

# AUTOMATIC FLOW CONTROL VALVE



Automatic flow control valve allow maintaining a constant flow rate at the desired value, within a wide differential pressure range between upstream and downstream.

The flow rate value is set through a cartridge adjustable from outside using a special accessory spanner. During this operation, the valve does not need to be shut off. Inserted in hydraulic circuits, the automatic balancing valve ensures maintaining the design flow rate.



## USE

They are particularly indicated in the following cases:

- Adjustment for pumping stations in central thermal fluid systems.
- Customer junctions balancing.
- Rising pillars balancing.
- Third way adjustment and balancing on thermoregulation units.

## CHOICE

It is advisable to choose a automatic flow control valve whose adjustment degree corresponds to about half the cartridge flow rate range.

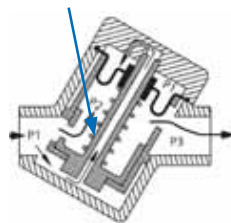
In this way, with the design nominal flow rate, a sufficient calibration margin is preserved so as to cope with any corrections due to inevitable route changes during work.

## OPERATING PRINCIPLE

Pressure P2 is determined by the membrane reacting to pressure P1 acting on the membrane upper chamber.

Interacting with the spring, the difference (P1-P2) remains constant, while maintaining a steady  $\Delta P$  through the orifice. As a result, a constant flow rate is obtained through the valve, regardless of the variations of the pressure difference between upstream and downstream.

Orifice bore



### KEY:

P1 and P3: Circuit pressure values  
P2: Pressure determined by membrane  
 $\Delta P = (P1-P3) =$  Total pressure difference between upstream/downstream

- Indicates pressure variations
- Indicates the flow direction

## POSSIBLE APPLICATIONS

Automatic flow control valve are mainly used on the hydraulic circuit delivery pipe. Below are some typical application examples:

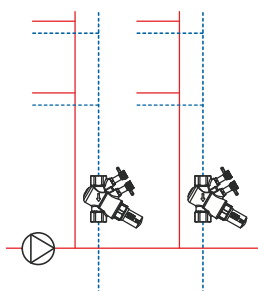


FIGURE 1

Automatic flow control valve with rising pillars balancing function.

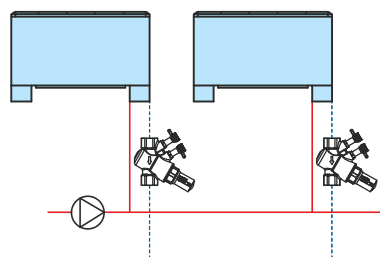


FIGURE 2

Automatic flow control valve with the function of serving in-line terminal elements (radiators, convectors, fan-coils, etc.).

## 2873

### Pressure independent control valve.

It allows to keep the flow rate to the desired level even when pressure conditions change in the circuit where it is inserted.

Brass body.

Polymer cartridge with elastomer diaphragm.

Indicator with graduated scale.

Threaded connections FF UNI-EN-ISO 228.

- Max operating pressure 16 Bar
- Allowed temperatures  $-20 \div +120$  °C
- Allowed fluid water and water+glycol 50%
- Pressure gauge plugs connection G1/8"



- Pressure independent control valve
- Vanne de réglage indépendant de la pression*
- Клапан с независимой регулировкой давления*
- Supapă de reglare independentă a presiunii*
- Válvulas de regulación independiente de la presión*
- Unabhängiges Druckregelventil*

Code Code Articul Cod Codigo Code	Size Taille Размер Dimensiune Medida Abmessung	DP - kPa DP - kPa DP - kPa DP - kPa DP - kPa	Flow rate - m <sup>3</sup> /h Débit - m <sup>3</sup> /h Напор - м <sup>3</sup> /ч Debit - m <sup>3</sup> /h Caudal - m <sup>3</sup> /h Durchflussmenge - m <sup>3</sup> /h	Cartridge Tamis Цвет картриджа Cartus Cartucho Farbe Einsatz	EURO EURO EURO EURO EURO	Pack Cond. Упак. Cutie Caja Pack.	Carton Emballage Кор. Ambalaj Embalaje Verpack.
2873.04.50	1/2"	16 - 200	0,037 - 0,575	G	-	1	1
2873.04.60	1/2"	30 - 400	0,064 - 1,110	B	-	1	1
2873.05.50	3/4"	16 - 200	0,037 - 0,575	G	-	1	1
2873.05.60	3/4"	30 - 400	0,064 - 1,110	B	-	1	1
2873.06.50	1"	16 - 200	0,037 - 0,575	G	-	1	1
2873.06.60	1"	30 - 400	0,064 - 1,110	B	-	1	1

G = O.R. Grey

B = O.R. Black

004



**Replaceable cartridge. See spare parts pricelist.**

**Cartridges are available in different colours to allow immediate identification of both the pressure field and flow rate.**

**For flow rate adjustment use accessory spanner code 2961.00.02 (see page 3.08).**

**Optional actuator series 2881 2882 to be ordered separately (see page 3.08).**

## 2874

### Pressure independent control valve, provided with pressure taps.

It allows to keep the flow rate to the desired level even when pressure conditions change in the circuit where it is inserted.

Brass body.

Polymer cartridge with elastomer diaphragm.

Indicator with graduated scale.

Threaded connections FF UNI-EN-ISO 228.

- Max operating pressure 16 Bar
- Allowed temperatures  $-20 \div +120$  °C
- Allowed fluid water and water+glycol 50%
- Pressure gauge plugs connection G1/8"



- Pressure independent control valve provided with pressure outlets
- Vanne de réglage indépendant de la pression dotée de prises de pression*
- Клапан для независимой регулировки давления с приёмниками давления*
- Supapă de reglare independentă a presiunii dotată cu prize de presiune*
- Válvula de regulación independiente de la presión dotada de tomas de presión*
- Unabhängiges Druckregelventil mit Druckanschlüssen*

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**Replaceable cartridge. See spare parts pricelist.**

**Cartridges are available in different colours to allow immediate identification of both the pressure field and flow rate.**

**Valve provided with two pressure taps.**

**For flow rate adjustment use accessory spanner code 2961.00.02 (see page 3.08).**

**Optional actuator series 2881 2882 to be ordered separately (see page 3.08).**

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