burkert
FLUID CONTROL SYSTEMS

2-way Diaphragm Control Valve, stainless steel body, pneumatically operated, DN 15-100

- Hermetical separation of fluids from the operating mechanism by diaphragm
- Integrated cascade process controller with PID algorithm
- Automatic self-adjustment of basic parameters means autotune for the valve and for PID
- Zero dead volume

Type 2731 GP can be combined with...

Type 8630
Positioner
TopControl
continuous

Type 1067
Positioner
SideControl

Type 8635
Positioner
SideControl

Type 8323
Pressure
transmitter

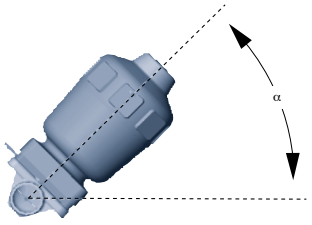
Type 8030
Flow sensor

Type ST20
Temperature sensor

The diaphragm control valve Type 2731 GP consists of a pneumatically operated piston actuator, a diaphragm and a valve body from cold-formed stainless steel pipe. The actuator has been designed so that the stroke can be continuously changed. This makes a favourable characteristic possible for the continuous change of the flow.

The Type 2731 GP can be actuated by the TopControl Continuous Type 8630, SideControl Type 1067 or Type 8635 forming a mechanical and functional unit and thus offering a complete control valve system. Using this control valve, continuous regulation tasks for fluids can be solved.

Installation for self-draining operation
α= 15 up to 30° plus 3 to 5° inclination to the pipe axis



Technical data	
Materials Body Actuator	 Stainless steel 1.4404, 316L PA (Polyamide)
Sealing materials	EPDM, PTFE/EPDM
Process media	For neutral gases and liquids, high purity, sterile, aggressive or abrasive fluids
Viscosity	Up to viscous
Surface finish (average surface finish) glass beaded	 Ra ≤ 1.6 µm
Media temperature	-10 to +130°C Briefly up to +150°C for steam sterilisation
Ambient temperature	-10 to +60°C (Actuator size ≥ 175 mm -10 to +50°C)
Control medium (for coupling with a positioner)	Instrumental air class 3 acc. DIN ISO 8573-1
Pilot pressure	5.5 to 7 bar Actuators Ø80 to 125 mm 5 to 6 bar Actuators Ø175 and 225 mm
Threads for pilot air	G 1/4 stainless steel (SS)
Flow characteristic	see chart p. 2
Port connections Weld end	 ▪ EN ISO 1127/ISO 4200 ▪ DIN 11850 Series 2
Installation	As required, preferably with actuator in upright position
With self-draining operation	see drawing on left hand side

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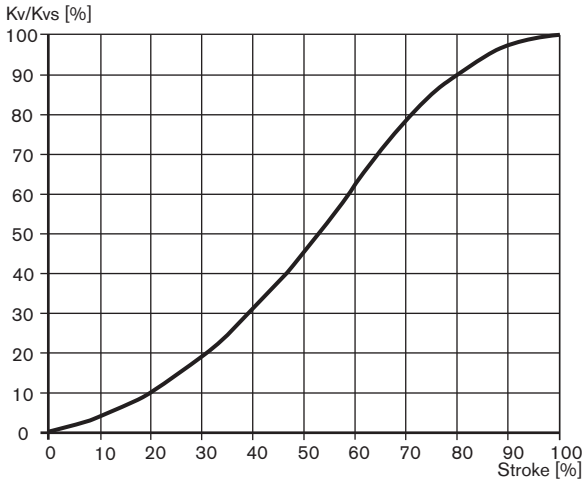
Technical data

Kvs values and weights

Orifice [mm]	Actuator size Ø EN ISO 1127/ ISO 4200 [mm]	Kvs value EN ISO 1127/ ISO 4200 [m³/h]	Actuator size Ø DIN 11850 Series 2 [mm]	Kvs value DIN 11850 Series 2 [m³/h]	Weight without TopControl [kg]
15	F-80	7.0	F-80	4.5	1.4
20	F-80	13.0	F-80	4.5	1.5
25	F-80	21.0	F-80	13.5	2.0
32	G-100	33.0	F-80	18.0	3.6
40	G-100 H-125	45.0 46.0	G-100 H-125	24.5 24.5	3.9 3.9
50	H-125	70.0	H-125	37.0	6.9
65	– –	– –	H-125 K-175	110.0 115.0	8.5 14.5
80	–	–	L-225	165.0	22.5
100	–	–	L-225	265.0	24.5

Flow characteristic



For further information about flow rates please see datasheet Type 273X

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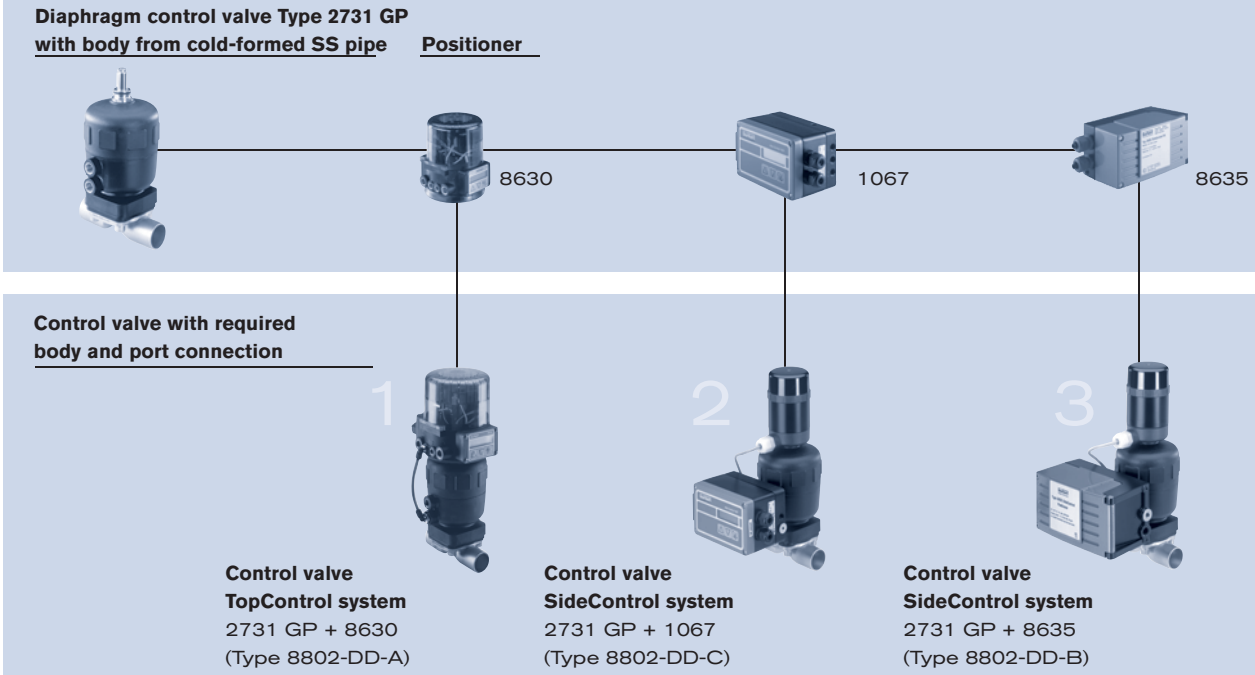
Ordering information for Control Valve System Type 8802

The complete control valve system, Type 8802, consists of a diaphragm control valve, Type 2731 GP, 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 diaphragm control valve **Type 2731 GP** (see Ordering chart)
- **Item no.** of the desired positioner **Type 8630, Type 1067 or Type 8635** (see separate datasheets)

Please also use the "request for quotation" form on p. 8 for ordering the complete system go to page

Examples for variations of a complete control valve system



Control valve
TopControl system
2731 GP + 8630
(Type 8802-DD-A)

Control valve
SideControl system
2731 GP + 1067
(Type 8802-DD-C)

Control valve
SideControl system
2731 GP + 8635
(Type 8802-DD-B)

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

TopControl Type 8630 More info.

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

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 More info.

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 More info.

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

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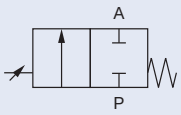
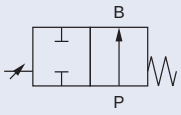
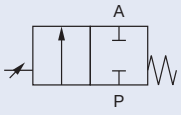
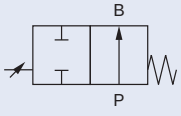
Ordering chart (other versions on request)

PA actuator: Valve body from cold-formed stainless steel pipe, weld ends permissable media temperature -10 to +130°C

Control function	Port connection [mm]	Actuator size Ø [mm]	Kvs value [m3/h]	Operating pressure max.1) [bar]	Item no. weld end EN ISO 1127/ ISO 4200	Item no. weld end DIN 11850 Series 2
EPDM diaphragm material						
A  NC by spring return	15	F-80	7	10	148 313	148 318
	20	F-80	4.5	10	–	148 319
		F-80	13	10	148 314	–
	25	F-80	13.5	10	–	148 320
		F-80	21	10	148 315	–
	32	F-80	18	10	–	148 321
		G-100	33	10	148 316	–
	40	G-100	24.5	10	–	148 322
		H-125	46	10	148 317	–
	50	H-125	37	10	–	148 323
		H-125	70	8	147 526	–
	65	H-125	110	7	–	157 537
		K-175	115	10	–	157 538
	80	L-225	165	10	–	157 542
	100	L-225	265	8	–	157 543
B  NO by spring return	15	F-80	7	10	148 324	148 330
	20	F-80	4,5	10	–	148 332
		F-80	13	10	148 325	–
	25	F-80	13.5	10	–	148 333
		F-80	21	10	148 326	–
	32	F-80	18	10	–	148 334
		G-100	33	10	148 327	–
	40	G-100	24.5	10	–	148 335
		H-125	46	10	148 328	–
	50	H-125	37	10	–	148 336
		H-125	70	7	148 329	–
	65	H-125	110	7.5	–	158 329
		K-175	115	10	–	158 330
	80	K-175	165	9	–	158 331
	100	K-175	265	7	–	158 332
PTFE/EPDM diaphragm						
A  NC by spring return	15	F-80	7	10	148 337	148 343
	20	F-80	4.5	10	–	148 344
		F-80	13	10	148 338	–
	25	F-80	13.5	10	–	148 345
		F-80	21	7.5	148 339	–
	32	F-80	18	7.5	–	148 346
		G-100	33	8	148 340	–
	40	G-100	24.5	8	–	148 347
		H-125	46	10	148 341	–
	50	H-125	37	10	–	147 708
		H-125	70	7	148 342	–
	65	H-125	110	4	–	157 545
		K-175	115	8.5	–	157 546
	80	L-225	165	10	–	157 548
	100	L-225	265	4	–	157 551
B  NO by spring return	15	F-80	7	9	148 348	148 355
	20	F-80	4.5	8.5	–	148 356
		F-80	13	8.5	148 349	–
	25	F-80	13.5	8	–	148 357
		F-80	21	8	148 350	–
	32	F-80	18	8	–	148 358
		G-100	33	10	148 352	–
	40	G-100	24.5	10	–	148 359
		H-125	46	10	148 353	–
	50	H-125	37	10	–	148 360
		H-125	70	4	148 354	–
	65	H-125	110	6.5	–	158 333
		K-175	115	10	–	158 334
	80	K-175	165	7.5	–	158 335
	100	K-175	265	4	–	158 336

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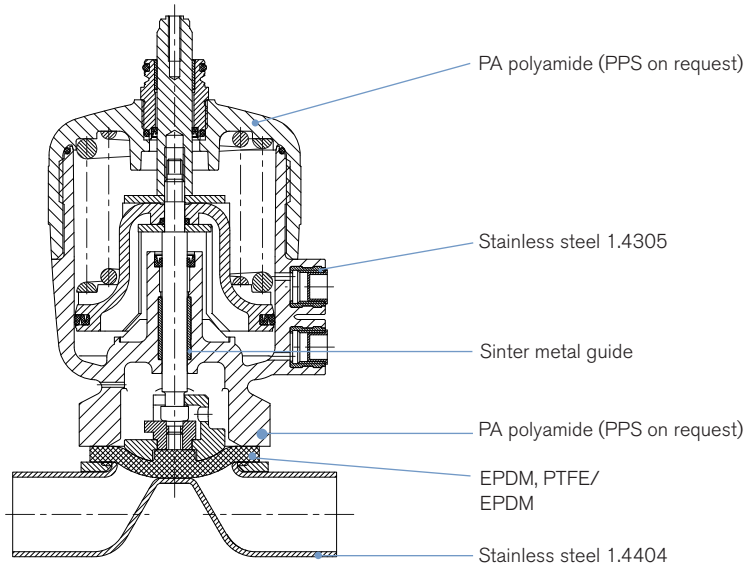
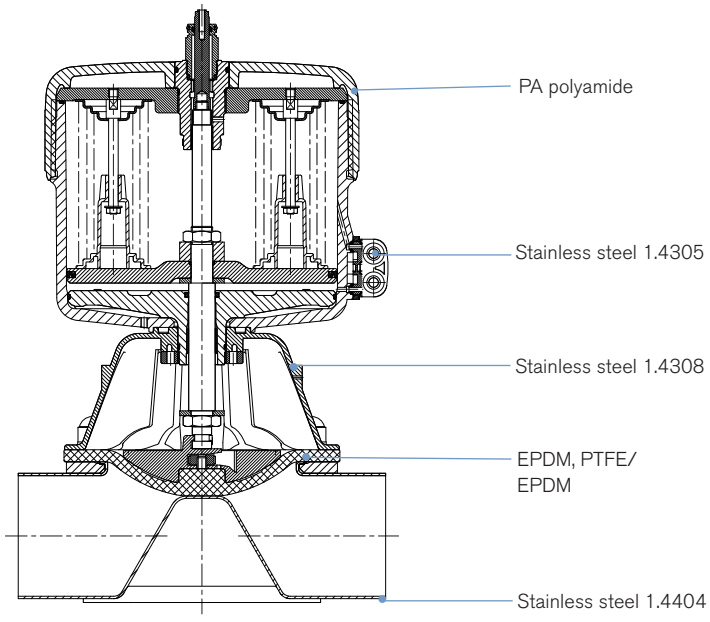
Materials

DN 15-50



DN 65-100



Approvals

Suitable for foodstuffs / sterile applications

- The composition of the EPDM and PTFE/EPDM diaphragms corresponds to the *Code of Federal Regulations*, published by the *FDA* (Food and Drug Administration, USA).
- The EPDM diaphragms correspond to the *KTW-Recommendation* (Plastics in the Drinking Water Sector), A Manufacturer's Declaration will be supplied on request.

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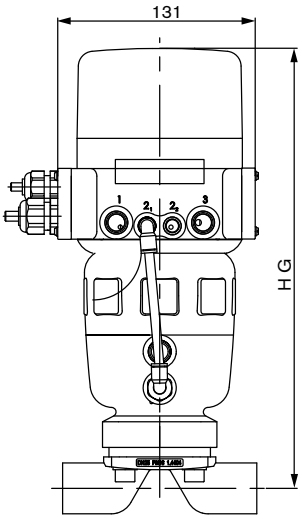
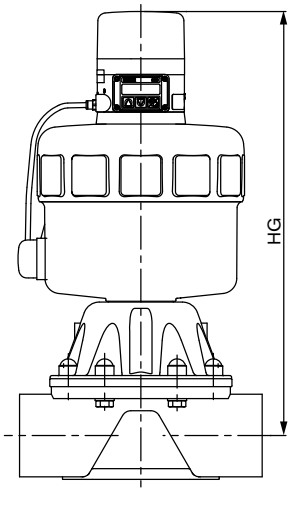
Dimensions [mm]

DN 15-50



with TopControl Type 8630

DN 65-100



with TopControl Type 8630

Orifice [mm]	Weld end acc. EN ISO 1127/ISO 4200						Weld end acc. DIN 11850 Series 2						All
	Actuator size Ø	Ø E	H	HG	Ø D	WS	Actuator size Ø	Ø E	H	HG	Ø D	WS	L
15	F-80	101	127	254	21.3	1.6	F-80	101	127	254	19	1.5	110
20	F-80	101	162	289	26.9	1.6	F-80	101	154	281	23	1.5	119
25	F-80	101	165	292	33.7	2.0	F-80	101	158	285	29	1.5	129
32	G-100	127	215	345	42.4	2.0	F-80	101	161	291	35	1.5	148
40	G-100 H-125	127 153	219 259	349 389	48.3 48.3	2.0 2.0	G-100 –	127 –	211 –	341 –	41 –	1.5 –	161 161
50	H-125	153	263	393	60.3	2.0	H-125	153	259	389	53	1.5	192
65	– –	– –	– –	– –	– –	– –	H-125 K-175	153 211	290 382	420 512	70 70	2 2	216 216
80	–	–	–	–	–	–	L-225	261	394	524	85	2	256
100	–	–	–	–	–	–	L-225	261	409	539	104	2	305

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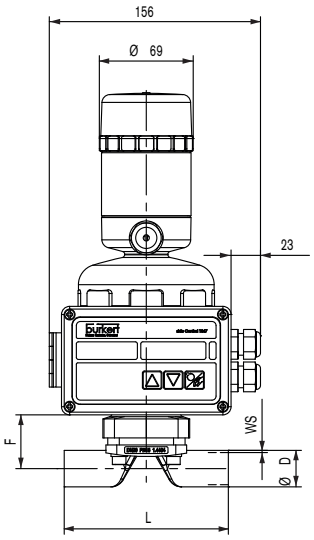
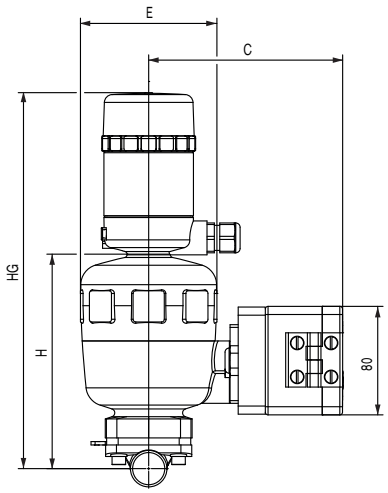
Dimensions [mm]

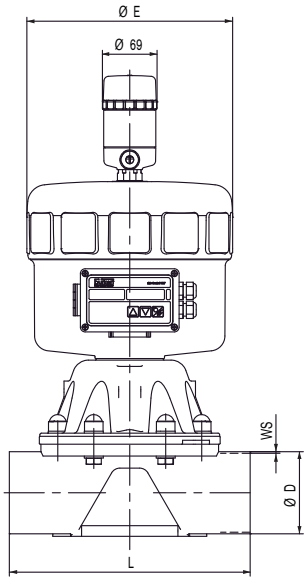
DN 15-50

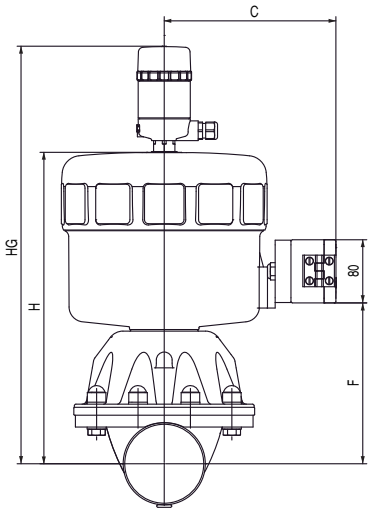




with SideControl Type 1067

DN 65-100





with SideControl Type 1067

All bodies					EN ISO 1127/ISO 4200					DIN 11850 R2				
DN	Actuator size	E	C	L	H	HG	F	D	WS	H	HG	F	D	WS
15	F-80	101	147	110	127	247	31	21.3	1.6	127	247	31	19	1.5
20	F-80	101	147	119	162	282	45	26.9	1.6	154	274	32	23	1.5
25	F-80	101	147	129	165	285	48	33.7	2.0	158	278	41	29	1.5
32	G-100	127	159	148	215	335	63	42.4	2.0	161	281	59	35	1.5
40	G-100 H-125	127 153	159 172	161 161	219 259	339 379	69 85	48.3 48.3	2.0 2.0	211 -	331 -	62 -	41 -	1.5 -
50	H-125	153	172	192	263	383	81	60.3	2.0	259	379	78	53	1.5
65	H-125 K-175	153 211	172 195	216 216	- -	- -	- -	- -	- -	290 371	410 505	93 173	70 70	2.0 2.0
80	L-225	261	220	256	-	-	-	-	-	383	517	191	85	2.0
100	L-225	261	220	305	-	-	-	-	-	398	532	203	104	2.0

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bürkert

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 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

		min	standard	max	unit
Site of control					
Measuring and control task					
Pipeline	DN / PN				
Pipe material					
■ Process medium					
■ Type of media	☐ Liquid ☐ Steam ☐ Gas				
■ Flow rate (Q, Q_N, W) [1]					
■ Temperature at valve inlet T1					
■ Absolute pressure at valve inlet P1					
■ Absolute pressure at valve outlet P2					
Steam pressure Pv					
Kinematic viscosity (ν)			mm^2/s or cSt		
Dynamic viscosity (η)			mPa.s or cP		
Standard density			Kg/m^3		
Max. sound level accepted			dB (A)		

[1] standard unit: Liquid Q = m^3/h; Steam W = kg/h; Gas Q_N = Nm^3/h

Valve features

Control valve type	☐ Globe	☐ Angle seat	☐ Diaphragm	☐ Ball valve	☐ Butterfly	☐ Other
Body material	☐ Stainless steel		☐ PVC	☐ PP	☐ PVDF	☐ Other
Surface finish[2]	internal			external		
Seat sealing material	☐ Metal	☐ PTFE	☐ EPDM[2]	☐ FKM[2]		
Nominal pressure	PN					
Nominal size	DN					
Type of connection	☐ Flange	☐ Socket union	☐ Welded	☐ Internal thread	☐ External thread	☐ Clamp
Standard connection	☐ ISO	☐ DIN	☐ ANSI	☐ JIS	☐ Other	
Function	☐ NC[3]	☐ NO[3]	☐ Double-acting			
Pilot pressure	min.			max.		

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

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 version** [4]
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 version** [4]
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 version** [4]
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 Bürkert facility, click on the orange box → www.burkert.com

Reset form

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

Subject to alterations
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