

*Liquids to Value*



## Order Code for **VESTA**<sup>®</sup> Sterile Valve

Type H\_A 2/2 Way Seat Valve

Made by GEA Tuchenhagen

# Register



## 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

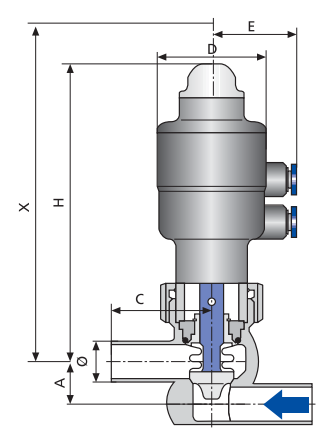
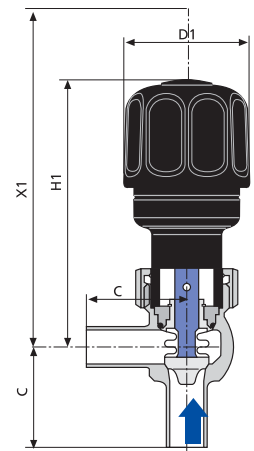
### Materials, non-product contact parts


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

# VESTA® Sterile Valve, Type H\_A 2/2 Way Seat Valve

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																																																																																																																																													
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	<b>2. Valve body combination</b>																																																																																																																																																														
	 <div style="display: flex; justify-content: space-around; width: 100%;"> <span>L</span> <span>T</span> <span>B</span> <span>C</span> <span>E</span> </div>																																																																																																																																																														
<b>A</b>	<b>3. Aseptic bellows seal</b>																																																																																																																																																														
<b>P</b>	<b>4. PTFE bellows seal</b>																																																																																																																																																														
	<p>Bellows material TFM1705 (PTFE), conforms to: FDA, 21CFR 177.150, USP class VI For documentation see Item 16</p>																																																																																																																																																														
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 Recommended flow direction

# VESTA® Sterile Valve, Type H\_A 2/2 Way Seat Valve

Example for an order code

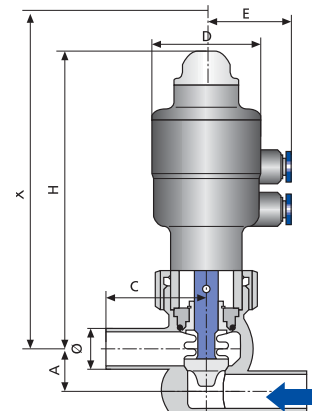
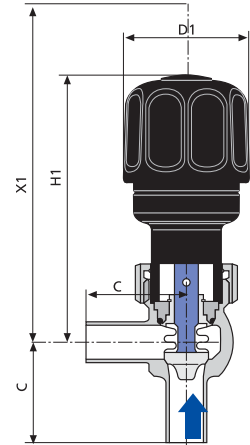
Code	Code	H	L	A	P	NW bottom	NW top	P	Z	TV1	P	1	P	D	1	52	0	20
	Item	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	-

## 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	F	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	F	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

Function	Control air volume [dm <sup>3</sup> N]						
	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
A (NO)	0.23	0.23	0.36	0.52

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Example for an order code

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Code	Item	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	-
	<p><b>9. Type/location of feedback element</b></p> <p>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-2o (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-2o (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)</p>																	
	<p><b>10. Control module type / solenoid valve</b></p> <p>N = without solenoid valve (TV1, TV2o)            P = one solenoid valve (TV1, TM1, SEE)            I = two solenoid valves (TV1, TM1, TP1, TP2o)            o = without solenoid valve (INA, ooo)</p>																	
	<p><b>11. Number of feedback signals</b></p> <p>o = without (ooo)            1 = one feedback signal (INA)            2 = two feedback signals (TV1, TV2o, TP1, TP2o, TM1, INA)</p>																	
	<p><b>12. Type of sensor connection</b></p> <p>A = AS Interface (TV1, TV2o, TM1)            B = 24 V DC, 3-wire, PNP (TV1, TV2o, TM1, INA)            N = 24 V DC, 3-wire, NPN (TM1, INA)            D = DeviceNet (TV1, TV2o, TM1)            E = EEX / ATEX (SEE, INA)            P = 24 V DC, programmable (TP1, TP2o)            X = proximity switch acc. to customer's specification</p>																	
	<p><b>13. Electrical connection (cable gland) / air connection</b></p> <p>o = without            D = 5-pin connector M 12 / Ø 6/4 mm (TV1, TP1, TM1, TV2o, TP2o)            K = 5-pin connector M 12 / Ø 6.35/4.35 mm, 0.25" OD - (TV1, TP1, TM1, TV2o, TP2o)            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)</p>																	

# VESTA® Sterile Valve, Type H\_A 2/2 Way Seat Valve

Example for an order code

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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

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



VESTA® sterile valve with manual actuator and housing type L



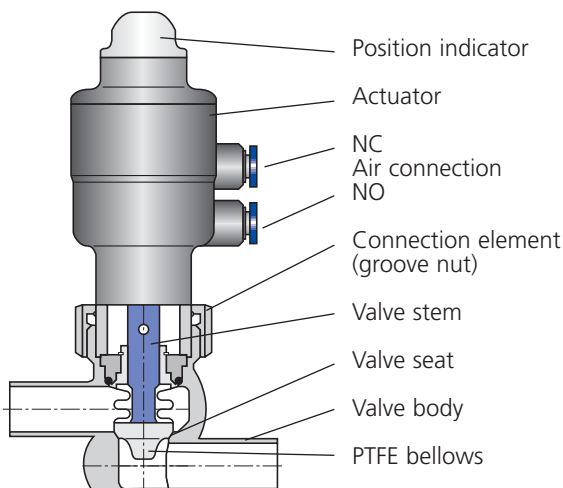
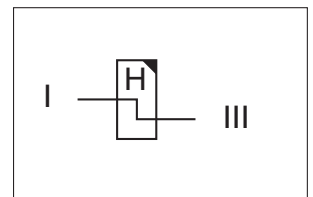
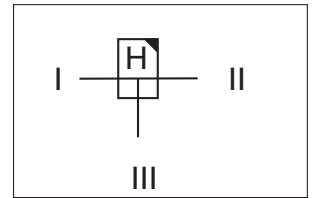
VESTA® sterile valve with pneumatic actuator and housing type B

# 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
<b>DIN</b> 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			
<b>Inch OD</b> 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			
<b>ISO</b> 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





GEA Mechanical Equipment

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