Application:

Oventrop bypass mixing valve DN 50, G 2, for potable water softening installations PN 10 for industry, trade and large consumers.
Max. water temperature 90 °C. Observe minimum flow rate.

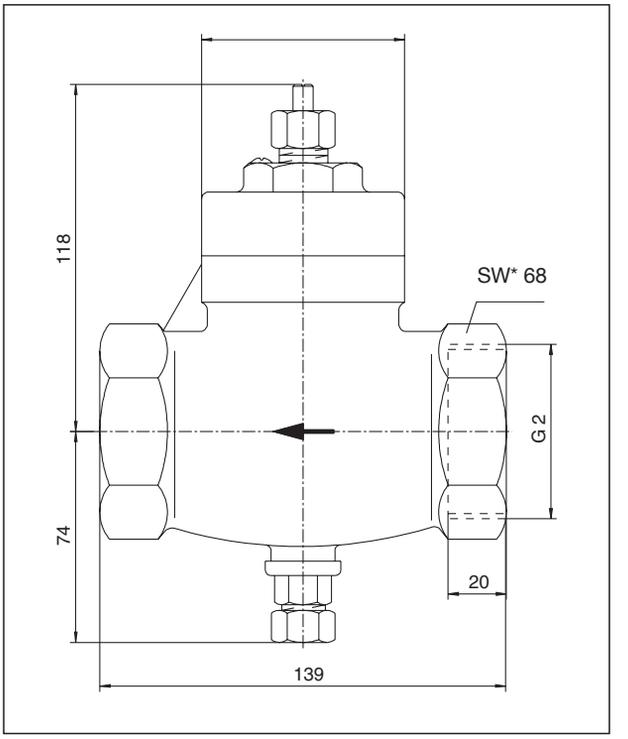
Description:

Bypass mixing valves are automatic mixing valves for potable water softening installations. The model described here was especially designed for larger plants. The bypass mixing valve is installed in the bypass pipe, replacing the usual gate valve.

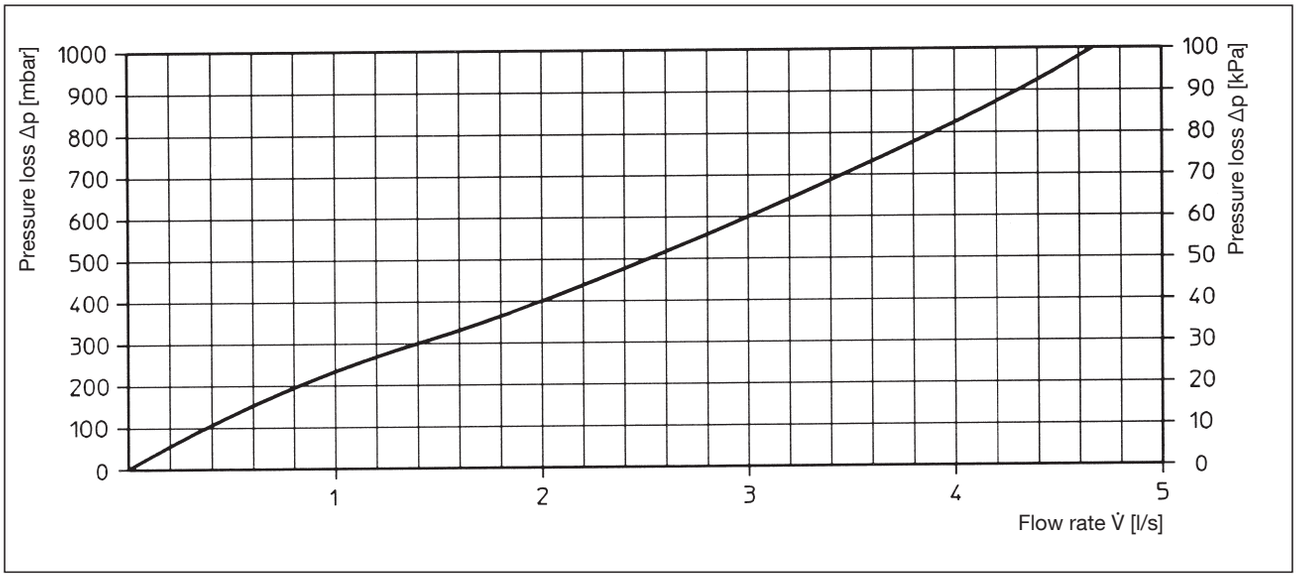
Once it has been set, the bypass mixing valve automatically maintains the hardness of the mixed water irrespective of consumption and pressure variations. The hardness of the mixed water is only set once, during installation. If the hardness of the untreated water changes significantly (e.g. if the water authority supplies a different type of water), it is of course necessary to readjust not only the water softener but also the bypass mixing valve.

The body of the bypass mixing valve is made of corrosion resistant brass according to DIN 50930-6. All other components are made of brass and the control diaphragm of a special buna N composition. The valve does not feature a dead zone.

Item no.: 6102016



Dimensions
*SW = Spanner size



Pressure loss of the valve depending on the flow rate

Function:

Depending on the required water hardness, a certain quantity of untreated water is added to the water softened to 0° dH (German hardness). The quantity of hard water added depends on the consumption and the pressure within the pipework.

By turning the regulating screw (7) to the right, the isolating disc (6) inside the bypass mixing valve is lifted from the seat allowing for the flow of untreated water through the bypass pipe.

With a low water consumption, the position of the regulating screw (7) determines the quantity of untreated water added to the soft water supplied by the water softener.

With a higher water consumption, the pressure loss of the water softener causes a differential pressure within the bypass mixing valve, affecting the diaphragm (10) via the control channels (8) and (9). If the differential pressure increases, the resistance of the spring (5) is overcome. The valve disc (6) is then lifted even more from the seat so that a larger quantity of untreated water (depending on the chosen setting of the regulating screw (11)) is now added to the soft water supplied by the water softener.

Setting:

The setting of the required hardness (normally 6° dH - German hardness) requires an adjustment which has to be carried out under working conditions as follows:

First of all, the regulating screw (11) is turned to the right until stop and is then turned back 1 or 2 turns. With a flow capacity equal to 20 % of the maximum capacity of the water softener, the required water hardness is set with the help of the regulating screw (7). If the hardness of the mixed water is below the required level, turn the regulating screw (7) slightly to the right (it may be necessary to open the screw (11) a little more). Now, with a flow rate equal to 75 % of the maximum capacity of the water softener, the correct hardness of the mixed water is set with the help of the regulating screw (11). If the level of the hardness is insufficient, turn the regulating screw (11) slightly to the left. The position of the regulating screw (7) must not be modified.

Note:

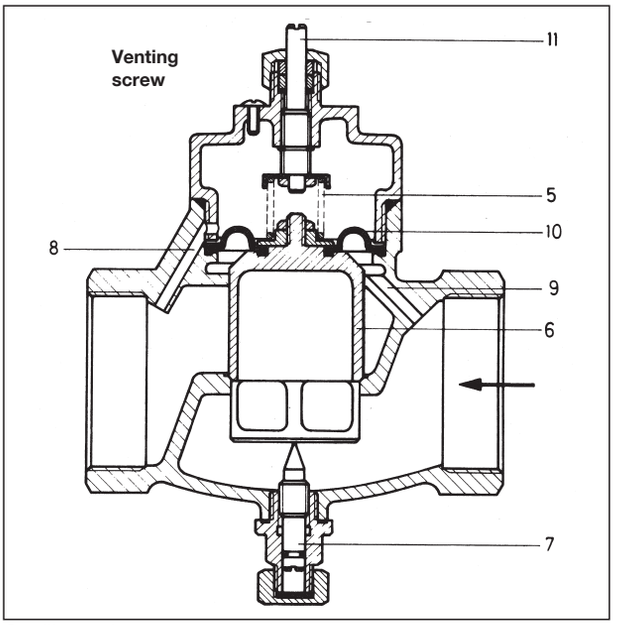
Oventrop also offers DN 25 and DN 32 bypass mixing valves for the direct connection to automatic water softeners. A separate technical data sheet is available for these models.

Accessories:

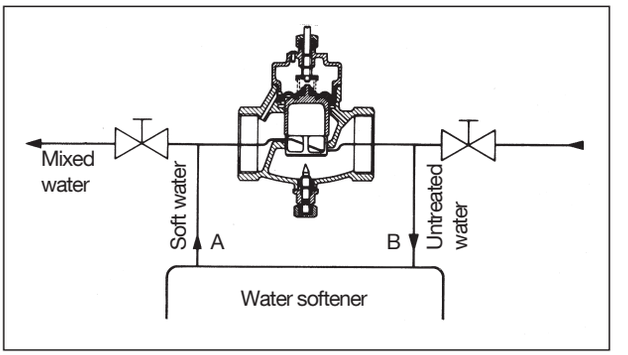
Brass bonnet with adjustment spindle
Item no.: 6109052

Bronze regulating insert with diaphragm and spring
Item no.: 6109152

Brass regulating screw for setting of low flow rates
Item no.: 6109851

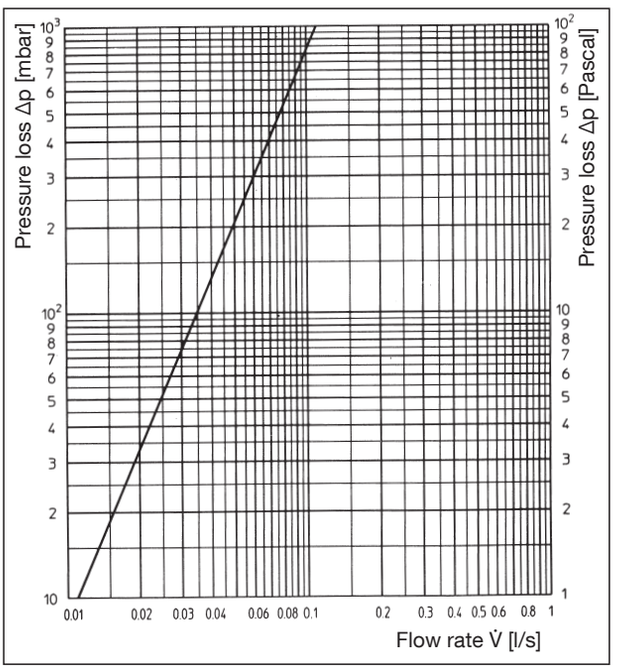


Cut illustration



Installation example

Do not draw any water from the circuit between points A and B (except for water sampling).



Minimum flow rate with the valve disc (6) being closed

Subject to technical modifications without notice.

Product range 8
ti 17-EN/10/MW
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