

Serie F.1000



PRESSURE INDEPENDENT FLOW LIMITER VALVE

F.1000



The valves in the series F.1000 balance the flow in main circuits or single sections of heating or conditioning plants.

They allow correcting irregularities in the supply of the single users (irregularities which might cause noise and damage the components of the plant) and, as a result, improve environmental comfort and optimize energy consumption.

Through opening or closing the valve, the room temperature is regulated. Flow value is not influenced by pressure undulation and is not influenced by each other.

They can be installed indifferently on the supply piping and on the return piping.

Control deviation: $\leq 5\%$

Application fields



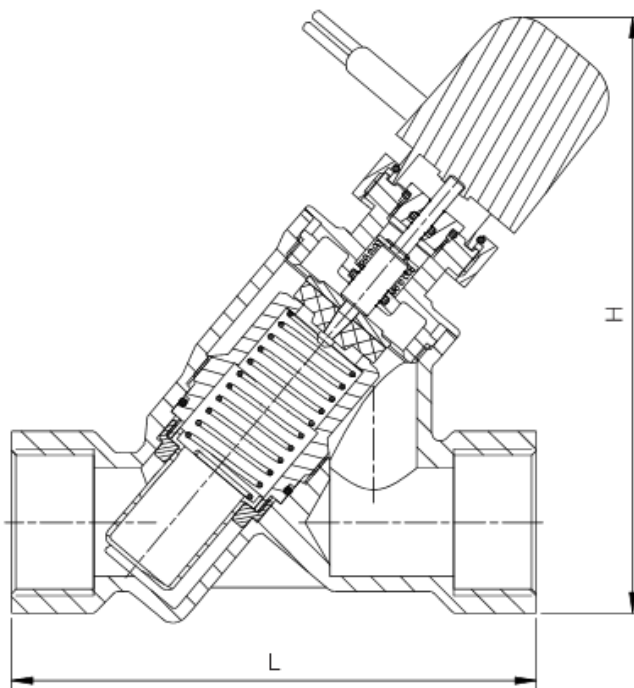
CONDITIONING



HEATING



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Materials

	Component	Material
1	Body	Brass
2	Plug	Brass
3	Membrane	EPDM
4	Stem	Stainless steel
5	Spring	Stainless steel
6	Seals	NBR
7	Actuator	Shell: Flame retardant PC

Dimensions (mm)

DN	15	20	25
L	104	104	112
H	148	148	152

Working Differential Pressure (kPa)

ΔP	20 - 200	30 - 300	20 - 200	30 - 300	20 - 200	30 - 300
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Rated Flow (m³/h)

	0.36 - 1.51	0.47 - 2.0	0.36 - 1.51	0.47 - 2.0	0.6 - 1.51	0.6 - 2.09
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Certificates



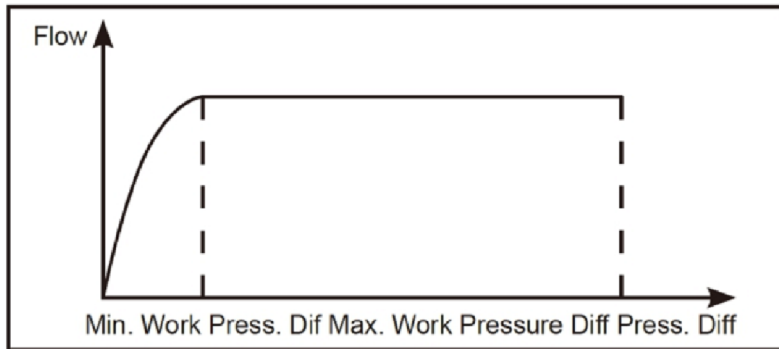
Standards

Connection standard : EN10226 GB/T 7306.1-2000
 Tests : TS EN 12266-1
 Nominal Pressure: PN16 / PN25
 Temperature: -10 ~ 110°C

Accessories

- Actuator

FLOW CHARACTERISTICS:



STORING

- Keep the valve in a dry place, protect from damage and dirt.
- Handle with care, avoid hitting, avoid knocks, especially on the weaker parts.
- Do not lift the valve by the actuator.
- Use suitable, sturdy packing for transport.

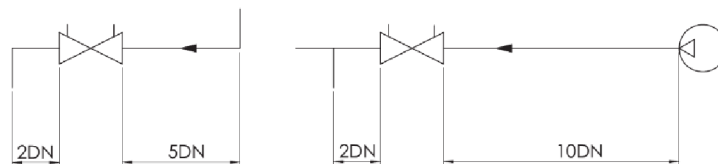
RECOMMENDATIONS

Before carrying out maintenance or dismantling the valve: ensure that the pipes, valves and fluids have cooled down, that the pressure has decreased and that the lines and pipes have been drained in case of toxic, corrosive, inflammable and caustic liquids. Temperatures above 50°C and below 0°C might cause damage to people.

Commissioning, decommissioning and maintenance interventions must be carried out by trained staff, taking account of the instructions and local safety regulations.

ADVICE FOR PLANT LAYOUT

- In order to ensure that temperature and pressure limits are not exceeded, the system should be fitted with a thermostat and pressure switches.
- Observe the following minimum distances between the valve and other system components. When connecting to a bend or pump, it is necessary to maintain a certain length of straight pipe. When connecting with elbow, follow valve 5DN, rear 2DN principle; follow the 10DN principle when connecting with a pump.



ABOUT CAVITATION

The flow must be free of cavitation.

As the liquid flows through the valve, as a result of section reduction, its velocity and its dynamic pressure increase, and the corresponding static pressure decreases. If the static pressure value drops below the vapour pressure level, steam bubbles will form. These bubbles will be carried away by the fluid, and implode when the static pressure exceeds the vapour pressure again. Bubble implosion generates high temperatures and pressure shock waves locally, which will damage the valve and cause vibrations and noise. Higher temperatures, lower static pressure and higher pressure drops across the valve usually increase the risk of cavitation

INSTALLATION

- Do not lift the valve by the actuator.
- Handle with care
- Before installing, check that:
 - the piping is clean,
 - the valve is clean and undamaged,
 - the thread are clean and undamaged.
- Do not use with fluids which are petroleum based or containing mineral oil, hydrocarbons, or solvents. Do not use with abrasive fluids.
- Suitable for antifreeze solutions (with minimum 50% water dilution diethylene glycol, ethylene glycol, and propylene glycol).
- Use piping of the same nominal size of the valve.
- The valve must be installed with flow direction same as the arrow on the valve body.
- The balancing valve could be installed in both the water supply pipe and water return pipe. Only one balancing valve is needed in one loop. It is best to install in the water return pipe which temperature is lower.
- The balancing valve in main pipe should be installed in the exit direction of water pump.
- The balancing valve could be installed both horizontally and vertically.
- For trouble-free operation of the product, good installation practice must include initial system flushing (balancing valve must be fully open) and the use of side stream filter(s). Assure there are no solid matters in system.

COMMISSIONING

- No on-site commissioning needed
- It is advisable to flush the system clean. Keep the valve fully open when flushing.

DISPOSAL

For valve operating with hazardous media (toxic, corrosive...) , if there is a possibility of residue remaining in the valve, take due safety precaution and carry out required cleaning operation. Personnel in charge must be trained and equipped with appropriate protection devices.

Prior to disposal, disassemble the valve and separate the component according to various materials. Please refer to product literature for more information. Forward sorted material to recycling (e.g. metallic materials) or disposal, according to local and currently valid legislation and under consideration of the environment.

Actuator



Specification

Enclosure	IP44
Power	Single phase 220V AC (Option: 24V AC)
Type	Electrothermic Actuator
Push force	90-125N
On/off time	< 4.5 min
Power	2.5W – 3W
Maximum current	150mA – 250mA
Function	Two wires normally closed type (Option: normally opened type)
Feedback signal	Optional (four wires)

INSTALLATION

- Remove the knob or helmet from the body of assemble.
- Align the actuator to the body, tighten the ring-nut on the actuator to the body. Do not use pipe tongs, wrenches or similar tools.
- Connect to wire.

ATTENTION

- The connection cable must not be replaced.
- If the actuator has a fault, it must be replaced as a whole.
- The actuator must not be installed under the valve body.

