

## **DYNAMICAL®** Dynamic thermostatic radiator valve

## 230 series

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- It keeps the flow rate to the radiator at a constant value, regardless of the working conditions of the rest of the system.
- The stabilising action of the  $\Delta p$  regulator allows the thermostatic values to constantly work with a proper authority and low  $\Delta p$  values.
- The device is combined by a differential pressure regulator and a flow rate pre-setting device.
- Make easy and possible the renovation of existing two-pipe systems with thermostatic valves.
- Coupled to a thermostatic control head, the device modulates the flow rate according to the room temperature.
- Benefits of thermal comfort and energy saving, typical of thermostatic regulations, can be now obtained also in systems previously excluded.







#### **PRODUCT RANGE**

	CODE	CONN.	PIPE CONN.	MODEL
	<b>230</b> 302	3/8"	-	angled for steel pipe
	<b>230</b> 402	1/2"	-	
	<b>230</b> 500	3/4" (*)	-	
	<b>231</b> 302	3/8"	-	straight for steel pipe
	<b>231</b> 402	1/2"	-	
	<b>231</b> 500	3/4" (*)	-	
	<b>232</b> 302	3/8"	23 p. 1,5	angled for copper pipe
	<b>232</b> 402	1/2"	23 p. 1,5	
	<b>233</b> 302	3/8"	23 p. 1,5	straight for copper pipe
	<b>233</b> 402	1/2"	23 p. 1,5	
	<b>234</b> 302	3/8"		reverse for steel pipe
	<b>234</b> 402	1/2"		
	<b>237</b> 302	3/8"	23 p. 1,5	reverse for copper, single and multilayer pipes
	<b>237</b> 402	1/2"	23 p. 1,5	
(*) without rubber seal				

#### **TECHNICAL SPECIFICATIONS**

Body material	brass
Max working pressure	10 bar
Temperature range	5–95°C

#### **OPERATING PRINCIPLE**

The DYNAMICAL® value allows dynamic system balancing and a regulation of the thermal medium independent from the pressure within the radiators of two-pipe heating systems.

- The differential pressure regulator A. automatically cancels the effect of pressure fluctuation characterising variable flow rate systems and prevents noisy functioning.
- В. The flow rate pre-setting device makes it possible to directly set the maximum flow rate value, thanks to the combination with the differential pressure regulator.
- C. Flow rate adjustment according to the room temperature, thanks to the combination with a thermostatic, electronic or thermo-electric control head. The flow rate adjustment is optimised because it is made pressure independent.



constant Ap

### SETTING

The  $\Delta p$  regulator keeps constant the working pressure difference of both the pre-setting valve and the simple thermostatic valve.

As a consequence, the setting position of the DYNAMICAL® valve can be decided by using diagrams or tables similar to the one below, independently of the upstream pressures.

In order to make the device keep the flow rate constant independently of the system differential pressure conditions, it is necessary that the valve total  $\Delta p$  is within the minimum and the maximum value.







# **CALEF**

#### **REFERENCE DOCUMENTATION**

230-231-232-233-234-237 series

- Technical brochure 01330

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Caleffi S.p.A. S.R. 229 n. 25 · 28010 Fontaneto d'Agogna (NO) · Italy Tel. +39 0322 8491 · Fax +39 0322 863723 info@caleffi.com · www.caleffi.com · © Copyright 2019 Caleffi

#### **PRE-SETTING OPERATION**

Remove the valve knob.

To pre-set the flow rate, place the specific shaped ring.

The setting position reference is determined by the orientation of the flat lateral surface (1) of the control stem.

Botate the control stem to select the desired position.

Remove the setting nut and place the thermostatic control head on the valve.

Hydronic Solutions