

## Data sheet

# Thermostatic Mixing Valve

## TVM-W

## Description



The TVM-W is a self-acting mixing valve, which provides mixed water at a constant temperature. It is used for instant supply of water at a required temperature in domestic hot water applications.

- The quick reaction of the thermostatic elements ensures accurate temperature control.

- It is suitable for single outlets (e.g. baths, basins, showers and bidets) or small numbers of grouped outlets.
- Its robust and non-complex construction provides superior reliability, improved safety, energy efficiency and user comfort. If the cold supply fails, a total and fast flow shut-off results in greater safety for the end-user. Simplified design and construction, with fewer components, ensures superior reliability, longevity and safety.
- The TVM-W ensures a high level of protection from scalding, which is important especially in hospitals, schools or multi family houses (e.g. in case of legionella disinfections).
- TVM-W "Low lead brass" valves meet the new regulations enforced by the European Drinking Water Directive that comes into effect in December 2013.

## Main data:

- Setting temperature in the range 35 ... 70 °C
- Preset and locked at 50 °C
- Locking function locks the set temperature
- DN 20 and DN 25
- Shuts off flow if the hot or cold supply fails
- Maintains the temperature by varying supply conditions
- integrated non-return valves

## Ordering

| Type  | DN | Connection | Temp. range (°C) | E (l/min) | $k_{vs}$ <sup>1)</sup> | Code No. |
|-------|----|------------|------------------|-----------|------------------------|----------|
| TVM-W | 20 | G 1        | 35 ... 70        | 35        | 2.1                    | 003Z3145 |
|       | 25 | G 1¼       | 35 ... 70        | 55        | 3.3                    | 003Z3146 |

E = extracted (outlet) quantity at  $\Delta p = 1.0$  bar

<sup>1)</sup> with check valve

## Accessories and spare parts

| Type                   | Max. pressure (bar) | Max. temperature (°C) | Code No. |
|------------------------|---------------------|-----------------------|----------|
| Non-return valve DN 20 | 10                  | 90                    | 003Z3137 |
| Non-return valve DN 25 | 10                  | 90                    | 003Z3138 |
| Thermostatic element   |                     |                       | 003Z3139 |
| Fitting set DN 20      |                     |                       | 003Z3134 |
| Fitting set DN 25      |                     |                       | 003Z3135 |

## Technical data

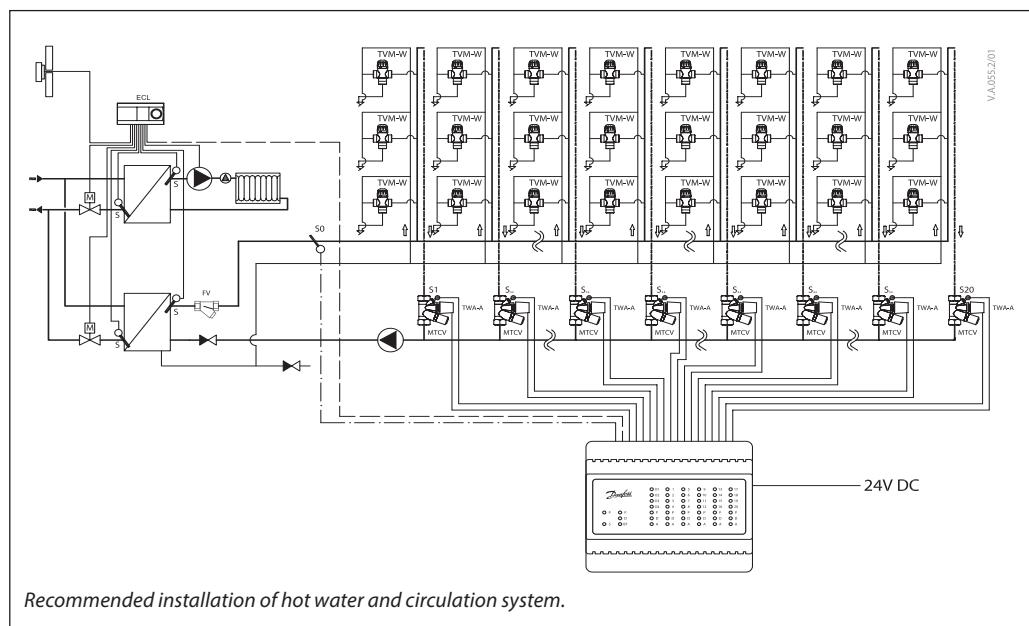
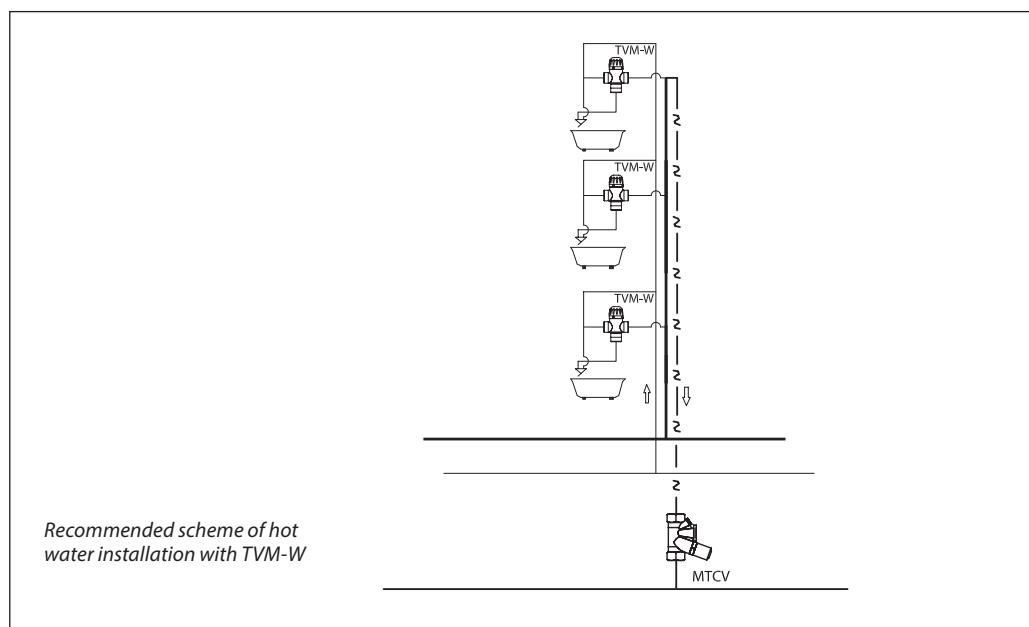
|  |   |                  |
|--|---|------------------|
| Factory temperature presetting   | °C  | 50               |
| Cold water supply temperature  |   | 10               |
| Hot water supply temperature   |   | 70               |
| Temperature stability (depend on pressure and temperature) <sup>3)</sup> |   | ± 3              |
| Max. hot water temperature   | bar   | 90 <sup>1)</sup> |
| Max. operating pressure  |   | 10               |
| Min. operating pressure  |   | 0.5              |
| Max. inlet pressure differential <sup>2)</sup>                           |   | 2                |
| Supply pressure, (dynamic)   |   | 5                |
| <b>Materials</b>   |   |                  |
| Body   | CW626N (Low Lead brass) + polished surface in functional area |                  |
| Plastic cap  | Polystyrene   |                  |
| Spring   | SS steel 1.4301 (inoxydable)                                  |                  |
| Sealing  | EPDM  |                  |

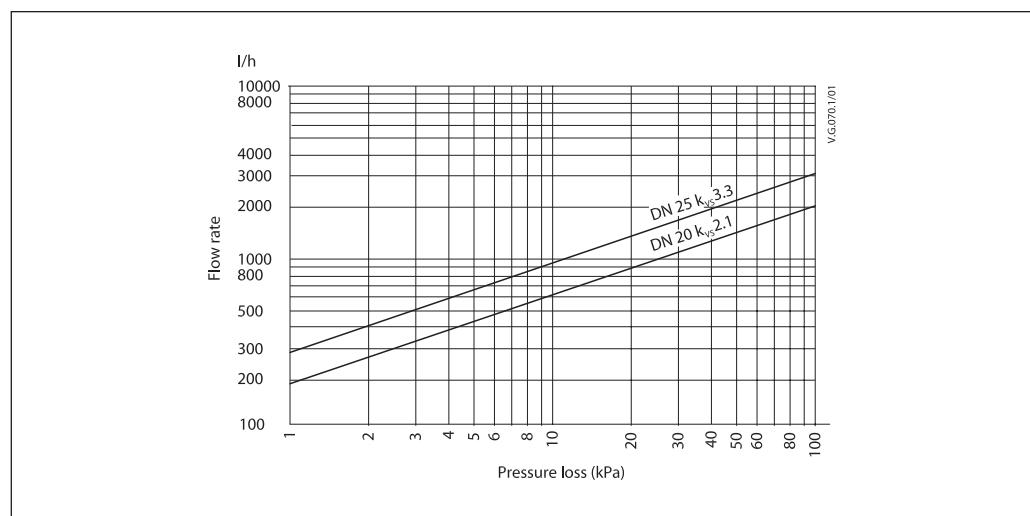
1) 100 °C without Non-return valve

2) Between cold and worm inlet

3) Cold inlet water temperature should not be above 15°C

## Applications



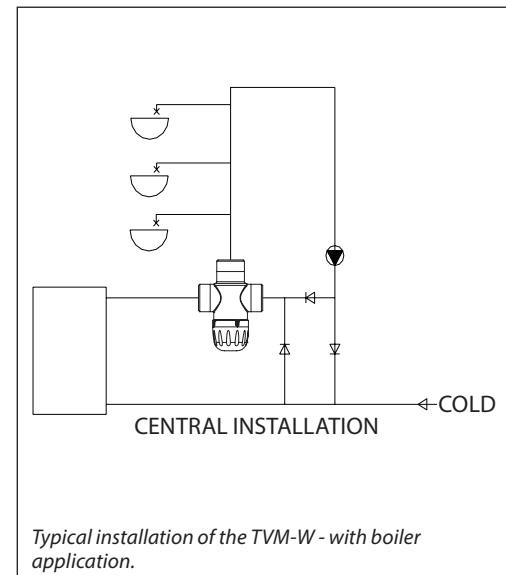
**Pressure diagram**

**Installation**

By mixing hot and cold water to achieve the desired temperature, the valve effectively provides a greater volume of hot water from the given tank size.

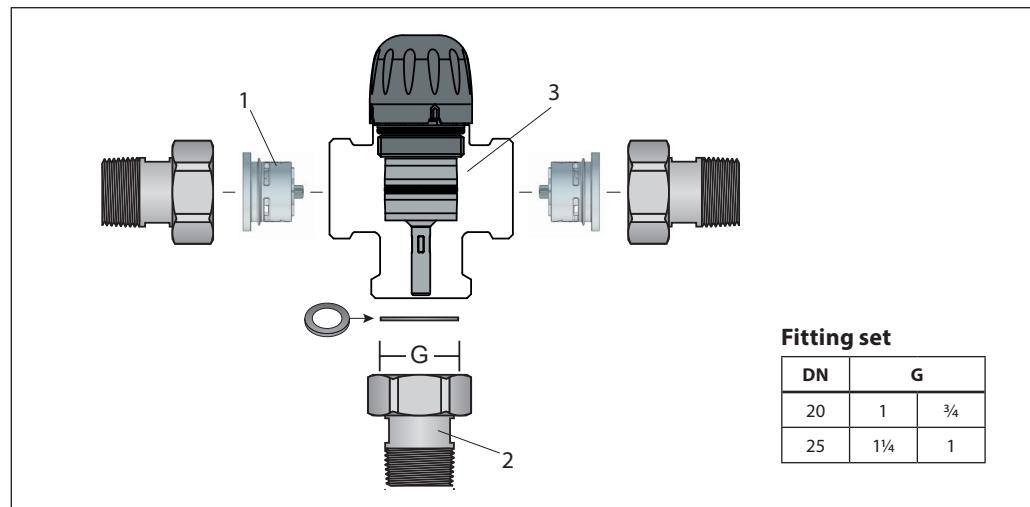
High temperature water storage prevents the growth of legionella bacteria.

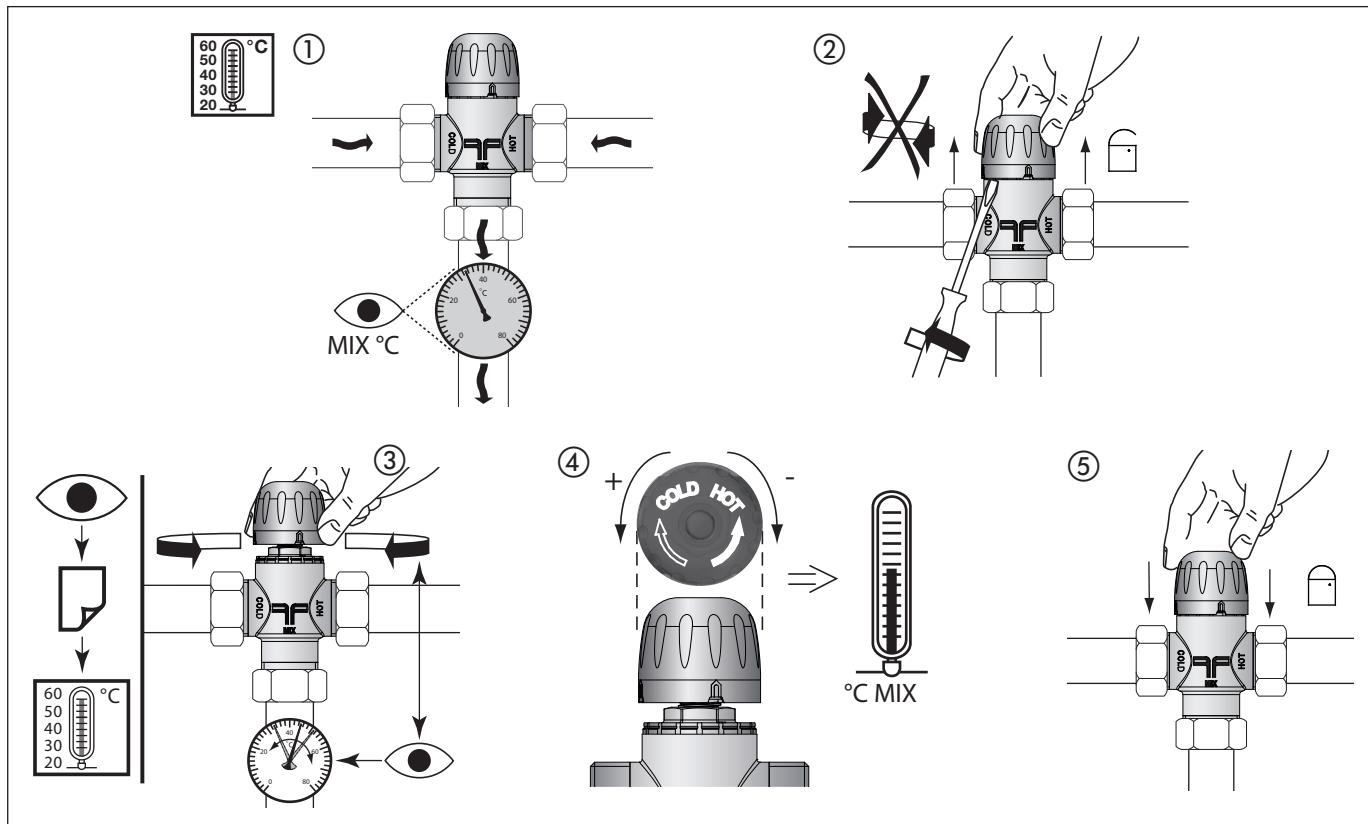
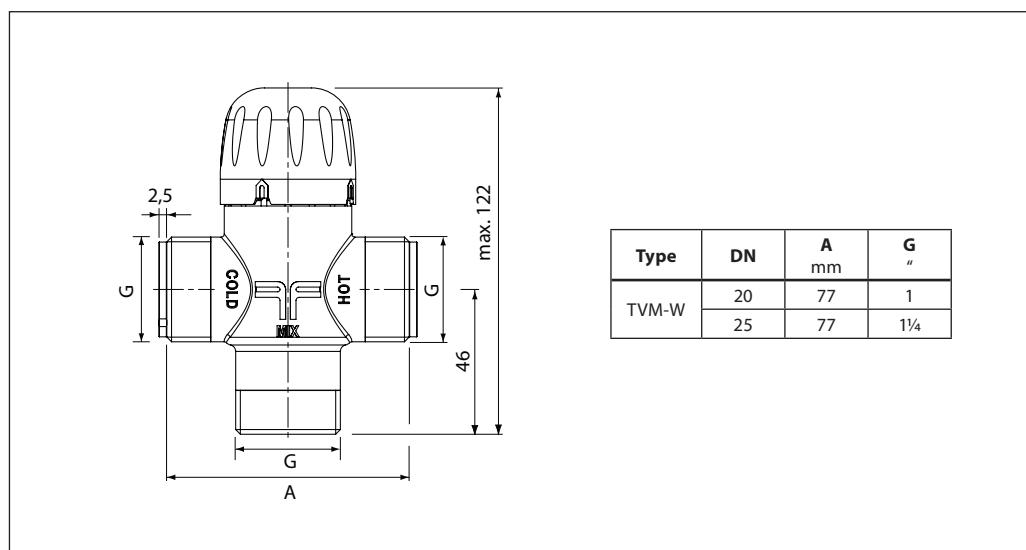
The valve can be installed in any position into the riser:

- In situations where the hot pressure may exceed the cold pressure and on pumped systems, non-return valves must be fitted to both hot and cold inlets.
- A TVM-W will provide optimum performance when installed with hot and cold supplies of equal dynamic pressure, i.e. pressure under flow conditions.
- In order to ensure the correct function of the failsafe and optimum performance it is recommended that the hot supply temperature is at least 10 °C higher than the set temperature.


**Spare parts**

1. Non-return valve
2. Fitting set
3. Thermostatic element



**Data sheet****Thermostatic Mixing Valve TVM-W****Locking the presetting****Dimensions****Danfoss A/S**Climate Solutions • [danfoss.com](http://danfoss.com) • +45 7488 2222

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