

AV-3 SANITARY CHECK VALVES



APPLICATION

AV-3 series check valve, also known as “non-return valve”, is designed for use in process piping installations to prevent reverse flow.

MATERIAL

Product wetted steel parts: AISI 304 or AISI 316L

Other steel parts: AISI 304

O ring and gasket: EPDM, comply with FDA21CFR177.2600

Options:

- O ring and gaskets can be Silicone or Viton, all complying with FDA 21CFR177.2600.
- Connection ends: Butt-welded, Sanitary Tri-clamp, Threaded or others upon request.

WORKING PRINCIPLE

A check valve opens when the pressure below the valve plug exceeds the pressure above the valve plug and the spring force. The valve close when pressure equalization has been achieved.

TECHNICAL PARAMETER

Max. Pressure: 10 bar (145psi)

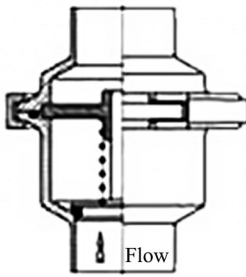
Opening pressure: 0.3 bar (DN25) 0.2 bar (DN32-40) 0.1 bar (DN50-100)

Working temperature: 14° F to 248 ° F (-10°C to 120°C) (EPDM)

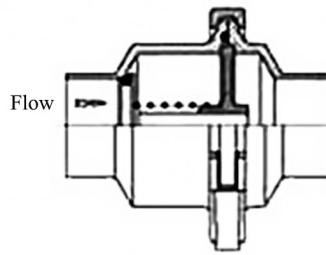
DESIGN STANDARDS

The stainless steel valve body ensures nonporous, smooth surfaces and dimensionally stable construction. The valve body is in two parts, assembled by means of a clamp and sealed with a gasket. The self draining design of the lower valve body enables flushing of the product. Ribbed construction of the stainless steel disc resists heavy pressure hammer, minimize the resistance to flow and also serves as a guide to the valve plug. All seats and seals are made from FDA approved materials.

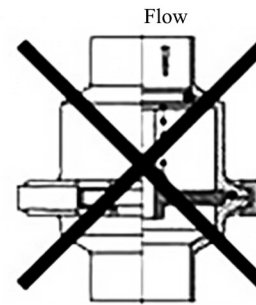
TECHNICAL PARAMETER



Optimal installation direction



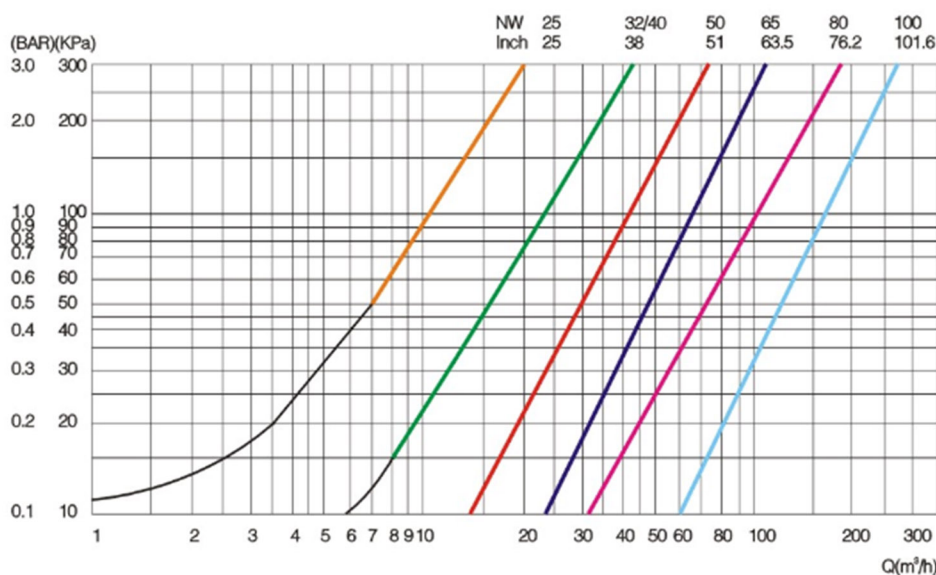
Permitted installation direction



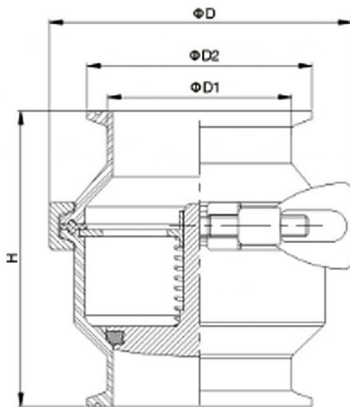
Wrong installation direction

Material	Product wetted steel parts	AISI 304L/316L (1.4306/1.4404)	Provided with material inspection report
	Other steel parts	AISI 304	
Seal	Standard	EPDM	All seal materials comply with the FDA
Material	Option	VMQ (Silicone) / VITON (FPM)	
Pressure	Working Pressure	Max.:10bar (145 PSI)	21CFR117.2600
Temperature	Working temperature	EPDM :14°F to 248°F (-10°C~ +120°C)	
	Sterilization temperature	150°C (MAX 20min)	
Surface	Inside surface treatment	Ra 16-32 μ in (0.4-0.8 μm)	
Treatment	Outside surface treatment	Ra 32-64 μ in (0.8-1.6 μm)	
Connection	The welding diameter	Welding end:	
		DIN 11850-2 with 11850-1 / SMS / 3A / ISO Series etc	
	End connections: Butt-weld, Sanitary Tri-clamp, male and female threaded, flanged, etc.		

CHECK VALVE CURVE



AV-3C SANITARY CHECK VALVE WITH TRI-CLAMP ENDS



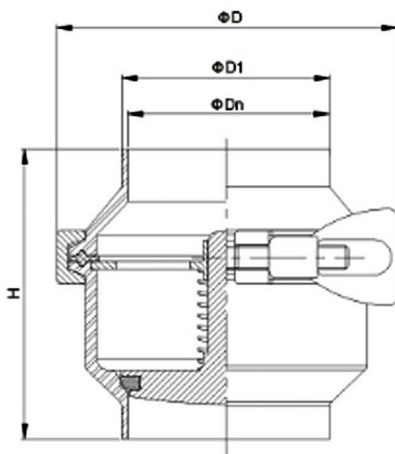
DIN

Size	H		D1		D2		D	
	Inch	mm	Inch	mm	Inch	mm	Inch	mm
DN10	3.760	95.5	0.472	12	1.339	34	2.835	72
DN15	3.760	95.5	0.709	18	1.339	34	2.835	72
DN20	3.760	95.5	0.866	22	1.339	34	2.835	72
DN25	3.760	95.5	1.102	28	1.988	50.5	2.835	72
DN32	3.839	97.5	1.339	34	1.988	50.5	3.425	87
DN40	3.839	97.5	1.575	40	1.988	50.5	3.425	87
DN50	4.469	113.5	2.047	52	2.520	64	3.937	100
DN65	4.705	119.5	2.756	70	3.583	91	4.528	115
DN80	5.020	127.5	3.346	85	4.173	106	5.039	128
DN100	5.969	151.6	4.094	104	4.685	119	6.457	164

INCH

Size	H		D1		D2		D	
	Inch	mm	Inch	mm	Inch	mm	Inch	mm
1/2"	3.760	95.5	0.500	12.7	1.000	25.4	2.835	72
3/4"	3.760	95.5	0.748	19	1.000	25.4	2.835	72
1"	3.760	95.5	1.000	25.4	1.988	50.5	2.835	72
1 1/4"	3.839	97.5	1.252	31.8	1.988	50.5	3.425	87
1 1/2"	3.839	97.5	1.500	38.1	1.988	50.5	3.425	87
2"	4.469	113.5	2.000	50.8	2.520	64	3.937	100
2 1/2"	4.705	119.5	2.500	63.5	3.051	77.5	4.528	115
3"	5.020	127.5	3.000	76.2	3.583	91	5.039	128
3 1/2"	5.020	127.5	3.504	89	4.173	106	5.039	128
4"	5.969	151.6	4.000	101.6	4.685	119	6.457	164

AV-3W SANITARY CHECK VALVE WITH BUTT-WELD ENDS



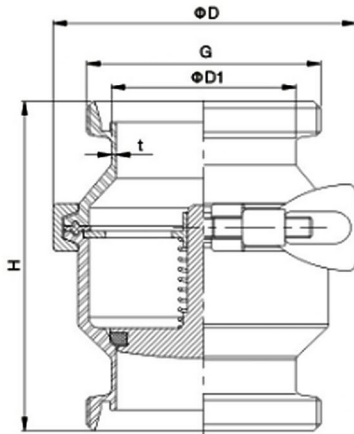
DIN

Size	H		D1		D		Dn	
	Inch	mm	Inch	mm	Inch	mm	Inch	mm
DN10	2.756	70	0.472	12	2.835	72	0.354	9
DN15	2.756	70	0.709	18	2.835	72	0.591	15
DN20	2.756	70	0.866	22	2.835	72	0.748	19
DN25	2.756	70	1.102	28	2.835	72	0.984	25
DN32	2.835	72	1.339	34	3.425	87	1.220	31
DN40	2.835	72	1.575	40	3.425	87	1.457	37
DN50	3.465	88	2.047	52	3.937	100	1.929	49
DN65	3.701	94	2.756	70	4.528	115	2.598	66
DN80	4.016	102	3.346	85	5.039	128	3.189	81
DN100	4.724	120	4.094	104	6.457	164	3.976	101

INCH

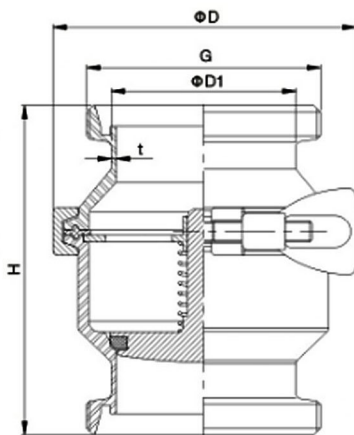
Size	H		D1		D		Dn	
	Inch	mm	Inch	mm	Inch	mm	Inch	mm
1/2"	2.756	70	0.500	12.7	2.835	72	0.382	9.7
3/4"	2.756	70	0.748	19	2.835	72	0.630	16
1"	2.756	70	1.000	25.4	2.835	72	0.882	22.4
1 1/4"	2.835	72	1.252	31.8	3.425	87	1.134	28.8
1 1/2"	2.835	72	1.500	38.1	3.425	87	1.382	35.1
2"	3.465	88	2.000	50.8	3.937	100	1.882	47.8
2 1/2"	3.701	94	2.500	63.5	4.528	115	2.343	59.5
3"	4.016	102	3.000	76.2	5.039	128	2.843	72.2
3 1/2"	4.016	102	3.504	89	5.039	128	3.346	85
4"	4.724	120	4.000	101.6	6.457	164	3.843	97.6

AV-3T SANITARY CHECK VALVE WITH THREAD ENDS



DIN

Size	H		D1		D		T		G
	Inch	mm	Inch	mm	Inch	mm	Inch	mm	
DN15	4.055	103	0.709	18	2.835	72	0.059	1.5	Rd33.5x1/8"
DN20	4.213	107	0.866	22	2.835	72	0.059	1.5	Rd43.5x1/6"
DN25	4.291	109	1.102	28	2.835	72	0.059	1.5	Rd51.5x1/6"
DN32	4.370	111	1.339	34	3.425	87	0.059	1.5	Rd57.5x1/6"
DN40	4.370	111	1.575	40	3.425	87	0.059	1.5	Rd64.5x1/6"
DN50	5.079	129	2.047	52	3.937	100	0.059	1.5	Rd77.5x1/6"
DN65	5.472	139	2.756	70	4.528	115	0.079	2	Rd94.5x1/6"
DN80	5.945	151	3.346	85	5.039	128	0.079	2	Rd109.3x1/4"
DN100	6.890	175	4.094	104	6.457	164	0.079	2	Rd129.3x1/4"



SMS

Size	H		D		D1		T		G
	Inch	mm	Inch	mm	Inch	mm	Inch	mm	
3/4"	4.213	107	2.835	72	0.748	19	0.059	1.5	Rd33.5x1/6"
1"	4.213	107	2.835	72	1.000	25.4	0.059	1.5	Rd39.5x1/6"
1 1/4"	4.213	107	3.425	87	1.252	31.8	0.059	1.5	Rd59.5x1/6"
1 1/2"	4.370	111	3.425	87	1.500	38.1	0.059	1.5	Rd69.5x1/6"
2"	5.000	127	3.937	100	2.000	50.8	0.059	1.5	Rd84.5x1/6"
2 1/2"	5.551	141	4.528	115	2.500	63.5	0.079	2	Rd97.3x1/6"
3"	5.945	151	5.039	128	3.000	76.2	0.079	2	Rd104.3x1/6"
3 1/2"	6.024	153	5.039	128	3.504	89	0.079	2	Rd124.3x1/4"
4"	6.811	173	6.457	164	4.000	101.6	0.079	2	Rd131.3x1/4"