

Frese ALPHA NPT 1/2" to 2" Automatic Balancing Valve

Application

The Frese ALPHA Valves are particularly designed and manufactured for the automatic balancing of heating and cooling circuits.

The Frese ALPHA Cartridges - the second generation cartridges - are an integral part of the Frese ALPHA Valves limiting the flow at the specified level even under fluctuating pressure conditions.

The patented design of these cartridges introduces a replaceable orifice plate for higher flexibility and a resistant diaphragm for higher accuracy. From small size threaded valves 1/2" (DN15) to big flanged type valves 40" (DN1000), from small heating units to district cooling applications, Frese ALPHA Valves guarantee the hydraulic balance of the system regardless pressure fluctuations.

Benefits

- Balancing of the system takes place automatically even under fluctuating pressure conditions.

Design

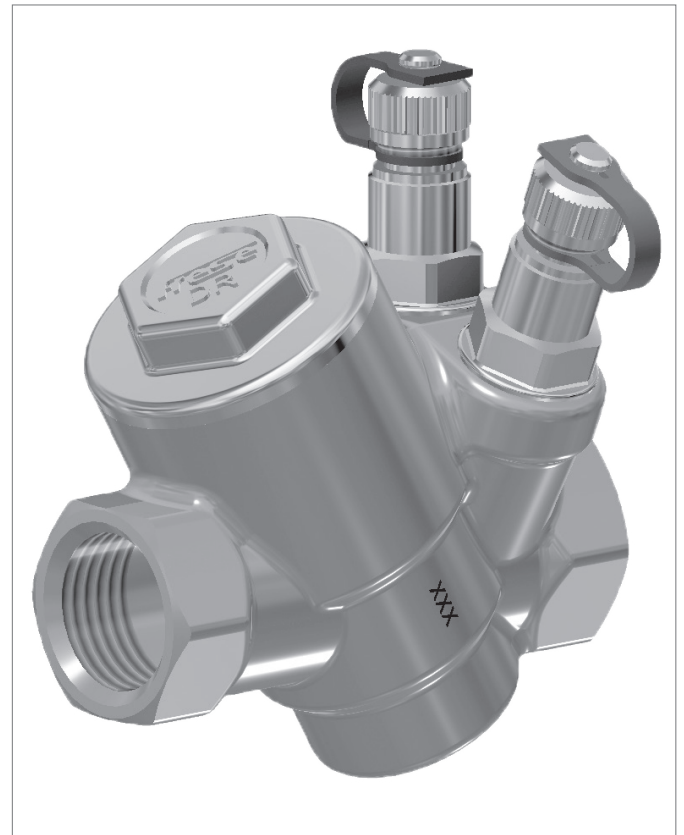
- No need to use balancing valves in the distribution lines, main distribution lines and supply lines.
- Less time to define the necessary equipment for a hydraulic balanced system.
- No impact if the calculated distribution of pressure in the installation is not accurate.
- Security that the specified flow is also the real one
- No requirements on pipe lengths before and after the valve.

Installation

- Minimized commissioning time due to automatic balancing of the system.
- Cartridge solution makes flushing procedure very easy.
- No need for oversized pumps and oversized control valves.

Operation

- Energy savings due to elimination of overflows.
- Higher comfort due to correct distribution of water in the system and to optimized function of the control valves.



Features

Wide product range covering all applications:

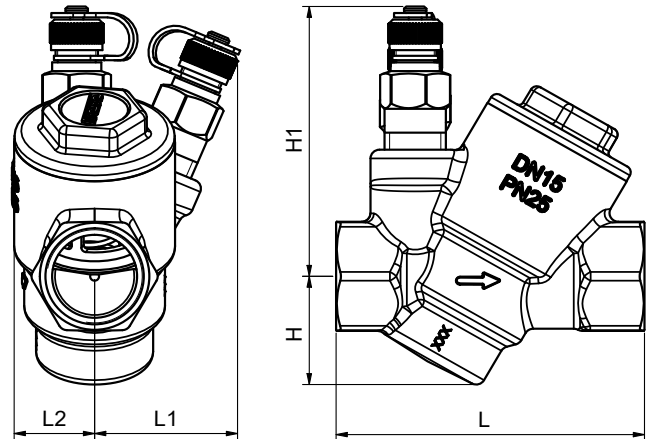
- threaded sizes from 1/2" to 2"
- end connections female/female.
- dezincification resistant brass
- P/T plugs.
- Modifications & extensions of the system do not affect the hydraulic balance in the other parts of the system.
- Tamper resistant cartridge independent of flow regulation errors during commissioning and operation of the system.
- Self-cleaning cartridge not allowing dirt to compromise the accuracy of the valve.
- Resistant diaphragm between the moving parts of the cartridge eliminates friction, noise and impact from water hammer.

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Technical data

Valve Housing:	DZR brass, CW602N
P/T plugs:	DZR brass, CW602N
O-rings:	EPDM
Pressure class:	PN25
Temperature:	-20°C to + 120°C
Diff. Pressure Range:	7 - 600 kPa
Thread:	NPT
Needles for DP measurement:	Max diameter, ø3.2 mm Length, 25 - 40 mm

The pipe system shall be properly ventilated to avoid risk of air pockets. Glycolic mixtures up to 50% are applicable (both ethylene and propylene).
Recommendation: Water treatment to VDI 2035.



Product Programme

Frese no.	Dimension	L [mm]	L1 [mm]	L2 [mm]	H [mm]	H1 [mm]	Weight [kg]
49-8001	1/2"	77	35	19	31	63	0.50
49-8011	3/4"	77	35	19	31	63	0.52
49-8021	1"	84	35	19	31	63	0.61
49-8031	1"L	123	42	32	47	77	1.30
49-8041	1-1/4"	123	42	32	47	77	1.30
49-8051	1-1/2"	123	42	32	47	78	1.44
49-8061	2"	128	42	32	47	78	1.72

Specification text

The valve shall operate by means of an automatic balancing cartridge with replaceable orifice plate and internal diaphragm.
The pressure class of the valve shall be PN25.
The valve housing shall be made of DZR brass.

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