

Tender specification:

Oventrop three-way mixing valve “Tri-M TR” PN 16 up to 120 °C. Bronze body.
Steady or two point control with Oventrop temperature controllers or Oventrop actuators.
Oventrop three-way mixing valves “Tri-M TR” are supplied with collar nuts for the connection of weldable tailpipes made of steel or solder or screwed tailpipes made of brass.
Connection thread M 30 x 1.5.

Technical data:

Max. operating temperature t_s : 120 °C
(for short periods up to 130 °C)
Min. operating temperature t_s : 0 °C
Max. operating pressure p_s : 16 bar (PN 16)

Function:

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

Actuators:

The three-way mixing valves “Tri-M TR” can be combined with the following Oventrop actuators (M 30 x 1.5):

Actuator	Voltage	Regulation behaviour		
		2 point	3 point	Proportional
Electro-thermal	24V	1012816/26 1012916/26		
	230V	1012815/25/17 1012915/25		
Electro-motive	24V		1012708	1012705/06 (0-10V)
	230V		1012710	
	EIB			1156065/66
	LON			1157065

When using a steady control, Oventrop temperature controllers* with immersion sensor (item no. 1140561 – 1140574 with connection thread M 30 x 1.5) or Oventrop temperature controllers with contact sensor (item no. 1142861 – 1142864 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 (A-AB) is opened and the angle port (B-AB) is closed.

Model:

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

Application:

Mixing or changing-over of the flow in bivalent heating systems or hot water storage cylinders, for instance for solar and heat pump technology. Fluid temperature up to 120 °C; for short periods up to 130 °C.

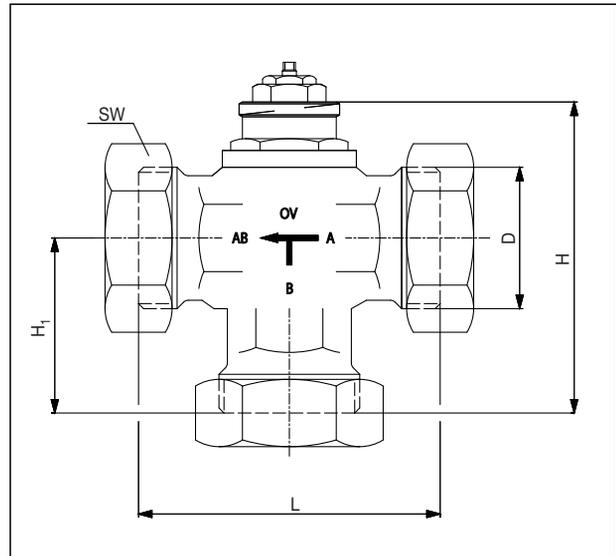
Permissible pressure difference:

DN 20 \triangleq 750 mbar, DN 25 \triangleq 500 mbar, DN 40 \triangleq 200 mbar (tight closing in final positions of the valve disc).

Max. operating pressure: 16 bar

*see separate technical information sheets

Oventrop actuators and temperature controllers



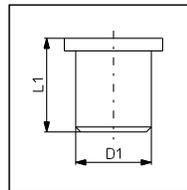
DN	D ISO 228	L	H	H ₁	SW*	Item no.
20	G 1	80	88	47	37	1131706
25	G 1 ¼	90	91	50	46	1131708
40	G 2	115	106	64	68	1131712

Dimensions

*SW = spanner size

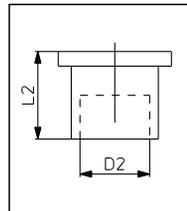
Accessories sets:

One set includes three tailpipes.



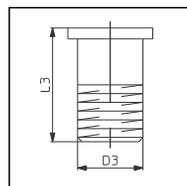
Weldable tailpipes

DN	D ₁	L ₁	Item no.
20	26	50	1130093
25	33	60	1130094
40	48.5	65	1130096



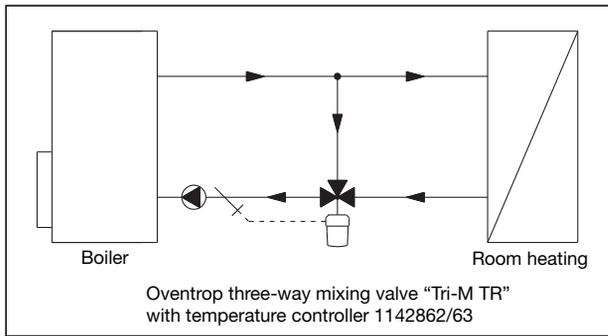
Solder tailpipes

DN	D ₂	L ₂	Item no.
20	15	20	1130192
20	18	23	1130193
20	22	24	1130194
25	28	27	1130195
40	35	40	1130196
40	42	32	1130197



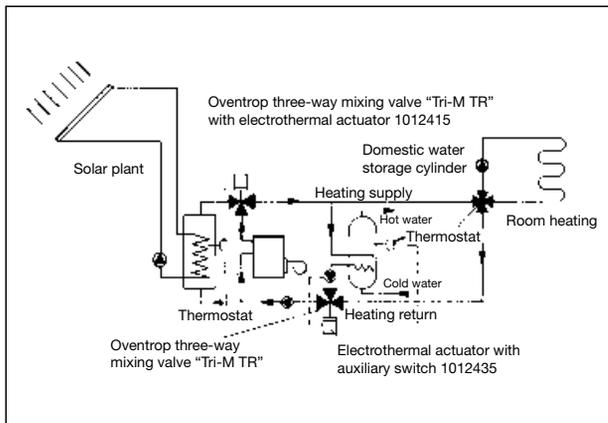
Threaded tailpipes

DN	D ₃ EN 10226	L ₃	Item no.
20	R ½	32	1130292
20	R ¾	34	1130293
25	R 1	40	1130294
40	R 1 ¼	40	1130295
40	R 1 ½	40	1130296



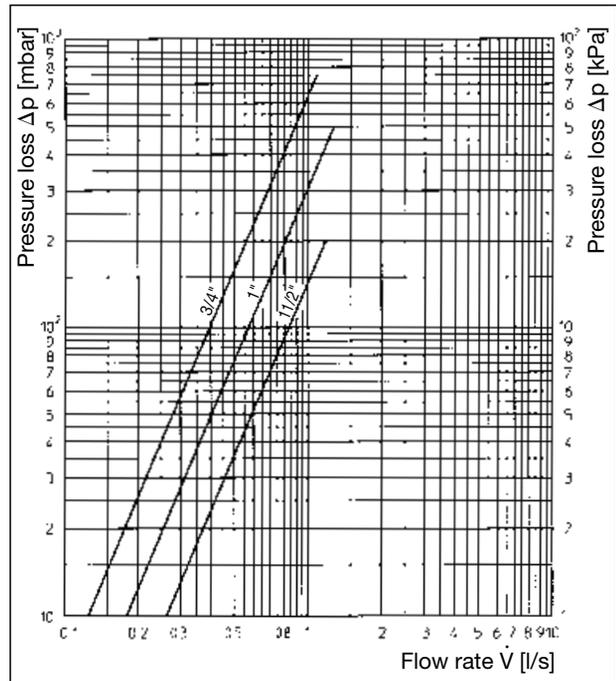
System illustration

Return temperature increase for solid fuel boilers.
The required 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.



System illustration

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 with the help of the three-way mixing valve. This way, a constant domestic water temperature is guaranteed.



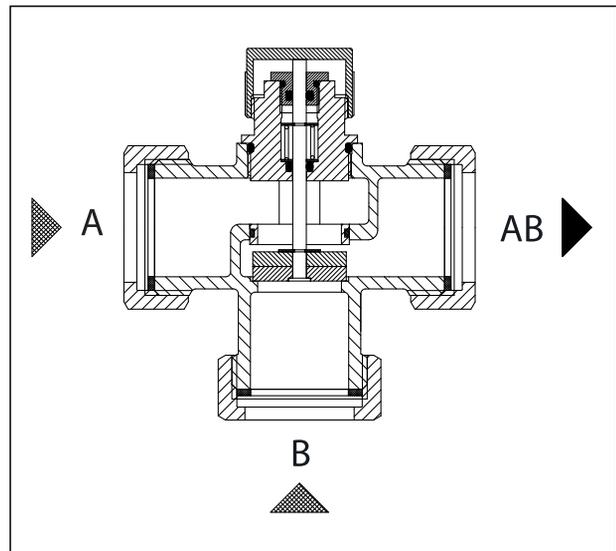
Performance data

k_{VS} and Zeta values:

DN	k_{VS}	Zeta
20	4.5	17
25	6.5	21
40	9.5	52

Zeta values related to the inner pipe diameter according to DIN EN 10255.

k_{VS} values in m^3/h with Δp 1 bar.



Illustrated section

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