



Pneumatically operated 2 way angle seat control valve ELEMENT

- Excellent combination of good control characteristic and high flow rate
- Long service life
- Control units can be mounted directly without external tubing
- Stainless steel housing with thread, clamp and weld end connection

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

Can be combined with

	Type 8696 ▶ Digital electropneumatic positioner for the integrated mounting on process control valves
	Type 8693 ▶ Digital electropneumatic process controller for the integrated mounting on process control valves
	Type 8692 ▶ Digital electropneumatic Positioner for the integrated mounting on process control valves
	Type 8694 ▶ Digital electropneumatic positioner for the integrated mounting on process control valves
	Type 8792 ▶ Digital electropneumatic Positioner SideControl
	Type 8793 ▶ Digital electropneumatic Process Controller SideControl
	Type 8791 ▶ Digital electropneumatic Positioner SideControl

Type description

In line with Bürkert's philosophy for modular valves and sensors the construction of Type 2300 angle-seat valve fulfils tough criteria for process environments. Unrivalled cycle life and sealing integrity is guaranteed by the proven self adjusting packing gland.

The parabolic trim results in a flow characteristic approximately 35 % larger than conventional control valves. It is available in either stainless steel or with a durable PTFE seal for tight shut-off. The design enables the easy integration of automation modules whether they are digital electropneumatic positioner or process controller.

The fully integrated system has a compact and smooth design, integrated pneumatic lines, IP65/67, NEMA Type 4X protection class and superior chemical resistance. This system has been engineered for reliable accurate control in applications where high flow rate is an advantage.

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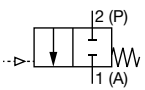
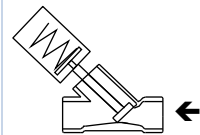
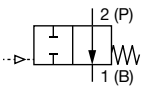
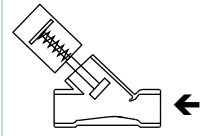
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1. General technical data

Product properties	
Dimensions	Detailed information can be found in chapter “5. Dimensions” on page 6.
Material	Detailed information can be found in chapter “4. Materials” on page 5.
Design	Angle seat control valve
Nominal diameter	DN10...DN65, NPS ¾...NPS 2½
Safety setting in case of power failure	Normally closed (control function A), normally open (control function B)
Flow direction	Flow to open (below seat)
Performance data	
Operating pressure	0 bar(g) ... 25 bar(g), vacuum version up to -0.9 bar (g) (Option), see “6.1. Fluidic data” on page 12
Nominal pressure	PN25 (DIN EN 1333), Class 150 (DIN EN 1759)
Pilot pressure	5.6 bar(g)... 7 bar(g)
Seat leakage	
Leakage class III and IV	Acc. DIN EN 60534 - 4:2006, see “6.1. Fluidic data” on page 12 Stainless steel
Leakage class VI	PTFE and PEEK
K _v value	5 m³/h...90 m³/h, see “6.1. Fluidic data” on page 12
Operating characteristic	Modified equal percentage
Medium data	
Medium	Steam, neutral gases, water, alcohol, oils, fuels, hydraulic fluids, salt solutions, alkalis, organic solvents, oxygen (option)
Medium temperature	-40 °C...230 °C, see “6.2. Operating limits” on page 14
Viscosity	Max. 600 mm²/s
Control medium	Air, neutral gases
Process/Port connection & communication	
Port connections	
Threaded connection	G (EN ISO 228 - 1) Rc (ISO 7/1 /DIN EN 10226 - 2) NPT (ASME B 1.20.1)
Welded connection	DIN EN ISO 1127/ISO 4200/DIN 11866 B DIN 11850 2/DIN 11866 A ASME BPE/DIN 11866 C SMS 3008
Clamp connection	DIN 32676 B (pipe ISO 4200) DIN 32676 A (pipe DIN 11850 2) ASME BPE
Approvals and certificates	
Conformity	Food contact 1935/2004(EG), FDA Drinking water Pressure Equipment Directive Machinery Directive Detailed information can be found in chapter “3. Approvals” on page 4.
Approvals	Explosion proof ATEX / IECex
Material certificate	2.2, 3.1
Environment and installation	
Ambient temperature	-10 °C...80 °C (with Remote Sensor Type 8798 for positioner or process controller, Type 8791/8792/8793) -10 °C...55 °C (with positioner or process controller, Type 8692/8693/8694)
Degree of protection	IP65/67
Installation position	As required, preferably with actuator in upright position

2. Circuit functions

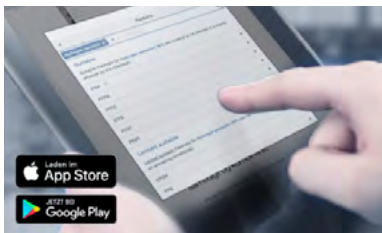
Control function (CF)	Description	
Flow direction below seat for fluids, steam and gases		
	CF: A, pneumatically operated control valve 2/2 way Flow direction below seat Normally closed by spring force	
	CF: B, pneumatically operated control valve 2/2 way Flow direction below seat Normally open by spring force	

3. Approvals

Approvals	Description
	Food produce contact Materials in contact with the medium conform to EC regulation 1935/2004 (option) Materials in contact with the medium conform to FDA (option)
	Drinking water Suitable for use with drinking water for Medium temperature up to 85 °C according to KTW, W270 (option)
	Oxygen Suitable for use with gaseous oxygen for medium temperature up to 60 °C and operating pressure up to 25 bar(g) (option)
	Explosion proof As category 2 device suitable for zone 1/21 and zone 2/22 (option)
	ATEX: II 2G Ex h IIC T4 Gb II 2D Ex h IIIC T135 °C Db IECEX: Ex h IIC T4 Gb Ex h IIIC T135 °C Db
	Safety requirements Evaluation of functional safety according to IEC 61508 (on request)

4. Materials

4.1. Chemical Resistance Chart – Bürkert resistApp

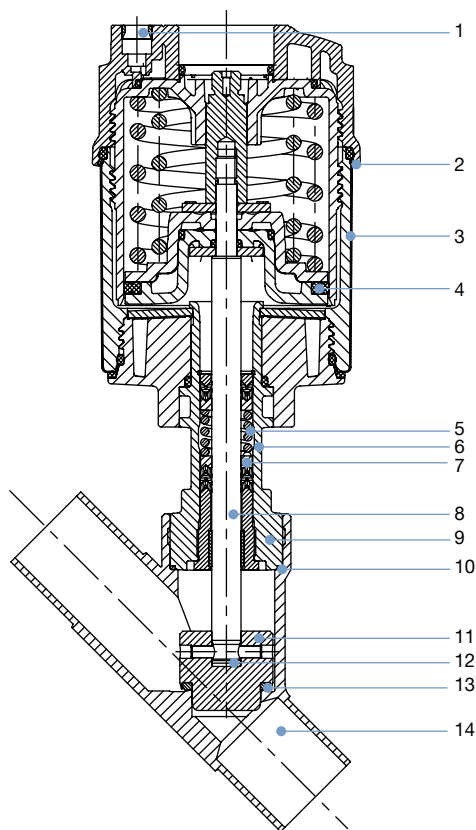


Bürkert resistApp – Chemical Resistance Chart

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](#)

4.2. Material specifications



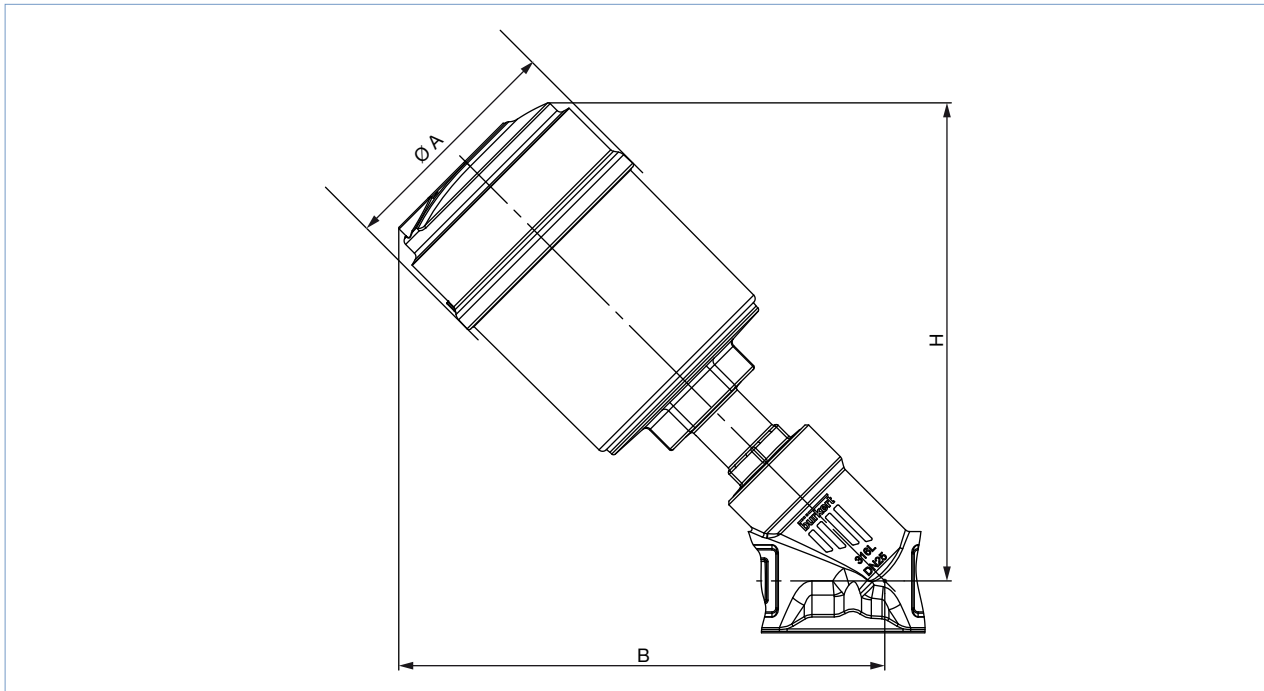
No.	Element	Material
1	Pilot air ports	Push-in connector PP (Standard)
2	Actuator	PPS
3	Cover	Stainless steel 1.4561 (316Ti)
4	Piston seal	FKM
5	Spring	Stainless steel 1.4310
6	Pipe	Stainless steel 1.4401 (316) / 1.4404 (316L)
7	Spindle sealing	PTFE V-Rings (filled), with spring compensation
8	Spindle	Stainless steel 1.4401 (316) / 1.4404 (316L)
9	Spindle guide	Stainless steel 1.4404 (316L)
10	Body seal	Graphite or PTFE
11	Control cone	Stainless steel 1.4571
12	Spring straight pin	Stainless steel 1.4310
13	Seat seal	Stainless steel 1.4571, PTFE or PEEK
14	Valve body	Stainless steel CF3M

5. Dimensions

5.1. Actuator

Note:

Dimensions in mm



Nominal diameter (pipe)		Actuator size	Ø A	B ^{1.)}	H ^{1.)}
DN	NPS				
10	3/8	50	64.5	166	163
		70	91	182	178
15	1/2	50	64.5	166	163
		70	91	182	178
20	3/4	50	64.5	174	171
		70	91	189	186
25	1	50	64.5	175	173
		70	91	191	188
		90	120	228	227
32	1 1/4	90	120	201	197
		130	159	243	242
40	1 1/2	90	120	247	246
		130	159	296	296
50	2	90	120	262	261
		130	159	312	312
65	2 1/2	130	159	342	342

1.) Dimensions for B and H are maximum dimensions and can be up to 6 mm smaller, depending on nominal diameter and standard.

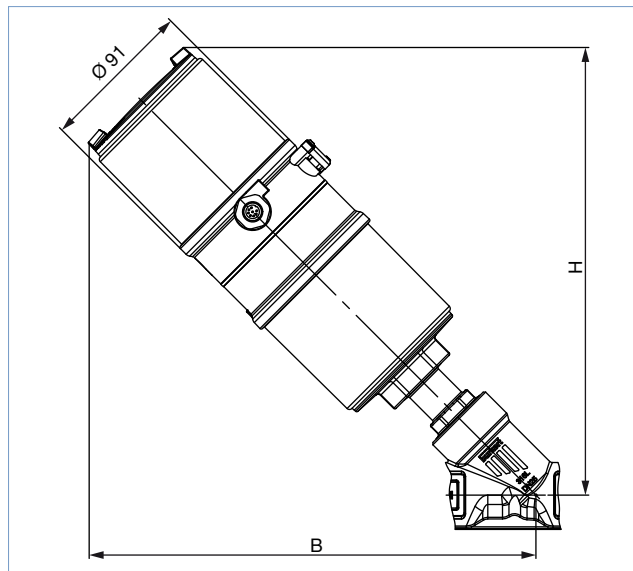
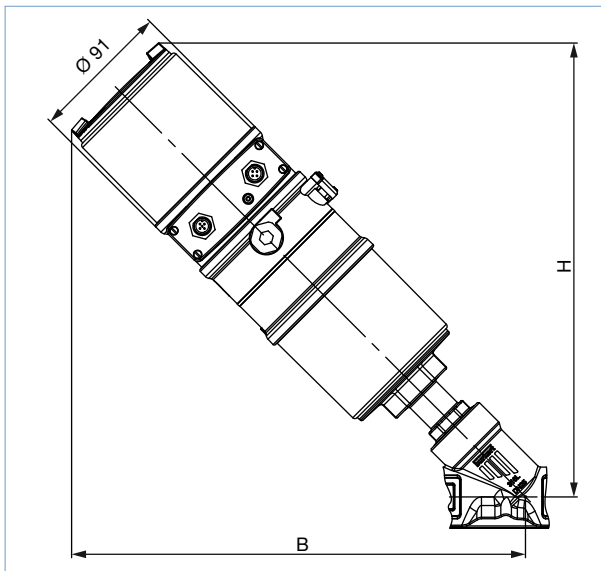
5.2. Valve system Continuous ELEMENT

Note:

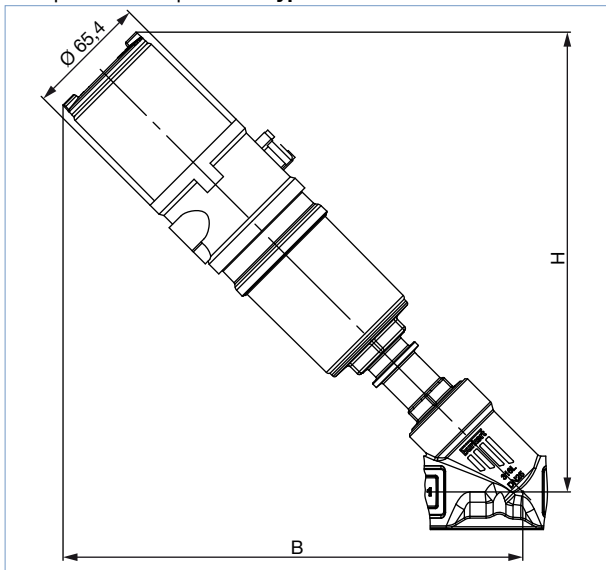
- Dimensions in mm, unless otherwise stated
- Please note actuator size A in table “5.1. Actuator” on page 6

With positioner TopControl **Type 8692** ▶
or with process controller TopControl **Type 8693** ▶

With positioner TopControl Basic **Type 8694** ▶



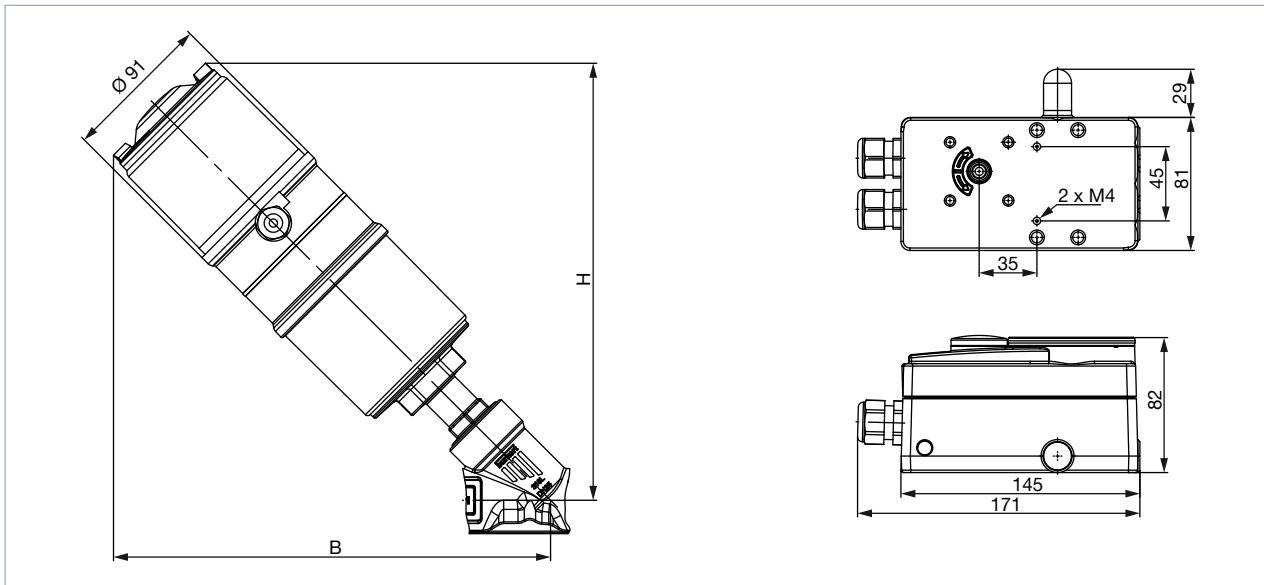
With positioner TopControl **Type 8696** ▶



Nominal diameter (pipe)		Actuator size	B/H ^{1.)} with	
DN	NPS		8692 or 8693	8694 or 8696
10	3/8	50	–	239
		70	285	257
15	1/2	50	–	239
		70	285	257
20	3/4	50	–	247
		70	293	264
25	1	50	–	249
		70	295	266
		90	332	303
32	1 1/4	90	304	276
		130	347	318
40	1 1/2	90	351	322
		130	387	359
50	2	90	366	337
		130	403	375
65	2 1/2	130	433	405

1.) Dimensions for B and H are maximum dimensions and can be up to 6 mm smaller, depending on nominal diameter and standard.

With remote positioner SideControl **Type 8792** ▶
 or with remote process controller SideControl **Type 8793** ▶



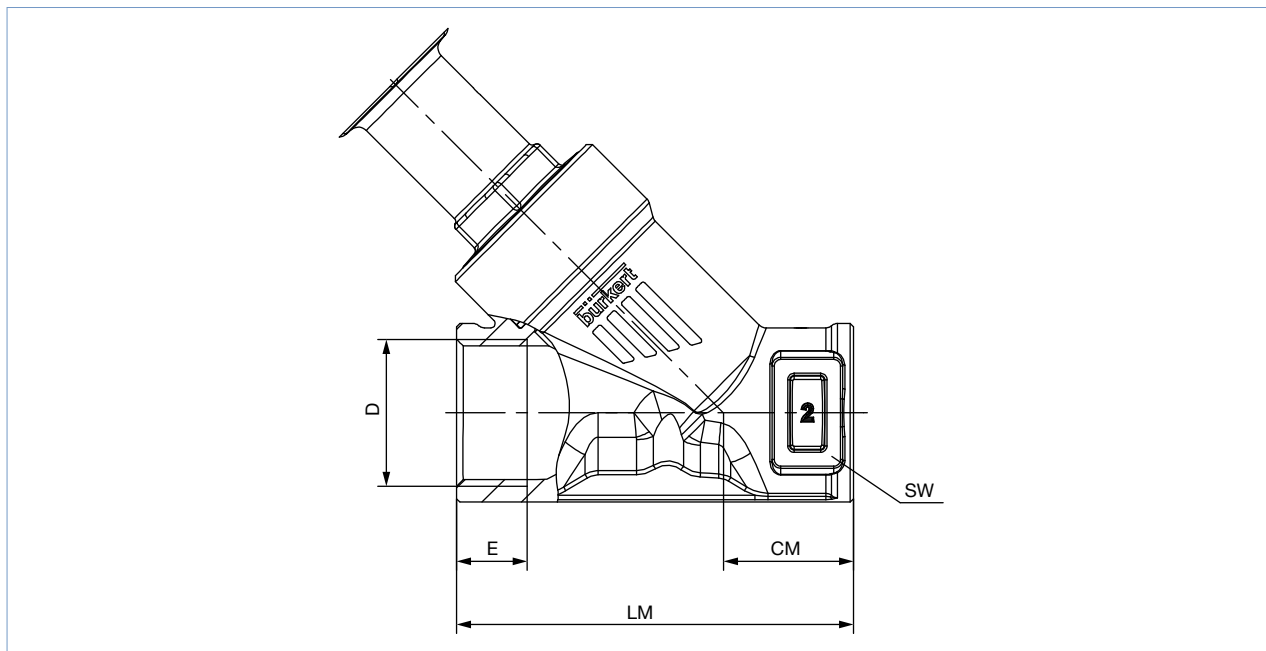
Nominal diameter (pipe)		Actuator size	B / H with 8792 or 8793
DN	NPS		
10	3/8	70	257
15	1/2	70	257
20	3/4	70	264
25	1	70	266
		90	303
32	1 1/4	90	276
		130	318
40	1 1/2	90	322
		130	359
50	2	90	337
		130	375
65	2 1/2	130	405

1.) Dimensions for B and H are maximum dimensions and can be up to 6 mm smaller, depending on nominal diameter and standard.

5.3. Body with threaded connection

Note:

Dimensions in mm, unless otherwise stated



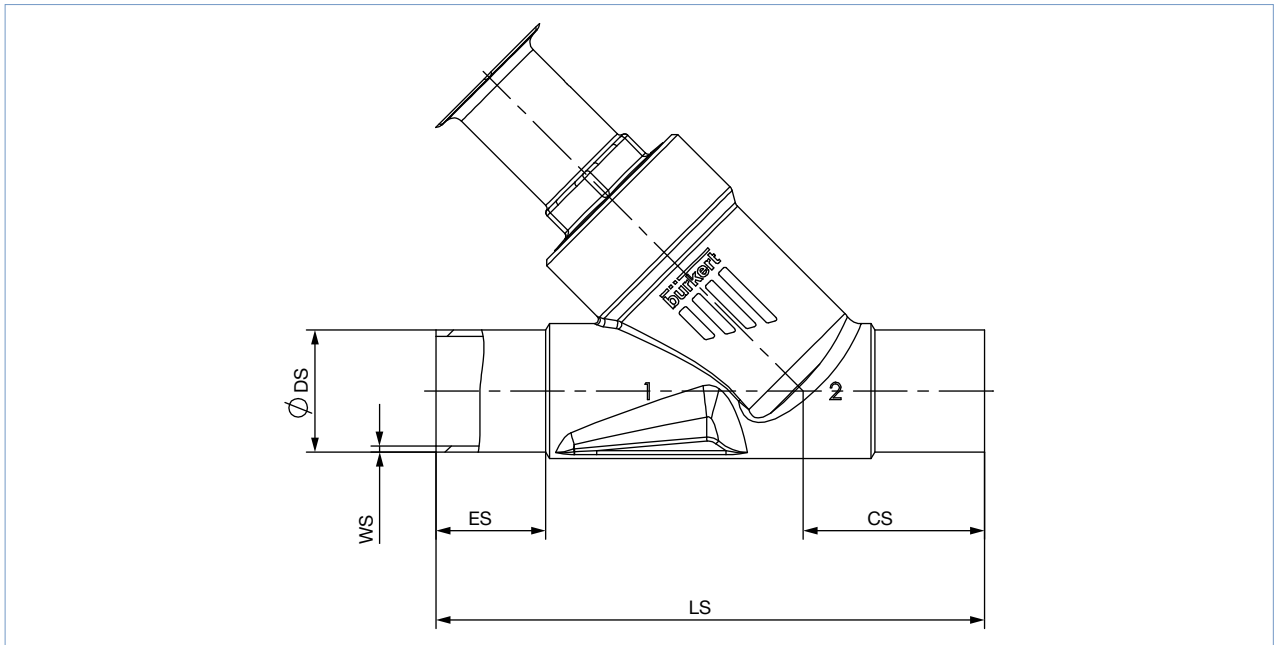
Nominal diameter (pipe)	G, Rc, NPT (EN ISO 228-1, ISO 7/1/DIN EN 10226-2, ASME B 1.20.1)					CM	LM	SW
	D	E						
[DN]	[NPS]	[G]	[NPT]	[Rc]				
15	½	14	13.7	13.2	24	65	27	
20	¾	16	14.0	14.5	27	75	34	
25	1	18	16.8	16.8	29.5	90	41	
32	1¼	16	17.3	19.1	36	110	50	
40	1½	18	17.3	19.1	35	120	55	
50	2	24	17.6	23.4	45	150	70	
65	2½	26	23.7	26.7	57	185	85	

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5.4. Body with welded connection

Note:

Dimensions in mm, unless otherwise stated



Nominal diameter (pipe)	DIN EN ISO 1127 ISO 4200 DIN 11866 B					DIN 11850 2 DIN 11866 A				
	ES	CS	LS	ØDS	WS	ES	CS	LS	ØDS	WS
15	19	34	100	21.3	1.6	19	34	100	19	1.5
20	20	39	115	26.9	1.6	20	39	115	23	1.5
25	26	43	130	33.7	2.0	26	43	130	29	1.5
32	26	45	145	42.4	2.0	26	45	145	35	1.5
40	26	49	160	48.3	2.0	26	49	160	41	1.5
50	26	50	175	60.3	2.0	26	50	175	53	1.5
65	26	50	210	76.1	2.3	26	50	210	70	2

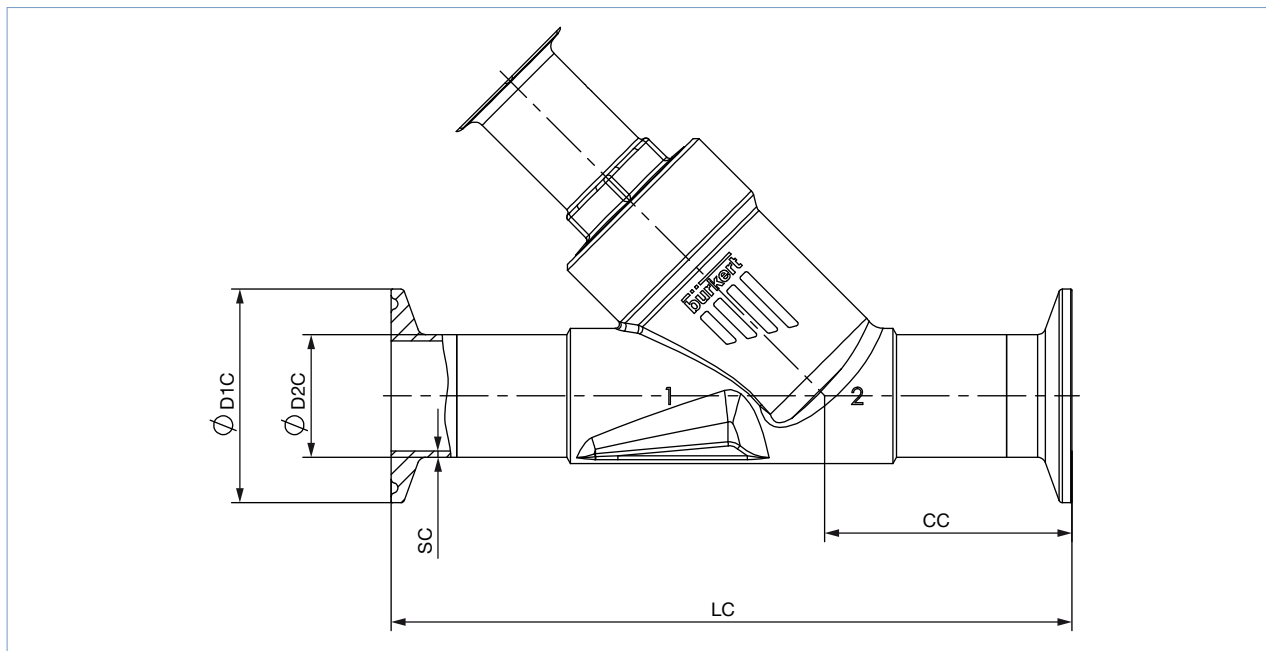
Nominal diameter (pipe)	ASME BPE DIN 11866 C				
[NPS]	ES	CS	LS	ØDS	WS
½	30	46	135	12.7	1.65
¾	30	52	145	19.05	1.65
1	30	51	152	25.4	1.65
1½	30	60	182	38.1	1.65
2	30	64	210	50.8	1.65
2½	26	56	230	63.5	1.65

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5.5. Body with clamp connection

Note:

Dimensions in mm, unless otherwise stated



Nominal diameter (pipe)	Clamp: DIN 32676 B					Clamp: DIN 32676 A				
	Pipe: EN ISO 1127 1 ISO 4200 DIN 11866 B					Pipe: DIN 11850 2 DIN 11866 A				
[DN]	LC	CC	ØDC1	ØDC2	SC	LC	CC	ØDC1	ØDC2	SC
15	156	49.0	50.5	21.3	1.6	130	49.5	19	34.0	1.5
20	150	56.5	50.5	26.9	1.6	150	57.0	23	34.0	1.5
25	160	58.0	50.5	33.7	2.0	160	58.5	29	50.5	1.5
32	200	57.5	50.5	42.4	2.0	180	58.0	35	50.5	1.5
40	200	69.0	64.0	48.3	2.0	200	69.5	41	50.5	1.5
50	230	77.5	77.5	60.3	2.6	230	78.0	53	64.0	1.5

Nominal diameter (pipe)	Clamp: ASME BPE				
	Pipe: ASME BPE DIN 11866 C				
[NPS]	LC	CC	ØDC1	ØDC2	SC
½	130	49.0	25.0	12.7	1.65
¾	150	56.5	25.0	19.05	1.65
1	160	58.0	50.5	25.4	1.65
1½	200	69.0	50.5	38.1	1.65
2	230	77.5	64.0	50.8	1.65

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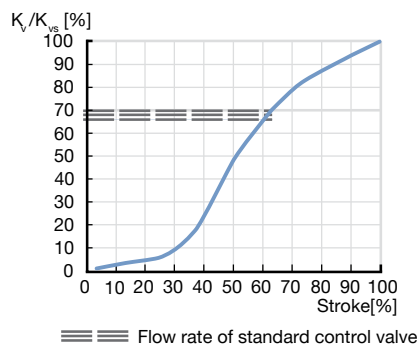
6. Performance specifications

6.1. Fluidic data

Flow characteristics

Note:

- Modified equal percentage flow characteristic
- Higher flow values compared to globe control valves



Overview of fluidic data for flow below seat

Note:

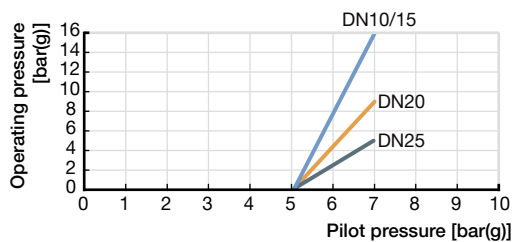
- K_v value [m³/h]: Measured with water acc. to DIN EN 60534-2-4
- See “6.2. Operating limits” on page 14

Nominal diameter (pipe)		Actuator size Ø	Operating pressure max. SF: A (Seat leakage class)			K _v value at stroke [m ³ /h]						K _{vs} value
			Seat seal			5 %	10 %	30 %	50 %	70 %	90 %	
[DN]	[NPS]	[mm]	Stainless steel [bar(g)]	PTFE [bar(g)]	PEEK [bar(g)]							[m ³ /h]
15	½	50 (D)	16 (IV)	16 (VI)	10 (VI)	0.16	0.17	0.40	2.7	4.0	4.8	5.0
		70 (M)	25 (IV)	25 (VI)	25 (VI)							
20	¾	70 (M)	25 (IV)	25 (VI)	10 (VI)	0.26	0.27	1.1	5.9	8.3	9.6	10.0
		90 (N)	25 (IV)	25 (VI)	25 (VI)							
25	1	70 (M)	12 (IV)	12 (VI)	7 (VI)	0.34	0.36	1.5	8.9	13.0	15.4	16.0
		90 (N)	25 (IV)	25 (VI)	20 (VI)							
32	1¼	70 (M)	6 (III)	6 (VI)	–	0.43	0.52	1.4	9.3	16.4	21.5	23.0
		90 (N)	16 (IV)	16 (VI)	10 (VI)							
		130 (P)	25 (IV)	25 (VI)	20 (VI)							
40	1½	90 (N)	12 (III)	12 (VI)	7 (VI)	0.47	0.62	2.6	17.0	25.5	31.5	34.0
		130 (P)	25 (IV)	25 (VI)	20 (VI)							
50	2	90 (N)	7 (III)	7 (VI)	–	0.85	1.1	2.7	20.0	35.5	45.0	49.0
		130 (P)	25 (20*) (IV)	25 (20*) (VI)	20 (VI)							
65	2½	130 (P)	16 (15*) (IV)	16 (15*) (VI)	10 (VI)	1.7	2.0	20.0	48.0	67	83	90

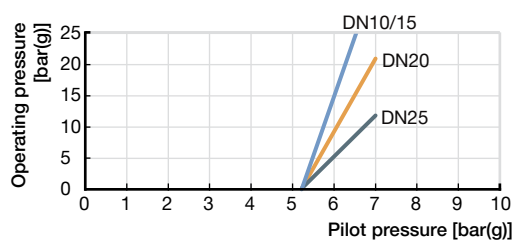
- 1.) According to Pressure Equipment Directive 97/23/EC for compressible fluids of group 1 (dangerous gases and vapours) according to Article 3 number 1.3 letter a first indent
- 2.) Normally open by spring force: see “2. Circuit functions” on page 4

Pilot pressure diagram with flow direction below seat (control function B)

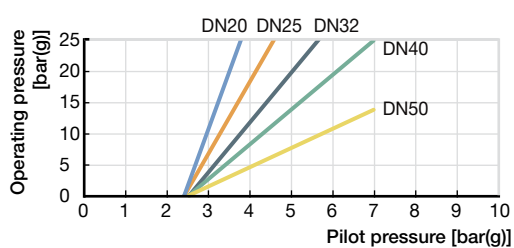
Actuator size Ø: 50 mm



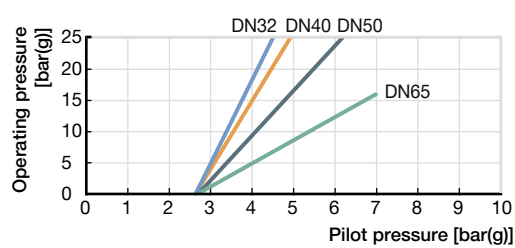
Actuator size Ø: 70 mm



Actuator size Ø: 90 mm



Actuator size Ø: 130 mm



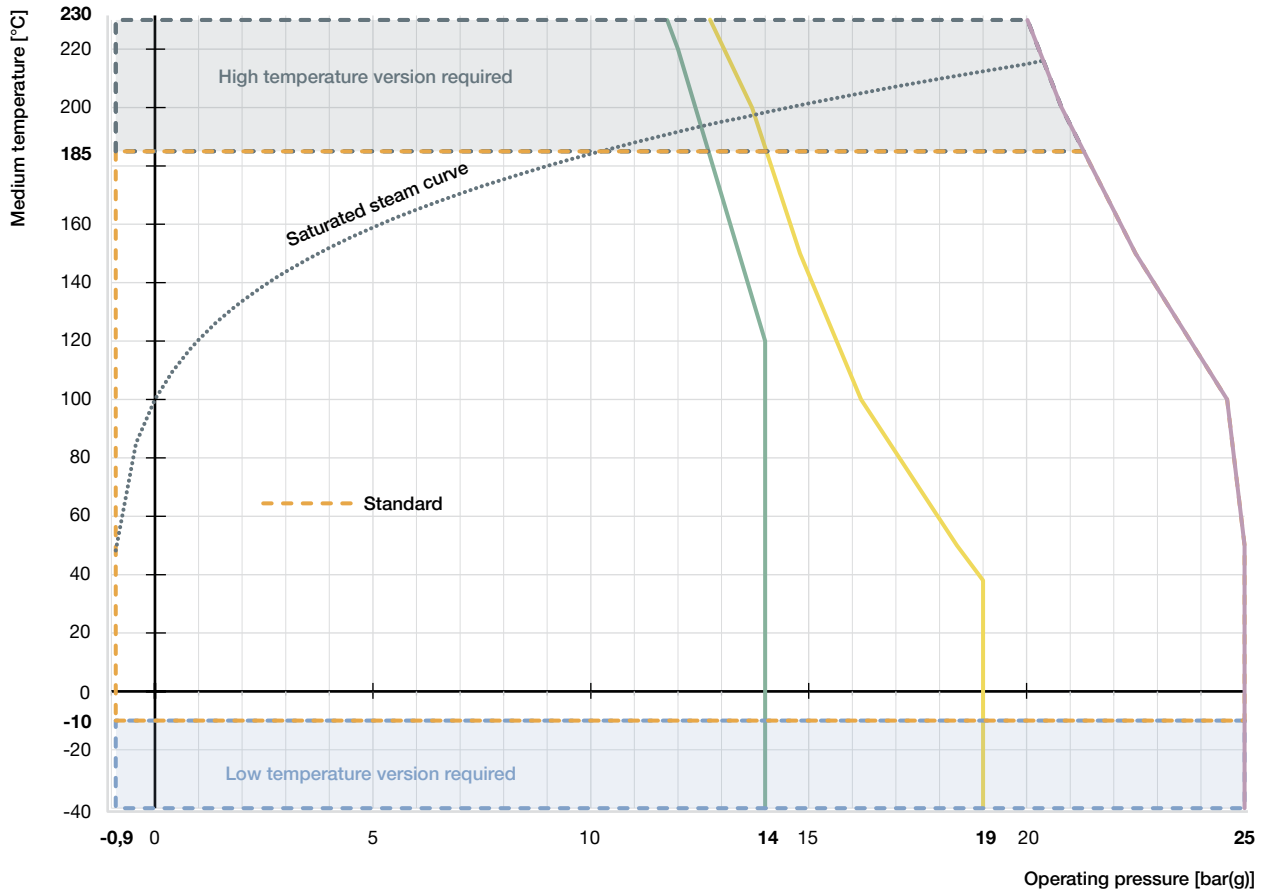
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6.2. Operating limits

Operating limits for medium temperature and operating pressure

The operating range of Bürkert process valves is in addition to the maximum operating pressures limited by the nominal pressure according to the relevant standard.

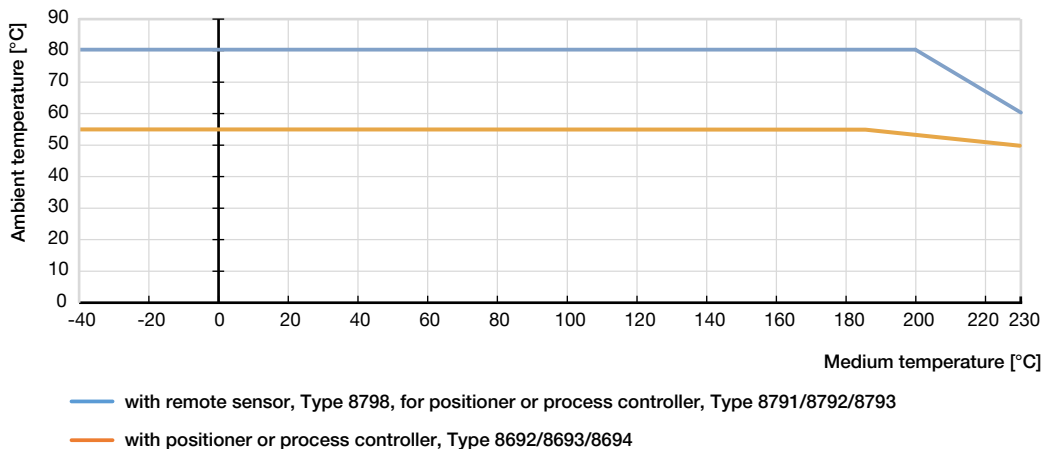
Application limits of operating pressure and medium pressure



- Operating limits for PN25 acc. to DIN EN 12516-1
- Operating limits for flange 10K acc. to JIS B 2220
- Operating limits for Class 150 acc. to ASME B16.34
- Saturated steam curve for water

Operating limits for ambient and medium temperature

ELEMENT Actuator



Operating limits seat seal

Tight sealing required	Leakage class (DIN EN 60534 - 4)	Medium temperature	Seat seal
No An additional shut-off valve is recommended	III / IV (metal seals) Metal-sealed valves have larger leakages (0.1 % or 0.01 % of the nominal flow rate are permissible). Metallic seals are impervious even under demanding process conditions.	-40...230 °C	Stainless steel
Yes An additional shut-off valve is often unnecessary.	VI (soft seals) By using plastics as sealing material, the control valves can close tightly. Their use is not recommended in cases of increased erosion due to demanding process conditions.	-40...130 °C (recommended for ≤ 130 °C)	PTFE
		-10...230 °C (recommended for > 130 °C)	PEEK

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Operating limits for optional versions

High temperature version

By adapting the spindle sealing this version is suitable for applications with steam, neutral gases and other heat transfer mediums up to 230 °C.

Hot water version

For applications with hot water up to 200 °C; a special configuration of the spindle seal increases the lifetime significantly. It is recommended for water temperatures starting at 85 °C.

Drinking water version

Materials in contact with the medium are tested for suitability with drinking water up to 85 °C.

Vacuum version

Without leakage bore, this design is suitable for pressures down to -0.9 bar(g).


Low temperature version

Suitable for minimum medium temperatures down to -40 °C

Version for oxygen


Non-metallic materials in contact with the medium are tested for suitability with oxygen. Suitable for operating pressures up to 25 bar(g) and medium temperatures up to 60 °C.




7. Product accessories

Process controller TopControl	
Type 8693 ▶ Actuator size Ø 70/90/130 mm	Description
	<p>The intelligent process controller Type 8693 is designed for integrated mounting on pneumatic actuators from the process control valve series Type 23xx/2103 and especially for the requirements of hygienic process conditions. Using the TUNE-Functions, the process and positioner can be initialized automatically. Easy operation and selection of additional software functions as well as parameterization are carried out via the large graphic display and the membrane keypad. Device configuration and parameterization can also be conveniently carried out by the Bürkert Communicator software tool via a PC interface.</p> <p>Features</p> <ul style="list-style-type: none"> • Contactless position sensor • Universal control system for single and double acting actuators • Highly dynamic actuating system without internal control air consumption in the balanced state • Integrated diagnostic functions for valve monitoring • Automatic initialization of the positioner and process controller using the TUNE-Function • Safeguarding in the event of failure of the electrical or pneumatic auxiliary power • PROFIBUS DP-V1, DeviceNet, EtherNet/IP, PROFINET, Modbus TCP, Bürkert system bus (bÜS) • Compact and robust hygienic stainless steel design <p>Customer benefits</p> <ul style="list-style-type: none"> • Quick and easy commissioning • Intuitive and simple operation via graphic display with backlight and membrane keyboard • High system availability due to increased drive service life by means of spring chamber ventilation • Guaranteed reliability and predictable maintenance through valve monitoring and diagnostics • Easy maintenance and process monitoring

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Positioner TopControl	
Type 8692 ▶ Actuator size Ø 70/90/130 mm	Description The intelligent electropneumatic positioner Type 8692 is designed for integrated attachment to pneumatic actuators of the process control valve series Type 23xx/2103 and especially for the requirements of hygienic process conditions. The positioner can be initialized automatically using the TUNE-Function. Easy operation and the selection of the extensive additional software functions as well as parameterization are carried out via the large graphic display and the membrane keypad. The device configuration and parameterization can also be conveniently carried out using the Bürkert Communicator software tool via a PC interface.
	Features <ul style="list-style-type: none"> • Contactless position sensor • Universal positioning system for single and double-acting actuators • Highly dynamic positioning system without internal control air consumption • Integrated diagnostic functions for valve monitoring • Automatic initialization of the positioner by means of the TUNE-Function • Safeguard in the event of failure of the electrical or pneumatic auxiliary power • PROFIBUS DP-V1, DeviceNet, EtherNet/IP, PROFINET, Modbus TCP, Bürkert system bus (büS) • Compact and robust hygienic stainless steel design
	Customer benefits <ul style="list-style-type: none"> • Quick and easy commissioning • Intuitive and simple operation via graphic display with backlight and touch keypad • Guaranteed reliability and predictable maintenance through valve monitoring and diagnostics • A high degree of system availability due to increased drive service life by means of spring chamber ventilation
Positioner TopControl BASIC	
Type 8694 ▶ Actuator size Ø 70/90/130 mm	Description The compact positioner Type 8694/8696 is designed for integrated attachment to pneumatic actuators of the Type 23xx/2103 Process Control Valve series and especially for the requirements of hygienic process conditions. Operation and parameterization are performed via push buttons and DIP switches. The device configuration and parameterization can also be conveniently carried out using the Bürkert Communicator software tool via a PC interface.
	Features <ul style="list-style-type: none"> • Contactless position sensor • Universal positioning system for single and double-acting actuators • Ultra dynamic positioning system without internal control air consumption • AS-Interface, IO-Link, Bürkert system bus (büS) (only 8694) • Compact and robust hygienic stainless steel design
	Type 8696 ▶ Actuator size Ø 50 mm
	

Process controller SideControl Remote	
Type 8793 ▶ with Remote Sensor 8798 ▶ Actuator size Ø 70/90/130 mm	Description
	<p>The intelligent digital positioner/process controller Type 8793 is designed for mounting on lift or swivel drives with standardization in accordance with IEC 534 - 6 or VDI/VDE 3845 and is designed for demanding control tasks. The version with remote position sensor Type 8798 is used to control Bürkert process control valves. It is operated via a backlit graphic display. The initialization of process and positioner can be done automatically by means of TUNE-Function. Here the type of controlled system is automatically recognized and the appropriate controller structure with the corresponding optimum parameter set is determined.</p> <p>Features</p> <ul style="list-style-type: none"> • Universal control system for single and double acting actuators • Integrated diagnostic functions for valve monitoring • Automatic initialization of the position and process controller by means of TUNE-Function • Ultra dynamic actuating system without internal control air consumption. • Illuminated graphic display with touch screen • PROFIBUS DP-V1, DeviceNet, EtherNet/IP, PROFINET, Modbus TCP, Bürkert system bus (bÜS) • Compact and robust design • Adaptation acc. to IEC 534 - 6 or VDI / VDE 3845 for lift and swivel drives or as remote version on Bürkert process valves <p>Customer benefits</p> <ul style="list-style-type: none"> • Quick and easy commissioning • Intuitive and simple operation via graphic display with backlight and touch keypad. • Guaranteed reliability and scheduled maintenance thanks to valve monitoring and diagnostics. • Easy maintenance and process monitoring • Long service life

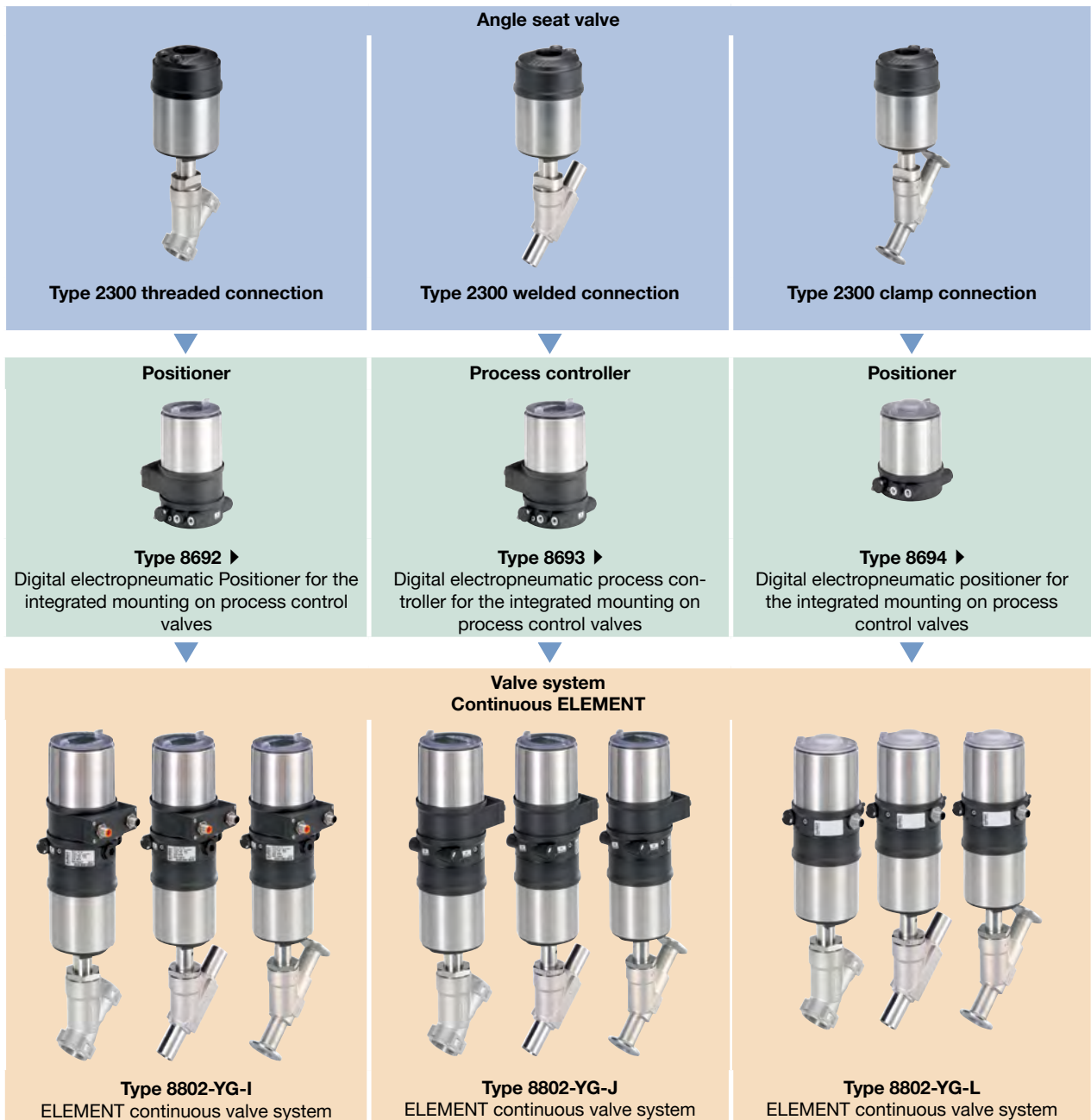
Positioner SideControl Remote	
Positioner Type 8792 ▶ with Remote Sensor Type 8798 ▶ Actuator size Ø 70/90/130 mm	Description The intelligent digital position/process controller Type 8792 is designed for attachment to lift and swivel drives with standardization according to IEC 534-6 or VDI/VDE 3845 for demanding control tasks. The Type 8798 version with remote position sensor is used to control Bürkert process control valves. It is operated via a backlit graphic display. The initialization of process and positioner can be done automatically by means of TUNE-Function.
	Features <ul style="list-style-type: none"> • Illuminated graphic display with touch screen • Universal control system for single and double acting actuators • Ultra dynamic actuating system without internal control air consumption. • Integrated diagnostic functions for valve monitoring • PROFIBUS DP-V1, DeviceNet, EtherNet/IP, PROFINET, Modbus TCP, Bürkert system bus (büS) • Compact and robust design • Adaptation acc. to IEC 534-6 or VDI / VDE 3845 for lift and swivel drives or as remote version on Bürkert process valves Customer benefits <ul style="list-style-type: none"> • Quick and easy commissioning • Intuitive and simple operation via backlit graphic display and touch keypad. • Guaranteed reliability and scheduled maintenance thanks to valve monitoring and diagnostics. • Long service life
Positioner SideControl BASIC Remote	Description The positioner Type 8791 is designed for mounting on lift or swivel drives with standardization in accordance with IEC 534-6 or VDI/VDE 3845 designed for simple control tasks. The variant with the remote sensor Type 8798 is used to control Bürkert process control valves. All operating elements are located inside the housing.
Positioner Type 8791 ▶ with Remote Sensor Type 8798 ▶ Actuator size Ø 70/90/130 mm	Features <ul style="list-style-type: none"> • Simple design • Universal control system for single and double acting actuators • Highly dynamic actuating system without internal control air consumption in the balanced state • Adaptation according to IEC 534-6 or VDI/VDE 3845 for lift and swivel drives or as remote version on Bürkert process valves • AS-Interface, IO-Link, Bürkert system bus (büS) (only for Positioner Type 8791 BASIC Remote) Customer benefits <ul style="list-style-type: none"> • Simple commissioning • Simple device for simple control tasks • Low energy consumption
	
Positioner IP20 Type 8791 ▶ with Remote Sensor Type 8798 ▶ Actuator size Ø 70/90/130 mm	
	

8. Networking and combination with other Bürkert products

The **angle seat valve, Type 2300**, can be combined with **process controller, Type 8693** or the **positioner controller, Type 8692/8694** to form the **Continuous ELEMENT valve system, Type 8801-YA**.

Note:

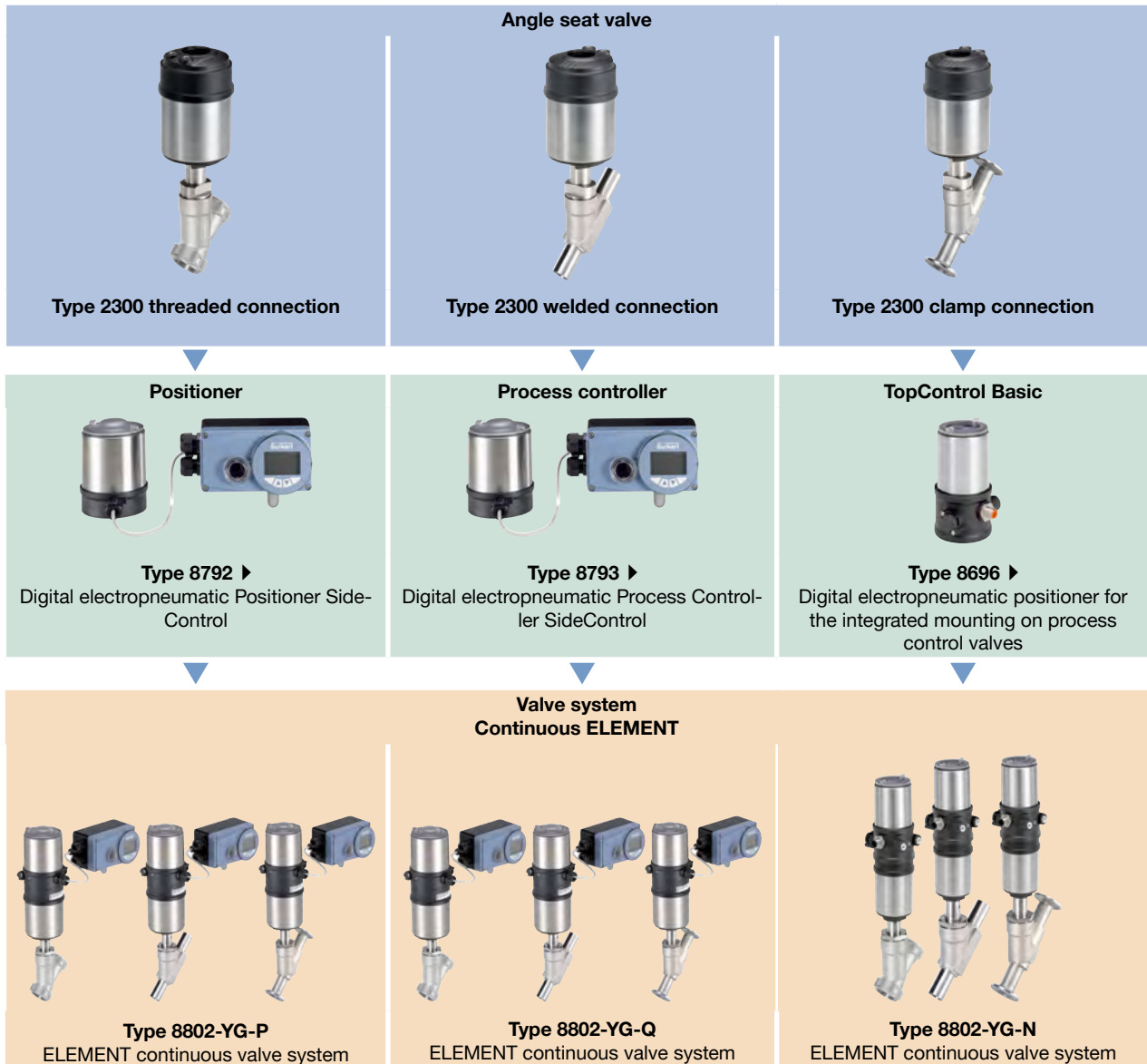
- For the configuration of further valve systems please use the **product enquiry form** at the end of this data sheet.
- You order two components and receive a completely assembled and tested valve.



The **angle seat valve, Type 2300** can be combined with the **process controller, Type 8793**, the **positioner, Type 8792** or the **Top Control Basic, Type 8696** to form the **Continuous ELEMENT Type valve system 8802-YG**.

Note:

- For the configuration of further valve systems please use the **product enquiry form** at the end of this data sheet.
- You order two components and receive a completely assembled and tested valve.



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9. Ordering information

9.1. Bürkert eShop – Easy ordering and quick delivery



Bürkert eShop – Easy ordering and fast 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](#)

9.2. 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.

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9.3. Ordering chart threaded connection

Valves with flow direction below seat

Control function	Nominal diameter	Actuator size Ø	Port connection thread	K _{vs} value water	Operating pressure bis + 185 °C	Article no. Control cone	Leakage class	Article no. Control cone	Leakage class		
	[mm]							[mm]	[inch]	[m ³ /h]	[bar]
G-Thread											
SF: A ^{1.)}	15	50	G ½	5	16	213712	VI	213763	IV		
		70	G ½	5	25	213713	VI	213764	IV		
	20	70	G ¾	10	25	213715	VI	213766	IV		
		70	G 1	16	12	213718	VI	213768	IV		
	32	70	G 1 ¼	23	6	213719	VI	213769	III		
		90	G 1 ¼	23	16	245406	VI	225395	IV		
	40	90	G 1 ½	34	12	213720	VI	213770	III		
		130	G 1 ½	36	25	223307	VI	223310	IV		
	50	90	G 2	49	7	203500	VI	206230	III		
		130	G 2	53	25 (20 ^{2.)})	213697	VI	213708	IV		
SF: B ^{1.)}	15	50	G ½	5	See diagram ^{3.)}	213722	VI	223313	IV		
		70	G ½	5		213721	VI	223314	IV		
	20	G ¾	10	213724		VI	223316	IV			
	25	G 1	16	213726		VI	223318	III			
	32	G 1 ¼	23	213727		VI	223319	III			
	40	G 1 ½	34	213728		VI	223320	IV			
	50	G 2	49	203510		VI	223321	III			
	65	G 2 ½	90	239495		VI	239511	IV			
	NPT-Thread										
	SF: A ^{1.)}	15	50	NPT ½		5	16	213729	VI	213771	IV
70			NPT ½	5	25	213730	VI	213772	IV		
20		70	NPT ¾	10	25	213732	VI	213774	IV		
		70	NPT 1	16	12	213734	VI	213776	IV		
32		70	NPT 1 ¼	23	6	465032	VI	464364	IV		
		90	NPT 1 ¼	23	16	465033	VI	464365	IV		
40		90	NPT 1 ½	34	12	213737	VI	213778	III		
		130	NPT 1 ½	36	25	223308	VI	223311	IV		
50		90	NPT 2	49	7	203537	VI	206239	III		
		130	NPT 2	53	25 (20 ^{2.)})	213699	VI	213709	IV		
SF: B ^{1.)}	15	50	NPT ½	5	See diagram ^{3.)}	213738	VI	223322	IV		
		70	NPT ½	5		213739	VI	223323	IV		
	20	NPT ¾	10	213741		VI	223325	IV			
	25	NPT 1	16	213743		VI	223327	III			
	32	NPT 1 ¼	23	213744		VI	223328	III			
	40	NPT 1 ½	34	213745		VI	223329	IV			
	50	NPT 2	49	203546		VI	223330	III			
	65	NPT 2 ½	90	239486		VI	239512	IV			

1.) For more information, refer to the chapter "2. Circuit functions" on page 4.

2.) According to Pressure Equipment Directive 97/23/EC for compressible fluids of group 1 (dangerous gases and vapours acc. to Article 3 point 1.3 letter a first indent)

3.) See diagram in chapter "Pilot pressure diagram with flow direction below seat (control function B)" on page 13.

Control function	Nominal diameter	Actuator size Ø	Port connection thread	K _{vs} value water	Operating pressure bis + 185 °C	Article no. Control cone	Leakage class	Article no. Control cone	Leakage class
	[mm]	[mm]	[inch]	[m ³ /h]	[bar]	PTFE		Stainless steel	
Rc-Thread									
SF: A ^{1.)}	15	50	Rc ½	5	16	213746	VI	213779	IV
		70	Rc ½	5	25	213747	VI	213780	IV
	20	70	Rc ¾	10	25	213749	VI	213782	IV
	25	70	Rc 1	16	12	213751	VI	213784	IV
		90	Rc 1	16	25	245407	VI	245438	IV
	32	70	Rc 1¼	23	6	213752	VI	213785	III
		90	Rc 1¼	23	16	245408	VI	245439	IV
	40	90	Rc 1½	34	12	213753	VI	213786	III
		130	Rc 1½	36	25	223309	VI	223312	IV
	50	90	Rc 2	49	7	203555	VI	206249	III
		130	Rc 2	53	25 (20 ^{2.)})	213700	VI	213710	IV
	65	130	Rc 2½	90	16 (15 ^{2.)})	239489	VI	239506	IV
	SF: B ^{1.)}	15	50	Rc ½	5	See diagram ^{3.)}	213755	VI	223331
70			Rc ½	5	213756		VI	223332	IV
20		70	Rc ¾	10	213758		VI	223334	IV
25		70	Rc 1	16	213760		VI	223336	III
32		70	Rc 1¼	23	213761		VI	223337	III
40		90	Rc 1½	34	213762		VI	223338	IV
50		90	Rc 2	49	203564		VI	223339	III
65		130	Rc 2½	90	239497		VI	239513	IV

1.) For more information, refer to the chapter "2. Circuit functions" on page 4.

2.) According to Pressure Equipment Directive 97/23/EC for compressible fluids of group 1 (dangerous gases and vapours acc. to Article 3 point 1.3 letter a first indent)

3.) See diagram in chapter "Pilot pressure diagram with flow direction below seat (control function B)" on page 13.

9.4. Ordering chart welded connection

Valves with flow direction below seat

Control function	Nominal diameter	Actuator size Ø	Port connection thread	K _{vs} value water	Operating pressure bis + 185 °C	Article no. Control cone	Leakage class	Article no. Control cone	Leakage class
	[mm]	[mm]	[inch]	[m ³ /h]	[bar]	PTFE		Stainless steel	
Welded connection acc. to EN ISO 1127									
SF: A ^{1.)}	15	50	21.3×1.6	5	16	203565	VI	206250	IV
		70	21.3×1.6	5	25	203566	VI	206252	IV
	20	70	26.9×1.6	10	25	203568	VI	206254	IV
		25	70	33.7×2	16	12	203570	VI	206256
	90		33.7×2	16	25	245395	VI	245403	IV
	32	70	42.4×2	23	6	203571	VI	206257	III
		90	42.4×2	23	16	204766	VI	245404	IV
	40	90	48.3×2	34	12	203572	VI	206258	III
		130	48.3×2	36	25	223299	VI	223306	IV
	50	90	60.3×2.0	49	7	274669	VI	274670	III
		130	60.3×2.0	53	25 (20 ^{2.)})	274672	VI	274673	IV
	65	130	76.1×2.3	90	16 (15 ^{2.)})	239490	VI	217770	IV
SF: B ^{1.)}	15	50	21.3×1.6	5	See diagram ^{3.)}	203574	VI	223340	IV
		70	21.3×1.6	5		203575	VI	223341	IV
	20	70	26.9×1.6	10		203577	VI	223343	IV
	25	70	33.7×2	16		203579	VI	223345	III
	32	70	42.4×2	23		203580	VI	223346	III
	40	90	48.3×2	34		203581	VI	223347	IV
	50	90	60.3×2.0	49		274674	VI	274675	III
	65	130	76.1×2.3	90		239498	VI	239515	IV
Welded connection acc. to DIN 11850 R2									
SF: A ^{1.)}	15	50	19×1.5	5	16	203583	VI	223349	IV
		70	19×1.5	5	25	203584	VI	223350	IV
	20	70	23×1.5	10	25	203586	VI	223352	IV
		25	70	29×1.5	16	12	203588	VI	223354
	90		29×1.5	16	25	245396	VI	245409	IV
	32	70	35×1.5	23	6	203589	VI	223355	III
		90	35×1.5	23	16	204767	VI	245410	IV
	40	90	41×1.5	34	12	203590	VI	223356	III
		130	41×1.5	36	25	223300	VI	223357	IV
	50	90	53×1.5	49	7	203591	VI	223358	III
		130	53×1.5	53	25 (20 ^{2.)})	213702	VI	223359	IV
	65	130	70×2	90	16 (15 ^{2.)})	239491	VI	239507	IV
SF: B ^{1.)}	15	50	19×1.5	5	See diagram ^{3.)}	203592	VI	223360	IV
		70	19×1.5	5		203593	VI	223361	IV
	20	70	23×1.5	10		203595	VI	223363	IV
	25	70	29×1.5	16		203597	VI	223365	III
	32	70	35×1.5	23		203598	VI	223366	III
	40	90	41×1.5	34		203599	VI	223367	IV
	50	90	53×1.5	49		203600	VI	223368	III
	65	130	70×2	90		239499	VI	239516	IV

1.) For more information, refer to the chapter "2. Circuit functions" on page 4.

2.) According to Pressure Equipment Directive 97/23/EC for compressible fluids of group 1 (dangerous gases and vapours acc. to Article 3 point 1.3 letter a first indent)

3.) See diagram in chapter "Pilot pressure diagram with flow direction below seat (control function B)" on page 13.

Control function	Nominal diameter	Actuator size Ø	Port connection thread	K _{vs} value water	Operating pressure bis + 185 °C	Article no. Control cone	Leakage class	Article no. Control cone	Leakage class
	[mm]	[mm]	[inch]	[m ³ /h]	[bar]	PTFE		Stainless steel	
Welded connection acc. to ASME BPE									
SF: A ^{1.)}	15	50	12.7 × 1.65	5	16	203601	VI	223369	IV
		70	12.7 × 1.65	5	25	203602	VI	223370	IV
	20	70	19.05 × 1.65	10	25	203604	VI	223372	IV
	25	70	25.4 × 1.65	16	12	203606	VI	223374	III
		90	25.4 × 1.65	16	25	245397	VI	245411	IV
	40	90	38.1 × 1.65	34	12	203607	VI	212906	III
		130	38.1 × 1.65	36	25	223303	VI	223376	IV
	50	90	50.8 × 1.65	49	7	203608	VI	223377	III
130		50.8 × 1.65	53	25 (20 ^{2.)})	213703	VI	223378	IV	
65	130	63.5 × 1.65	90	16 (15 ^{2.)})	239492	VI	239508	IV	
SF: B ^{1.)}	15	50	12.7 × 1.65	5	See diagram ^{3.)}	203609	VI	223379	IV
		70	12.7 × 1.65	5		203610	VI	223380	IV
	20	70	19.05 × 1.65	10		203612	VI	223382	IV
	25	70	25.4 × 1.65	16		203614	VI	223384	III
	40	90	38.1 × 1.65	34		203615	VI	223385	IV
	50	90	50.8 × 1.65	49		203616	VI	223386	III
	65	130	63.5 × 1.65	90		239500	VI	239517	IV
Welded connection acc. to SMS 3008									
SF: A ^{1.)}	15	50	12 × 1.0	5	16	203617	VI	223387	IV
		70	12 × 1.0	5	25	203618	VI	223388	IV
	20	70	18 × 1.0	10	25	203620	VI	223390	IV
	25	70	25 × 1.2	16	12	203622	VI	223392	III
		90	25 × 1.2	16	25	245398	VI	245412	IV
	40	90	38 × 1.2	34	12	203623	VI	223393	III
		130	38 × 1.2	36	25	223302	VI	223394	IV
	50	90	51 × 1.2	49	7	203624	VI	223395	III
130		51 × 1.2	53	25 (20 ^{2.)})	213704	VI	223396	IV	
65	130	63.5 × 1.65	90	16 (15 ^{2.)})	239493	VI	239509	IV	
SF: B ^{1.)}	15	50	12 × 1.0	5	See diagram ^{3.)}	203625	VI	223397	IV
		70	12 × 1.0	5		203626	VI	223398	IV
	20	70	18 × 1.0	10		203628	VI	223400	IV
	25	70	25 × 1.2	16		203630	VI	223402	III
	40	90	38 × 1.2	34		203631	VI	223403	IV
	50	90	51 × 1.2	49		203632	VI	223404	III
	65	130	63.5 × 1.65	90		239501	VI	239518	IV

1.) For more information, refer to the chapter "2. Circuit functions" on page 4.

2.) According to Pressure Equipment Directive 97/23/EC for compressible fluids of group 1 (dangerous gases and vapours acc. to Article 3 point 1.3 letter a first indent)

3.) See diagram in chapter "Pilot pressure diagram with flow direction below seat (control function B)" on page 13.

9.5. Ordering chart clamp connection

Valves with flow direction below seat

Control function	Nominal diameter	Actuator size Ø	Port connection thread	K _{vs} value water	Operating pressure bis + 185 °C	Article no. Control cone	Leakage class	Article no. Control cone	Leakage class	
	[mm]							[mm]	[inch]	[m ³ /h]
Clamp acc. to ISO 2852										
SF: A ^{1.)}	15	50	34.0	5	16	203649	VI	223423	IV	
		70	34.0	5	25	203650	VI	223424	IV	
	20	70	50.5	10	25	203652	VI	223426	IV	
		25	70	50.5	16	12	203654	VI	223428	III
	90		50.5	16	25	245401	VI	245414	IV	
		32	70	50.5	23	6	203655	VI	223429	III
	90		50.5	23	16	204768	VI	245415	IV	
		40	90	64.0	34	12	203656	VI	223430	III
	130		64.0	36	25	223304	VI	223431	IV	
		50	90	77.5	49	7	203657	VI	223433	III
	130		77.5	53	25 (20 ^{2.)}	213706	VI	223434	IV	
		SF: B ^{1.)}	15	50	34.0	5	See diagram ^{2.)}	203658	VI	223435
70	34.0			5	203659	VI		223436	IV	
20	70		50.5	10	203661	VI		223438	IV	
	25		70	50.5	16	203663		VI	223440	III
32			70	50.5	23	203664		VI	223441	III
	40		90	64.0	34	203665		VI	223442	IV
50			90	77.5	49	203666		VI	223443	III
	Clamp acc. to ASME BPE									
SF: A ^{1.)}	15	50	25.0	5	16	203667	VI	223444	IV	
		70	25.0	5	25	203668	VI	223445	IV	
	20	70	25.0	10	25	203670	VI	223447	IV	
		25	70	50.5	16	12	203672	VI	223449	III
	90		50.5	16	25	245402	VI	245416	IV	
		40	90	50.5	34	12	203673	VI	223450	III
	130		50.5	36	25	223305	VI	223451	IV	
		50	90	64.0	49	7	203674	VI	223452	III
	130		64.0	53	25 (20 ^{2.)}	213707	VI	223453	IV	
		SF: B ^{1.)}	15	50	25.0	5	See diagram ^{2.)}	203675	VI	223454
	70			25.0	5	203677		VI	223455	IV
	20		70	25.0	10	203679		VI	223457	IV
25			70	50.5	16	203681		VI	223459	III
	40		90	50.5	34	203682		VI	223460	IV
50			90	64.0	49	203683		VI	223461	III

1.) For more information, refer to the chapter "2. Circuit functions" on page 4.

2.) See diagram in chapter "Pilot pressure diagram with flow direction below seat (control function B)" on page 13.

Further versions on request



Process connection
Clamp acc. to DIN 32676, BS4825



Circuit function/Switching function
B (normally open) and I (double-acting)

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Valve data		
Circuit Function	A: Normally closed	B: Normally open

Approvals / Conformities
For use with food (conform to EG regulation no. 1935/2004)
For use with food (conform to FDA)
Explosion protection in accordance with ATEX II 2GD mech. / IECex
European Gas Appliances Directive (EU) 2016/426, DVGW DIN EN 161 and DIN EN 16678
For potable water according to KTW/W270
Certificate for the fulfilment of the order EN-ISO 10204 2.1 (Article no. 440788)
Test report EN-ISO 10204 2.2 (Article no. 803722)
Conformity certification for raw material EN-ISO 10204 3.1 (included)



Additional Requirements / Comment

DTS 1000475061 EN Version: A Status: RL (released | freigegeben | valide) printed: 12.03.2021

Positioner / process controller TopControl for control valves of the ELEMENT series

For actuator size $\varnothing 70/\varnothing 90/\varnothing 130$ mm					
Process Controller TopControl Type 8693 ▶			Positioner TopControl Type 8692 ▶		
	<ul style="list-style-type: none"> Intelligent digital positioners and process controllers with integrated PID controller for accurate process control Lighted graphic display with membrane keypad Tune function for automatic start-up Field bus communication Diagnostic functions 			<ul style="list-style-type: none"> Digital positioner without sensor input Lighted graphic display with membrane keypad Tune function for automatic start-up Field bus communication Diagnostic functions 	
Pneumatic function			Electrical connection		
Single-acting		Double-acting	Cable gland Without		M12 Multipole connection
Digital Communication			Approvals		
PROFIBUS DP-V1	DeviceNet	EtherNet/IP	ATEX cat. 3GD, IECEx		Without
PROFINET	Bürkert Systembus (bùS) ^{1.)}				
Modbus TCP	Without				
Analogue feedback			Digital outputs and diagnostics		
0/4...20 mA		0/4...20 mA + 2 binary outputs	Yes		No

1.) Based on CANopen



For actuator size $\varnothing 70/\varnothing 90/\varnothing 130$ mm				For actuator size $\varnothing 50$ mm	
Positioner TopControl BASIC Type 8694 ▶				Positioner TopControl BASIC Type 8696 ▶	
	<ul style="list-style-type: none"> Status LED and DIP switches Tune-function for automatic start-up Positioning system for single-acting actuators Field bus communication 				<ul style="list-style-type: none"> Status LED and DIP switches Tune-function for automatic start-up Positioning system for single-acting actuators
Pneumatic function				Electrical connection	
Single-acting				Cable gland ^{1.)} Without	
Digital Communication				Approvals	
AS-Interface ^{1.)}	IO-Link	Bürkert Systembus (bùS) ^{2.)}		ATEX cat. 3GD, IECEx	
Without				Without	
Analogue feedback					
Yes		No			

1.) Only available for Type 8694. Not available for Type 8696.

2.) Based on CANopen



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Positioner / process controller SideControl Remote for control valves of the ELEMENT series

For actuator size $\varnothing 70/\varnothing 90/\varnothing 130$ mm			
Process Controller SideControl Type 8793 with Remote sensor Type 8798		Positioner SideControl Type 8792 with Remote sensor Type 8798	
	<ul style="list-style-type: none"> Intelligent digital positioners and process controllers with integrated PID controller Lighted graphic display with membrane keypad Tune-function for automatic start-up, linearization and optimization of process characteristics Field bus communication Diagnostic functions 		<ul style="list-style-type: none"> Digital positioner without sensor input Lighted graphic display with membrane keypad Tune function for automatic start-up Field bus communication Diagnostic functions
Pneumatic function		Electrical connection	
Single-acting	Single- and double-acting	Cable gland ^{1.)}	M12 Multipole connection
Digital communication		Approvals	
PROFIBUS DP-V1	DeviceNet	EtherNet/IP	ATEX cat. 3GD, IECEx
PROFINET	Bürkert Systembus (büS) ^{2.)}		Without
Modbus TCP	Without		
Analogue feedback		Digital outputs and diagnostics	
0/4...20 mA	0/4...20 mA + 2 binary outputs	Yes	No
0/5...10 V	0/5...20 V + 2 binary outputs		

1.) With a cable gland the selection of a fieldbus communication PROFIBUS, EtherNet etc. is not possible. Only variants with M12 Multipole are offered as standard for fieldbus communication.

2.) Based on CANopen

For actuator size $\varnothing 70/\varnothing 90/\varnothing 130$ mm			
Positioner SideControl BASIC Type 8791 with Remote sensor Type 8798		Positioner SideControl BASIC IP20 Type 8791 with Remote sensor Type 8798	
	<ul style="list-style-type: none"> „simple positioner“ Universal positioning system for single and double acting actuators Tune function for automatic start-up Field bus communication 		<ul style="list-style-type: none"> „simple positioner“ Universal positioning system for single and double acting actuators Tune function for automatic start-up Switchgear cabinet assembly
Pneumatic function		Electrical connection	
Single-acting (actuator size $\varnothing 70/90$)	Single- and double-acting (actuator size $\varnothing 130$)	Cable gland ^{1.)}	M12 Multipole connection
Digital communication		Approvals	
AS-Interface ^{2.)} :		ATEX cat. 3GD, IECEx ^{2.)}	Without
Analogue profile S-7.3.4 (only set point)			
Analogue profile S-7.A.5 (set point and feedback)			
IO-Link	Bürkert Systembus (büS) ^{3.)}	Without	
Analogue feedback			
0/4...20 mA	No		

1.) With a cable gland, the selection of a fieldbus communication AS-Interface is not possible. For fieldbus communication, only variants with M12 Multipole are offered as standard.

2.) Only available for Positioner SideControl BASIC Type 8791. Not available for Positioner SideControl BASIC IP20 Type 8791.

3.) Based on CANopen, IO-Link and büS not available for IP20 Type 8791

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