WaStop® Check Valve System

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

TECHNICAL GUIDE: **VH4.9**

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 Systems
- ISO 14001:2015 Environmental Management Systems

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
- No moving parts - virtually maintenance-free costs
- Models to suit pipes 75-2400 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 and 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, electricity or constant maintenance.

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 the priority, their engineers developed a valve that works in stormwater, sewer, and odour applications, and ensured coverage of a wide range of existing pipe sizes to enable retro-fitting with ease. The WaStop® valves cover all sizes of pipes, all shapes, from 75mm-2400mm.

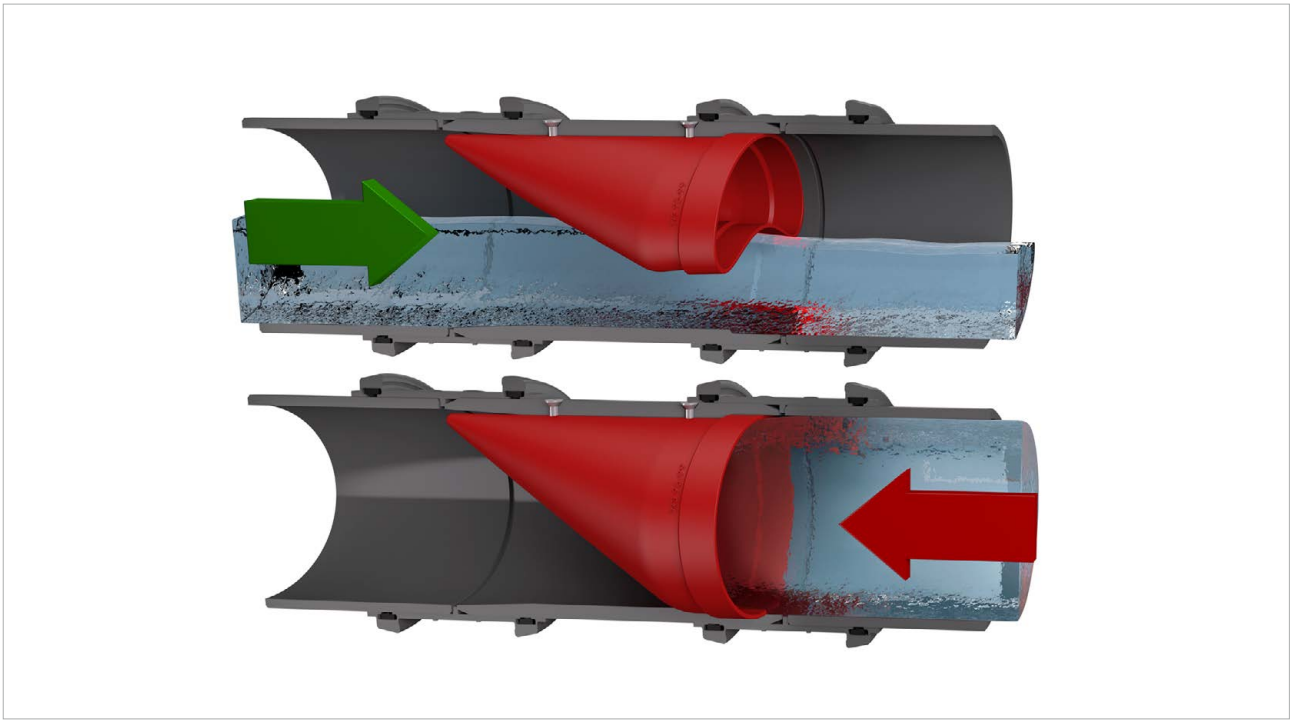


FIG. 1 Valve opens with normal flow and closes with backflow

BENEFITS OF SUPERIOR CONSTRUCTION

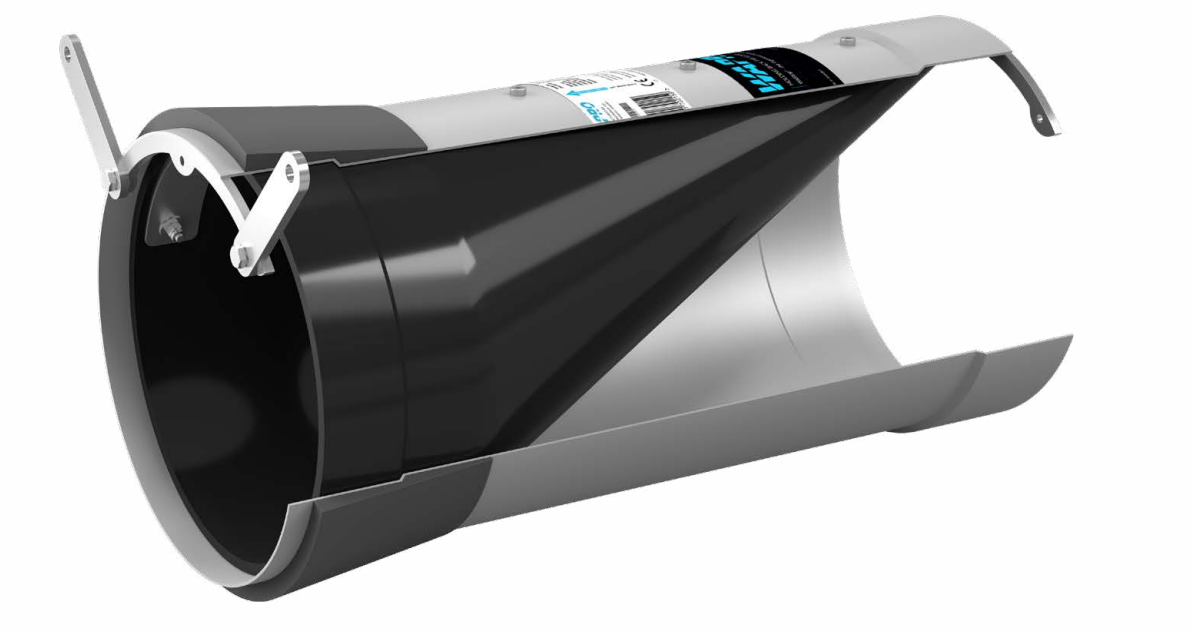
WaStop® check valves are designed to provide asset and property owners' peace of mind. Simply the most reliable, high quality inline check valve on the market.

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 on pipe inlet or outlet
- One product for dual installation situations



FIXATION MATERIAL

- Long life expectancy and low life-cycle cost with high quality materials
- Peace of mind - engineered product that exceeds expectations
- High quality fixation Tabs of Stainless Steel 316
- Adaptable fixings to suit multiple installation requirements

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
- Silicon membrane in DN75 to DN200
- Polyurethane membrane in DN200+

Installation Options

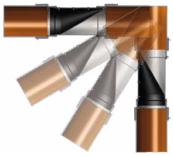


FIG. 2 Inline installation

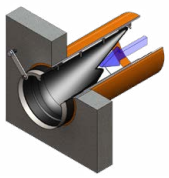


FIG. 3 Wingwall or manhole installation

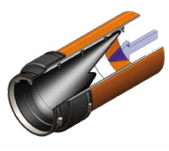


FIG. 4 Outfall installation

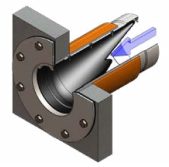


FIG. 5 Flange installation
(can be an inlet or outlet end)

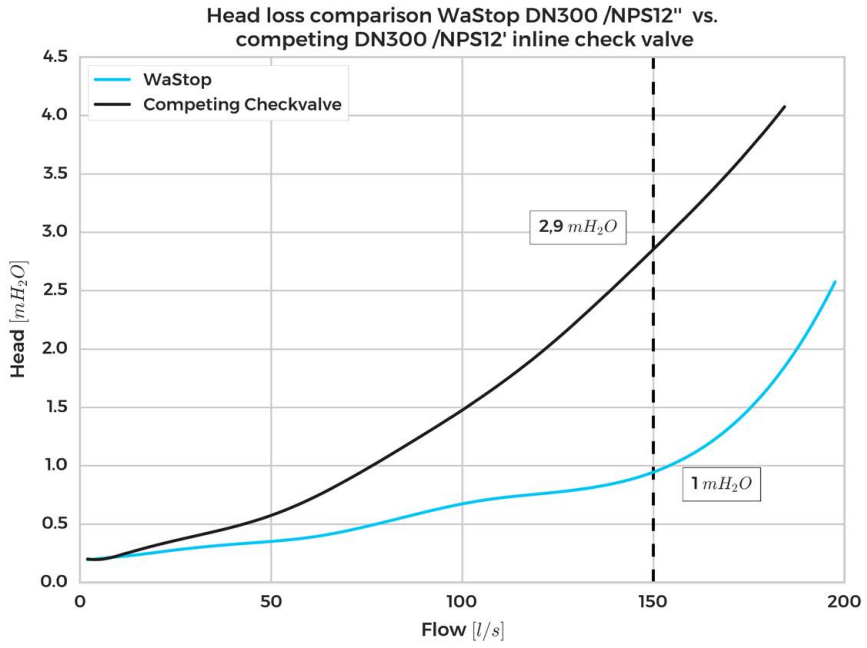
SikaSwell® S-2 Additional Sealant

The SikaSwell® S-2 is a polyurethane hydrophilic swellable sealant which swells in contact with water to seal construction joints and penetrations in concrete. This can be used to take up any gap between the WaStop Check Valve seal and the pipe.

Note: *Refer to our website for videos of the different installation methods available.*

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 Stainless Steel

Item Code	**DN** (mm)	**Fits pipe ID** (min-max)	**A** (mm)	**L** (mm)
VCWR0100SS	100	98-107	97	210
VCWR0105SS	110	101-111	100	215
VCWR0150SS	150	146-159	145	300
VCWR0190SS	200	182-200	181	385
VCWR0200SS	200	192-209	191	395
VCWR0225SS	225	216-233	215	450
VCWR0235SS	250	232-248	230	480
VCWR0250SS	250	242-258	240	495
VCWR0300SS	300	292-308	283	600
VCWR0350SS	350	344-360	340	700
VCWR0375SS	375	374-390	370	745
VCWR0400SS	400	393-411	390	750
VCWR0450SS	450	446-464	443	840
VCWR0500SS	500	493-511	490	900
VCWR0525SS	525	518-536	490	900
VCWR0600SS	600	590-613	587	1200
VCWR0675SS*	675	672-675	690/670	1300
VCWR0700SS	700	692-710	690	1300
VCWR0750SS	750	755-767	750	1400
VCWR0800SS**	800	795-807	790	1500
VCWR0900SS	900	890-912	885	1700
VCWR1050SS	1050	1048-1070	1040	2000

Note: *Please refer to Fig. 6*
**Special design – no rear shoulder, front shoulder will protrude from pipe.*
*** For installation in an 825mm concrete pipe, use 5.5m of EWKB16.70PM bush at the front and rear shoulder of the valve.*

TABLE 2 Stainless Steel – Flanged

Code	**DN** (mm)	**L** (mm)	**OD1** (mm)	**OD2** (mm)	**OD-f** (mm)	**Bolt circle diam** (mm)	**Bolts Required**
VCWR1000SSFL	1000	1800	990	1012	1190	1140	14 x M17
VCWR1050SSFL	1040	2000	1048	1070	1320	1245	16 x M17
VCWR1200SSFL	1200	2250	1193	1230	1430	1380	14 x M17
VCWR1400SSFL	1400	2600	1393	1430	1660	1610	14 x M17
VCWR1500SSFL	1500	2800	1493	1530	1760	1710	14 x M17
VCWR1600SSFL	1600	3000	1593	1630	1900	1840	18 x M19
VCWR1800SSFL	1800	3100	1793	1830	2040	2100	18 x M19

Note: *Please refer to Fig. 7*
Valves to suit pipes up to 2400mm are also available upon request

TABLE 3 PVC

Code	**DN** (mm)	**OD** (mm)	**L** (mm)
VCWR0075PVC	75	75	130
VCWR0100PVC	110	110	210
VCWR0150PVC	160	160	310
VCWR0200PVC	200	200	400

Note: *Please refer to Fig. 8*

TABLE 4 PE Inline Type

Code	**DN** (mm)	**OD** (mm)	**L** (mm)
VCWR0250PE	250	250	480

TABLE 4 PE Inline Type

Code	DN (mm)	OD (mm)	L (mm)
VCWR0315PE	315	315	600

Note: *Please refer to Fig. 8*

TABLE 5 PE Insert Type

Code	DN (mm)	OD1 (mm)	OD2 (mm)	L (mm)
VCWR0250PE.INT	250	250	236	480
VCWR0315PE.INT	315	315	295	600

Note: *Please refer to Fig. 9*

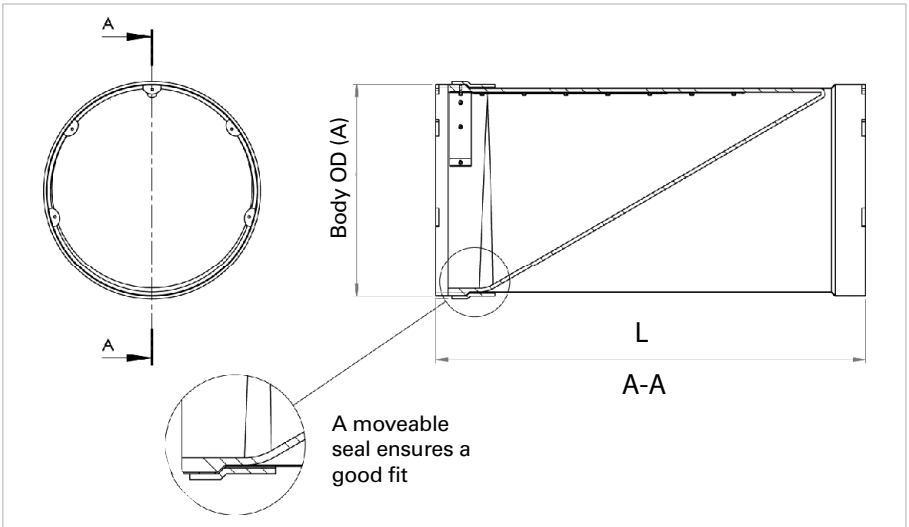


FIG. 6 SS version side section and seal detail

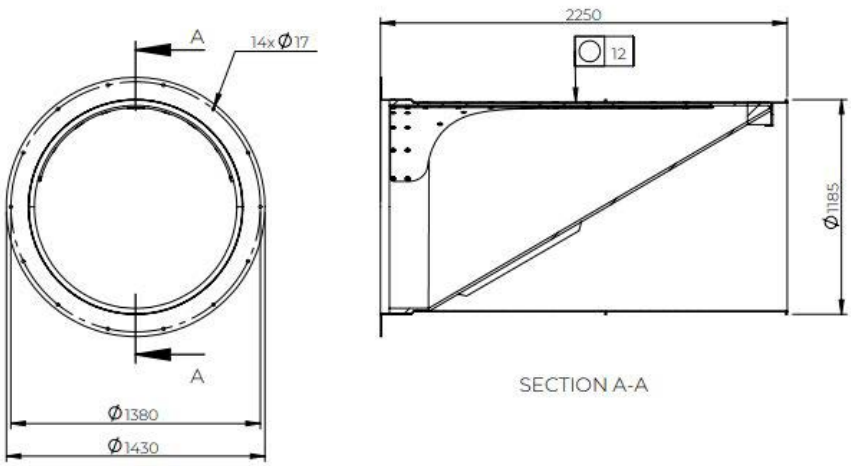


FIG. 7 SS Flanged version side section

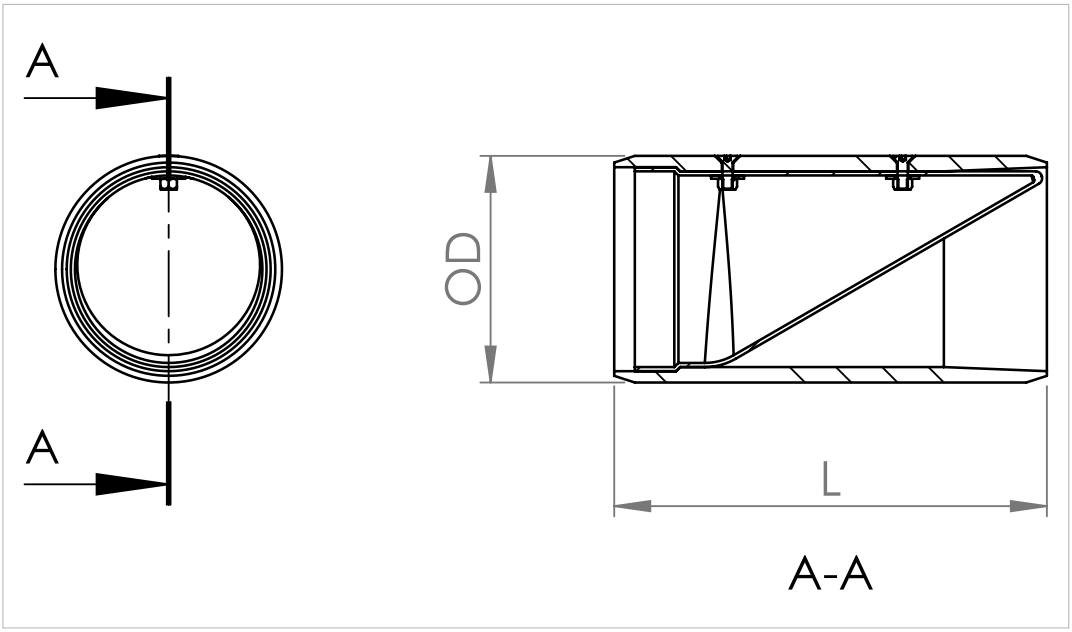


FIG. 8 PE/PVC inline type side section

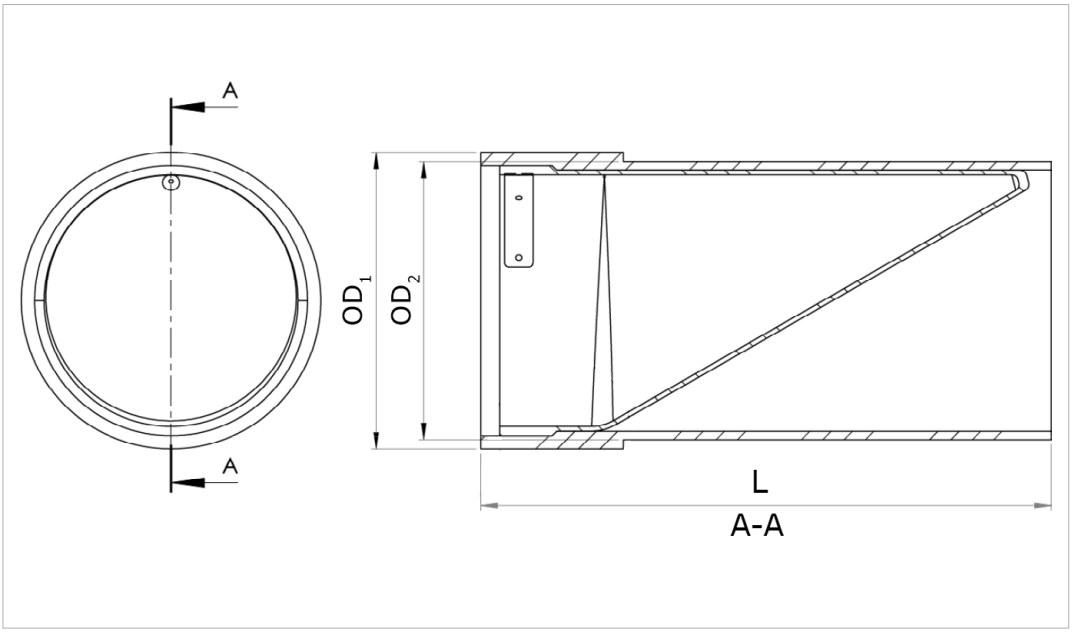


FIG. 9 PE insert type side section

FIG. 10 DN900 Valve in DN1350 pipe, Porirua

FIG. 13 DN600 – Te Puru Boat Ramp, Thames

FIG. 11 DN600 - Custom designed valve inside manhole at Sulphur Beach, Northcote

FIG. 14 DN600 – Cochrane St, Thames

FIG. 12 DN1200 & DN600 – Avon River Estuary, Christchurch

FIG. 15 DN600 – Madills Farm, Auckland

Scan for more information

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