



The Oventrop Quality Management System is certified to DIN-EN-ISO 9001

Three-way mixing valve "Tri-M" PN 16

Tender specification:

Oventrop three-way mixing valve "Tri-M" PN 16 up to 120 °C, for short periods up to 140 °C.

Bronze body.

Connection thread M 30 x 1.5.

Steady or two point control with Oventrop temperature controllers or Oventrop actuators.

Oventrop three-way mixing valves "Tri-M" are supplied with collar nuts for the connection of either weldable tailpipes made of steel or solder- or screwed tailpipes made of brass.

Accessories sets:

Weldable tailpipes DN...20, 25, 40 mm

Solder tailpipes 15, 18, 22, 28, 35, 42 mm

Screwed tailpipes 1/2", 3/4", 1", 1 1/4", 1 1/2"

Function:

Oventrop three-way mixing valves "Tri-M" have two inlet ports and one outlet port. Depending on the position of the valve disc, the cold and hot water is mixed.

For commercial two point controls, the electrothermal actuator* (item no. 101 24 85 with connection thread M 30 x 1.5) is used, with the straight port being opened with current "off" and the port opposite the actuator being closed. Reversed action with the current "on". The working procedure of the actuators (item nos. 101 24 85 and 101 24 86) can be reversed, i.e. straight port closed with current "off". Pressure waves are not produced during changeover and the volume of flow remains constant. Oventrop actuators* have an expansion type working element which is heated electrically.

When using a steady control, Oventrop temperature controllers* with immersion sensor (item nos. 114 05 61 to 114 05 74 with connection thread M 30 x 1.5) or Oventrop temperature controllers with contact sensor (item nos. 114 28 61 to 114 28 64 with connection thread M 30 x 1.5) are used. These are proportional controllers working without auxiliary energy and allowing intermediate positions. With the temperature at the sensor rising, the straight port is opened and the angle port is closed.

Model:

Valve body made of corrosion-resistant bronze, inner parts made of brass and stainless steel, EPDM washers.

Application:

Mixing and changingover of the flow in bivalent heating systems or hot water storage cylinders, e.g. solar heating and heatpump installations. Temperature of fluid up to 120° C, for short periods up to 140 °C.

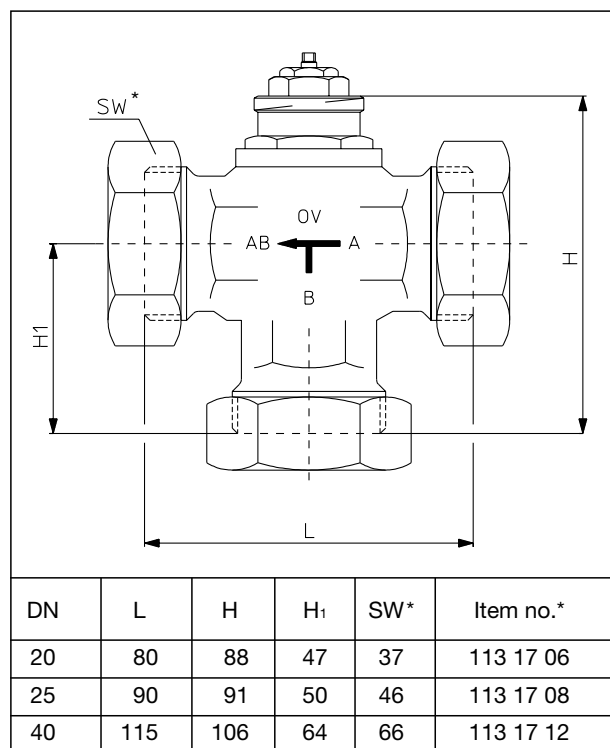
Permissible pressure difference: 3/4" $\hat{=}$ 750 mbar, 1" $\hat{=}$ 500 mbar, 1 1/2" $\hat{=}$ 200 mbar (tight closing in final positions of the valve disc).

Max. working pressure: 10 bar

* see special technical information sheets

Oventrop actuators and Oventrop temperature controllers

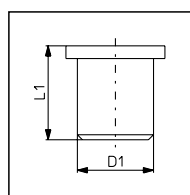
Dimensions:



* SW = spanner size

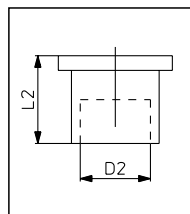
Accessories sets:

One set includes three tailpipes.



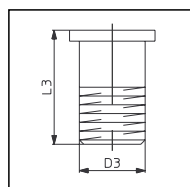
Weldable tailpipes

DN	D ₁	L ₁	Item no.
20	26	50	113 00 93
25	33	60	113 00 94
40	48.5	65	113 00 96



Solder tailpipes

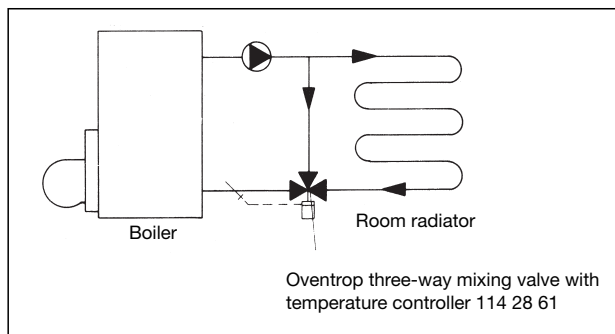
DN	D ₂	L ₂	Item no.
20	15	20	113 01 92
20	18	23	113 01 93
20	22	24	113 01 94
25	28	27	113 01 95
40	35	40	113 01 96
40	42	32	113 01 97



Screwed tailpipes

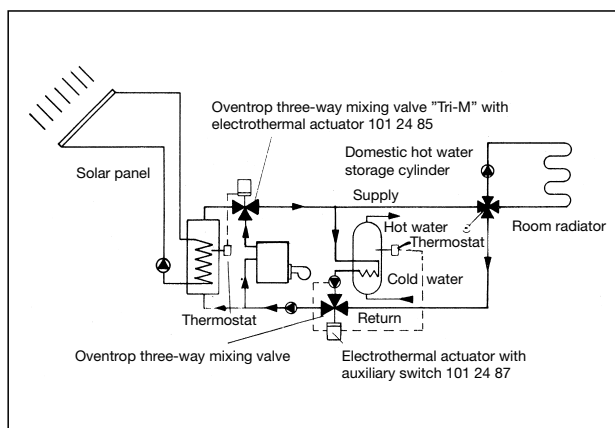
DN	D ₃ DIN 2999	L ₃	Item no.
20	1/2"	32	113 02 92
20	3/4"	34	113 02 93
25	1"	40	113 02 94
40	1 1/4"	40	113 02 95
40	1 1/2"	40	113 02 96

Examples of installation:



Increase of return temperature for solid fuel boilers.

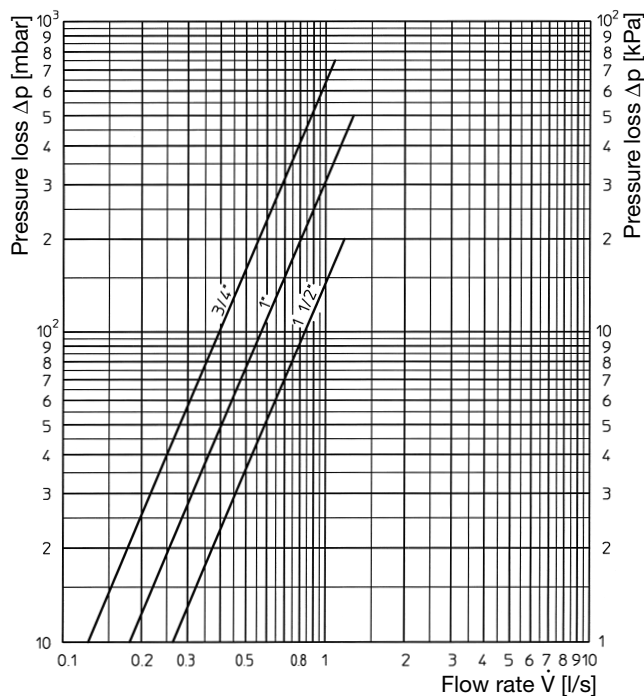
The desired return temperature is set at the temperature controller. With the return temperature increasing, the bypass between the supply and return pipe is throttled and vice versa.



Use in a bivalent heating system

With a sufficient duration of sunshine, the solar heating system is in operation. If this duration is not sufficient, the oil- or gas fired boiler is added to the heating circuit by means of the three-way mixing valve. A constant temperature of domestic water is thus guaranteed.

Performance data:



k_V - and zeta values:

DN	Size	k_V	Zeta
20	3/4"	4.5	17
25	1"	6.5	21
40	1 1/2"	9.5	52

Zeta values related to the inner pipe diameter according to DIN 2440.

k_V -values in m³/h with Δp 1 bar.

Cut illustration:

