	Polyphenylene sulphide PPS (standard) Polyamide PA (on request)
3	Pilot air ports	Stainless steel 1.4305
4	Piston seal	FKM
5	Socket	Sinter metal
6	Interface	Stainless steel 1.4404
7	Diaphragm	EPDM (AD), PTFE/EPDM (EA), Advanced PTFE/EPDM (EU), laminate of GYLON® and EPDM (ER)

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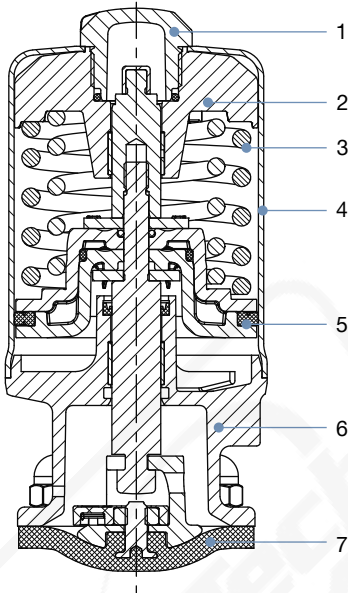
Diaphragm size: DN 65...DN 100



No.	Element	Material
1	Transparent cap	Polysulfone (actuator size 40...125) Polycarbonate (actuator size 175...225)
2	Actuator	Polyphenylene sulphide PPS (actuator size 40...125) Polyamide PA (actuator size 175...225)
3	Pilot air ports	Stainless steel 1.4305
4	Piston seal	FKM (actuator size 40...125) NBR (actuator size 175...225)
5	Socket	Stainless steel 1.4404 (actuator size 40...125) Stainless steel 1.4308 (actuator size 175...225)
6	Screws	Stainless steel
7	Diaphragm	EPDM (AD), PTFE/EPDM (EA), Advanced PTFE/EPDM (EU), laminate of GYLON® and EPDM (ER)

Variant with INOX actuator (Type 2063)

Diaphragm size: DN 08...DN 50

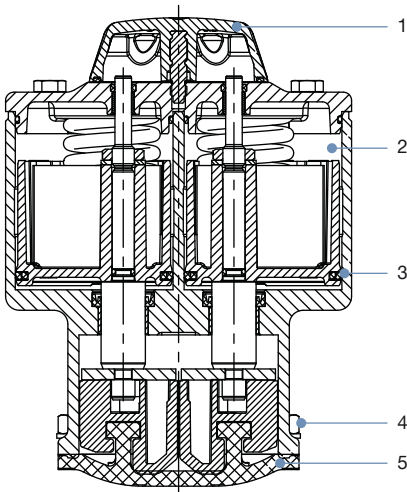


No.	Element	Material
1	Transparent cap	Polysulfone PSU
2	Spring support	Stainless steel 1.4308
3	Spring	EN10270-2 FDSiCr
4	Actuator cover	Stainless steel 1.4404 (316L)
5	Piston seal	FKM
6	Actuator base (diaphragm socket)	Stainless steel 1.4308
7	Diaphragm	EPDM (AD), PTFE/EPDM (EA), Advanced PTFE/EPDM (EU), laminate of GYLON® and EPDM (ER)

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Variant with Robolux actuator (Type 2036)

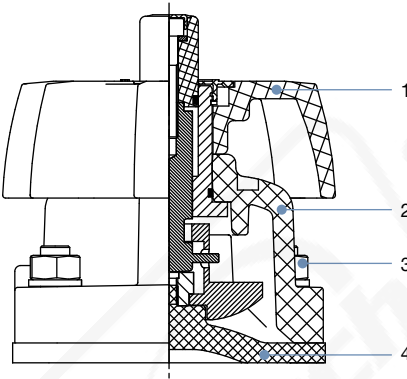
Diaphragm size: DN 08...DN 50



No.	Element	Material
1	Transparent cap	Polyamide 12
2	Actuator	Stainless steel 1.4308/PPS
3	Piston seal	FKM
4	Screws	Stainless steel
5	Diaphragm	EPDM (AD), advanced PTFE/EPDM laminated (EK), laminate of GYLON® and EPDM (ER)

Variant with manual actuator (Type 3233)

Diaphragm size DN 08...DN 100

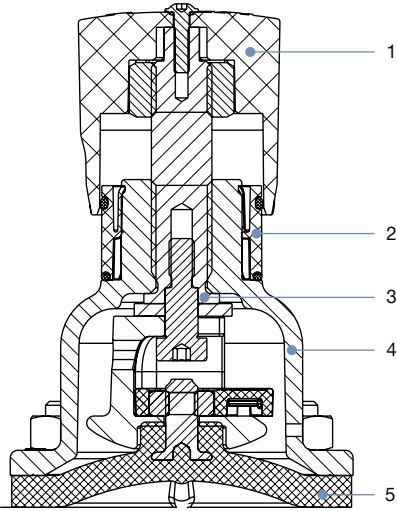


No.	Element	Material
1	Transparent cap	Diaphragm size 15...50: Polyoxymethylene Diaphragm size 65...100: stainless steel
2	Handwheel	Diaphragm size 8...50: Polyphenylene sulphide PPS (stainless steel on request) Diaphragm size 65...100: stainless steel
3	Socket	Diaphragm size 8...50: Polyphenylene sulphide PPS (stainless steel on request) Diaphragm size 65...100: stainless steel
4	Diaphragm	EPDM (AD), PTFE/EPDM (EA), Advanced PTFE/EPDM (EU), laminate of GYLON® and EPDM (ER)

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Version with manually operated actuator (Type 2933 – Basic)

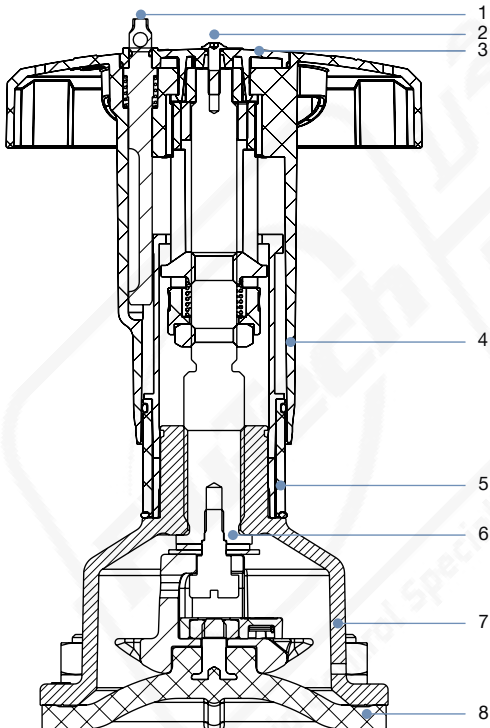
Diaphragm size DN 08...DN 50



No.	Element	Material
1	Handwheel	Polyphenylene sulphide (PPS)
2	Visual position indicator	Polyamide (PA)
3	Valve spindle	Stainless steel 1.4305
4	Diaphragm bonnet	Stainless steel 1.4308, Polyphenylene sulphide (PPS)
5	Diaphragm	EPDM (AD), PTFE/EPDM (EA), Advanced PTFE/EPDM (EU), laminate of GYLON® and EPDM (ER)

Version with manually operated actuator (Type 2973 – Full Function)

Diaphragm size DN 08...DN 50



No.	Element	Material
1	Lock pin	Stainless steel 1.4305
2	Screw	Stainless steel A2
3	Handwheel cover	Polyamide (PA)
4	Handwheel	Polyphenylene sulphide (PPS)
5	Visual position indicator	Polyamide (PA)
6	Valve spindle	Stainless steel 1.4305
7	Diaphragm socket	Stainless steel 1.4308
8	Diaphragm	EPDM (AD), PTFE/EPDM (EA), Advanced PTFE/EPDM (EU), laminate of GYLON® and EPDM (ER)

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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](#) ▶.

4. Device/Process connections

4.1. Configurations

The following examples give an insight into our configuration programme. It is possible to implement customised block solutions. Further configurations can be found in the **block brochure Type 2034** ▶.

GMPA	0113	0116
SAP1	0201	0203
0301	0336	0340

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<p>0423</p>	<p>0416</p>	<p>0602</p>
<p>0229</p>	<p>0206</p>	<p>MW56</p>
<p>K301</p>	<p>K302</p>	<p>K501</p>

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5. Performance specifications

5.1. Medium pressure

Specification for control function A

Note:

- For low operating pressures, optional variants with reduced spring force are recommended.
- Pressure data [bar]: Overpressure to atmospheric pressure. The valve closes dynamically against maximum operating pressure.
- Information for control function B and I is available on request.

Pneumatic actuator

Nominal diameter		Diaphragm size	Actuator size Ø	Pilot pressure	Maximum operating pressure for seal material	
[mm]	[inch]				EPDM	PTFE/EPDM and advanced PTFE/EPDM, laminate of GYLON® and EPDM
[mm]	[inch]	DN	[mm]	[bar]	[bar]	[bar]
ELEMENT actuator						
8	¼"	8	50 (D)	5.0...10	10	10
15	½"	15	50 (D)	5.0...10	7.5	–
			70 (M)	5.0...10	10	10
20	¾"	20	70 (M)	5.0...10	10	10
25	1"	25	70 (M)	5.0...10	6.5	4.5
			90 (N)	5.0...10	10	8
32	1¼"	32	90 (N)	5.0...10	8	6
40	1½"	40	90 (N)	5.5...10	5.5	5 ^{1.)}
			130 (P)	5.0...7	10	10
50	2"	50	130 (P)	5.0...7	8	7
65	2½"	65	130 (P)	5.0...7	5.5	3.5
			225(L)	5.0...7	8	8 ^{5.)}
80	3"	80	225(L)	5.0...7	10	8
100	4"	100	225(L)	5.0...7ss	8	5.5
CLASSIC actuator						
8	¼"	8	40 (C)	5.0...7	10	10
15	½"	15	50 (D)	5.0...7	8.5	–
			63 (E)	5.0...7	10	10
20	¾"	20	63 (E)	5.5...7	10	5
			80 (F)	5.0...7	10	10
25	1"	25	80 (F)	5.5...7	10	7.5
40	1¼"	40	100 (G)	5.5...7	6.5	6 ^{2.)}
			125 (H)	5.5...7	10	10
50	2"	50	125 (H)	5.5...7	8	7
65	2½"	65	175 (K)	5.0...6	8	5
80	3"	80	175 (K)	5.0...6	5	3 ^{4.)}
			225 (L)	5.0...6	10	7 ^{3.)}
100	4"	100	225 (L)	5.0...6	8	4
Stainless steel/INOX actuator						
8	¼"	8	32 (B)	5.5...10.5	10	6
15	½"	15	50 (D)	5.0...10.5	8.5	–
			70 (M)	5.0...10.5	10	10
20	¾"	20	70 (M)	5.0...10.5	10	10
25	1"	25	70 (M)	5.0...10.5	6.5	4.5
			90 (N)	5.0...10.5	10	8
32	1¼"	32	90 (N)	5.0...10.5	8	6
40	1½"	40	90 (N)	5.5...10.5	5.5	5 ^{1.)}
			130 (P)	5.0...7.5	10	10
50	2"	50	130 (P)	5.0...7.5	8	7

1.) The variant with with laminate made of laminate of GYLON® and EPDM (ER) is not available.
 2.) The maximum operating pressure of GYLON® and EPDM (ER) is 4 bar.
 3.) The maximum operating pressure of GYLON® and EPDM (ER) is 8.5 bar.
 4) The tightness value only applies of GYLON® and EPDM (ER diaphragm), otherwise 0 bar for PTFE/EPDM and advanced PTFE/EPDM (EA and EU diaphragms).
 5) The maximum operating pressure for laminate made of GYLON® and EPDM is 6.5 bar.

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Robolux actuator

Actuator size Ø [mm]	Actuator variant	Pilot pressure [bar]	Maximum operating pressure for seal material		
			EPDM [bar]	Advanced PTFE laminated [bar]	GYLON® laminated [bar]
RV50	D11	6...10	7.5	7.5	5.5
	D55 (reduced spring force)	4...10	5.0	3.5	o. r.
RV70	D11, D1x, Dx1	6...10	8.0	8.0	5.5
	D55 (reduced spring force)	4...10	5.5	6.0	4.5
RV110	D11, D1x, Dx1	6...7	7.0	7.5	6.0
	D55 (reduced spring force)	4...7	5.0	5.0	4.0

o. r. = on request

Manual actuator

Diaphragm size DN	Actuator material	Maximum operating pressure for seal material EPDM, PTFE/EPDM, advanced PTFE/EPDM, laminate of GYLON® and EPDM
		Maximum [bar]
8...80	VA/VA	10
100	VA/VA	6
8...50	VA/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

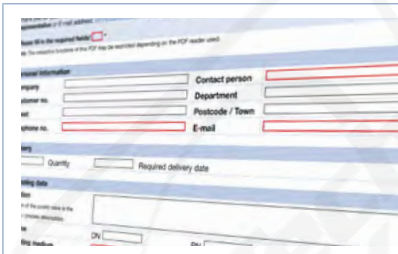
You want to select products comfortably based on your technical requirements? Use the Bürkert product filter and find suitable articles for your application quickly and easily.

[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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