



2/2-way Angle-Seat Control Valve with stainless steel design for media up to +185°C, DN15-65

- Excellent combination of good control characteristic and high flow rates
- High cycle life
- Clean design for optimal use in hygienic environment

Type 2300 thread can be combined with...



Type 8692/8693
Positioner / Process
Controller TopControl



Type 8694
Positioner
TopControl Basic



Type 8696
Positioner
TopControl Basic



Type 8792/93
SideControl Remote
version

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

The parabolic trim results in a flow characteristic approximately 35% larger than conventional control valves. It is available in either stainless steel on 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 protection class and superior chemical resistance.

This system has been engineered for reliable accurate control in applications where high flow rate is an advantage.

Technical data	
Orifice	DN15 to 65
Port connections Threaded port acc. to Clamp and welded - see separate datasheets	G 1/2 to G 2 1/2, NPT 1/2 to NPT 2 1/2, RC 1/2 to RC 2 1/2
Body material	Stainless steel 316L
Nominal pressure	PN25 (Body)
Actuator material Actuator Cover	PPS Stainless steel 1.4561 (316Ti)
Plug sealing	PTFE/St.st. (PTFE/stainless steel) and St.st./St.st. (stainless steel/stainless steel)
Seat leakage IEC 534-4/EN 1349	Shut-off class III and IV for St.st./St.st. Shut-off class VI for PTFE/St.st.
Medium	Water, alcohol, oils, fuels, hydraulic fluids, salt solution, alkali solutions, organic solvents, steam, optional fuel gas (EC Gas Appliances Directive 2009/142/EG)
Viscosity	max. 600 mm ² /s
Spindle packing	PTFE V-seals with spring compensation
Medium temperature	-10 to +185 °C (max. +130°C for PTFE/St.st. sealing)
Ambient temperature	0 to +55 °C (when used with positioner or process controllers) 0 to +80 °C (remote version)
Control medium	Compressed air
Relevant pilot pressure for circuit function A	Port size DN 15 to 50 5.5 to 7 bar Port size DN 65 5.6 to 7 bar
Pilot air ports	Push-in connector for external ø 6 mm or 1/4" tube
Installation	As required, preferably with actuator in upright position

Content



Valve specifications

Type 2300 thread

Technical data & ordering info. p. 1-5



System Continuous ELEMENT

Type 8802-YG

Ordering info. & technical data p. 6-10

Request for quotation

Type 8802-YG

p. 11

Technical data Type 2300, continued

 K_{vs} values water/pressure

Orifice [mm]	Actuator size [mm]	K_{vs} value water (m ³ /h)	Minimum pilot pressure [bar] **	Operating pressure up to +185°C NC [bar] **
15	50 / 70	5	5.5	16
20	50 / 70	10	5.5	10/16
25	50 / 70 / 90	16	5.5	5 / 12 / 16
32	70 / 90	23	5.5	6 / 16
40	90	34	5.5	12
	130	36	5.5	16
50	90	49	5.5	7
	130	53	5.5	16
65	130	90	5.6	16 (15*)

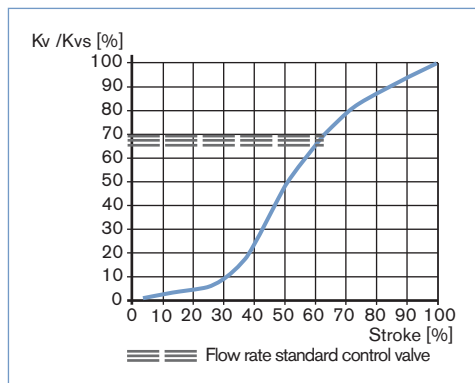
* acc. to the Pressure Equipment Directive 97/23 / EC for compressible fluids in Group 1 (hazardous gases and vapors in accordance with Article 3, Section 1.3, letter a, first dash)

** For NO (normally open) see charts on page 5

Flow rate: K_{vs} 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

Flow characteristic



Remarks on the flow characteristic

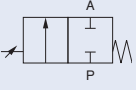
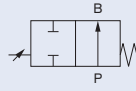
Modified equi-percentile flow characteristic, engineered for a quick response during peak flow demand (an advantage for many processes like heating/cooling with heat exchangers) and fine control at lower flow.

 K_{vs} values [m³/h]

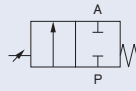
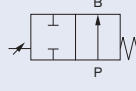
Orifice [mm]	Actuator size [mm]	Stroke [%]										
		5	10	20	30	40	50	60	70	80	90	100
15	50 / 70	0.16	0.17	0.22	0.4	1.2	2.7	3.5	4.0	4.5	4.8	5
20	50 / 70	0.26	0.27	0.4	1.1	4.0	5.9	7.2	8.3	9.1	9.6	10
25	50 / 70 / 90	0.34	0.36	0.62	1.5	5.2	8.9	11.5	13.0	14.2	15.4	16
32	70 / 90	0.43	0.52	0.82	1.4	4.0	9.3	13.8	16.4	19.2	21.3	23
40	90	0.47	0.62	1.1	2.6	10.0	17.0	21.5	25.3	28.8	31.6	34
	130	0.48	0.66	1.4	5.1	14.0	20.0	24.3	28.3	31.7	34.5	36
50	90	0.85	1.1	1.6	2.7	10.2	20.0	28.6	35.6	40.6	45.0	49
	130	0.87	1.2	1.8	4.0	15.2	26.0	35.0	40.3	45.0	48.0	53
65	130	1.7	2	6.5	20	35	48	58	67	75	83	90

Ordering chart Type 2300, flow direction below the seat (for gases and liquids)

G threaded port

Control function	Orifice [mm]	Actuator size Ø [mm]	Port connection thread	K _{vs} value water [m³/h]	Operating pressure up to +185°C [bar]	Item no. plug sealing PTFE/St. st.	Leakage class	Item no. plug sealing St. st./St. st.	Leakage class
A 2/2-way valve, NC 	15	50	G 1/2	5	16	213 712	VI	213 763	IV
		70	G 1/2	5	16	213 713	VI	213 764	IV
	20	50	G 3/4	10	10	213 714	VI	213 765	III
		70	G 3/4	10	16	213 715	VI	213 766	IV
	25	50	G 1	16	5	213 716	VI	213 767	III
		70	G 1	16	12	213 718	VI	213 768	IV
		90	G 1	16	16	245 405	VI	229 276	IV
	32	70	G 1 1/4	23	6	213 719	VI	213 769	III
		90	G 1 1/4	23	16	245 406	VI	225 395	IV
	40	90	G 1 1/2	34	12	213 720	VI	213 770	III
		130	G 1 1/2	36	16	223 307	VI	223 310	IV
	50	90	G 2	49	7	203 500	VI	206 230	III
		130	G 2	53	16	213 697	VI	213 708	IV
B 2/2-way valve, NO 	15	50	G 1/2	5	see charts on page 5	213 722	VI	223 313	IV
		70	G 1/2	5		213 721	VI	223 314	IV
	20	50	G 3/4	10		213 723	VI	223 315	III
		70	G 3/4	10		213 724	VI	223 316	IV
	25	50	G 1	16		213 725	VI	223 317	III
		70	G 1	16		213 726	VI	223 318	III
	32	70	G 1 1/4	23		213 727	VI	223 319	III
	40	90	G 1 1/2	34		213 728	VI	223 320	IV
	50	90	G 2	49		203 510	VI	223 321	III
	65	130	G 2 1/2	90		239 495	VI	239 511	IV

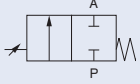
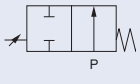
NPT threaded port

Control function	Orifice [mm]	Actuator size Ø [mm]	Port connection thread	K _{vs} value water [m³/h]	Operating pressure up to +185°C [bar]	Item no. plug sealing PTFE/St. st.	Leakage class	Item no. plug sealing St. st./St. st.	Leakage class
A 2/2-way valve, NC 	15	50	NPT 1/2	5	16	213 729	VI	213 771	IV
		70	NPT 1/2	5	16	213 730	VI	213 772	IV
	20	50	NPT 3/4	10	10	213 731	VI	213 773	III
		70	NPT 3/4	10	16	213 732	VI	213 774	IV
	25	50	NPT 1	16	5	213 733	VI	213 775	III
		70	NPT 1	16	12	213 734	VI	213 776	IV
		90	NPT 1	16	16	465 032	VI	464 364	IV
	32	70	NPT 1 1/4	23	6	213 736	VI	213 777	III
		90	NPT 1 1/4	23	16	465 033	VI	464 365	IV
	40	90	NPT 1 1/2	34	12	213 737	VI	213 778	III
		130	NPT 1 1/2	36	16	223 308	VI	223 311	IV
	50	90	NPT 2	49	7	203 537	VI	206 239	III
		130	NPT 2	53	16	213 699	VI	213 709	IV
B 2/2-way valve, NO 	15	50	NPT 1/2	5	see charts on page 5	213 738	VI	223 322	IV
		70	NPT 1/2	5		213 739	VI	223 323	IV
	20	50	NPT 3/4	10		213 740	VI	223 324	III
		70	NPT 3/4	10		213 741	VI	223 325	IV
	25	50	NPT 1	16		213 742	VI	223 326	III
		70	NPT 1	16		213 743	VI	223 327	III
	32	70	NPT 1 1/4	23		213 744	VI	223 328	III
	40	90	NPT 1 1/2	34		213 745	VI	223 329	IV
	50	90	NPT 2	49		203 546	VI	223 330	III
	65	130	NPT 2 1/2	90		239 486	VI	239 512	IV

* acc. to the Pressure Equipment Directive 97/23 / EC for compressible fluids in Group 1 (hazardous gases and vapors in accordance with Article 3, Section 1.3, letter a, first dash)

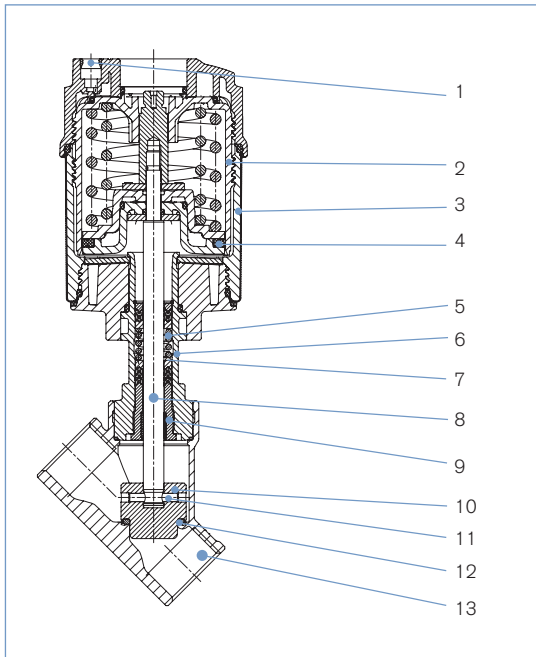
Ordering chart Type 2300, flow direction below the seat (for gases and liquids), continued

RC threaded port

Control function	Orifice [mm]	Actuator size Ø [mm]	Port connection thread	K _{vs} value water [m³/h]	Operating pressure up to +185°C [bar]	Item no. plug sealing PTFE/St. st.	Leakage class	Item no. plug sealing St. st./St. st.	Leakage class
A 2/2-way valve, NC 	15	50	RC 1/2	5	16	213 746	VI	213 779	IV
		70	RC 1/2	5	16	213 747	VI	213 780	IV
	20	50	RC 3/4	10	10	213 748	VI	213 781	III
		70	RC 3/4	10	16	213 749	VI	213 782	IV
	25	50	RC 1	16	5	213 750	VI	213 783	III
		70	RC 1	16	12	213 751	VI	213 784	IV
		90	RC 1	16	16	245 407	VI	245 438	IV
	32	70	RC 1 1/4	23	6	213 752	VI	213 785	III
		90	RC 1 1/4	23	16	245 408	VI	245 439	IV
	40	90	RC 1 1/2	34	12	213 753	VI	213 786	III
		130	RC 1 1/2	36	16	223 309	VI	223 312	IV
	50	90	RC 2	49	7	203 555	VI	206 249	III
		130	RC 2	53	16	213 700	VI	213 710	IV
	65	130	RC 2 1/2	90	16 (15*)	239 489	VI	239 506	IV
B 2/2-way valve, NO 	15	50	RC 1/2	5	siehe Diagramme auf Seite 5	213 755	VI	223 331	IV
		70	RC 1/2	5		213 756	VI	223 332	IV
	20	50	RC 3/4	10		213 757	VI	223 333	III
		70	RC 3/4	10		213 758	VI	223 334	IV
	25	50	RC 1	16		213 759	VI	223 335	III
		70	RC 1	16		213 760	VI	223 336	III
	32	70	RC 1 1/4	23		213 761	VI	223 337	III
	40	90	RC 1 1/2	34		213 762	VI	223 338	IV
	50	90	RC 2	49		203 564	VI	223 339	III
	65	130	RC 2 1/2	90		239 497	VI	239 513	IV

* acc. to the Pressure Equipment Directive 97/23 / EC for compressible fluids in Group 1 (hazardous gases and vapors in accordance with Article 3, Section 1.3, letter a, first dash)

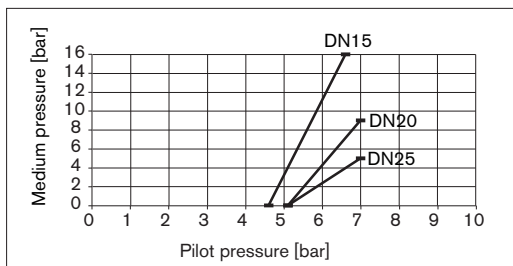
Materials Type 2300



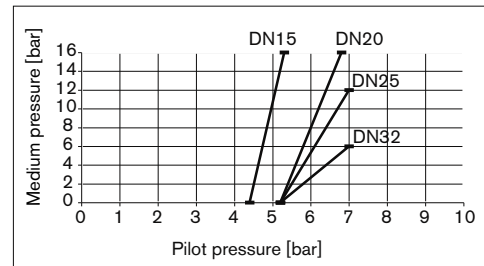
1	Pilot air ports	Push-in connector PP (standard)
2	Actuator	PPS
3	Cover	Stainless steel 1.4561 (316Ti)
4	Piston seal	FKM
5	Spring	Stainless steel 1.4310
6	Tube	Stainless steel 1.4401 (316) / 1.4404 (316L)
7	Spindle packing	PTFE
8	Spindle	Stainless steel 1.4401 (316) / 1.4404 (316L)
9	Spindle guidance	Stainless steel 1.4404 (316L)
10	Plug	Stainless steel 1.4571
11	Spring straight pin	Stainless steel 1.4310
12	Plug seal	Stainless steel 1.4571 / PTFE disc for soft seat sealing
13	Valve body	Stainless steel 316L

Pressure Charts with control function B (normally open, NO)

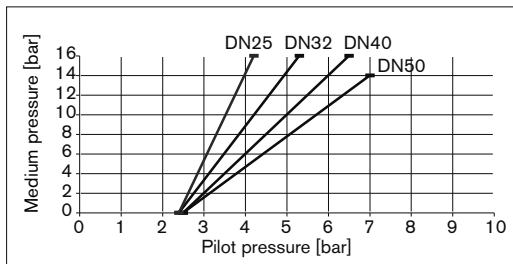
Ø 50



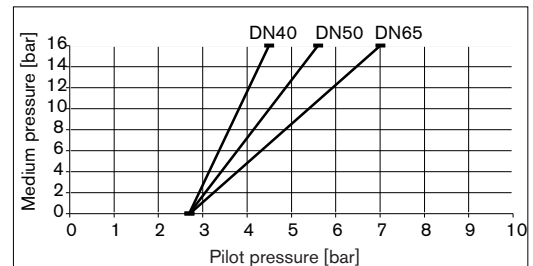
Ø 70



Ø 90



Ø 130



Ordering information for valve system Continuous ELEMENT Type 8802-YG

A valve system Continuous ELEMENT Type 8802-YG consists of an angle-seat control valve Type 2300 and a digital electropneumatic Positioner Type 8692, a digital electropneumatic Process Controller Type 8693, a digital electropneumatic Positioner Basic Type 8694 (below), an electropneumatic Positioner Type 8792/8793 (for valve actuator sizes $\varnothing$ 70/90/130 mm) or a digital electropneumatic Positioner Type 8696 (for valve actuator size $\varnothing$ 50 mm) (see next page and separate datasheets). For the configuration of further valve systems please use the "Request for quotation" on p. 11

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

Ordering the valve system Continuous ELEMENT Type 8802-YG

Angle seat valve Type 2300



Positioner



Positioner
Type 8692



Process Controller
Type 8693



Positioner Basic
Type 8694

Angle seat valve with desired control unit



Valve system
Continuous
ELEMENT
Type 8802-YG-I
2300 + 8692



Valve system
Continuous
ELEMENT
Type 8802-YG-J
2300 + 8693



Valve system
Continuous
ELEMENT
Type 8802-YG-L
2300 + 8694

When you click on the orange box "More info." below, you will come to our website for the resp. product where you can download the datasheet.

Positioner TopControl Type 8692



Process Controller TopControl Type 8693



DeviceNet™

The new generation of integrated positioners/process controllers for combination with actuators from the process valve series Type 23xx/2103 is specially designed for the requirements of hygienic process environments. The easy handling and the selection of additional software functions are done either on a big graphic display with backlight and keypad or via a PC interface. A contact-free analogue position sensor registers the valve position without deterioration. Single-acting or double-acting actuators are controlled via the integral positioner system. With Type 8693, the process controller function is superimposed on the position control loop. Profibus DPV1 and DeviceNet communication interfaces are available as options.

Main customer benefits:

- Compact design of the valve system with integrated positioner/process controller meets the demands for plant washdown environments through the selection of materials, external seals and integrated control air supply to the actuator
- Extremely simple commissioning and operation thanks to the back-lighting of the graphics display and proven multilingual software structure
- Automatic parameterisation of the positioner and process controller using the TUNE functions
- Field bus communication via Profibus DPV1 or DeviceNet
- Air intake filter enhances the process valve system availability
- Simple and reliable actuator adaption

Positioner TopControl Basic Type 8694



The new generation of integrated positioners for combination with actuators from the process valve series Type 23xx/2103 is specially designed for the requirements of hygienic process environments. The operation and selection of the software functions close tight function, inversion of the operating direction of the setpoint signal, characteristic curves selection and switching manual/automatic operation are effected via push-buttons and DIP switches or via the PC interface. The position setpoint is set using the standard signal 4 - 20 mA. In addition, the enable can be controlled via the binary input and an optional position feedback can be integrated. The positioner, Type 8694, registers the valve position without deterioration through a contact-free analogue position sensor. Single-acting or double-acting actuators are controlled via the integral positioner system. An AS-Interface communication interface is available as an option.

Main customer benefits:

- Compact design of the valve system with integrated positioner meets the demands for plant washdown environments through the selection of materials, external seals and integrated control air supply to the actuator
- Automatic parameterisation of the positioner using the Process TUNE function
- Field bus communication via optional AS-Interface
- Air intake filter enhances the process valve system availability
- Simple and reliable actuator adaption allowing additional actuators of the process valve series, Type 20xx or actuators from other manufacturers to be used

Ordering information for valve system Continuous ELEMENT Type 8802-YG, continued

A valve system Continuous ELEMENT Type 8802-YG consists of an angle-seat control valve Type 2300 and a digital electropneumatic Positioner Type 8692, a digital electropneumatic Process Controller Type 8693, a digital electropneumatic Positioner Basic Type 8694 (previous page), an electropneumatic Positioner Type 8792/8793 (for valve actuator sizes $\varnothing$ 70/90/130) mm or a digital electropneumatic Positioner Type 8696 (for valve actuator size $\varnothing$ 50 mm) (see separate datasheets). For the configuration of further valve systems please use the "Request for quotation" on p. 11

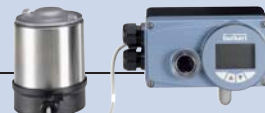
You order two components and receive a complete assembled and certified valve.

Ordering the valve system Continuous ELEMENT Type 8802-YG

Angle seat valve Type 2300



Positioner



Positioner
Type 8792/
Process Controller Type 8793



TopControl Basic Type 8696
Only for actuator size
 $\varnothing$ 50 mm

Angle seat valve with desired control unit



Valve system
Continuous ELEMENT
Type 8802-YG-P
2300 + 8792 /
Type 8802-YG-Q
2300 + 8793



Valve system
Continuous ELEMENT
Type 8802-YG-N
2300 + 8696

When you click on the orange box "More info." below, you will come to our website for the resp. product where you can download the datasheet.

Positioner SideControl Type 8792

Process Controller SideControl Type 8793



Type 8792/8793 is a digital electro-pneumatic positioner with an optional, integrated process controller (8793) for precise control requirements. The compact design with integrated position encoder and LCD display was developed for demanding applications of the process industry. A Profibus DPV1 communication interface is available as an option. Main customer benefits are:

- Time saving algorithms for temperature, flow and pressure PID parameters through ProcessTUNE function.
- Quick and simple menu driven parameterization through keyboard or Profibus DPV1 PA
- Adaption acc. to IEC534-6 and VDI/VDE 3845 for lift and swivel drives or as a Remote version together with Bürkert process valves
- Rugged anodised aluminium housing

TopControl Basic Type 8696



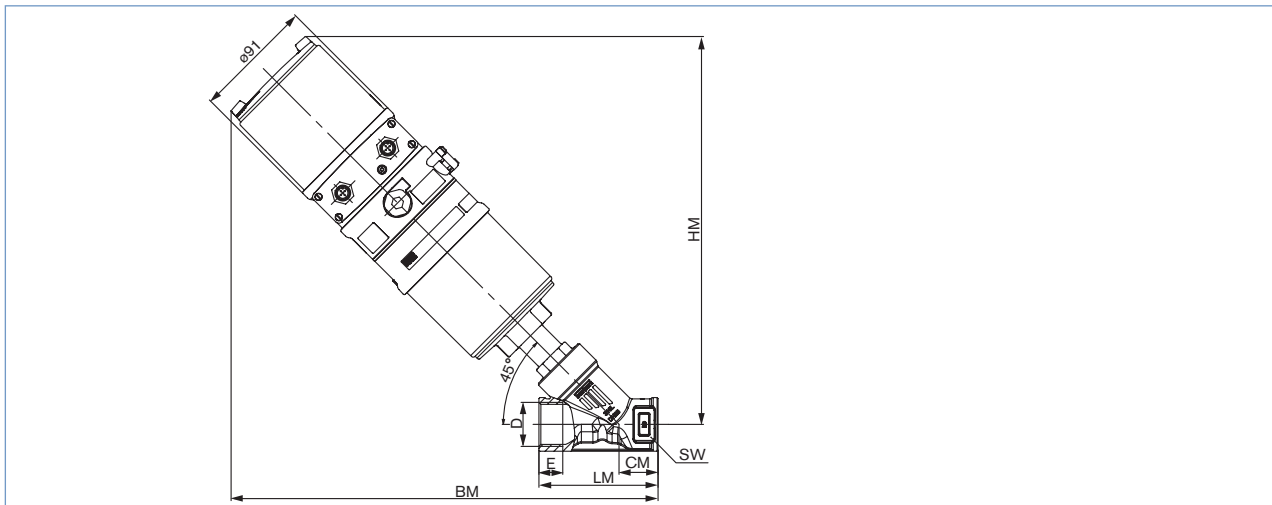
The new generation of integrated positioners for combination with small actuators from the process valve series Type 23xx/2103 is specially designed for the requirements of hygienic process environments. The operation and selection of the software functions close tight function, inversion of the operating direction of the setpoint signal, characteristic curves selection and switching manual/automatic operation are effected via push-buttons and DIP switches or via the PC interface. The position setpoint is set using the standard signal 4 - 20 mA. In addition, the enable can be controlled via the binary input and an optional position feedback can be integrated. The positioner, Type 8696, registers the valve end position without deterioration through a contact-free analogue position sensor. Single-acting actuators are controlled via the integral positioner system.

Main customer benefits:

- Compact design of the valve system with integrated positioner meets the demands for plant washdown environments through the selection of materials, external seals and integrated control air supply to the actuator
- Automatic parameterisation of the positioner using the TUNE function
- Simple and reliable actuator adaption

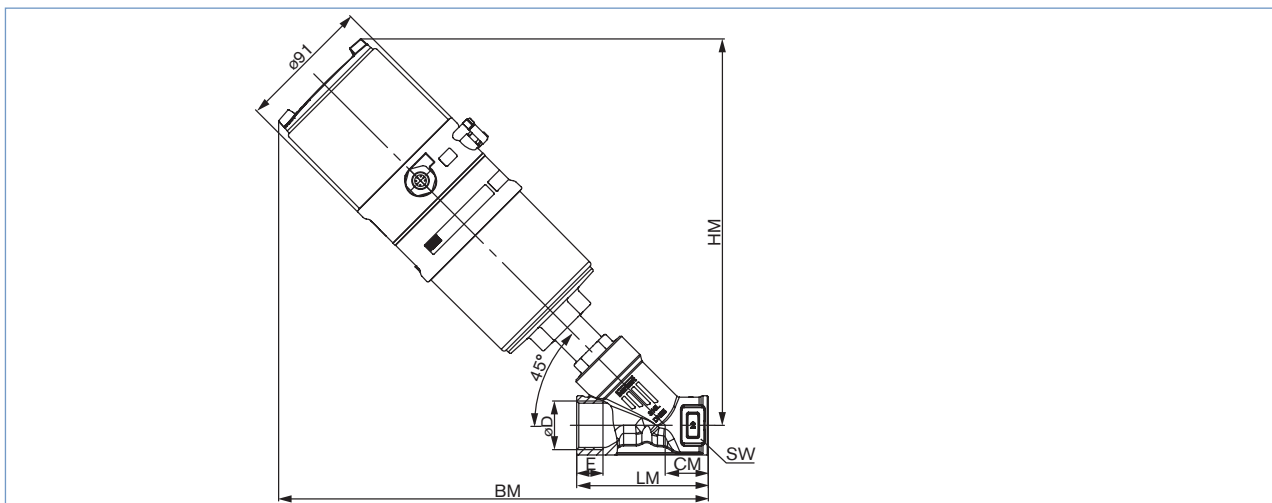
Dimensions for valve system Continuous ELEMENT Type 8802-YG [mm]

Dimensions valve system Continuous ELEMENT Type 8802-YG-I with positioner TopControl Type 8692 or 8802-YG-J with process controller TopControl Type 8693 [mm]



Orifice [mm]	Actuator size [mm]	HM	BM	CM	LM	SW	G D	E	NPT D	E	RC D	E
15	70	280	308	24	65	27	G 1/2	14	NPT 1/2	13.7	RC 1/2	13.2
20	70	288	318	27	75	34	G 3/4	16	NPT 3/4	14	RC 3/4	14.5
25	70	294	327	29.5	90	41	G 1	18	NPT 1	16.8	RC 1	16.8
	90	331	362	29.5	90	41	G 1	18	NPT 1	16.8	RC 1	16.8
32	70	302	342	36	110	50	G 1 1/4	16	NPT 1 1/4	17.3	RC 1 1/4	19.1
	90	345	382	36	110	50	G 1 1/4	16	NPT 1 1/4	17.3	RC 1 1/4	19.1
40	90	347	383	35	120	55	G 1 1/2	18	NPT 1 1/2	17.3	RC 1 1/2	19.1
	130	384	419	35	120	55	G 1 1/2	18	NPT 1 1/2	17.3	RC 1 1/2	19.1
50	90	360	406	45	150	70	G 2	24	NPT 2	17.6	RC 2	23.4
	130	397	442	45	150	70	G 2	24	NPT 2	17.6	RC 2	23.4
65	130	430	487	57	185	85	G 2 1/2	26	NPT 2 1/2	23.7	RC 2 1/2	26.7

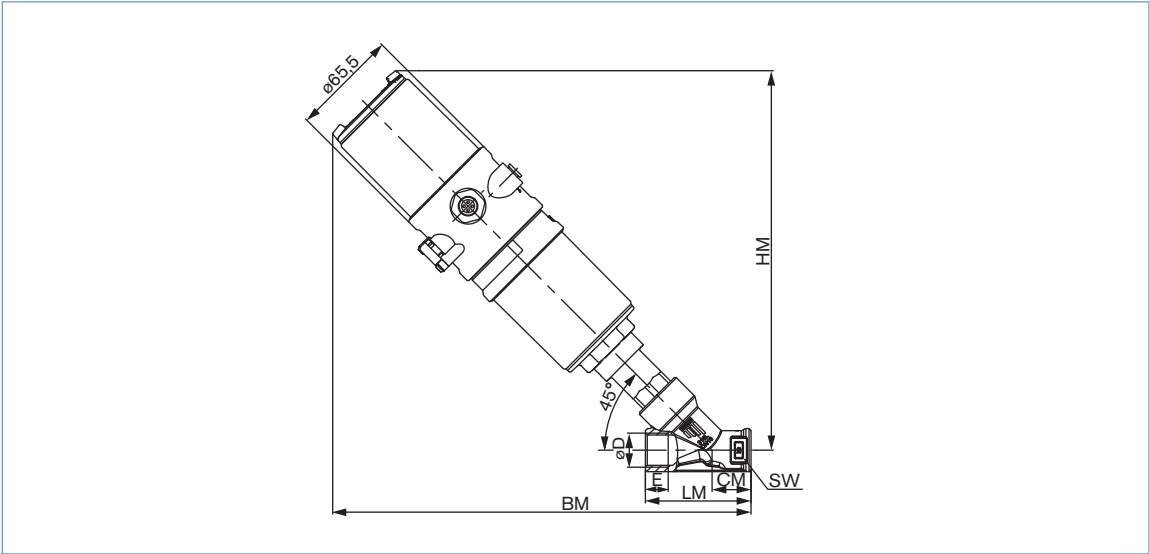
Dimensions valve system Continuous ELEMENT Type 8802-YG-L with positioner TopControl Basic Type 8694 [mm]



Orifice [mm]	Actuator size [mm]	HM	BM	CM	LM	SW	G D	E	NPT D	E	RC D	E
15	70	251	279	24	65	27	G 1/2	14	NPT 1/2	13.7	RC 1/2	13.2
20	70	259	289	27	75	34	G 3/4	16	NPT 3/4	14	RC 3/4	14.5
25	70	265	298	29.5	90	41	G 1	18	NPT 1	16.8	RC 1	16.8
	90	302	333	29.5	90	41	G 1	18	NPT 1	16.8	RC 1	16.8
32	70	273	313	36	110	50	G 1 1/4	16	NPT 1 1/4	17.3	RC 1 1/4	19.1
	90	316	353	36	110	50	G 1 1/4	16	NPT 1 1/4	17.3	RC 1 1/4	19.1
40	90	318	354	35	120	55	G 1 1/2	18	NPT 1 1/2	17.3	RC 1 1/2	19.1
	130	355	390	35	120	55	G 1 1/2	18	NPT 1 1/2	17.3	RC 1 1/2	19.1
50	90	331	377	45	150	70	G 2	24	NPT 2	17.6	RC 2	23.4
	130	368	413	45	150	70	G 2	24	NPT 2	17.6	RC 2	23.4
65	130	401	458	57	185	85	G 2 1/2	26	NPT 2 1/2	23.7	RC 2 1/2	26.7

Dimensions for valve system Continuous ELEMENT Type 8802-YG [mm], continued

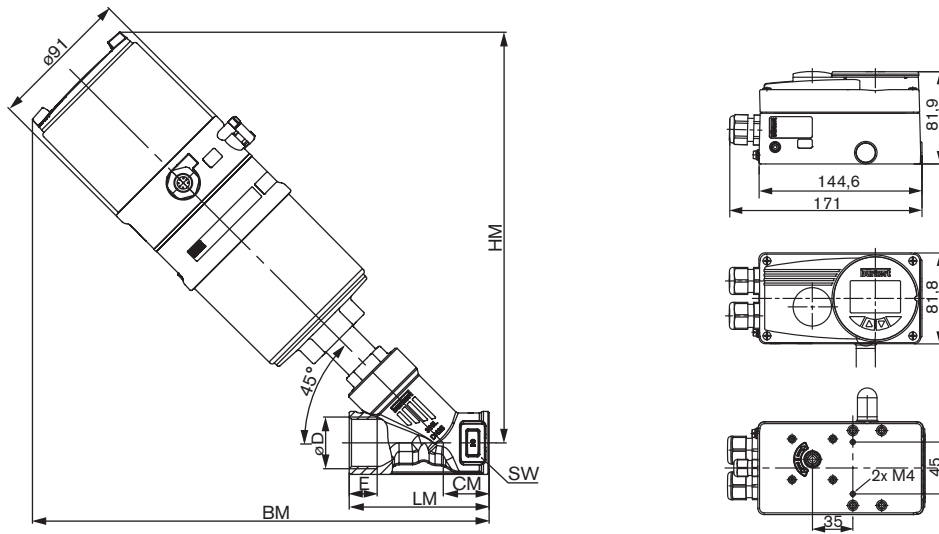
Dimensions valve system Continuous ELEMENT Type 8802-YG with positioner TopControl Basic Type 8696 [mm]



Orifice [mm]	Actuator size [mm]	HM	BM	CM	SW	LM	G		NPT		RC	
							D	E	D	E	D	E
15	50	234	265	24	27	65	G 1/2	14	NPT 1/2	13.7	RC 1/2	13.2
20	50	242	276	27	34	75	G 3/4	16	NPT 3/4	14	RC 3/4	14.5
25	50	250	285	29.5	41	90	G 1	18	NPT 1	16.8	RC 1	16.8

Dimensions for valve system Continuous ELEMENT Type 8802-YG [mm], continued

Dimensions valve system Continuous ELEMENT Type 8802-YG-P with positioner SideControl Remote Type 8792 and Type 8802-YG-Q with Process Controller SideControl Remote Type 8793 [mm]



Orifice [mm]	Actuator size [mm]	HM	BM	CM	LM	SW	G		NPT		RC	
							D	E	D	E	D	E
15	70	251	279	24	65	27	G 1/2	14	NPT 1/2	13.7	RC 1/2	13.2
20	70	259	289	27	75	34	G 3/4	16	NPT 3/4	14	RC 3/4	14.5
25	70	265	298	29.5	90	41	G 1	18	NPT 1	16.8	RC 1	16.8
	90	302	333	29.5	90	41	G 1	18	NPT 1	16.8	RC 1	16.8
32	70	273	313	36	110	50	G 1 1/4	16	NPT 1 1/4	17.3	RC 1 1/4	19.1
	90	316	353	36	110	50	G 1 1/4	16	NPT 1 1/4	17.3	RC 1 1/4	19.1
40	90	318	354	35	120	55	G 1 1/2	18	NPT 1 1/2	17.3	RC 1 1/2	19.1
	130	355	390	35	120	55	G 1 1/2	18	NPT 1 1/2	17.3	RC 1 1/2	19.1
50	90	331	377	45	150	70	G 2	24	NPT 2	17.6	RC 2	23.4
	130	368	413	45	150	70	G 2	24	NPT 2	17.6	RC 2	23.4
65	130	401	458	57	185	85	G 2 1/2	26	NPT 2 1/2	23.7	RC 2 1/2	26.7