130

variable orifice balancing valve

altecnic
Caleffi group

130 variable orifice balancing valve

Application

Balancing valves are used to regulate the flow of heating or chilled water to a heating or cooling emitter, such as a fancoil or air handling unit.

Hydraulic circuits must be correctly balanced to ensure that the system performs within the design parameters and provides a high level of comfort for the occupants, with the lowest possible energy consumption.

VODRV

The Altecnic 130 is a variable orifice double regulating valve (VODRV) is a double regulating oblique globe valve with pressure tapping at either side of the valve seat to enable the differential pressure to be measured.

The numerical indicator on the handwheel show the position open of the valve.

The position open relates the differential pressure across the valve seat to the multi-line flow charts and the corresponding flow rate through the valve.

The valve can also act as an isolation valve should this be required for maintenance on the circuit or system.

Construction Details

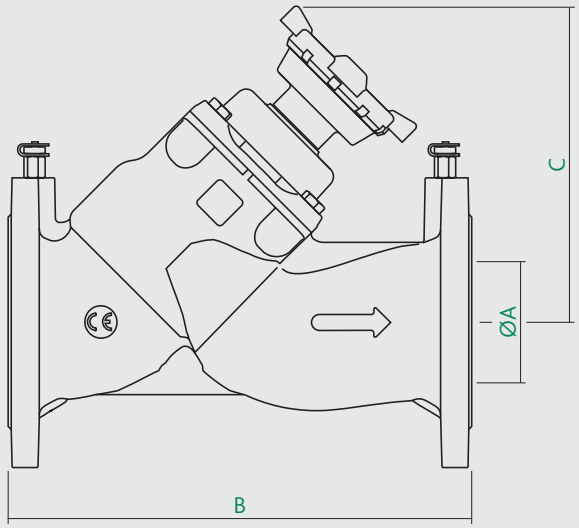
Component	Material	Grade
Body	Cast iron	BS EN 1561 EN-GJL-250
Cover	Cast iron	BS EN 1561 EN-GJL-250
Stem	Brass	BS EN 12164 CW614N
Regulating disc	Polymer	PPS
Seal seat	Cast iron	BS EN 1561 EN-GJL-250
Disc seal	EPDM rubber	
Seals	EPDM rubber	
Handwheel	PA	
	Steel*	
Pressure tappings	Brass/ EPDM seals	

* DN125 & DN150 sizes

Technical Data

Max. percentage of glycol:	50%
Maximum working pressure:	16 bar
Working temperature range:	-10 to 140˚C
Accuracy:	±10%
Flanged PN16:	BS EN 1092-2

Dimensions

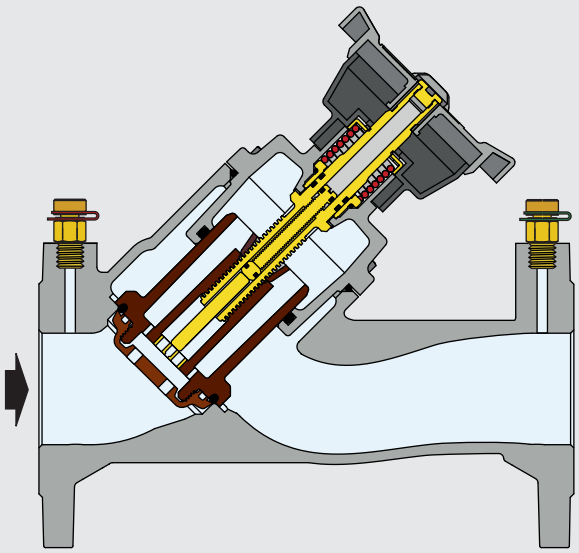


Product Code	A	B	C	kg
130060	65	290	225	13
130080	80	310	235	15.5
130100	100	350	245	21
130120	125	400	350	32
130150	150	480	380	45
130200	200	600	480	115
130250	250	730	525	160
130300	300	850	535	210

Disc Construction

The disc is made from technopolymer plastic.

This material is particularly resistant to abrasion due to the flowing water, especially important on the characterised regulating profile.



Handwheel

The shape of the handwheel is the outcome of research into ergonomics to ensure the greatest operator comfort and accurate adjustment.

- The range of adjustment with a number of complete turns permits great accuracy when balancing hydraulic circuits.
- The micrometric scale graduations are large and clear and make it easy to refine the flow rate adjustment.
- The handwheel is made of corrosion-proof technopolymer, for the sizes from DN 65 to DN 100 and DN200 to DN300 and steel for sizes DN 125 and DN 150.

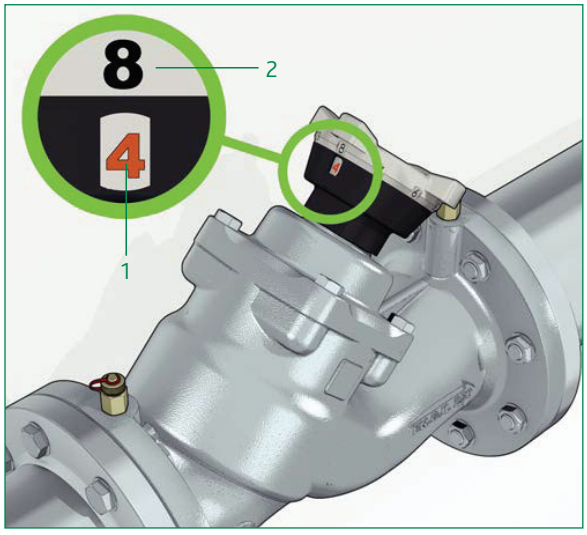
Position Indicator

The position open is indicated by two numbered indicators:

- The number of completed turns are shown on indicator (1) which shows an adjustment scale from 0 (closed) to a maximum adjustment (7, 8, 11, 13 and 15 depending on the size of the valve) in red.

  Turning the handwheel manually through 360° causes the indicator to click by one unit.
- The micrometric adjustment indicator (2) shows numbers in black from 0 to 9.

  Each change in the numerical position represents 1/10 of a turn of the handwheel with respect to the turns indicator (1).



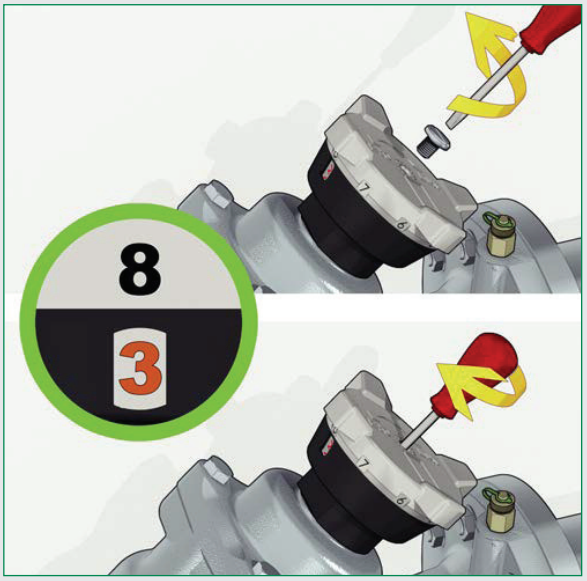
Memory Stop

The valves are equipped with an adjustable memory stop that, after full closure allows easy re-opening to the set position.

Once the valve has been regulated to the required position the maximum position can be restricted to this position without the need for special tools and is protected to avoid improper use.

Unscrew the threaded protective cap with a screwdriver, then insert the screwdriver in the handwheel and fully turn the internal screw clockwise until a resistance is felt, do not force it beyond this point.

For sizes DN 200–DN 300, the internal screw for the memory stop is a 6 mm hexagon located under the central protective cap.



Flow Data Charts

A flow data chart is available for each size of valve.

The multi-line charts relate each full turn of the handwheel to a line on the chart and the corresponding flow rate through the valve.

For ease of commissioning the Altecnic electronic manometer is recommended which contains flow data for the intermediate position.

Accessories

Test Point Probes - Code No: 100010

Pair test point probes with isolation valves
Female ¼" threaded connection.
Max. working pressure: 10 bar.
Max. working temperature: 110°C.

Electronic Manometer

Code 130006 Electronic flow rate and differential pressure measuring station complete with remote control unit

Code 130005 Electronic flow rate and differential pressure measuring station without remote control unit, with Android® app

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