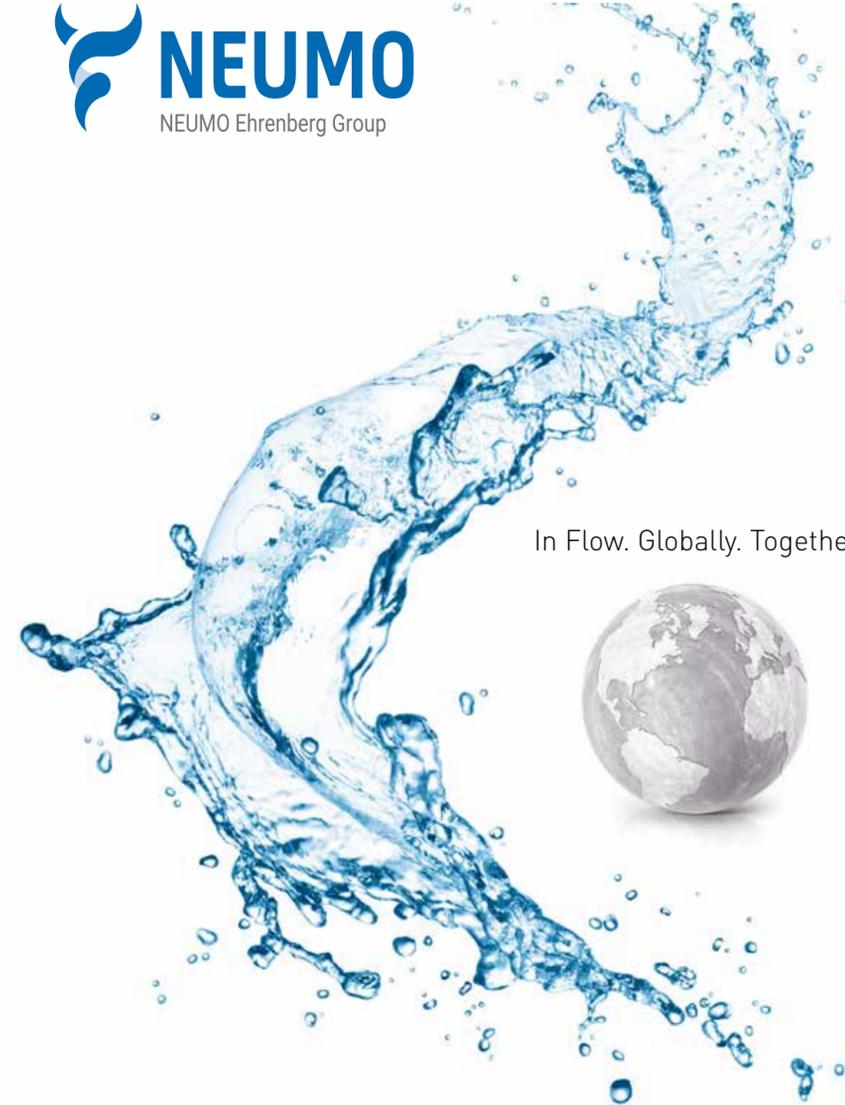


## Technical data



	BioFlow vc	BioFlow Hvc	BioFlow TCvc
Installation	Vertical	Horizontal	Vertical
Housing material*	1.4435 / 316L acc. ASME-BPE		
Surface finish (product contacted area)*	Ra < 0.8 µm precision turned and electropolished		Ra < 0.8 µm precision turned
FLOWstop (shut-off element)	Stainless steel 1.4435 / 316L with vulcanised O-ring EPDM / FDA + USP Class VI		
	PTFE / FDA + USP Class VI		
Body seal*	NEUMO BioConnect® O-ring		Clamp gasket
	NEUMO ConnectS® (free of any elastomer)		EPDM / FDA + USP Class VI
Max. operating pressure	PN16 (at 20 °C)		PN10 (at 20 °C)
Operating temperature	-10 °C to +150 °C		
Delta-ferrite content* (raw material)	<1%		
Opening pressure	0.02 bar		
Connections*	Orbital weld ends according to DIN 11866 Line A (DIN), line B (ISO), line C (ASME-BPE)		

\* alternative materials (e.g. 2.4602, 2.4605, 1.4539, AL6XN, etc.), alternative materials for the body seal (e.g. Viton, Viton/FEP-encapsulated, PTFE, CleanLip®, etc.), differing connections, different surface finishes and delta-ferrite values are available on request.



In Flow. Globally. Together.

NEUMO Ehrenberg Group is a privately owned, globally operating group of companies with more than 2,150 employees.

Founded in 1947, NEUMO GmbH + Co. KG, the group's parent company, now develops, manufactures and supplies fittings, equipment and tubes made from stainless steel and highly corrosion resistant special alloys for the pharmaceutical, chemical and biotechnology industries.

NEUMO products provide a significant contribution to safety and integrity of production processes.

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**BioFlow**  
cGMP Check Valves  
for pharmaceutical and sterile applications



# BioFlow

## cGMP Check Valves

### for pharmaceutical and sterile applications

Protect your valuable pumps and instruments from damage by using self-acting cGMP Check Valves and simplify your GMP systems for enhanced manufacturing processes

NEUMO BioFlow Check Valves and their unique shut-off element **FLOW**stop provide optimal results when being used:

- to prevent the reflow of condensate
- in ultra-pure steam, ultra-pure water and WFI systems
- to protect sensitive sterile pumps and instruments from surges in pressure
- in sampling systems for supplying WFI and ultra-pure water
- in compressed air flushing and pressure flushing in sterile areas

Check Valves fulfil the following fundamental technical requirements:

- pressure- and/or flow-dependent on/off function
- self-acting, without external actuator
- flow is only possible in one direction
- flow is blocked in the opposite direction
- quick reaction times
- ability to prevent reflow
- protects pumps and instruments from water hammer

In accordance with cGMP (Current Good Manufacturing Practice) regulations, the following requirements come along when the valves are being used in the pharmaceutical industry and sterile areas:

- avoidance of contamination and cross contamination
- no fouling
- optimal cleanability
- low differential pressure

The NEUMO **FLOW**stop is available in two different materials:

- stainless steel 1.4435 / 316L
- PTFE

Upper housing

**FLOW**stop (shut-off element)

Body seal – choose between NEUMO BioConnect® and NEUMO Connects® (free of any elastomer)

Lower housing

Benefits of NEUMO BioFlow Check Valves with **FLOW**stop:

Design benefits ( BioFlow VC / HVC)

- cGMP-compliant design and finish
- excellent anti fouling characteristics
- virtually no dead space
- pharmaceutical grade surface finishes
- uniform flow profile
- optimal cleanability

Technical benefits

- no springs or membranes
- sophisticated state of the art design
- ingeniously simple structure with only one moving part
- the **FLOW**stop is guided axially due to the shape of the housing

Economic benefits

- maintenance costs and downtime of pharmaceutical facilities are reduced
- no need for orifice plates and expensive sensors to monitor flow rates
- minimisation of process interruptions



BioFlow VC  
Check Valve  
for vertical  
installation



BioFlow HVC  
Check Valve  
for horizontal  
Installation



BioFlow TCVC  
Check Valve for  
vertical installation.  
Body is sealed by a clamp  
gasket in accordance with  
DIN32676 / ASME-BPE