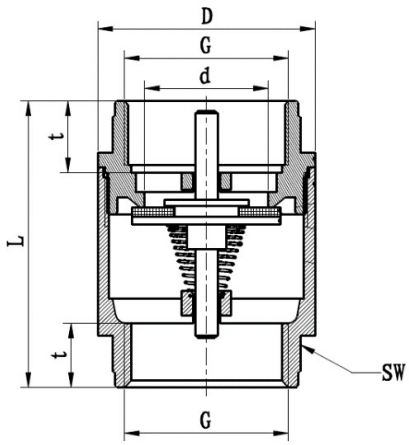
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PRODUCT DESCRIPTION

The check spring valve is designed for installation on hydraulic pipeline networks and the passage of the transported medium in only one direction, indicated by an arrow on the valve body.
A brass core is used as a working valve.

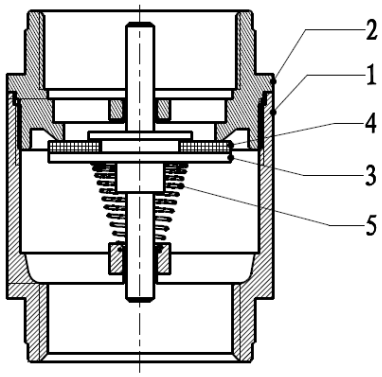


TECHNICAL PARAMETERS	
Connection type	Threaded
Maximum operating temperature	90 °C
Nominal pressure, PN	16 bar
Minimum opening pressure	0,036 bar
Nominal diameter range DN	15-50 mm

DIMENSIONS

SIZE	1/2”	3/4”	1”	1*1/4”	1*1/2”	2”
D (mm)	30	36,6	44	55,5	63	78
L (mm)	48	52	58	66	71	80
d (mm)	15	18,5	25	28	38,5	54
t (mm)	12,5	13,5	14,5	15	15	16,5
SW	25	31	38	46	53	65
Weight, g	125	173	250	400	550	786

DESIGN AND MATERIALS		
1	Big half-body	Brass CW617N
2	Small half-body	Brass CW617N
3	Core	Brass HPB57-3
4	Seal	NBR
5	Spring	Stainless steel AISI 304

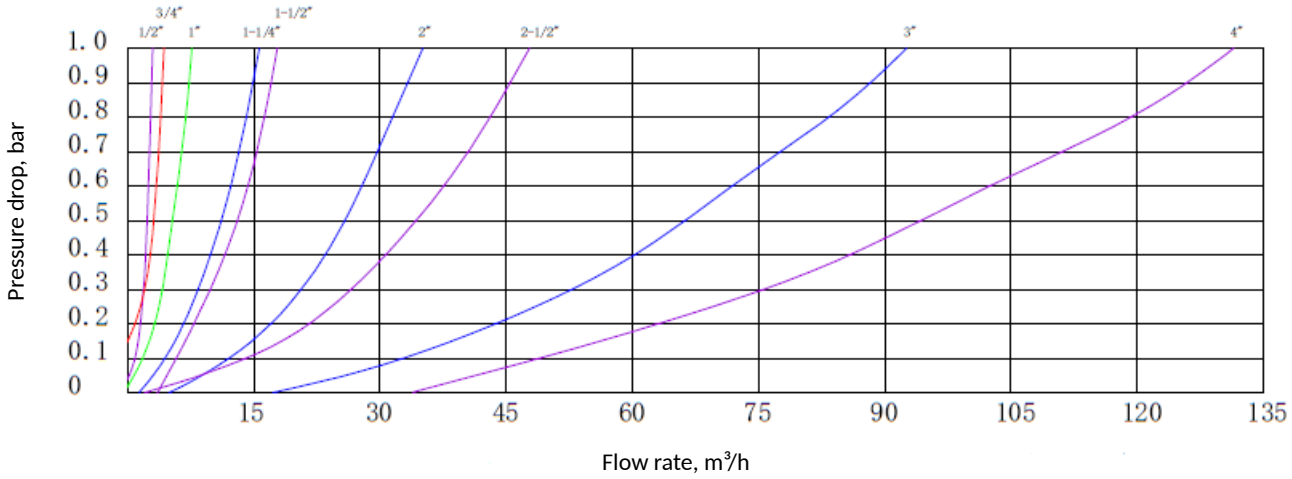


OPERATING PRINCIPLE

The valve consists of two brass semi-bodies (pos. 1 and 2), in which a movable stem is located, consisting of a brass seat and a nitrile butadiene seal (5). The return of the spool to the seat is provided by a spring (3). The transported medium, due to its excess pressure, overcomes the resistance of the spring-loaded stem with a seat and passes through the valve, losing part of the pressure. When equalizing the excess pressures of the medium before and after the valve, and also in the case when the pressure of the medium after the valve becomes greater than the pressure upstream of the valve, the spring returns the seat, preventing the reverse flow.

HYDRAULIC PARAMETERS

Graph of pressure loss versus volume flow



The graph is built under the following conditions: working medium - water; water temperature - 23°C.

INSTALLATION REQUIREMENTS

1. The check valve can be mounted on pipelines in any mounting position with a connection on a cylindrical pipe thread.
2. The check valve is installed with an arrow on the body in the direction of flow, both in a horizontal and vertical position.
3. Installation and dismantling of the product, as well as any adjustment or repair operations, must be carried out in the absence of pressure in the system.
4. During installation, one should take into account the fragility of the brass body of the non-return valve and avoid tightening the couplings when tightening with a seal on the pipeline thread. The limit torque is shown in the table below:

TORQUE LIMIT						
Thread size	1/2"	3/4"	1"	1*1/4"	1*1/2"	2"
Limit torque on the thread, Nm	35	45	65	90	130	160

4. The check spring coupling valve should not experience loads from the pipeline (bending, compression, tension, torsion, distortions, vibration, misalignment of branch pipes, uneven tightening of fasteners). If necessary, supports or compensators should be provided to reduce the load from the pipeline on the check spring valve. The misalignment of the connected pipelines should not exceed 3 mm with a length of up to 1 m + 1 mm for each subsequent meter.
5. The presence of mechanical particles in the flow of the transported liquid can limit the closing ability of the valve, so it is recommended to install a mechanical filter before the valve.
6. To avoid burnout of sealing materials, welding work on the pipeline with a check valve installed on it must be carried out with measures to prevent heating of the check valve.

MANUFACTURER

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