

# Self-operated Temperature Regulators

## Series 43 Temperature Regulators with - Double Adapter Do3 K - Manual Adjuster



### Application

Temperature regulator with a **double adapter** for attaching a second thermostat for control by a second process variable.

Temperature regulator with a **manual adjuster** for manual control of the process.

Connection to **globe valves** and **three-way valves** · G 1/2 to G 1 · DN 15 to DN 50 · PN 25

### Double Adapter Do3 K and manual adjuster

– in combination with Series 43 Temperature Regulators

#### • Double Adapter Do3 K

Installation between valve and control thermostat. It is suitable for attaching two control thermostats or control devices at the maximum. This includes the use of one connection point for the attachment of the manual adjuster. In all combinations, the largest signal actuates the valve during operation.

#### • Manual adjuster

For the manual operation of the valve. The manual adjuster can either be attached directly to the valve instead of a control thermostat or to the Do3 K at connection *b*.

### Versions

**Double Adapter Do3 K** (Fig. 1) · Connection *a* with a coupling pin bushing · Connection *b* and *c* for attaching a control thermostat or other control devices (e.g. a manual adjuster).

Combined regulators with double adapters to control the differential pressure, (flow) and temperature are available. Details can be found in Data Sheet T 3132 EN.

**Double Adapter Do3 K with manual adjuster** (Fig. 4) · To manually close the valve or to limit its travel · Connection *c* for control thermostat, connection *b* for manual adjuster.

**Manual adjuster** (Fig. 2) directly attached to the valve · For the manual operation of the valve.

**Table 1** · Versions with double adapter/manual adjuster

Technical data can be found in the data sheets listed

Valve Type...	2431 K	2432 K	2433 K	2435 K	2436 K	2437 K
Globe valve	•	•		•	•	•
Three-way valve			•			
Connection	G 1/2 to G 1	–	G 1/2 to G 1			–
Nominal size DN <sup>1)</sup>	–	15 to 50		–	32 to 50	15 to 50
Data Sheet T ...	2171 EN		2173 EN	2172 EN		
Equipped with	Type 2430 K Control Thermostat					

<sup>1)</sup> Normal version with weld-on fittings, also available with threaded ends or flanges on request · 2432 K/36 K/37 K: DN 32 to 50 also with flanged body made of EN-JS1049

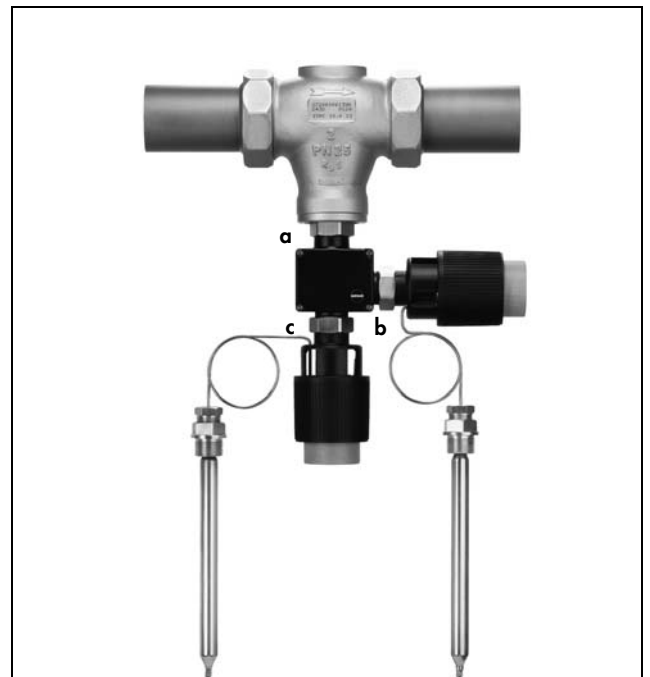


Fig. 1 · Temperature Regulator with Type 2432 K Valve, Double Adapter Do3 K with two Type 2430 K Thermostats



Fig. 2 · Type 2436 K Valve with manual adjuster

**Principle of operation** (Figs. 3, 4, and 5)

The **double adapter** mounts between the valve (1) and the control thermostat (5) and allows two control thermostats to be attached to connections *b* and *c* (Fig. 3). A manual adjuster can be attached to the double adapter at connection *b* to limit the valve travel (Fig. 4).

In the double temperature regulator shown in Fig. 1, the thermostat attached to connection *b* can be used to control the flow temperature and the second thermostat can be used to limit the return flow temperature, for example. Each thermostat produces a positioning force according to its process variable. The thermostat that produces the greater force is coupled to the valve plug. Depending on the connection of the thermostat exerting the greater force, the positioning force is transmitted either directly from connection *c* or via the lever (3) from connection *b* to the coupling pin (4) and thus to the plug stem (2) and valve plug.

**Manual adjuster** (Fig. 5) - directly attached to the valve

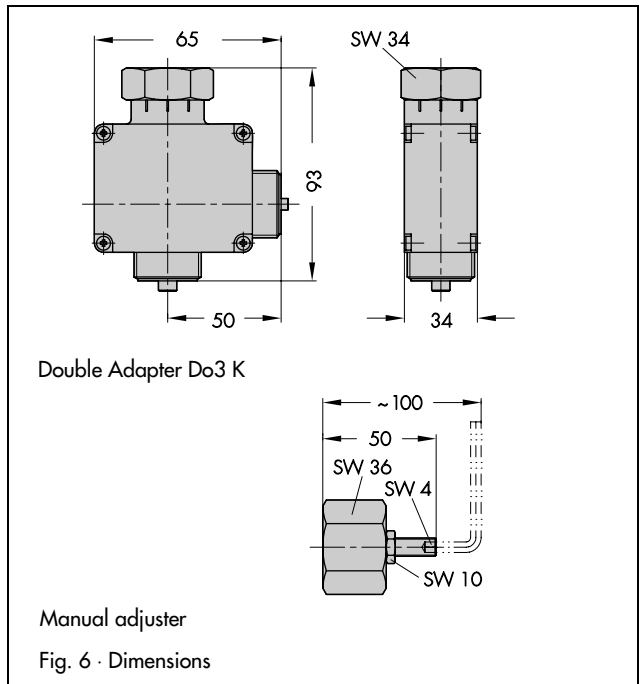
The threaded pin (8) of the manual adjuster acts on the plug stem (2) of the valve. Turning the threaded pin (8) manually will change the position of the valve plug and thus the flow rate of the heat transfer medium. The lock nut (7) is used to fix the adjusted valve plug position.

**Table 2 · Technical data · Materials · Weights · Dimensions**

The permissible ambient temperatures for the valves, thermostats, and actuators are also valid for these devices with double adapter and/or manual adjuster.

**Materials** · Material numbers acc. to DIN EN

Double adapter	
Body	Glass fiber-reinforced PETP
Coupling pin	Stainless steel 1.4104
Manual adjuster	
Body	CW509 (brass)
Threaded pin	S275JR (St 44-2)
Lock nut	1.4301
Weight, approx. in kg	
Double Adapter Do3 K	0.2
Manual adjuster	0.2



Specifications subject to change without notice.

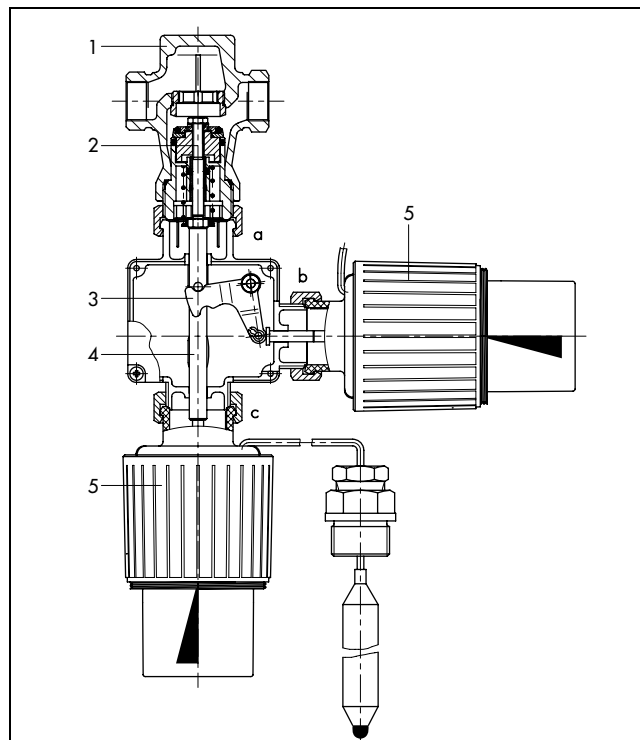


Fig. 3 · Type 2431 K Valve and Double Adapter Do3 K with two Type 2430 K Thermostats

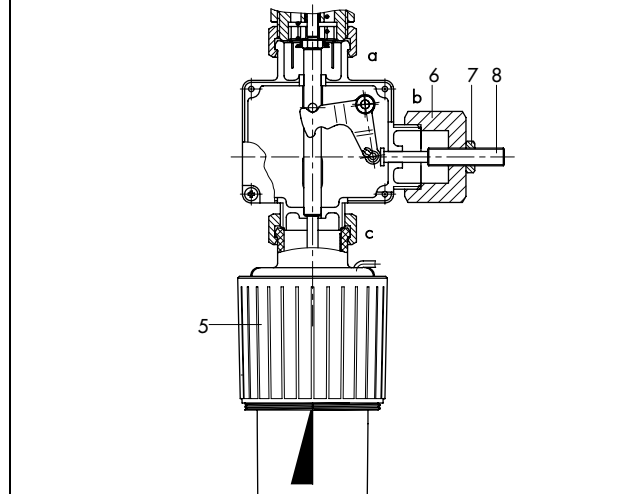


Fig. 4 · Double Adapter Do3 K, Type 2430 K Thermostat and manual adjuster

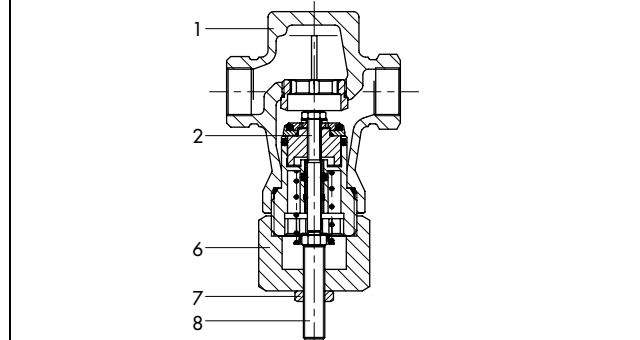


Fig. 5 · Type 2431 K Valve with manual adjuster

- |         |              |   |                    |
|---------|--------------|---|--------------------|
| a, b, c | Connections  | 5 | Control thermostat |
| 1       | Valve        | 6 | Manual adjuster    |
| 2       | Plug stem    | 7 | Lock nut           |
| 3       | Lever        | 8 | Threaded pin       |
| 4       | Coupling pin |   |                    |

