



## Temperature Regulators - TR25S/R

**Self Acting - Non Balanced Simple Seat  
Reverse Action for Cooling Systems  
Forged Steel Valves & T series thermostats**

### Description

The series TR25-R valves are designed for temperature control of cooling systems where the valve open on temperature rising. They are single seat type in order to guarantee an excellent tightness and are to be coupled with the thermostats model T.205 and T.405. The liquid filling in the thermostat expands with a rise in temperature operating the valve. The valves are used for temperature control in cooling systems. Connections are female screwed or flanged.

### Materials

1	Body	P250GH / 1.0460
2	Bonnet	C45E / 1.1191
3 *	Gasket	St.St./ Graphite
4 *	Valve plug	St.St./NBR/PTFE
5	Seat	AISI 316 / 1.4401
6 *	Spring	AISI 302 / 1.4300
7	Cap	AISI 316 / 1.4401
8 *	Cap gasket	St.St./Graphite

\* Available spare parts

Article No.	Size	Price
<b>BSP</b>		
<b>TR25R-15*</b>	1/2"	<b>£235.40</b>
<b>TR25R-20*</b>	3/4"	<b>£246.10</b>
<b>TR25R-25*</b>	1"	<b>£273.90</b>

\* Specify opening in mm

PN40	Size	Price
<b>TR25R-15**</b>	15mm	<b>£310.30</b>
<b>TR25R-20**</b>	20mm	<b>£350.90</b>
<b>TR25R-25**</b>	25mm	<b>£385.20</b>

\*\* Specify opening in mm & flange type

### Thermostat With Copper Rod Sensor

Article No.	Connection	Temp Range	Price
<b>T205</b>	3/4"	0 - 60°C	<b>£932.40</b>
<b>T205</b>	3/4"	30 - 90°C	<b>£932.40</b>
<b>T205</b>	3/4"	60 - 120°C	<b>£932.40</b>
<b>T405</b>	1"	0 - 120°C	<b>£1,214.00</b>
<b>T405</b>	1"	40 - 160°C	<b>£1,214.00</b>

### Accessories for TR25

<b>S/S SENSOR POCKET FOR T.205 3/4" x 1"</b>	<b>£158.40</b>
<b>S/S SENSOR POCKET FOR T.405 1" x 1 1/4"</b>	<b>£185.80</b>
<b>CAPILARY TUBING 6 MTS LONG*</b>	<b>£92.50</b>
<b>CAPILARY TUBING 9 MTS LONG*</b>	<b>£184.90</b>

\* Add on price

## Max. Permissible Dif. Pressures Specifications

With T.205 Thermostat		
Press. bar	Valve Size	Seat Ø(mm)
5,3	15	15
5,3	20	15
2,9	20	20
2,9	25	20

  

With T.405 Thermostat		
Press. bar	Valve Size	Seat Ø(mm)
15	15	15
15	20	15
9	20	20
9	25	20

Type	Conn. DN	Opening Ø (mm)	Kvs m3/h	Valve stroke
TR25R-15	15	15	1.9	6
TR25R-20/15	20	15	1.9	6.5
TR25R-20/20	20	20	4.2	6.5
TR25R-25/20	25	20	4.2	7

### Proportional Band

The proportional band is the temperature change required for the valve to move from fully open to fully closed. It depends on the valve stroke and on the thermostat movement per °C, and is calculated as follows:

$$\text{Proportional band: } \frac{\text{Valve stroke (mm)}}{\text{Thermostat mov (mm/°C)}}$$

Thermostat movement in mm per °C : T.205 and T.405 : 0,5 mm / °C

A proportional band in the range 8-13°C is suitable for most applications. A smaller proportional band is not ideal where heat load varies rapidly.

## Accessories

### Cooling Units K1

The cooling units are used in connection with control valves and thermostats to protect the stuffing box. At valve temperatures between 150°C and 250°C a cooling unit of type K1 connected downwards should be applied. For higher temperatures as well as for all hot oil systems please consult.

### Sensor Pockets PK

Sensor pockets of stainless steel can be supplied to all TR series self-acting thermostats with rod sensors. They are used where it is impossible to empty the system or the tank.

Use of sensor pockets implies delay of heat transfer to the rod sensors and thus a longer reaction time for the controllers. This is to some extent counteracted by filling up the sensor pockets with paste or oil.

### Installation

The installation site for the sensor pocket is arbitrary when paste is applied. When using oil the sensor pocket must point somewhat downwards.

Material	Stainless steel 1.4436
Limiting Conditions	40 bar at 120°C 24 bar at 350°C

