

"ADCATROL" TEMPERATURE REGULATORS
SELF ACTING - NON BALANCED SIMPLE SEAT
TR25S/R – 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.

MAIN FEATURES

Single seated, two way, reverse action valve.

Leakage less than 0,05% of full Kv

OPTIONS :

Valves for heating process.

USE:

Water and other compatible fluids.

AVAILABLE

MODELS: TR25S-R - Steel construction valve body

SIZES:

DN 1/2" - DN 1" – DN15 - DN 25.

CONNECTIONS:

Female screwed ISO7/1Rp(BS 21) .

CONTROL MODE:

Flanged EN 1092-1 or ANSI.

THERMOSTATS: Proportional

T.202 - 200N (max. closing force)

THERMOSTAT

T.405 - 400N (max. closing force)

RANGES:

T.205 - 0-60; 30-90 and 60-120°C

CAPILLARY

T.405 - 0-120; 40-160 °C

LENGTHS:

3 m as standard

HOW TO SELECT:

Never size the valve according to the pipe diameter in which it has to be fitted but according to the required actual flow of steam or water. Refer to valve calculation data sheet or consult the factory.

VALVE LIMITING CONDITIONS:

Body design conditions: PN40

40 bar at 120°C

24 bar at 350 °C

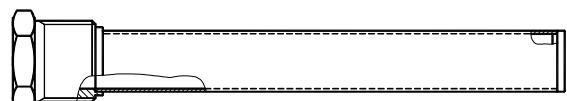
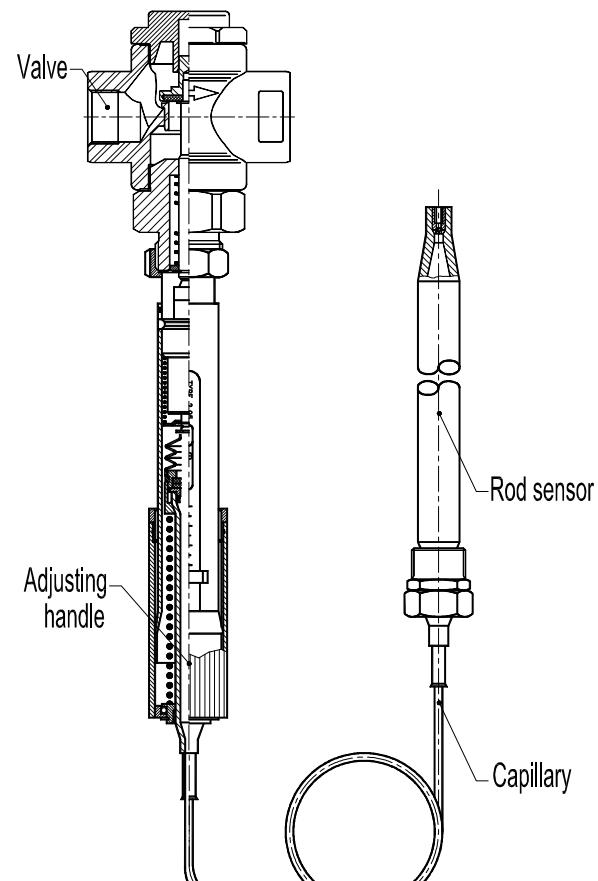
Min. working temperature: -10°C

INSTALLATION:

Horizontal installation with the thermostat in the vertical position in order to reduce wear. In case of valve temperatures up to 150°C the thermostat may be fitted below or above the valve.

An "Y" strainer should be provided upstream the valve.

See IMI, installation and maintenance instructions.



Sensor pocket PK

SPECIFICATIONS				
Type	Conn. DN	Opening Ø (mm)	Kvs m3/h	Valve stroke
TR25-15	15	15	1,9	6
TR25-20/15	20	15	1,9	6,5
TR25-20/20	20	20	4,2	6,5
TR25-25/20	25	20	4,2	7

MAX.PERMISIBLE DIF.PRESSES		
Press. bar	Valve Size	Seat Ø (mm)
With T.205 Thermostat		
5,3	15	15
5,3	20	15
2,9	20	20
2,9	25	20
With T.405 Thermostat		
15	15	15
15	20	15
9	20	20
9	25	20

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 $^{\circ}\text{C}$, and is calculated as follows:

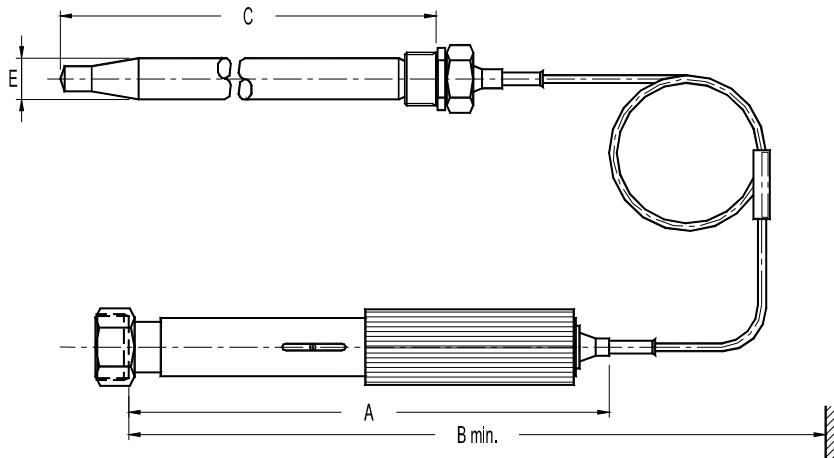
Proportional band:
$$\frac{\text{Valve stroke (mm)}}{\text{Thermostat mov. (mm/}^{\circ}\text{C)}} \text{ mm/}^{\circ}\text{C}$$

Thermostat movement in mm per $^{\circ}\text{C}$:

T.205 and T.405: 0,5 mm / $^{\circ}\text{C}$

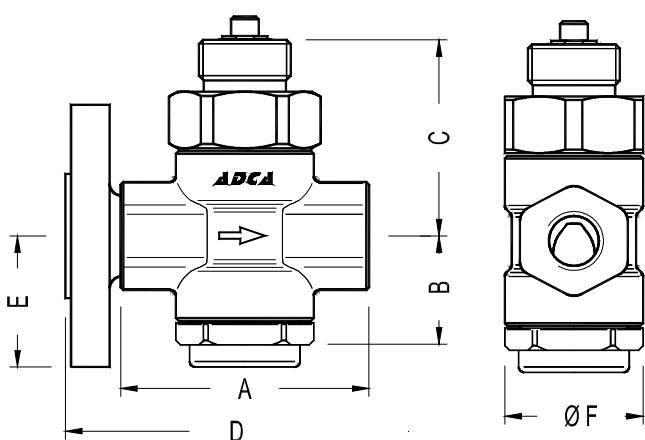
A proportional band in the range 8-13 $^{\circ}\text{C}$ is suitable for most applications. A smaller proportional band is not ideal where heat load varies rapidly.

THERMOSTAT DIMENSIONS (mm)					
TYPE	A	B	C	E	Wgt Kg
T.205	305	405	210	22	1,8
T.405	385	525	390	22	2,6



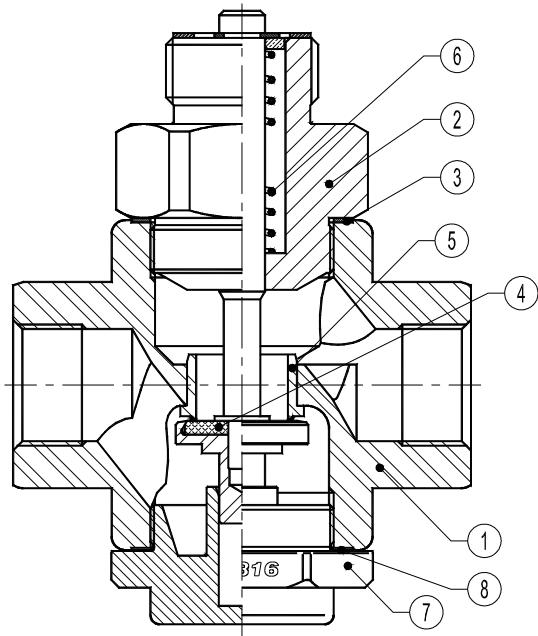
DIMENSIONS (mm)-Screwed					EN 1092-1 Flanges			
SIZE DN	A	B	C	F	WGT. Kgs	D	E	WGT. Kgs
1/2"	90	40	70	50	1,2	130	47,5	2,6
3/4"	90	40	70	50	1,2	150	52,5	3,2
* 3/4"	100	45	75	55	1,6	150	52,5	3,6
1"	100	45	75	55	1,6	160	57,5	4,2

* Only model TR25-20/20



MATERIALS		
POS.	DESIGNATION	MATERIAL
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



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

POCKET DIMENSIONS (mm)					
TYPE	D	H	L	S	R
PK2	25	9	218	36	1"
PK4	25	10	390	45	11/4"

