Serie F.600

STATIC BALANCING VALVE

F.600

The valves in the series F.600 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.

They perform shut-off and measuring functions. The continuous presetting function allows controlling the loss of pressure and of the flow rate.

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

It also allows the transmission of the delivery pressure to the DPCV pressure regulator

Application fields

CONDITIONING HEATING

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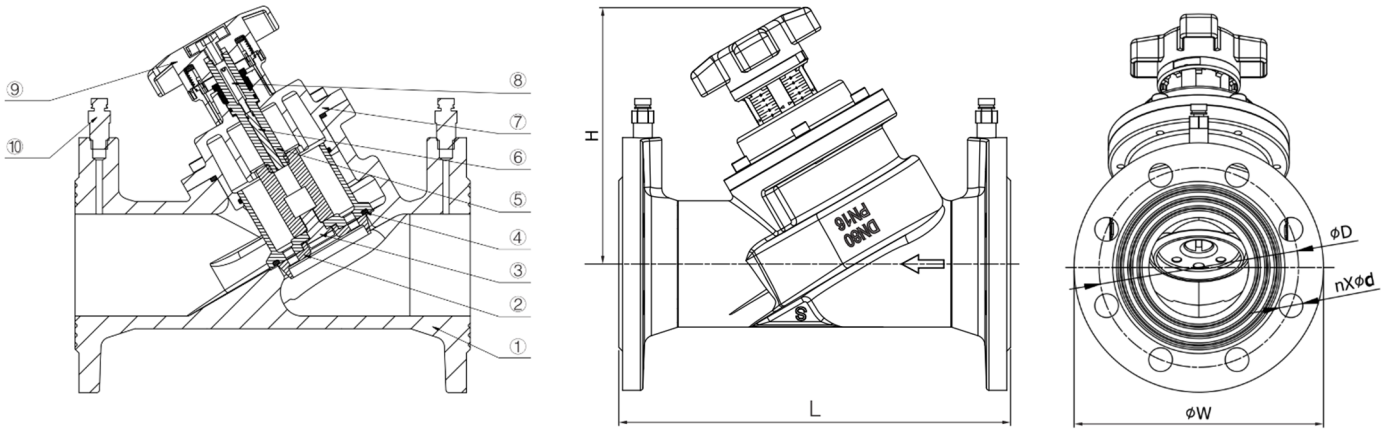


Materials

	Component	Material
1	Body	Ductile Iron
2	Valve core	Ductile Iron / Stainless steel / Brass
3	Screw	Stainless steel
4	Sealing	PTFE / EPDM
5	Stem	Brass / Stainless steel
6	Core rod	Brass / Stainless steel
7	Bonnet	Ductile Iron
8	Lock Screw	Stainless steel
9	Handwheel	DN40~250: Nylon ; DN300~500: Die-Cast Aluminum
10	Measuring Points	Brass

Dimensions (mm)

DN	40	50	65	80	100	125	150	200	250	300	350	400	450	500
L	200	230	290	310	350	400	480	600	730	850	980	1100	1200	1250
H	136	152	180	200	220	308	322	420	460	600	614	642	675	713
W	150	165	185	200	220	250	285	340	405	460	520	580	640	715
D	110	125	145	160	180	210	240	295	355	410	470	525	585	650
nxd	4x19	4x19	4x19	8x19	8x19	8x19	8x23	12x23	12x28	12x28	16x28	16x31	20x31	20x34

Kvs

	32.3	54	94.47	137.2	211.2	330.4	408.52	759.25	1162.25	1703.3	2250	2804	3750	4210

Certificates

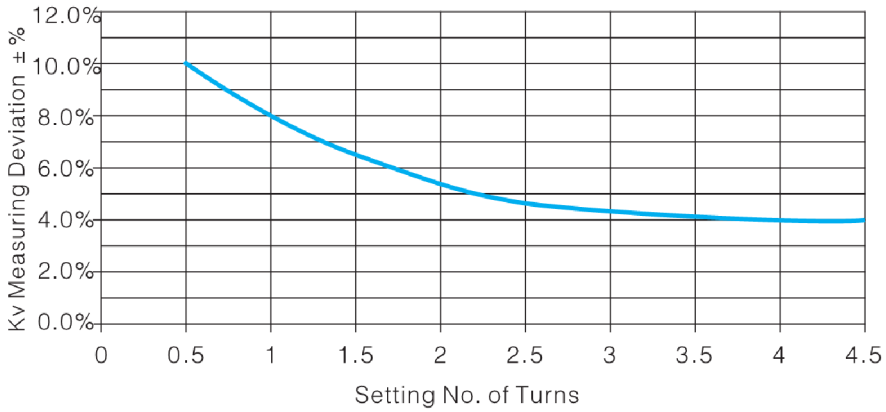
Standards

Design : TS EN 13789
Flange Dimensions : TS EN1092-2 (PN 16)
Connection Dimensions : TS EN 1092 (PN 16)
Tests : TS EN 12266-1
Nominal Pressure: PN16
Temperature: -10 ~ 120°C

Accessories

- Electronic instrument for measuring the differential pressure, flow rate and balancing of the circuit
- Pressure gauge probe adaptor

Measuring Accuracy:



When the valve's opening rate is greater than 50%, the deviation is lower than ±5%. Based on this, it is suggested to choose a valve with at least 50% opening rate when working under the design flow. Additionally, in order to ensure adequate on-site commissioning allowance, it is recommended to set the valve at around 75% opening rate.

STORING

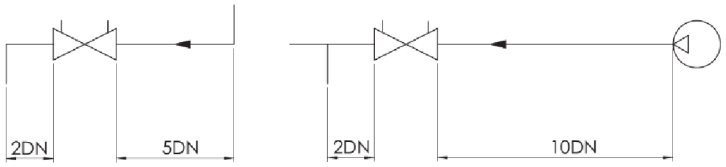
- Keep the valve in a dry place, protect from damage and dirt.
- Handle with care, avoid hitting, avoid knocks, especially on the weaker parts (hand wheel).
- Do not lift the valve by the hand wheel.
- Use suitable, sturdy packing for transport.

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

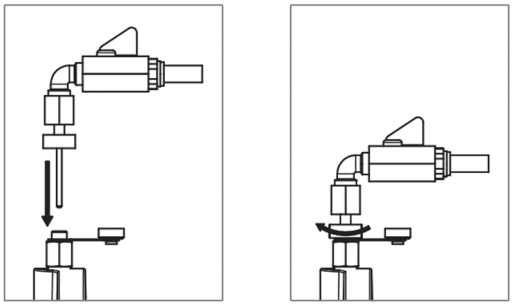
- Do not lift the valve by the hand wheel.
- Handle with care
- Before installing, check that:
• the piping is clean,
• the valve is clean and undamaged,
• the flange sealing surfaces are clean and undamaged.
- The valve is unidirectional; respect the flow direction indicated by the arrow on the body.
- Use suitable gaskets and check they are correctly centered.
- Do not weld the flanges to the piping after installation of the valve.
- 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.
- Tighten the bolts crosswise.
- The position indicator may be set to 4 positions for an easier reading, without changing the valve preset regulation position.

COMMISSIONING

- It is advisable to flush the system clean. Keep the valve fully open when flushing.
- If a system pressure test is required, the maximum allowed pressure PS may be exceeded by up to a maximum of 24 bar. Pressure tests must be carried out at room temperature and with the valve fully open.

MEASURING

Pay close attention during measurement in the case of hot media.
- Pressure test plugs are self-sealing. Unscrew the pressure test plug cap and insert the probe.
- Screw the probe ring nut to the pressure test plug.
- We recommend placing an isolation valve (S) on the probe.
- After measuring, unscrew and extract the probe. Screw the plug cap back on



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.