



Pneumatically operated 2 way Globe Control Valve

- 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 valve seats
- Control units can be mounted directly without external tubing



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

Can be combined with

	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 8693 Digital electropneumatic process controller for the integrated mounting on process control valves	▶
	Type 8792 Digital electropneumatic Positioner SideControl	▶
	Type 8791 Digital electropneumatic Positioner SideControl	▶
	Type 8793 Digital electropneumatic Process Controller SideControl	▶
	Type 8802 ELEMENT continuous control valve systems - overview	▶

Type description

In line with Bürkert's philosophy the construction of the type 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.

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1. General technical data

Product properties	
Dimensions	Detailed information can be found in chapter "6. Dimensions" on page 7.
Material	Detailed information can be found in chapter "5. Materials" on page 5.
Design	Globe control valve
Nominal diameter	DN10...DN100, NPS ¾...NPS 4
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 "7.1. Fluidic data" on page 13
Nominal pressure	PN25 (DIN EN 1333), Class 150 (DIN EN 1759)
Seat leakage acc. to DIN EN 60534-4:2006	Leakage class III and IV for stainless steel Leakage class VI for PTFE/steel and PEEK/steel (see "7.1. Fluidic data" on page 13)
K _v value	0.1 m³/h...140 m³/h, see "7.1. Fluidic data" on page 13
Operating characteristic	Linear or equal percentage
Theoretical rangeability	Up to 50:1
Medium data	
Medium	Steam, water, neutral gases, alcohol, oils, fuels, hydraulic fluids, salt solution, alkali solutions, organic solvents, for fuel gases of category I, II and III acc. to Gas Appliances Regulation (EU) 2016/426 and oxygen
Medium temperature	-40 °C...230 °C, see "7.2. Operating limits" on page 16
Viscosity (max.)	Max. 600 mm²/s
Control medium	Air, neutral gases
Process/Port connection & communication	
Port connection²⁾	
Flange connection	DIN EN 1092-1 ANSI B 16.5 JIS 10K
Threaded connection	G (DIN ISO 228-1) NPT (ASME B1.20.1) Rc (ISO 7-1)
Welded connection	DIN EN ISO 1127 / ISO 4200 / DIN11866 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 Gas Appliances Regulation Machinery Directive
Approvals	Explosion proof ATEX / IECex
Material certificate	2.2, 3.1
Environment and installation	
Degree of protection	IP65/67
Installation position	As required, preferably with actuator upright

2. Product versions

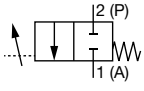
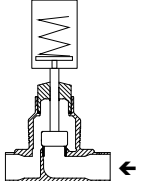
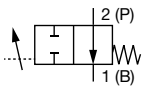
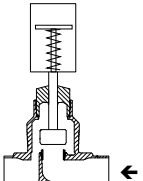
2.1. 2301 ELEMENT

Product properties	
Nominal diameter	DN10...100
Actuator size	50 mm (D), 70 mm (M), 90 mm (N), 130 mm (P)
Performance data	
Maximum pilot pressure	5.6...7 bar(g)
Medium data	
Medium temperature	-40 °C...230 °C, see "7.2. Operating limits" on page 16
Environment and installation	
Ambient temperature	-10...80 °C (for remote positioner or process controller) -10...55 °C (TOP Control) See "Operating limits for ambient and medium temperature" on page 17

2.2. 2712 CLASSIC

Product properties	
Nominal diameter	DN65...100
Actuator size	225 mm (L)
Performance data	
Maximum pilot pressure	5.0...6.0 bar(g)
Medium data	
Medium temperature	-40 °C...180 °C, see "7.2. Operating limits" on page 16
Environment and installation	
Ambient temperature	-10...50 °C

3. Circuit functions

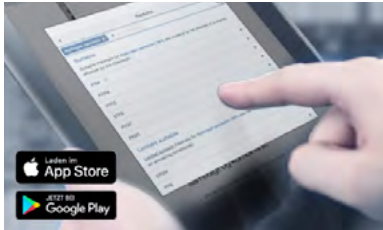
Control function (CF)	Description	
Flow direction below seat for fluids, steam and gases		
	CF: A, pneumatically operated control valve 2/2 way Flow direction below seat Normally closed by spring force	
	CF: B, pneumatically operated control valve 2/2 way Flow direction below seat Normally open by spring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

4. Approvals

Approval	Description
	Food produce contact Materials in contact with the medium conform to EC regulation 1935/2004 (standard Type 2301, option Type 2712) Materials in contact with the medium conform to FDA (option)
	Drinking water Suitable for use with drinking water 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 20 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
	Fuel gases Approval according to the European Gas Appliances Regulation (EU) 2016/426, DVGW DIN EN 161 and DIN EN 16678, Class D, suitable for medium temperature 0 °C...60 °C, ambient temperature -10...60 °C and operating pressures 0...25 bar(g) (option)

5. Materials

5.1. 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.

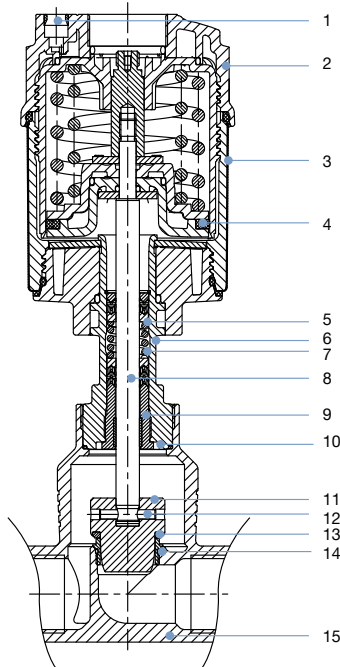
[Start Chemical Resistance Check](#)

5.2. Material specifications

2301 ELEMENT

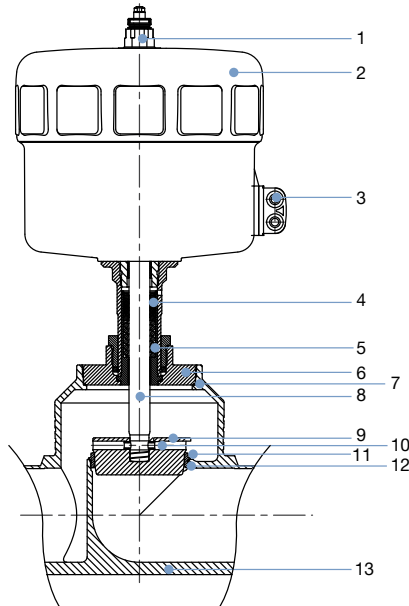
Note:

The Type 2301 globe control valve is supplied with different connection ports (flange, threaded, welded and clamp). These connections are not shown in the picture. They correspond to the material of the valve body.



No.	Element	Material
1	Pilot air ports	Push-in connector PP
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)
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), PTFE filled
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 seat with O-Ring	Stainless steel 1.4571, EPDM
15	Valve body	Stainless steel CF3M

2712 CLASSIC



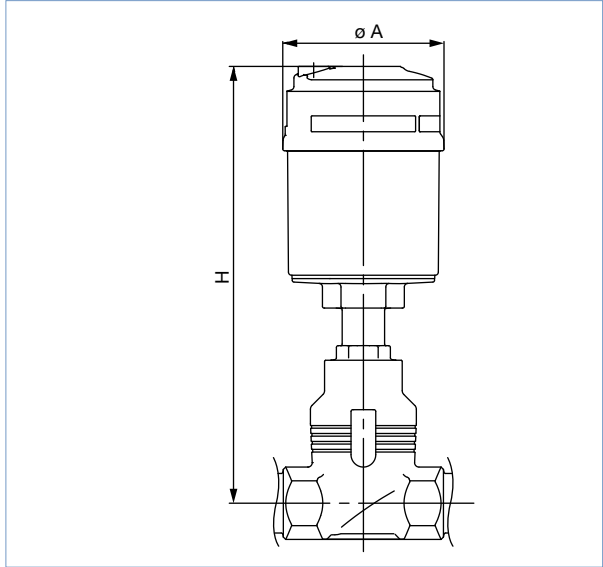
No..	Element	Material
1	Adapter	Stainless steel 1.4305
2	Actuator	PA Polyamide
3	Pilot air ports	Stainless steel 1.4305
4	Spindle sealing	PTFE V-Rings (filled), with spring compensation
5	Spring	Stainless steel 1.4568
6	Nipple	Stainless steel 1.4404
7	Body seal	Graphite or PTFE
8	Spindle	Stainless steel 1.4404
9	Control cone	Stainless steel 1.4571
10	Spring straight pin	Stainless steel 1.4310
11	Seat seal	Stainless steel 1.4571, PTFE or PEEK
12	Valve seat with O-Ring	Stainless steel 1.4571, EPDM
13	Valve body	Stainless steel CF3M

6. Dimensions

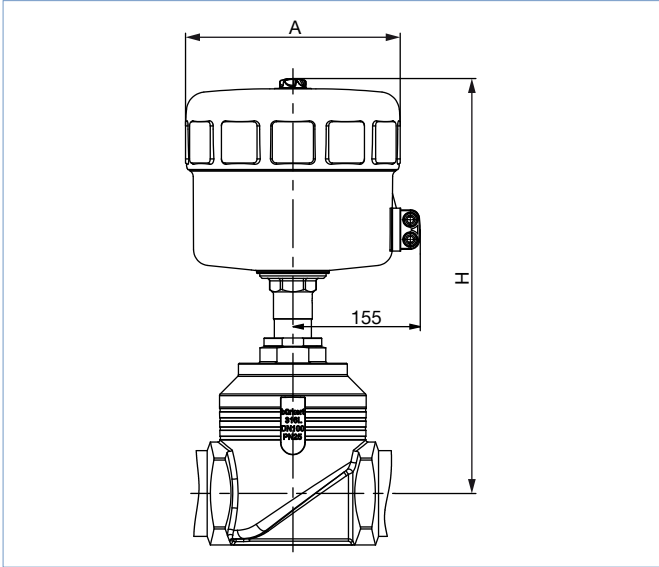
6.1. Actuator

Note:
Dimensions in mm, unless otherwise stated

Continuous ELEMENT Type 2301 valve



Continuous ELEMENT Type 2712 valve



Nominal diameter (pipe)		Actuator size	Ø A	H
DN	NPS			
10	3/8	50	64.5	226
		70	91	239
15	1/2	50	64.5	226
		70	91	239
20	3/4	50	64.5	232
		70	91	245
25	1	50	64.5	235
		70	91	248
		90	120	301
32	1 1/4	90	120	329
		130	159	381
40	1 1/2	90	120	334
		130	159	386
50	2	90	120	340
		130	159	392
65	2 1/2	130	159	446
		225	261	474
80	3	130	159	454
		225	261	482
100	4	130	159	464
		225	261	492

6.2. Valve system Continuous ELEMENT

Note:

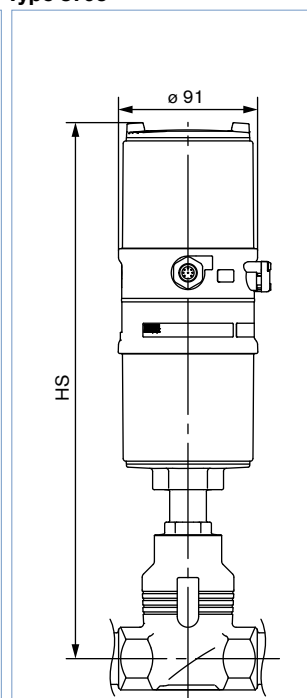
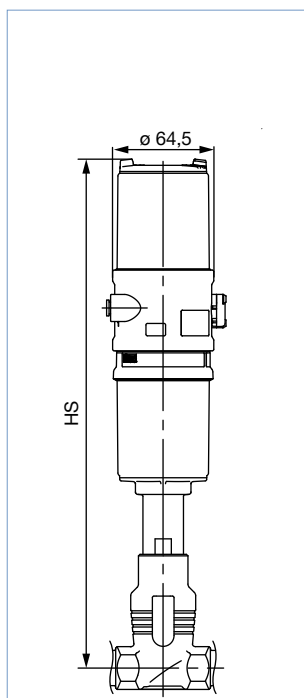
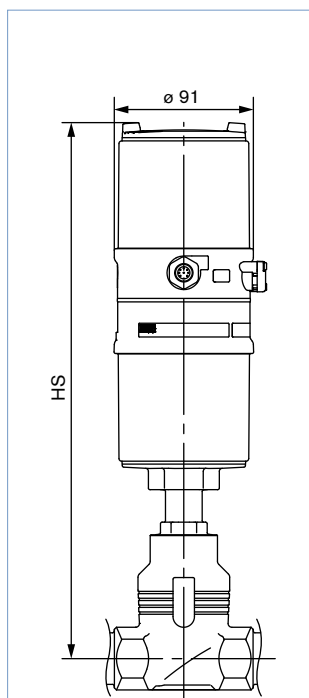
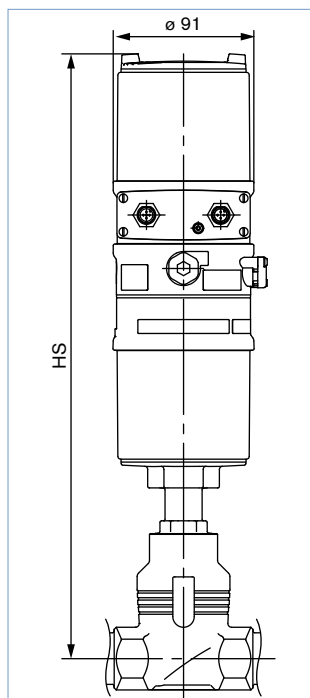
Dimensions in mm, unless otherwise stated

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

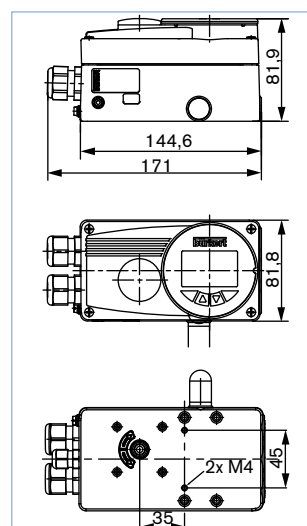
With positioner
TopControl Basic,
Type 8694

With positioner
TopControl Basic,
Type 8696

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



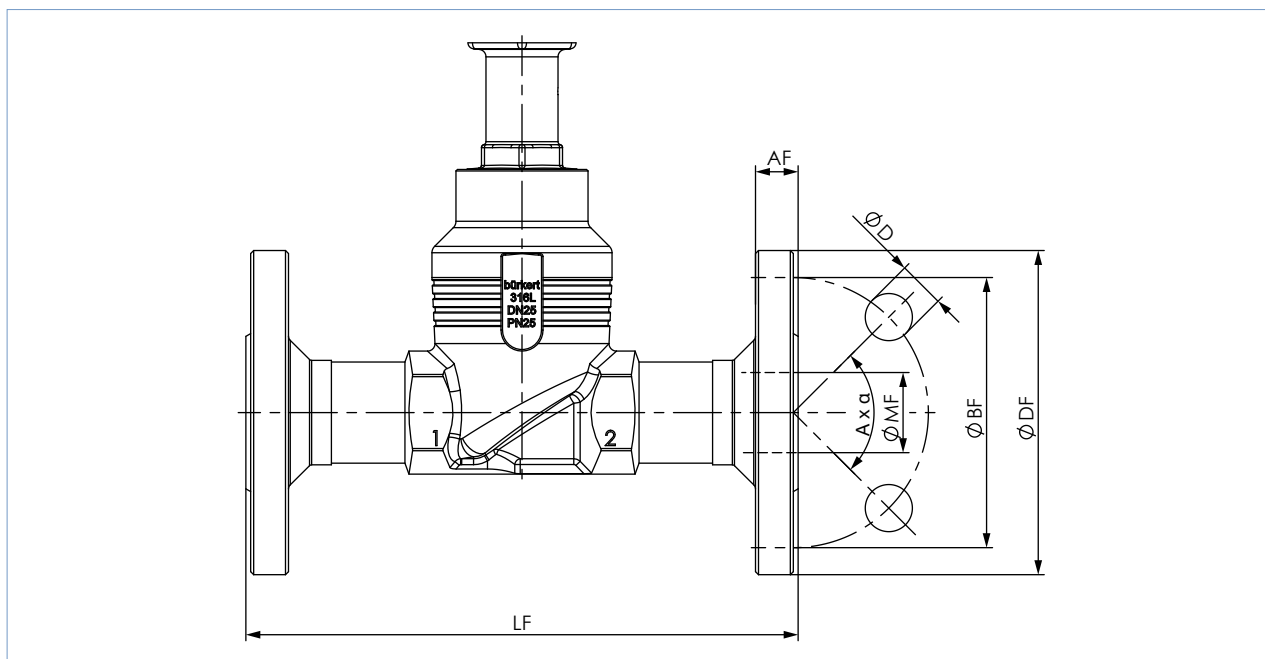
Nominal diameter (pipe)		Actuator size	HS with		
DN	NPS		8692 or 8693	8694 or 8696	8792 or 8793
10	3/8	50	—	329	—
		70	383	342	329
15	1/2	50	—	329	—
		70	383	342	342
20	3/4	50	—	335	—
		70	389	348	348
25	1	50	—	342	—
		70	392	351	351
		90	445	404	404
32	1 1/4	90	473	432	432
		130	525	484	484
40	1 1/2	90	478	437	437
		130	530	489	489
50	2	90	484	443	443
		130	536	495	495
65	2 1/2	130	590	549	549
		225	629	586	586
80	3	130	598	557	557
		225	637	594	594
100	4	130	608	567	567
		225	647	604	604



6.3. Body with flange connection

Note:

Dimensions in mm, unless otherwise stated



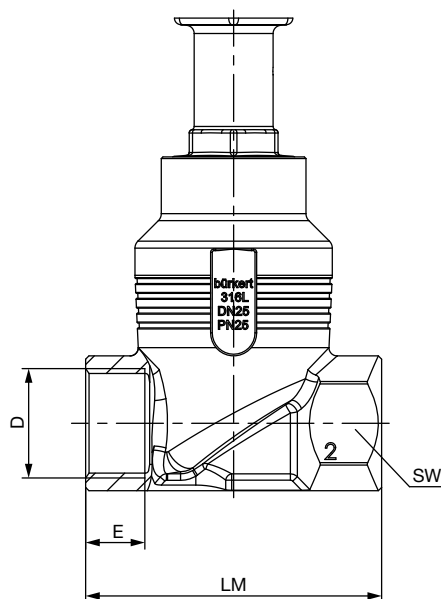
Nominal diameter (pipe)	DIN EN 1092 PN25 FTF 1 acc. to DIN EN 558-1							JIS 10K FTF 10 acc. to DIN EN 558-2						
	Ø DF	LF	Ø BF	AF	Ø D	A x α	Ø MF	Ø DF	LF	Ø BF	AF	Ø D	A x α	Ø MF
10	90	130	60	16	14	4 x 90°	13.6	-	-	-	-	-	-	-
15	95	130	65	16	14	4 x 90°	18.1	95	108	70	12	15	4 x 90°	18.1
20	105	150	75	18	14	4 x 90°	23.7	100	117	75	14	15	4 x 90°	23.7
25	115	160	85	18	14	4 x 90°	29.7	125	127	90	14	19	4 x 90°	29.7
32	140	180	100	18	18	4 x 90°	38.4	135	140	100	16	19	4 x 90°	38.4
40	150	200	110	18	18	4 x 90°	44.3	140	165	105	16	19	4 x 90°	44.3
50	165	230	125	20	18	4 x 90°	56.3	155	203	120	16	19	4 x 90°	56.3
65	185	290	145	22	18	8 x 45°	66.0	175	216	140	18	19	4 x 90°	71.5
80	200	310	160	24	18	8 x 45°	81.0	185	241	150	18	19	8 x 45°	84.3
100	235	350	190	24	22	8 x 45°	100.0	292	292	175	18	19	8 x 45°	109.1

Nominal diameter (pipe)	ANSI B 16.5 Class 150 FTF 37 acc. to DIN EN 558-2						
	Ø DF	LF	Ø BF	AF	Ø D	A x α	Ø MF
½	89	184	60.5	11.2	15.7	4 x 90°	15.7
¾	99	184	69.9	12.7	15.7	4 x 90°	20.8
1	108	184	79.2	14.2	15.7	4 x 90°	26.7
1½	127	222	98.6	17.5	15.7	4 x 90°	40.9
2	152	254	120.7	19.1	19.1	4 x 90°	52.6
2½	178	276	139.7	22.3	19.1	4 x 90°	62.7
3	190	298	152.5	23.9	19.1	4 x 90°	78.0
4	229	432	190.5	23.9	19.1	8 x 45°	102.4

6.4. Body with threaded connection

Note:

Dimensions in mm, unless otherwise stated

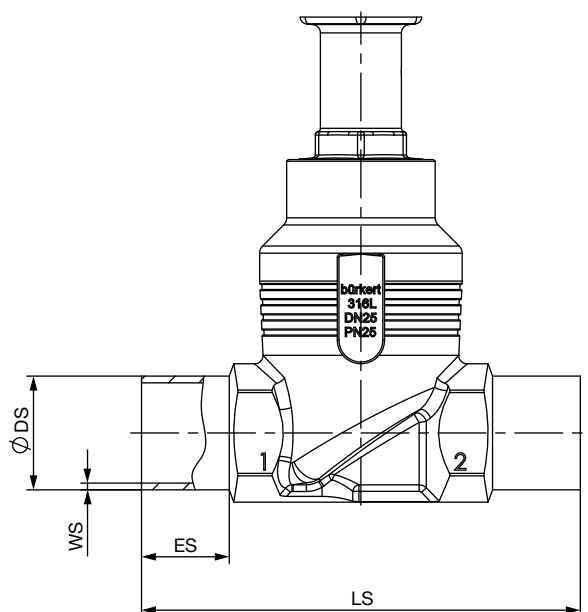


Nominal diameter (pipe)	G, Rc, NPT (EN ISO 228-1, ISO 7/1/DIN EN 10226-2, ASME B 1.20.1)				LM	SW
DN	D	E	[G]	[NPT]		
	NPS					
10	3/8	12		10.3	65	27
15	1/2	14		13.7	65	27
20	3/4	16		14	75	34
25	1	18		16.8	90	41
32	1 1/4	20		17.3	110	50
40	1 1/2	22		17.3	120	55
50	2	24		17.6	150	70
65	2 1/2	26		23.7	185	85
80	3	28		30.5	205	100
100	4	32		33	240	125

6.5. Body with welded connection

Note:

Dimensions in mm, unless otherwise stated



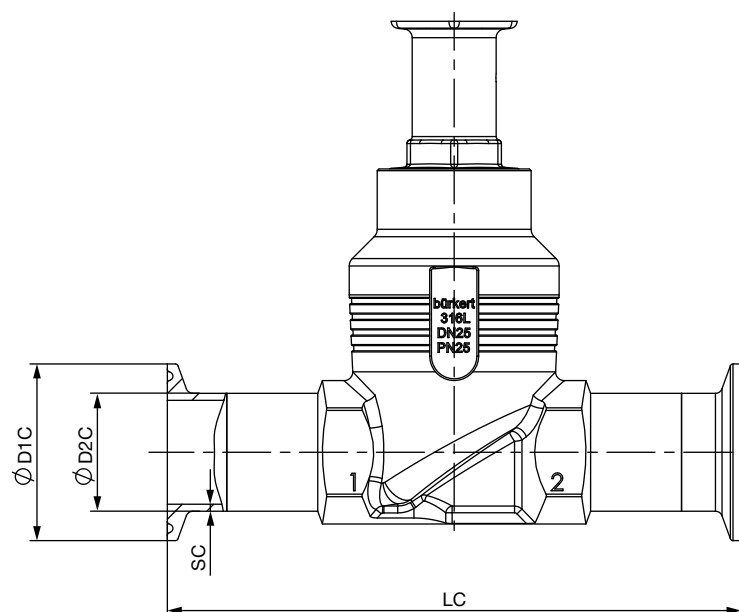
Nominal diameter (pipe) DN	ES	LS	EN ISO 1127 1/ISO 4200/DIN 11866 B		DIN 11850 2/DIN 11866 A/DIN EN 10357 A	
			Ø DS	WS	Ø DS	WS
10	20	90	17.2	1.6	13	1.5
15	20	90	21.3	1.6	19	1.5
20	20	100	26.9	1.6	23	1.5
25	26	130	33.7	2.0	29	1.5
32	26	140	42.4	2.0	35	1.5
40	26	150	48.3	2.0	41	1.5
50	26	175	60.3	2.0	53	1.5
65	26	210	76.1	2.3	70	2.0
80	26	230	88.9	2.3	85	2.0
100	26	260	114.3	2.6	104	2.0

Nominal diameter (pipe) NPS	ES	LS	ASME BPE/DIN 11866 C	
			Ø DS	WS
1/2	20	90	12.7	1.65
3/4	20	90	19.05	1.65
1	20	100	25.4	1.65
1 1/2	26	140	38.1	1.65
2	26	150	50.8	1.65
2 1/2	26	175	63.5	1.65
3	26	210	76.2	1.65
4	26	260	101.6	2.11

6.6. Body with clamp connection

Note:

Dimensions in mm, unless otherwise stated



Nominal diameter (pipe)	Clamp: DIN 32676 A				Clamp: DIN 32676 B			
	Pipe: DIN 11850 2 DIN 11866 A DIN EN 10357 A				Pipe: EN ISO 1127 1 ISO 4200 DIN 11866 B			
DN	LC	Ø D2C	Ø D1C	SC	LC	Ø D2C	Ø D1C	SC
15	126	19	34	1.5	146	21.3	50.5	1.6
20	136	23	34	1.5	136	26.9	50.5	1.6
25	173	29	50.5	1.5	164	33.7	50.5	2.0
40	193	41	50.5	1.5	193	48.3	64.0	2.0
50	218	53	64	1.5	218	60.3	77.5	2.0

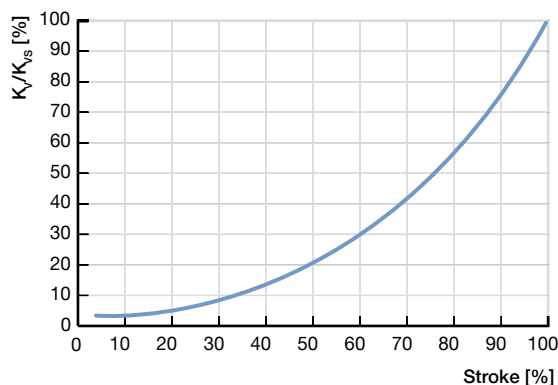
Nominal diameter (pipe)	Clamp: ASME BPE DIN 32676 C			
	Pipe: ASME BPE DIN 11866 C			
NPS	LC	Ø D2C	Ø D1C	SC
½	122	12.7	25.0	1.65
¾	126	19.05	25.0	1.65
1	126	25.4	50.5	1.65
1½	172	38.1	50.5	1.65
2	182	50.8	64.0	1.65
2½	231	63.5	77.5	1.65
3	265	76.2	91.0	1.65
4	315	101.6	119.0	2.11

7. Performance specifications

7.1. Fluidic data

Flow characteristics

- Flow characteristic acc. to DIN EN 60534-2-4
- K_{VR} value at 5 % of stroke for $DN > 10$ mm
 K_{VR} value at 10 % of stroke for $DN \leq 10$ mm
- Actuator size 70 offers a better control quality compared to actuator size 50 and is therefore preferred (K_{VR} value = smallest K_V value, at which the tilt tolerance according to DIN EN 60534-2-4 is still maintained).



Equal percentage flow curve - detailed values please see below

Overview of fluidic data for flow under seat (for gases, steam and liquids)

Note:

- K_V value [m^3/h]: Measured with water acc. to DIN EN 60534-2-3
- See "7.2. Operating limits" on page 16.

Nominal diameter (pipe)		Seat size	Actuator size Ø	Operating pressure max. SF: A (Seat leakage class)			Characteristic curve (theoretical rangeability)	K _v value at stroke [m³/h]						K _{vs} value
				Seat seal										
				Stainless steel	PTFE	PEEK		5 %	10 %	30 %	50 %	70 %	90 %	
DN	NPS		[mm]	[bar(g)]	[bar(g)]	[bar(g)]								
10	¾ ^{1.)}	3	50 (D)	16 (IV)	–	–	Linear (10:1)	–	0.003	0.015	0.037	0.065	0.090	0.10
			70 (M)	25 (IV)										
		4	50 (D)	16 (IV)			Linear (25:1)	–	0.015	0.10	0.19	0.27	0.33	0.35
			70 (M)	25 (IV)										
		4	50 (D)	16 (IV)			Linear (10:1)	–	0.050	0.16	0.27	0.36	0.44	0.50
			70 (M)	25 (IV)										
		6	50 (D)	16 (IV)			Linear (25:1)	–	0.12	0.48	0.76	0.98	1.1	1.2
			70 (M)	25 (IV)										
		6	50 (D)	16 (IV)	16 (VI)	10 (VI)	Equal percent-age (50:1)	–	0.007	0.045	0.16	0.41	1.1	1.3
			70 (M)	25 (IV)	25 (VI)	10 (VI)								
		8	50 (D)	16 (IV)	16 (VI)	10 (VI)		–	0.070	0.12	0.26	0.61	1.5	2.0
			70 (M)	25 (IV)	25 (VI)	10 (VI)								
		10	50 (D)	16 (IV)	16 (VI)	10 (VI)		–	0.11	0.19	0.48	1.0	2.3	2.7
			70 (M)	25 (IV)	25 (VI)	10 (VI)								

Nominal diameter (pipe)		Seat size	Actuator size Ø	Operating pressure max. SF: A (Seat leakage class)			Characteristic curve (theoretical rangeability)	K _v value at stroke [m³/h]						K _{vs} value	
				Seat seal				5 %	10 %	30 %	50 %	70 %	90 %		[m³/h]
				Stainless steel	PTFE	PEEK									
DN	NPS		[mm]	[bar(g)]	[bar(g)]	[bar(g)]									
15	½ ^{1,3}	3	50 (D)	16 (IV)	–	–	Linear (10:1)	–	0.003	0.015	0.037	0.065	0.090	0.10	
			70 (M)	25 (IV)											
		4	50 (D)	16 (IV)			Linear (25:1)	–	0.015	0.10	0.19	0.27	0.33	0.35	
			70 (M)	25 (IV)											
		4	50 (D)	16 (IV)			Linear (10:1)	–	0.050	0.16	0.27	0.36	0.44	0.50	
			70 (M)	25 (IV)											
		6	50 (D)	16 (IV)			Linear (25:1)	–	0.12	0.48	0.76	0.98	1.1	1.2	
			70 (M)	25 (IV)											
		6	50 (D)	16 (IV)	16 (VI)	10 (VI)	Equal percent-age (50:1)	–	0.007	0.045	0.16	0.41	1.1	1.3	
			70 (M)	25 (IV)	25 (VI)	10 (VI)									
		8	50 (D)	16 (IV)	16 (VI)	10 (VI)		–	0.080	0.13	0.27	0.63	1.6	2.1	
			70 (M)	25 (IV)	25 (VI)	10 (VI)									
		10	50 (D)	16 (IV)	16 (VI)	10 (VI)		–	0.11	0.19	0.49	1.1	2.5	3.1	
			70 (M)	25 (IV)	25 (VI)	10 (VI)									
		15	50 (D)	16 (IV)	16 (VI)	10 (VI)		0.14	0.17	0.35	0.80	1.8	3.7	4.3	
			70 (M)	25 (IV)	25 (VI)	10 (VI)									
20	¾ ^{1,3}	10	50 (D)	16 (IV)	16 (VI)	10 (VI)		0.11	0.12	0.20	0.52	1.2	2.6	3.2	
			70 (M)	25 (IV)	25 (VI)	10 (VI)									
		15	50 (D)	16 (IV)	16 (VI)	10 (VI)		0.14	0.17	0.35	0.80	1.8	4.0	5.2	
			70 (M)	25 (IV)	25 (VI)	10 (VI)									
		20	70 (M)	16 (IV)	16 (VI)	10 (VI)		0.20	0.25	0.45	1.1	2.4	5.2	7.1	
			90 (N)	25 (IV)	25 (VI)	10 (VI)									
25	1	15	50 (D)	16 (IV)	16 (VI)	10 (VI)		0.14	0.17	0.35	0.80	1.8	4.1	5.3	
			70 (M)	25 (IV)	25 (VI)	10 (VI)									
		20	70 (M)	16 (IV)	16 (VI)	10 (VI)	0.20	0.25	0.47	1.1	2.5	5.4	7.2		
			90 (N)	25 (IV)	25 (VI)	10 (VI)									
		25	70 (M)	12 (IV)	12 (VI)	7 (VI)	0.35	0.38	1.0	2.2	5.1	9.4	12.0		
			90 (N)	25 (IV)	25 (VI)	10 (VI)									
32	1¼ ^{1,3}	20	90 (N)	25 (IV)	25 (VI)	10 (VI)	0.21	0.24	0.45	0.85	1.8	3.8	5.5		
			130 (P)				0.22	0.25	0.50	1.1	2.5	5.8	8.0		
		25	90 (N)				0.38	0.45	0.93	1.8	3.7	6.7	8.9		
			130 (P)				0.40	0.47	1.1	2.5	5.4	10.3	13.0		
		32	90 (N)	16 (IV)	16 (VI)	10 (VI)	0.45	0.58	1.1	2.5	4.9	10.1	13.4		
			130 (P)	25 (IV)	25 (VI)	10 (VI)	0.48	0.60	1.3	3.1	6.8	14.0	17.8		
		40	90 (N)	25 (IV)	25 (VI)	10 (VI)	0.38	0.48	0.95	1.9	3.7	7.2	9.4		
			130 (P)				0.40	0.50	1.1	2.6	5.6	10.7	13.6		
40	1½ ^{1,3}	25	90 (N)	16 (IV)	16 (VI)	10 (VI)	0.45	0.55	1.1	2.5	5.0	10.8	14.4		
			130 (P)	25 (IV)	25 (VI)	10 (VI)	0.48	0.60	1.3	3.2	6.9	15.0	20.0		
		32	90 (N)	12 (IV)	12 (VI)	7 (VI)	0.55	0.67	1.5	3.2	6.5	13.6	17.5		
			130 (P)	25 (IV)	25 (VI)	10 (VI)	0.60	0.70	1.7	4.0	9.2	18.2	24.0		
		40	90 (N)	16 (IV)	16 (VI)	10 (VI)	0.45	0.56	1.1	2.5	5.0	11.4	15.3		
			130 (P)	25 (20 ^{2,3})(IV)	25 (20 ^{2,3})(VI)	10 (VI)	0.48	0.60	1.3	3.2	6.9	16.0	21.0		
		50	90 (N)	12 (IV)	12 (VI)	7 (VI)	0.57	0.68	1.5	3.2	6.4	13.8	18.0		
			130 (P)	25 (20 ^{2,3})(IV)	25 (20 ^{2,3})(VI)	10 (VI)	0.60	0.70	1.7	4.0	9.2	18.9	24.5		
50	2 ^{1,3}	32	90 (N)	7 (III)	7 (VI)	–	0.85	1.1	2.6	5.4	11.4	21.5	28.0		
			130 (P)	25 (20 ^{2,3})(IV)	25 (20 ^{2,3})(VI)	10 (VI)	0.90	1.1	2.9	6.8	15.5	29.5	37.0		
		40	130 (P)	25 (15 ^{2,3})(IV)	25 (15 ^{2,3})(VI)	10 (VI)	0.65	0.75	1.8	4.3	10.4	22.0	29.0		
			130 (P)				1.0	1.2	3.1	6.7	16.0	35.0	45.0		
		65	130 (P)	16 (15 ^{2,3})(IV)	16 (15 ^{2,3})(VI)	10 (VI)	1.6	2.0	5.0	13.5	33.0	56	65		
			225 (L)	25 (15 ^{2,3})(IV)	25 (15 ^{2,3})(VI)	10 (VI)	1.1	1.4	3.2	8.0	18.5	46.5	62		
		65	2½ ^{1,3}	40	130 (P)	25 (15 ^{2,3})(IV)	25 (15 ^{2,3})(VI)	10 (VI)							
					130 (P)										

Nominal diameter (pipe)		Seat size	Actuator size Ø	Operating pressure max. SF: A (Seat leakage class)			Characteristic curve (theoretical rangeability)	K _v value at stroke [m³/h]						K _{vs} value	
				Seat seal											
				Stainless steel	PTFE	PEEK									
DN	NPS		[mm]	[bar(g)]	[bar(g)]	[bar(g)]		5 %	10 %	30 %	50 %	70 %	90 %	[m³/h]	
80	3 ¹⁾	50	130 (P)	25(12,5 ²⁾ (IV)	25 (12,5 ²⁾ (VI)	10 (VI)	Equal percent-age (50:1)	1.0	1.2	3.4	8.3	19.0	35.0	45.0	
			65	130 (P)	16(12,5 ²⁾ (IV)	16 (12,5 ²⁾ (VI)		10 (VI)	1.6	2.0	5.0	13.0	35.0	61	73
				225 (L)	25 (12,5 ²⁾ (IV)	25 (12,5 ²⁾ (VI)		10 (VI)	1.4	1.7	3.8	8.2	19.5	50	70
		80	130 (P)	10 (IV)	10 (VI)	–		2.5	3.4	10.7	27.0	58	87	100	
			225 (L)	12,5 (IV)	12,5 (VI)	7 (VI)		2.1	2.6	7.0	16.0	40.0	83	100	
100	4	65	130 (P)	16 (10 ²⁾ (IV)	16 (10 ²⁾ (VI)	10 (VI)		1.4	1.8	5.0	15.0	37.0	64	77	
			225 (L)	25 (10 ²⁾ (IV)	25 (10 ²⁾ (VI)	10 (VI)		1.4	1.7	3.8	8.3	20.0	51	75	
			80	130 (P)	10 (IV)	10 (VI)		–	2.2	3.1	10.3	30.0	66	97	110
		225 (L)		12,5 (10 ²⁾ (IV)	12,5 (10 ²⁾ (VI)	7 (VI)		2.1	2.6	7.0	17.0	44.0	89	115	
		100		130 (P)	6 (IV)	6 (VI)		–	3.8	5.2	15.0	46.5	90	128	140
			225 (L)	10 (IV)	10(VI)	–		3.2	3.9	9.0	20.5	51	118	140	

1.) Deviation for line connections according to ASME BPE: the next larger nominal connection size is used, e.g. NPS 1 instead of NPS ¾

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

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

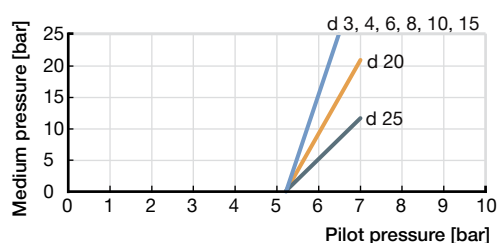
Note:

d = Seat size

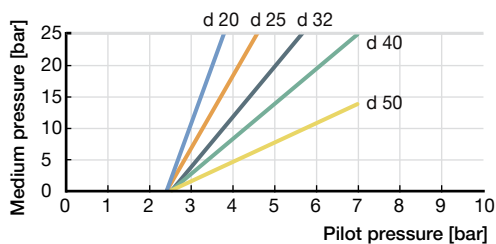
Actuator size Ø: 50 mm



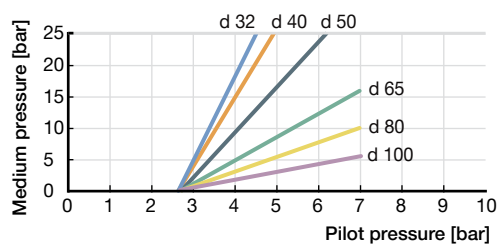
Actuator size Ø: 70 mm



Actuator size Ø: 90 mm



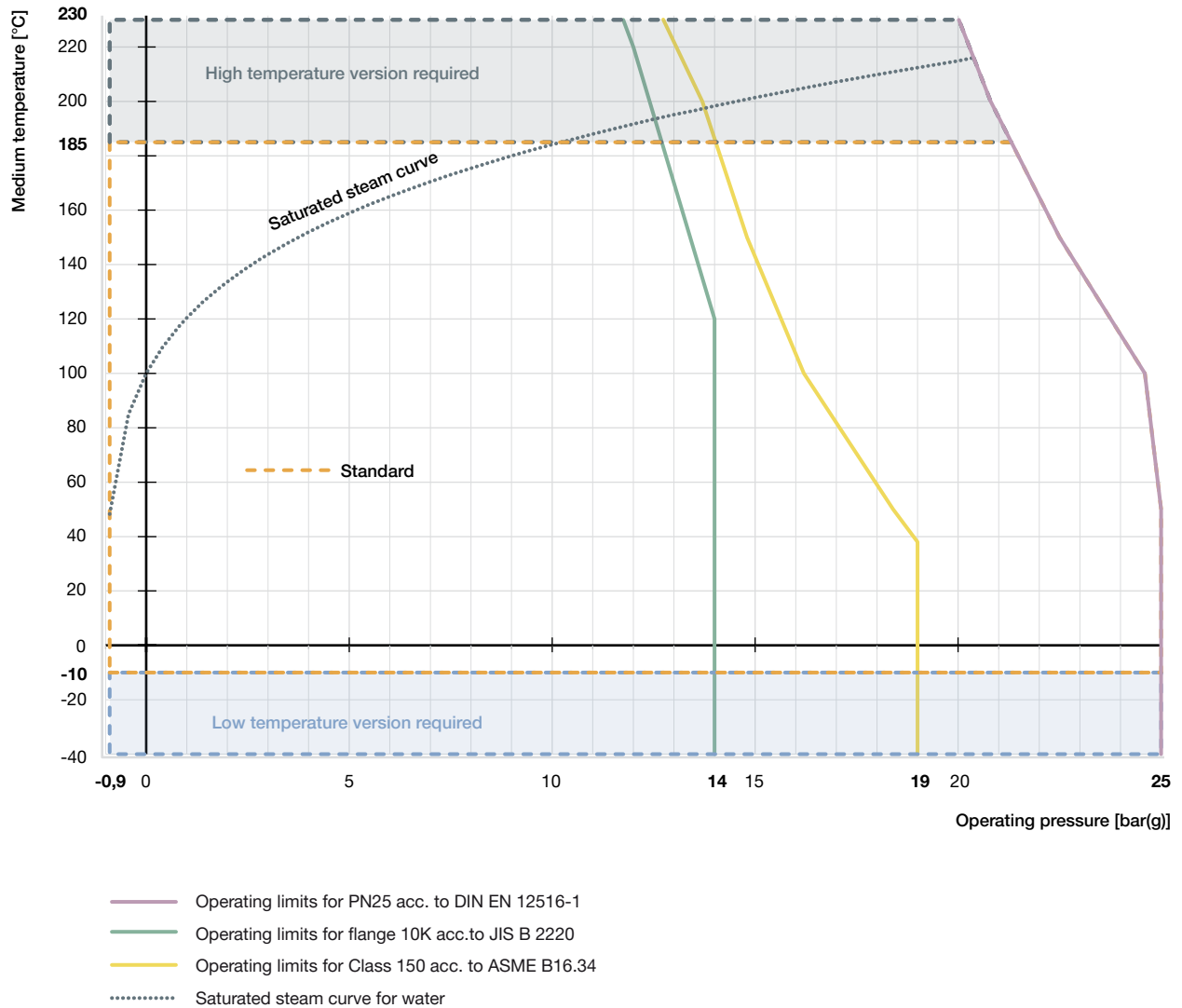
Actuator size Ø: 130 mm



7.2. Operating limits

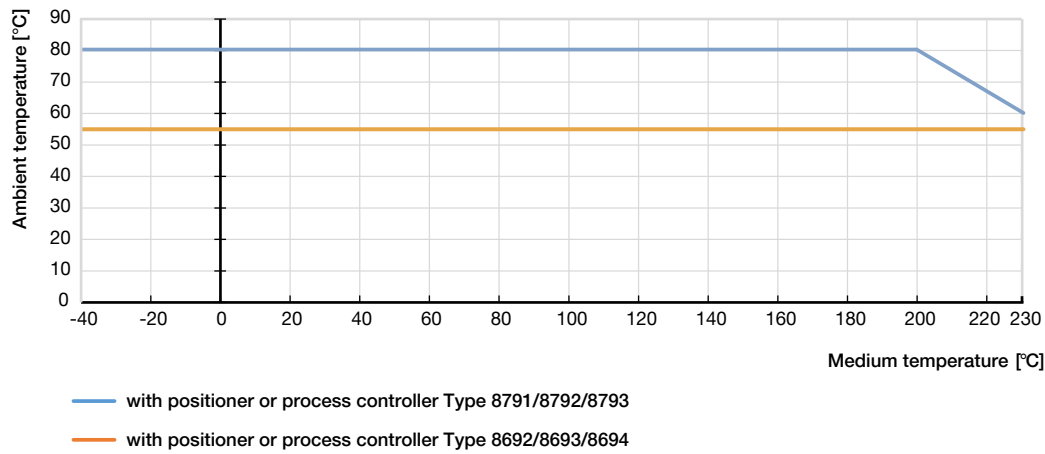
Operating limits for medium temperature and operating pressure

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.



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

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 20 bar(g) and medium temperatures up to 60 °C.

8. Product accessories

Process controller TopControl	
Type 8693 ▶ Actuator size Ø 70/90/130 mm	Description
	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.
	Features • 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
	Customer benefits • 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

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 • 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 • 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 • 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	Description
	Customer benefits • Simple and safe commissioning through Teach-In function • Minimum space requirement in the plant pipework for more flexibility in plant design • A high degree of system availability due to increased drive service life by means of spring chamber ventilation

Process controller SideControl Remote	
Type 8793 ▶ with Remote Sensor 8798 ▶ Actuator size Ø 70/90/130 mm	Description
	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.
	Features • 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 (būs) • 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 • 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 • 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 • 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 Positioner Type 8791 ▶ with Remote Sensor Type 8798 ▶ Actuator size Ø 70/90/130 mm 	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. Features • 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 • 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 	

9. Networking and combination with other Bürkert products

The **Type 2301 Globe Control Valve** can be combined with our extensive range of positioners and process controllers to form the **Continuous ELEMENT valve system, Type 8802-GD**.

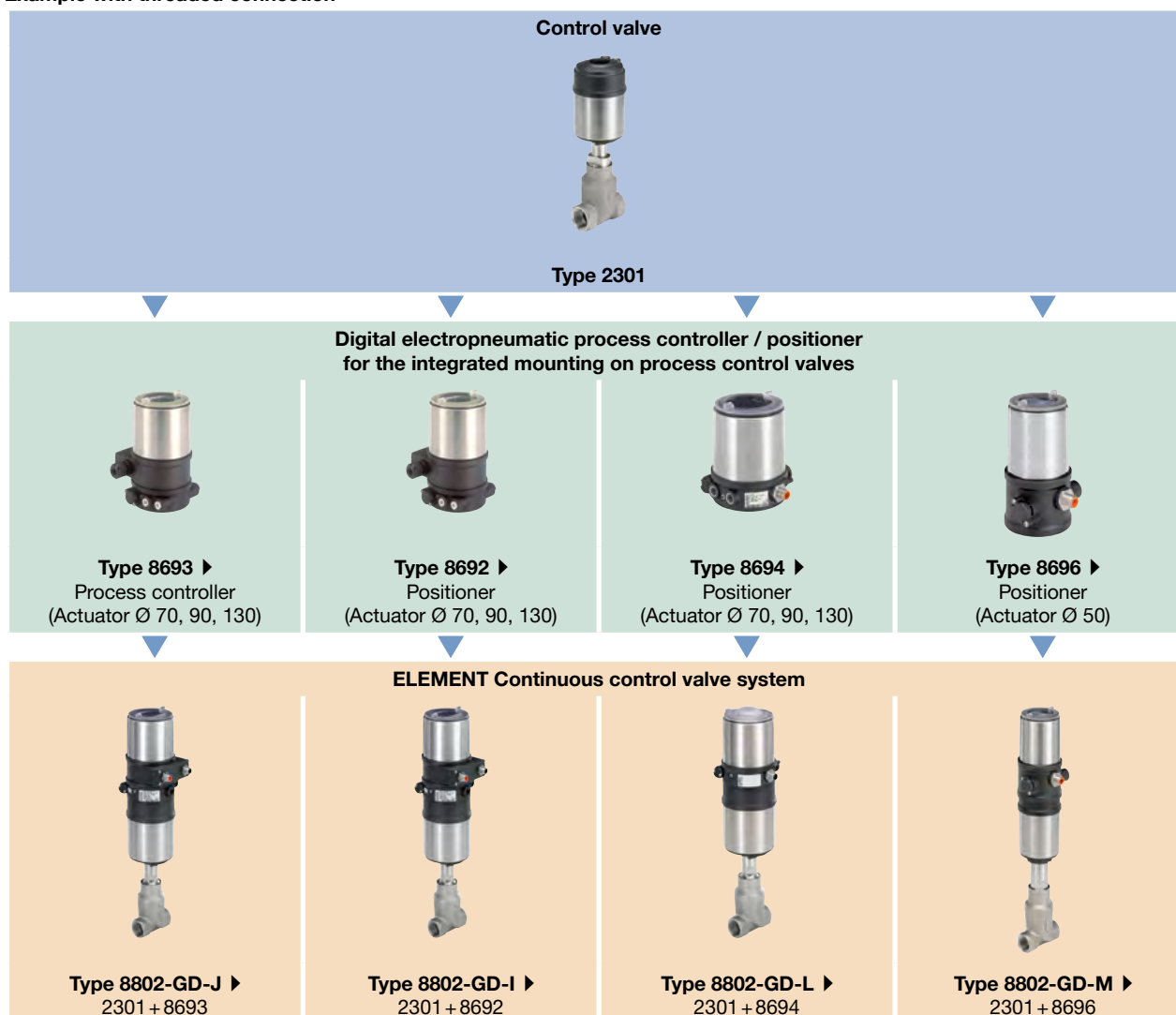
The range of the control unit consists of;

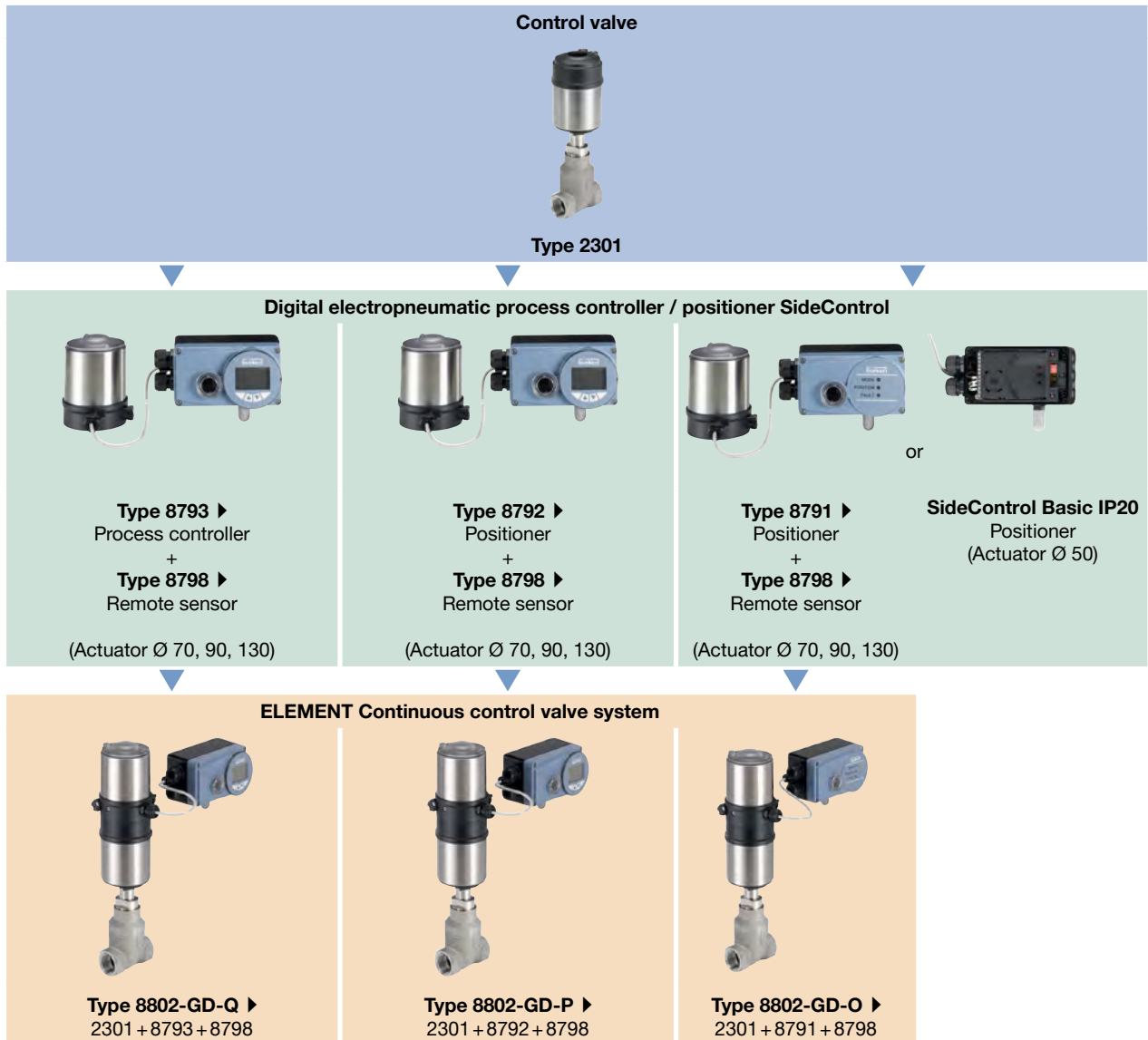
- A digital electropneumatic positioner/process controller **Type 8692/8693** (for valve actuator sizes Ø 70/90/130 mm)
- A digital electropneumatic positioner, basic **Type 8694** (for valve actuator size Ø 70/90/130 mm)
- A digital electropneumatic positioner, basic **Type 8696** (for valve actuator size Ø 50 mm)
- An electropneumatic positioner, SideControl **Type 8792** or an electropneumatic process controller, **Type 8793** (for valve actuator size Ø 70/90/130 mm) and a remote sensor, **Type 8798**
- An electropneumatic positioner, SideControl Basic **Type 8791** (for valve actuator size Ø 70/90/130 mm) and a remote sensor, **Type 8798**

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.

Example with threaded connection





10. Ordering information

10.1. 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](#)

10.2. Bürkert product filter



Bürkert product filter – Get quickly to the right product

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

[Try out our product filter](#)

10.3. Ordering chart flange connection

Valve with flow direction below seat

Nominal diameter (pipe)		Seat size	Actuator size Ø	K _{vs} value	Article no.	
DN	NPS				Seat seal	
			[mm]	[m³/h]	PTFE	Stainless steel
DIN EN 1092-1						
10	¾	3	70	0.1	–	On request
		4	70	0.5	–	215207 
		6	70	1.25	–	215209 
		8	70	2.0	213985 	215212 
		10	70	2.7	213989 	215215 
15	½	3	70	0.1	–	233165 
		4	70	0.5	–	210529 
		6	70	1.25	–	215211 
		8	70	2.1	213987 	215214 
		10	70	3.1	213991 	215217 
		15	70	4.3	204932 	205010 
20	¾	10	70	3.2	210530 	215218 
		15	70	5.2	213993 	214030 
		20	70	7.1	204935 	205012 
25	1	15	70	5.3	213994 	214031 
		20	70	7.2	213995 	214032 
		25	70	12.0	204937 	205014 
		90	70	12.0	242054 	229421 
32	1¼	25	90	9.9	213997 	210446 
			130	13.0	222634 	222655 
		32	90	13.4	204939 	205016 
			130	17.8	223597 	223598 
40	1½	32	90	14.4	213999 	214035 
			130	20.2	222636 	222657 
		40	90	17.5	204941 	205018 
			130	23.8	219791 	222659 
50	2	40	90	18.0	214001 	214037 
			130	24.6	222638 	222660 
		50	90	28.0	204942 	205019 
			130	37.0	214003 	214039 
65	2½	50	130	45.0	214005 	214040 
		65	130	65.0	217772 	219618 
80	3	65	130	73.0	239545 	239581 
		80	130	100.0	239540 	239576 
100	4	80	130	110.0	239561 	239597 
		100	130	140.0	239556 	331125 

Nominal diameter (pipe)		Seat size	Actuator size Ø	K _{vs} value	Article no.	
DN	NPS				Seat seal	
			[mm]	[m³/h]	PTFE	Stainless steel
JIS 10K						
15	½	3	70	0.1	–	On request
		4	70	0.5	–	215226 
		6	70	1.25	–	215227 
		8	70	2.1	215203 	215228 
		10	70	3.1	213913 	213911 
		15	70	4.3	204953 	205030 
20	¾	10	70	3.2	215204 	215229 
		15	70	5.2	213936 	213933 
		20	70	7.1	204955 	205032 
25	1	15	70	5.3	214020 	214059 
		20	70	7.2	213930 	213914 
		25	70	12.0	204957 	205034 
			90	12.0	242165 	242199 
32	1¼	25	90	9.9	213939 	213937 
			130	13.0	222643 	222665 
		32	90	13.4	213177 	213178 
			130	17.8	222645 	222667 
40	1½	32	90	14.4	213932 	213931 
			130	20.2	222647 	222668 
		40	90	17.5	204959 	205037 
			130	23.8	222649 	222670 
50	2	40	90	18.0	213941 	213940 
			130	24.6	222650 	222671 
		50	90	28.0	204960 	205038 
			130	37.0	214023 	214062 
65	2½	50	130	45.0	214024 	214063 
		65	130	65.0	219617 	219620 
80	3	65	130	73.0	239547 	239584 
		80	130	100.0	239542 	239578 
100	4	80	130	110.0	239563 	239599 
		100	130	140.0	239558 	239594 

Nominal diameter (pipe)		Seat size	Actuator size Ø	K _{vs} value	Article no.	
DN	NPS				Seat seal	
			[mm]	[m³/h]	PTFE	Stainless steel
ANSI B 16.5						
15	½	3	70	0.1	–	On request
		4	70	0.5	–	215219 
		6	70	1.25	–	215220 
		8	70	2.1	215198 	215221 
		10	70	3.1	215199 	215222 
		15	70	4.3	204944 	205021 
20	¾	10	70	3.2	215200 	215223 
		15	70	5.2	214009 	214046 
		20	70	7.1	204946 	205023 
25	1	15	70	5.3	214010 	214047 
		20	70	7.2	214011 	214048 
		25	70	12.0	204948 	205025 
			90	12.0	464851 	464367 
40	1½	32	90	14.4	215201 	215224 
			130	20.2	463905 	463913 
		40	90	17.5	204950 	205027 
			130	23.8	463907 	463915 
50	2	40	90	18.0	214013 	214050 
			130	24.6	463908 	463916 
		50	90	28.0	204951 	205028 
			130	37.0	214015 	214052 
65	2½	50	130	45.0	239537 	239573 
		65	130	65.0	239535 	239572 
80	3	65	130	73.0	239546 	239582 
		80	130	100.0	239541 	239577 
100	4	80	130	110.0	239562 	239598 
		100	130	140.0	239557 	239593 

Further versions on request		
	Approval FDA, ATEX, (EG Gas Appliances Directive 2009/142/EG)	 Control function/Circuit function B (normally open: NO)
	Process connection Further housing connections	

10.4. Ordering chart threaded connection

Valve with flow direction below seat

Nominal diameter (pipe)		Seat size	Actuator size Ø	K _{vs} value	Article no.	
					Seat seal	
[mm]	[inch]		[mm]	[m³/h]	PTFE	Stainless steel
G thread, EN ISO 228-1						
10	¾	3	70	0.1	—	284168 
		4	70	0.5	—	215238 
		6	70	1.25	—	215240 
		8	70	2.0	215233 	215242 
		10	70	2.7	215235 	215245 
15	½	3	70	0.1	—	227784 
		4	70	0.5	—	208843 
		6	70	1.25	—	215241 
		8	70	2.1	212964 	215243 
		10	70	3.1	215236 	215246 
		15	70	4.3	206432 	213955 
20	¾	10	70	3.2	215237 	215247 
		15	70	5.2	214067 	215248 
		20	70	7.1	206584 	211239 
25	1	15	70	5.3	206588 	210460 
		20	70	7.2	206586 	210721 
		25	70	12.0	189145 	210485 
		90	12.0	242203 	242207 	
32	1¼	25	90	9.9	214070 	210407
			130	13.0	222677	222687
		32	90	13.4	210097	210458
			130	17.8	223599	223600
40	1½	32	90	14.4	214072	214084
			130	20.2	222679	222689
		40	90	17.5	210098	207800
			130	23.8	222681	222691
50	2	40	90	18.0	214074	214086
			130	24.6	222682	222692
		50	90	28.0	210099	203693
			130	37.0	214076	214088
65	2½	50	130	45.0	214077	214089
		65	130	65.0	219621	219622

Nominal diameter (pipe)		Seat size	Actuator size Ø	K _{vs} value	Article no.	
					Seat seal	
[mm]	[inch]		[mm]	[m³/h]	PTFE	Stainless steel
NPT thread, ISO 7/1/DIN EN 10226-2						
10	¾	3	70	0.1	—	On request
		4	70	0.5	—	220447 
		6	70	1.25	—	220450 
		8	70	2.0	220418 	220453 
		10	70	2.7	220421 	220457 
15	½	3	70	0.1	—	466159 
		4	70	0.5	—	220884 
		6	70	1.25	—	220452 
		8	70	2.1	220881 	220455 
		10	70	3.1	220423 	220459 
		15	70	4.3	220882 	220886 
20	¾	10	70	3.2	220425 	220461 
		15	70	5.2	220427 	220463 
		20	70	7.1	220430 	220466 
25	1	15	70	5.3	220428 	220464 
		20	70	7.2	220431 	220467 
		25	70	12.0	220434 	220470 
		90	12.0	464864 	464867 	
32	1¼	25	90	9.9	220435 	220471 
			130	13.0	463921 	463931 
		32	90	13.4	220437 	220473 
			130	17.8	463956 	463957 
40	1½	32	90	14.4	220438 	463803 
			130	20.2	463923 	463933 
		40	90	17.5	220440 	220476 
			130	23.8	463925 	463935 
50	2	40	90	18.0	220441 	220477 
			130	24.6	463926 	463936 
		50	90	28.0	220443 	220479 
			130	37.0	220444 	220480 
65	2½	50	130	45.0	239536 	239620 
		65	130	65.0	239534 	239571 

Nominal diameter (pipe)		Seat size	Actuator size Ø	K _{vs} value	Article no. RC (ASME B 1.20.1)	
					Seat seal	
[mm]	[inch]		[mm]	[m³/h]	PTFE	Stainless steel
Rc thread, ASME B 1.20.1						
10	3/8	3	70	0.1	–	On request
		4	70	0.5	–	220513 
		6	70	1.25	–	220516 
		8	70	2.0	220484 	220519 
		10	70	2.7	220487 	220523 
15	1/2	3	70	0.1	–	233369 
		4	70	0.5	–	220891 
		6	70	1.25	–	220518 
		8	70	2.1	220888 	220521 
		10	70	3.1	220489 	220525 
		15	70	4.3	220889 	220894 
20	3/4	10	70	3.2	220491 	220527 
		15	70	5.2	220493 	220529 
		20	70	7.1	220496 	220532 
25	1	15	70	5.3	220494 	220530 
		20	70	7.2	220497 	220533 
		25	70	12.0	220500 	220536 
			90	12.0	242377 	242380 
32	1 1/4	25	90	9.9	220501 	220537 
			130	13.0	222740 	222777 
		32	90	13.4	220503 	220539 
			130	17.8	223605 	223606 
40	1 1/2	32	90	14.4	220504 	220540 
			130	20.2	222742 	222763 
		40	90	17.5	220506 	220542 
			130	23.8	222767 	222765 
50	2	40	90	18.0	220507 	220543 
			130	24.6	222768 	222766 
		50	90	28.0	220509 	220545 
			130	37.0	220510 	220546 
65	2 1/2	50	130	45.0	220511 	220547 
		65	130	65.0	220512 	220548 

Further versions on request			
	Approval FDA, ATEX, (EG Gas Appliances Directive 2009/142/EG)		Control function/Circuit function B (normally open: NO)
	Process connection Further housing connections		

10.5. Ordering chart welded connection

Valve with flow direction below seat

Nominal diameter (pipe)		Seat size	Actuator size Ø	K _{vs} value	Connection MW x TW	Article no.	
[mm]	[inch]					Seat seal	
			[mm]	[m³/h]		PTFE	Stainless steel
EN ISO 1127 1/ISO 4200/DIN 11866 B							
10	3/8	3	70	0.1	17.2 x 1.6	–	On request
		4	70	0.5	17.2 x 1.6	–	On request
		6	70	1.25	17.2 x 1.6	–	On request
		8	70	2.0	17.2 x 1.6	On request	On request
		10	70	2.7	17.2 x 1.6	On request	On request
15	1/2	3	70	0.1	21.3 x 1.6	–	259240 ㉞
		4	70	0.5	21.3 x 1.6	–	215254 ㉞
		6	70	1.25	21.3 x 1.6	–	215255 ㉞
		8	70	2.1	21.3 x 1.6	212392 ㉞	216407 ㉞
		10	70	3.1	21.3 x 1.6	212393 ㉞	215873 ㉞
		15	70	4.3	21.3 x 1.6	209571 ㉞	216409 ㉞
20	3/4	15	70	5.2	26.9 x 1.6	214094 ㉞	214132 ㉞
		20	70	7.1	26.9 x 1.6	214096 ㉞	210696 ㉞
25	1	20	70	7.2	33.7 x 2.0	214097 ㉞	214135 ㉞
		25	70	12.0	33.7 x 2.0	209572 ㉞	214138 ㉞
32	1 1/4	25	90	9.9	42.4 x 2.0	214101 ㉞	214139 ㉞
		32	90	13.4	42.4 x 2.0	214103 ㉞	214141 ㉞
40	1 1/2	32	90	14.4	48.3 x 2.0	214104 ㉞	214142 ㉞
			130	20.2	48.3 x 2.0	222700 ㉞	222721 ㉞
		40	90	17.5	48.3 x 2.0	209440 ㉞	214144 ㉞
			130	23.8	48.3 x 2.0	222702 ㉞	222723 ㉞
50	2	40	90	18.0	60.3 x 2.0	210756 ㉞	213561 ㉞
			130	24.6	60.3 x 2.0	222703 ㉞	222724 ㉞
		50	90	28.0	60.3 x 2.0	214107 ㉞	214146 ㉞
			130	37.0	60.3 x 2.0	214108 ㉞	214147 ㉞
65	2 1/2	65	130	65.0	76.1 x 2.3	219623 ㉞	219626 ㉞
80	3	80	130	100.0	88.9 x 2.3	239543 ㉞	239579 ㉞
100	4	100	130	140.0	114.3 x 2.6	239559 ㉞	239595 ㉞

Nominal diameter (pipe)		Seat size	Actuator size Ø	K _{vs} value	Connection MW x TW	Article no.	
[mm]	[inch]					Seat seal	
			[mm]	[m³/h]		PTFE	Stainless steel
DIN 11850 2 / DIN 11866 A / DIN EN 10357 A							
10	3/8	3	70	0.1	13.0 x 1.5	–	250658 ☒
		4	70	0.5	13.0 x 1.5	–	284171 ☒
		6	70	1.25	13.0 x 1.5	–	284177 ☒
		8	70	2.0	13.0 x 1.5	On request	284179 ☒
		10	70	2.7	13.0 x 1.5	257412 ☒	208553 ☒
15	1/2	3	70	0.1	19.0 x 1.5	–	225130 ☒
		4	70	0.5	19.0 x 1.5	–	215257 ☒
		6	70	1.25	19.0 x 1.5	–	215258 ☒
		8	70	2.1	19.0 x 1.5	215250 ☒	215911 ☒
		10	70	3.1	19.0 x 1.5	215251 ☒	215913 ☒
		15	70	4.3	19.0 x 1.5	215253 ☒	209173 ☒
20	3/4	15	70	5.2	23.0 x 1.5	214113 ☒	208555 ☒
		20	70	7.1	23.0 x 1.5	211937 ☒	211953 ☒
25	1	20	70	7.2	29.0 x 1.5	214116 ☒	214154 ☒
		25	70	12.0	29.0 x 1.5	209384 ☒	209089 ☒
32	1 1/4	25	90	9.9	35.0 x 1.5	214119 ☒	214156 ☒
		32	90	13.4	35.0 x 1.5	211965 ☒	209181 ☒
40	1 1/2	32	90	14.4	41.0 x 1.5	214121 ☒	213487 ☒
			130	20.2	41.0 x 1.5	222711 ☒	222732 ☒
		40	90	17.5	41.0 x 1.5	211967 ☒	209110 ☒
			130	23.8	41.0 x 1.5	222713 ☒	222734 ☒
50	2	40	90	18.0	53.0 x 1.5	214123 ☒	213411 ☒
			130	24.6	53.0 x 1.5	222714 ☒	222735 ☒
		50	90	28.0	53.0 x 1.5	211968 ☒	209185 ☒
			130	37.0	53.0 x 1.5	214125 ☒	214159 ☒
65	2 1/2	65	130	65.0	70.0 x 2.0	219625 ☒	219628 ☒
80	3	80	130	100.0	85.0 x 2.0	239544 ☒	239580 ☒
100	4	100	130	140.0	104.0 x 2.0	239560 ☒	239596 ☒

Nominal diameter (pipe)		Seat size	Actuator size Ø	K _{vs} value	Connection MW x TW	Article no.	
[mm]	[inch]					Seat seal	
			[mm]	[m³/h]		PTFE	Stainless steel
ASME BPE/DIN 11866 C							
15	½	3	70	0.1	12.7 x 1.65	–	466160
		4	70	0.5	12.7 x 1.65	–	464905
		6	70	1.25	12.7 x 1.65	–	464907
		8	70	2.1	12.7 x 1.65	464878	464909
		10	70	3.1	12.7 x 1.65	464882	222997
20	¾	15	70	5.2	19.05 x 1.65	464455	211017
25	1	20	70	7.2	25.4 x 1.65	464891	463980
40	1½	32	90	14.4	38.1 x 1.65	464898	464927
			130	20.2	38.1 x 1.65	464899	464928
50	2	40	90	18.0	50.8 x 1.65	464902	464931
			130	24.6	50.8 x 1.65	464903	464932

Further versions on request	
Approval FDA, ATEX, (EG Gas Appliances Directive 2009/142/EG)	Control function/Circuit function B (normally open: NO)
Process connection Further housing connections	

10.6. Ordering chart clamp connection

Valve with flow direction below seat

Nominal diameter (pipe)		Seat size	Actuator size Ø	K _{vs} value	Connection MC x TC, CC	Article no.	
[mm]	[inch]					Seat seal	
			[mm]	[m³/h]		PTFE	Stainless steel
DIN 32676 A							
15	½	15	70	4.3	19 x 1.5, 34	222593	282208
20	¾	20	70	7.1	23 x 1.5, 34	225647	282209
25	1	25	90	12.0	29 x 1.5, 50.5	222594	282210
32	1¼	32	90	13.4	35 x 1.5, 50.5	240415	282211
40	1½	40	130	23.8	41 x 1.5, 50.5	240351	282212
50	2	50	130	37.0	53 x 1.5, 64	282258	282259
DIN 32676 B							
15	½	15	70	4.3	21.3 x 1.6, 50.5	273974	282213
20	¾	20	70	7.1	26.9 x 1.6, 50.5	209438	282214
25	1	25	90	12.0	33.7 x 2.0, 50.5	241115	282215
40	1½	40	130	23.8	48.3 x 2.0, 64.0	209880	284181
50	2	50	130	37.0	60.3 x 2.0, 77.5	282261	282263

Further versions on request	
Approval FDA, ATEX, (EG Gas Appliances Directive 2009/142/EG)	Control function/Circuit function B (normally open: NO)
Process connection Further housing connections	

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Operating data	
Function (Function of the control valve in the process / process description)	
Pipeline	DN PN
Operating medium	
Type of medium	Fluid Steam Gas

Fluidic data	Largest flow rate 1. Operating point	Largest flow rate 2. Operating point	Largest flow rate 3. Operating point	Unit
Flow rate				
Temperature t_1				
Inlet pressure p_1 absolute (a) relative (g)				
Outlet pressure p_2 absolute (a) relative (g)				
Steam pressure p_v				
Viscosity (ν / η)				
Density (ρ)				
Max. permitted sonic pressure level (L_p)				

Valve body				
Construction	Angle seat valve		Globe valve	
DN / Nominal pressure	DN		PN	
Seat size				
Flow coefficient	K_{vs}	m^3/h	C_v	GPM(US)
Seat seal	Metallic		Soft seal PTFE Soft seal PEEK	
Connection	Flange	DIN EN 1092-1	ANSI B16.5	JIS 10K
	Thread	G	NPT	RC
	Weld	DIN EN ISO 1127 / ISO 4200	DIN 11850 2 / DIN 11866 A	ASME BPE
	Clamp	ASME BPE	DIN 32676 A (tube ISO 4200)	DIN 32676 B (tube DIN 11850)
	Other			

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

Automation unit features

For actuator size ø70/ø90/ø130 mm

Process Controller TopControl Type 8693 ▶				Positioner TopControl Type 8692 ▶	
	- 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				- 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 M12 Multipol connection	
				Without	
Digital Communication				Approvals	
PROFIBUS DP-V1		DeviceNet	EtherNet/IP	ATEX cat. 3GD, IECEx	
PROFINET		Modbus TCP	büS	Without	
Without					
Analogue feedback				Digital outputs and diagnostics	
0/4...20 mA		0/4...20 mA + 2 binary outputs		Yes No	

For actuator size ø70/ø90/ø130 mm

Positioner TopControl Type 8694 ▶		Positioner TopControl Type 8696 ▶	
	• Status LED and DIP switches • Tune-function for automatic start-up • Positioning system for single-acting actuators • Field bus communication		• Status LED and DIP switches • Tune-function for automatic start-up • Positioning system for single-acting actuators
Pneumatic function Single-acting		Electrical connection Cable gland ^{1.)} Without	
		M12 Multipol connection	
Digital Communication AS-Interface ^{1.)} Without		Approvals ATEX cat. 3GD, IECEx Without	
Analogue feedback Yes No			

1.) Nur verfügbar für Type 8694. Nicht verfügbar für Type 8696.

For actuator size ø70/ø90/ø130 mm					
Process Controller SideControl Type 8793 mit Remote-Sensor Type 8798			Positioner SideControl Type 8792 mit Remote-Sensor Type 8798		
	• 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			• 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 Multipol connection	
Digital communication			Approvals		
PROFIBUS DP-V1	DeviceNet	EtherNet/IP	ATEX cat. 3GD, IECEx	Without	
PROFINET	Modbus TCP	bÜS			
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.

For actuator size ø70/ø90/ø130 mm		
Positioner SideControl Basic Type 8791 mit Remote-Sensor Type 8798		Positioner SideControl Basic IP20 Type 8791 mit Remote-Sensor Type 8798
	• „simple positioner“ • Universal positioning system for single and double acting actuators • Tune function for automatic start-up • Field bus communication	 • „simple positioner“ • Universal positioning system for single and double acting actuators • Tune function for automatic start-up • Switchgear cabinet assembly
Pneumatic function Single-acting (actuator size Ø70/90) Single- and double-acting (actuator size Ø130)		Electrical connection Cable gland ^{2.)} M12 Multipol connection
Digital communication AS-Interface ^{3.)} : Analog-Profil S-7.3.4 (only set point) Analog-Profil S-7.A.5 (set point and feedback) Without		Approvals ATEX cat. 3GD, IECEx ^{3.)} Without
Analogue feedback 0/4...20 mA No		

2.) 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.

3.) Only available for Positioner SideControl Basic Type 8791. Not available for Positioner SideControl Basic IP20 Type 8791.