bürkert
FLUID CONTROL SYSTEMS

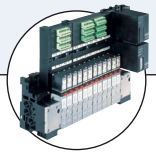
2/2 way Angle-Seat Valve for medium up to +180 °C, DN15-50

For process valves with decentralized automation see ELEMENT Type 2100

- High flow rates
- Very high cycle life
- Clamp body according to EN ISO 2852, BS 4825 or ASME BPE
- Deliverable with flow direction below or above seat
- Simple conversion of the circuit function

Type 2000 can be combined with…

Type 8697
Electrical position feedback

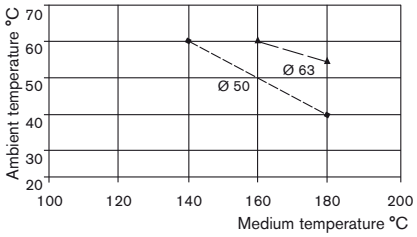


Type 8640/8644
Valve block

Type 6012/6014 P
Pilot valve

The externally piloted angle-seat valve is operated with a single or double-acting piston actuator. The actuator is available in two different materials, PA and PPS depending on the ambient temperature. The reliable self-adjusting packing gland provides high sealing integrity. High flow rates are attained with the stainless steel 2-way body.
These maintenance-free and robust valves can be retrofitted with a comprehensive range of accessories for position indication, stroke limitation or manual override.
For valves with port connection threaded port and weld end please see separate datasheets.

[1] **Note**: For PA actuators in the sizes 50 and 63, the combination of max. medium temperature and max. ambient temperature is as shown in the following chart



Technical data	
Orifice	DN15 to 50
Body materials	Stainless steel 316L
Actuator material	PA (PPS on request)
Seal material	PTFE (NBR, FKM, EPDM on request)
Medium	Water, alcohol, oils, fuel, hydraulic fluids, salt solution, alkali solutions, organic solvents, steam
Viscosity	Max. 600 mm²/s
Packing gland (with silicone grease)	PTFE V-rings with spring compensation
Medium temperature[1]	-10 to +180 °C with PTFE seal
Ambient temperature	
PA actuator[1]	-10 to +60 °C
PPS actuator[1] Ø 50-80	+5 to +140 °C
PPS actuator[1] Ø 100-125	+5 to +90 °C
Installation	As required, preferably with actuator in upright position
Control medium	Neutral gases, air
Max. pilot pressure	
Actuator size Ø 50-80	PA and PPS 10 bar
Actuator size Ø 100	PA 10 bar
Actuator size Ø 100	PPS 7 bar
Actuator size Ø 125	PA and PPS 7 bar
Port connection acc. on request	EN ISO 2852, BS 4825, ASME BPE DIN 32676
Surface finish on request	Standard Ra, internal ≤ 3.2 µm Int. Ra ≤ 0.6 µm (external cast surface) electropolished

Content

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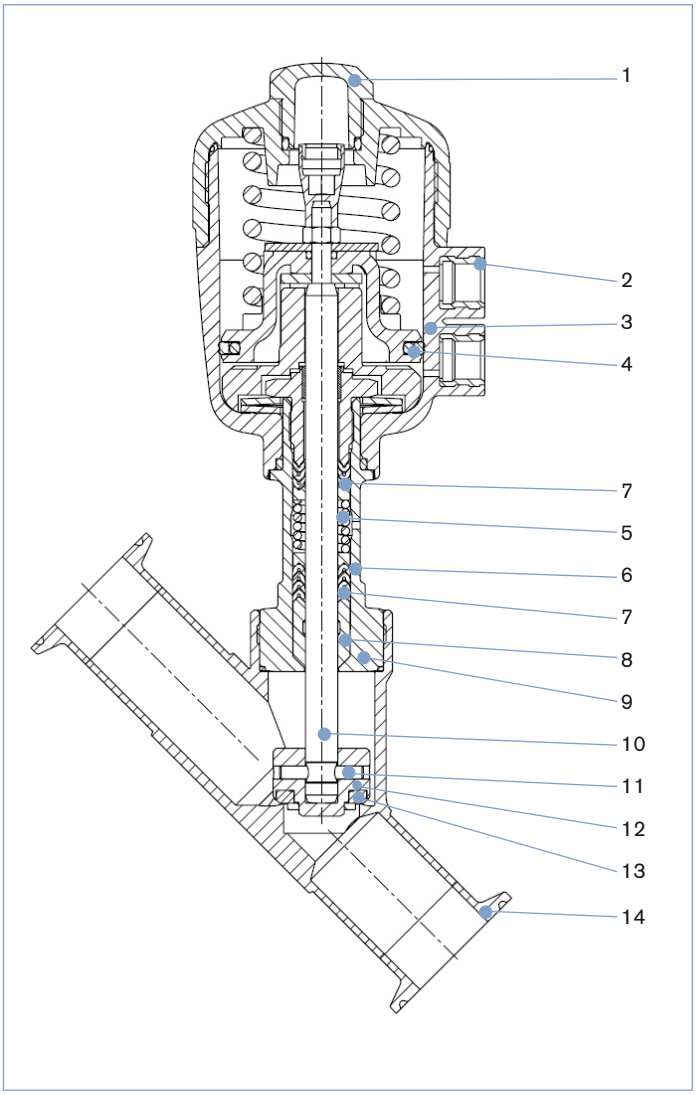
Materials Type 2000 clamp



1	Transparent cap	PC (with PPS actuator; PSU)
2	Pilot air ports	Stainless steel 1.4305
3	Actuator	PA (PPS on request)
4	Piston seal	NBR (with PPS actuator; FKM)
5	Spring	Stainless steel 1.4310
6	Tube[2)]	Stainless steel 1.4401 Stainless steel 316L[3)]
7	V-Seals	PTFE (FKM on request)
8	Wiper	PTFE PEEK[1)]
9	Nipple[2)]	Stainless steel 1.4401 Stainless steel 316L[3)]
10	Spindle	Stainless steel 1.4401
11	Pins	Stainless steel 1.4401
12	Swivel plate	Stainless steel 1.4401
13	Seal	PTFE (NBR, FKM, EPDM on request)
14	Valve body	Stainless steel 316L

[1)] For actuator size 100 mm and 125 mm
[2)] Single piece with actuator size 63 mm to 125 mm
[3)] For actuator size 63 mm to 125 mm

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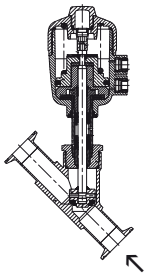
Technical data for Type 2000 clamp with flow direction below seat (for gas and liquid)



Flow direction below seat

Orifice [mm]	Actuator size [mm]	K_V value water (m^3/h)	Min. pilot pressure CFA [bar]	Max. operating pressure up to +180° CFA [bar]	CFB [bar]	Weight [kg]
15	50	4.2	3.9	16	16	0.8
20	50	8.0	3.9	11	16	1.0
25	50	14.5	–	–	16	1.2
	63	19	4.2	11	16	1.8
32	63	27	4.2	6	16	2.3
	80	28	5.0	14	16	3.1
40	63	35	–	–	16	2.7
	80	38	5.0	9	16	3.5
50	63	49	–	–	13	4.0
	100	55	4.4	7.2	–	7.0

K_V value water [m^3/h]: Measured at + 20 °C, 1 bar pressure at valve inlet and free outlet
Pressure values [bar]: Measured as overpressure to the atmospheric pressure

Pilot pressure diagram with control function B and flow direction below seat

Diagram 1

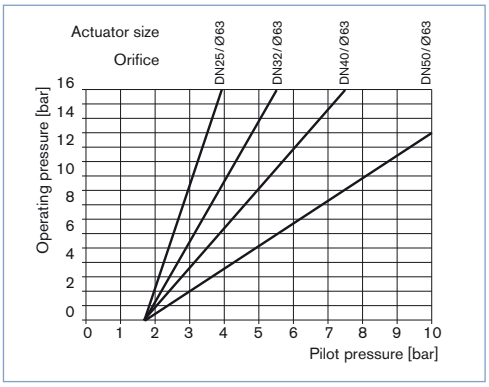
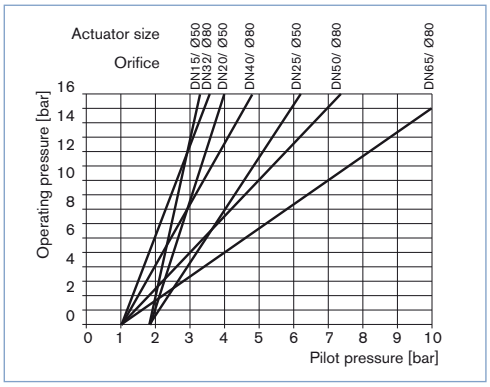
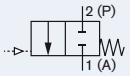
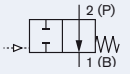


Diagram 2



Ordering chart for valves with flow direction below seat (further versions on request)

Valves with clamp connection acc. to ISO 2852, ASME BPE or BS 4825, body in stainless steel, actuator material PA, Ra internal ≤ 3.2 µm

Control function	Orifice [mm]	Actuator size Ø [mm]	Port connection Clamp external Ø [mm] ISO 2852	ASME BPE	BS 4825	Min. pilot pressure [bar]	Operating pressure up to 180 °C [bar]	Article no. ISO 2852	ASME BPE	BS 4825
A 	15	50	34.0	25.0	25.0	3.9	16	415070	175574	183245
	20	50	50.5	25.0	25.0	3.9	11	415071	175575	183246
	25	63	50.5	50.5	50.5	4.2	11	415072	175576	175576
	32	80	50.5	–	–	5	14	415073	–	–
	40	80	64.0	50.5	50.5	5	9	415074	175579	175579
	50	100	77.5	64.0	64.0	4.4	7.2	415075	175580	175580
B 	15	50	34.0	25.0	25.0	see diagram 1 and 2 above	16	415076		
	20	50	50.5	25.0	25.0		16	415077		
	25	50	50.5	50.5	50.5		16	415078		
	32	63	50.5	–	–		16	415079		
	40	63	64.0	50.5	50.5		16	415080		
	50	63	77.5	64.0	64.0		13	415081		

Further versions on request

Material
Seal: NBR, FKM, EPDM
Actuator: PPS

Port connections
Clamp acc. DIN 32676,
Weld end, threaded port

Additional
Surface finish: int. Ra ≤ 0.8 µm electro polished,
int. Ra ≤ 0.4 µm electro polished

Control function
Double-acting actuator

Approvals
GL, SIL

Mediums temperature
Valves for mediums temperature up to + 200 °C or down to - 40 °C

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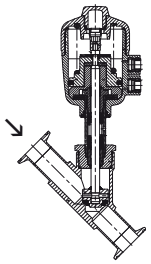
Technical data for Type 2000 clamp with flow direction above seat (only for gas and steam)



Flow direction above seat

Orifice [mm]	Actuator size [mm]	K_V value water (m^3/h)	Max. operating pressure up to + 180°	Weight [kg]
15	50	4.2	16	0.8
20	50	8.0	16	1.0
25	63	19.0	16	1.8
32	63	27.0	16	2.2
40	63	35.0	16	2.7
50	63	49.0	16	4.0

K_V value water [m^3/h]: Measured at + 20 °C, 1 bar pressure at valve inlet and free outlet
Pressure values [bar]: Measured as overpressure to the atmospheric pressure

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

Pilot pressure diagram with control function A and flow direction above seat

Diagram 3

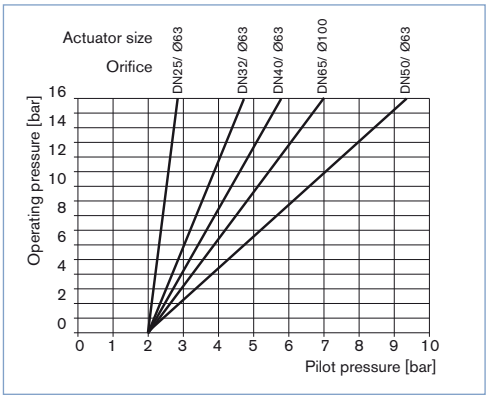
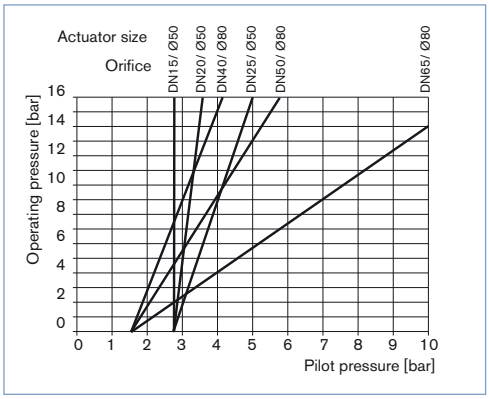
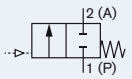


Diagram 4



Ordering chart for valves with flow direction above seat (further versions on request)

Valves with clamp connection acc. to ISO 2852, ASME BPE or BS 4825, body in stainless steel, actuator material PA, Ra internal ≤ 3.2 µm

Control function	Orifice [mm]	Actuator size Ø [mm]	Port connection Clamp external Ø [mm] ISO 2852	ASME BPE	BS 4825	Min. pilot pressure [bar]	Operating pressure up to 180 °C [bar]	Article no. ISO 2852	ASME BPE	BS 4825
A	15	50	34.0	25.0	25.0	see diagram 3 and 4 above	16	415082	183247	183249
	20	50	50.5	25.0	25.0		16	415083	183248	183264
	25	63	50.5	50.5	50.5		16	415084	183265	183265
	32	63	50.5	–	–		16	415085	–	–
	40	63	64.0	50.5	50.5		16	415086	183266	183266
	50	63	77.5	64.0	64.0		16	415087	183267	183267

Further versions on request

Material
Seal: NBR, FKM, EPDM
Actuator: PPS

Port connections
Clamp acc. DIN 32676,
Weld end, threaded port

Additional
Surface finish: int. Ra ≤ 0.8 µm electro polished,
int. Ra ≤ 0.4 µm electro polished

Control function
Double-acting actuator

Approvals
GL, SIL

Mediums temperature
Valves for mediums temperature up to + 200 °C or down to - 40 °C

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Ordering chart for accessories

3/2 way pilot valves with banjo bolts

Seal material valve FKM, seal material banjo bolt NBR

Valve for actuator size [Ø mm]	Type	Pressure inlet P (valve body)	Service port A (banjo bolt)	Ori-fice [mm]	Q_{Nn} value air [l/min]	Pressure range [bar]	Electrical coil connection Ind. Std.	Power consumption [W]	Article no. Voltage/ frequency [V/Hz] 024/DC	230/50
50-63	6012P	Tube fitting Ø6 mm	G ¼	1.2	48	0-10	Form B	4	552283	552286
50-125	6014P	G ¼	G ¼	2	120	0-10	Form A	8	424103	424107

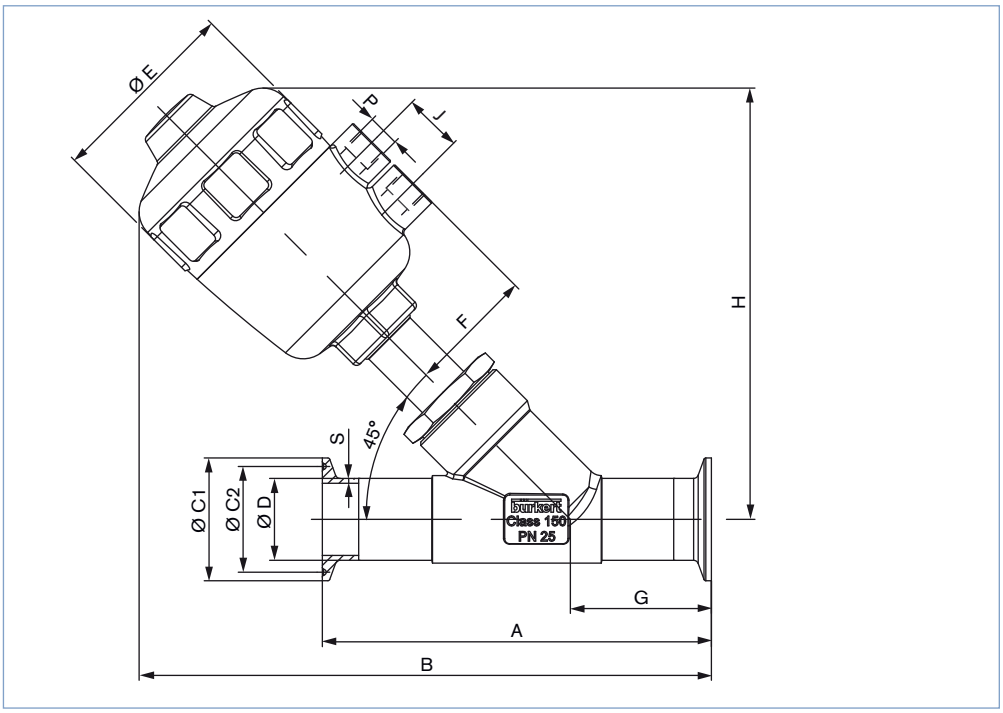
Cable plug Type 2507, Form B or Type 2508, Form A

	Article no.
Type 2507, Form B Industrial standard, 0 to 250 V without circuitry (Type 6012 P)	423845
Type 2508, Form A acc. DIN EN 175301–803, 0 to 250 V without circuitry (Type 6014 P, Type 0331P)	008376

For further accessories see datasheet for Type 1062 or the accessories datasheet Type 2XXX for the full options programme.

Note: For design reasons, some of the accessories cannot be supplied for actuator size Ø 40 mm. Please request the accessories datasheet Type 2XXX.

Dimensions Type 2000 clamp [mm]



Dimensions according to EN ISO 2852 [mm]

DN [mm]	Actuator size Ø	Ø E	H	F	P	J	A	B	Ø C1	Ø C2	Ø D	G	S
15	50	64	145	44	G ¼	24	130	194	34.0	27.5	21.3	49	1.6
20	50	64	149	44	G ¼	24	150	205.5	50.5	43.5	26.9	56.5	1.6
25	50	64	152	44	G ¼	24	160	210	50.5	43.5	33.7	58	2
	63	80	178	52	G ¼	24	160	236	50.5	43.5	33.7	58	2
32	63	80	188	52	G ¼	24	180	245.5	50.5	43.5	42.4	57.5	2
	80	101	209	60	G ¼	24	180	266.5	50.5	43.5	42.4	57.5	2
40	63	80	191	52	G ¼	24	200	260	64	56.5	48.3	69	2
	80	101	213	60	G ¼	24	200	282	64	56.5	48.3	69	2
50	63	80	209	52	G ¼	24	230	286.5	77.5	70.5	60.3	77.5	2.6
	100	127	277	73	G ¼	30	230	354.5	77.5	70.5	60.3	77.5	3.6

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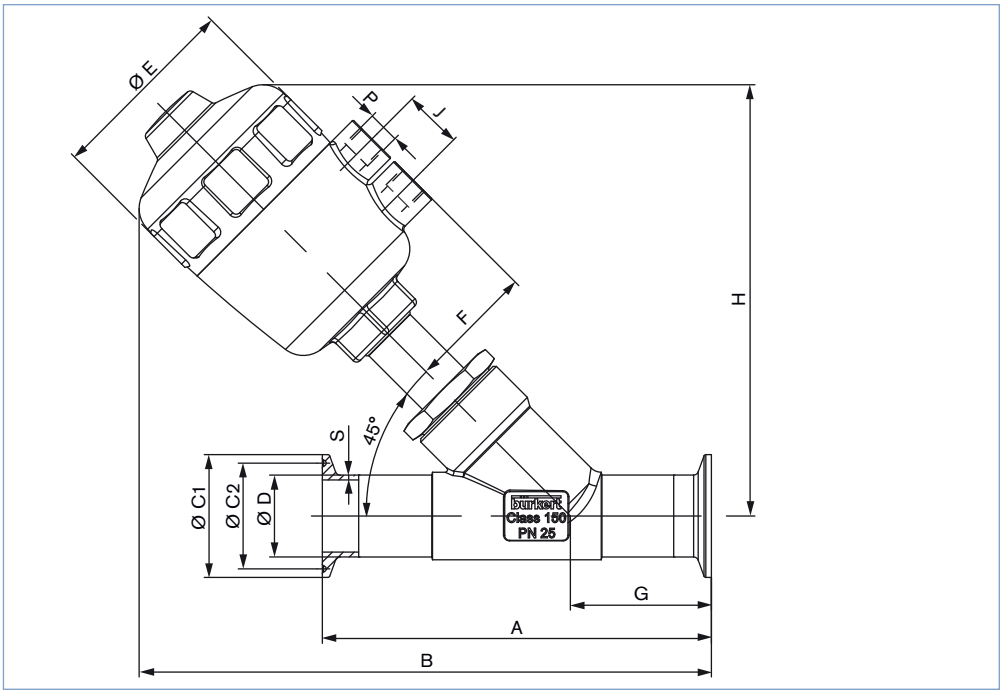
Dimensions Type 2000 clamp [mm], *continued*



Dimensions according to ASME BPE [mm]

DN [mm]	Actuator size Ø	Ø E	H	F	P	J	A	B	Ø C1	Ø C2	Ø D	G	S
15	50	64	145	44	G ¼	24	130	194	25.2	20.2	12.7	49	1.65
20	50	64	149	44	G ¼	24	150	205.5	25.2	20.2	19.05	56.5	1.65
25	50	64	152	44	G ¼	24	160	210	50.5	43.5	25.4	58	1.65
	63	80	178	52	G ¼	24	160	230	50.5	43.5	25.4	58	1.65
40	63	80	191	52	G ¼	24	200	260	50.5	43.5	38.1	69	1.65
	80	101	213	60	G ¼	24	200	282	50.5	43.5	38.1	69	1.65
50	63	80	209	52	G ¼	24	230	286.5	64.0	56.5	50.8	77.5	1.65
	100	127	277	73	G ¼	30	230	354.5	64.0	56.5	50.8	77.5	1.65

Dimensions according to BS 4825 [mm]

DN [mm]	Actuator size Ø	Ø E	H	F	P	J	A	B	Ø C1	Ø C2	Ø D	G	S
15	50	64	145	44	G ¼	24	130	194	25.2	20.2	12.7	49	1.2
20	50	64	149	44	G ¼	24	150	205.5	25.2	20.2	19.05	56.5	1.2
25	50	64	152	44	G ¼	24	160	210	50.5	43.5	25.4	58	1.65
	63	80	178	52	G ¼	24	160	236	50.5	43.5	25.4	58	1.65
40	63	80	191	52	G ¼	24	200	260	50.5	43.5	38.1	69	1.65
	80	101	213	60	G ¼	24	200	282	50.5	43.5	38.1	69	1.65
50	63	80	209	52	G ¼	24	230	286.5	64.0	56.5	50.8	77.5	1.65
	100	127	277	73	G ¼	30	230	354.5	64.0	56.5	50.8	77.5	1.65

Dimensions according to DIN 32676 [mm]

DN [mm]	Actuator size Ø	Ø E	H	F	P	J	A	B	Ø C1	Ø C2	Ø D	G	S
15	50	64	145	44	G ¼	24	130	194	34.0	27.5	19.0	49	1.5
20	50	64	149	44	G ¼	24	150	205.5	34.0	27.5	23.0	56.5	1.5
25	50	64	152	44	G ¼	24	160	210	50.5	43.5	29.0	58	1.5
	63	80	178	52	G ¼	24	160	236	50.5	43.5	29.0	58	1.5
32	63	80	188	52	G ¼	24	180	245.5	50.5	43.5	35.0	57.5	1.5
	80	101	209	60	G ¼	24	180	266.5	50.5	43.5	35.0	57.5	1.5
40	63	80	191	52	G ¼	24	200	260	50.5	43.5	41.0	69	1.5
	80	101	213	60	G ¼	24	200	282	50.5	43.5	41.0	69	1.5
50	63	80	209	52	G ¼	24	230	286.5	64.0	56.5	53.0	77.5	1.5
	100	127	277	73	G ¼	30	230	354.5	64.0	56.5	53.0	77.5	1.5

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Ordering information for valve system On/Off CLASSIC Type 8801-YA

An **angle seat valve Type 2000** can be combined with the **feedback Type 8697** to form a **valve system On/Off CLASSIC.**

The valve system On/Off CLASSIC is composed of: More info.
- a feedback **Type 8697** (see separate datasheet)
- an angle seat valve **Type 2000** (see ordering chart p. 3)

For the configuration of further valve systems please use the “Request for quotation” on p. 9
You order two components and receive a complete assembled and certified valve.

Angle seat valve Type 2000 clamp

Feedback

Type 8697

Valve System On/Off CLASSIC

Type 8801-YA-U
2100 + 8697

Electrical position feedback More info.

Type 8697
Actuator size 40 to 225

The position feedback Type 8697 is designed for integrated mounting on CLASSIC series 20XX process valves suiting the requirements of hygienic process environment Mechanical or inductive limit switches register the position of the valve.

Features
- Compact design
- LED position indicator
- Mechanical or inductive limit switches for end position registering
- Easy to clean chemically resistant housing featuring IP65 / IP67, 4X Rating
- Optional intrinsically safe version acc. to ATEX

Benefits
- Easy and quick installation
- High level of signal reliability thanks to self adjusting limit switches
- Signal safety through the automatic adjustment of the limit switches
- Minimised space requirement in the plant piping for more flexibilty in plant design

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

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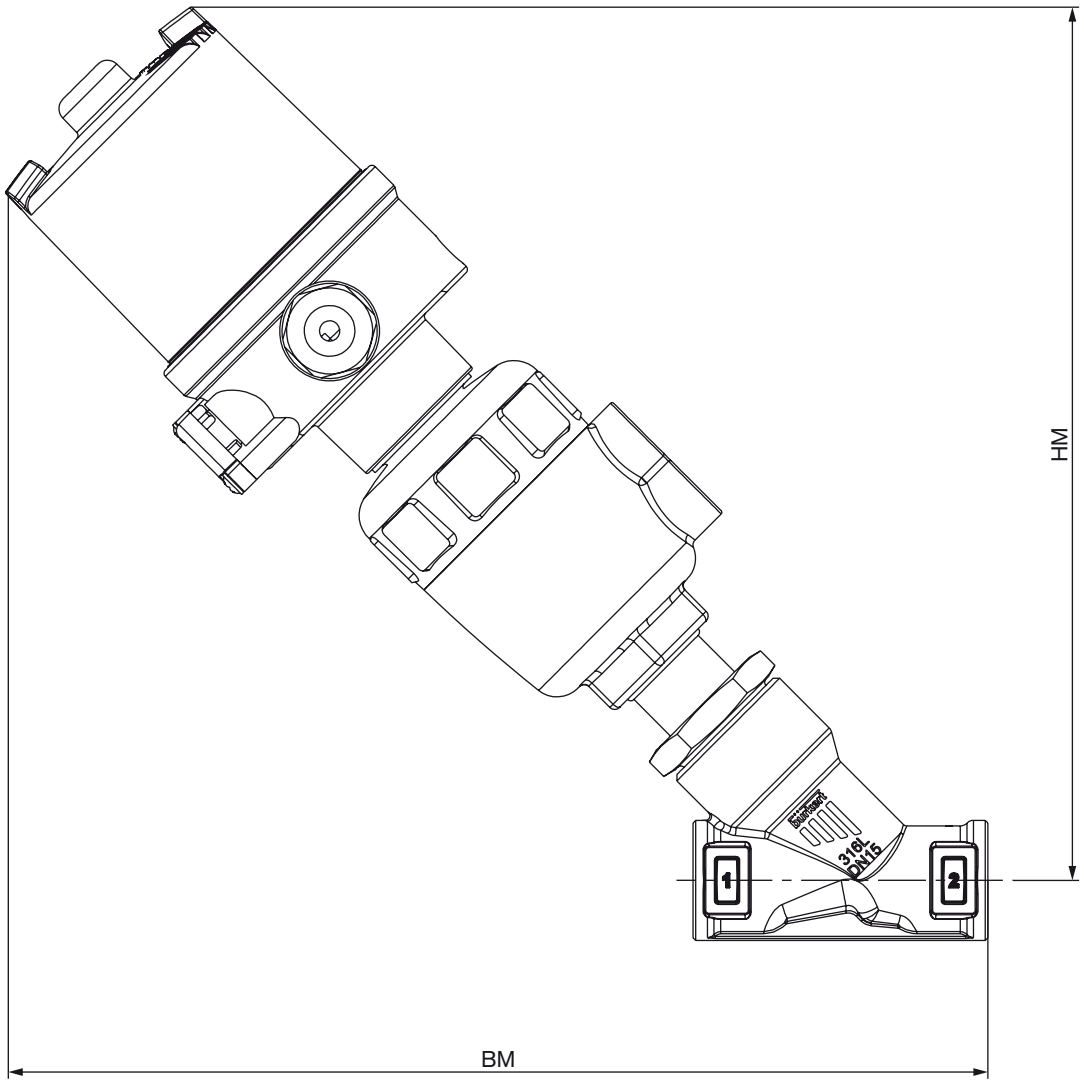
Dimensions for valve system On/Off CLASSIC Type 8801-YA [mm]

Dimensions valve system On/Off CLASSIC Type 8801-YA-U with electrical position feedback Type 8697



	Orifice [mm]	Actuator size Ø [mm]	BM [mm]	HM [mm]
Clamp ISO 2852	15	50	246	197
	20	50	278	222
	25	63	308	251
	32	80	333	277
	40	80	348	280
	50	100	403	334
Clamp ASME BPE	15	50	246	198
	20	50	309	251
	25	63	348	279
	40	80	348	279
	50	100	416	339
Clamp BS 4835	15	50	269	220
	20	50	282	225

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bürkert

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

Valve system On/Off CLASSIC Type 8801-YA – 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

Pipeline	DN		PN	
Pipe material				
■ **Process medium**				
■ **Type of medium**	☐ Liquid	☐ Steam	☐ Gas	
		standard	unit	
■ **Flow rate (Q, Q_N, W)** [1]				
■ **Temperature at valve inlet**				
■ **Absolute pressure at valve inlet**				

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

Valve features

Actuator material	☐ PA	☐ PPS			
Body material	☐ Stainless steel	☐ Gunmetal			
Seat sealing material	☐ PTFE	☐ NBR	☐ Other		
Nominal pressure	PN				
Nominal size	DN				
Type of connection	☐ Welded	☐ Internal thread	☐ Clamp		
Standard connection	☐ ISO	☐ DIN	☐ ANSI	☐ JIS	☐ Other
Function	☐ NC[2]	☐ NO[2]	☐ Double-acting		
Pilot pressure	min.		max.		

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

Automation unit features

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

Electrical position feedback

☐ **Type 8697**
For actuator size 40 to 225

More info.

- LED position indicator
- Mechanical or inductive limit switches for end position registering
- Housing with IP65/IP67, 4X rating protection
- Optional intrinsically safe version acc. to ATEX / IECEx

Position feedback switches
- ☐ Micro switch 24 V DC
- ☐ Micro switch 50 – 225 V DC/AC
- ☐ Inductive switch 3-wire PNP
- ☐ Inductive switch 2-wire NAMUR
- ☐ Inductive switch 2-wire 24 V DC

Electrical connection
- ☐ Cable gland
- ☐ M12 connector (applicable only with inductive switch 3-wire PNP)

Number of Position feedback switches
- ☐ 2x

Approval
- ☐ ATEX cat. 3GD, IECEx
- ☐ ATEX cat. 2DG, IECEx
- ☐ without

reset form

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Valve system On/Off CLASSIC Type 8801-YA – request for quotation, *continued*

Valve accessories

Pilot valve	Stroke limitation
☐ **Pilot valve**	☐ **Stroke limitation**
Power supply ☐	☐ **Min./max. stroke limitation,** with visual position indicator ☐ **Max. stroke limitation,** without visual position indicator
Please specify item no. if known: ☐	**Please specify item no. if known:** ☐

Certifications

- ☐ Attestation of compliance with the order EN-ISO 10204 2.1
- ☐ Test report EN-ISO 10204 2.2
- ☐ Certification of Conformity for Raw Material EN-ISO 10204 3.1
- ☐ EN161 (European Gas Device guideline)

Comment / sketch

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