

The Ingenious Check Valve



**NON-RETURN
ANTI-ODOUR
ANY ANGLE
MANY DIMENSIONS**

Why WaStop®?

WaStop®'s unique patented construction stops back flow in drains. It can be installed in minutes either in existing drains or manholes, and gives a reliable protection against high water levels, flotsam, gases, salt water, insects and small animals.

Odour escaping from sewage pipes or drains is a real problem around the world. Older drainage systems can allow odour to come up through the drains on street level. WaStop® is the perfect solution to allow rain or stormwater through, but to totally stop odour escaping. For this purpose softer versions of the membrane are available.

The elastomer membrane design means there is only one moving part. The valve is self-cleansing ensuring the valve will not block. The end result is low maintenance and therefore low operation costs. The WaStop® check valve also boasts one of the lowest head losses on the market which reduces the risk of damming. WaStop® check valve is available in dimensions from 75-1200mm. Larger or customised dimensions can be manufactured on request.

WaStop® reduces operation costs.

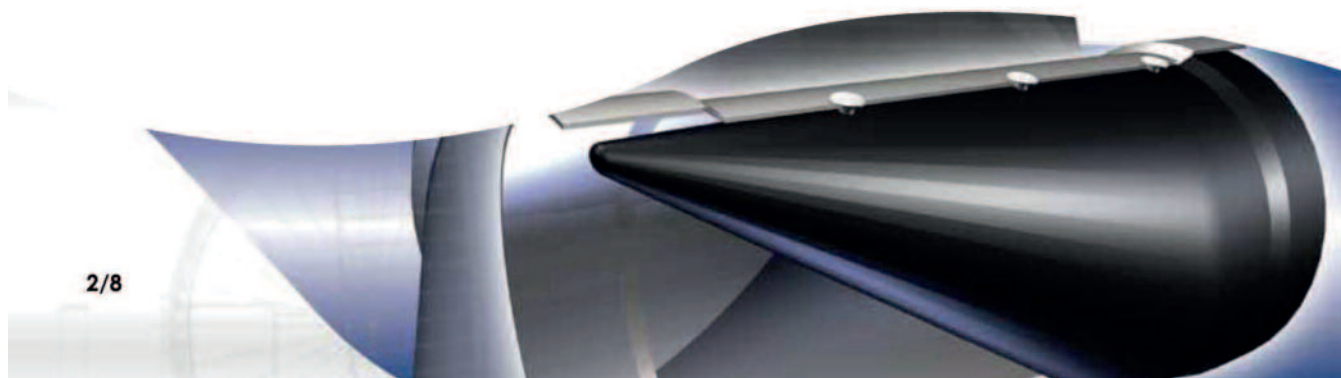


Halmstad Harbour

Halmstad Harbor was ravaged by a storm on 8-9th of January 2005. During the storm large amounts of water were pushed back up into a sewage drain and flooded a parking lot filled with imported cars.

All the cars parked in the lot, numbering up to several hundred, were destroyed due to the salty flood water.

To ensure that this event is avoided in the future a 1000mm WaStop® check valve was installed in the sewage drain.

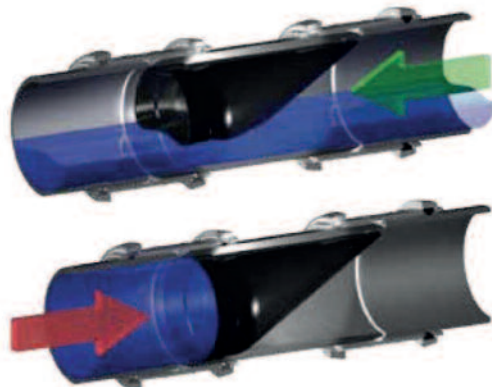


How It Works

Flow in the normal direction causes a pressure buildup against the membrane which in turn causes the membrane to open just enough to allow the flow to pass unhindered.

If the flow is reversed the membrane fills with water or gas and acts as a stopper blocking all back flow in the drain.

WaStop check valve can be designed to withstand up to 8m back pressure.



Wastop® can be installed in minutes in a drain or chamber. It can be installed either horizontally or vertically and either at an inlet or outlet. Seals and anchors for installation in drains are included. Joint connections are available for purchase upon request (see example).

WaStop® can be installed for reverse flow in all cases.

CE Approved



The models that are CE-approved, 80-200mm, are tested and approved for up to 5 meters back pressure.

WaStop® can be manufactured using different qualities of elastomer and materials appropriate for the specific usage. For example, if the check valve is to be used to stop odours a softer elastomer is used for easier opening and closing.

WaStop® can be manufactured according to individual requirements.

Contact WaStop International AB for more information.



Case Studies

Harwich Harbour

Anglian Water is one of the leading providers of water and waste water services in Europe and serves the needs of around six million industrial, commercial and domestic customers.



Aggressive tidal waters, silt and poor maintenance resulted in the existing flap valve becoming ineffective which resulted in major flooding in the area. The solution was WaStop®. The existing valve was replaced with a 600mm WaStop®.

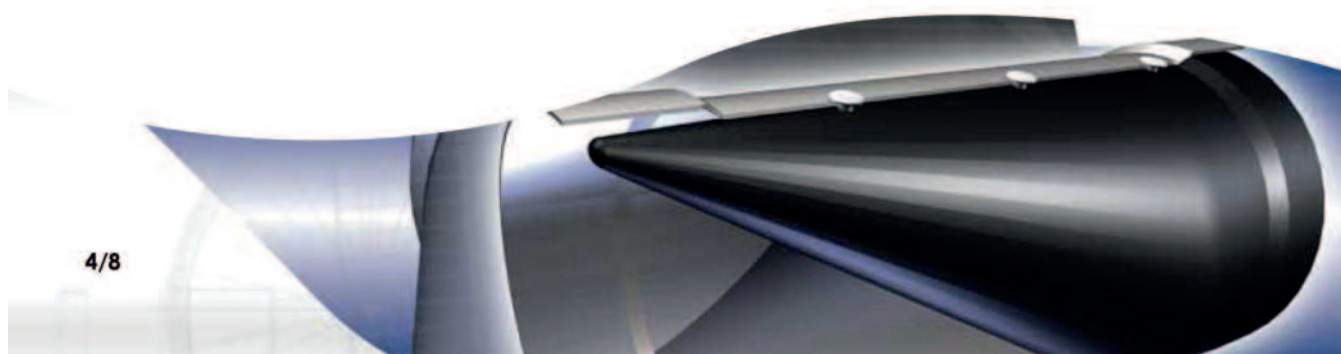
Due to the tidal flow the installation had to be completed in just a few hours. There was no problem with the installation and most of the time was used to remove the existing valve, dewatering, excavating, removing silt and jetting the outfall pipe. Contractor Claret Civil Engineering thought the installation of WaStop® was very simple and cost effective.



Odour in Oslo

Torg Street in Oslo has had an ongoing and longstanding problem with sewage odours from the sewer drains. To stop this problem 52 WaStop® DN 100 have been installed.

These check valves now protect cable culverts from water during torrential rainfall and the odour is prevented from being forced up to the street. The sewage odour is not missed by either the shop owners affected or Oslo Council!



Case Studies

Odour Control

The discharge of odours or aggressive gases from sewage systems can be a major problem in built up areas. By installing a WaStop® in the system discharge can be stopped, or directed to a less sensitive area.

By installing WaStop® insects and small animals are stopped from entering storm and waste water drains.



Basement Flooding

Implementing a WaStop® in the buildings' drainage system or in a basement can protect the property from flooding. Installation costs and time invested can be kept to a minimum by installing a WaStop® in an existing drainage system.



Waste and Surface Water

Protect waste and surface water drains from high water levels in rivers and lakes.

Emergency Overflow

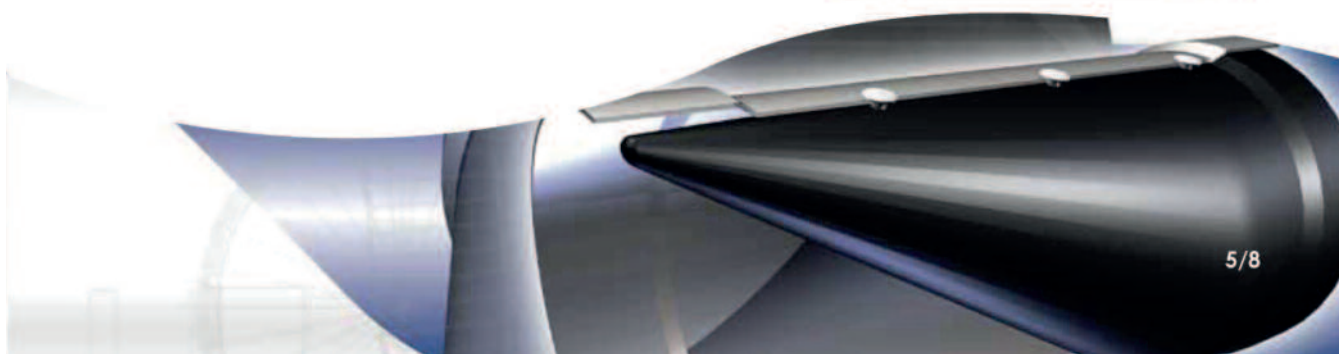
Flooding is common between waste and storm water drains caused by water forcing its way back into the drainage system. To prevent this install a WaStop® in the emergency overflow.

Pump Stations

Prevents back flow from forced back into pump stations.

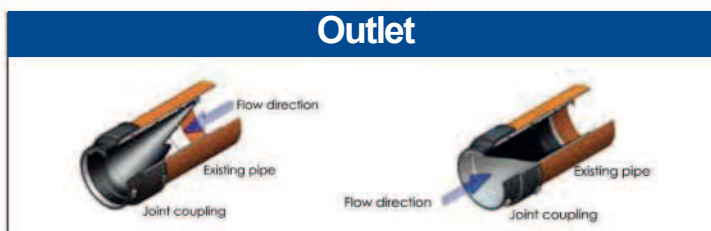
Wetlands

Prevent salt water or other unwanted water from forcing back in through an outlet leading to flooding of wetlands or other flood sensitive farmland.

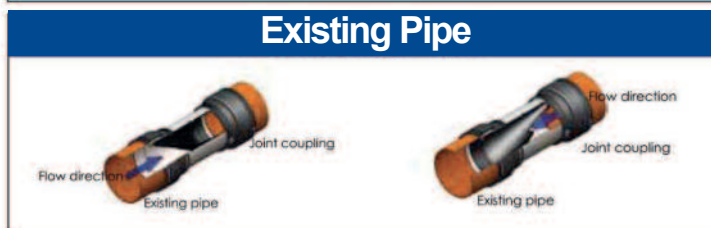


Installation Options

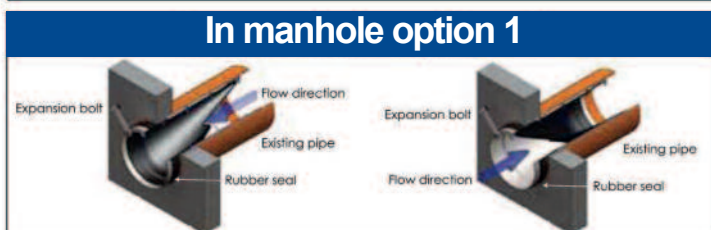
Outlet



Existing Pipe



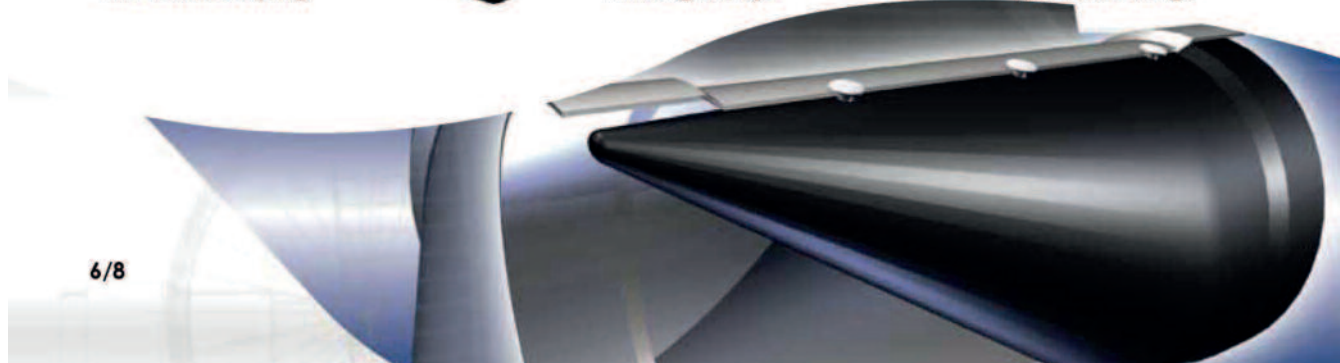
In manhole option 1



In manhole option 2



WaStop® Options



WaStop® Standard Product Range

WaStop® is manufactured using stainless steel EN1.4301/AISI 304 and PVC.

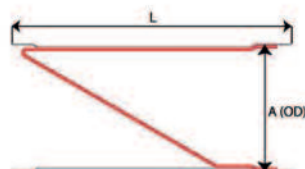
WaStop® stainless steel EN1.4301/AISI 304

Art. nr	DN	A	L	Fit in existing pipe (min-max)
ws97-55-304	100	97	220	98-101
ws101-55-304	110	101	220	102-105
ws118-55-304	125	118	250	119-121
ws146-55-304	150	146	300	147-150
ws183-55-304	200	183	400	185-193
ws193-55-304	200	193	410	195-203
ws215-55-304	225	215	450	217-225
ws230-55-304	250	230	480	232-240
ws240-55-304	250	240	520	242-250
ws290-55-304	300	290	600	292-300
ws340-55-304	350	340	700	342-354
ws390-55-304	400	390	750	392-404
ws440-55-304	450	440	900	442-454
ws490-65-304	500	490	900	492-504
ws590-65-304	600	590	1200	592-604
ws690-65-304	700	690	1300	692-708
ws790-65-304	800	790	1500	792-808
ws885-65-304	900	885	1700	887-913
ws985-65-304	1000	985	1800	992-1013
ws1185-75-304	1200	1185	2250	1187-1213
ws1385-75-304	1400	1385	2600	Contact WaStop
ws1485-75-304	1500	1485	2800	Contact WaStop

WaStop® PVC

Art. nr	DN	A	L
ws75pvc-45	75	75	125
ws110pvc-55	110	110	210
ws125pvc-55	125	125	240
ws160pvc-55	160	160	300
ws200pvc-55	200	200	400

Other dimensions can be manufactured in plastic on request, with or without flange. Contact WaStop International AB for technical drawings.



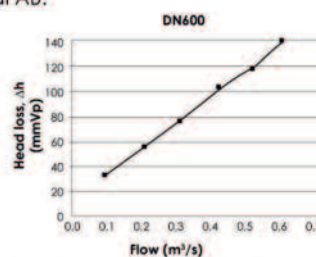
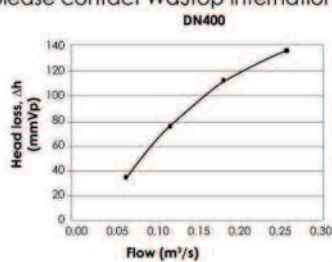
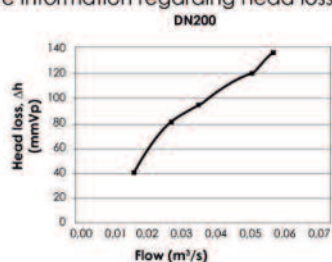
Special versions of WaStop® can be ordered, according to your requirements.

Pipe: EN1.4301/AISI 304 as standard, extra charge if EN1.4404/AISI 316 is required.

Low Head Loss

The diagrams demonstrate the extremely low head loss. Flow tests were conducted by Vattenfall Utveckling AB. WaStop® check valve has the lowest head loss in the market. Damming in the drainage system is therefore minimized.

For more information regarding head loss please contact WaStop International AB.



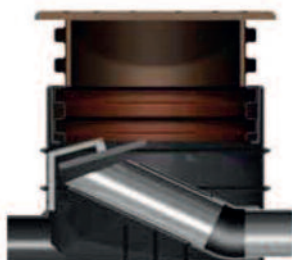
WaStop International AB

WaStop Int. AB develops, manufactures, markets and sells the WaStop® check valve. Marketing and sales is handled on a worldwide basis either through WaStop Int. AB, or through subsidiary companies or distributors in specific geographical markets.

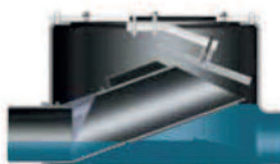
WaStop Int. AB is a subsidiary of Wapro AB that has been active in the water management and water flow control market in Sweden and Scandinavia since 1990 with its own innovative products.

Other products from Wapro AB

WaBack and WaBack Mini non-return chamber
WaReg flow regulator



WaBack



WaBack Mini



WaReg