

Liquids to Value



Order Code for **VESTA**[®] Block Valve

Type HWA 2/3 Way

Type HXA 2/4 Way

Made by GEA Tuchenhagen

Register



VESTA® Block Valve Type HWA 2/3 Way, Type HXA 2/4 Way



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

- Block housing, single piece, manufactured from solid material
- PTFE bellows as shut-off element for universal applications
- Hermetic sealed against the external environment using a patented bellows sealing system
- Compact design
- Self-locking groove nut connection
- Pocket-free design

Benefits

- Valve body drains completely in straight pipes
- Self draining
- Reliable CIP/SIP cleaning thanks to optimised flow characteristics
- Long service life for the PTFE bellows
- Use of standard pneumatically and manually actuated VESTA® valve inserts
- 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

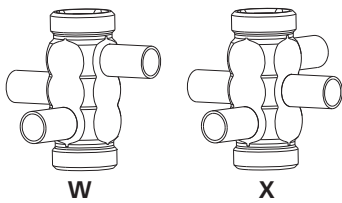
- Housing 1.4435 (AISI 316L)
- Housing socket 1.4435 (AISI 316L)
- Delta ferrite content optional
- Bellows material TFM1705 (PTFE), FDA-conformity

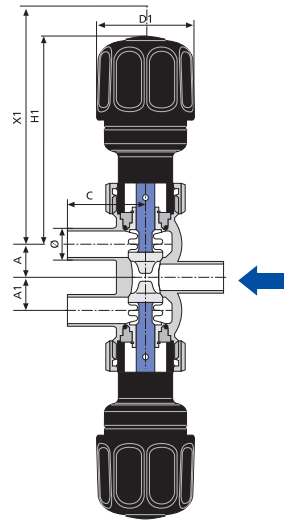
Materials, non-product contact parts

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

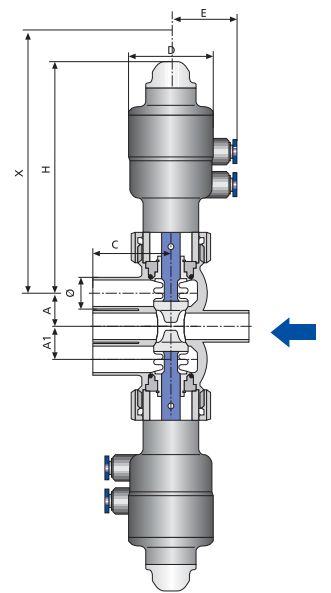
VESTA® Block Valve Type HWA 2/3 Way, Type HXA 2/4 Way

Example for a order code

Code	Code	H	W	A	P	NW bottom	NW top	P	Z	TV1	P	1	P	D	1	52	0	20																																																																																																																																																																																																																																																																																																																																																																																																																
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	2. Valve body combination																																																																																																																																																																																																																																																																																																																																																																																																																																	
A	3. Aseptic bellows seal																																																																																																																																																																																																																																																																																																																																																																																																																																	
P	4. PTFE bellows seal	<p>Bellows material TFM1705 (PTFE), conforms to: FDA, 21CFR 177.150, USP class VI For documentation see Item 16</p>																																																																																																																																																																																																																																																																																																																																																																																																																																
	5. Nominal width, bottom connection	<p>DIN 10 / 15 / 20 / 25 / 40 / 50 / 65</p> <p>ISO 13.5 / 17.2 / 21.3 / 26.9 / 33.7 / 42.4 / 48.3 / 60.3 / 76.1</p> <p>OD 0.5" / 0.75" / 1" / 1.5" / 2" / 2.5"</p>																																																																																																																																																																																																																																																																																																																																																																																																																																
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Type HWA with 3 sockets



Type HXA with 4 sockets

↑ Recommended flow direction
Socket turned into the section plane

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Example for a order code

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

6. Nominal width, top connection

Inch OD Outside diameter acc. to ASME-BPE 1997, DIN 11866, series C

Nominal width Ø	A	A1	C	E	D	D1	H	H1	X	X1	Stroke	
0.5" OD	12.7x1.65	17.8	11.8	50	40	50	59	131	114	177	160	2.1
0.75" OD	19.05x1.65	18		50	40	50	59	134	118	187	171	4
1" OD	25.4x1.65	28.5		55	47	65	59	145	118	203	181	4.5
1.5" OD	38.1x1.65	51		90	71	104	140	253	139	290	210	8.5
2" OD	50.8x1.65	57		90	71	104	140	259	146	300	225	11
2.5" OD	63.5x1.65	76		125	104	169.5	180	277	188	330	290	12

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, ISO 76.1
Z (NC)	0.23	0.23	0.36	0.52
A (NO)	0.23	0.23	0.36	0.52

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)

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Example for a order code

Code	Code	H	W	A	P	Size bottom	Size top	P	Z	TV1	P	1	P	D	1	52	0	20
Code	Item	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	-
	<p>10. Control module type / solenoid valve</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>11. Number of feedback signals</p> <p>o = without (ooo) 1 = one feedback signal (INA) 2 = two feedback signals (TV1, TV2o, TP1, TP2o, TM1, INA)</p>																	
	<p>12. Type of sensor connection</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>13. Electrical connection (cable gland) / air connection</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>																	
	<p>14. Surface finish</p> <p>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</p>																	
	<p>15. Valve tag</p> <p>52 = adhesive plate</p>																	

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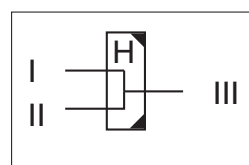
Example for a order code

Code	Code	H	W	A	P	Size bottom	Size 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	-	
	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																		

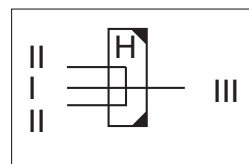
Key figures

	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	1.12	2.09	1.19
DN 15	19x1.5	4	6.4	6.5	5.9	1.23	2.15	1.25
DN 20	23x1.5	4.8	10.4	11.8	11.8	2.15	3.74	2
DN 25	29x1.5	5	15.2	16.7	16.9	3.36	5.44	2.95
DN 40	41x1.5	11.5	45.96	44.05	43.37			
DN 50	53x1.5	13.5	61.53	67.66	70.00			
DN 65	70x2	18	120.22	120.28	133.22			
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	1.12	2.09	1.19
0.75" OD	19.05x1.65	4	6.6	6.9	6	1.23	2.15	1.25
1" OD	25.4x1.65	4.5	12.4	12.9	12.7	2.33	3.9	2.18
1.5" OD	38.1x1.6	8.5	42.58	37.42	37.25			
2" OD	50.8x1.6	11	66.89	63.59	65.26			
2.5" OD	63.5x1.6	12	106.88	99.49	93.70			
ISO Outside socket diameter, acc. to DIN EN ISO1127, DIN11866, series B								
ISO 13.5	13.5x1.6	2.1	2.1	2.8	2.5	1.19	2.1	1.21
ISO 17.2	17.2x1.6	2.9	4.1	5.2	4.5	1.23	2.15	1.21
ISO 21.3	21.3x1.6	3.2	8.2	9.1	8.8	2.12	3.69	1.97
ISO 26.9	26.9x1.6	5	13.7	14.3	13.7	2.56	4.13	2.42
ISO 33.7	33.7x2.0	6.8	20.2	22.3	21.8	3.8	5.88	3.39
ISO 42.4	42.2x2	11.5	48.12	46.35	43.84			
ISO 48.3	48.3x2	9.5	53.15	60.56	57.24			
ISO 60.3	60.3x2	14	92.37	84.60	88.19			

Kv- flow direction

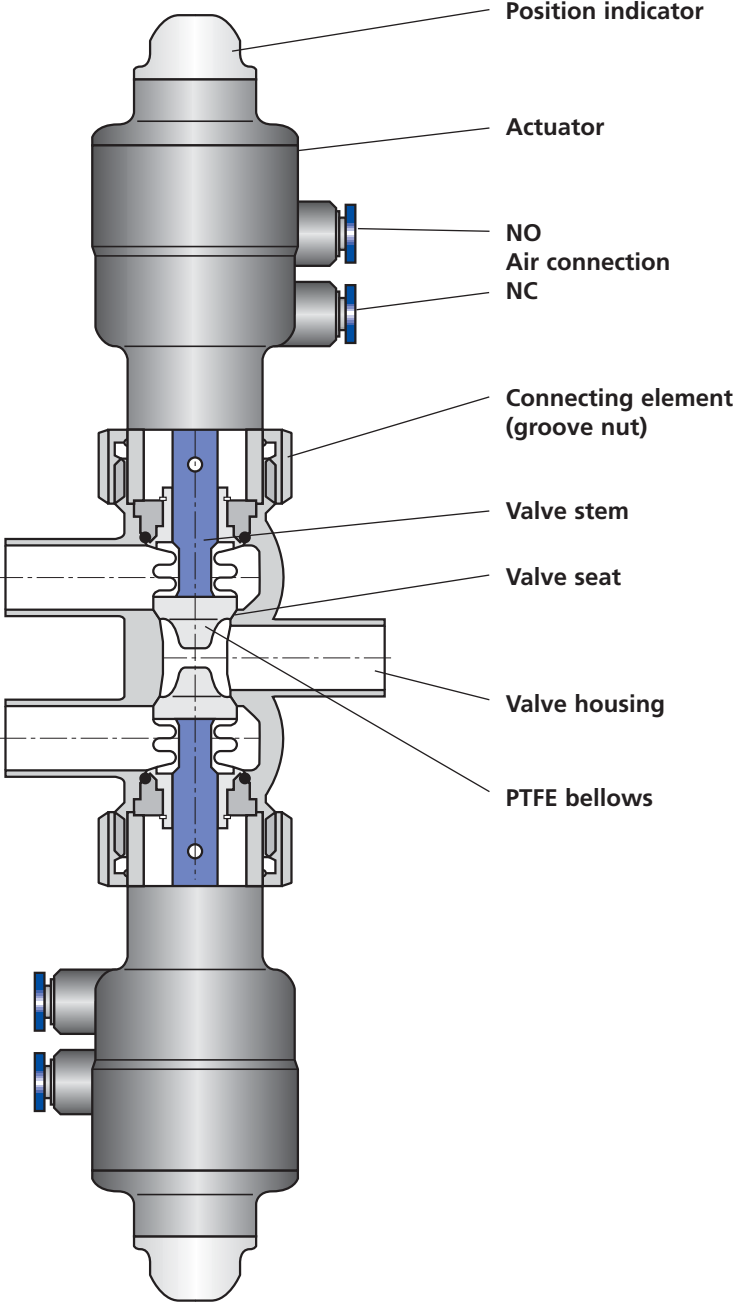


Type HWA with 3 sockets



Type HXA with 4 sockets

VESTA® Block Valve Type HWA 2/3 Way, Type HXA 2/4 Way





GEA Mechanical Equipment

GEA Tuchenhagen GmbH

Am Industriepark 2-10, 21514 Büchen, Germany

Phone +49-4155 49-0, Fax +49-4155 49-2428

sales.geatuchenhagen@geagroup.com, www.tuchenhagen.com