

## Injected or custom-made valves

### **Overview**

A backflow valve should be installed whenever there is a possibility of backflow. The backflow is due to a loading of the communal collector which can be caused by heavy storms. This phenomenon is often observed along unit collectors or near stormwater runoffs on separating collectors.

Most often, the unfavourable situation is not known at the time of construction and the valve becomes a backup solution to prevent further flooding. The choice of the model of the valve is often dictated by the characteristics of the pipe and by the existing inspection chambers.

### **Operation of a valve**

Ideally, the valve should be opened in order to allow normal flow and closed when there is backflow. In practice, operation is much simpler when discharging rainwater or solids-free wastewater from floor grills or sinks. The flow of water pushes a clapper that remains closed when there is no flow. For wastewater containing solids, systems that promote the passage of solids carried by water should be used.

### Which type of valve to choose ?

The table below allows you to choose the most suitable model :

Applications	Clapper valves	Valve without float	Float valves	Wastop <sup>®</sup> valves	Waback <sup>®</sup> valves
Clean water, rainwater	yes	yes	yes	yes	yes
Solids-free, wastewater	yes	yes	yes	yes	yes
Wastewater, containing solids	no	no	yes	possible	yes
Fixing in existing manhole	unlikely	possible	possible	yes	yes
Fixing in new manhole	possible	possible	possible	yes	yes
Creation of a new manhole	possible	possible	possible	not necessary	possible
Anti-odour on overflow	no	yes	no	yes	no
Low level variation	yes	yes	no	yes	yes
High level variation	no	yes	necessary	yes	possible
Collector Ø in mm	110 to 315	110 to 400*	110 to 400*	75 to 1'400	110 to 315
Material used	PVC	PVC	PVC	INOX	PE
Price category in CHF	from 290	from 585	from 665	from 830	from 1'710

\*other dimensions on request



## **Clapper non-return valves**

#### Area of use

This type of valve is inserted in the pipe system as a normal PVC short pipe. It can be put in place as a preventive measure during construction, or later, after having observed the presence of a backflow. If it is buried, it is necessary to put it at the bottom of a manhole in order to have access to it, control its operation and clean it. It is also useful to prevent some animals, such as rodents, from getting back into the pipe.





## **PVC non-return valves without float**

#### Area of use

This type of valve can be installed in an existing or new inspection chamber. It is suitable for rainwater or wastewater that is **free** of **solids**. It can also be used as an anti-odour valve on overflow pipes. The difference in level between the lower level of the upstream pipe and the base of the inspection chamber must be at least 20 to 40 mm depending on the model. The valve must remain accessible for inspection or maintenance.





# **PVC non-return float valves**

#### Area of use

The non-return valve prevents backflow of wastewater into basements when the communal collector or the collector of the residential area is loaded.

The Canplast PVC valve is designed for installation on plastic pipes, but it can also be adapted to other types of pipes. This type of valve can be installed in an existing or new inspection chamber. It is recommended for wastewater that contain solids. The difference in level between the lower level of the upstream pipe and the base of the inspection chamber must be sufficient to allow the floats to move. The valve must remain accessible for inspection or maintenance.





#### Operation

When the pipe runs normally, the weight of the floats keeps the damper open. When the water level rises in the collector, the floats rise and close the damper.

For proper operation, it is necessary that the movement of the floats not be hindered by a possible build-up of solid matters. The non-return valve should be cleaned regularly.

# Wastop<sup>®</sup> backflow valves

The Wastop® valve consists of a stainless steel or plastic cylinder with a conical polyurethane membrane attached inside.

The Wastop® valve :

- is the only valve that can be installed easily and at no additional cost in an existing inspection chamber or along an
  accessible pipe.
- is the only one that can be installed on both low gradients and vertical columns.
- can be installed in all pipes of circular section whatever the material.
- can be installed in all pipes from Ø 75 mm to Ø 1'400 mm.
- prevents backflow. It also has the advantage of preventing odours from rising in the building.







# Waback<sup>®</sup> non-return valves

#### When to use a Waback® valve

WaBack<sup>®</sup> is a manhole that is installed outside buildings, on the wastewater outlet, where it plays the role of a backflow valve.

The installation of a Waback<sup>®</sup> on the wastewater outlet of the building offers a safe protection against the flooding of basements in the zones at risk.

WaBack<sup>®</sup> works both as a non-return valve and as a manhole. Installed during construction, this "all-in-one" module reduces installation costs.

Its small size allows it, in some cases, to be installed in existing concrete manholes of 80 cm diameter and over.

Wastewater is often very loaded with solids. In this context, Waback<sup>®</sup> is a safe choice. Its pipe is fully open at normal flow, which minimizes the risk of technical incidents and the need for maintenance operations.

The standard model of Waback® is prefabricated in polyethylene. It is quickly available from our stock.

WaBack® is also obtainable in "mini" version for cellar installation.



