110mm Water And Rodent Back Flow Valve

Data sheet

Product Description.

The 110mm Water And Rodent Back Flow Valve comprises a Type 0 Anti-flooding device as per EN 13564-1:2002 (non-return valve) for use in domestic lateral drains serving a single property where a minimum 6 liter WC flush is regularly discharged through the Water and Rodent Rodent Back Flow Valve.

The Back Flow Valve stops the back flow of water, rats, noxious fumes, frogs, snakes and other vermin from entering a property through the pipe or sewerage line.

Manufactured in molded polypropylene body, TPE fins and ring seal, and a stainless steel (SS430).plate in the flap. Designed as a retrofit device to fit into the outlet of DN100 plastic or 4" clay pipes discharging into brick or concrete chambers or to fit into preformed plastic manhole bases (in accordance with BS EN 1329-1:2000), located external to the building.

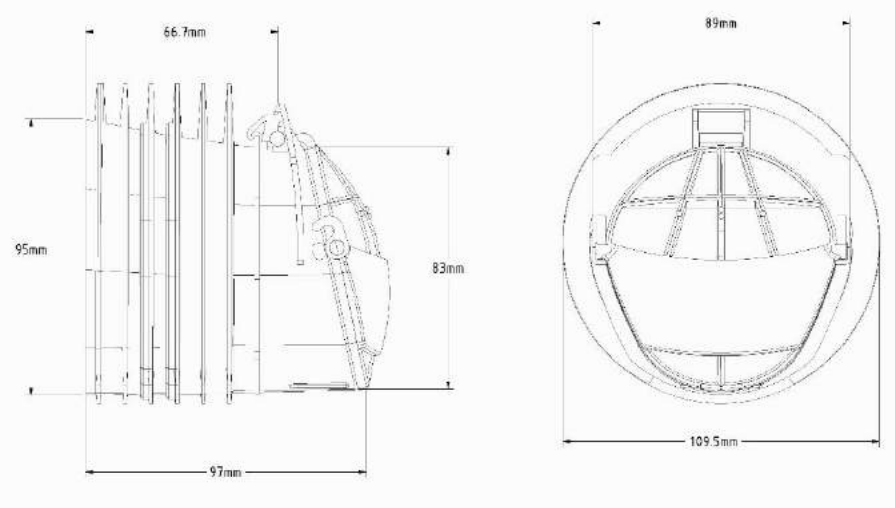
The unit is push fit, being retained in the pipe by an elastomeric seal in the form of a series of rubber fins on the body of the NRV.
The closure flap is 'egg' shaped that allows it to be installed on bends without the channel sides or benching inhibiting the articulation of the flap. The gravity activated flap has a stainless steel plate molded into the body of the flap to provide rat resistance. A manually operated locking handle allows the user to temporarily lock the flap in the shut position.

The is designed to be an easy retro fit product into an existing inspection chamber or end of pipe to stop the back flow was water, cross contamination, smells and fumes, insects, vermin, in a pipe line.
The 110mm Back Flow Valve has been tested and certified by the Water Research Council (WRc) in the United Kingdom. **Product testing and certification: PT/377/0916**

Specification:

- TPE Elastomeric material complies with the requirements of BS EN 681- 1:1996.
- Polypropylene complies with the requirements of BS EN 1852-1:2009 Clause 4.
- Stainless steel complies with the requirements of BS EN 10088-1:2014 and BS EN 10088-2:2014, Steel number 1.4016 (SS430).
- Force required to dislodge the valve downstream: 10 kgf (when inserted in the larger internal dia plastic pipe of 105mm)
- Valve step / lip when inserted into pipe less than 2.5mm
- Minimum internal pipe dia: 98mm
- Maximum internal pipe dia: 107mm
- Body inlet cross sectional area: 7,552mm^2
- Mouth cross section area: 4,682mm^2
- The Back Flow Valve automatically closes when backflow occurs and allows the normal flow when backflow ceases.
- In normal flow conditions the Back Flow Valve opens when there is a depth of water in the pipe on the upstream side of 50mm or more.
- Internal surfaces of the Back Flow Valve are smooth.
- When installed in accordance with the manufacturer's instructions, there should be a clearance of 5mm between the closure flap and the adjacent wall of the channel.

Dimensions:



Testing:

- **Closure flap seal test:** when installed in a pipe at a 1:40 gradient and tested in accordance with BS EN 13564-2. When installed at an angle of 10 degrees radially from vertical and tested in accordance with BS EN 13564-2 clause 3.4.4, the Back Flow Valve meets the requirements 3.4.4.3. BS EN 13564-2:2002 clauses 3.4.2 (automatic closure device pressure test) with a modified test arrangement to accommodate end of pipe NRV design.
- **Conveyance test:** When installed in a pipe at a gradient of 1:80 at a distance 10 meters downstream of a WC, solids and toilet tissue discharged 10 times with a 6 liter WC flush will pass through the Back Flow Valve with a maximum of 3 flushes on each occasion.
- **Durability:** The valve complies with the requirements of BS EN 13564-2:2002 clause 3.2 (temperature cycling).
- **Accelerated wear test**: After having been subjected to 234,000 operation cycles (simulating 10 years operation) the hinge showed no visible signs of wear.
- **In-pipe security test**: When installed in accordance with the manufacturer's instructions, the Back Flow Valve remained fully inserted into the pipe when subjected to a pull of 10 kgf.
- **Security against unintended locking test:** After cleaning with a domestic broom with soft bristles or cleaned with a domestic hose pipe at 1 bar pressure, the closure flap and locking lever remained in the unlocked position. The seals were unaffected and undamaged.

Recommendations for Installation Position of the Back Flow Valve.:

1. Can be installed in inspection chambers constructed of concrete, clays or plastic
2. Ideally fitted on chamber inlets within 6 meters of the property.
3. Best used in drains serving single properties and carrying a 6-liter WC discharge.
4. Not suitable on 45-degree chamber inlets and on some smaller inspection chamber bases (less than 280mm diameter chamber base)
5. Must be installed with the “top” positioned to the top.
6. Must be undamaged and fully home (all black fins in the pipe)
7. Installation must be carried out in accordance with the installation instructions.

WRc Approved : PT/377/0916 - (September 2016 - 2021)