

FINE CONTROLS (UK) LTD



Fine Controls have been supplying process controls & instrumentation equipment since 1994, & now serves an ever expanding customer base, both in the UK & globally.

We offer a full range of valve & instrumentation products & services, with our product range representing leading technologies & brands:

Flow: Flow Meters & Transmitters, Flow Switches, Flow Control Valves & Batch Control Systems

Temperature: Temperature Probes & Thermowells, Temperature Transmitters, Temperature Regulators & Temperature Displays

Level: Level Transmitters & Switches

Pressure: Pressure Gauges & Transmitters, Precision & High Pressure Regulators & I-P Converters, Volume boosters.

Precision Pneumatics: Pressure Regulators, I-P Converters, Volume Boosters, Vacuum Regulators

Valves: Solenoid & Pneumatic Valves, Control Valves & Positioners, Actuated Ball, Globe or Diaphragm Valves & Isolation Valves

Services: Repair, Calibration, Panel Build, System Design & Commissioning

 FAIRCHILD
A rotork® Brand












Solenoid Valves
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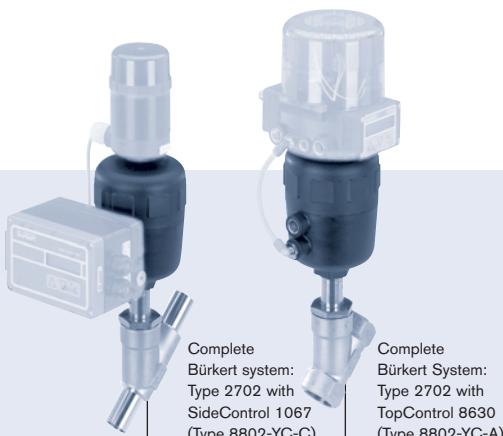



Baumer Group




CONTROLS
A rotork® Brand





Type 2702 can be combined with...



Type 8630

Positioner TopControl
continuous



Type 1067

Positioner
SideControl



Type 8635

Positioner
SideControl



Type 8323

Pressure transmitter



Type 8030

Flow sensor



Type ST20

Temperature sensor

The 2702 Control Valve consists of an 316L angle seat body with a rugged pneumatic piston actuator. The parabolic trim results in a flow characteristic approximately 35% larger than conventional control valves. It is available in either stainless steel or stainless steel or with a durable PTFE seal for tight shut-off.

Type 2702 can be actuated by the Continuous TopControl Type 8630 or SideControl Type 1067 and 8635. TopControl/SideControl thus forms a mechanical and functional unit with the pneumatic actuator as a complete control valve system.

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

Proven Applications

- Food and beverage CIP/SIP and auxiliary processes with steam, chilled water and glycol
- Textile machinery (steam, water, air) and dyeing
- Heat exchangers and autoclaves
- Sterilizers and washers
- Distillation apparatus
- Packaging and filling machinery

2/2-way Angle Seat Control Valve, threaded and weld end connections, DN 13-50

- Excellent control characteristic and high flow rates
- Durable, robust and cost effective
- Ultra compact design, low weight
- Quality certifications available

Technical data

Materials	Cast stainless steel (conform to 1.4409) PA polyamide (PPS on request)	
Sealing	St.st./St.st. (stainless steel/stainless steel), PTFE/St.st. (PTFE/stainless steel)	
Seat leakage IEC 534-4/EN 1349	Shut-off class IV for St.st./St.st. Shut-off class VI for PTFE/St.st.	
Process media gases and liquids (vacuum version on request)	For neutral gases, water, alcohols, oils, fuels, hydraulic liquids, salt solutions, lyes, organic solvents, steam (10 bar(abs)/+180°C)	
Viscosity	Max. 600 mm ² /s	
Packing gland	PTFE V-rings (silicone grease) with spring compensation	
Nominal pressure	PN 25 (body)	
Temperature	Fluid -10°C to +180°C ¹⁾ (max. +130°C for PTFE/St.st. sealing recommended) Ambient -10°C to +60°C ¹⁾	
Control medium	Compressed air	
Pilot pressure	5.5 to 7 bar	
Pilot air ports	G 1/4 stainless steel (St.st.)	
Flow direction	Below seat	
Flow characteristic	Modified equal percentage	
Control ratio (Kvs/KvO)	More than 50:1	
Port connections		
Threaded	G	▪ DIN ISO 228 (face-to-face DIN 3202-4 M4 on request , DIN 3202-4 M8)
	NPT	▪ ANSI/ASME B1.20.1 (face-to-face DIN 3202-4 M4)
	Rc	▪ ISO 7 (face-to-face DIN 3202-4 M4)
Weld end	ISO	▪ EN ISO 1127/ISO 4200
	DIN	▪ DIN 11850 series 2
	SMS	▪ SMS 3008 (on request)
	OD-Tube	▪ BS 4825 part 1 (on request) ▪ ASME BPE (on request)
Mounting position	Any, preferably upright	

¹⁾ high temperature on request

Ordering information for Angle Seat Valve System Type 8802-YC

A complete continuous angle seat valve system Type 8802-YC consists of an angle seat control valve Type 2702 and a valve actuation system TopControl Type 8630 or SideControl Type 1067 or Type 8635. The positioners are only delivered in combination with an actuator as a part of a complete control valve. The following information is necessary for the selection of a complete control valve:

- **Item no.** of the seat control valve **Type 2702** (see Ordering chart)
- **Item no.** of the desired positioner **Type 8630, Type 1067 or Type 8635** (see separate datasheets)

Examples for variations of continuous angle seat valve systems

Angle seat valve Type 2702 with required process connection

Positioner



Angle seat valve with required body and port connection

1

**Angle seat valve
TopControl system**
2702+8630
(Type 8802-YC-A)

2

**Angle seat valve
SideControl system**
2702+1067
(Type 8802-YC-C)

3

**Angle seat valve
SideControl system**
2702+8635
(Type 8802-YC-B)

TopControl Type 8630



0/4-20 mA
0-5/10 V PROFIBUS DeviceNet™



The Type 8630 is an electro-pneumatic positioner for usage with pneumatically operated process valves. The compact design with integrated position encoder and LCD display was developed for demanding applications of the process industry.

Main customer benefits are:

- Time saving algorithms for temperature, flow and pressure PID parameters through ProcessTUNE function.
- Quick and simple menu driven parameterization through keyboard
- Field bus communication via Profibus DPV1 or DeviceNet
- Fits seamlessly to Bürkert's process valve systems
- Break resistant housing
- Suitable for hazardous locations per zone 2 and 22

SideControl Type 1067



0/4-20 mA
0-10 V



Type 1067 is a digital electro-pneumatic positioner with an integrated process controller for precise control requirements. The compact and sturdy design with integrated position encoder and LCD display was developed for demanding applications of the process industry.

Main customer benefits are:

- Quick and simple menu driven parameterization through keyboard
- Remote setpoint adjustment via a 0/4-20 mA or 0-10 VDC signal
- 3-wire, 24 VDC connection
- Adaptation according to IEC534-6 for lift and swivel drives
- Sturdy aluminium housing
- Remote model with separate positioner
- Suitable for hazardous locations per zone 2 and 22

SideControl Type 8635, 2-wire, intrinsically safe



4-20 mA



Type 8635 is a digital electro-pneumatic positioner with an optional, integrated process controller for precise control requirements. The compact design with integrated position encoder and LCD display was developed for demanding applications of the process industry.

Main customer benefits are:

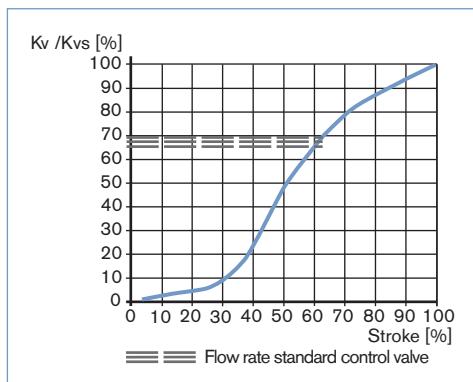
- Time saving algorithms for temperature, flow and pressure PID parameters through ProcessTUNE function.
- Quick and simple menu driven parameterization through keyboard or Profibus PA
- Remote setpoint adjustment via a 4-20 mA signal
- Adaptation according to IEC534-6 for lift and swivel drives
- Rugged anodised aluminium housing
- Suitable for hazardous locations per zone 1, zone 21 or zone 2 and 22

Application example



A 2702 control valve with a 1067 local PID controller. The valve is controlling the exit temperature of a media flowing through a heat exchanger. The process input is a simple temperature transmitter.

Flow characteristic



Remarks on the flow characteristic

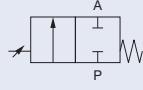
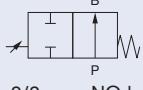
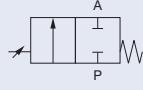
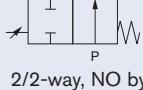
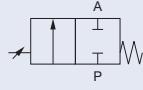
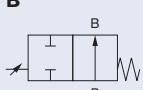
Modified equi-percentile flow characteristic, engineered for a quick response during peak flow demand (an advantage for many processes like heating/cooling with heat exchangers) and fine control at lower flow.

Kvs values [m^3/h]

Port size and orifice [mm]	Actuator size [mm]	Stroke [%]										
		5	10	20	30	40	50	60	70	80	90	100
13/15	80	0.23	0.24	0.26	0.35	0.7	1.85	2.9	3.5	4	4.3	4.5
20	80	0.30	0.33	0.42	0.7	2.85	5.3	6.6	7.5	8.2	8.6	9
25	80	0.39	0.41	0.60	1.25	4.5	8.5	10.5	12.2	13.5	14.2	15
32	80	0.55	0.65	0.95	1.5	4	9.3	13.8	16.5	18.8	21	23
40	100	0.65	0.85	1.5	5	14	20	25	27	30	33	35
50	100	1	1.3	2	5	16	27	34	41	45	49	53

Ordering chart for Angle seat valve (without positioner)

Body with threaded port connection acc. G, DIN ISO 228 and NPT, ANSI/ASME B1.20.1, flow below seat

 Control function	Port size and orifice [mm] [inch]	Actuator size Ø [mm]	Kvs value [m³/h]	Operating pressure ≤ +180°C [bar]	Item no. seal system* St.st./St.st.	Item no. seal system* PTFE/St.st.
Acc. G, DIN ISO 228, face-to-face acc. DIN 3202-4 M4 (long dimension), flow below seat, on request						
A  2/2-way, NC by spring return	13	1/2"	80	4.5	16	■
	20	3/4"	80	9	16	■
	25	1"	80	15	16	■
	32	1 1/4"	80	23	15	■
	40	1 1/2"	100	35	12.5	■
	50	2"	100	53	7.2	165 543
B  2/2-way, NO by spring return	13	1/2"	80	4.5	16	■
	20	3/4"	80	9	16	■
	25	1"	80	15	16	■
	32	1 1/4"	80	23	15	■
	40	1 1/2"	100	35	12.5	■
	50	2"	100	53	7.2	165 598
Acc. G, DIN ISO 228, face-to-face acc. DIN 3202-4 M8 (short dimension), flow below seat						
A  2/2-way, NC by spring return	13	1/2"	80	4.5	16	165 523
	20	3/4"	80	9	16	165 526
	25	1"	80	15	16	165 531
	32	1 1/4"	80	23	15	165 537
	40	1 1/2"	100	35	12.5	165 540
	50	2"	100	53	7.2	165 518
B  2/2-way, NO by spring return	13	1/2"	80	4.5	16	165 580
	20	3/4"	80	9	16	165 584
	25	1"	80	15	16	165 566
	32	1 1/4"	80	23	15	165 569
	40	1 1/2"	100	35	15.2	165 592
	50	2"	100	53	7.2	165 572
Acc. NPT, ANSI/ASME B1.20.1, face-to-face acc. DIN 3202-4 M4, flow below seat						
A  2/2-way, NC by spring return	13	1/2"	80	4.5	16	462 101
	20	3/4"	80	9	16	462 102
	25	1"	80	15	16	462 103
	32	1 1/4"	80	23	15	462 104
	40	1 1/2"	100	35	12.5	462 105
	50	2"	100	53	7.2	462 106
B  2/2-way, NO by spring return	13	1/2"	80	4.5	16	462 115
	20	3/4"	80	9	16	462 116
	25	1"	80	15	16	462 110
	32	1 1/4"	80	23	15	462 121
	40	1 1/2"	100	35	12.5	462 122
	50	2"	100	53	7.2	462 123

*seal system:

- St.st./St.st.: plug stainless steel/seat stainless steel
- PTFE/St.st.: (soft sealing) plug PTFE/seat stainless steel

■ on request



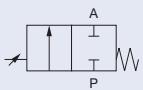
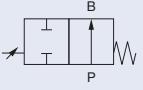
Further versions on request



Material
Actuator: PPS

Ordering chart for Angle seat valve (without positioner)

Body with threaded port connection acc. Rc, ISO 7, flow below seat

 Control function	Port size and orifice		Actuator size Ø [mm]	Kvs value [m³/h]	Operating pressure ≤ +180°C [bar]	Item no. seal system* St.st./St.st.	Item no. seal system* PTFE/St.st.
	[mm]	[inch]					
Acc. Rc, ISO 7, face-to-face acc. DIN 3202-4 M4, flow below seat							
A  2/2-way, NC by spring return	13	1/2"	80	4.5	16	507 147	507 141
	20	3/4"	80	9	16	507 148	507 142
	25	1"	80	15	16	507 149	507 143
	32	1 1/4"	80	23	15	507 150	507 144
	40	1 1/2"	100	35	12.5	507 151	507 145
	50	2"	100	53	7.2	507 152	507 146
B  2/2-way, NO by spring return	13	1/2"	80	4.5	16	507 165	507 153
	20	3/4"	80	9	16	507 166	507 154
	25	1"	80	15	16	507 155	507 161
	32	1 1/4"	80	23	15	507 156	507 162
	40	1 1/2"	100	35	12.5	507 157	507 163
	50	2"	100	53	7.2	507 158	507 164

*seal system:

- St.st./St.st.: plug stainless steel/seat stainless steel
- PTFE/St.st.: (soft sealing) plug PTFE/seat stainless steel



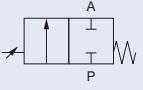
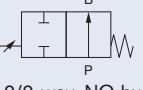
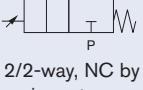
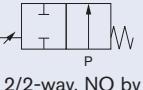
Further versions on request



Material

Actuator: PPS

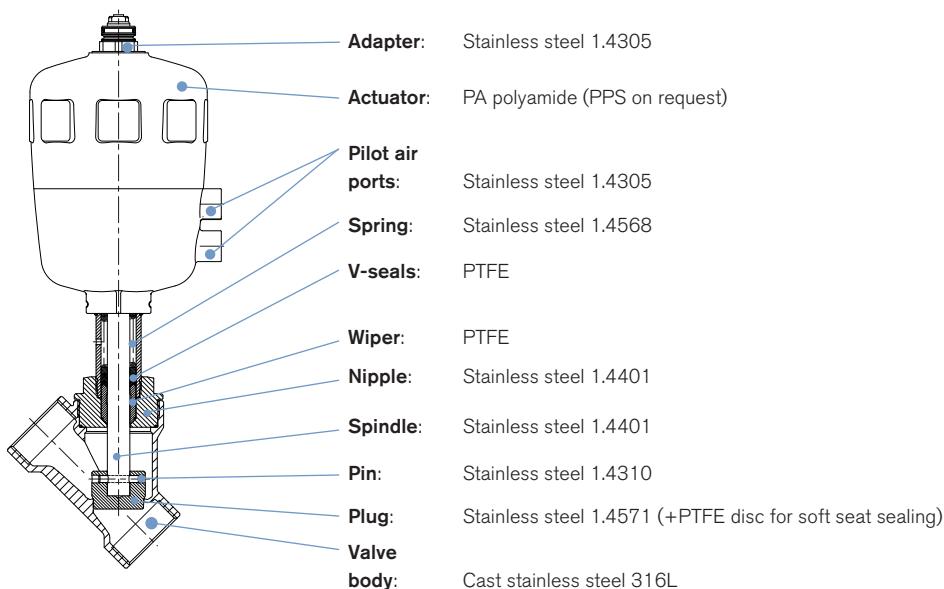
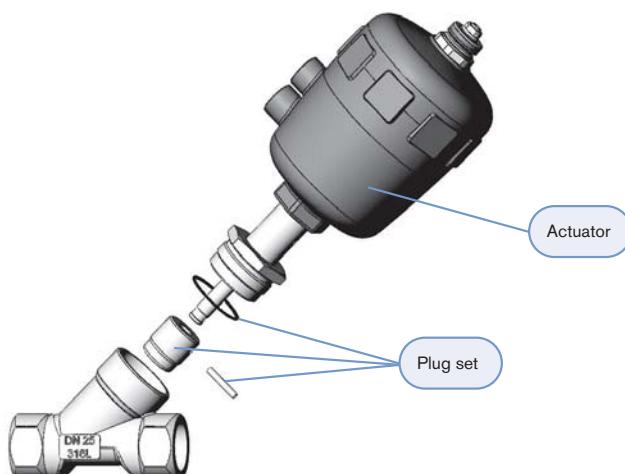
Ordering chart for Angle seat valve (without positioner)**Body with weld end acc. EN ISO 1127/ISO 4200 and DIN 11850 S2, flow below seat**

	Control function	Port size and orifice		Connection DS x WS [mm]	Actuator size Ø [mm]	Kvs value [m³/h]	Operating pressure $\leq +180^\circ\text{C}$ [bar]	Item no. seal system* St.st./St.st.	Item no. seal system* PTFE/St.st.
		[mm]	[inch]						
Acc. EN ISO 1127/ISO 4200, flow below seat									
	A	15	1/2"	21.3 x 1.6	80	4.5	16	165 524	165 487
		20	3/4"	26.9 x 1.6	80	9	16	165 529	165 511
		25	1"	33.7 x 2.0	80	15	16	165 534	165 514
		32	1 1/4"	42.4 x 2.0	80	23	15	165 538	165 516
		40	1 1/2"	48.3 x 2.0	100	35	12.5	165 541	165 519
		50	2"	60.3 x 2.0	100	53	7.2	165 544	165 521
	B	15	1/2"	21.3 x 1.6	80	4.5	16	165 582	165 547
		20	3/4"	26.9 x 1.6	80	9	16	165 585	165 551
		25	1"	33.7 x 2.0	80	15	16	165 567	165 554
		32	1 1/4"	42.4 x 2.0	80	23	15	165 570	165 559
		40	1 1/2"	48.3 x 2.0	100	35	12.5	165 596	165 573
		50	2"	60.3 x 2.0	100	53	7.2	165 599	165 578
Acc. DIN 11850 series 2, flow below seat									
	A	15	1/2"	19.0 x 1.5	80	4.5	16	165 525	165 488
		20	3/4"	23.0 x 1.5	80	9	16	165 530	165 512
		25	1"	29.0 x 1.5	80	15	16	165 536	165 030
		32	1 1/4"	35.0 x 1.5	80	23	15	165 539	165 517
		40	1 1/2"	41.0 x 1.5	100	35	12.5	165 542	164 778
		50	2"	53.0 x 1.5	100	53	7.2	165 545	165 522
	B	15	1/2"	19.0 x 1.5	80	4.5	16	165 583	165 548
		20	3/4"	23.0 x 1.5	80	9	16	165 586	165 552
		25	1"	29.0 x 1.5	80	15	16	165 568	165 556
		32	1 1/4"	35.0 x 1.5	80	23	15	165 591	165 571
		40	1 1/2"	41.0 x 1.5	100	35	12.5	165 597	165 574
		50	2"	53.0 x 1.5	100	53	7.2	165 600	165 579

*seal system:

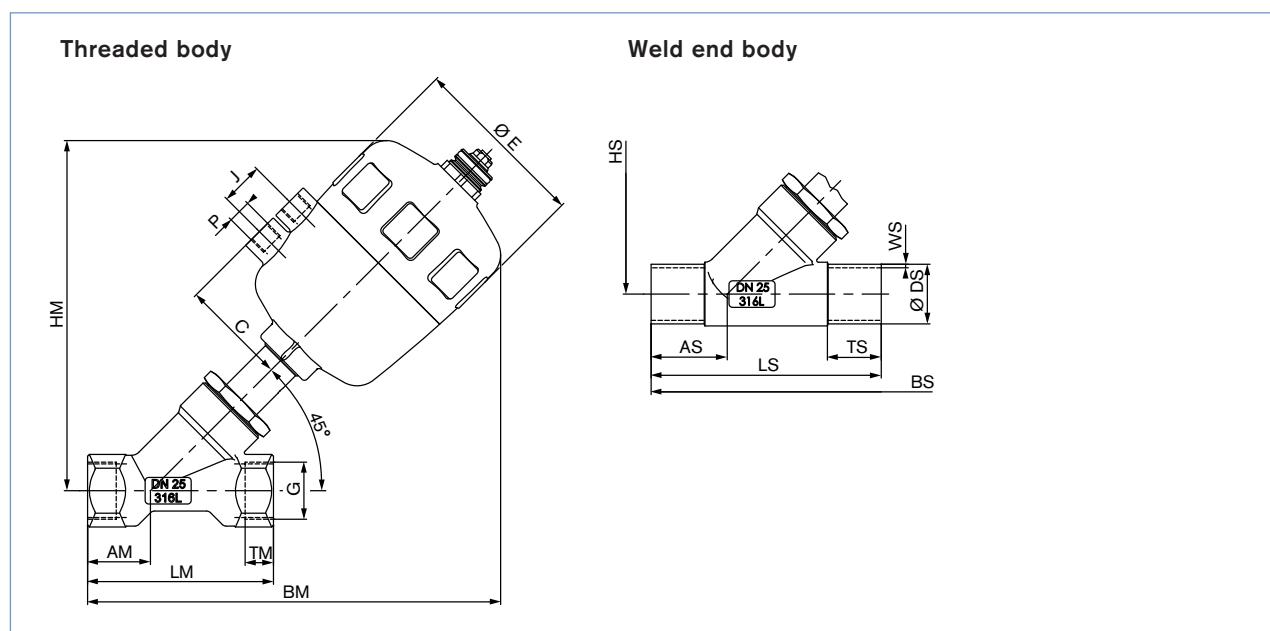
- St.st./St.st.: plug stainless steel/seat stainless steel
- PTFE/St.st.: (soft sealing) plug PTFE/seat stainless steel

**Further versions on request****Material**
Actuator: PPS**Port connection**
SMS 3008, BS 4825 part 1, ASME BPE

Materials**Spare parts for Type 2702 – DN 13-50 (on request)**

Dimensions Angle seat valve [mm]

Angle seat valve with threaded and weld end connection

**All actuators**

Port size and orifice [mm]	Actuator size Ø [mm]	ØE	C	P	J
13/15	80	101	60	G 1/4	24
20	80	101	60	G 1/4	24
25	80	101	60	G 1/4	24
32	80	101	60	G 1/4	24
40	100	127	73	G 1/4	30
50	100	127	73	G 1/4	30

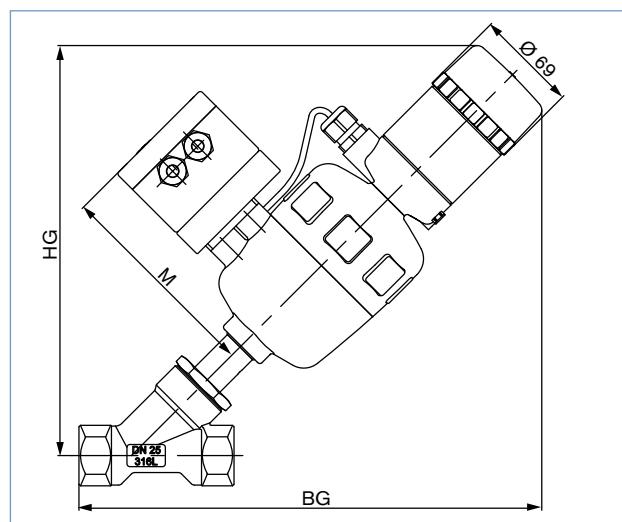
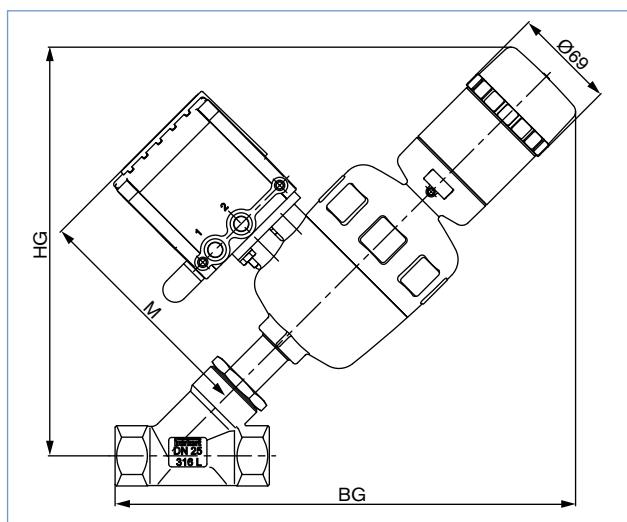
Threaded ends

All threaded bodies		G, NPT and Rc thread with face-to-face acc. DIN 3202-4 M4										G thread with face-to-face acc. DIN 3202-4 M8					
Orifice [mm]	HM	BM	LM	AM	G thread		NPT thread		Rc thread		BM	LM	AM	G	TM		
13	193	224	85	31	G 1/2	14	NPT 1/2	13.7	Rc 1/2	13.2	217	65	24	G 1/2	14		
20	193	228	95	35	G 3/4	16	NPT 3/4	14	Rc 3/4	14.5	220	75	27	G 3/4	16		
25	198	234	105	35.5	G 1	18	NPT 1	16.8	Rc 1	16.8	228	90	29.5	G 1	18		
32	205	246	120	41	G 1 1/4	16	NPT 1 1/4	17.3	Rc 1 1/4	19.1	241	110	36	G 1 1/4	16		
40	260	300	130	40	G 1 1/2	18	NPT 1 1/2	17.3	Rc 1 1/2	19.1	295	120	35	G 1 1/2	18		
50	272	317	150	45	G 2	24	NPT 2	17.6	Rc 2	23.4	—	—	—	—	—		

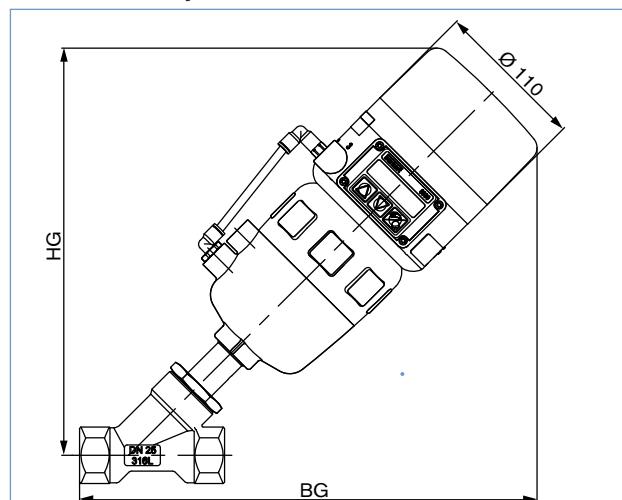
Weld ends

All weld end bodies		EN ISO 1127/ISO 4200 and DIN 11850 series 2								BS 4825 P1, ASME BPE, SMS 3008											
Ori-fice [mm]	HS	BS	LS	AS	EN ISO 1127/ISO 4200			DIN 11850 S2			Ori-fice [inch]	BS	LS	AS	øDS	TS	WS ¹⁾	WS ²⁾	øDS	TS	WS
15	198	232	100	34	21.3	20	1.6	19	20	1.5	1/2"	244	135	46	12.7	38	1.2	1.65	12	38	1
20	198	237	115	39	26.9	25	1.6	23	20	1.5	3/4"	250	145	52	19.05	38	1.2	1.65	18	38	1
25	199	242	130	43	33.7	30	2	29	26	1.5	1"	250	152	51	25.4	38	1.65	1.65	25	38	1.2
32	209	244	145	40	42.4	26	2	35	26	1.5	1 1/2"	323	182	60	38.1	38	1.65	1.65	38	38	1.2
40	263	312	160	49	48.3	30	2	41	26	1.5	1 1/2"	323	182	60	38.1	38	1.65	1.65	38	38	1.2
50	277	327	175	50	60.3	30	2.6	53	26	1.5	2"	341	210	64	50.8	45	1.65	1.65	51	45	1.2

¹⁾ BS 4825 P1 ²⁾ ASME BPE

Dimensions Control valve systems [mm]**Control valve system 2702 + 1067****Control valve system 2702 + 8635**

All bodies orifice [mm]	Actuator size [mm]	M		Threaded body		Weld end body		BS 4825 P1, ASME BPE, SMS 3008
		2702+ 1067	2702+ 8635	HG	BG	G, NPT and Rc thread with face-to-face acc. DIN 3202-4 M4	G thread with face-to-face acc. DIN 3202-4 M8	
13/15	80	142	160	273	304	297	278	312
20	80	142	160	273	308	300	278	317
25	80	142	160	278	314	308	279	322
32	80	142	160	285	326	321	289	324
40	100	155	173	336	376	371	340	389
50	100	155	173	349	394	-	354	404
								418

Control valve system 2702 + 8630

All bodies orifice [mm]	Actuator size [mm]	Threaded body			Weld end body		BS 4825 P1, ASME BPE, SMS 3008	
		HG	BG	G, NPT and Rc thread with face-to-face acc. DIN 3202-4 M4	G thread with face-to-face acc. DIN 3202-4 M8	HG	BG	
13/15	80	291	322	315	315	296	330	342
20	80	291	326	318	318	296	335	348
25	80	296	332	326	326	297	340	348
32	80	303	344	339	339	307	342	-
40	100	354	394	389	389	358	407	418
50	100	367	412	-	-	372	422	436

Note

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

Control valves – request for quotation

► Please fill out and send to your nearest Burkert 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

Site of control

DN	PN
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Measuring and control task

Pipeline

DN

PN

Pipe material

Process medium

Type of media

Liquid
min

Steam
standard

max

Gas
unit

Flow rate (Q, Q_N, W)¹⁾Temperature at valve inlet T₁Absolute pressure at valve inlet P₁Absolute pressure at valve outlet P₂Steam pressure P_v

Kinematic viscosity (ν)

Dynamic viscosity (η)

Standard density

Max. sound level accepted

mm²/s or cSt

mPas or cP

Kg/m³

dB (A)

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

Valve features

Control valve type

Globe Angle seat Diaphragm Ball valve Butterfly Other

Body material

Stainless steel PVC PP PVDF Other

Surface finish²⁾

internal

external

Seat sealing material

Metal PTFE EPDM²⁾ FKM²⁾

Nominal pressure

PN

Nominal size

DN

Type of connection

Flange Socket union

Welded Internal

External thread

Tri-Clamp®*

Standard connection

ISO DIN

ANSI JIS

Other

Function

NC³⁾ NO³⁾ Double-acting

min.

max.

²⁾ only diaphragm valve ³⁾ NC: normally closed by spring action; NO: normally open by spring action

* Tri-Clamp® is a registered Trademark of Alfa Laval Inc.

Positioner / Controller Type 1067 - 3-wire Valve mounted Remote version

Power supply 24 VDC

Communication

Setpoint / feedback analog signal

 Positioner version

Input 0/4 - 20 mA / 0-10 V

Feedback

4 - 20 mA or Binary

 PID Controller version⁴⁾

Input measuring signal 4 - 20 mA

 Type 8630 - 3-wire

Power supply 24 VDC

Communication

Setpoint / feedback analog signal
or via BUS Profibus DP
 DeviceNet

 Positioner version

Input 0/4 - 20 mA / 0-5/10 V

Feedback

4 - 20 mA or/and Binary

 PID Controller version⁴⁾

Input measuring signal
4 - 20 mA / Pt100 / Frequency

Inductive proximity switch 1 2

 Type 8635 - 2-wire Standard ATEX/FM Zone 1 Zone 2/22

Power supply 24 VDC via setpoint or BUS

Communication

Setpoint / feedback analog signal
or via BUS Profibus PA

 Positioner version

Input 4 - 20 mA

Feedback

4 - 20 mA or/and Binary

 PID Controller version⁴⁾

Input measuring signal 4 - 20 mA

Inductive proximity switch 1 2

⁴⁾ same setpoint for input and feedback signal as for Positioner version

* To find your nearest Burkert facility, click on the orange box →

www.burkert.com

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

We reserve the right to make technical
changes without notice.

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