BioFlow

cGMP Check Valves for Pharmaceutical and Aseptic Applcations

BioFlow check valves and their unique shut-off element, **FlowStop** provide optimal results when being used:

- To prevent reflow of condensate in **ultra-pure** steam, **ultra-pure** water and **WFI systems**
- To protect sensitive **sterile pumps** and **istruments** from surges in presure
- In sampling systems for supplying **WFI** and **ultra-pure** water
- In compressed **air flushing** and **pressure**
- Flushing in **sterile areas**

Benefits of the **BioFlow** check valves with **FlowStop**

Constructive Benefits (type VC / HVC)

- **cGMP** compliant design and construction
- Excellent **anti-fouling** characteristics
- Virtually **no dead space**
- Pharmaceutical **grade surface finish**
- Uniform **flow** profile
- **Optimal** cleanability

In compliance 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**
- **Optimum** cleaning capability
- **Low** differential pressure

Economic Benefis

- Maintenance **costs** and **downtime** of pharmaceutical facilities are reduced
- **No need** for **orifice plates** or expesive **sensors** to monitor flow rates
- Minimising the **risks** of **process disturbances**

Technical Benefis

- **No springs** or **membranes**
- **Sophisticated** state of the art design
- Ingenuously simpe structure with one movable part
- **Axial guidance** of the **FlowStop** due to housing shape

Check Valves fulfil the following funda-mental technical requirements

- **Pressure-resp. flow** - dependent on-off function
- Self-acting, without external actuator
- Outlet in **one flow direction** only
- Flow is **blocked** in the **opposite direction**
- **Quick reaction** times
- **Reflow prevention**
- **Protects** pumps and instruments from water hammer

BioFlow

Check Valves
VC/HVC
Body Seal BioConnect

SEALING SYSTEMS

Check Valve BioFlow VC

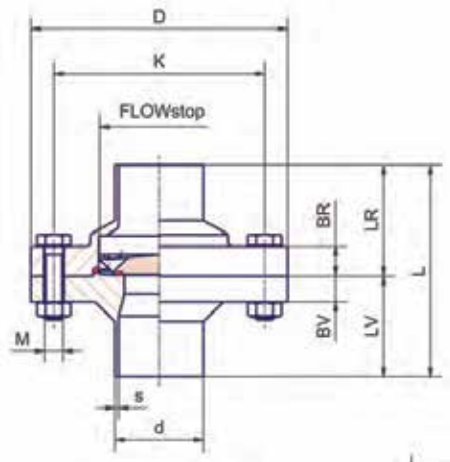
Check Valve BioFlow HVC

FlowStop

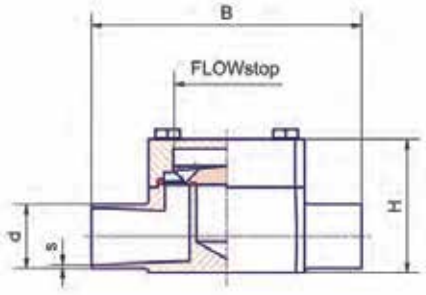
Technical Data	
Installation	BioFlow VC: vertical BioFlow HVC: horizontal
Housing material*	1.4435 / 316L
FLOWstop material*	1.4435 / 316L with vulcanised seal EPDM (FDA+ USP Class VI) PTFE (FDA + USP Class VI)
Delta ferrite content (raw material)*	< 1%
Surface finish (product contacted area)*	Ra < 0,8 µm electropolished
Body seal	O-Ring EPDM (FDA + USP Class VI), BioConnect® CleanLip (stainless steel sealing element)
Max. permissible pressure	PN16 (20°C)
Opening pressure	0.02 bar
Max. operating temperature	-10°C / +150°C
Connections*	Orbital welding ends in accordance with DIN11866 line A (DIN), Reihe B (ISO), line C (ASME-BPE)
Approvals	TÜV-component testing (housing) EHEDG (housing)

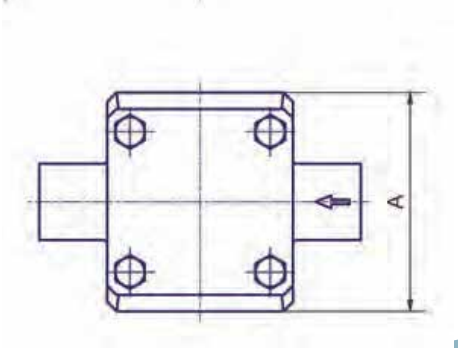
* Alternative material grades (such as 2.4602, 2.4605, 1.4539, AL-6XN®, etc.), alternative sealing materials for body seal (such as Viton, Viton / FEP - encapsulated, PTFE, CleaLip®, etc.), as well as different connections, surface qualities and delta ferrite values are available on request

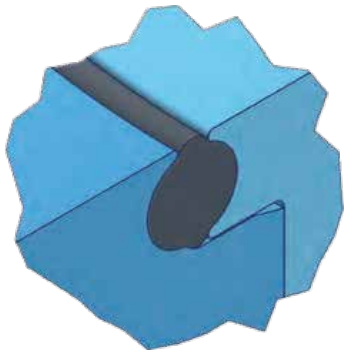
Check Valve BioFlow VC



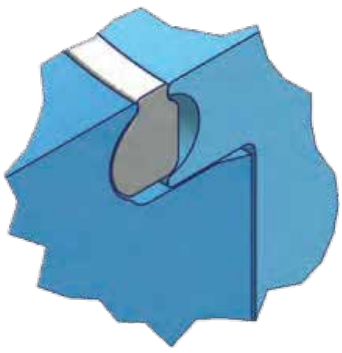
Check Valve BioFlow HVC







BioConnect®



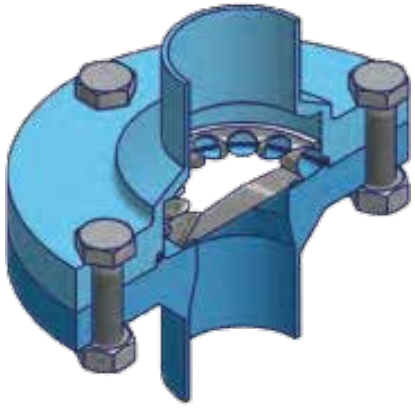
BioConnect® CleanLip

SEALING SYSTEMS

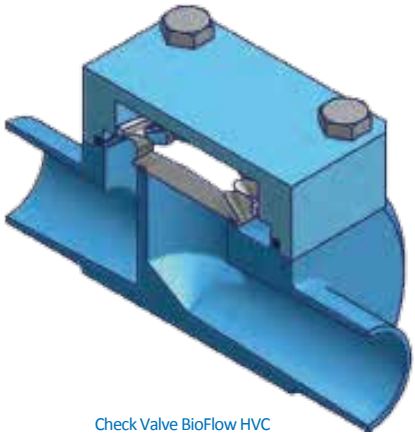
Check Valve BioFlow VC / HVC, Body Seal BioConnect®, tube dimensions in accordance with DIN11866 line A															
DN	d	s	D	K	L	LV	BV	LR	BR	M	A	B	H	FLOWstop VC	FLOWstop HVC
8	10	1	100	80	100	45	10	55	12	4 x M 8x30	62.5	111	32.5	37	37
10	13	1.5	100	80	100	45	10	55	12	4 x M 8x30	65	111	38	37	37
15	19	1.5	100	80	102	50	10	52	12	4 x M 8x30	66	111	43	37	37
20	23	1.5	100	80	102	50	10	52	12	4 x M 8x30	68	121	47	37	37
25	29	1.5	100	80	112	55	10	57	12	4 x M 8x30	70	122	53	37	37
32	35	1.5	110	90	115	55	12	60	14	4 x M 8x35	92	142	65	55	55
40	41	1.5	110	90	112	55	12	57	14	4 x M 8x35	100	142	75	55	55
50	53	1.5	140	115	114	55	14	59	16	4 x M 10x40	108	153	85	65	65
65	70	2	175	150	155	70	16	85	18	8 x M 10x45	on request			99	on request
80	85	2	175	150	155	70	16	85	18	8 x M 10x45	on request			99	on request
100	104	2	215	190	188	88	16	100	18	8 x M 12x50	on request			146,5	on request

Check Valve BioFlow VC / HVC, Body Seal BioConnect®, tube dimensions in accordance with DIN11866 line B															
DN	d	s	D	K	L	LV	BV	LR	BR	M	A	B	H	FLOWstop VC	FLOWstop HVC
8	13.5	1.6	100	80	100	45	10	55	12	4 x M 8x30	63	111	35	37	37
10	17.2	1.6	100	80	102	50	10	52	12	4 x M 8x30	65	111	40	37	37
15	21.3	1.6	100	80	102	50	10	52	12	4 x M 8x30	67	122	46	37	37
20	26.9	1.6	100	80	112	55	10	57	12	4 x M 8x30	68	122	49	37	37
25	33.7	2	110	90	115	55	12	60	14	4 x M 8x35	97	142	70	37	37
32	42.4	2	110	90	115	55	12	60	14	4 x M 8x35	95	142	73	55	55
40	48.3	2	140	115	115	55	14	60	16	4 x M 10x40	105	153	80	55	55
50	60.3	2	175	150	160	70	16	90	18	4 x M 10x45	111	153	91	65	65
65	76.1	2	175	150	155	70	16	85	18	8 x M 10x45	on request			99	on request
80	88.9	2.3	175	150	155	70	16	85	18	8 x M 10x45	on request			99	on request
100	114.3	2.3	215	190	188	88	16	100	18	8 x M 12x50	on request			146,5	on request

Check Valve BioFlow VC / HVC, Body Seal BioConnect®, tube dimensions in accordance with DIN11866 line C															
DN	d	s	D	K	L	LV	BV	LR	BR	M	A	B	H	FLOWstop VC	FLOWstop HVC
1/2"	12.7	1.65	100	80	100	45	10	55	12	4 x M 8x30	64	111	37	37	37
3/4"	19.05	1.65	100	80	100	45	10	55	12	4 x M 8x30	66	121	43	37	37
1"	25.4	1.65	100	80	112	55	10	57	12	4 x M 8x30	68	122	49	37	55
1 1/2"	38.1	1.65	110	90	115	55	12	60	14	4 x M 8x35	93	142	69	55	55
2"	50.8	1.65	110	90	115	55	12	60	14	4 x M 8x35	106	153	82	55	65
2 1/2"	63.5	1.65	175	150	155	70	16	85	18	8 x M 10x45	on request			99	on request
3"	76.2	1.65	175	150	155	70	16	85	18	8 x M 10x45	on request			99	on request
4"	101.6	2.11	215	190	188	88	16	100	18	8 x M 12x50	on request			146,5	on request



Check Valve BioFlow VC
BioConnect®



Check Valve BioFlow HVC
BioConnect®

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