

Manually operated T Valve



Type 3234 can be combined with...



Type 2032



Type 3233



Type 3235

- Zero dead volume body - no welds
- Hermetical separation of fluids from the operating mechanism by diaphragm
- Actuator in stainless steel or plastic
- Stainless steel body with clamp or weld ends
- Quality certifications FDA/3A

The Burkert Zero Deadleg T Valve 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 manual actuator in PPS or stainless steel can be sterilized.

Applications

- Pharma
- Biotechnology
- Food Industry

Technical data	
Body materials	<ul style="list-style-type: none"> • Monoblock stainless steel • 316 L/1.4435/BN2 Fe <0.5 %/C≤0.03 %
Actuator materials	PPS, stainless steel 1.4581
Actuator and bonnet	
Diaphragm material	EPDM (AD), PTFE/EPDM (EA), advanced PTFE/EPDM (EU), GYLON®/EPDM laminated (ER), FKM (FF)
Media	Neutral gases and liquids, high purity, sterile, aggressive or abrasive
Viscosity	Up to viscous
Surface finish (others on request)	<ul style="list-style-type: none"> • Ra ≤ 0.5 µm (ASME BPE SF1) (external Ra ≤ 1.6 µm) • Ra ≤ 0.38 µm (ASME BPE SF4 / DIN HE4) (external Ra ≤ 1.6 µm)
Medium temperature	EPDM (AD) -10 to +143 °C (steam sterilisation +150 °C for 60 min) PTFE/EPDM (EA) -10 to +130 °C (steam sterilisation +140 °C for 60 min) PTFE/EPDM (EU) -5 to +143 °C (steam sterilisation +150 °C for 60 min) GYLON®/EPDM laminated (ER) -5 to +130 °C (steam sterilisation +140 °C for 60 min) FKM (FF) 0 to +130 °C (not recommended for steam)
Ambient temperature	+5 to +140 °C
Port connections	Weld end acc. to <ul style="list-style-type: none"> • EN ISO 1127/ISO 4200 • DIN 11850 Series 0 to 3 • ASME BPE • SMS 3008 • BS 4825 • ISO 2852 • ASME BPE • DIN 32676
Clamp acc. to	
Installation	As required
Option	Locking function
(on request, not for DN8/10)	

Technical data, continued

Specifications

Orifice diaphragm [mm]	K _v value water (m ³ /h)	Max. operating pressure (medium) for seal material EPDM and PTFE/EPDM [bar]
8	1.0	10
10	1.0	10
15	6.0	10
20	11.0	10
25	16.0	10
40	29.0	10
50	50.0	10 ¹⁾

¹⁾ Max. operating pressure 7 bar for bonnet and manual actuator in PPS

Orifice DN65, DN80 and DN100 on request

- ▶ Various other Clamp and Sterile threaded end connection combination are available, please consult for advice.

Approvals/certifications

Suitability for foodstuffs / sterile applications

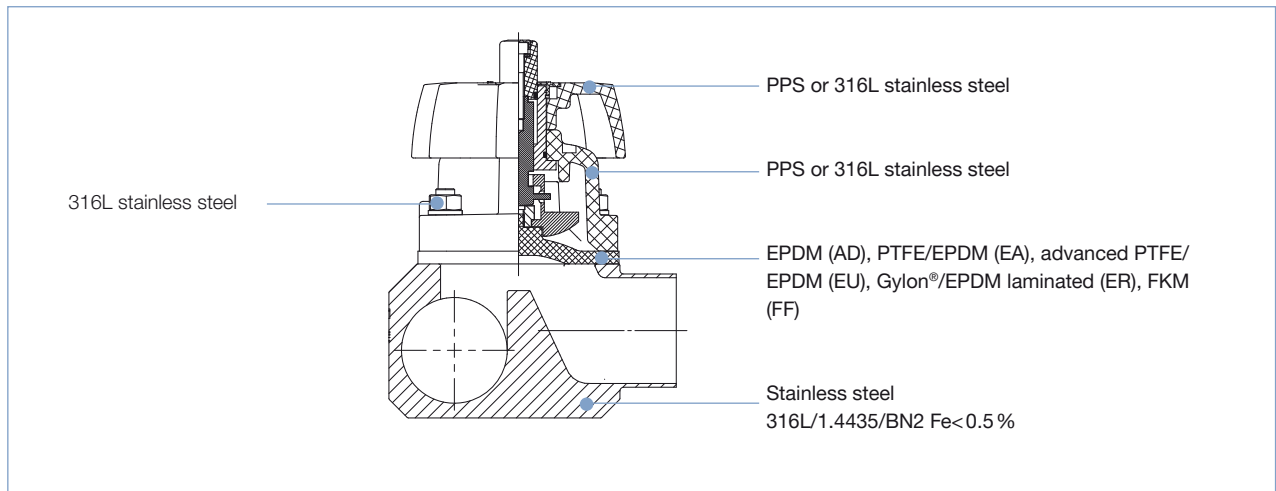


- The composition of the EPDM (AD), PTFE/EPDM (EA), advanced PTFE/EPDM (EU) and GYLON®/EPDM laminated (ER) diaphragms corresponds to the Code of Federal Regulations, published by the FDA (Food and Drug Administration, USA).



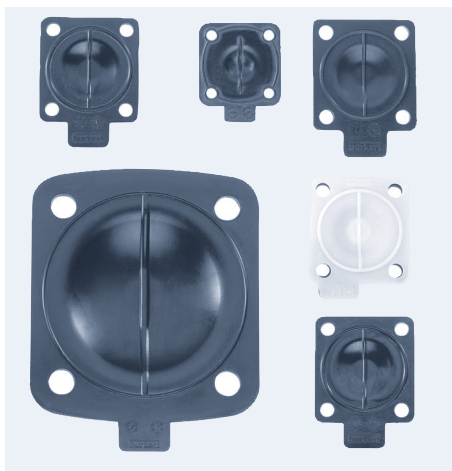
- The composition of the EPDM (AD), PTFE/EPDM (EA), advanced PTFE/EPDM (EU) and GYLON®/EPDM laminated (ER) diaphragms is suitable for the application with food and beverage (acc. to EC-Regulation 1935/2004/EC)
- The composition of the EPDM (AD), PTFE/EPDM (EA), advanced PTFE/EPDM (EU) and GYLON®/EPDM laminated (ER) diaphragms are approved acc. USP Class VI
- Approval according to TA-air (Port size DN4 - 50)

Materials



Example of available diaphragm materials

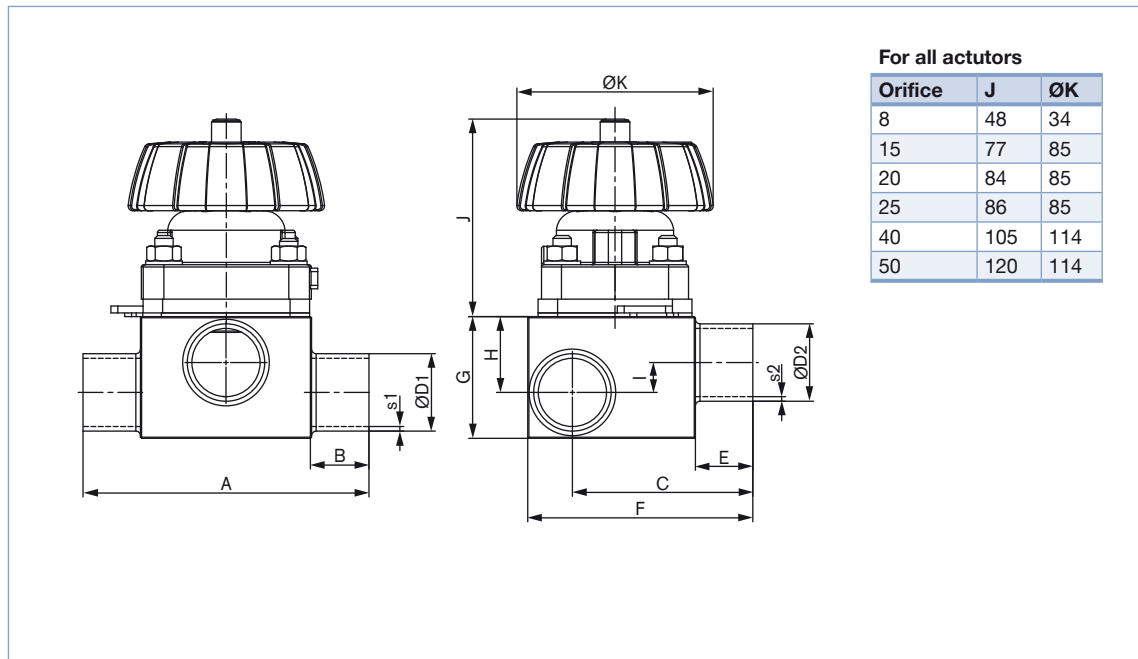
Developed to handle the unique challenges of hygienic and sterile applications, Bürkert offers diaphragms with precise material formula and physical tolerances. Bürkert diaphragms are available in a wide range of materials which have been proven in food & beverage, biotechnology, pharmaceutical and cosmetic industry applications. 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 (AD)
- PTFE/EPDM (EA)
- advanced PTFE/EPDM (EU)
- FKM (FF)
- Gylon®/EPDM laminated (ER)

Dimensions [mm]

Welded body acc. to EN ISO 1127/ISO 4200



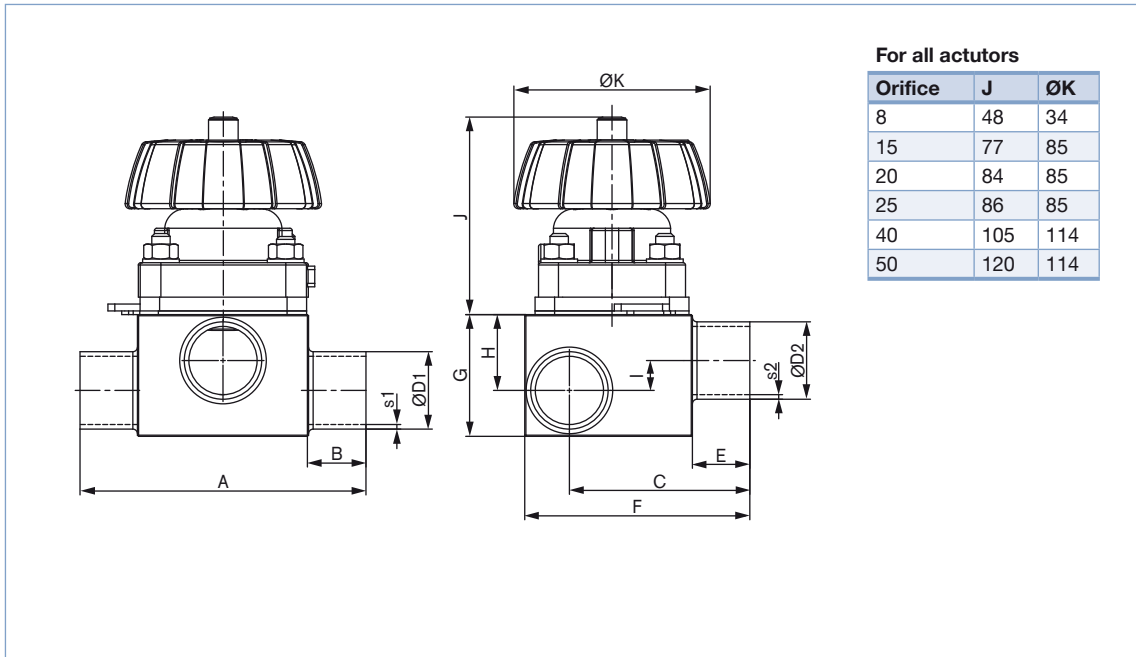
For all actuators

Orifice	J	ØK
8	48	34
15	77	85
20	84	85
25	86	85
40	105	114
50	120	114

Orifice	ØD1	s1	ØD2	s2	A	B	C	E	F	G	H	I
8	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
	48.3	2.0	13.5	1.6	88.0	25	64.15	20	90	57	31	21.0
15	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
	60.3	2.0	21.3	1.6	113.0	30	76.05	20	109	72	38	24.5
20	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
	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
25	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
	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
40	42.4	2.0	42.4	2.0	152.0	25	97.00	25	122	62	37	8.4
	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
50	60.3	2.0	60.3	2.0	188.0	30	120.15	30	154	82	48	12.5
	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

Dimensions [mm], continued

Welded body acc. to ASME BPE



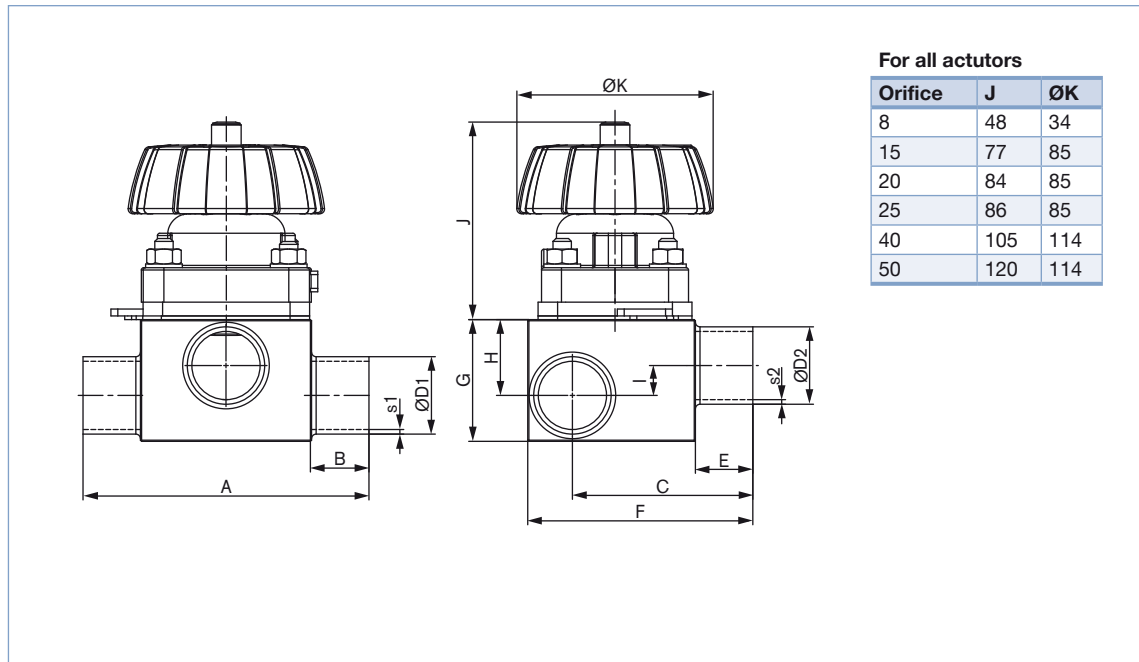
For all actuators

Orifice	J	ØK
8	48	34
15	77	85
20	84	85
25	86	85
40	105	114
50	120	114

Orifice	ØD1	s1	ØD2	s2	A	B	C	E	F	G	H	I
15	12.70	1.65	12.70	1.65	93.0	20	51.60	20	70	27	13.5	0.0
	19.05	1.65	12.70	1.65	103.0	20	54.78	20	70	31	18.5	5.0
	25.40	1.65	12.70	1.65	103.0	20	57.95	20	75	40	24	10.5
	38.10	1.65	12.70	1.65	103.0	25	64.30	20	88	54	31	17.5
	50.80	1.65	12.70	1.65	113.0	30	71.65	20	100	64	35	21.5
	63.50	1.65	12.70	1.65	113.0	30	78.80	20	113	73	38	24.5
	76.20	1.65	12.70	1.65	113.0	30	84.35	20	125	85	44	30.5
20	19.05	1.65	19.05	1.65	114.0	25	66.28	25	85	36	18	0.0
	25.40	1.65	19.05	1.65	114.0	25	69.45	25	90	40	24	6.0
	38.10	1.65	19.05	1.65	114.0	25	75.80	25	98	53	31	13.0
	50.80	1.65	19.05	1.65	124.0	30	82.15	25	111	66	37	19.0
	63.50	1.65	19.05	1.65	124.0	30	88.50	25	123	75	40	22.0
	76.20	1.65	19.05	1.65	124.0	30	94.85	25	137	87	45	27.0
25	25.40	1.65	25.40	1.65	124.5	25	74.75	25	95	42	26	6.0
	38.10	1.65	25.40	1.65	124.5	25	81.10	25	103	58	36	16.0
	50.80	1.65	25.40	1.65	134.5	30	87.45	25	120	75	44	24.0
	63.50	1.65	25.40	1.65	134.5	30	93.80	25	130	83	48	28.0
	76.20	1.65	25.40	1.65	134.5	30	100.15	25	142	94	52	32.0
40	38.10	1.65	38.10	1.65	152.0	25	95.20	25	121	58	35	6.4
	50.80	1.65	38.10	1.65	162.0	30	101.55	25	131	72	43	14.4
50	50.80	1.65	50.80	1.65	188.0	30	115.75	30	145	71	42	6.5
	63.50	1.65	63.50	1.65	188.0	30	122.10	30	158	86	50	14.5

Dimensions [mm], continued

Welded body acc. to DIN 11850 Series 0 and 2



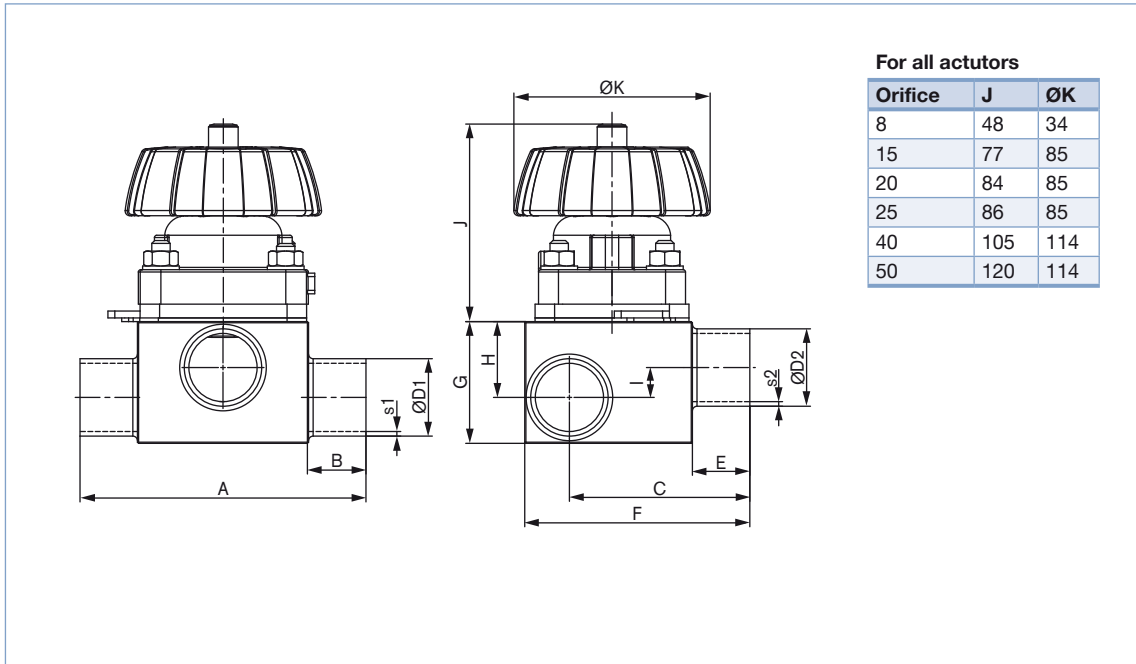
For all actuators

Orifice	J	ØK
8	48	34
15	77	85
20	84	85
25	86	85
40	105	114
50	120	114

Orifice	ØD1	s1	ØD2	s2	A	B	C	E	F	G	H	I
Series 0												
08	6.0	1.0	6.0	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	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	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	52.0	1.5	52.0	1.5	188.0	30	116.5	30	147	73	43	7.5
Series 2												
15	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	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	29.0	1.5	29.0	1.5	124.5	25	76.7	25	98	48	30	10.0
40	41.0	1.5	41.0	1.5	152.0	25	96.8	25	121	62	37	8.4
50	53.0	1.5	53.0	1.5	188.0	30	117.0	30	147	74	44	8.5

Dimensions [mm], continued

Welded body acc. to SMS 3008



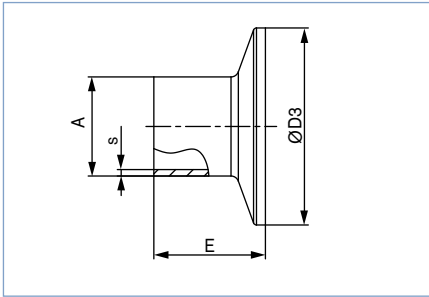
For all actuators

Orifice	J	ØK
8	48	34
15	77	85
20	84	85
25	86	85
40	105	114
50	120	114

Orifice	ØD1	s1	ØD2	s2	A	B	C	E	F	G	H	I
25	25.0	1.2	25.0	1.2	124.5	25	75.0	25	95	43	27	7.0
	38.0	1.2	25.0	1.2	124.5	25	81.5	25	105	59	36	16.0
	51.0	1.2	25.0	1.2	134.5	30	88.0	25	118	72	42	22.0
40	38.0	1.2	38.0	1.2	152.0	25	95.6	25	121	58	35	6.4
	51.0	1.2	38.0	1.2	162.0	30	102.1	25	131	73	44	15.4
50	51.0	1.2	51.0	1.2	188.0	30	116.3	30	147	73	43	7.5

Dimensions [mm], continued

Clamp body



ASME BPE

Orifice [mm]	[inch]	A	s	ØD3	E
08	¼"	6.35	0.89	25.0	28.6
10	⅜"	9.53	0.89	25.0	28.6
15	½"	12.7	1.65	25.0	28.6
20	¾"	19.05	1.65	25.0	28.6
25	1"	25.4	1.65	50.5	28.6
40	1 ½"	38.1	1.65	50.5	28.6
50	2"	50.8	1.65	64.0	28.6
65	2 ½"	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	ØD3	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	ØD3	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	ØD3	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

Valve features

Example

15 AD B VH SA42 SA42 D050 NO15 + NO14 + NK52 + HA24

Specification key

Please make a choice

Diaphragm size

08	(only with DO58)
15	
20	
25	
40	
50	
80	
100	

SEAL MATERIAL

AD	EPDM
EA	PTFE/EPDM
EU	advanced PTFE/EPDM
ER	Gylon®/EPDM laminated
FF	FKM

PRODUCTION OF BODY

B	Monoblock
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BODY MATERIAL

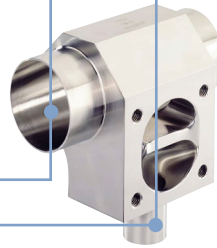
VH	AISI 316L
VI	1.4435 BN ₂ /ASME

VARIABLE CODES

Surface finish external		
-	clamped Ra ≤ 1.6 µm	standard
NO19	mechanical polished Ra ≤ 1.6 µm	
NO02	mechanical polished Ra ≤ 0.76 µm	
NO28	electro polished Ra ≤ 1.6 µm	
NO15	electro polished Ra ≤ 0.76 µm	
Surface finish, internal		
NO14	mechanical polished Ra ≤ 0.5 µm (ASME BPE SF1)	standard
NO06	mechanical polished Ra ≤ 0.76 µm (ASME BPE SF3 / DIN H2)	
NO17	electro polished Ra ≤ 0.38 µm (ASME BPE SF4 / DIN HE4)	standard
NO16	electro polished Ra ≤ 0.6 µm (ASME BPE SF6)	
Certificate		
NK52	3.1 Certificate	
Handwheel		
HA24	with locking function	

ACTUATOR VERSION

D050	Top PPS Handwheel PPS	not possible with orifice 08
D058	Top stainless steel, Handwheel PPS for T-valve	



Flange 1 (main tube) connection

Flange 2

Orifice	DIN EN ISO 1127 ISO 4200 DIN 11866 series B	SMS 3008	DIN 11850 series 0	DIN 11850 series 1 DIN EN 10357 series B	DIN 11850 series 2 DIN 11866 series A DIN EN 10357 series A	DIN 11850 series 3	BS 4825	ASME BPE DIN 11866 series C
DN 4			SC40-6.0×1.0					
DN 6	1/8"	SA78-10.2×1.6	SC41-8.0×1.0					SA89-3.17×0.56
DN 8	1/4"	SA40-13.5×1.6	SC42-10.0×1.0				SODB-6.35×1.2	SA90-6.35×0.89
DN 10	3/8"	SA41-17.2×1.6		SF40-12.0×1.0	SD40-13.0×1.5	SE40-14.0×2.0	SODC-9.53×1.2	SA91-9.53×0.89
DN 15	1/2"	SA42-21.3×1.6	SC43-18.0×1.5	SF41-18.0×1.0	SD42-19.0×1.5	SE42-20.0×2.0	SODD-12.7×1.2	SA92-12.7×1.65
DN 20	3/4"	SA43-26.9×1.6	SC44-22.0×1.5	SF42-22.0×1.0	SD43-23.0×1.5	SE43-24.0×2.0	SODE-19.05×1.2	SA93-19.05×1.65
DN 25	1"	SA44-33.7×2.0	SA60-25.0×1.2	SC45-28.0×1.5	SF43-28.0×1.0	SD44-29.0×1.5	SE44-30.0×2.0	SODF-25.4×1.65
DN 32	1 1/4"	SA45-42.4×2.0	SA61-33.7×1.2	SC46-34.0×1.5	SF44-34.0×1.0	SD45-35.0×1.5	SE45-36.0×2.0	
DN 40	1 1/2"	SA46-48.3×2.0	SA62-38.0×1.2	SC47-40.0×1.5	SF45-40.0×1.0	SD46-41.0×1.5	SE46-42.0×2.0	SODH-38.1×1.65
DN 50	2"	SA47-60.3×2.0	SA63-51.0×1.2	SC48-52.0×1.5	SF46-52.0×1.0	SD47-53.0×1.5	SE47-54.0×2.0	SODI-50.8×1.65
DN 65	2 1/2"	SA48-76.1×2.0	SA64-63.5×1.6			SD48-70.0×2.0		SODJ-63.5×1.65
DN 80	3"	SA49-88.9×2.3	SA65-76.1×1.6			SD49-85.0×2.0		SODK-76.2×1.65
DN 100	4"	SA39-114.3×2.3	SA66-101.6×2.0			SD50-104.0×2.0		SODL-101.6×2.11

Orifice	Clamp 34.0 similar DIN 32676 series B (ISO-tube)	DIN 32676 Reihe A (DIN-Rohr)	DIN 32676 Reihe B (ISO-Rohr)	ASME BPE	BS 4825 Clamp BS 4825-3 Rohr BS 4825-1
DN 8	1/4"	TC51-13.5×1.6 Cl: 34.0	TC40-13.5×1.6 Cl: 25.0	TG 50-6.35×0.89 Cl: 25.0	TH40-6.35×1.2 Cl: 25.0
DN 10	3/8"	TC41-17.2×1.6 Cl: 34.0	TC53-17.2×1.6 Cl: 25.0	TG 01-9.53×0.89 Cl: 25.0	TH41-9.53×1.2 Cl: 25.0
DN 15	1/2"	TC42-21.3×1.6 Cl: 34.0	TC52-21.3×1.6 Cl: 50.5	TG 02-12.7×1.65 Cl: 25.0	TH42-12.7×1.2 Cl: 25.0
DN 20	3/4"		TC43-26.9×1.6 Cl: 50.5	TG 03-19.05×1.65 Cl: 25.0	TH43-19.05×1.2 Cl: 25.0
DN 25	1"		TC44-33.7×2.0 Cl: 50.5	TG 04-25.4×1.65 Cl: 50.5	TG 04-25.4×1.65 Cl: 50.5
DN 40	1 1/2"		TC46-48.3×2.0 Cl: 64.0	TG 05-38.1×1.65 Cl: 50.5	TG 05-38.1×1.65 Cl: 50.5
DN 50	2"		TC47-60.3×2.0 Cl: 77.5	TG 06-50.8×1.65 Cl: 64.0	TG 06-50.8×1.65 Cl: 64.0
DN 65	2 1/2"		TC48-76.1×2.0 Cl: 91.0	TG 07-63.5×1.65 Cl: 77.5	TG 07-63.5×1.65 Cl: 77.5
DN 80	3"		TC49-88.9×2.3 Cl: 106.0	TG 08-76.2×1.65 Cl: 91.0	TG 08-76.2×1.65 Cl: 91.0
DN 100	4"		TC50-114.3×2.3 Cl: 130.0	TG 09-101.6×2.11 Cl: 119.0	TG 09-101.6×2.11 Cl: 119.0

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

Subject to alteration.
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1801/10_EU-en_00891854