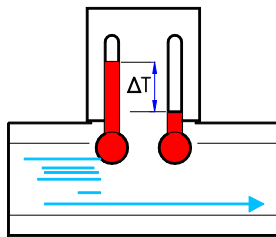
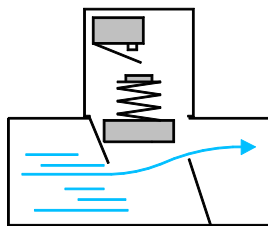
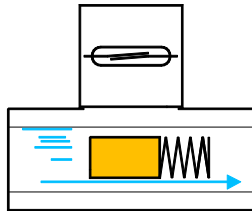
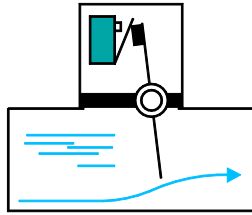


TECHNOLOGY



Paddle

The movement of a paddle, dependent on the value of the flow rate, is magnetically transmitted to the mechanism that activates the electrical contact.

The paddle system is used for monitoring the presence of flow in pipes up to DN300, has low pressure losses and is insensitive to any impurities present in the fluid.

Piston – In line

A piston, equipped with a magnetic assembly and supported by a spring, actuates an electrical contact housed externally, to the flow chamber of the body.

The system can be used with pressures up to 300 bars, as security in hydraulic and lubrication systems and is available for pipes up to DN50.

Piston – Valve

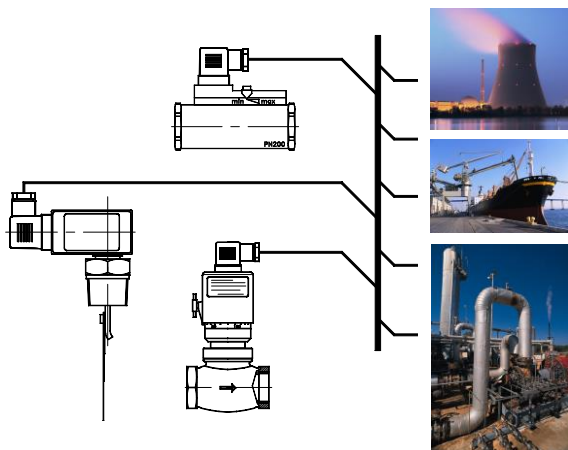
A piston, equipped with a magnetic assembly and supported by a spring, actuates an electrical contact housed externally, to the flow chamber of the body valve.

These flow switches that can be used as security devices in the lubrication and cooling circuits of machine tools and industrial plants are compensated for the variation of viscosity of the fluid up to 200 cst. and are available for pipes up to DN300.

Calorimetric

Electronic and static flow switch type without moving parts. The temperature difference measured between two sensors, one heated and one at the temperature of the fluid, is directly proportional to the flow rate and/or flow velocity. The system is easy to install, has no pressure losses, is insensitive to impurities, can be used independently of the diameter of the pipe.

FIELDS OF APPLICATION

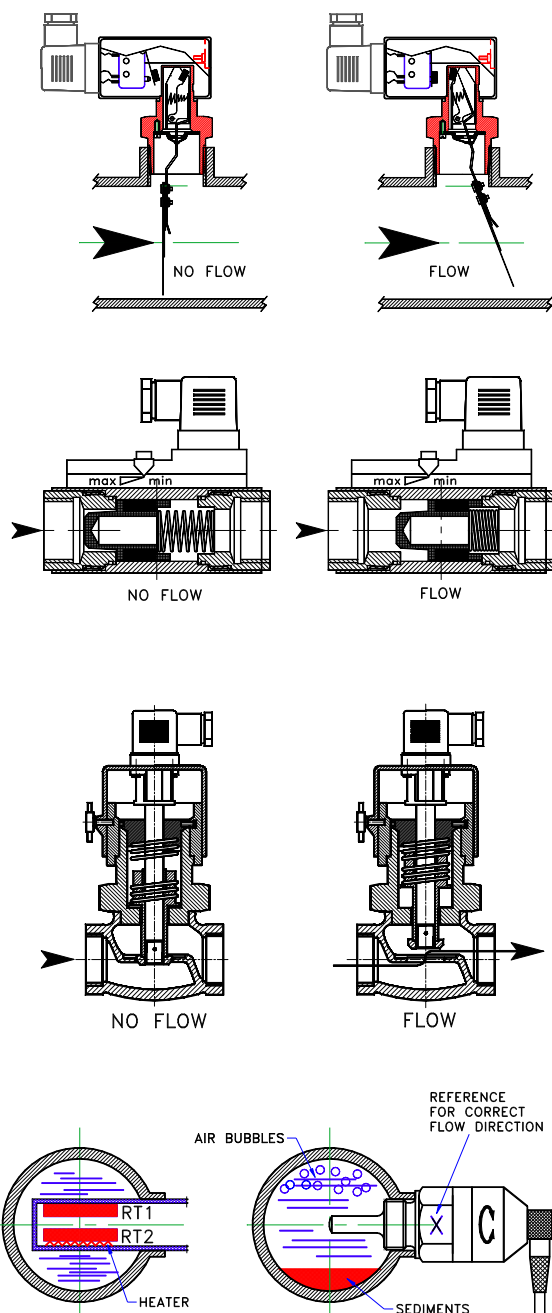


- Flow monitoring of liquids and gases.
- Activation of audible or visible alarms.
- Protection of pumps.
- Safety in cooling and lubrication circuits.
- Control of emulsions on machine tools.
- High-pressure washers.
- Air-conditioning and refrigeration.
- Compressors.
- Industrial processes.
- Chemical.

ADVANTAGES

- Simple structure devices.
- Easy to install.
- Separation of flow chamber and electric head.
- Electric head replaceable without removing the device from the hydraulic circuit.

SYSTEM DESCRIPTION



Paddle

The paddle system represents an efficient and economical alternative for the monitoring of liquids and gases. The displacement of the paddle, supported by a spring, is proportional to the flow rate.

A permanent magnet is fixed to the paddle and, when the calibration set is reached, the magnet actuates an electrical contact.

The calibration is obtained by varying the position of the electrical contact with respect to the magnet or by acting on an adjustment spring.

Piston – In line

The in-line-piston system is used for the control and for the indication of the flow rate of liquids and gases. The piston, equipped with a magnetic assembly and supported by a spring, is dragged by the flow and its displacement is proportional to the flow rate. The piston is housed in a rugged body made from a metal bar that allows a compact and robust construction, suitable for use with high operating pressures. The electrical contact is positioned outside the body and the calibration is obtained by varying its position with respect to the magnetic piston.

Piston – Valve

The piston-valve system is used for the control and for the indication of the flow rate of liquids and gases, where it is required a precise adjustment of the calibration. The piston, housed inside a valve body, equipped with a magnetic assembly and supported by a spring, is lifted vertically by the flow rate. Its position is directly proportional to the flow rate. The electrical contact is positioned outside the flow chamber and is magnetically actuated.

The adjustment, assisted by a calibration graph, is performed by rotating and positioning the electric head on a wide scale. The piston-valve system is compensated for variations of the fluid viscosity up to 200 cst.

Calorimetric

The calorimetric system is used to control the flow rate of liquids where are requested compact size, absence of moving parts, and a very low pressure drop.

The calorimetric system is based on the positioning of two temperature sensors inside a stem. One of the sensors is permanently heated, the other assumes the temperature of the liquid. The temperature difference between the sensors is proportional to the flow velocity.

The calibration is obtained by trimming an electronic circuit that processes the electronic measurement of ΔT .

TECHNICAL DATA

Concept	Paddle – Piston – Calorimetric
Process connection	1/4" ÷ 3" DN15 ÷ DN300
Type of connection	Threaded Flanged
PN	PN6 ÷ PN300
Max. temperature	120 °C
Output signal	NC – NO – SPDT Contact
Calibration	Fixed or adjustable
Materials	Brass – Bronze – Stainless steel – PVC

EXECUTIONS

■ Degree of protection IP65

Piston and valve system – In line piston – Paddle
Cable output - DIN 43650-A Plug

■ ATEX II 2G Exd IIC T6

Piston and valve system – Housing with cable output

■ ATEX I M1 Exia I

■ ATEX II 1G Exia IIC T4

■ ATEX II 1D Exia D 20 T135

Piston and valve system – In line piston – Paddle
Housing with cable output