bürkert
FLUID CONTROL SYSTEMS

2/2-way-Globe Valve with stainless steel design for media up to +185°C, DN 13-50

- High cycle life
- Flow optimised body in stainless steel 316L
- Deliverable with flow direction below or above seat
- Clean design for optimal use in hygienic environment
- Suitable for steam up to 10 barg

Type 2101 can be combined with…

Type 8690
Pneum. control unit with feedback

Type 8691
Control Head

Type 8695
Control Head

Typ 8619
MultiCELL Transmitter/Controller

Type 8222
Conductivity transmitter

In line with Bürkert's philosophy for modular valves and sensors the construction of the 2101 globe valve fulfils tough criteria for process environments. Unrivalled cycle life and sealing integrity is guaranteed by the proven self adjusting spindle packing with V-seals.

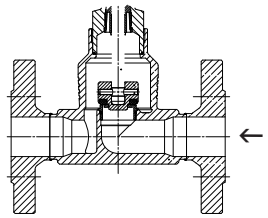
The design enables the easy integration of automation modules whether they are electrical/optical position feedback, pneumatic control units, an integrated fieldbus interface or even an explosion proof feedback.

The fully integrated system has a compact and smooth design, integrated pneumatic lines, IP65/67 protection class and superior chemical resistance.

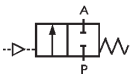
Technical data	
Orifice	DN 15 to 50
Port connection Flange connection acc. to Welded and threaded ports	 DIN EN 1092-1, ANSI B 16.5, JIS 10K on request
Body materials	Cast stainless steel 316L
Actuator material Actuator Cover	 PPS Stainless steel 1.4561 (316Ti)
Seal material	PTFE
Medium	Water, alcohol, oils, fuel, hydraulic fluids, salt solution, alkali solutions, organic solvents, steam
Viscosity	max. 600 mm²/s
Spindle packing	PTFE V-seals with spring compensation
Medium temperature	-10 to +185 °C
Ambient temperature	0 to +55 °C (with integrated control head) 0 to +60 °C (push-in air ports) 0 to +100 °C (threaded air ports)
Control medium	Neutral gases, air
Max. pilot pressure	max. 10 bar, 7 bar with actuator size 130 mm
Pilot air ports	Push-in connector for external ø 6 mm or 1/4" tube, Thread G 1/8 (on request)
Installation	As required, preferably with actuator upright

Content

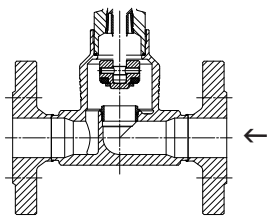
Technical data Type 2101 Globe Valve, flow direction below seat (for gas and liquid)



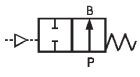
Control function A



Normally closed by spring action



On request:
Control function B



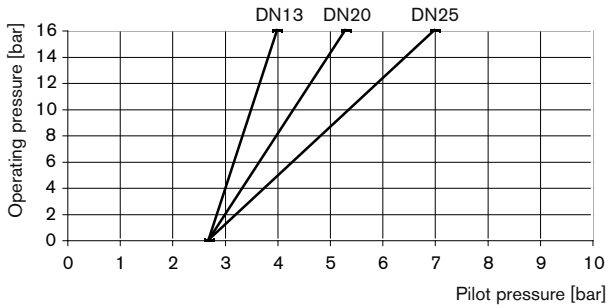
normally open by spring action

Orifice [mm]	Actuator size [mm]	Kv value water (m^3/h)	Minimum pilot pressure CFA [bar]	Max. operating pressure to +185°C CFA [bar]	On request: CFB [bar]
15	50	4.7	4.8	25	16
	70	4.7	4.8	25	16
20	50	8.1	4.8	13	16
	70	8.1	4.8	20	16
25	50	13	4.8	6	16
	70	13	4.8	16	16
32	70	19.5	4.8	8.5	16
	90	19.5	5.0	16	16
40	70	31	4.8	6	16
	90	31	5.0	16	16
50	70	45	–	–	16
	90	45	5.0	10	16
	130	45	5.0	16	–

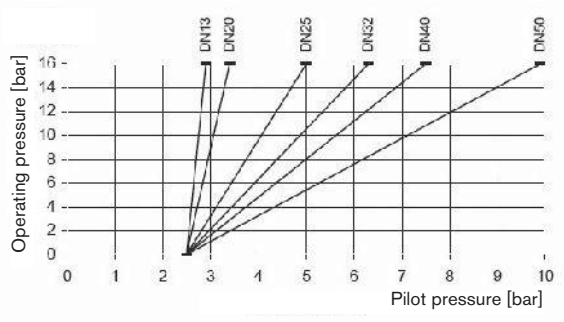
Flow rate: *Kv value water [m^3/h]*: Measured at +20 °C, 1 bar pressure at valve inlet and free outlet.
Pressure valves [bar]: Overpressure to the atmospheric pressure

On request control function B:
Pressure charts with control function B and flow direction below the seat

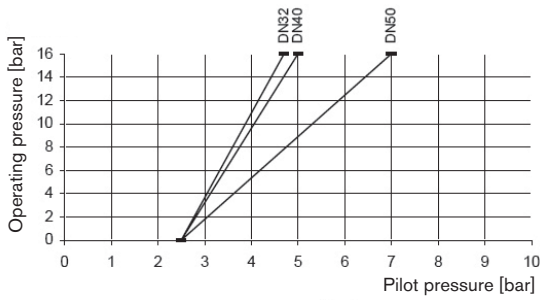
Actuator size 50 mm



Actuator size 70 mm

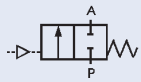


Actuator size 90 mm

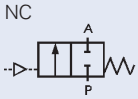


Ordering chart Type 2101 Globe Valve, flow direction below seat (for gases and liquid)

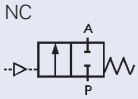
Flange connection acc. to DIN EN 1092-1, flow direction below seat

Control function	Orifice (mm)	Actuator size Ø (mm)	Minimum pilot pressure (bar)	Operating pressure to +185°C (bar)	Item no.
A 2/2-way-valve, NC 	15	50	4.8	25	203 076
	20	50	4.8	13	203 077
	20	70	4.8	20	203 078
	25	50	4.8	6	203 079
	25	70	4.8	16	189 700
	32	70	4.8	8.5	203 080
	32	90	5.0	16	203 081
	40	70	4.8	6	203 082
	40	90	5.0	16	203 083
	50	90	5.0	10	203 084
		130	5,0	16	218 418

Flange connection acc. to ANSI B16.5, flow direction below seat

Control function	Orifice (mm)	Actuator size Ø (mm)	Minimum pilot pressure (bar)	Operating pressure to +185°C (bar)	Item no.
A 2/2-way-valve, NC 	15	50	4.8	25	203 095
	20	50	4.8	13	203 096
	20	70	4.8	20	203 097
	25	50	4.8	6	203 098
	25	70	4.8	16	203 099
	40	70	4.8	6	203 100
	40	90	5.0	16	203 101
	50	90	5.0	10	203 102
		130	5,0	16	218 419

Flange connection acc. to JIS 10K, flow direction below seat

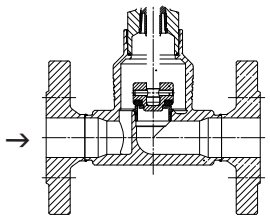
Control function	Orifice (mm)	Actuator size Ø (mm)	Minimum pilot pressure (bar)	Operating pressure to +185°C (bar)	Item no.
A 2/2-way-valve, NC 	15	50	4.8	25	203 111
	20	50	4.8	13	203 112
	20	70	4.8	20	203 113
	25	50	4.8	6	203 114
	25	70	4.8	16	203 115
	40	70	4.8	6	203 118
	40	90	5.0	16	203 121
	50	90	5.0	10	203 122
		130	5,0	16	218 471

Further versions on request

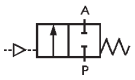
Control function
B (normally open) and I (double-acting)

Port connection
Welded and threaded ports

Technical data Type 2101 Globe Valve, flow direction above the seat (for gases and steam)



Control function A



Normally closed by spring action

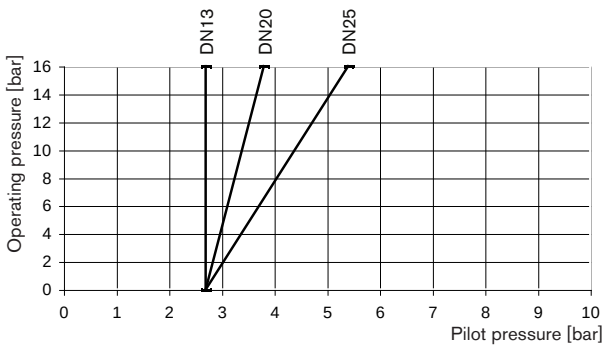
Attention!
Valves with flow direction above the seat are only conditionally usable for liquid media . There is a danger of waterhammer!

Orifice [mm]	Actuator size [mm]	Kv value water (m^3/h)	Max. operating pressure to +185°C CFA [bar]
15	50	4.7	16
	70	4.7	16
20	50	8.1	16
	70	8.1	16
25	50	13	16
	70	13	16
32	70	19.5	16
40	70	31	16
	90	31	16
50	70	45	12
	90	45	16

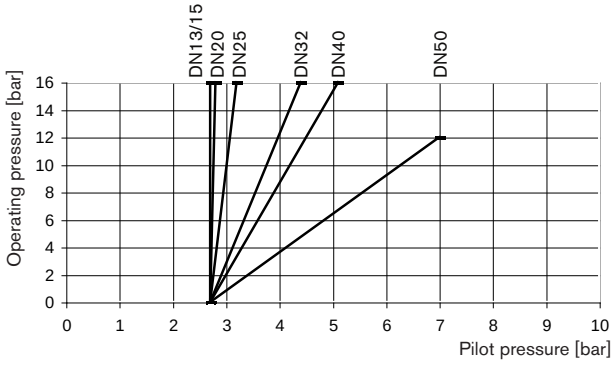
Flow rate: *Kv value water [m^3/h]*: Measured at +20 °C, 1 bar pressure at valve inlet and free outlet.
Pressure valves [bar]: Overpressure to the atmospheric pressure

Pressure charts with control function A and flow direction above the seat

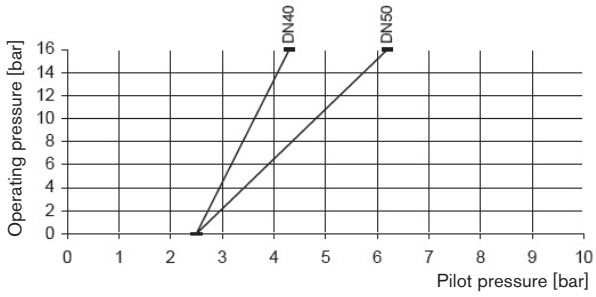
Actuator size 50 mm



Actuator size 70 mm

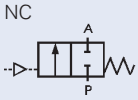


Actuator size 90 mm

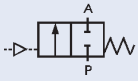


Ordering chart Type 2101 Globe Valve, flow direction above the seat (for gases and steam)

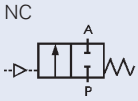
Flange connection acc. to DIN EN 1092-1, flow direction above the seat

Control function	Orifice (mm)	Actuator size Ø (mm)	Minimum pilot pressure (bar)	Operating pressure to +185°C (bar)	Item no.
A 2/2-way-valve, NC 	15	50	see charts on page 4	16	203 086
	20	50		16	203 087
	25	50		16	203 088
	32	70		16	203 091
	40	70		16	203 092
	50	70		12	204 973
	50	90		16	203 094

Flange connection acc. to ANSI B16.5, flow direction above the seat

Control function	Orifice (mm)	Actuator size Ø (mm)	Minimum pilot pressure (bar)	Operating pressure to +185°C (bar)	Item no.
A 2/2-way-valve, NC 	15	50	see charts on page 4	16	203 103
	20	50		16	203 104
	25	50		16	203 105
	40	70		16	203 107
	50	70		12	204 974
	50	90		16	203 109

Flange connection acc. to JIS 10K, flow direction above the seat

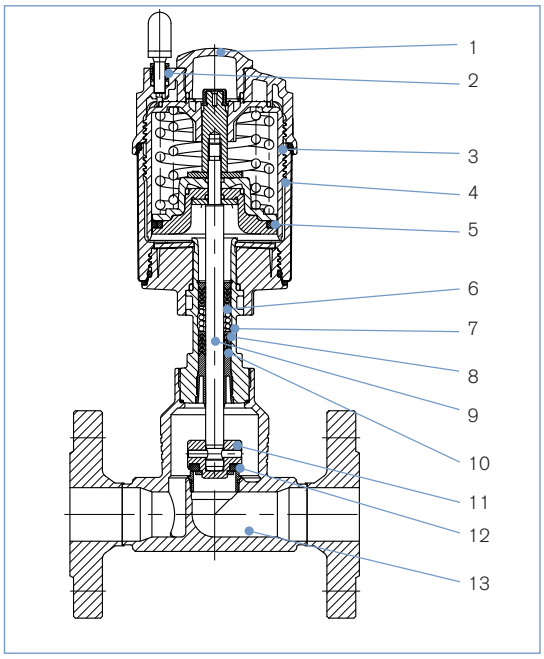
Control function	Orifice (mm)	Actuator size Ø (mm)	Minimum pilot pressure (bar)	Operating pressure to +185°C (bar)	Item no.
A 2/2-way-valve, NC 	15	50	see charts on page 4	16	203 123
	20	50		16	203 124
	25	50		16	203 125
	40	70		16	203 127
	50	70		12	204 975
	50	90		16	203 129

Further versions on request

Control function
B (normally open) and I (double-acting)

Port connection
Welded and threaded ports

Materials Type 2101 Globe Valve

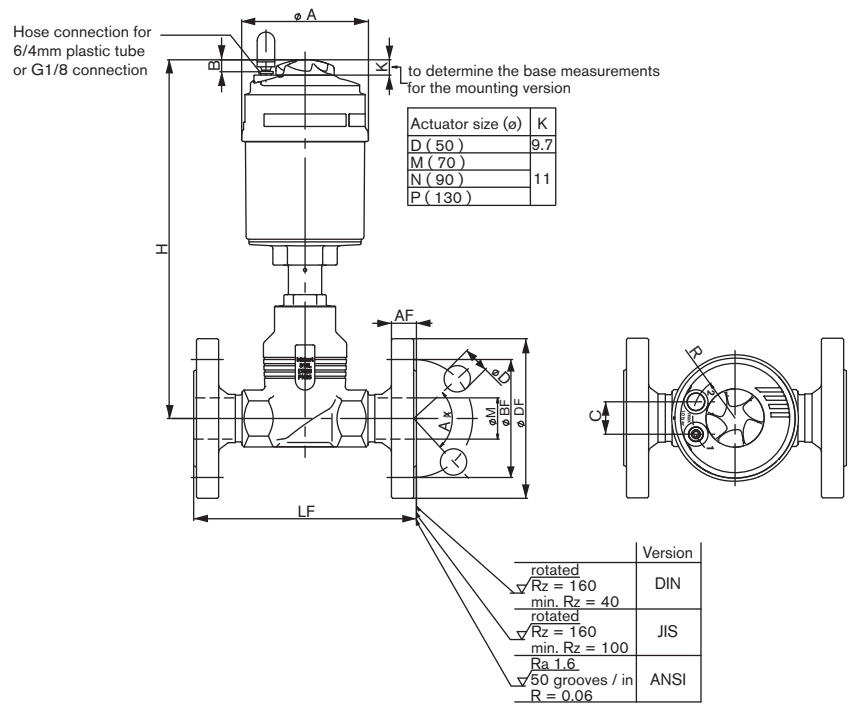


1	**Visual position indicator**	Transparent cap polysulphone PSU
2	**Pilot air ports**	Push-in connector PP (standard) *On request:* Thread G 1/8" stainless steel 1.4305
3	**Actuator**	PPS
4	**Cover**	Stainless steel 1.4561 (316Ti)
5	**Piston seal**	FKM
6	**Spring**	Stainless steel 1.4310
7	**Tube**	Stainless steel 1.4401 (316) / 1.4404 (316L)
8	**Spindle packing**	PTFE
9	**Spindle**	Stainless steel 1.4401 (316) / 1.4404 (316L)
10	**Wiper**	PEEK
11	**Swivel plate**	Stainless steel 1.4401 (316) / 1.4404 (316L)
12	**Seal**	PTFE
13	**Valve body**	Cast stainless steel 316L

Lubricants for spindle packing and actuator are classified according NSF H1

Dimensions Type 2101 Globe Valve [mm]

Flanged body



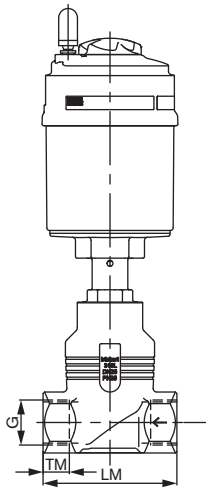
Actuator size (ø)	K
D (50)	9.7
M (70)	11
N (90)	
P (130)	

All bodies							Flange body DIN 2634 Length acc.to DIN 3202 resp. DIN EN 558-1 FTF basic range 1							Flange body JIS 10K B 2338 ordinary type flanges FTF JIS B2002 Series 20 length acc. to DIN EN 588-2 FTF basic range 10						
Orifice [mm]	**Actuator size [mm]**	**Ø A**	**B**	**C**	**R**	**H**	**ØDF**	**LF**	**ØBF**	**AF**	**ØD**	**Axα**	**ØM**	**ØDF**	**LF**	**ØBF**	**AF**	**ØD**	**Axα**	**ØM**
10	D (50)	64.5	6	19.8	19.8	236	90	130	60	16	14	4x90°	13.6	–	–	–	–	–	–	–
	M (70)	91	8.5	23.3	30.5	250														
15	D (50)	64.5	6	19.8	19.8	236	95	130	65	16	14	4x90°	18.1	95	108	70	12	15	4x90°	18.1
	M (70)	91	8.5	23.3	30.5	250														
20	D (50)	64.5	6	19.8	19.8	242	105	150	75	18	14	4x90°	23.7	100	117	75	14	15	4x90°	23.7
	M (70)	91	8.5	23.3	30.5	256														
25	D (50)	64.5	6	19.8	19.8	245	115	160	85	18	14	4x90°	29.7	125	127	90	14	19	4x90°	29.7
	M (70)	91	8.5	23.3	30.5	259														
32	M (70)	91	8.5	23.3	30.5	280	140	180	100	18	18	4x90°	38.4	135	140	100	16	19	4x90°	38.4
	N (90)	120	8.5	23.3	30.5	340														
40	M (70)	91	8.5	23.3	30.5	285	150	200	110	18	18	4x90°	44.3	140	165	105	16	19	4x90°	44.3
	N (90)	120	8.5	23.3	30.5	345														
	P (130)	159	8.5	23.3	30.5	397														
50	M (70)	91	8.5	23.3	30.5	295	165	230	125	20	18	4x90°	56.3	155	203	120	16	19	4x90°	56.3
	N (90)	120	8.5	23.3	30.5	351														
	P (130)	159	8.5	23.3	30.5	403														
65	N (90)	120	8.5	23.3	30.5	379	185	290	145	22	18	8x45°	66	175	216	140	18	19	4x90°	72
	P (130)	159	8.5	23.3	30.5	432														

All bodies							ANSI B16.5 Class 150 FTF ISA S75.03 RF Length acc. to DIN EN 558-2 FTF basic range 37						
Orifice [inch]	**Actuator size [mm]**	**Ø A**	**B**	**C**	**R**	**H**	**ØDF**	**LF**	**ØBF**	**AF**	**ØD**	**Axα**	**ØM**
1/2"	D (50)	64.5	6	19.8	19.8	236	89	184	60.5	11.2	15.7	4x90°	15.7
	M (70)	91	8.5	23.3	30.5	250							
3/4"	D (50)	64.5	6	19.8	19.8	242	99	184	69.9	12.7	15.7	4x90°	20.8
	M (70)	91	8.5	23.3	30.5	256							
1"	D (50)	64.5	6	19.8	19.8	245	108	184	79.2	14.2	15.7	4x90°	26.7
	M (70)	91	8.5	23.3	30.5	259							
1 1/2"	M (70)	91	8.5	23.3	30.5	285	127	222	98.6	17.5	15.7	4x90°	40.9
	N (90)	120	8.5	23.3	30.5	345							
	P (130)	159	8.5	23.3	30.5	397							
2"	M (70)	91	8.5	23.3	30.5	295	152	254	120.7	19.1	19.1	4x90°	52.6
	N (90)	120	8.5	23.3	30.5	351							
	P (130)	159	8.5	23.3	30.5	403							
2 1/2"	N (90)	120	8.5	23.3	30.5	379	178	276	139.7	22.3	19.1	4x90°	63
	P (130)	159	8.5	23.3	30.5	432							

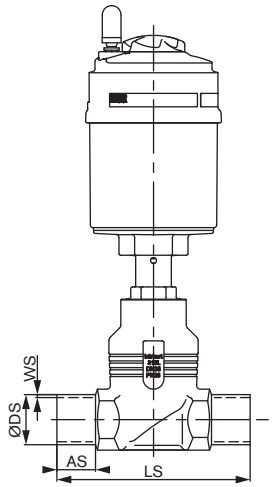
Dimensions Type 2101 Globe Valve [mm], continued

Threaded port



Orifice [mm]	LM	G G	TM	NPT G	TM	Rc G	TM
10	65	G 3/8	12	3/8	10.3	3/8	10.1
15	65	G 1/2	14	1/2	13.7	1/2	13.2
20	75	G 3/4	16	3/4	14	3/4	14.5
25	90	G 1	18	1	16.8	1	16.8
32	110	G 1 1/4	20	1 1/4	17.3	1 1/4	19.1
40	120	G 1 1/2	22	1 1/2	17.3	1 1/2	19.1
50	150	G 2	24	2	17.6	2	23.4
65	185	G 2 1/2	26	2 1/2	23.7	2 1/2	26.7

Weld end body



Orifice [mm]	LM	AS	LS	ØDS	WS	ØDS	WS
10	65	20	90	17.2	1.6	13	1.5
15	65	20	90	21.3	1.6	19	1.5
20	75	20	100	26.9	1.6	23	1.5
25	90	26	130	33.7	2.0	29	1.5
32	110	26	140	42.4	2.0	35	1.5
40	120	26	150	48.3	2.0	41	1.5
50	150	26	175	60.3	2.0	53	1.5
65	185	26	210	76.1	2.3	70	2

Orifice [inch]	AS	LS	ØDS	WS	ØDS	WS
1/2	20	90	12.7	1.2	12.7	1.65
3/4	20	90	19.05	1.2	19.05	1.65
1	20	100	25.4	1.6	25.4	1.6
1 1/2	26	140	38.1	1.6	38.1	1.6
2	26	150	50.8	1.6	50.8	1.6
2 1/2	26	175	63.5	1.6	63.5	1.6

bürkert

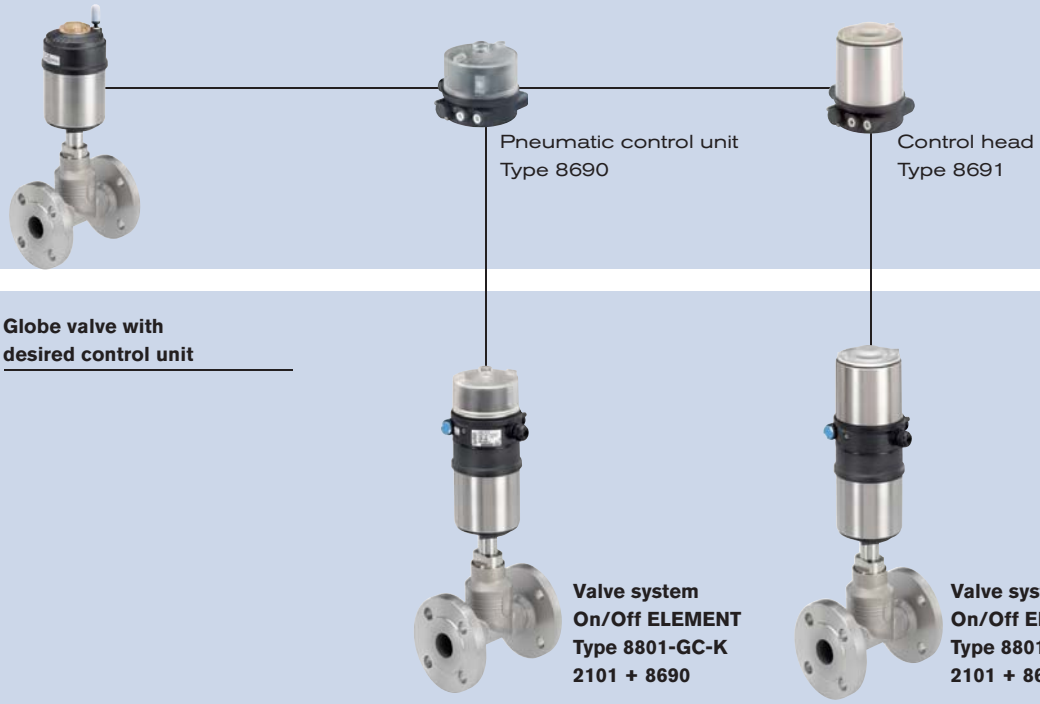
Ordering information for valve system On/Off ELEMENT Type 8801-GC

A **valve system On/Off ELEMENT Type 8801-GC** consists of an **Globe Valve Type 2101** and a pneumatic control unit **Type 8690**, control head **Type 8691** (for valve actuator sizes ø70/ø90/ø130mm) or control head **Type 8695** (for valve actuator size ø50 mm) (see separate datasheets).
For the configuration of further valve systems please use the "Request for quotation" on p. 14 go to page
You order two components and receive a complete assembled and certified valve.

Ordering the valve system On/Off ELEMENT Type 8801-GC with valve actuator sizes ø70/ø90/ø130 mm

Globe Valve Type 2101 with actuator sizes ø70/ø90/ø130 mm

Control Head



Globe valve with desired control unit

Valve system On/Off ELEMENT Type 8801-GC-K 2101 + 8690

Valve system On/Off ELEMENT Type 8801-GC-H 2101 + 8691

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

Pneumatic control unit Type 8690

More info.

The new generation of integrated controllers for combination with actuators from the process valve series Type 21xx is specially designed for the requirements of hygienic process environments.
The pneumatic control unit Type 8690 combines electrical position feedback and pneumatic control for single or double-acting actuators, and is also optionally available as an intrinsically safe model to ATEX.

Main customer benefits:
- Compact design of the valve system with integrated controller meets the demands for plant washdown environments through the selection of materials, external seals and integrated control air supply to the actuator.
- Integrated pilot valve with manual actuation
- Air intake filter enhances the process valve system availability
- Simple and reliable actuator adaptations allowing additional actuators of the process valve series, Type 20xx or actuators from other manufacturers to be used

Control head Type 8691

More info.

DeviceNet™

The new generation of integrated control heads for combination with actuators from the process valve series Type 21xx is specially designed for the requirements of hygienic process environments.
The intelligent control head, Type 8691, detects the valve position by means of a contact-free analog position sensor circumventing excessive wear of mechanical parts. Single or double-acting actuators are controlled via the integral pilot valve. Communication interfaces AS-Interface and DeviceNet are available as options.

Main customer benefits:
- Compact, hygienic design of the valve system with integrated controller meets the demands of plant washdown environments through the selection of materials, external seals and integrated control air supply to the actuator.
- Automatic setting of the control head at the push of a button
- Even under dirty or dark environments, a clearly visible status display due to powerful LEDs
- Monitoring and diagnosis: Process valve systems with field bus interface used in modern plant processes
- Integrated pilot valve with manual actuation
- Air intake filter enhances the process valve system availability
- Simple and reliable actuator adaptations allowing additional actuators of the process valve series, Type 20xx or actuators from other manufacturers to be used

Ordering information for valve system On/Off ELEMENT Type 8801-GC continued

A **valve system On/Off ELEMENT Type 8801-GC** consists of an **Globe Valve Type 2101** and a pneumatic control unit **Type 8690**, control head **Type 8691** (for valve actuator sizes ø70/ø90/ø130mm) or control head **Type 8695** (for valve actuator size ø50 mm) (see separate datasheets).
For the configuration of further valve systems please use the "Request for quotation" on p. 14 go to page
You order two components and receive a complete assembled and certified valve

Ordering the valve system On/Off ELEMENT Type 8801-GC with valve actuator size ø 50 mm

Globe Valve Type 2101 with atuator size ø 50 mm

Control Head

Control head
Type 8695

Globe Valve with desired control unit

Valve system
On/Off ELEMENT
Type 8801-GC-M
2101 + 8695

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

Control head Type 8695

More info.

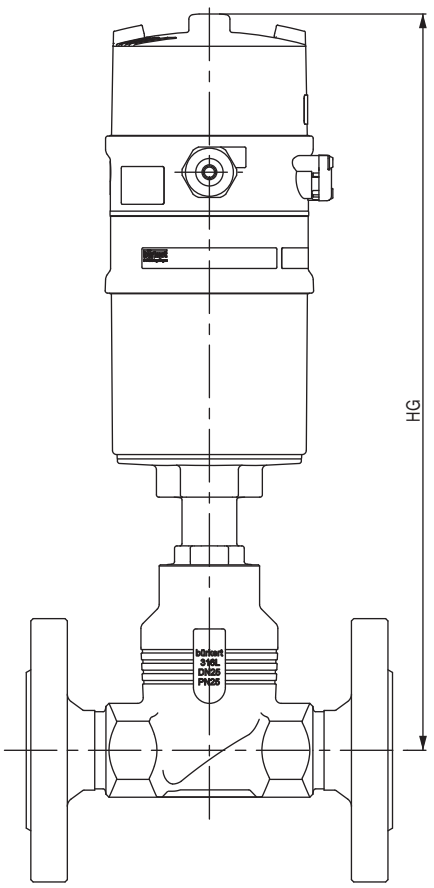
The new generation of integrated control heads for combination with small actuators from the process valve series Type 21xx is specially designed for the requirements of hygienic process environments. The intelligent control head, Type 8695, detects the valve position by means of a contact-free analog position sensor circumventing excessive wear of mechanical parts. Single and double-acting actuators are controlled via the integral pilot valve. An AS-Interface communication interface is available as an option.

Main customer benefits:
- Compact, hygienic design of the valve system with integrated controller meets the demands of plant washdown environments through the selection of materials, external seals and integrated control air supply to the actuator
- Automatic setting of the control head at the push of a button
- Visual status display on the control head
- Monitoring and diagnosis: Process valve systems with fieldbus interface used in modern plant processes
- Integrated pilot valve
- Simple and reliable actuator adaption

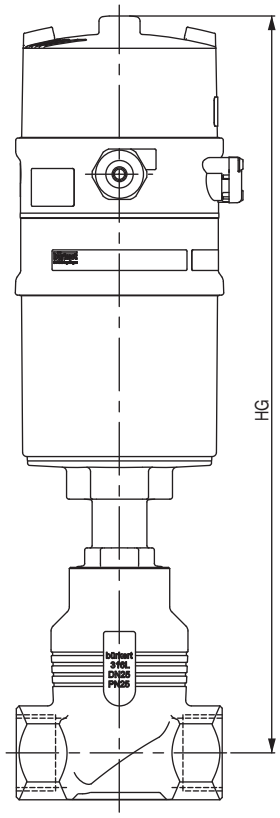
Dimensions for valve system On/Off ELEMENT Type 8801-GC [mm]

Dimensions valve system On/Off ELEMENT Type 8801-GC-K with pneumatic control unit Type 8690 [mm]

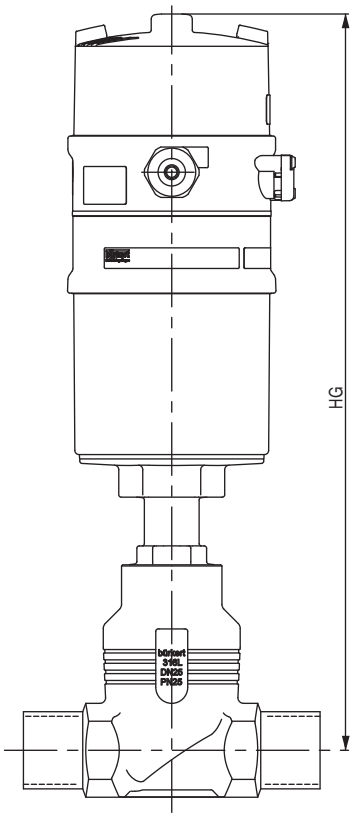
Flanged body



Threaded body



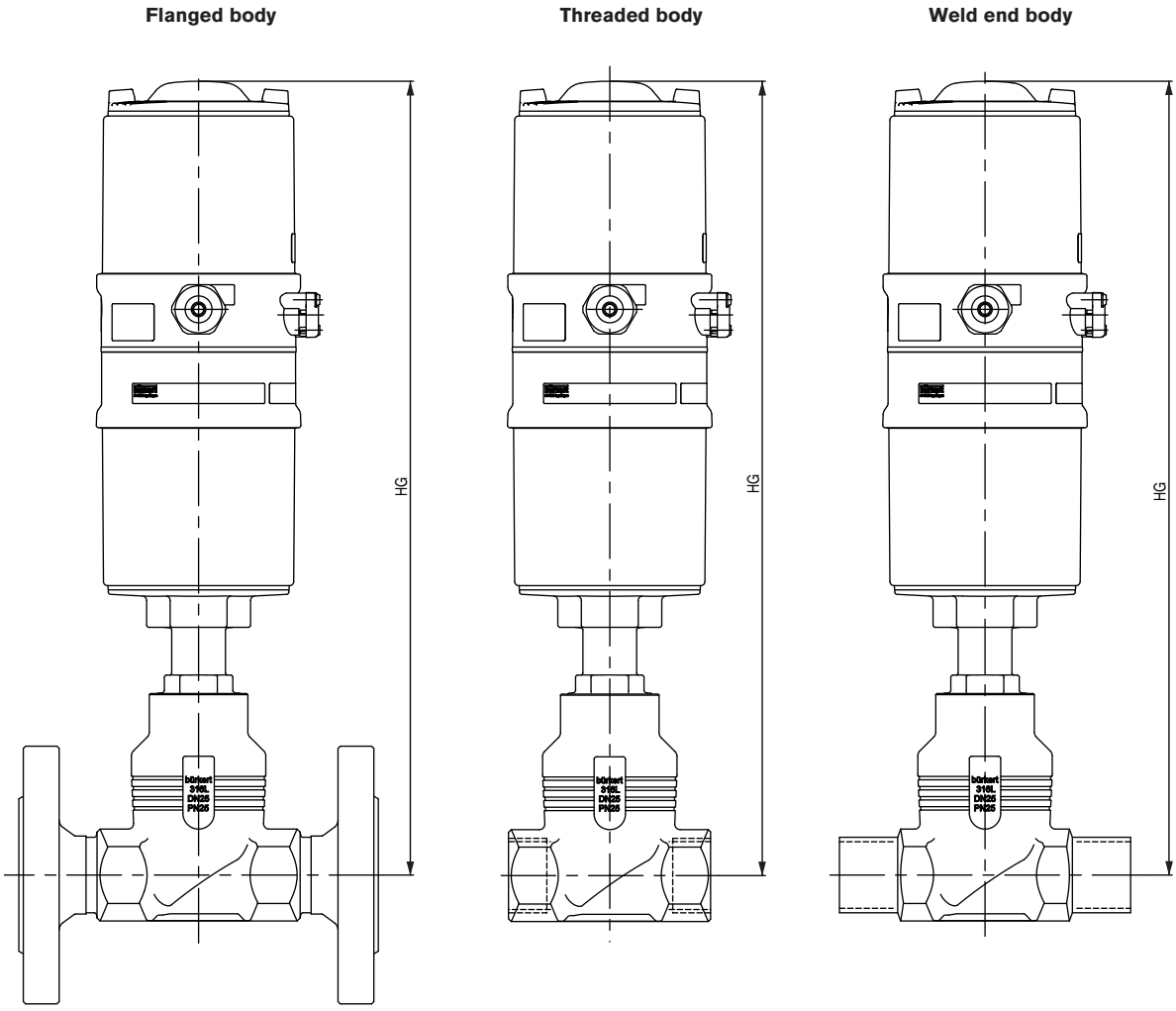
Weld end body



Orifice [mm]	[inch]	Actuator size	HG
10	–	70	313
15	1/2”	70	313
20	3/4”	70	319
25	1”	70	322
32	–	70	343
		90	403
40	1 1/2”	70	348
		90	408
		130	460
50	2”	70	358
		90	414
		130	466

Dimensions for valve system On/Off ELEMENT Type 8801-GC [mm], continued

Dimensions valve system On/Off ELEMENT Type 8801-GC-H with control head Type 8691 [mm]

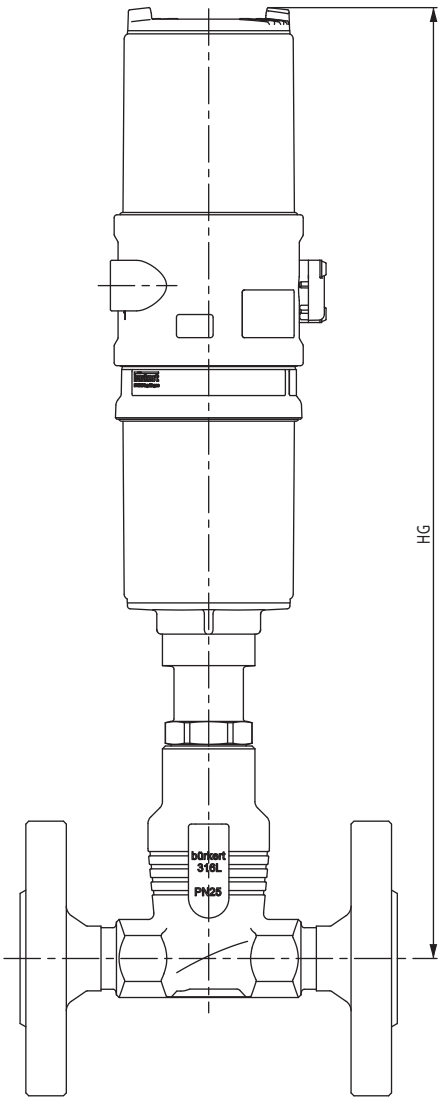


Orifice [mm]	[inch]	Actuator size	HG
10	–	70	346
15	1/2”	70	346
20	3/4”	70	352
25	1”	70	355
32	–	70	376
		90	436
40	1 1/2”	70	381
		90	441
		130	493
50	2”	70	391
		90	447
		130	499

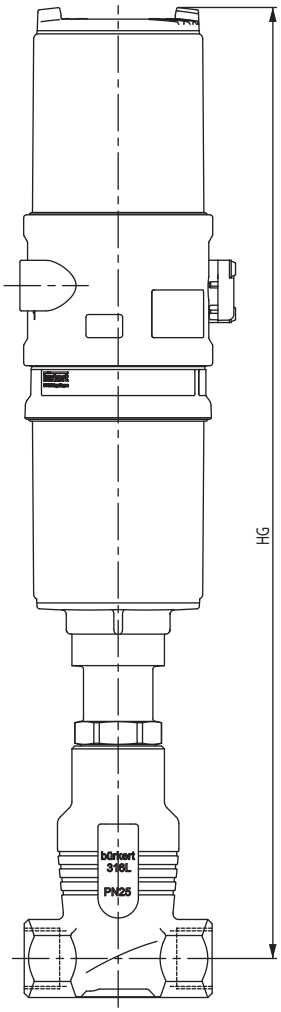
Dimensions for valve system On/Off ELEMENT Type 8801-GC [mm], continued

Dimensions valve system On/Off ELEMENT Type 8801-GC-M with control head Type 8695 [mm]

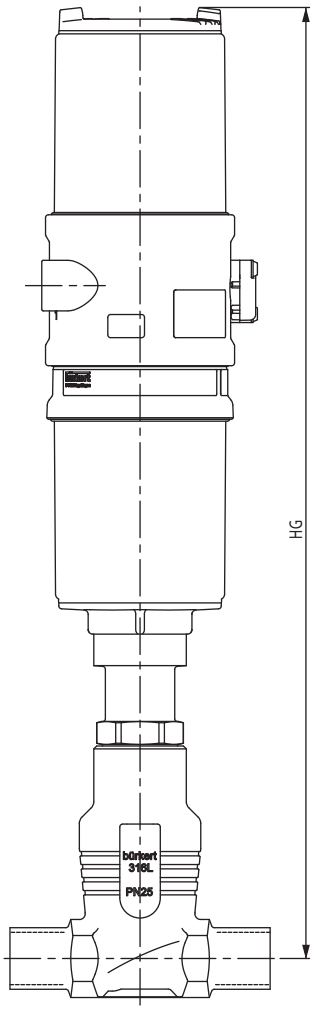
Flanged body



Threaded body



Weld end body



Orifice [mm]	Orifice [inch]	Actuator size [mm]	HG
10	-	50	329
15	1/2	50	329
20	3/4	50	335
25	1	50	342

bürkert

Valve system On/Off ELEMENT Type 8801-GC - 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 facility* 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

Pipeline DN PN
Pipe material
■ **Process medium**
■ **Type of media** ☐ Liquid ☐ Steam ☐ Gas

Valve features

Seat sealing material ☐ PTFE ☐ NBR ☐ Other
Nominal pressure PN
Nominal size DN
Type of connection ☐ Flanged ☐ Threaded ☐ Welded ☐ Clamp
Standard connection ☐ ISO ☐ DIN ☐ Other
Control function ☐ NC[1)] ☐ NO [1)] ☐ double-acting
Pilot pressure min. max.

Please specify item no. if known):

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

Control unit features

For actuator sizes 70/90/130 mm

☐ **Pneumatic Control Unit Type 8690** More info.

Pneumatic function
☐ Single-acting ☐ Double-acting
☐ Without pilot valve

Position feedback
☐ 1x inductive ☐ 2x inductive
☐ 1x inductive (NAMUR) ☐ 2x inductive (NAMUR)
☐ 1x mechanical ☐ 2x mechanical

Supply voltage
☐ 24 V / DC (ATEX Zone 2/22)
☐ Ex ia IIC T6 (ATEX Zone 1)

Pilot air ports
☐ Push-in connector external ø 6mm or 1/4" ☐ Thread G 1/8"

Please specify item no. if known:

☐ **Control Head Type 8691** More info.

Pneumatic function
☐ Single-acting ☐ Double-acting

Pilot air ports
☐ Push-in connector external ø 6mm or 1/4"
☐ Thread G 1/8"

Communication
☐ ASI
☐ Multipol M12
☐ Flat cable clip, 1 m cable
☐ DeviceNet

Please specify item no. if known:

For actuator size 50 mm

☐ **Control Head Type 8695** More info.

Pneumatic function
☐ Single-acting ☐ Double-acting

Pilot air ports
☐ Push-in connector external ø 6mm or 1/4"
☐ Thread G 1/8"

Communication
☐ ASI

Please specify item no. if known:

Comments

Reset