



**Order Code for
GEA Tuchenhagen VESTA® Sterile Valves**

Type H_A 2/2 Way Seat Valve

VESTA® Sterile Valve, Type H_A 2/2 Way Seat Valve



VESTA® Sterile Valves are designed for universal use in sterile process technology.

A wide range of body types is available for horizontal or vertical valve configurations. The pneumatic actuators are made of high-strength, resistant synthetic material or stainless steel.

The pneumatic actuators are equipped in the standard with an optical position indicator and two air connections.

The VESTA® Sterile Valve is of safe design and extremely easy to maintain.

Design features

- Aseptic bellows sealing system
- Pressure and vacuum resistant
- One-piece PTFE bellows for universal applications
- Defined pretension of the seal
- Self-locking groove nut connection
- Pocket-free design

Benefits

- Valve body drains completely in straight pipes
- Reliable CIP/SIP cleaning thanks to optimised flow characteristics
- Long service life for the PTFE bellows
- Height of the valve body corresponds to that of the connecting piping
- Minimum space requirement, low process volume
- Easy and safe maintenance
- Sizes up to DN 65 available, larger sizes on request

Operating media

- Operating temperature -10 °C to max. 135 °C
- Sterilisation temperature max. 150 °C for 1h
- Operating pressure 0 to 6 bar (plastic actuator ISO 60.3, max. 5 bar)

Control air

- Control air temperature min. 0 °C, max. 70 °C
- NO function
- Control air pressure min. 5 bar, max. 6 bar
- NC function
- Control air pressure min. 5 bar, max. 8 bar
- Valve port cross-section 100 %

Materials, product contact parts

- Housing 1.4435 (AISI 316L)
- Housing socket 1.4435 (AISI 316L)
- Delta ferrite content optional
- Bellows material TFM1705 (PTFE), FDA-conformity

Materials, non-product contact parts

- Stainless steel actuator 1.4301 (AISI 304)
- Synthetic actuator polyphenylene sulphide (PPS)

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Example for an order code

Code	Code	H	L	A	P	NW bottom	NW top	P	Z	TV1	P	1	P	D	1	52	0	20
	Item	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	-

H 1. Valve type VESTA® Sterile Valve

2. Valve body combination

L T B C E

A 3. Aseptic bellows seal

P 4. PTFE bellows seal

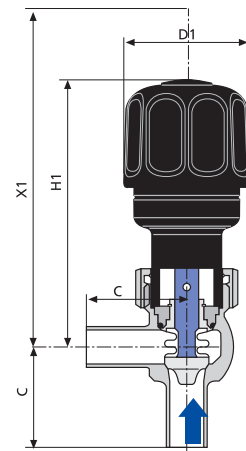
Bellows material TFM1705 (PTFE), conforms to: FDA, 21CFR 177.150, USP class VI
For documentation see Item 16

5. Nominal width, bottom connection

DIN 10 / 15 / 20 / 25 / 40 / 50 / 65 / 80 / 100

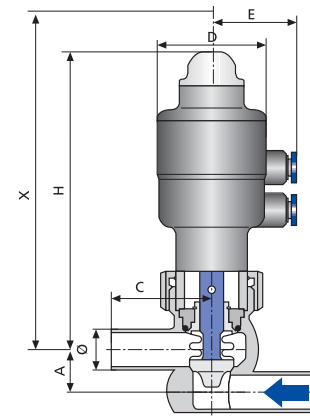
ISO 13.5 / 17.2 / 21.3 / 26.9 / 33.7 / 42.4 / 48.3 / 60.3 / 76.1 / 88.9 / 114.3

OD 0.5" / 0.75" / 1" / 1.5" / 2" / 2.5" / 3" / 4"



6. Nominal width, top connection

DIN	Outside diameter acc. to DIN 11850, series II, DIN 11866, series A										
Nominal width Ø	C	E	A	D	D1	H	H1	X	X1	Stroke	
DN 10	13x1.5	50	40	12.5	50	59	131	114	177	160	2.1
DN 15	19x1.5	50	40	18.5	50	59	134	118	187	171	4
DN 20	23x1.5	55	47	23.0	65	59	144	118	204	178	4.8
DN 25	29x1.5	60	53	29.5	77	59	161	125	230	194	5
DN 32	35x1.5	60	53	36	77	59	165	130	240	204	6.8
DN 40	41x1.5	90	71	52	104	140	254	141	290	210	11.5
DN 50	53x1.5	90	71	58	104	140	260	147	300	225	14
DN 65	70x2	125	104	78	169.5	180	280	191	330	295	18
DN 80	85x2	125	104	90	169.5	180	287.5	199	408	310	20
DN 100	104x2	125	104	110	169.5	180	305	218	451	350	28



X (included the clearance required for maintenance)

↑ Recommended flow direction

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6. Nominal width, top connection

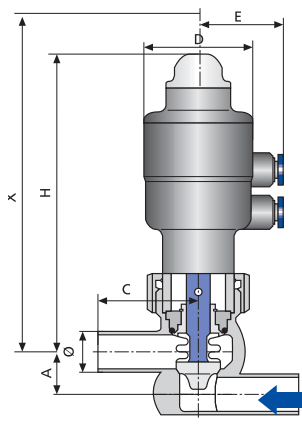
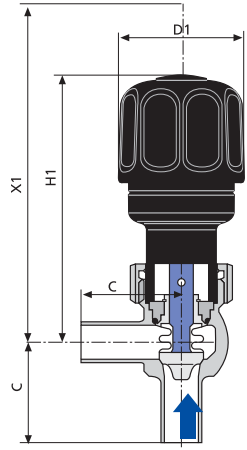
ISO Outside diameter acc. to DIN EN ISO 1127, series II, DIN 11866, series B

Nominal width Ø	C	E	A	D	D1	H	H1	X	X1	Stroke	
ISO 13.5	13.5x1.6	50	40	13.5	50	59	131	114	177	160	2.1
ISO 17.2	17.2x1.6	50	40	16.5	50	59	133	116	187	170	2.9
ISO 21.3	21.3x1.6	55	47	21	65	59	143	118	203	178	3.2
ISO 26.9	26.9x1.6	55	47.5	27	62	59	146	122	210	186	5
ISO 33.7	33.7x2	60	53	33	75	59	163	126	239	202	6.8
ISO 42.4	42.4x2	90	71	52	104	140	254	141	290	210	11.5
ISO 48.3	48.3x2	90	71	55	104	140	257	144	300	220	9.5
ISO 60.3	60.3x2	90	83.5	64	129	140	263	150	305	230	14
ISO 76.1	76.1x2	125	104	82	169.5	180	283	194	407	310	19.5
ISO 88.9	88.9x2.3	125	104	92	169.5	180	289	200	413	340	23.3
ISO 114.3	114.3x2.3	125	104	118	169.5	180	310	223	461	360	28

Inch OD Outside diameter acc. to ASME-BPE, DIN 11866, series C

Nominal width Ø	C	E	A	D	D1	H	H1	X	X1	Stroke	
0.5" OD	12.7x1.65	50	40	12.5	50	59	131	114	177	160	2.1
0.75" OD	19.05x1.65	50	40	18.5	50	59	134	118	187	171	4
1" OD	25.4x1.65	55	47	25.4	65	59	145	118	203	181	4.5
1.5" OD	38.1x1.65	90	71	51	104	140	253	139	290	210	8.5
2" OD	50.8x1.65	90	71	57	104	140	259	146	300	225	11
2.5" OD	63.5x1.65	125	104	76	169.5	180	277	188	330	290	12
3" OD	76.2x1.65	125	104	82	169.5	180	283.5	195	400	310	21
4" OD	101.6x2.11	125	104	109	169.5	180	303.5	217	446	350	24.7

X (included the clearance required for maintenance)



Recommended flow direction

7. Type of actuator

- P = synthetic material (PPS), air/spring, up to DN 50, 2" OD, ISO 60.3
- M = stainless steel (1.4301/316), air/spring
- H = manual actuator (PPS)

8. Non-actuated position

- Z = air-to-open/spring-to-close / and manual actuator
- A = air-to-close/spring-to-open
- J = air-to-open/air-to-close

Control air volume [dm³N]

Function	DN 10, 0.5" OD ISO 13.5	DN 15 0.75" OD	ISO 17.2	DN 20 1" OD	ISO 21.3	ISO 26.9	DN 25/32 ISO 33.7
Z (NC)	0.011	0.013	0.014	0.020	0.019	0.020	0.038
A (NO)	0.026	0.026	0.028	0.044	0.044	0.044	0.068

Function	DN 40, 1.5" OD ISO 42.4 / 48.3	DN 50 2" OD	ISO 60.3	DN 65 2.5" OD
Z (NC)	0.23	0.23	0.36	0.52
A (NO)	0.23	0.23	0.36	0.52

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9. Type/location of feedback element

TV1 = position indicator / control module type T.VIS® V-1 (for nominal size up to DN 32, 1" OD, ISO 33-7)

TV2 = position controller type T.VIS® V-20 (for nominal size from DN 40, 1.5" OD, ISO 42.4)

TM1 = control module T.VIS® M-1 (for nominal size from DN 40, 1.5" OD, ISO 42.4)

TP1 = position controller T.VIS® P-1 (for nominal size up to DN 32, 1" OD, ISO 33-7)

TP2 = position controller T.VIS® P-20 (for nominal size from DN 40, 1.5" OD, ISO 42.4)

Ex = SEE / ATEX (only stainless steel actuator)

INA = proximity switch holder

ooo = visual indication (standard), (manual/pneumatic actuator)

10. Control module type / solenoid valve

N = without solenoid valve (TV1, TV20)

P = one solenoid valve (TV1, TM1, SEE)

I = two solenoid valves (TV1, TM1, TP1, TP20)

o = without solenoid valve (INA, ooo)

11. Number of feedback signals

o = without (ooo)

1 = one feedback signal (INA)

2 = two feedback signals (TV1, TV20, TP1, TP20, TM1, INA)

12. Type of sensor connection

A = AS Interface (TV1, TV20, TM1)

B = 24 V DC, 3-wire, PNP (TV1, TV20, TM1, INA)

N = 24 V DC, 3-wire, NPN (TM1, INA)

D = DeviceNet (TV1, TV20, TM1)

E = EEX / ATEX (SEE, INA)

P = 24 V DC, programmable (TP1, TP20)

X = proximity switch acc. to customer's specification

13. Electrical connection (cable gland) / air connection

o = without

D = 5-pin connector M 12 / Ø 6/4 mm (TV1, TP1, TM1, TV20, TP20)

K = 5-pin connector M 12 / Ø 6.35/4.35 mm, 0.25" OD - (TV1, TP1, TM1, TV20, TP20)

M = connection for air hose Ø 6/4 mm, proximity switch with terminal box and cable terminals (INA, ooo, manual actuator)

Z = connection for air hose 0.25" OD (6.35/4.35 mm), proximity switch with terminal box and cable terminals (INA, ooo)

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14. Surface finish

1 = inside surfaces $R_a \leq 0.8 \mu\text{m}$, socket welds unpolished, body electrochemically cleaned
 2 = inside surfaces $R_a \leq 0.4 \mu\text{m}$, socket welds polished, body electropolished

15. Valve tag

52 = adhesive plate

16. Certificates

o = without
 Z = certificate acc. to EN10204-3.1
 W = factory test certificate EN10204-2.2
 F = ferrite content certificate
 O = surface test certificate
 K = certificate of FDA conformity
 U = certificate of USP class VI conformity
 X = acceptance acc. to customer's specification

17. Accessories

20 = stroke limiter open
 21 = seal adjuster close
 22 = 5 pin connector/junction box
 29 = quick release handle (for nominal size up to DN 32, 1" OD, ISO 33.7)
 43 = VESTAMID®* - UV resistant material; for oil and fat containing control air
 3A = 3A Symbol

*) VESTAMID® is registered as a trademark of the Degussa AG



VESTA® sterile valve with manual actuator and housing type L



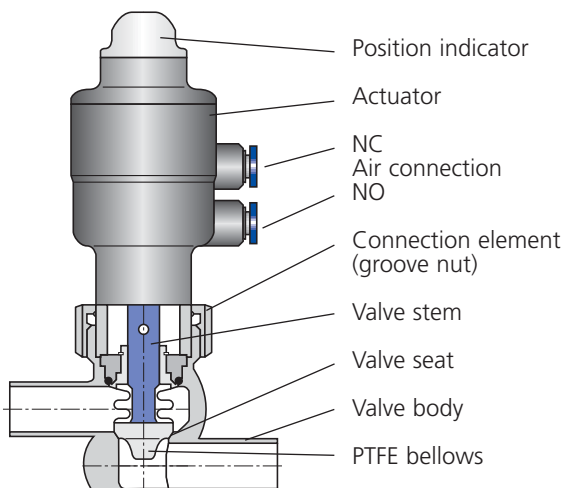
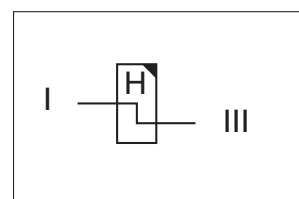
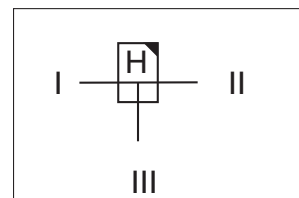
VESTA® sterile valve with pneumatic actuator and housing type B

VESTA® Sterile Valve, Type H_A 2/2 Way Seat Valve

Key figures

Ø	Stroke [mm]	Kv value [m³/h]			Weight acc. to actuator [kg]			
		I-II	I-III	III-I	Synthetic	Stainless Steel	Manual	
DIN Outside socket diameter, acc. to DIN11866, series A / DIN11850, series II								
DN 10	13x1.5	2.1	2	2.3	2.1	0.48	1.04	0.56
DN 15	19x1.5	4	6.4	6.5	5.9	0.64	1.10	0.62
DN 20	23x1.5	4.8	10.4	11.8	11.8	1.03	1.82	0.93
DN 25	29x1.5	5	15.2	16.7	16.9	1.59	2.63	1.36
DN 40	41x1.5	11.5	45.96	44.05	43.37	5.2	6.6	3.3
DN 50	53x1.5	13.5	61.53	67.66	70.00	5.5	6.9	3.5
DN 65	70x2	18	120.22	120.28	133.22	-	15.6	9.3
DN 80	85x2	20	307.83	155.45	128.85			
DN 100	104x2	28	559.68	269.10	248.79			
Inch OD Outside socket diameter, acc. to ASME-BPE, DIN11866, series C								
0.5" OD	12.7x1.65	2.1	2.1	2.2	2.2	0.48	1.04	0.56
0.75" OD	19.05x1.65	4	6.5	6.9	6.0	0.64	1.1	0.62
1" OD	25.4x1.65	4.5	12.4	12.9	12.7	1.08	1.87	0.98
1.5" OD	38.1x1.65	8.5	42.58	37.42	37.25	5.2	6.6	3.3
2" OD	50.8x1.65	11	66.89	63.59	65.26	5.5	6.9	3.5
2.5" OD	63.5x1.65	12	106.88	99.49	93.70	-	15.6	9.3
3" OD	76.2x1.65	21	167.02	153.48	140.76			
4" OD	101.6x2.11	24.7	378.95	255.79	241.80			
ISO Outside socket diameter, acc. to DIN EN ISO1127, DIN11866, series B								
ISO 13.5	13.5x1.6	2.1	2.4	2.8	2.5	0.48	1.04	0.56
ISO 17.2	17.2x1.6	2.9	4.1	5.2	4.5	0.63	1.09	0.61
ISO 21.3	21.3x1.6	3.2	8.2	9.1	8.8	1.02	1.81	0.92
ISO 26.9	26.9x1.6	5	13.7	14.3	13.7	1.1	1.88	0.99
ISO 33.7	33.7x2	6.8	20.2	22.3	21.8	1.85	2.7	1.45
ISO 42.4	42.2x2	11.5	48.12	46.35	43.84	5.2	6.6	3.3
ISO 48.3	48.3x2	9.5	53.15	60.56	57.24	5.5	6.9	3.5
ISO 60.3	60.3x2	14	92.37	84.60	88.19	5.6	8.6	3.7
ISO 76.1	76.1x2	19.5						
ISO 88.9	88.9x2.3	23.3						
ISO 114.3	114.3x2.3	28						

Kv- flow direction



We live our values.

Excellence • Passion • Integrity • Responsibility • GEA-versity

GEA Group is a global engineering company with multi-billion euro sales and operations in more than 50 countries. Founded in 1881, the company is one of the largest providers of innovative equipment and process technology. GEA Group is listed in the STOXX® Europe 600 Index.

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