**MT 53**

Thermostatic Mixing Valve

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**Advantages**

- Constant temperature of the water at the outlet
- Automatic mixing function without the need for auxiliary power
- Infinite regulation of the mixed water temperature in the range from 45 – 65 °C and 35 – 70 °C
- High regulation precision
- Protection against scalding
- High kvs values
- Very low cold water leak rate
- Valve housing with non-stick coating to protect against lime scale deposits
- Installation instructions embossed on the housing
- Available with 3 valve dimensions
- Mechanism to prevent adjustment of the nominal value
- Can also be used as a diverting valve
- No additional seals required when using the check valves (CV)
- The check valves are in captively secured form

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**Maintaining constant mix temperatures and limiting temperatures in hot water systems**

**Description**

The automatic thermostatic mixing valve MT 53 ensures a constant temperature of the mixed water at the outlet when used as the central mixing device. This prevents scalding at the outlet, even with high storage tank temperatures.

Wide area of possible application thanks to three different valve dimensions. Available with ¼” (DN15), 1” (DN20) and 1 ¼” (DN25) connection.

Special valve seals at the regulator piston keep undesired admixtures to a minimum*, resulting in maximum utilisation of the storage tank temperature.

The MT 53 is mainly used in sanitary applications as a regulating device for reducing the temperature of the water coming out of hot water storage tanks. It can also be used in numerous other applications requiring a constant mixing temperature, for example as a thermostatic mixing device in heating systems or as a diverting valve in climate control applications.

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* If the hot water lies 3K below the set mixing temperature, the cold water leak rate = 0. Otherwise, the maximum value for admixtures is 3K.

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**Maintaining constant mix temperatures and limiting temperatures in hot water systems**

**Operation**

The mixing valve is supplied with hot water from the storage tank and cold water from the mains network. The temperature of the mixed water is detected by the thermostatic expansion element. If the mixed water temperature diverges from the target value, the thermostatic expansion element moves the regulator piston, thus regulating the hot and cold water intake quantity accordingly, until the mixed water temperature corresponds to the target value.
**MT 53**

**Range 45 – 65°C**
(Designed in accordance with EN15092)

**Specification text**
The thermostatic mixing valve ensures a constant temperature of the mixed water at the outlet.
High kVS values.
Available with three valve dimensions.
Long durability thanks to use of high-quality plastics and non-stick coatings to prevent limescale buildup.
Infinite regulation of the mixed water temperature.

**Technical data**
kVS values and dimensions as per the relevant tables
Max. operating temp.: TB 100 °C
Max. operating temp. w/ CV: TB 90 °C
Max. operating pressure: 10 bar
Min. operating pressure: 0.5 bar
Max. dynamic working pressure: 5 bar
Max. constant input pressure diff.: 2 bar
Adjustable temp. range: 45 – 65°C
Mix temperature stability: max. 3 K (for hot water temp. change 15 K)
Shut-off function in event of cold water failure
Noise class 2
Materials:
Housing: brass (DZR)
Internal parts: High-quality plastic
Seals: EPDM
Housing with anti-lime scale coating
Installation position: any
Special application: diverting function possible (incoming flow through mix connection).

**Approvals**

* pending

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**Type program**

<table>
<thead>
<tr>
<th>Item no.</th>
<th>DN</th>
<th>G</th>
<th>CV built in</th>
<th>A</th>
<th>E (l/min)</th>
<th>kVS</th>
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</thead>
<tbody>
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<td>253.1002.000</td>
<td>15</td>
<td>¾*</td>
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<td>76</td>
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<td>77</td>
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</table>

A = Housing without check valves (CV)
E = Extracted (outlet) quantity at ∆p = 1.0 bar
No additional seals required when using the check valves

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**Dimensions**

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**Pressure loss diagram**

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**Notes:**

- A = Housing without check valves (CV)
- E = Extracted (outlet) quantity at ∆p = 1.0 bar
- No additional seals required when using the check valves

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**Range 35 – 70 °C**  
(for Legionella flushing up to 75 °C)

**Specification text**

The thermostatic mixing valve ensures a constant temperature of the mixed water at the outlet.

High kVS values.

Available with three valve dimensions.

Long durability thanks to use of high-quality plastics and non-stick coatings to prevent limescale buildup.

Infinite regulation of the mixed water temperature.

Mixing temperature can be set for Legionella flushing (hot water inflow at least 75 °C).

Due to the extended mixing range, EN 15092 no longer applies to these mixing valves.

**Technical data**

Adjustable temperature range: 35 – 70 °C

All other technical datas are in accordance with those on page 2.

**Approvals**

- W270
- KTW

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**Type program**

<table>
<thead>
<tr>
<th>Item no.</th>
<th>DN</th>
<th>G</th>
<th>CV built in</th>
<th>A</th>
<th>E (l/min)</th>
<th>kVS</th>
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A = Housing without check valves (CV)

E = Extracted (outlet) quantity at Δp = 1.0 bar

No additional seals required when using the check valves

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**Dimensions**

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**Pressure loss diagram**

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Connection set for threaded pipe

<table>
<thead>
<tr>
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<td>210.6631.004</td>
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<td>1&quot; x ½&quot;</td>
<td>3 pcs.</td>
</tr>
<tr>
<td>210.6632.004</td>
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<td>1&quot; x ¾&quot;</td>
<td>3 pcs.</td>
</tr>
<tr>
<td>210.6633.004</td>
<td>25</td>
<td>1¼&quot; x 1&quot;</td>
<td>3 pcs.</td>
</tr>
</tbody>
</table>

Check valve

<table>
<thead>
<tr>
<th>Item no.</th>
<th>DN</th>
<th>G</th>
<th>Quantity</th>
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<tbody>
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<td>2 pcs.</td>
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<td>296.5212.003</td>
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<td>2 pcs.</td>
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Regulating piston with thermostatic element

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<th>Item no.</th>
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<th>Quantity</th>
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<td>298.5280.000</td>
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<td>1 pc.</td>
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Cap and spindle

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<td>298.5285.000</td>
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<td>1 pc.</td>
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