



SELF-ACTING UNBALANCED TEMPERATURE REGULATOR

MODEL TC1-S

TEMPERATURE REGULATING VALVE FOR NON-HAZARDOUS LIQUIDS AND GASES

Features

Unbalanced self-acting single seat globe valve type temperature regulator. Suitable for steam heating of liquids, air and non-hazardous gases.

1. Self-acting design simplifies installation by eliminating the need for power supply and instrument signal lines.
2. No external energy required, allowing for ease of installation in remote areas or potentially flammable atmospheres.
3. Robust design minimizes maintenance.
4. Reliable long-life spring mechanism protects the sensor from overheat damage.
5. Wide set point range and simple set point adjustment provide easy operation.



Specifications

VALVE

| | | | |
|---|---------------------------|------|-----|
| Model | TC1-S | | |
| Size | 1/2" | 3/4" | 1" |
| Kvs Value (DIN) | 3.6 | 5.7 | 7.2 |
| Cv Value (UK) | 3.5 | 5.5 | 7.0 |
| Cv Value (US) | 4.2 | 6.7 | 8.4 |
| Maximum Allowable Differential Pressure (bar) | 14 | | |
| Leakage Rate | < 0.05% of Cv (Kvs) value | | |
| Connection | Screwed | | |
| Maximum Operating Pressure (barg) | PMO | 14 | |
| Maximum Operating Temperature (°C) | TMO | 200 | |
| Suitable for Use with: | Steam | | |

THERMOSTAT

| | |
|---|---|
| Model | TC-A |
| Suitable for Immersion in* | Liquids Compatible with Sensor Material |
| Set Point Range* | 20 °C to 120 °C |
| Maximum Temperature at Sensor | Set Point Value + 100 °C |
| Ambient Temperature Limits at Adjustment Head | - 40 °C to 80 °C |
| Capillary Tube Length* (m) | 3 |

1 bar = 0.1 MPa

*Other options available, see overleaf for details

PRESSURE SHELL DESIGN CONDITIONS (NOT OPERATING CONDITIONS):
 Maximum Allowable Pressure (barg) PMA: 14
 Maximum Allowable Temperature (°C) TMA: 200



To avoid abnormal operation, accidents or serious injury, DO NOT use this product outside of the specification range. Local regulations may restrict the use of this product to below the conditions quoted.

| No. | Description | Material | DIN | ASTM/AISI* |
|-----|-------------------|----------------------|--------|-------------|
| ① | Body | Red Brass | - | B505 C83600 |
| ② | Seat | Stainless Steel | 1.4104 | - |
| ③ | Plug | Stainless Steel | 1.4305 | - |
| ④ | Plug Stem | Stainless Steel | 1.4301 | AISI304 |
| ⑤ | Spring | Stainless Steel | - | - |
| ⑥ | Plug Stem Housing | Brass | 2.0375 | B16 C36000 |
| ⑦ | Operating Element | Nickel-plated Brass | - | - |
| ⑧ | Capillary Tube | Nickel-plated Copper | - | - |
| ⑨ | Sensor | Nickel-plated Bronze | - | - |

*Equivalent materials



