





Zero Deadleg T Valve, pneumatically operated, stainless steel block material

- Fully integrated in Burkert's Process Control Systems
- Zero dead volume
- Monoblock – no welds
- Quality certifications  / 

Type 2032 can be combined with...



Type 8691

Control head



Type 8690

Pneum. control unit with feedback



Type 1062

Electrical position feedback



Type 8630

Positioner Top-Control continuous



Stroke limitation

Min./max. stroke limitation



Type 6012

Pilot valve

The Burkert Zero Deadleg T Valve system is designed for control of ultra pure, sterile, aggressive or abrasive fluids. Enables especially optimal sampling, draining or diverting of critical process fluids. The valve body is machined from a single piece of block material (monoblock – no weld seam).

The high quality diaphragms separate hermetically critical fluids from the actuator. The pneumatic actuator can be controlled by pneumatic pilot valves (single pilot valves, valve islands and control heads). Control function A, normally closed by spring return.

Technical data			
Orifice	DN 4-100		
Body materials	<ul style="list-style-type: none"> ▪ Stainless steel 1.4435 / 316 L ▪ Stainless steel 1.4435BN2 / ASME BPE Fe < 0.5% / C ≤ 0.03%		
Diaphragm materials	EPDM, PTFE/EPDM, advanced PTFE/EPDM, FKM		
Actuator materials	PPS, PA		
Pilot air ports	Stainless steel 1.4305		
Surface finish	Ra [µm]	Ra [µlnch]	Ra [Grit #]
	internal	internal	internal
mechanical polished	0.6	25	180
electro polished	0.6	25	180
mirror finished	0.25	10	330
Medium temperatures	EPDM, PTFE/EPDM, advanced PTFE/EPDM ¹⁾ FKM		
	-10 to +130°C (briefly up to +150°C for steam sterilisation)		
	-10 to +130°C		
Ambient temperature	Actuator size < 100 mm Actuator size 100-125 mm Actuator size ≥ 175 mm		
	+5° to +140°C		
	+5° to +90°C (briefly up to +140°C)		
	-10° to +50°C		
Control medium	Neutral gases; air		
Pilot pressure max.	max. 7 bar, see table on p. 2		
Port connections	EN ISO 1127 / ISO 4200, DIN 11850 Series 0 to 3, SMS 3008, ASME BPE, BS 4825		
Weld end acc. to	ISO 2852, ASME BPE, DIN 32676		
Clamp acc. to	ISO 2852, ASME BPE, DIN 32676		
Installation for selfdraining operation	Actuator inclined 3 to 5° downwards		

¹⁾ Advanced PTFE/EPDM is recommended for sterilization cycle

Content



Valve specifications

Type 2032

Technical data & ordering info. p. 1-8



System spec. On/Off Classic

Type 8801/8803-TA

Ordering info. & technical data

p.9-12

Request for quotation

Type 8801/8803-TA

p. 13

Technical data, continued

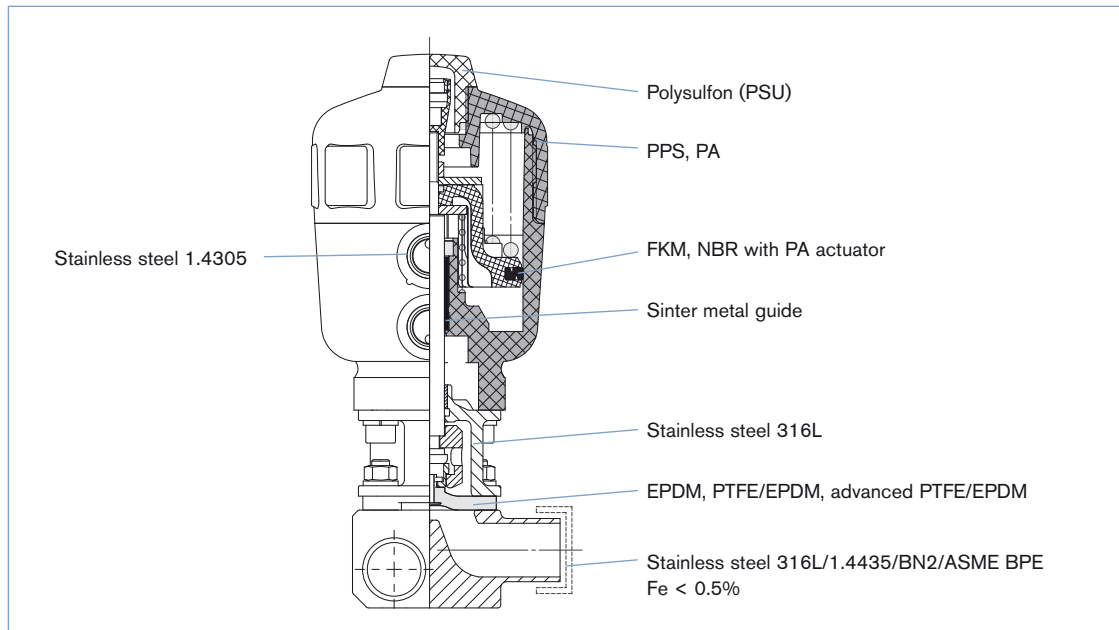
Orifice DN diaphragm [mm]	Actuator size Ø [mm]	Kv-value water [m³/h]	Pilot pressure [bar]	Max. operating pressure (medium) for seal material	
				EPDM, FKM [bar]	PTFE/EPDM, advanced PTFE/EPDM [bar]
4/6	40	1.0	5.0-7	10	10
8	40	1.0	5.0-7	10	10
15	50	4.0	5.0-7	8.5	5
	63	4.5	5.0-7	10	10
20	63	7.0	5.5-7	10	5
	80	7.5	5.0-7	10	10
25	63	12.0	5.0-7	3	–
	80	12.0	5.5-7	10	7.5
40	100	30.0	5.5-7	6.5	6
	125	30.5	5.5-7	10	10
50	100	51.5	5.5-7	4.5	2.5
	125	51.5	5.5-7	8	7
80	225	160.0	5.0-6	10	10
100	225	235	5.0-6	8	4

Approvals/certifications

- Certification of Conformity for Raw Material EN-ISO 10204 3.1
- Attestation of compliance with the order EN-ISO 10204 2.1
- Test report EN-ISO 10204 2.2
- 3A Certification
- Certification of Conformity for Pickling and Electropolishing Processes
- Certification of Conformity for the Surface Quality DIN4762-DIN4768-ISO/4287/1
- Attestation of compliance with FDA CFR No. 21.177.1550 for PTFE/EPDM and advanced PTFE/EPDM and 21.177.2600 for EPDM
- USP CLASS VI certification for EPDM and PTFE diaphragm
- Test Certification and Conformity Certification for the Final Assembly of Diaphragm Valves
- ISO 9001 Certification

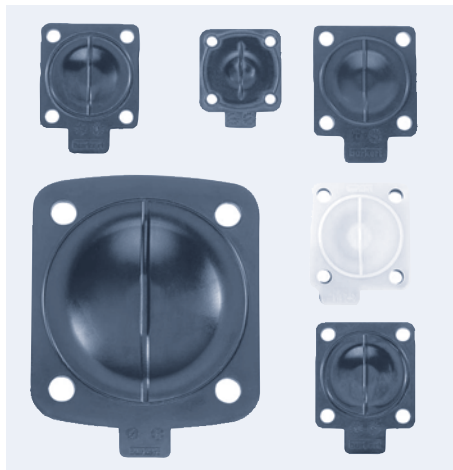
Note: Retrospective manufacturing certification for process diaphragm valves can not be made, therefore please notify when ordering.

Materials



Example of available diaphragm materials

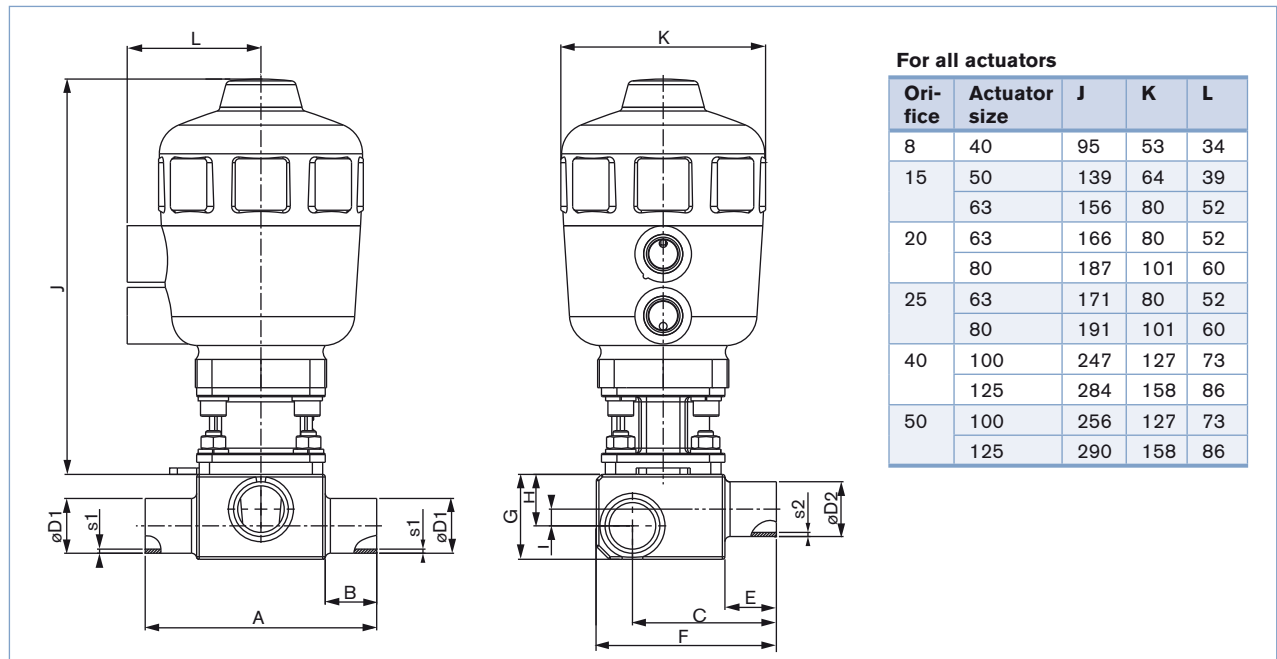
Developed to handle the unique challenges of hygienic and sterile applications, Bürkert offers diaphragms with precise material formula and physical tolerances. Bürkert diaphragms are available in a wide range of materials which have been proven in food & beverage, biotechnology, pharmaceutical and cosmetic industry applications. Diaphragms are tested during development and production to ensure reliability in critical processing environments.



- EPDM (Ethylene Propylene Rubber)
- PTFE/EPDM
- advanced PTFE/EPDM
- FKM
- PTFE/FKM
- NBR

Dimensions [mm]

Welded body acc. to EN ISO 1127/ISO 4200



For all actuators

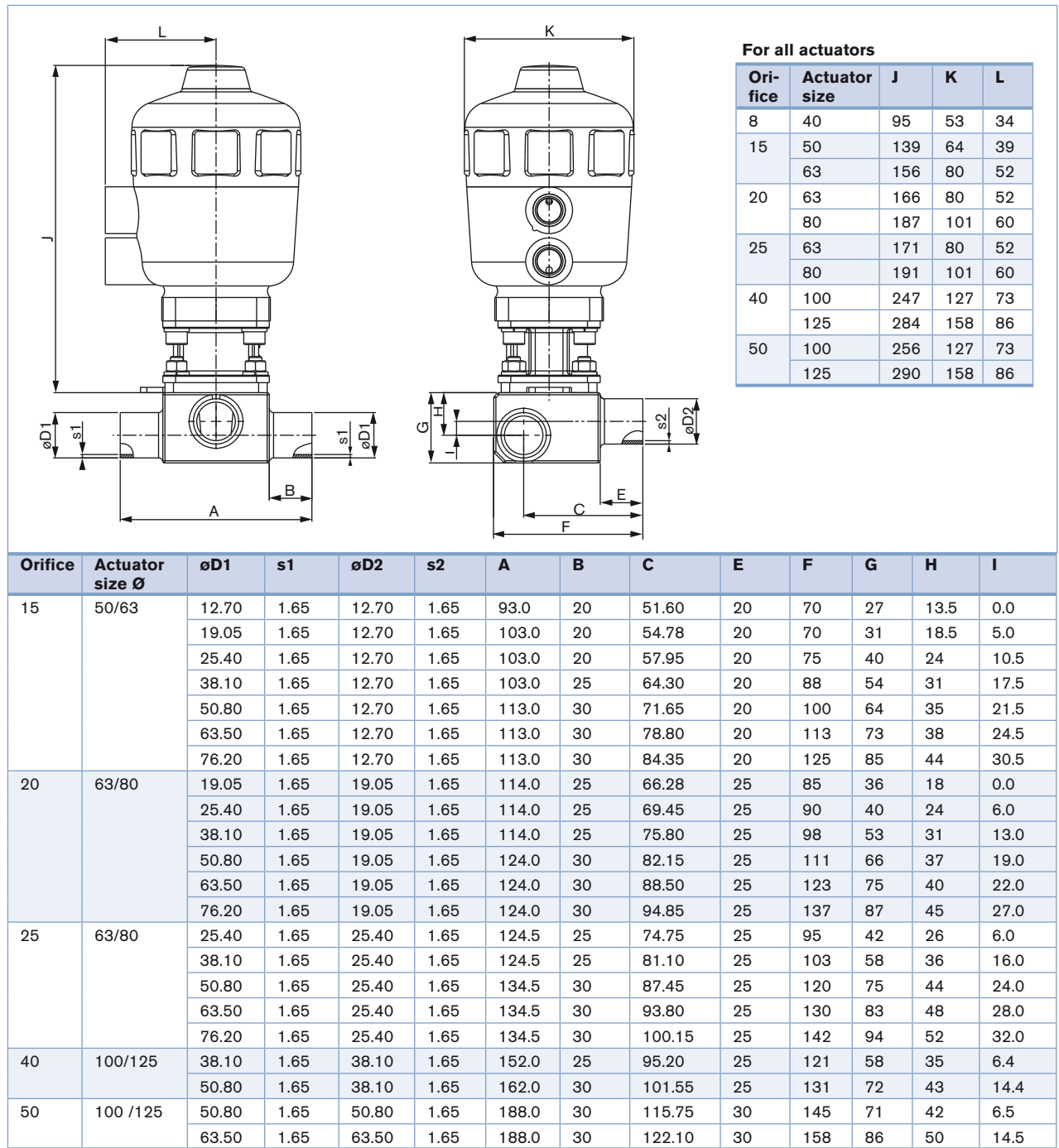
Orifice	Actuator size	J	K	L
8	40	95	53	34
15	50	139	64	39
	63	156	80	52
20	63	166	80	52
	80	187	101	60
25	63	171	80	52
	80	191	101	60
40	100	247	127	73
	125	284	158	86
50	100	256	127	73
	125	290	158	86

Orifice	Actuator size Ø	ØD1	s1	ØD2	s2	A	B	C	E	F	G	H	I
8	40	17.2	1.6	17.2	1.6	78.0	20	49.00	20	60	29	18	8.0
		21.3	1.6	17.2	1.6	78.0	20	51.05	20	64	34	21	11.0
		26.9	1.6	13.5	1.6	88.0	25	53.85	20	70	38	23	13.0
		33.7	2.0	13.5	1.6	88.0	25	56.85	20	76	45	26	16.0
		42.4	2.0	13.5	1.6	88.0	25	61.20	20	84	52	29	19.0
		42.4	2.0	17.2	1.6	88.0	25	61.20	20	84	52	29	19.0
15	50 / 63	48.3	2.0	13.5	1.6	88.0	25	64.15	20	90	57	31	21.0
		13.5	1.6	13.5	1.6	93.0	20	52.05	20	70	27	17	4.5
		17.2	1.6	13.5	1.6	93.0	20	53.90	20	70	31	18	4.5
		21.3	1.6	21.3	1.6	93.0	20	55.95	20	71	35	21	6.5
		26.9	1.6	21.3	1.6	103.0	25	58.75	20	78	42	25	11.5
		33.7	2.0	21.3	1.6	103.0	25	62.75	20	82	47	28	14.5
		42.4	2.0	21.3	1.6	103.0	25	67.10	20	91	56	32	18.5
		48.3	2.0	13.5	1.6	103.0	25	69.05	20	97	61	34	20.5
		48.3	2.0	21.3	1.6	103.0	25	69.05	20	97	63	35	21.5
		60.3	2.0	13.5	1.6	113.0	30	76.05	20	109	71	38	24.5
20	63 / 80	60.3	2.0	21.3	1.6	113.0	30	76.05	20	109	72	38	24.5
		76.1	2.0	13.5	1.6	113.0	30	83.95	20	125	85	44	30.5
		76.1	2.0	21.3	1.6	113.0	30	83.95	20	125	85	44	30.5
		88.9	2.3	13.5	1.6	113.0	30	90.05	20	140	99	52	38.5
		26.9	1.6	26.9	1.6	114.0	25	70.25	25	88	42	24	6.0
		33.7	2.0	26.9	1.6	114.0	25	73.25	25	94	48	28	10.0
25	63 / 80	42.4	2.0	26.9	1.6	114.0	25	78.60	25	102	57	33	15.0
		48.3	2.0	26.9	1.6	114.0	25	80.55	25	108	63	35	17.0
		60.3	2.0	26.9	1.6	124.0	30	86.55	25	121	74	40	22.0
		76.1	2.0	26.9	1.6	124.0	30	94.45	25	136	86	45	27.0
		33.7	2.0	33.7	2.0	124.5	25	78.55	25	98	53	33	13.0
40	100 / 125	42.4	2.0	33.7	2.0	124.5	25	82.90	25	107	62	38	18.0
		76.1	2.0	33.7	2.0	134.5	30	99.75	25	142	94	52	32.0
		42.4	2.0	42.4	2.0	152.0	25	97.00	25	122	62	37	8.4
50	100 / 125	48.3	2.0	48.3	2.0	152.0	25	99.95	25	128	68	41	12.4
		60.3	2.0	48.3	2.0	162.0	30	105.95	25	140	82	48	19.4
		76.1	2.0	48.3	2.0	162.0	30	113.85	25	155	97	55	26.4
		60.3	2.0	60.3	2.0	188.0	30	120.15	30	154	82	48	12.5
50	100 / 125	76.1	2.0	60.3	2.0	188.0	30	128.05	30	172	100	56	20.5
		88.9	2.3	60.3	2.0	188.0	30	134.15	30	183	110	61	25.5

DTS 1000011282 EN Version: K Status: RL (released | freigegeben | validé) printed: 18.08.2011

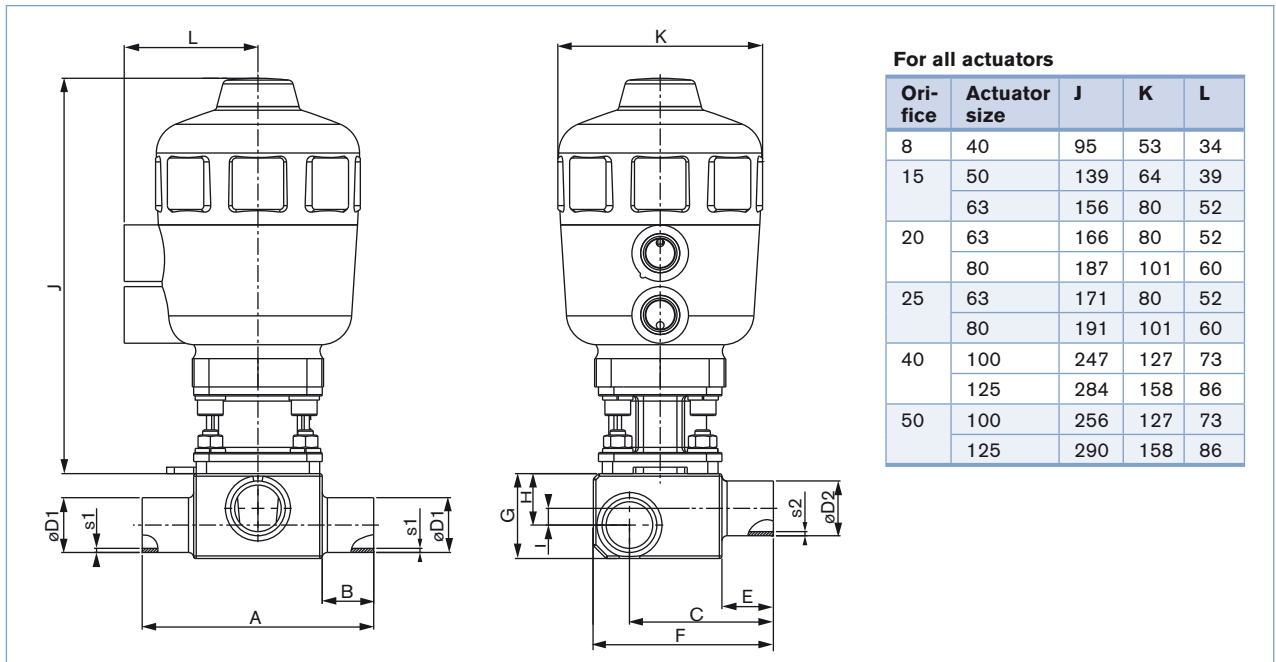
Dimensions [mm], continued

Welded body acc. to ASME BPE



Dimensions [mm], continued

Welded body acc. to DIN 11850 Series 0 and 2



For all actuators

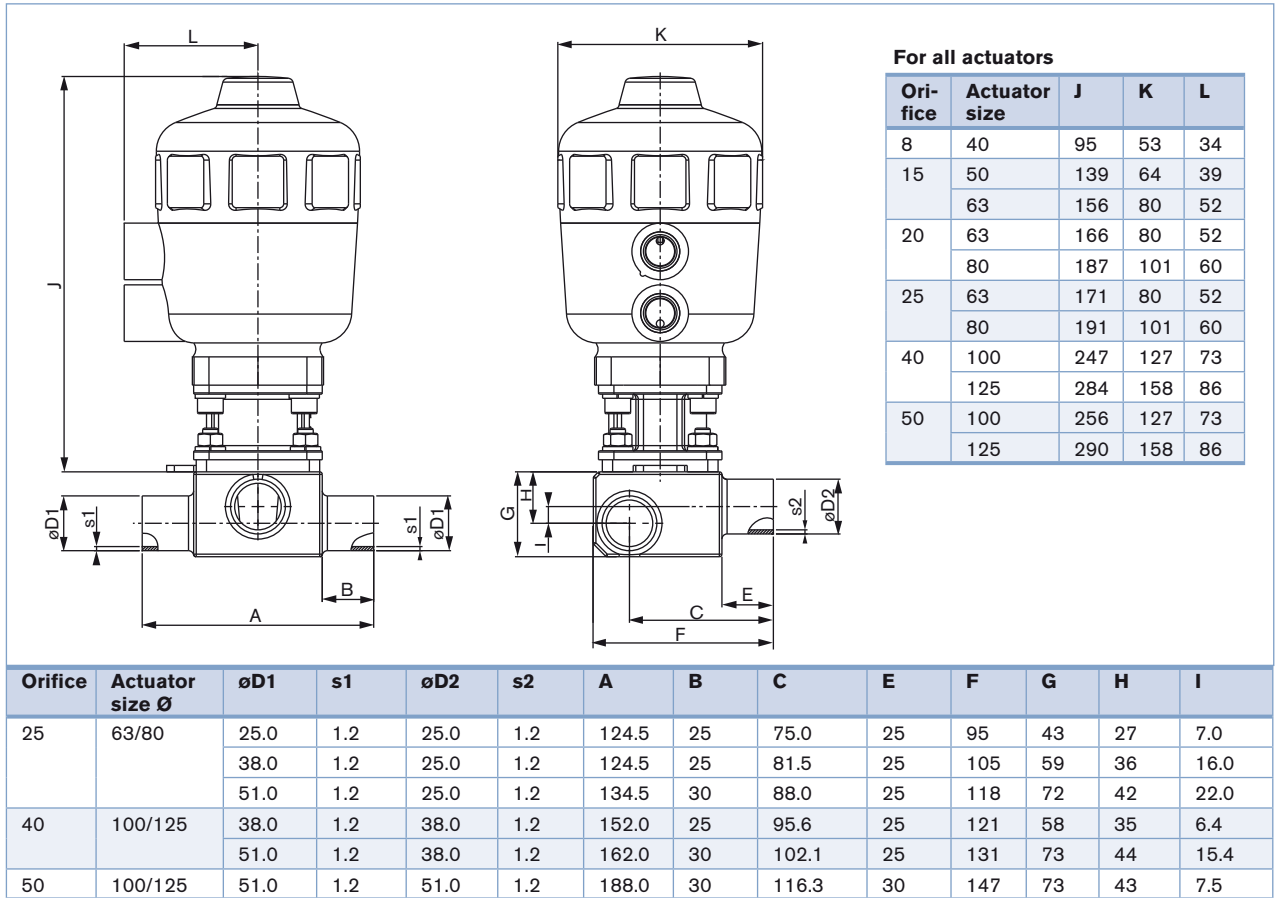
Orifice	Actuator size	J	K	L
8	40	95	53	34
15	50	139	64	39
	63	156	80	52
20	63	166	80	52
	80	187	101	60
25	63	171	80	52
	80	191	101	60
40	100	247	127	73
	125	284	158	86
50	100	256	127	73
	125	290	158	86

Orifice	Actuator size Ø	øD1	s1	øD2	s2	A	B	C	E	F	G	H	I
Series 0													
08	40	10.0	1.0	10.0	1.0	78.0	20	43.0	20	60	17	6.5	0.0
		40.0	1.5	6.0	1.0	88.0	25	60.5	20	83	51	29	19.0
		40.0	1.5	10.0	1.0	88.0	25	60.5	20	83	51	29	19.0
		52.0	1.5	6.0	1.0	98.0	30	66.5	20	95	60	32	22.0
25	63/80	28.0	1.5	28.0	1.5	124.5	25	76.2	25	95	46	29	9.0
		52.0	1.5	28.0	1.5	134.5	30	88.2	25	117	71	42	22.0
40	100/125	28.0	1.5	34.0	1.5	152.0	25	90.3	25	122	58	32	3.4
		52.0	1.5	34.0	1.5	162.0	30	102.3	25	132	75	45	16.4
50	100/125	52.0	1.5	52.0	1.5	188.0	30	116.5	30	147	73	43	7.5
Series 2													
15	50/63	19.0	1.5	19.0	1.5	93.0	20	54.9	20	70	33	20	6.5
		23.0	1.5	19.0	1.5	103.0	20	56.9	20	72	37	22.5	8.5
		35.0	1.5	19.0	1.5	103.0	25	62.9	20	84	50	29	14.5
		41.0	1.5	19.0	1.5	103.0	25	65.9	20	91	56	32	18.5
20	63/80	23.0	1.5	23.0	1.5	114.0	25	68.4	25	88	42	21	3.0
		35.0	1.5	23.0	1.5	114.0	25	74.4	25	95	50	29	11.0
		41.0	1.5	23.0	1.5	114.0	25	77.4	25	101	56	32	14.0
25	63/80	29.0	1.5	29.0	1.5	124.5	25	76.7	25	98	48	30	10.0
40	100/125	41.0	1.5	41.0	1.5	152.0	25	96.8	25	121	62	37	8.4
50	100/125	53.0	1.5	53.0	1.5	188.0	30	117.0	30	147	74	44	8.5

DTS 1000011282 EN Version: K Status: RL (released | freigegeben | validé) printed: 18.08.2011

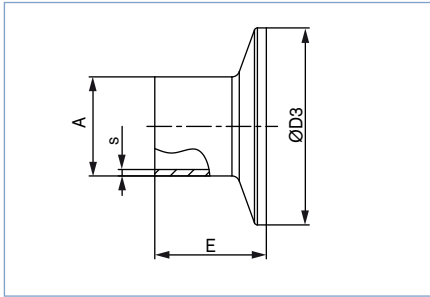
Dimensions [mm], continued

Welded body acc. to SMS 3008



Dimensions [mm], continued

Clamp body



ASME BPE

Orifice		A	s	D3	E
[mm]	[inch]				
08	1/4"	6.35	0.89	25.0	28.6
10	3/8"	9.53	0.89	25.0	28.6
15	1/2"	12.7	1.65	25.0	28.6
20	3/4"	19.05	1.65	25.0	28.6
25	1"	25.4	1.65	50.5	28.6
40	1 1/2"	38.1	1.65	50.5	28.6
50	2"	50.8	1.65	64.0	28.6
65	2 1/2"	63.5	1.65	77.5	28.6
80	3"	76.2	1.65	91.0	28.6
100	4"	101.6	2.11	119.0	28.6

DIN 32676

Orifice [mm]	A	s	D3	E
10	1.5	34.0	18	18
15	19	1.5	34.0	18
20	23	1.5	34.0	18
25	29	1.5	50.5	21.5
32	35	1.5	50.5	21.5
40	41	1.5	50.5	21.5
50	53	1.5	64.0	21.5
65	70	2.0	91.0	28

ISO 2852 for pipe ISO 4200

Orifice [mm]	A	s	D3	E
8	13.5	1.6	25.0	28.6
8	13.5	1.6	34.0	28.6
10	17.2	1.6	34.0	28.6
15	21.3	1.6	34.0	28.6
15	21.3	1.6	50.5	28.6
20	26.9	1.6	50.5	28.6
25	33.7	2	50.5	28.6
32	42.4	2	50.5	28.6
40	48.3	2	64.0	28.6
50	60.3	2	77.5	28.6
65	76.1	2	91.0	28.6
100	114.3	2.3	130.0	28.6

SMS

Orifice [mm]	A	s	D3	E
25	25	1.2	50.5	21.5
40	38	1.2	50.5	28.6
50	51	1.2	64.0	28.6

Ordering information for valve system On/Off Classic Type 8801-TA/8803-TA

A valve system On/Off Classic Type 8801-TA/8803-TA consists of a T valve Type 2032 and a valve actuation system control head Type 8691, a pneumatic control unit Type 8690 or an electrical position feedback Type 1062 (see separate datasheets).

For the configuration of further valve systems please use the "Request for quotation" on p. 13 [go to page](#)
You order two components and receive a complete assembled and certified valve.

Ordering the valve system On/Off Classic Type 8801-TA/8803-TA

T valve Type 2032



Control units



8691



8690



1062

T valve with
desired control unit



Valve system On/Off Classic
Type 8801-TA-H
2032 + 8691



Valve system On/Off Classic
Type 8801-TA-K
2032 + 8690



Valve system On/Off Classic
Type 8803-TA
2032 + 1062

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.

Control head Type 8691



More info.

The new generation of integrated control heads for combination with actuators from the process valve series Type 20xx/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:

- 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

Pneumatic control unit
Type 8690



More info.

The new generation of integrated controllers for combination with actuators from the process valve series Type 20xx/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:

- 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

Electrical position feedback
Type 1062



More info.

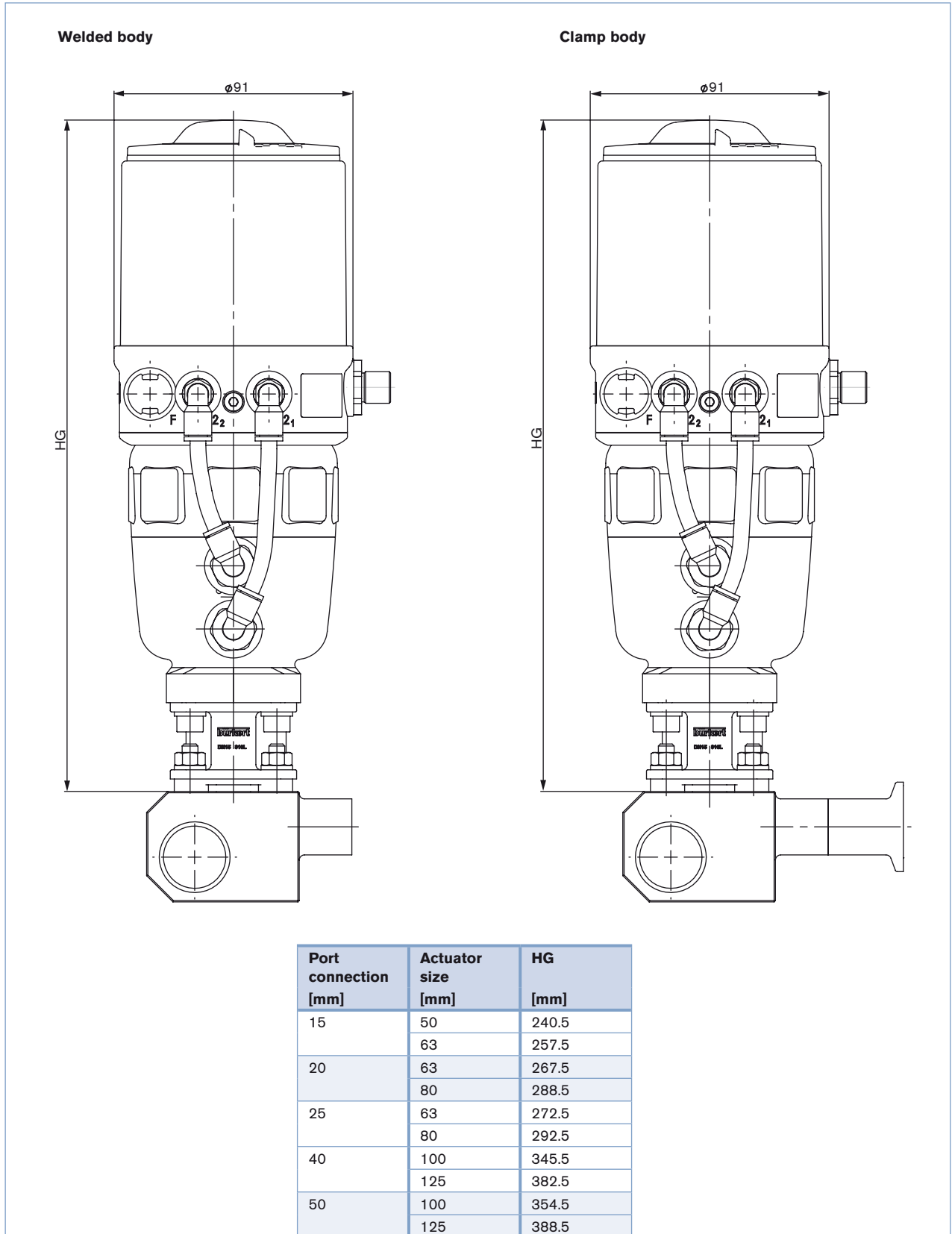
Positions are electrically signaled according to switch type:

- open,
- closed or
- open and closed.

LEDs provide optical position indication (except for Namur Ex-version). Mechanical or inductive switches are housed in a compact splash-proof enclosure. The position indicator can be rotated 360° and is easily fitted to the valve. Trip cams do not require adjustment. The unit only needs to be screwed on and connected to be ready for operation.

Dimensions for valve system On/Off Classic Type 8801-TA-H [mm]

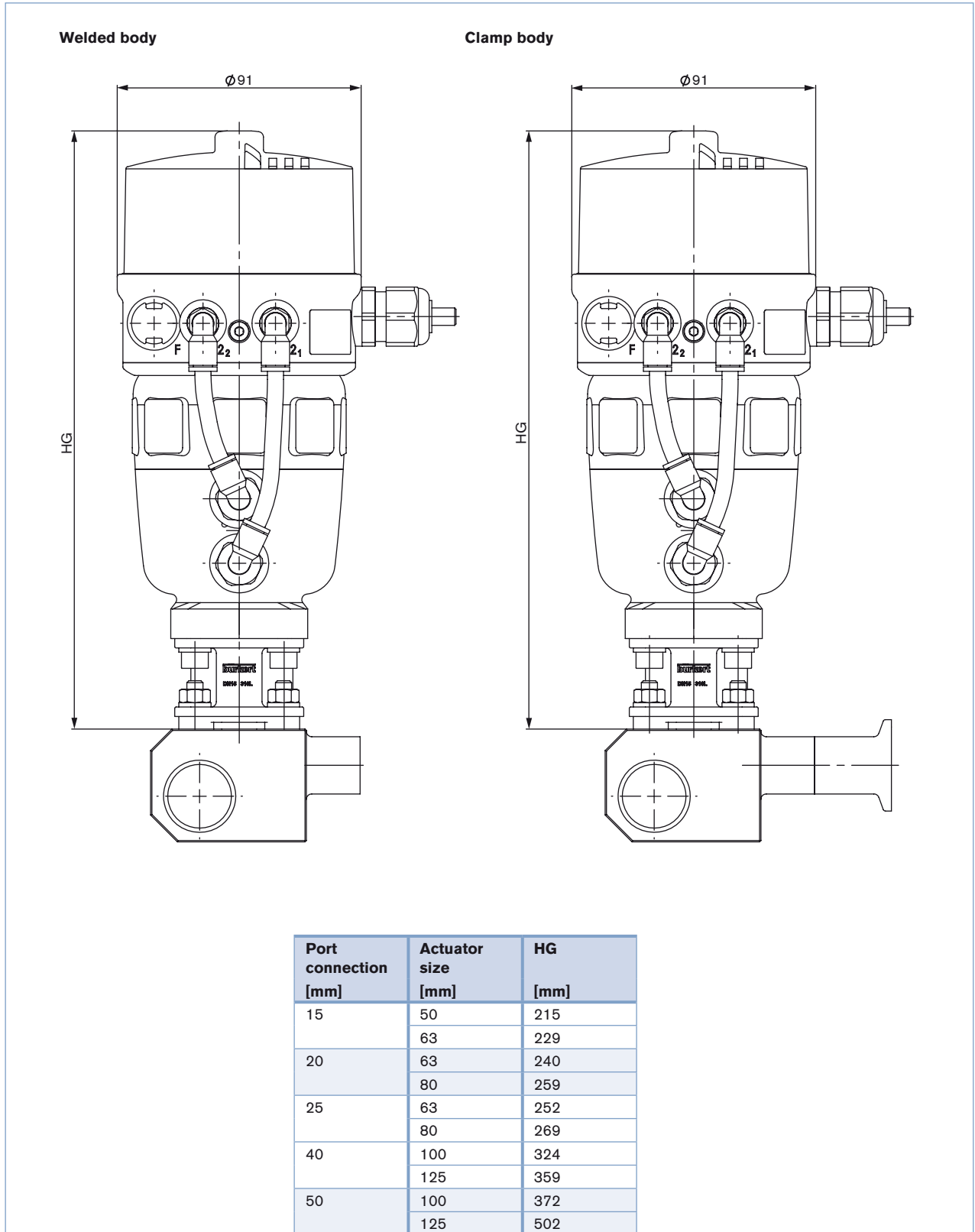
Dimensions valve system On/Off Classic Type 8801-TA-H with control head Type 8691 [mm]



Further dimensions see p. 4-8

Dimensions for valve system On/Off Classic Type 8801-TA-K [mm]

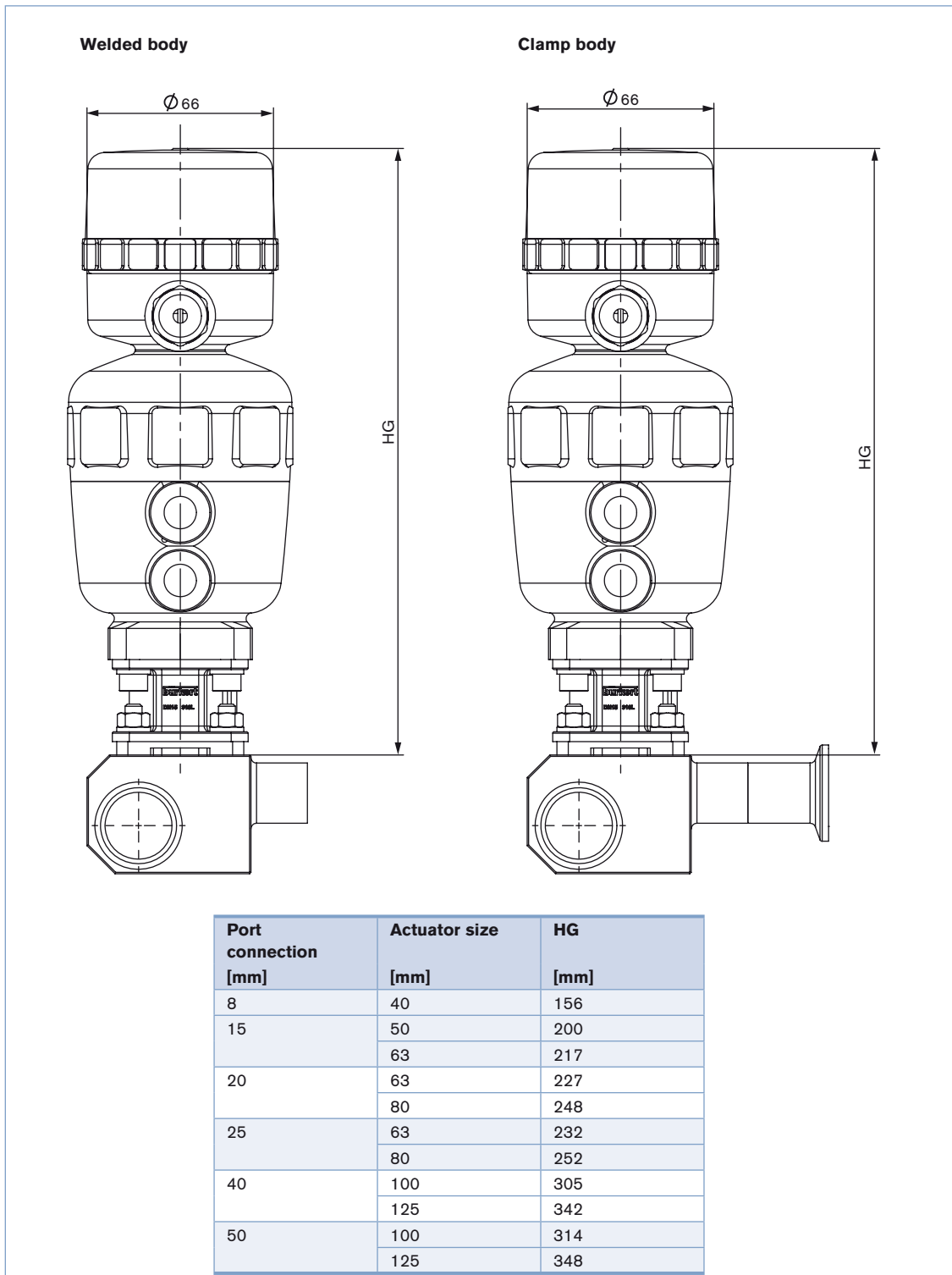
Dimensions valve system On/Off Classic Type 8801-TA-K with pneumatic control unit Type 8690 [mm]



Further dimensions see p. 4-8

Dimensions for valve system On/Off Classic Type 8803-TA [mm]

Dimensions valve system On/Off Classic Type 8803-TA with electrical position feedback Type 1062 [mm]



Further dimensions see p. 4-8

Valve system On/Off Classic Type 8801-TA/8803-TA – request for quotation, cont.

Control unit features	
Pilot valve	Stroke limitation
<input type="checkbox"/> Pilot valve	<input type="checkbox"/> Stroke limitation
Power supply <input type="text"/>	<input type="checkbox"/> Min./max. stroke limitation , with visual position indicator
	<input type="checkbox"/> Max. stroke limitation , without visual position indicator
Please specify item no. if known: <input type="text"/>	Please specify item no. if known: <input type="text"/>

Certifications
<input type="checkbox"/> Attestation of compliance with the order EN-ISO 10204 2.1 (Item-No. 440 788)
<input type="checkbox"/> Test report EN-ISO 10204 2.2 (Item No. 803 722)
<input type="checkbox"/> Certification of Conformity for Raw Material EN-ISO 10204 3.1 (included in delivery)
<input type="checkbox"/> EN161 (European Gas Device guideline)
<input type="checkbox"/> FDA - USP certificate

Comment / sketch

DTS 1000011282 EN Version: K Status: RL (released | freigegeben | validé) printed: 18.08.2011

Valve features

Example

A 15 AB B VH SA42 SA42 D E NO14

Specification key

Please make a choice

CONTROL FUNCTION

A	normally closed by spring action
B	normally open by spring action
I	double acting

SIZE [mm]

4
6
8
15
20
25
40
50
80
100

DIAPHRAGM MATERIAL

AB	EPDM in food quality
EA	PTFE
FF	FKM
EU	advanced PTFE

PRODUCTION OF BODY

B	Monoblock
---	-----------

BODY MATERIAL

VH	1.4435/AISI 316L
VI	1.4435BN2/ASME BPE

VARIABLE CODES

Surface finish, internal

NO07	Int. Mirror finished Ra=0.25 µm	
NO23	Mechanical polished Ra=0.6 µm	standard
NO16	Int. Electro polished Ra=0.6 µm	

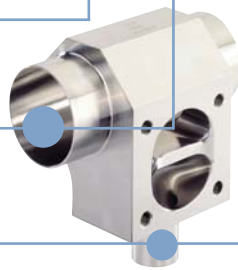
ACTUATOR SIZE ¹⁾

C	ø 40 mm
D	ø 50 mm
E	ø 63 mm
F	ø 80 mm
G	ø 100 mm
H	ø 125 mm
K	ø 175 mm
L	ø 225 mm

¹⁾ for technical spec. see table, page 2

ACTUATOR MATERIAL

C	PA (for actuator sizes ø175/225 mm)
D	PPS



øD1 main tube connection

øD2 outlet tube connection

Port connection weld end

Port conn. [mm]	EN ISO 1127/ ISO 4200	SMS 3008	DIN 11850 Series 0	Series 1	Series 2	Series 3	BS 4825	ASME BPE	JIS Sanitary	JIS Utility
4	-	-	SC40=6x1.0	-	-	-	-	-	-	-
6	-	-	SC41=8x1.0	-	-	-	-	-	-	-
8	SA40=13.5x1.6	-	SC42=10x1.0	-	-	-	SODB=6.35x1.2	SA90=6.35x0.89	SA70=13.8x1.65	-
10	SA41=17.2x1.6	-	-	SF40=12x1.0	SD40=13x1.5	SE40=14x20.0	SODC=9.53x1.2	SA91=9.53x0.89	SA71=17.3x1.65	-
15	SA42=21.3x1.6	-	SC43=18x1.5	SF41=18x1.0	SD42=19x1.5	SE42=20x2.0	SODD=12.7x1.2	SA92=12.7x1.65	SA72=21.7x2.1	-
20	SA43=26.9x1.6	-	SC44=22x1.5	SF42=22x1.0	SD43=23x1.5	SE43=24x2.0	SODE=19.05x1.2	SA93=19.05x1.65	SA76=27.2x2.1	SA80=27.2x2.1
25	SA44=33.7x2.0	SA60=25.0x1.2	SC45=28x1.5	SF43=28x1.0	SD44=29x1.5	SE44=30x2.0	-	SODF=25.4x1.65	SA73=25.4x1.2	SA81=34x2.0
32	SA45=42.4x2.0	-	SC46=34x1.5	SF44=34x1.0	SD45=35x1.5	SE45=36x2.0	-	-	-	SA83=42.7x2.0
40	SA46=48.3x2.0	SA62=38.0x1.2	SC47=40x1.5	SF45=40x1.0	SD46=41x1.5	SE46=42x2.0	-	SODH=38.1x1.65	SA74=38.1x1.2	SA83=48.6x2.0
50	SA47=60.3x2.0	SA63=51.0x1.2	SC48=52x1.5	SF46=52x1.0	SD47=53x1.5	SE47=54x2.0	-	SODI=50.8x1.65	SA75=50.8x1.5	SA84=60.5x2.0
65	SA48=76.1x2.0	SA64=63.5x1.6	-	-	SD48=70x2.0	-	-	SODJ=63.5x1.65	-	-
80	SA49=88.9x2.3	SA65=76.1x1.6	-	-	SD49=85x2.0	-	-	SODK=76.2x1.65	-	-
100	SA39=114.3x2.3	SA66=101.6x2.0	-	-	SD50=104x2.0	-	-	SODL=101.6x2.11	-	-

Port connection clamp

Port conn. [mm]	ISO 2852 SMS 3017	ASME BPE	DIN 32676
8	TC51=Clamp 34 - for tube ISO 4200	TG50=Clamp 25 - Tube 6.35x0.89	-
10	TC41=Clamp 34 - for tube ISO 4200	TG01=Clamp 25 - Tube 9.53x0.89	TD41=Clamp 34 - Tube 13x1.5
15	TC42=Clamp 34 - for tube ISO 4200	TG02=Clamp 25 - Tube 12.7x1.65	TD42=Clamp 34 - Tube 19x1.5
20	TC43=Clamp 50.5 - for tube ISO 4200	TG03=Clamp 25 - Tube 19.05x1.65	TD43=Clamp 34 - Tube 23x1.5
25	TC44=Clamp 50.5 - for tube ISO 4200	TG04=Clamp 50.5 - Tube 25.4x1.65	TD44=Clamp 50.5 - Tube 29x1.5
40	TC46=Clamp 64 - for tube ISO 4200	TG05=Clamp 50.5 - Tube 38.1x1.65	TD46=Clamp 50.5 - Tube 41x1.5
50	TC47=Clamp 77.5 - for tube ISO 4200	TG06=Clamp 64 - Tube 50.8x1.65	TD47=Clamp 64 - Tube 53x1.5
65	TC48=Clamp 91 - for tube ISO 4200	TG07=Clamp 64 - Tube 63.5x1.65	TD48=Clamp 91 - Tube 70x2.0
80	-	TG08=Clamp 91 - Tube 76.1x1.65	-
100	TC50=Clamp 130 - for tube ISO 4200	TG09=Clamp 119 - Tube 101.6x2.11	-

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

Subject to alteration.
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