

WaStop® Check Valve System

WaStop® is a unique patented check valve that helps to protect against flooding.



TECHNICAL GUIDE: **AVH4.4**

Applications

Stormwater discharge
Waste and surface water
Odour control
Basement flooding
Pump station overflows
Wetlands

Product Attributes

Provides flood and odour protection
Very low head loss
Quick installation into new and existing drains or chambers
Low maintenance and low operation costs
The unique pulsating flow prevents blockages

Approvals/Standards

US Patent No. 6,810,914 PCT/SE00/02524
80-200 mm models are CE approved

Quality

ISO 9001:2008 Quality Management Standard
ISO 14001:2015 Environmental Management

WaStop® Inline Check Valve

We all know someone who has been affected by it. We see it, feel it and experience it. Climate change and rising sea levels are affecting us all. Through the innovation of the WaStop® Inline Check Valve, Wapro have prevented thousands of floods worldwide.

In order to protect against flooding, Wapro have engineered the WaStop® inline check valve to ensure the lowest possible opening pressure whilst maintaining the best possible seal against backflow. This, combined with the lowest headloss available, gives the most efficient flow conditions, ensuring the fastest evacuation of water. An essential quality of check valves used to protect people and property. WaStop® protects.

Advantages of WaStop®

- Easy installation saving on construction & installation
- No moving parts - virtually maintenance-free costs
- Models to suit pipes 75-1800 mm
- Superior construction materials
- Stops liquids, gases, odours, insects and small animals
- Lowest headloss amongst inline check valves
- Stops backflow effectively even in low flow events
- Low life-cycle cost

Applications

Wapro know that any solution for flood prevention or odour control needs to function. Simply, effectively. That's why, when they invented the WaStop® inline check valve in 2000, they had one thought in mind. Instant automatic protection. Working on differential pressure the WaStop® functions autonomously, without human interaction, without electricity, without constant maintenance. It just works.

To invent the best inline check valve on the market the Wapro engineers went one step further. They also thought about the different parts of the process and who would be affected by the design of the valve. With function top of mind their engineers developed a valve that works in stormwater, sewer, odour applications, as well as ensuring to cover the range of existing pipe sizes to enable retro-fitting with ease. The WaStop® valves cover all sizes of pipes, all shapes, from 75mm-1800mm. As standard. Off the shelf in most cases, for fast delivery.

We keep stock of the popular sizes in New Zealand to ensure the contractor and end user can keep time and costs to a minimum.

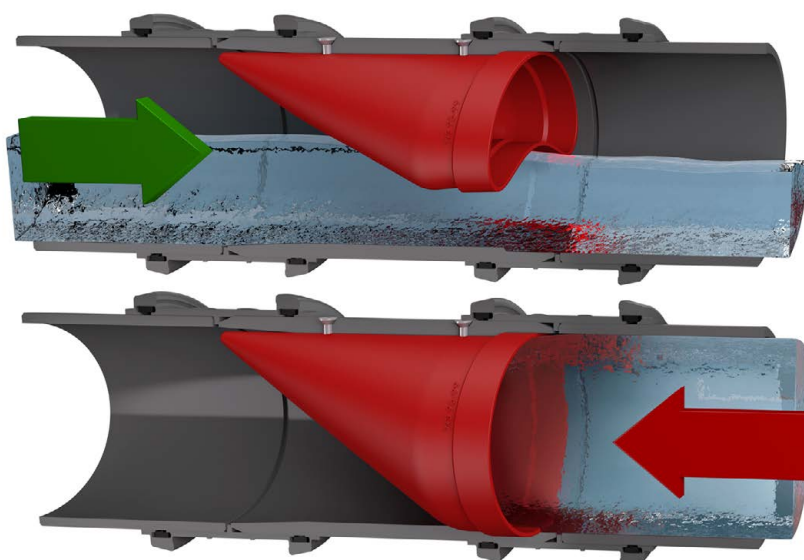


FIG. 1 Valve opens with normal flow and closes with backflow

BENEFITS OF SUPERIOR CONSTRUCTION

WaStop® check valves are designed to provide asset and property owners' peace of mind. Simply the most reliable, high quality inline check valve on the market.

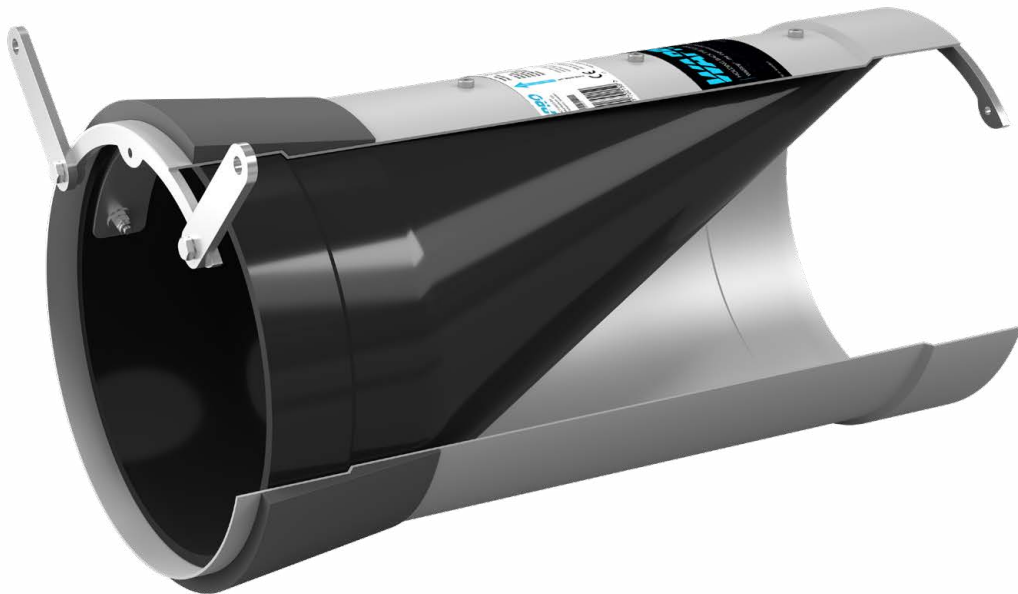
HOUSING & SEAL

- Thin stainless steel 316 housing
- Perfect function regardless of the existing pipe quality
- Peace of mind knowing the seal is 100% tight
- Low life-cycle cost
- Quick, easy installation
- Lower energy costs

DOUBLE COLLARS

Standard model can be used for inlet or outlet

- One product for multiple installation situations



FIXATION MATERIAL

- Long life expectancy and low life-cycle cost with high quality materials
- Peace of mind - engineered product that exceeds expectations

MEMBRANE

- Protection even in low flow events
- Pulsating flow reducing sedimentation up and downstream
- Extremely low headloss
- Low maintenance costs
- Memory membrane - doesn't sag

Installation Options



FIG. 2 INLINE INSTALLATION

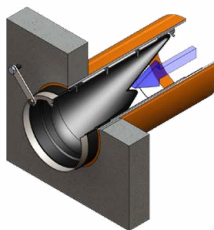


FIG. 3 WINGWALL OR MANHOLE INSTALLATION

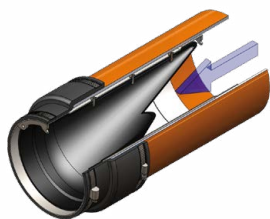


FIG. 4 OUTFALL INSTALLATION

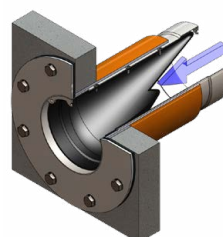
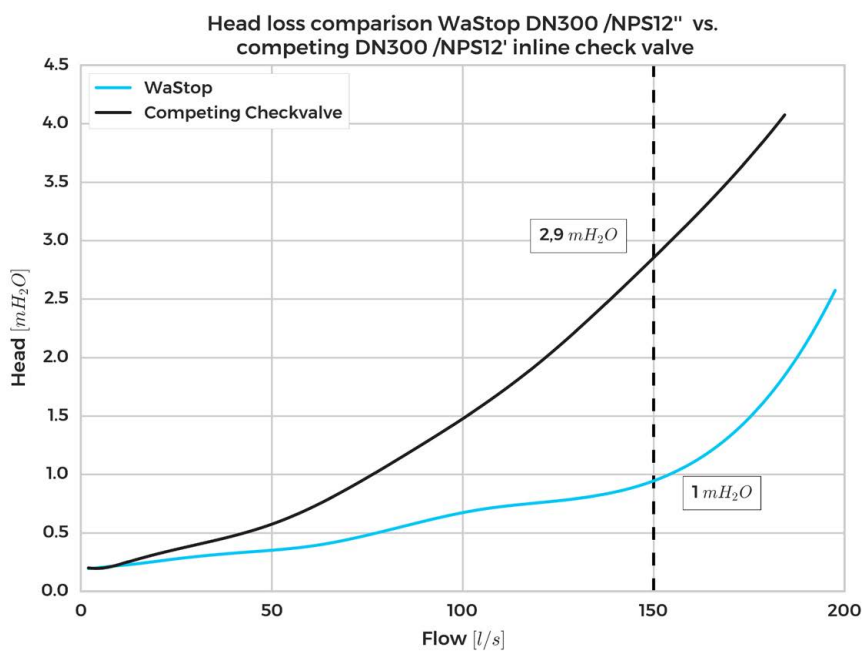


FIG. 5 FLANGE INSTALLATION
(CAN BE AN INLET OR OUTLET END)

LOW HEAD LOSS IS ESSENTIAL

Comparing head loss data is difficult as the test procedure is rarely presented. However, the test results shown below were conducted in the same facility with the same reference points and are therefore comparable. The test result shows that the WaStop® has 65% lower head loss than a competing inline check valve at a flow of 150l/s. Both valves were tested in the same open air scenario.



WaStop® Standard Product Range

WaStop® check valves are manufactured in EN 1.4401/AISI 316 stainless steel, PVC or PE. Valves can be adapted to suit a variety of different internal pipe diameters or external flanges. Please contact us with details of your special application.

TABLE 1 WASTOP® STANDARD - 304/316 STAINLESS STEEL

Model*	DN (mm)	Length (mm)	Length (Short)** (mm)	OD seal (mm)	OD body (mm)	OD waist (OD Short) (mm)	*Opening pressure Standard*** (mmH2O)	Closing pressure Standard (mmH2O)	Installation pipe*		Weight (kg)
									Min	Max	
WS97	100	210	160	102	97	93	180	70	99	101	0,7
WS101	110	215	165	105	100	96	190	60	101	104	0,8
WS116	125	230	160	120	115	111	250	90	117	120	0,9
WS146	150	300	200	160,5	144,5	138,5	230	80	146	159	2,4
WS183	200	385	270	201	181	173	260	120	182	200	4
WS193	200	395	275	211	191	183	210	110	193	210	5
WS215	225	450	300	235	215	207	220	130	216	233	5,5
WS230	250	480	320	250	230	222	200	120	232	248	6
WS240	250	520	350	260	240	232	190	110	242	258	7
WS265	300	550	365	285	265	256	180	120	267	283	10
WS290	300	600	400	310	290	280	220	160	293	307	10
WS340	350	700	500	352	340	328	360	220	343	349	18
WS370	400	730	500	394	370	358	240	160	373	391	20
WS390	400	750	500	414	390	378	310	190	393	411	24
WS440	450	840	560	467	443	431	210	140	446	464	28
WS490	500	900	600	506	490	474	270	180	493	503	29
WS515	515	1000	650	539	515	499	265	165	518	536	38
WS590	600	1200	800	603	587	567	370	240	590	598	48
WS690	700	1300	870	710	690	670	280	180	695	705	63
WS750	750	1400	950	770	750	726	390	240	755	765	75
WS790	800	1500	1000	810	790	766	350	230	795	805	88
WS885	900	1700	-	915	885	855	400	270	890	910	116
WS985	1000	1800	-	1015	985	955	390	260	990	1010	141
WS1040	1050	2000	-	-	1040	-	350	220	1048	-	221
WS1185	1200	2250	-	-	1185	1155	460	290	1190	-	290
WS1385	1400	2600	-	-	1385	1349	540	350	1390	-	440
WS1485	1500	2800	-	-	1485	1441	620	390	1490	-	642
WS1585	1600	3000	-	-	1585	1541	600	380	1590	-	700

NOTE: *We have a standard set of sizes which can be customized, easily, to suit any application.

Flanges on inlet, outlet or somewhere in between are all easily available. Quickly.

**Customized extra short valves are available.

*** Open air. Standard membrane. Lower and higher opening pressures available.

TABLE 2 WASTOP® STANDARD - PVC/PE

Model	DN (mm)	Length (mm)	OD body (mm)	Opening Pressure Standard (mmH2O)	Closing Pressure Standard (mmH2O)	Weight (kg)
WS75PVC	75	125	75	190	70	0,3
WS110PVC	110	210	110	200	60	0,9
WS125PVC	125	240	125	190	80	1,2
WS160PVC	160	310	160	220	80	2,1
WS200PVC	200	400	200	190	110	4,1
WS250PE	250	480	250	220	130	6,3
WS250PE-I	250	480	236	220	140	4,6
WS315PE	315	600	315	220	160	12,5
WS315PE-I	315	600	295	230	170	8,3

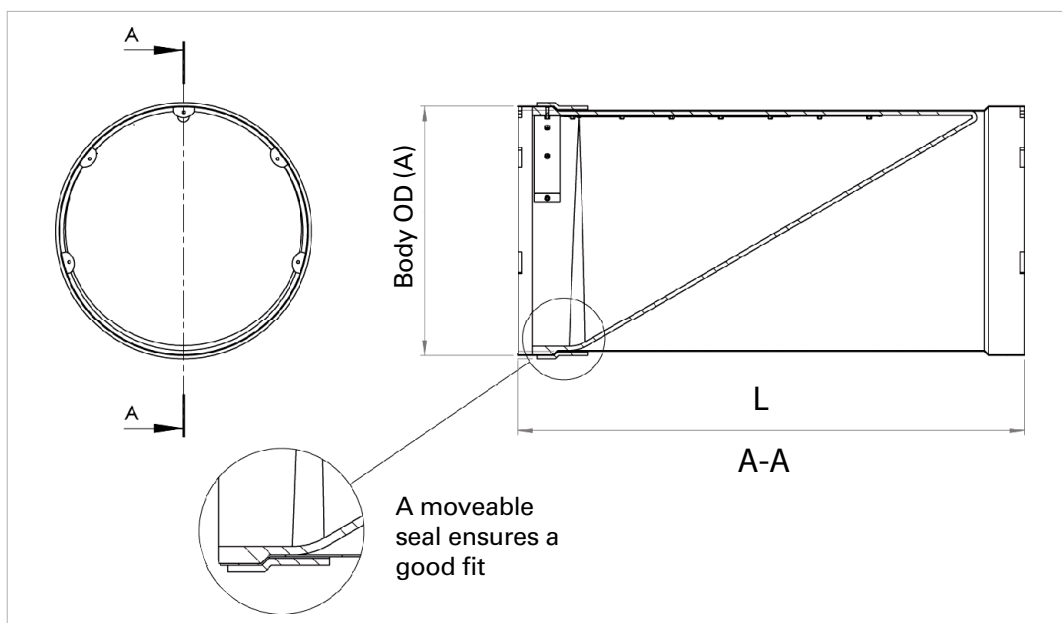


FIG. 6 SS version side section and seal detail

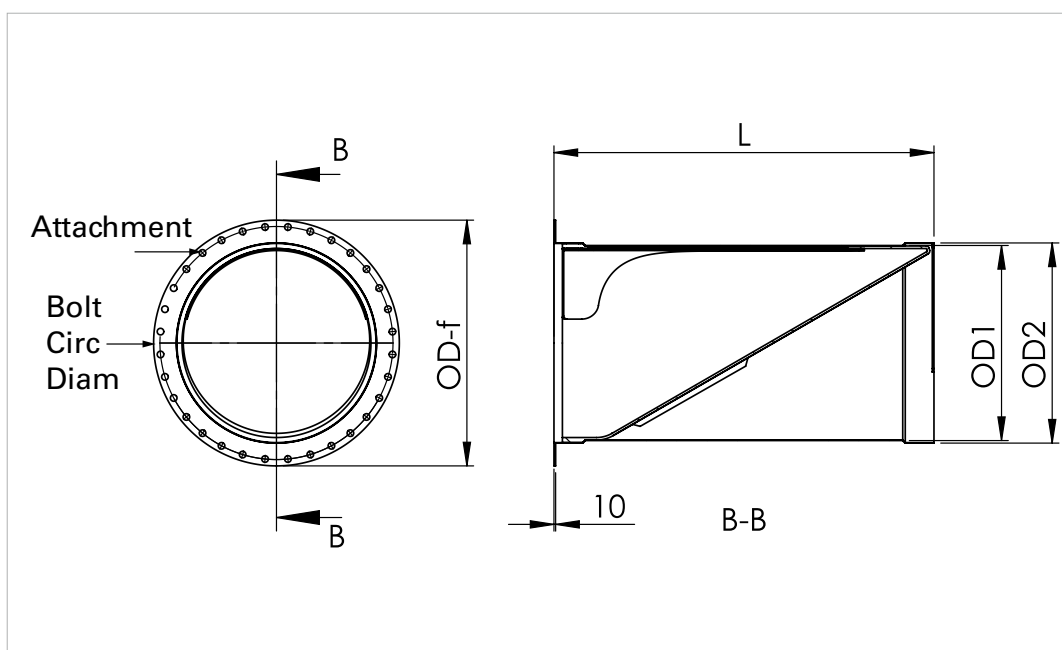


FIG. 7 SS Flanged version side section

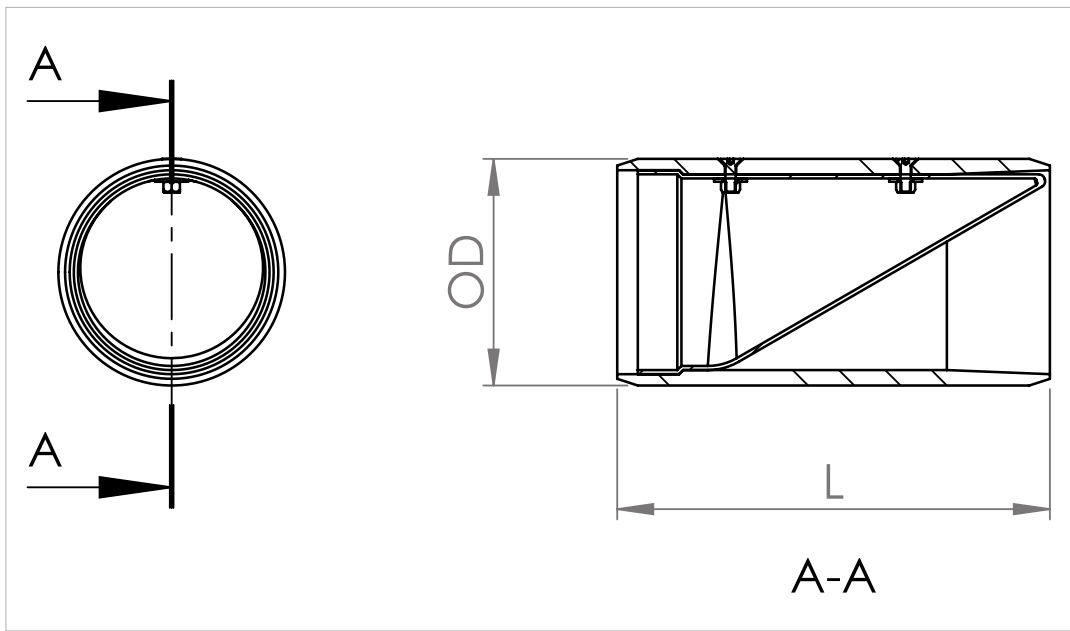


FIG. 8 PE/PVC inline type side section

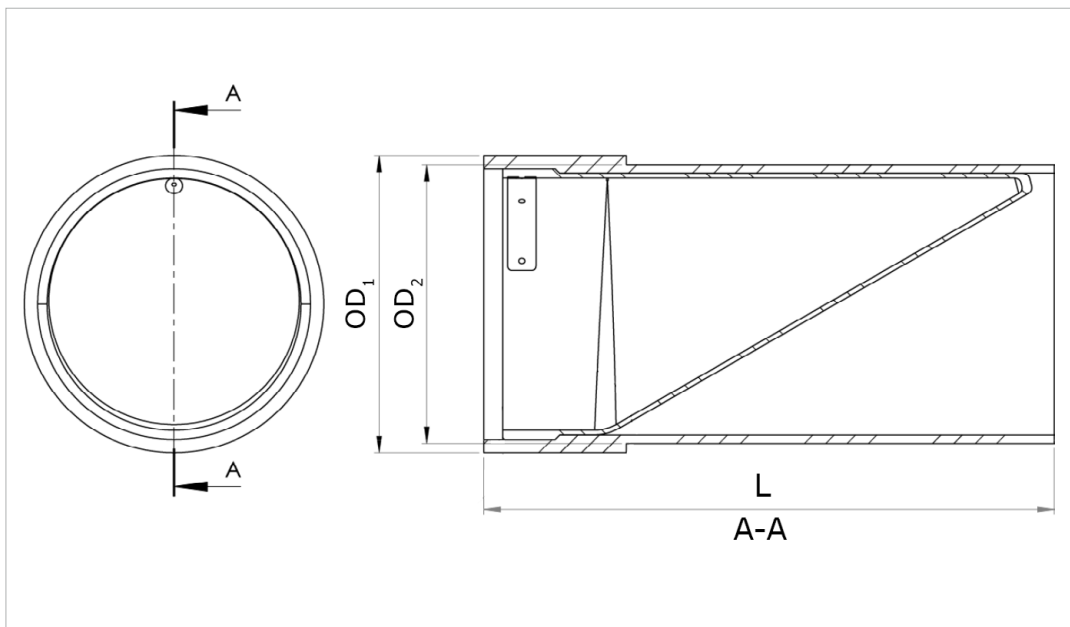
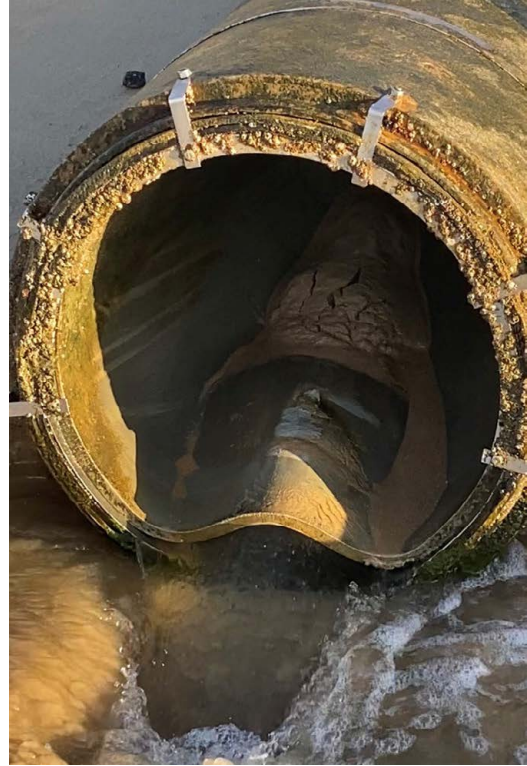


FIG. 9 PE insert type side section



Scan for more
information

Disclaimer: While every effort has been made to ensure that the information in this document is correct and accurate, users of Hygrade Water Infrastructure product or information within this document must make their own assessment of suitability for their particular application. Product dimensions are nominal only, and should be verified if critical to a particular installation. No warranty is either expressed, implied, or statutory made by Hygrade Water Infrastructure unless expressly stated in any sale and purchase agreement entered into between Hygrade Water Infrastructure and the user.

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