VESTA® Block Valves

Pure valve technology by GEA Tuchenhagen

Process Equipment

GEA Tuchenhagen

VESTA® Block Valves, type HWA / HXA

VESTA® block valves are compact sterile valves that can be used universally with two independent actuators of each other. The design concept of a single piece body allowing the merging, separation or branching of various media flows in the smallest of spaces. VESTA® block valves offer an optimal flow path with reduction of dead spaces at the same time. The significantly reduced pipework volume and the improved selfdraining are outstanding features of the design. A variety of configurations provide a high measure of flexibility in the implementation of plant designs with significant cost reduction.

VESTA® block valves - the rational expansion to the VESTA® series of sterile valves - are designed to provide a reliable process and are extremely easy to service. The secure connection, using groove nuts between body and drive, simplifies installation and the labour required for servicing. The single piece body is machined from solid; in this way it is possible to achieve a consistently high surface quality with minimal variation caused by tolerances.

VESTA® block valves can be supplied in two different standard body configurations:

- **Type HWA – body with 3 connections**
- **Type HXA –body with 4 connections (central body through-flow)**

On request further body configurations can be supplied, for example body with different connection sizes.

With VESTA® block valves are ideal for a wide range of applications. Whether as a single valve block or as a complex distributor of media with a number of valve blocks – GEA Tuchenhagen Service is there to answer your questions and provide technical support for the implementation of your plant design.

In contrast to design concepts with individual valves, system solutions using VESTA® block valves reduce the number of parts and welded connections helping to keep plant costs down.

The design features

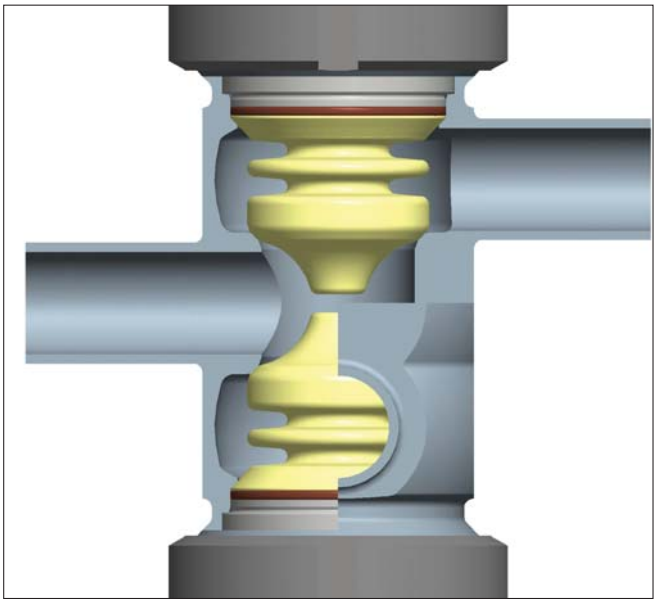
- Block body, single piece, manufactured from solid
- PTFE bellows as shut-off element for universal applications
- Hermetic sealing of the valve interior space from the external environment using a patented bellows sealing system
- Any installation orientation possible
- Compact design
- Self-locking groove nut connection

The advantages

- **Pocket-free design**
- **Self-draining**
- **Reliable CIP/SIP cleaning by means of flow-optimised design**
- **Long service life for the PTFE bellows**
- **Sealing in the plane of the pipework**
- **Use of standard VESTA® pneumatically and manually driven valve inserts**
- **Easy and safe maintenance**

VESTA® type HWA valve block with 3 connections

VESTA® type HXA valve block with 4 connections



Cross-section of VESTA® type HWA valve block

VESTA® Ventilblock Typ HWA / HXA

Field of application

Suitable for the control and regulation of all types of fluid and gaseous media

Operating pressure	max 6 bar
Control air pressure	NC actuator - min. 5 bar, max. 10 bar
	NO actuator - min. 5 bar, max. 6 bar
Operating temperature	-10 °C to max 135 °C
Sterilisation temperature	max 150 °C.

Installation orientation

Preferably horizontal (through-flow line), drive vertical or horizontal

Materials

In contact with product	body	1.4435 / AISI 316L,
	PTFE-bellows	TFM 1705, FDA-conformity
Not in contact with product	synthetic actuator	polyphenylene sulphide (PPS)
	stainless steel actuator	1.4301 / AISI 304

Surfaces

Internal

Ra ≤ 0.8 µm (standard)
Ra ≤ 0.4 µm, (as option)

External

bright metal (body and stainless steel drives)
Synthetic actuator - surface structure in accordance with VDI 3400, roughness level 30

Nominal widths

DIN - DN 10 up to DN 65
External diameter in accordance with DIN 11850 Series 2 / DIN 11866, Series A
ISO - ISO 13.5 up to ISO 76,1
External diameter in accordance with DIN EN ISO 1127 / DIN 11866, Series B
OD - 0,5" OD up to 2,5" OD
External diameter in accordance with ASME BPE / DIN 11866, Series C
(larger sizes on request)

Actuators

Manual actuator from synthtic material
Pneumatic actuator from synthtic material
Pneumatic actuator in stainless steel

Certifications

Documented verification of the following quality features
- body with material inspection certificate in accordance with EN 10204/3.1 (on request)
- documented verification of the surface roughness in the form of a test report in accordance with EN 10204 (on request to 3.1)
- documented verification of the delta ferrite content in the form of a test report in accordance with EN 10204, optional (on request)
- documented verification for the PTFE bellows in the form of a test report in accordance with EN 10204 FDA certificate of conformity– FDA 21 § 177.1550 (on request to 3.1)
- certificate for PTFE bellows (TFM 1705) concerning the documented evidence of biocompatibility in accordance with USP Class VI (on request)

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