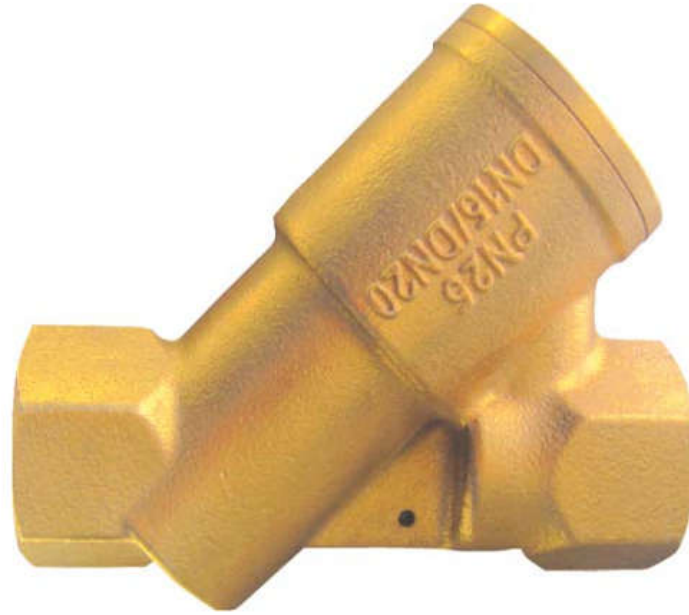


Serie F.600



BRASS DYNAMIC BALANCING VALVE

F.640



The valves F.640 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.

When the system pressure is within the scope of work pressure difference fluctuation, it can balance the change dynamically and maintain constant flow in pipe.

Precision calibrated valve plug keeps the flow deviation no greater than $\pm 5\%$.

The flow rate is factory preset multiple ΔP ranges available for each size

No on-site commissioning is needed, saving time and labour costs

No need of re-balancing after system changes

Application fields



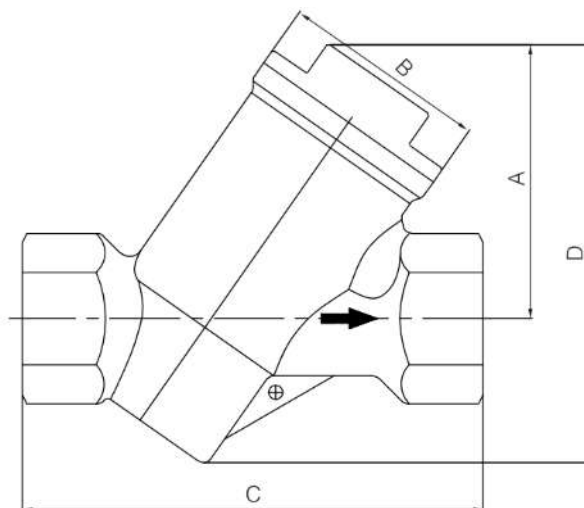
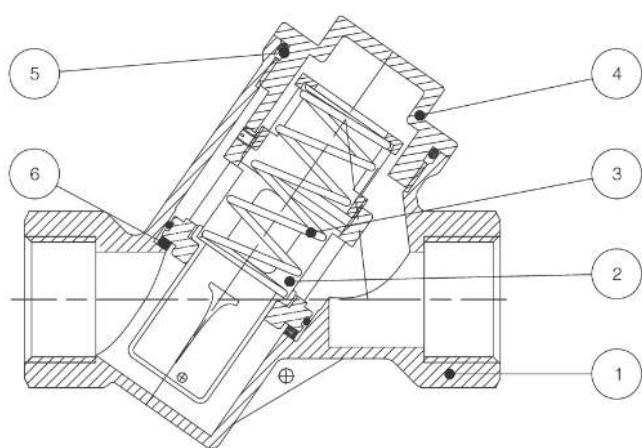
CONDITIONING



HEATING



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Materials

Component	Material
1 Body	Brass
2 Core	Stainless steel
3 Spring	Stainless steel
4 Bonnet	Brass
5 O-Ring	EPDM
6 Gasket	EPDM

Dimensions (mm)

DN	15	20	25	32	40
A	60	60	65	80	84
B	Ø45	Ø45	Ø45	Ø55	Ø55
C	100	100	110	140	145
D	90	90	95	110	115

Technical Parameter

DN	ΔP Code	ΔP Range (Kpa)	Flow Range (m³/h)
DN15 DN20 DN25	A	15 – 150	0.432 – 1.51
	B	20 – 200	0.54 – 1.98
	C	30 – 300	0.68 – 2.77
	D	80 – 800	1.00 – 4.18
	E	10 – 100	0.216 – 0.54
DN32 DN40	A	15 – 150	0.54 – 3.13
	B	20 – 200	0.68 – 3.67
	C	30 – 300	0.79 – 4.82
	D	80 – 800	1.44 – 7.52

*NOTE: According to design requirement, select a valve with suitable ΔP range. Design flow should be in valve flow range.

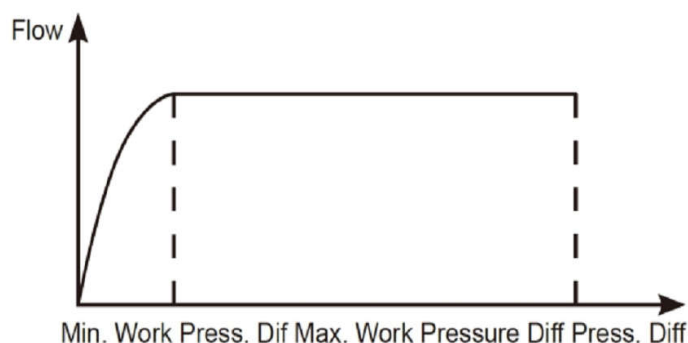
Certificates



Standards

Thread standard : ISO 7-1
 Tests : TS EN 12266-1
 Nominal Pressure: PN25
 Temperature: 0 ~ 110°C

Flow Characteristic



- Acting as a simple orifice plate, the valve plug will fully open when ΔP across the valve is below its control range. This allows the flow rate increases with the grow of ΔP .
- If ΔP is in the control range, the valve plug will adjust its opening in terms of the system's ΔP change. This ensures a constant flow rate with a deviation no greater than $\pm 5\%$.
- If ΔP exceeds the control range, the valve plug will work as an orifice plate again to achieve the smallest opening rate. And the flow rate increases with the growth of ΔP .
- ΔP – Flow curve show that in the working ΔP range, the flow rate stay the same.

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.
- Use suitable, sturdy packing for transport.

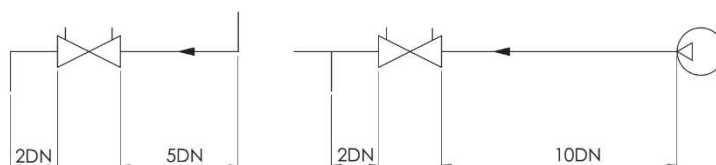
RECOMMENDATIONS

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

- Handle with care
- Before installing, check that:
 - the piping is clean,
 - the valve is clean and undamaged,
 - the flange sealing surfaces are clean and undamaged.
- The valve is unidirectional; respect the flow direction indicated by the arrow on the body.
- The valve can be installed horizontally or vertically
- Water hammers might cause damage and ruptures. Avoid inclination, twisting and misalignments of the piping which may subject the installed valve to excessive stresses. It is recommended that elastic joints be used in order to reduce such effects as much as possible.

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.