

## Data Sheet

# RAE 2000 Thermostatic Operator

### Application:



RAE 8254



RAE 8256

The RAE 2000 series of thermostatic operators are designed for use in residential hot water and low pressure steam heating systems. This non-electric self-actuating proportional controller provides effective regulation of temperature within the space.

RAE 2000 operators are equipped with a tool free snap on lock mechanism that allows mounting of the operator to the RA2000 series of valve bodies.

Incorporated into the RAE operator are features that include a 'Freeze Protection Setting'. For the RAE 8256 which utilizes a remote sensor, a 6ft (2m) ultra-thin capillary tube is coiled within the remote sensor housing. After the operator has been mounted the capillary tube is pulled out to the required length.





### Technical Specifications:

<b>Thermostatic operator charge</b>	Liquid
<b>Max. differential pressure, close off</b>	15 psi (1 bar), across valve body
<b>Suitable valve mounting</b>	RA2000, RA-C, RA 15/6
<b>Max. sensor temperature</b>	140°F (60°C)
<b>Adjustable temp. range</b>	46° to 82°F (8° to 28°C)

### Data and Ordering:

Type	Version	Setting Range	Code no.
RAE 8254	Built-in sensor	46° to 82° F (8° to 28° C)	<b>013G8254</b>
RAE 8256	Remote sensor capillary length 6 ft (2 m)		<b>013G8256</b>

Data and Ordering  
Cont.:

RA2000 Valves				
Valve	Pipe Size	Valve Type	Connection	Code No.
	1/2"	Straight	FNPT x MNPT Union Tailpiece	<b>013G8015</b>
	3/4"			<b>013G8020</b>
	1"			<b>013G8025</b>
	1-1/4"			<b>013G8032</b>
	1/2"	Angle		<b>013G8014</b>
	3/4"			<b>013G8019</b>
	1"			<b>013G8024</b>
	1-1/4"			<b>013G8031</b>
	1/2"	Side Mount Angle		<b>013G8013</b>
	3/4"			<b>013G8018</b>
	1"			<b>013G8023</b>
	1-1/4"			<b>013G8030</b>
	1/2"	Straight	Double Female Solder Unions	<b>013G8042</b>
	3/4"			<b>013G8044</b>

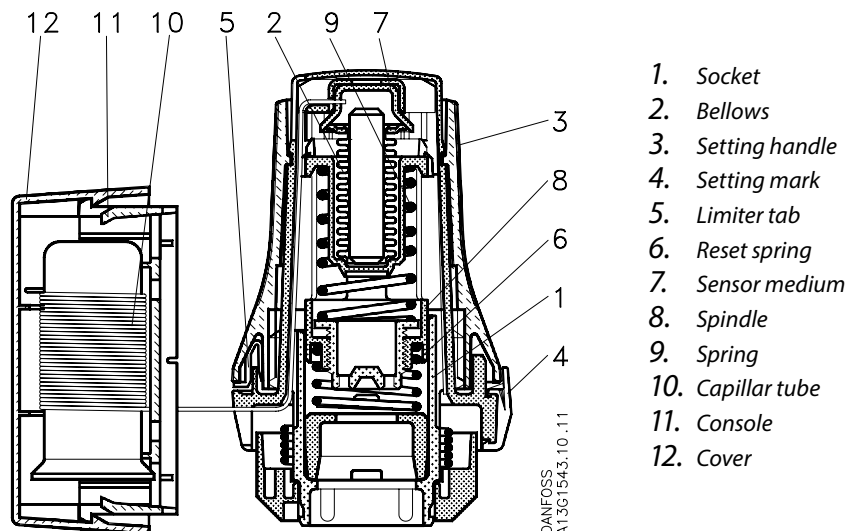
Design:

The RAE thermostatic operator operates with a liquid filled bellows system, which is actuated by ambient temperature changes. The calibrated pressure in the bellows corresponds to the temperature. This pressure is balanced by the force of a regulating spring.

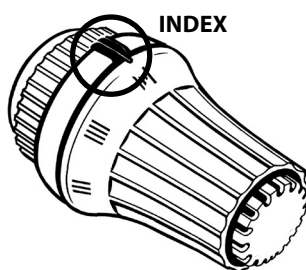
On a rise in ambient temperature, the pressure increases in the bellows, moving the valve cone

towards the 'closed' position, until equilibrium exists between the bellows and spring.

On a drop in ambient temperature, the pressure falls, allowing the bellows to contract and the valve cone to move towards the 'open' position until a state of equilibrium is re-established.



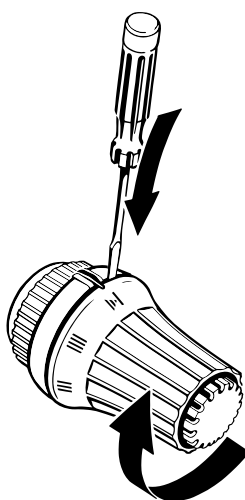
**Setting the Temperature:**



46°	53°	61°	68°	75°	82°	°F
*	I	II	III	IIII	>I	
8°	12°	16°	20°	24°	28°	°C

The required room temperature is set by turning the setting dial. The temperature scales show the correlation between scale values and the room temperature. The temperature values stated are for guidance only as the obtained room temperature will often be influenced by installation conditions.

**Locking the Settings:**



Locking and limitation of the temperature set point of RAE operators are carried out using the limiter tabs as shown in the illustration:

- Turn operator to maximum setting.
- Press and hold tab with screw driver while turning handle to desired max setting.
- Remove screwdriver.
- Similar steps are repeated when setting the minimum.
- Turn operator to lowest setting.
- With screwdriver press and hold tab to setting. Then remove.

**Mounting:**

The Danfoss snap-on mounting is easy to install and requires no use of tools, once the protective cap on the valve has been removed.

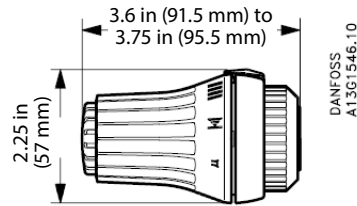
The operator is fitted to the valve by applying a gentle pressure. When the operator is in place, the snap-on mechanism is activated and the operator has been correctly mounted.

To remount the operator to the valve after removal, reset the snap-on mechanism by rotating the grey tightening ring base counter-clockwise.

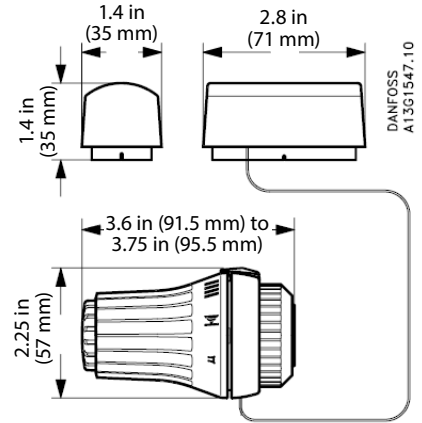
If mounting and dismounting are carried out again, the mechanism must be reset manually by turning the grey tightening ring base.

Installation	Removal	Resetting

Dimensions:



Operator type RAE 8254



Operator type RAE 8256

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