

Pneumatic operated 2-way Globe Control Valve ELEMENT



Type 2301 can be combined with...



Type 8692/8693

Positioner / Process
Controller TopControl



Type 8694

Positioner Basic
TopControl



Type 8696

Positioner Basic
TopControl



Type 8792/93

Positioner / Process
Controller SideControl
Remote



Type 8791

Positioner Basic
SideControl Remote



- Excellent control characteristics
- High cycle life and maintenance-free operation
- Flow optimised body in stainless steel
- Several K_{vs} value per port size due to removable trim kit
- Control units can be mounted directly without external tubing

In line with Bürkert's philosophy the construction of the 2301 globe valve fulfils tough criteria for process environments. Unrivalled cycle life and sealing integrity is guaranteed by the proven self adjusting spindle packing with exchangeable V-seals.

Each globe valve body can be fitted with up to five sizes of trim sets. These parabolic trims provide a reliable and repeatable characteristic to vary the flow. The control cones are available in either stainless steel or with a durable PTFE seal or PEEK seal for tight shut-off. Leakage class III, IV or VI are available.

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.

Technical data	
K_{vs} values	0.1 - 140 m ³ /h
Port size / Seat size (orifice)	DN10...DN100 / 3 - 100
Pressure stage	PN25
Port connections	<ul style="list-style-type: none"> • Flange • Thread • Weld ends • Clamp
Medium	Neutral gases, water, alcohol, oils, fuel, hydraulic mediums, salt solution, alkali solutions, organic solvents, steam, oxygen, optional fuel gas (EC Gas Appliances Directive 2009/142/EG)
Viscosity	max. 600 mm ² /s
Medium temperature	-10 ... +185 °C (Stainless Steel seal /Stainless Steel cone) -10 ... +185 °C (PEEK seal/Stainless Steel cone) -10 ... +130 °C (PTFE seal /Stainless Steel cone)
Ambient temperature	-10 ... +80 °C (remote version) -10 ... +55 °C (when used with positioner or process controllers)
Seat leakage acc. to DIN EN 60534-4:2006	Shut-off class III and IV for Stainless steel Shut-off class VI for PTFE/St.st. and PEEK/St. st. (see details in ordering chart)
Safety position	A: normally closed by spring action (NC) B: normally open by spring action (NO)
Control medium	neutral gases, air
Approval and Conformity	FDA, EGV 1935/2004; (ATEX, FDA and EC Gas Appliances Directive 2009/142/EG on request)

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Technical data, continued

Flow direction below the seat, Control function A (NC)

Port size (tube)		Seat size		Actuator size Ø	Operating pressure Seal/control cone		Pilot pressure	Leakage Class Seal/control cone		K _v values at stroke [m ³ /h]						K _{v5} values			
[mm]	[inch]	[mm]	[inch]		St. st. or PTFE/St. st. [bar]	PEEK/St. st. [bar]		PTFE or PEEK/St. st.	St. st./St. st.	5%	10%	30%	50%	70%	90%		[m ³ /h]		
10	3/8	3	0.12	50	16	10	5.5-7	-	IV	0.001	0.003	0.015	0.037	0.065	0.090	0.1			
				70						0.005	0.015	0.100	0.190	0.265	0.325	0.35			
		4	0.16	50						VI	0.04	0.05	0.16	0.27	0.36	0.44	0.5		
		70		0.05							0.12	0.48	0.76	0.98	1.13	1.2			
		6 ²⁾	0.24	50				0.005	0.007		0.045	0.160	0.410	1.080	1.25				
		70		0.06				0.07	0.12		0.26	0.61	1.50	2.0					
		8	0.31	50				0.09	0.11	0.19	0.48	1.00	2.30	2.7					
		70																	
15	1/2	3	0.12	50	16	10	5.5-7	-	IV	0.001	0.003	0.015	0.037	0.065	0.090	0.1			
				70						0.005	0.015	0.100	0.190	0.265	0.325	0.35			
		4	0.16	50						VI	0.04	0.05	0.16	0.27	0.36	0.44	0.5		
		70		0.05							0.12	0.48	0.76	0.98	1.13	1.2			
		6 ²⁾	0.24	50				0.005	0.007		0.045	0.160	0.410	1.080	1.25				
		70		0.07				0.08	0.13		0.27	0.63	1.60	2.1					
		8	0.31	50				0.09	0.11	0.19	0.49	1.10	2.50	3.1					
		70																	
15	0.59	50	0.14	0.17	0.35	0.80	1.80	3.70	4.3										
70																			
20	3/4	10	0.39	50	16	10	5.5-7	VI	IV	0.11	0.12	0.20	0.52	1.20	2.60	3.2			
				70						0.14	0.17	0.35	0.80	1.80	4.00	5.2			
		15	0.29	50						10	-	III	0.20	0.25	0.45	1.10	2.40	5.20	7.1
70	16	10		IV															
25	1	15	0.29	50	16	10	5.5-7	VI	IV	0.14	0.17	0.35	0.80	1.80	4.10	5.3			
				70						0.20	0.25	0.47	1.10	2.50	5.40	7.2			
		20	0.79	50						5	-	III	0.35	0.38	1.00	2.20	5.10	9.40	12.0
		70		16						10	IV								
		25		70						12	7	IV							
90	16	10																	
32	1 1/4	20	0.79	90	16	10	5.5-7	VI	IV	0.21	0.24	0.45	0.85	1.75	3.75	5.5			
				130						0.22	0.25	0.50	1.10	2.50	5.80	8.0			
		25	0.98	90						0.38	0.45	0.95	1.95	4.00	7.40	9.9			
		130		0.40						0.47	1.10	2.50	5.40	10.3	13.0				
		32		90						0.45	0.58	1.10	2.50	4.90	10.1	13.4			
130	0.48	0.60	1.30	3.10	6.80	14.0	17.8												
40	1 1/2	25	0.98	90	16	10	5.5-7	VI	IV	0.38	0.48	0.95	2.00	4.10	7.90	10.3			
				130						0.40	0.50	1.10	2.60	5.60	10.7	13.6			
		32	1.3	90						0.45	0.55	1.10	2.50	4.95	10.8	14.4			
		130		0.48						0.60	1.30	3.20	6.90	15.0	20.2				
		40		90						0.55	0.67	1.50	3.15	6.50	13.6	17.5			
130	16	10	IV	0.60	0.70	1.70	4.00	9.20	18.2	23.8									
50	2	32	1.3	90	16	10	5.5-7	VI	IV	0.45	0.56	1.10	2.50	4.95	11.4	15.3			
				130						0.48	0.60	1.30	3.20	6.90	16.0	21.0			
		40	1.6	90						0.57	0.68	1.45	3.15	6.40	13.8	18.0			
		130		0.60						0.70	1.70	4.00	9.20	18.9	24.6				
		50		90						0.85	1.05	2.55	5.35	11.4	21.7	28.0			
130	16	10	IV	0.90	1.10	2.90	6.80	15.5	29.3	37.0									
65	2 1/2	40	1.6	130	16 (15 [*])	10	5.5-7	VI	IV	0.65	0.75	1.8	4.3	10.4	22	29.0			
		50		2.0						130	1.0	1.2	3.1	6.7	16.0	35.0	45.0		
		65		2.6						130	1.6	2.0	5.0	13.5	33.0	56.0	65.0		

Technical data, continued

Flow direction below the seat, Control function A (NC)

Port size (tube)		Seat size		Actuator size Ø	Operating pressure Seal/control cone		Pilot pressure	Leakage Class Seal/control cone		K _v values at stroke [m ³ /h]						K _{vs} values
[mm]	[inch]	[mm]	[inch]		St. st. or PTFE/St. st. [bar]	PEEK/St. st. [bar]		PTFE or PEEK/St. st.	St. st./St. st.	5%	10%	30%	50%	70%	90%	
80	3	50	2.0	130	16 (12.5*)	10	5.5 - 7	VI	IV	1.0	1.2	3.4	8.3	19.0	35.0	45.0
		65	2.6	130					III	1.6	2.0	5.0	13.0	35.0	61.0	73.0
		80	3.2	130	10	6			III	2.5	3.4	10.7	27.0	58.0	87.0	100.0
100	4	65	2.6	130	16 (10*)	10	5.6 - 7	VI	IV	1.4	1.8	5.0	15.0	37.0	64.0	77.0
		80	3.2	130	10	6			III	2.2	3.1	10.3	30.0	66.0	97.0	110.0
		100	3.9	130	6	-			III	3.8	5.2	15.0	46.5	90.0	128.0	140.0

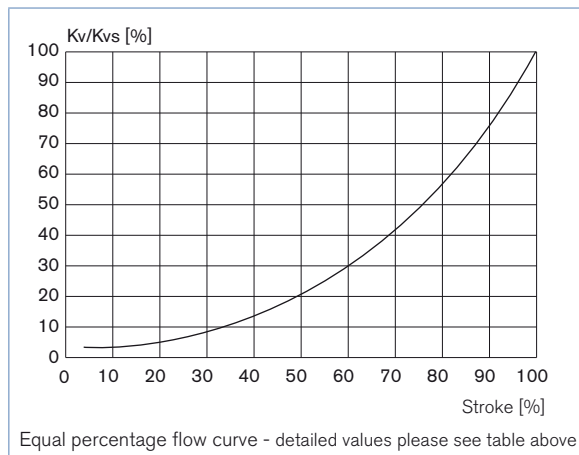
¹⁾ low flow cone

²⁾ linear flow curve

³⁾ equal percentage flow curve

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

Flow curve and description



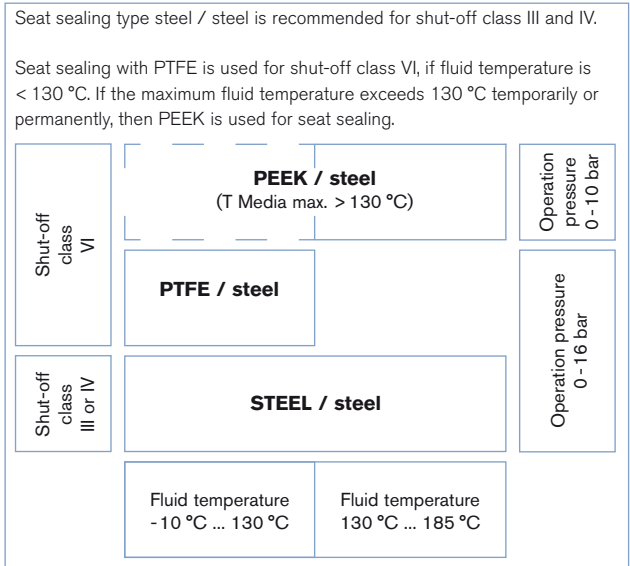
Remarks on the flow characteristic

- Linear cone for seat size 3 to 6
 - Equal percentage cone for seat size 8 to 100 (seat size 6 optional with equal percentage cone)
 - Flow characteristic runs within DIN EN 60534-2-4
 - Theoretical control ratio (K_{vs}/K_{v0}) for drive size 70/90/130:
 - 50:1 for the seat size 8 to 100
 - 25:1 for the seat size 6
 - 10:1 for the seat size 3 to 4
 - KVR value at 5% of stroke for DN > 10 mm
KVR value at 10% of stroke for DN ≤ 10 mm
 - The drive size 70 has relative to the drive size 50 better control quality and is therefore preferable to use
- (KVR value = smallest K_v value at which the gradient tolerance to DIN EN 60534-2-4 is still complied with)

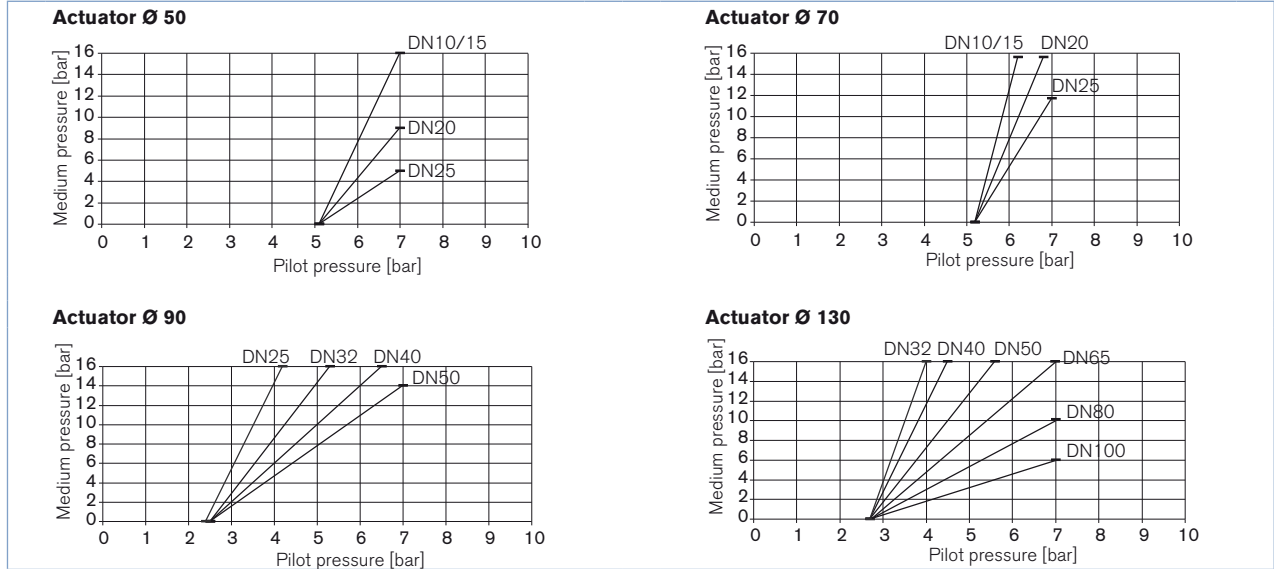
Control pressure

Control pressure	min.	max.
Control function A (NC), normally closed by spring force	5.6 bar 560 kPa 81 PSI	7 bar 700 kPa 102 PSI
Control function B (NO), normally open by spring force	see pressure charts	7 bar 700 kPa 102 PSI

Selection chart for seat sealing



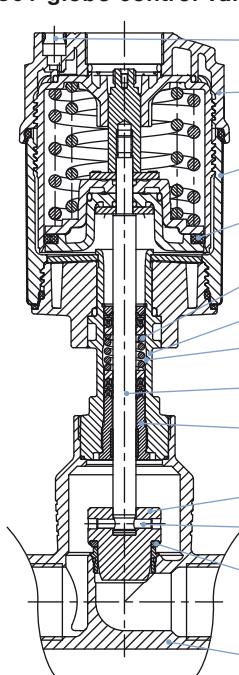
Pressure Charts with control function B (normally open, NO)



Design and materials view

The detailed parts and materials are displayed in the following picture:

Note: as the globe control valve Type 2301 could be delivered with miscellaneous port connection (flange, thread, weld ends and clamp), there will not be represented on the picture, but are made with same material as the valve body.

2301 globe control valve	Description	Material
	Pilot air ports	Push-in connector PP
	Actuator	PPS
	Cover	Stainless steel 1.4561 (316Ti)
	Piston seal	FKM
	Spring	Stainless steel 1.4310
	Tube	Stainless steel 1.4401 (316)
	Spindle packing	PTFE
	Spindle	Stainless steel 1.4401 (316) / 1.4404 (316L)
	Spindle guidance	Stainless steel 1.4404 (316L)
	Control cone	Stainless steel 1.4571
	Spring straight pin	Stainless steel 1.4310
	Control cone seal	Stainless steel 1.4571 / PTFE or PEEK disc for soft seat sealing
	Valve body	Cast stainless steel 316L

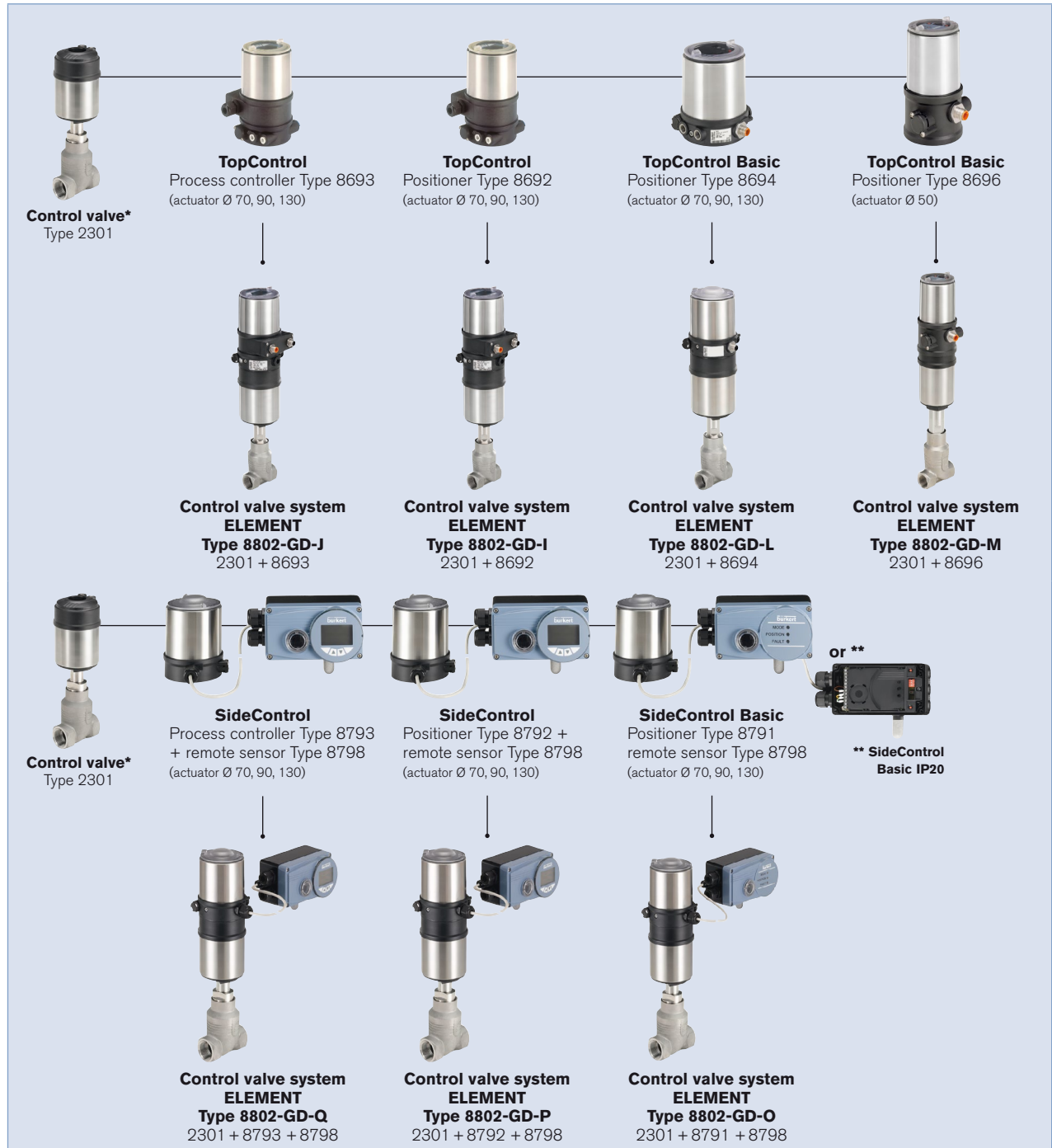
Decentralised automation - valve system Continuous ELEMENT Type 8802-GD

The **globe control valve Type 2301** can be combined with our comprehensive range of positioners and controllers, specially optimised for the decentralised automation of pneumatically controlled valve, to lead a **valve system Continuous ELEMENT Type 8802-GD**.

The range of control unit consists of:

- a digital electropneumatic Positioner/Process Controller **Type 8692/8693** (for valve actuator sizes Ø 70/90/130 mm)
- a digital electropneumatic Positioner Basic **Type 8694** (for valve actuator sizes Ø 70/90/130 mm)
- a digital electropneumatic Positioner Basic **Type 8696** (for valve actuator size Ø 50 mm).
- an electropneumatic Positioner SideControl **Type 8792** or an electropneumatic Process Controller **Type 8793** (for valve actuator sizes Ø 70/90/130 mm) and a remote sensor **Type 8798**
- an electropneumatic Positioner SideControl Basic **Type 8791** (for valve actuator sizes Ø 70/90/130 mm) and a remote sensor **Type 8798**

For the configuration of further valve systems please use the "Request for quotation" on p. 17
 You order two components and receive a complete assembled and certified valve.



* Example with thread port connection

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Decentralised automation - valve system Continuous ELEMENT Type 8802-GD, continued.

Positioners and controllers information

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.

Process Controller TopControl Type 8693 (actuator size: 70/90/130)

More
info.



PROFIBUS
DeviceNet™

The intelligent process controller Type 8693 is designed for integrated mounting on pneumatic actuators from the process control valve series Type 23xx/2103 and specifically for the requirements of hygienic process environments. The initialisation of the process controller and positioners can be automatically performed using Tune-Functions. The easy handling and the selection of additional software functions and parameterisation are done either on a big graphic display and keypad. Device configuration and parameterisation can be carried out easily by the Bürkert-COMMUNICATOR software tool via a PC interface.

Features:

- Hygienic stainless steel design according to EHEDG guidelines
- Contact and wearless analog 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
- Ensuring failure of the electrical or pneumatic power supply
- Profibus DPV1 or DeviceNet Field bus communication (optional)

Customer Benefits:

- Intuitive and easy operation via the large graphic display with backlight and keypad
- Automatic initialisation of positioners and process controllers using TUNE function
- High plant availability through increased drive life by spring chamber ventilation
- Guaranteed reliability and services can be scheduled through valve monitoring and diagnosis
- Outstanding price/performance ratio

Positioner TopControl Type 8692 (actuator size: 70/90/130)

More
info.



PROFIBUS
DeviceNet™

The intelligent electro-pneumatic positioner Type 8692 is designed for integrated mounting on pneumatic actuators from the process control valve series Type 23xx/2103 and specifically for the requirements of hygienic process environments. The initialisation of the positioners can be automatically performed using Tune-Functions. The easy handling and the selection of additional software functions and parameterisation are done either on a big graphic display and keypad. Device configuration and parameterisation can be carried out easily by the Bürkert-COMMUNICATOR software tool via a PC interface.

Features:

- Hygienic stainless steel design according to EHEDG guidelines
- Contact and wearless analog 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
- Ensuring failure of the electrical or pneumatic power supply
- Profibus DPV1 or DeviceNet Field bus communication (optional)

Customer Benefits:

- Intuitive and easy operation via the large graphic display with backlight and keypad
- Automatic initialisation of positioners and process controllers using TUNE function
- High plant availability through increased drive life by spring chamber ventilation
- Guaranteed reliability and services can be scheduled through valve monitoring and diagnosis

Positioner TopControl Basic Type 8694 (actuator size: 70/90/130)

More
info.



ASi

The compact positioner Type 8694 is designed for integrated mounting on pneumatic actuators from the process control valve series Type 23xx/2103 and specifically for the requirements of hygienic process environments. The operation and parameterisation are done via push buttons and DIP switches. Device configuration and parameterisation can be carried out easily by the Bürkert-COMMUNICATOR software tool via a PC interface.

Features:

- Hygienic stainless steel design according to EHEDG guidelines
- Contact and wearless analog position sensor
- Universal positioning system for single and double-acting actuators
- AS-Interface Field bus communication

Customer Benefits:

- Simple design
- Simple and safe start-up by teach function
- High plant availability through increased drive life by spring chamber ventilation
- Little space requirement in the plant piping

Positioner TopControl Basic Type 8696 (actuator size: 50)

More
info.



ASi

The compact positioner Type 8696 is designed for integrated mounting on pneumatic actuators from the process control valve series Type 23xx/2103 and specifically for the requirements of hygienic process environments. The operation and parameterisation are done via push buttons and DIP switches. Device configuration and parameterisation can be carried out easily by the Bürkert-COMMUNICATOR software tool via a PC interface.

Features:

- Hygienic stainless steel design according to EHEDG guidelines
- Contact and wearless analog position sensor
- Universal positioning system for single and double-acting actuators

Customer Benefits:

- Simple design
- Simple and safe start-up by teach function
- High plant availability through increased drive life by spring chamber ventilation
- Little space requirement in the plant piping

Decentralised automation - valve system Continuous ELEMENT Type 8802-GD, continued.

Positioners and controllers information

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.

**Process Controller SideControl Type 8793
with remote sensor Type 8798**
(actuator size: 70/90/130)


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 designed for demanding control tasks. The variant with the remote sensor Type 8798 is used to control Bürkert process control valves. The operation is done on a graphic display with backlight. The initialization of the process controller and positioners can be automatically performed using Tune-Function. Here, the type of control system is automatically detected and determines the appropriate controller structure with the corresponding optimal parameter set.

Features:

- Backlit graphic display with keypad
- Compact and robust design
- Adaption acc. to IEC534-6 and VDI/VDE 3845 for lift and swivel drives or as remote version together with Bürkert Process valves
- Universal positioning system for single and double-acting actuators
- Integrated diagnostic functions for valve monitoring
- Profibus DPV1 or DeviceNet Field bus communication (optional)

Customer Benefits:

- Automatic initialization of positioners and process controllers using TUNE function
- Valve monitoring and diagnosis through integrated diagnostic functions
- No air consumption in steady state condition
- Intuitive and easy operation via the large graphic display with backlight and keypad (Intuitive and simple operating concept)

**Positioner SideControl Type 8792
with remote sensor Type 8798**
(actuator size: 70/90/130)


The intelligent digital positioner Type 8792 is designed for mounting on lift or swivel drives with standardization in accordance with IEC 534-6 or VDI/VDE 3845 designed for demanding control tasks. The variant with the remote sensor Type 8798 is used to control Bürkert process control valves. The operation is done on a graphic display with backlight. The initialisation of the process controller and positioners can be automatically performed using Tune-Function. Here, the type of control system is automatically detected and determines the appropriate controller structure with the corresponding optimal parameter set.

Features:

- Backlit graphic display with keypad
- Compact and robust design
- Adaption acc. to IEC534-6 and VDI/VDE 3845 for lift and swivel drives or as remote version together with Bürkert Process valves
- Universal positioning system for single and double-acting actuators
- Integrated diagnostic functions for valve monitoring
- Profibus DPV1 or DeviceNet Field bus communication (optional)

Customer Benefits:

- Automatic initialization of positioners and process controllers using TUNE function
- Valve monitoring and diagnosis through integrated diagnostic functions
- No air consumption in steady state condition
- Intuitive and easy operation via the large graphic display with backlight and keypad (Intuitive and simple operating concept)

**Positioner SideControl Basic Type 8791
with remote sensor Type 8798**
(actuator size: 70/90/130)


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.

Features:

- Simple design
- Adaption acc. to IEC 534-6 and VDI/VDE 3845 for lift and swivel drives or as remote version together with Bürkert Process valves
- Universal positioning system for single and double-acting actuators for valve monitoring
- AS-Interface Field bus communication

Customer Benefits:

- Easy commissioning
- No air consumption in steady state condition
- Simple device for simple control tasks

**Positioner SideControl Basic IP20 Type 8791
mit remote sensor Type 8798**
(actuator size: 70/90/130)


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.

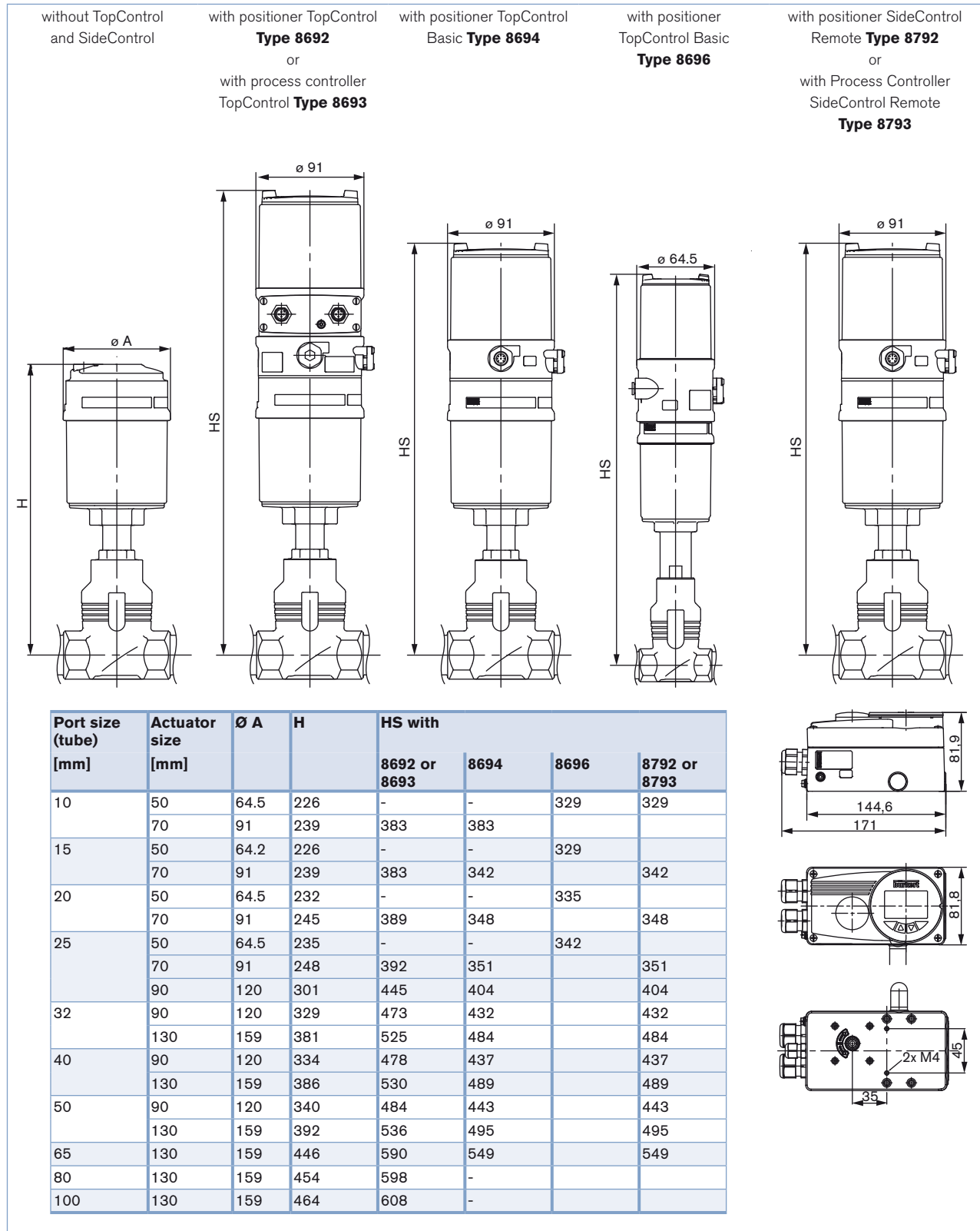
Features:

- Simple design
- Adaption acc. to IEC 534-6 and VDI/VDE 3845 for lift and swivel drives or as remote version together with Bürkert Process valves
- Universal positioning system for single and double-acting actuators for valve monitoring
- AS-Interface Field bus communication

Customer Benefits:

- Easy commissioning
- No air consumption in steady state condition
- Simple device for simple control tasks

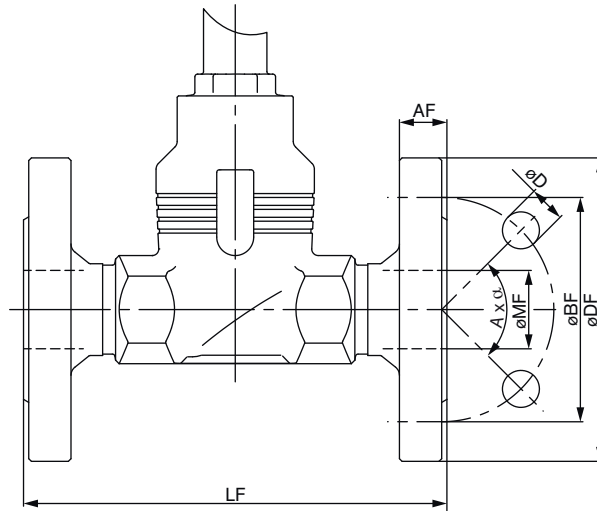
Dimensions [mm] - Valve Continuous ELEMENT Type 2301 and valve system Cont. ELEMENT



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Dimensions [mm] - Body valve Continuous ELEMENT Type 2301

Flange port connection



DIN EN 1092, JIS 10K

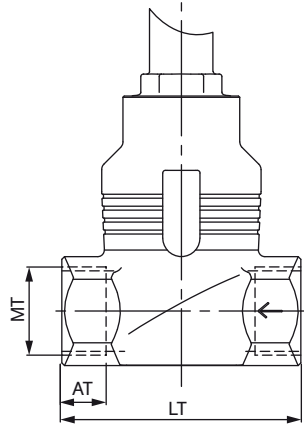
Port size (tube) [mm]	Actuator size [mm]	DIN EN 1092 FTF Series 1 acc. to DIN EN 558-1						JIS 10K FTF Series 10 acc. to DIN EN 558-2					
		Ø DF	LF	Ø BF	AF	Ø D	Ø MF	Ø DF	LF	Ø BF	AF	Ø D	Ø MF
10	50	90	130	60	16	14	13.6	-	-	-	-	-	-
	70	90	130	60	16	14	13.6	-	-	-	-	-	-
15	50	95	130	65	16	14	18.1	95	108	70	12	15	18.1
	70	95	130	65	16	14	18.1	95	108	70	12	15	18.1
20	50	105	150	75	18	14	23.7	100	117	75	14	15	23.7
	70	105	150	75	18	14	23.7	100	117	75	14	15	23.7
25	50	115	160	85	18	14	29.7	125	127	90	14	19	29.7
	70	115	160	85	18	14	29.7	125	127	90	14	19	29.7
	90	115	160	85	18	14	29.7	125	127	90	14	19	29.7
32	90	140	180	100	18	18	38.4	135	140	100	16	19	38.4
	130	140	180	100	18	18	38.4	135	140	100	16	19	38.4
40	90	150	200	110	18	18	44.3	140	165	105	16	19	44.3
	130	150	200	110	18	18	44.3	140	165	105	16	19	44.3
50	90	165	230	125	20	18	56.3	155	203	120	16	19	56.3
	130	165	230	125	20	18	56.3	155	203	120	16	19	56.3
65	130	185	290	145	22	18	66	175	216	140	18	19	72
80	130	200	310	160	24	18	81	185	241	150	18	19	84
100	130	235	350	190	24	22	100	210	292	175	18	19	109

ANSI B 16.5

Port size (tube) [inch]	Actuator size [mm]	ANSI B 16.5 Class 150 FTF Series 37 acc. to DIN EN 558-2					
		Ø DF	LF	Ø BF	AF	Ø D	Ø MF
½	50	89	184	60.5	11.2	15.7	15.7
	70	89	184	60.5	11.2	15.7	15.7
¾	50	99	184	69.9	12.7	15.7	20.8
	70	99	184	69.9	12.7	15.7	20.8
1	50	108	184	79.2	14.2	15.7	26.7
	70	108	184	79.2	14.2	15.7	26.7
	90	108	184	79.2	14.2	15.7	26.7
1 ½	90	127	222	98.6	17.5	15.7	40.9
	130	127	222	98.6	17.5	15.7	40.9
2	90	152	254	120.7	19.1	19.1	52.6
	130	152	254	120.7	19.1	19.1	52.6
2 ½	130	178	276	139.7	22.3	19.1	63
3	130	190	298	152.5	23.9	19.1	78
4	130	229	352	190.5	23.9	19.1	102

Dimensions [mm] - Body valve Continuous ELEMENT Type 2301

Thread port connection

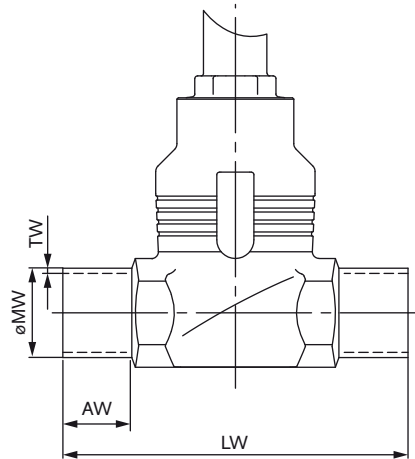


G, RC, NPT (EN ISO 228-1, ISO 7/1 /DIN EN 10226-2, ASME B 1.20.1)

Port size (tube) [mm]	MT G / NPT / RC [inch]	Actuator size [mm]	LT	AT		
				G	NPT	RC
10	3/8	50	65	12	10.3	10.1
		70	65	12	10.3	10.1
15	1/2	50	65	14	13.7	13.2
		70	65	14	13.7	13.2
20	3/4	50	75	16	14	14.5
		70	75	16	14	14.5
25	1	50	90	18	16.8	16.8
		70	90	18	16.8	16.8
		90	90	18	16.8	16.8
32	1 1/4	90	110	20	17.3	19.1
		130	110	20	17.3	19.1
40	1 1/2	90	120	22	17.3	19.1
		130	120	22	17.3	19.1
50	2	90	150	24	17.6	23.4
		130	150	24	17.6	23.4
65	2 1/2	130	185	26	23.7	26.7

Dimensions [mm] - Body valve Continuous ELEMENT Type 2301

Weld ends port connection



EN ISO 1127 series 1/ISO 4200/DIN 11866 series B, DIN 11850 series 2/DIN 11866 series A/DIN EN 10357 series A

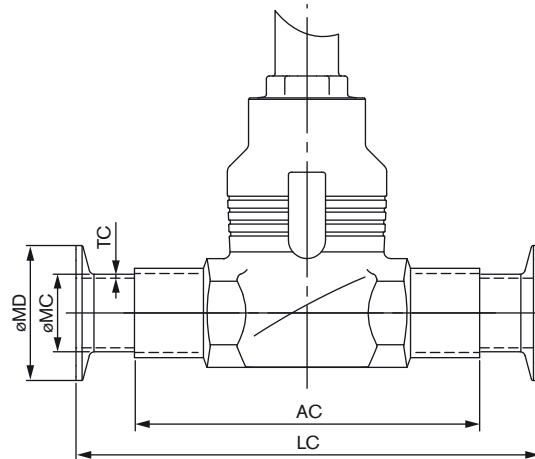
Port size (tube) [mm]	Actuator size [mm]	AW	LW	EN ISO 1127 series 1/ ISO 4200/DIN 11866 series B		DIN 11850 series 2/DIN 11866 series A/ DIN EN 10357 series A	
				Ø MW	TW	Ø MW	TW
10	50	20	90	17.2	1.6	13	1.5
	70		90	17.2	1.6		
15	50	20	90	21.3	1.6	19	1.5
	70		90	21.3	1.6		
20	50	20	100	26.9	1.6	23	1.5
	70		100	26.9	1.6		
25	50	26	130	33.7	2.0	29	1.5
	70		130	33.7	2.0		
	90		130	33.7	2.0		
32	90	26	140	42.4	2.0	35	1.5
	130		140	42.4	2.0		
40	90	26	150	48.3	2.0	41	1.5
	130		150	48.3	2.0		
50	90	26	175	60.3	2.0	53	1.5
	130		175	60.3	2.0		
65	130	26	210	76.1	2.3	70	2
80	130	26	230	88.9	2.3	85	2
100	130	26	260	114.3	2.6	104	2

BS4825 Part 1, ASME BPE/DIN 11866 series C

Port size (tube) [inch]	Actuator size [mm]	AW	LW	BS 4825 Part 1		ASME BPE/ DIN 11866 series C	
				Ø MW	TW	Ø MW	TW
½	50	20	90	12.7	1.2	12.7	1.65
	70		90	12.7	1.2	12.7	1.65
¾	50	20	90	19.05	1.2	19.05	1.65
	70		90	19.05	1.2	19.05	1.65
1	50	20	100	25.4	1.6	25.4	1.65
	70		100	25.4	1.6	25.4	1.65
	90		100	25.4	1.6	25.4	1.65
1 ½	90	26	140	38.1	1.6	38.1	1.65
	130		140	38.1	1.6	38.1	1.65
2	90	26	150	50.8	1.6	50.8	1.65
	130		150	50.8	1.6	50.8	1.65
2 ½	90	26	175	63.5	1.6	63.5	1.65
	130		175	63.5	1.6	63.5	1.65
3	130	26	210	76.2	1.6	76.2	1.65
4	130	26	260	101.6	2.0	101.6	2

Dimensions [mm] - Body valve Continuous ELEMENT Type 2301

Clamp port connection



DIN 32676 series A, ASME BPE/DIN 32676 series C or BS4825-3

Port size (tube) [mm]	Actuator size [mm]	AC	LC	Clamp: DIN 32676 series A, Rohr: DIN 11850 series 2/ DIN 11866 series A/ DIN EN 10357 series A			Clamp: ASME BPE/ DIN 32676 series C, Rohr: ASME BPE/ DIN 11866 series C			Clamp: BS4825-3, Rohr: BS4825-1		
				Ø MC	Ø MD	TC	Ø MC	Ø MD	TC	Ø MC	Ø MD	TC
15	70	90	126	19	34.0	1.5	12.7	25.0	1.65	12.7	25.0	1.2
20	70	100	136	23	34.0	1.5	19.05	25.0	1.65	19.05	25.0	1.2
25	90	10	173	29	50.5	1.5	25.4	50.5	1.65	25.4	50.5	1.6
32	90	140	179	35	50.5	1.5	-	-	-	-	-	-
40	130	150	193	41	50.5	1.5	38.1	50.5	1.65	38.1	50.5	1.6
50	130	175	218	53	64.0	1.5	50.8	64.0	1.65	50.8	64.0	1.6

DIN 32676 series B

Port size (tube) [mm]	Actuator size [mm]	AC	LC	Clamp: DIN 32676 series B, Rohr: EN ISO 1127 series 1/ ISO 4200/DIN 11866 series B		
				Ø MC	Ø MD	TC
15	70	90	146	21.3	50.5	1.6
20	70	100	136	26.9	50.5	1.6
25	90	130	164	33.7	50.5	2.0
32	90	140	178	-	-	-
40	130	150	193	48.3	64.0	2.0
50	130	175	218	60.3	77.5	2.0

Ordering chart Globe Control Valve Type 2301

Flange connection

Flow direction below the seat, Control function A (NC)

Port size (tube)		Seat size		Actuator size Ø	K _{vs} -value	Article no. DIN EN 1092-1 Seal/cone		Article no. ANSI B 16.5 Seal/cone		Article no. JIS 10K Seal/cone	
[mm]	[inch]	[mm]	[inch]	[mm]	[m³/h]	PTFE/St. St.	St. St./St. St.	PTFE/St. St.	St. St./St. St.	PTFE/St. St.	St. St./St. St.
10	¾	3	0.12	70	0.1	-	On request	-	-	-	-
		4	0.16	70	0.5	-	215207	-	-	-	-
		6	0.24	70	1.25	-	215209	-	-	-	-
		8	0.31	70	2.0	213985	215212	-	-	-	-
		10	0.39	70	2.7	213989	215215	-	-	-	-
15	½	3	0.12	70	0.1	-	233165	-	On request	-	On request
		4	0.16	70	0.5	-	210529	-	215219	-	215226
		6	0.24	70	1.25	-	215211	-	215220	-	215227
		8	0.31	70	2.1	213987	215214	215198	215221	215203	215228
		10	0.39	70	3.1	213991	215217	215199	215222	213913	213911
		15	0.59	70	4.3	204932	205010	204944	205021	204953	205030
20	¾	10	0.39	70	3.2	210530	215218	215200	215223	215204	215229
		15	0.59	70	5.2	213993	214030	214009	214046	213936	213933
		20	0.79	70	7.1	204935	205012	204946	205023	204955	205032
25	1	15	0.59	70	5.3	213994	214031	214010	214047	214020	214059
		20	0.79	70	7.2	213995	214032	214011	214048	213930	213914
		25	0.98	70	12.0	204937	205014	204948	205025	204957	205034
		90	12.0	242054	229421	464851	464367	242165	242199		
32	1 ¼	25	0.98	90	9.9	213997	210446	-	-	213939	213937
		130	13.0	222634	222655	-	-	222643	222665		
		32	1.3	90	13.4	204939	205016	-	-	213177	213178
		130	17.8	223597	223598	-	-	222645	222667		
40	1 ½	32	1.3	90	14.4	213999	214035	215201	215224	213932	213931
		130	20.2	222636	222657	463905	463913	222647	222668		
		40	1.6	90	17.5	204941	205018	204950	205027	204959	205037
		130	23.8	219791	222659	463907	463915	222649	222670		
50	2	40	1.6	90	18.0	214001	214037	214013	214050	213941	213940
		130	24.6	222638	222660	463908	463916	222650	222671		
		50	2.0	90	28.0	204942	205019	204951	205028	204960	205038
		130	37.0	214003	214039	214015	214052	214023	214062		
65	2 ½	50	2.0	130	45.0	214005	214040	239537	239573	214024	214063
		65	2.6	130	65.0	217772	219618	239535	239572	219617	219620
80	3	65	2.6	130	73.0	239545	239581	239546	239582	239547	239584
		80	3.2	130	100.0	239540	239576	239541	239577	239542	239578
100	4	80	3.2	130	110.0	239561	239597	239562	239598	239563	239599
		100	3.9	130	140.0	239556	239592	239557	239593	239558	239594

 Further versions on request

Control function
B (normally open: NO)

Process connection
Further port connections

Approvals
FDA, ATEX, (EC Gas Appliances Directive 2009/142/EG)

Ordering chart Globe Control Valve Type 2301, continued

Thread connection

Flow direction below the seat, Control function A (NC)

Port size (tube)		Seat size		Actuator size Ø	K _v -value	Article no. G (EN ISO 228-1)		Article no. NPT (ISO 7/1 / DIN EN 10226-2)		Article no. RC (ASME B 1.20.1)	
[mm]	[inch]	[mm]	[inch]			PTFE/St. St.	St. St./St. St.	PTFE/St. St.	St. St./St. St.	PTFE/St. St.	St. St./St. St.
10	3/8	3	0.12	70	0.1	-	284168	-	On request	-	On request
		4	0.16	70	0.5	-	215238	-	220447	-	220513
		6	0.24	70	1.25	-	215240	-	220450	-	220516
		8	0.31	70	2.0	215233	215242	220418	220453	220484	220519
		10	0.39	70	2.7	215235	215245	220421	220457	220487	220523
15	1/2	3	0.12	70	0.1	-	227784	-	466159	-	233369
		4	0.16	70	0.5	-	208843	-	220884	-	220891
		6	0.24	70	1.25	-	215241	-	220452	-	220518
		8	0.31	70	2.1	212964	215243	220881	220455	220888	220521
		10	0.39	70	3.1	215236	215246	220423	220459	220489	220525
		15	0.59	70	4.3	206432	213955	220882	220886	220889	220894
20	3/4	10	0.39	70	3.2	215237	215247	220425	220461	220491	220527
		15	0.59	70	5.2	214067	215248	220427	220463	220493	220529
		20	0.79	70	7.1	206584	211239	220430	220466	220496	220532
25	1	15	0.59	70	5.3	206588	210460	220428	220464	220494	220530
		20	0.79	70	7.2	206586	210721	220431	220467	220497	220533
		25	0.98	70	12.0	189145	210485	220434	220470	220500	220536
					12.0	242203	242207	464864	464867	242257	242380
32	1 1/4	25	0.98	90	9.9	214070	210407	220435	220471	220501	220537
				130	13.0	222677	222687	463921	463931	222740	222777
				130	17.8	210097	210458	220437	220473	220503	220539
		32	1.3	90	13.4	223599	223600	463956	463957	223605	223606
				130	17.8	214072	214084	220438	220474	220504	220540
40	1 1/2	32	1.3	130	20.2	222679	222689	463923	463933	222742	222763
				130	23.8	210098	207800	220440	220476	220506	220542
		40	1.6	90	17.5	222681	222691	463925	463935	222767	222765
				130	23.8	214074	214086	220441	220477	220507	220543
50	2	40	1.6	130	24.6	222682	222692	463926	463936	222768	222766
				130	37.0	210099	203693	220443	220479	220509	220545
		50	2.0	90	28.0	214076	214088	220444	220480	220510	220546
				130	37.0	214077	214089	239536	239620	220511	220547
65	2 1/2	50	2.0	130	45.0	219621	219622	239534	239571	220512	220548
		65	2.6	130	65.0						



Further versions on request



Control function

B (normally open: NO)



Process connection

Further port connections



Approvals

FDA, ATEX, FDA, ATEX, (EC Gas Appliances Directive 2009/142/EG)

Ordering chart Globe Control Valve Type 2301, continued

Weld ends connection

Flow direction below the seat, Control function A (NC)

Port size (tube)		Seat size		Actuator size Ø	K _{vs} -value	Article no. EN ISO 1127 series 1 / ISO 4200 / DIN 11866 Series B Seal/cone		Article no. DIN 11850 Series 2 / DIN 11866 Series A / DIN EN 10357 Series A Seal/cone		Article no. ASME BPE / DIN 11866 Series C Seal/cone	
[mm]	[inch]	[mm]	[inch]			PTFE/St. St.	St. St./St. St.	PTFE/St. St.	St. St./St. St.	PTFE/St. St.	St. St./St. St.
						Connection MW x TW		Connection MW x TW		Connection MW x TW	
10	⅜					17.2 x 1.6		13.0 x 1.5		-	
		3	0.12	70	0.1	-	On request	-	250658	-	-
		4	0.16	70	0.5	-	On request	-	284171	-	-
		6	0.24	70	1.25	-	On request	-	284177	-	-
		8	0.31	70	2.0	On request	On request	On request	284179	-	-
		10	0.39	70	2.7	On request	On request	257412	208553	-	-
15	½					21.3 x 1.6		19.0 x 1.5		12.7 x 1.65	
		3	0.12	70	0.1	-	259240	-	225130	-	466160
		4	0.16	70	0.5	-	215254	-	215257	-	464905
		6	0.24	70	1.25	-	215255	-	215258	-	464907
		8	0.31	70	2.1	212392	215872	215250	215911	464878	464909
		10	0.39	70	3.1	212393	215873	215251	215913	464882	222997
		15	0.59	70	4.3	209571	215909	215253	209173	-	-
20	¾					26.9 x 1.6		23.0 x 1.5		19.05 x 1.65	
		15	0.59	70	5.2	214094	214132	214113	208555	464455	211017
		20	0.79	70	7.1	214096	210696	211937	211953	-	-
25	1					33.7 x 2.0		29.0 x 1.5		25.4 x 1.65	
		20	0.79	70	7.2	214097	214135	214116	214154	464891	464920
		25	0.98	70	12.0	209572	214138	209384	209089	-	-
32	1 ¼					42.4 x 2.0		35.0 x 1.5		-	
		25	0.98	90	9.9	214101	214139	214119	214156	-	-
		32	1.3	90	13.4	214103	214141	211965	209181	-	-
40	1 ½					48.3 x 2.0		41.0 x 1.5		38.1 x 1.65	
		32	1.3	90	14.4	214104	214142	214121	213487	464898	464927
				130	20.2	222700	222721	222711	222732	464899	464928
		40	1.6	90	17.5	209440	214144	211967	209110	-	-
				130	23.8	222702	222723	222713	222734	-	-
50	2					60.3 x 2.0		53.0 x 1.5		50.8 x 1.65	
		40	1.6	90	18.0	210756	213561	214123	213411	464902	464931
				130	24.6	222703	222724	222714	222735	464903	464932
		50	2.0	90	28.0	214107	214146	211968	209185	-	-
130	37.0			214108	214147	214125	214159	-	-		
65	2 ½					76.1 x 2.3		70.0 x 2.0		-	
		65	2.6	130	65.0	219623	219626	219625	219628	-	-
80	3					88.9 x 2.3		85.0 x 2.0		-	
		80	3.2	130	100.0	239543	239579	239544	239580	-	-
100	4					114.3 x 2.6		104.0 x 2.0		-	
		100	3.9	130	140.0	239559	239595	239560	239596	-	-



Further versions on request



Control function

B (normally open: NO)



Process connection

Further port connections



Approvals

FDA, ATEX, FDA, ATEX, (EC Gas Appliances Directive 2009/142/EG)


Ordering chart Globe Control Valve Type 2301, continued

Clamp connection

Flow direction below the seat, Control function A (NC)

Port size (tube)		Seat size		Actuator size Ø	K _{vs} -value	Article no. DIN 32676 series A		Article no. DIN 32676 series B	
						Seal/cone		Seal/cone	
[mm]	[inch]	[mm]	[inch]	[mm]	[m³/h]	PTFE/St. St.	St. St./St. St.	PTFE/St. St.	St. St./St. St.
						Connection MC x TC, TC		Connection MC x TC, TC	
15	½	15	0.59	70	4.3	19 x 1.5, 34		21.3 x 1.6, 50.5	
						222593	282208	273974	282213
20	¾	20	0.79	70	7.1	23 x 1.5, 34		26.9 x 1.6, 50.5	
						225647	282209	209438	282214
25	1	25	0.98	90	12.0	29 x 1.5, 50.5		33.7 x 2.0, 50.5	
						222594	282210	241115	282215
32	1 ¼	32	1.3	90	13.4	35 x 1.5, 50.5		-	
						240415	282211	-	-
40	1 ½	40	1.6	130	23.8	41 x 1.5, 50.5		48.3 x 2.0, 64.0	
						240351	282212	209880	284181
50	2	50	2.0	130	37.0	53 x 1.5, 64		60.3 x 2.0, 77.5	
						282258	282259	282261	282263

 Further versions on request

 **Control function**
B (normally open: NO)

 **Process connection**
Further port connections

 **Approvals**
FDA, ATEX, FDA, ATEX, (EC Gas Appliances Directive 2009/142/EG)

Valve system Continuous ELEMENT– request for quotation

Note
You can fill out the fields directly in the PDF file before printing out the form.

▶ Please fill out and send to your nearest Bürkert office* with your inquiry or order

Company:	Contact person:
Customer no.:	Department:
Address:	Tel./Fax.:
Postcode/town:	E-Mail:

= mandatory fields to fill out

Quantity:

Required delivery date:

Operating data

Pipe line DN PN

Pipe Material

Process medium

Type of medium Liquid Steam Gas

	min.	standard	max.	Unit
<input type="checkbox"/> Flow rate (Q, Q _N , W) ¹⁾	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="checkbox"/> Temperature at valve inlet T1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="checkbox"/> Absolute pressure at valve inlet P1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="checkbox"/> Absolute pressure at valve outlet P2	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Steam Pressure P _v	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Kinematic viscosity (ν)	<input type="text"/>	mm ² /s or cSt		
Dynamic viscosity (η)	<input type="text"/>	mPa.s or cP		
Standard density	<input type="text"/>	Kg/m ³		
Max. sound level accepted	<input type="text"/>	dB (A)		

¹⁾ standard unit:
Liquid Q = m³/h;
Steam W = kg/h;
Gas Q_N = Nm³/h

Valves features

Cone seal material PTFE/Stainless steel Stainless st./Stainless st. PEEK/Stainless steel

Nominal pressure PN

Seat size

Type of connection Flanged Threaded Welded Clamp

Standard connection ISO DIN Other

Control function NC¹⁾ NO¹⁾

¹⁾ NC: normally closed by spring action; NO: normally open by spring action:

Please specify item no. (if known):

Comments

continued on next page →

Valve system Continuous ELEMENT– request for quotation, *continued*

Control unit features

Click on the orange box „More info.“ below... you will come to our website for the resp. product where you can download the data sheet.

For actuator sizes Ø70/Ø90/Ø130 mm

Process Controller TopControl Type 8693



- 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

Positioner TopControl Type 8692



- Digital positioner without sensor input
- Lighted graphic display with membrane keypad
- Tune function for automatic start-up
- Field bus communication
- Diagnostic functions

Pneumatic function

- Single-acting
- Double-acting

Analogue feedback

- 0/4 - 20 mA
- 0/4 - 20 mA + 2 binary outputs

Approvals

- ATEX Cat. 3GD, IECEx
- None

Communication

- Profibus
- DeviceNet
- None

Electrical connection

- Cable gland
- Multipol connection
- None

Diagnostic function^{*)}

- Yes
- No

Proximity switches (optional)

- Yes (Request an end position)
- No

^{*)} In combination with digital outputs

For actuator sizes Ø70/Ø90/Ø130 mm

Positioner TopControl Type 8694



- Status LED and DIP switches
- Tune-function for automatic start-up
- Positioning system for single-acting actuators
- With AS-Interface fieldbus

Pneumatic function

- Single-acting

Analogue feedback

- Yes
- No

Approvals

- ATEX Cat. 3GD, IECEx
- None

Communication

- AS-Interface (only 8694)
- None

Electrical connection

- Cable gland (only 8694)
- M12 Multipol connection
- None

For actuator size Ø50 mm

Positioner TopControl Type 8696



- Status LED and DIP switches
- Tune-function for automatic start-up
- Positioning system for single-acting actuators
- With AS-Interface fieldbus

continued on next page →

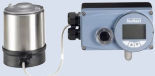
Valve system Continuous ELEMENT– request for quotation, continued

Control unit features

Click on the orange box „More info.“ below... you will come to our website for the resp. product where you can download the data sheet.


For actuator sizes Ø70/Ø90/Ø130 mm

Process Controller SideControl Type 8793 with remote sensor Type 8798 [More info.](#) [More info.](#)



- 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

Positioner SideControl Type 8792 with remote sensor Type 8798 [More info.](#) [More info.](#)



- Digital positioner without sensor input
- Lighted graphic display with membrane keypad
- Tune function for automatic start-up
- Field bus communication
- Diagnostic functions

Pneumatic function

- Single-acting (actuator size Ø70/90)
- Single and Double-acting (actuator size Ø130)

Communication

- Profibus
- DeviceNet
- None

Diagnostic function^{*)}

- Yes
- No

Analogue feedback

- 0/4-20 mA
- 0/4-20 mA + 2 binary outputs
- 0-5/10 V
- 0-5/10 V + 2 binary outputs

Electrical connection

- Cable gland (without Bus)
- Multipol connection


Approvals

- ATEX Cat. 3GD
- None

^{*)} In combination with digital outputs


For actuator sizes Ø70/Ø90/Ø130 mm

Positioner SideControl Basic Type 8791 with remote sensor Type 8798 [More info.](#) [More info.](#)



- „simple positioner“
- Universal positioning system for single and double acting actuators
- Tune function for automatic start-up
- Feldbuskommunikation

Positioner SideControl Basic IP20 Type 8791 with remote sensor Type 8798 [More info.](#) [More info.](#)



- „simple positioner“
- Universal positioning system for single and double acting actuators
- Tune function for automatic start-up

Pneumatic function

- Single-acting (actuator size Ø70/90)
- Single and Double-acting (actuator size Ø130)

Communication

- AS-Interface (not by Basic IP20)
- Analogue-Profile S-7.3.4 (Only setpoint)
- Analogue-Profile S-7.A.5 (Only setpoint & Feedback)
- None

Analogue feedback

- 0/4-20 mA
- No

Electrical connection

- Cable gland (without Bus)
- Multipol connection

Approvals

- ATEX Cat. 3GD (not by Basic IP20)
- None

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www.burkert.com

In case of special application conditions, please consult for advice.

Subject to alteration.
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