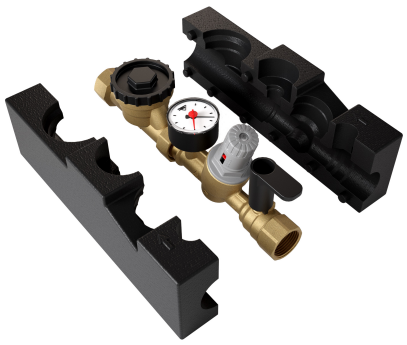
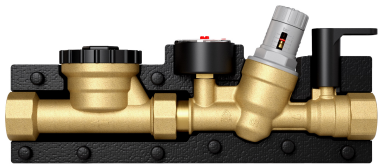




Apartment Hub Compact

Isolation valve, pressure reducing valve, pressure gauge, class D water meter carrier, double check valve and moulded insulation cover (TVC34FF & TVC01FF)

- Combines an isolation valve, double check valve, pressure reducing valve, and class D water meter carrier. (TVC34FF & TVC01FF)
- Supplied with a whole assembly insulation jacket as standard
- Double check valve to eliminate the chance of backflow
- Stop valve included to allow isolation from the rest of the system, ideal for multi-dwelling properties
- WRAS and KIWA regulation 4 approved
- Vertical or horizontal installation
- Pressure reducing valve can be manualy adjusted to suite site condtions

Product Range

Code	Description
TVC34FF	Apartment Hub Compact 3/4" FF with Water Meter Carrier
TVC01FF	Apartment Hub Compact 1" FF with Water Meter Carrier
TVC34FF-CV	Apartment Hub Compact 3/4" FF without Water Meter Carrier
TVC01FF-CV	Apartment Hub Compact 1" FF without Water Meter Carrier

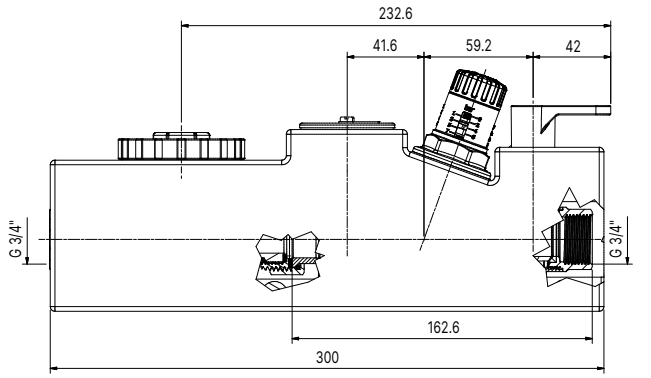
Technical Data

Maximum inlet pressure (static):	16 bar
Maximum inlet temperature:	65°C
Pre-set pressure (PRV):	4 bar
Pressure adjustment range:	1 - 6 bar
Gauge connection	G 1/4"
Water meter carrier:	Class D
Water meter carrier connection:	1 1/2"
Medium:	Water
Installation:	Vertical or Horizontal

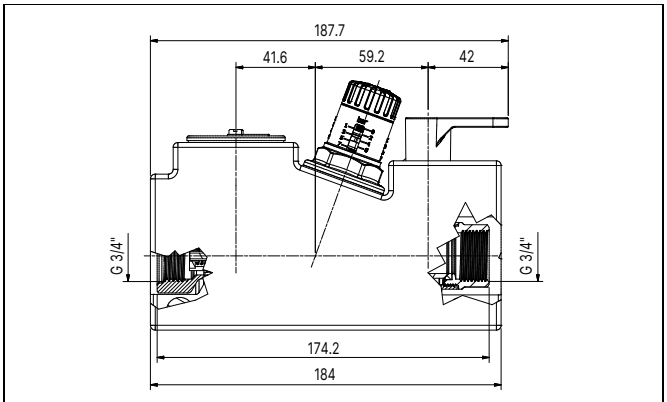
Materials

Brass components:	CW602N, CW617N,
Plastic components:	PTFE G300, UFS2320
Metal components:	AISI 304, AISI 303,
Rubber components:	EPDM 01/U70EP, EPDM7008

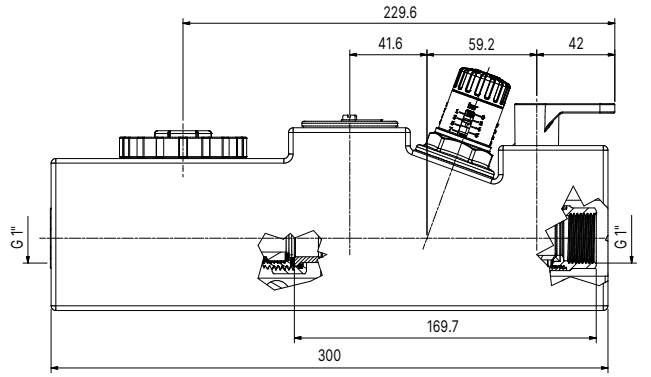
Dimensions



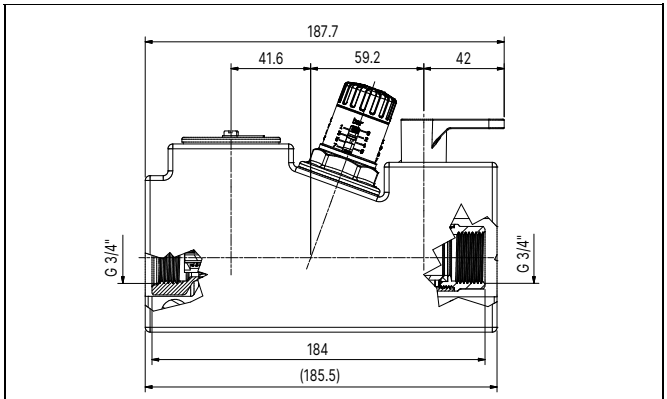
TVC34FF



TVC34FF-CV



TVC01FF

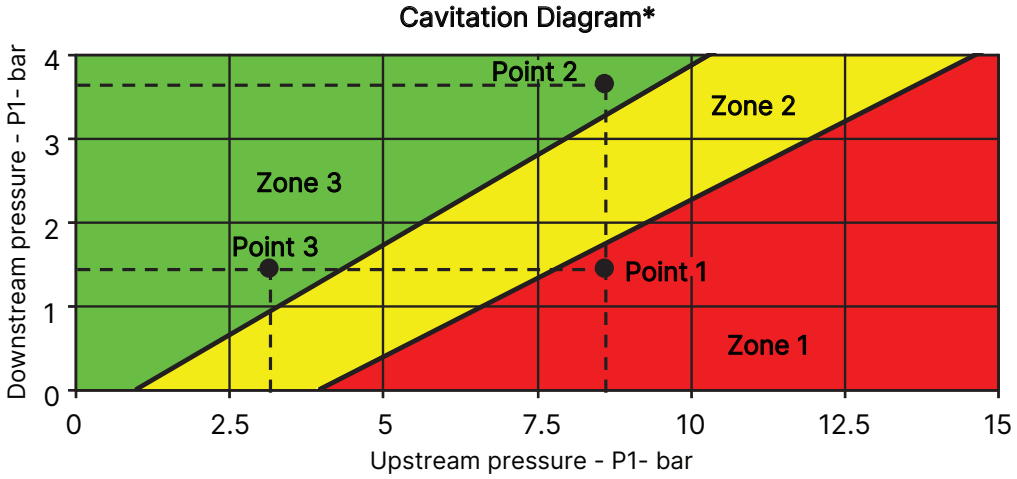


TVC01FF-CV

Cavitation

In order to prevent cavitation, which can cause excessive noise, vibration and damage to the valve and downstream pipe, in certain pressure situations with high inlet pressures and low outlet pressures (high pressure loss) then a number of pressure reducing valves may be required.

The cavitation diagram shows three areas of operation depending upon the upstream and downstream (outlet) pressures.



- **ZONE 1: Damage and Noise** - The characteristics of cavitation are clearly audible and visible inside the pressure reducing valve and pipework. The valve should not be used under these conditions.
- **Zone 2: Critical Zone** - Hightlights the possibility of cavitation ofoccuring inside the pressure reducing valve or pipework. Using the valve under these conditions should be avoided and is not recommended.
- **Zone 3: Operating Zone:** The pressure reducing valve works under its optimum conditions. The valve can safely be used under these conditions.

In order to avoid cavitation occurring the ratio between the maximum upstream pressure and the outlet pressure should not exceed a value of 2.5.

*** Note:** The cavitation diagram is only a quick reference to determine if cavitation will be present and the likely level.

Example:

Upstream pressure: Pm = 8.5bar
Outlet pressure: Pv 1.5 bar
On the cavitation diagram these pressures correspond to POINT 1 in ZONE 1. Ratio Pm/Pv = 8.5/1.5 = 5.67.

Solution:

Use two pressure reducing valves in series. The first valve would use the following conditions:

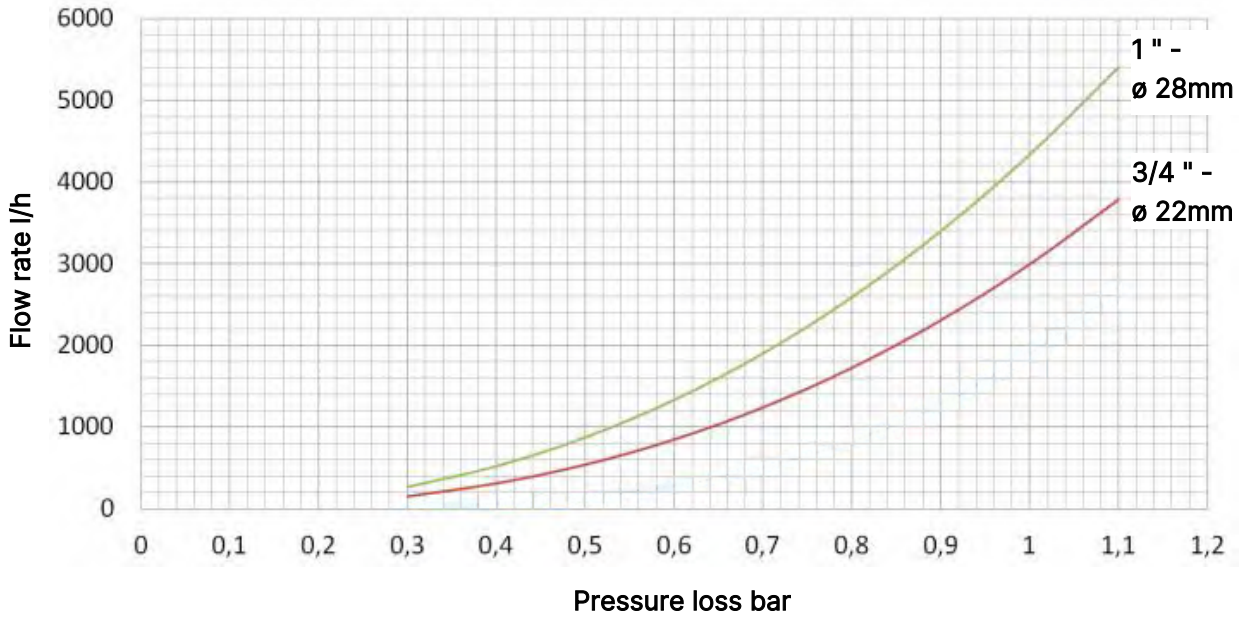
Upstream pressure: Pm = 8.5 bar
Outlet pressure: Pv = 3.5 bar
Pressure ratio 8.5/3.5 = 2.42 < 2.5
On the cavitation diagram these pressures correspond to POINT 2 in ZONE 3

The second valve would use the following conditions:

Upstream pressure: Pm = 3.5 bar
Outlet pressure: Pv = 1.5 bar
Pressure ratio 3.5/1.5 = 2.33 < 2.5
On the cavitation diagram these pressures correspond to POINT 3 in ZONE 3.

*** Note:** The outlet pressure of the pressure reducing valve must NEVER be higher than the maximum pressure of components and outlets downstream of the valve.

Pressure Loss Graph



Additional Information

The internal filter of the pressure reducing valve can be removed for servicing / maintenance or replacement.

Once the water to the pressure reducing valve has been isolated, the grey cap can be removed using a suitably sized spanner. The internal components can then be removed for servicing / maintenance.

The pressure reducing valves control static and dynamic pressure. When all outlets are closed the differential pressure inside the chamber closes the shutter preventing pressure creep. When the outlets are open, the flow of water opens the shutter.