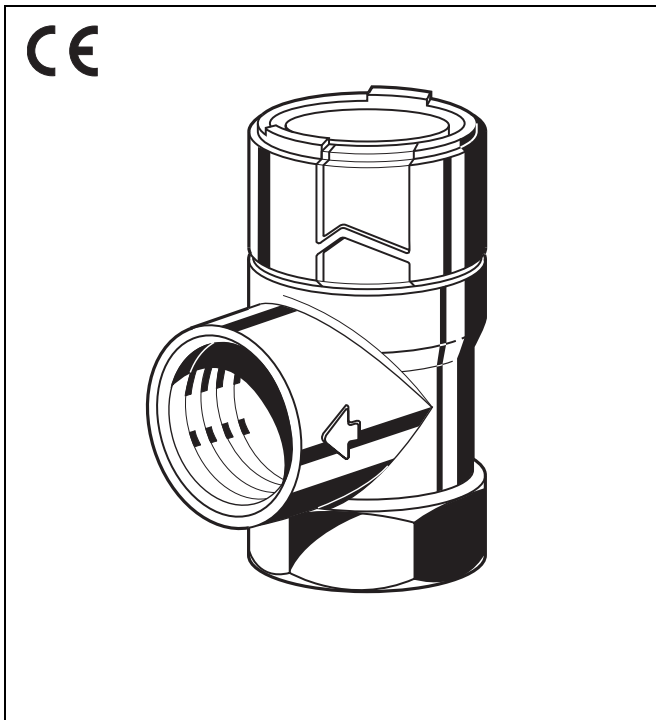


SM150

Diaphragm safety valve for closed drinking water systems

Product specification sheet



Construction

The safety valve comprises:

- Angled housing
- Adjustment spring
- Diaphragm
- Security cap with part label

Materials

- Brass housing
- Spring steel adjustment spring
- High grade synthetic material security cap
- Hot water resistant elastomer diaphragm

Application

Membrane safety valves of this type are used to protect closed hot drinking water systems according to DIN 1988 and DIN 4753-1.

In accordance with statutory requirements, the diaphragm safety valve is preset to the required fixed set pressure by the manufacturer and is sealed with an embossed security cap marked with the test badge and pressure rating to prevent unauthorised tampering with the setting. Subsequent alteration of the setting is not permitted and is impossible without destroying the security cap. The preset pressure is embossed on the security cap.

Special Features

- Meets KTW recommendations for potable water
- Certified to Pressure Equipment Directive 97/23/EC, Reference No. CE 0036
- Standardised discharge connection
- With lifting device
- Protected against subsequent changing of the default settings

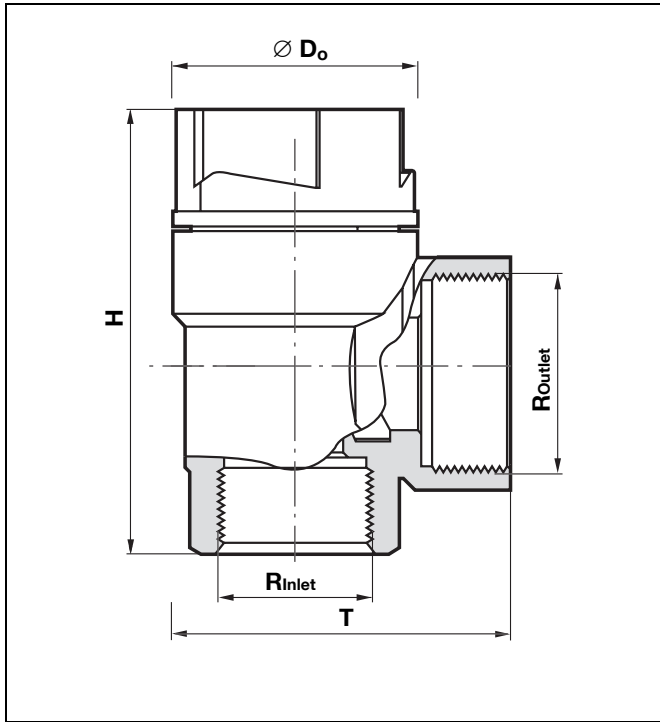
Range of Application

The membrane safety valve is only suitable to drain drinking water from closed hot drinking water systems according to DIN 1988 and DIN 4753-1 for protection against exceeding pressure

Medium Water

Technical Data

Installation position	Horizontal with safety cap pointing up
Opening pressure	Factory preset to 6.0, 7.0, 8.0 or 10.0 bar Subsequent alteration of the setting is not permitted and is impossible without destroying the security cap
Operating temperature	Max. 95 °C
Connection size	Internal thread on inlet 1/2", 3/4", Internal thread on outlet 1/2", 3/4", 1" Valve size is defined by the size of the inlet connection



Method of Operation

Diaphragm safety valves of this type are directacting safety valves in which the disc is pushed up by the pressure from the system against a spring which is holding the valve closed. If the opening force exceeds the force exerted by the spring, then the valve disc is lifted off the valve seat and the valve discharges the medium. In accordance with the requirements of the standard, the full discharge capacity of the valve will be achieved when the system pressure climbs to no more than 10% above the set pressure of the valve. Full shutoff must be achieved if the system pressure falls to below 80% of the nominal set pressure of the valve. For valves rated up to 3.0 bar, the closing pressure can be taken as 0.6 bar minimum.

Options

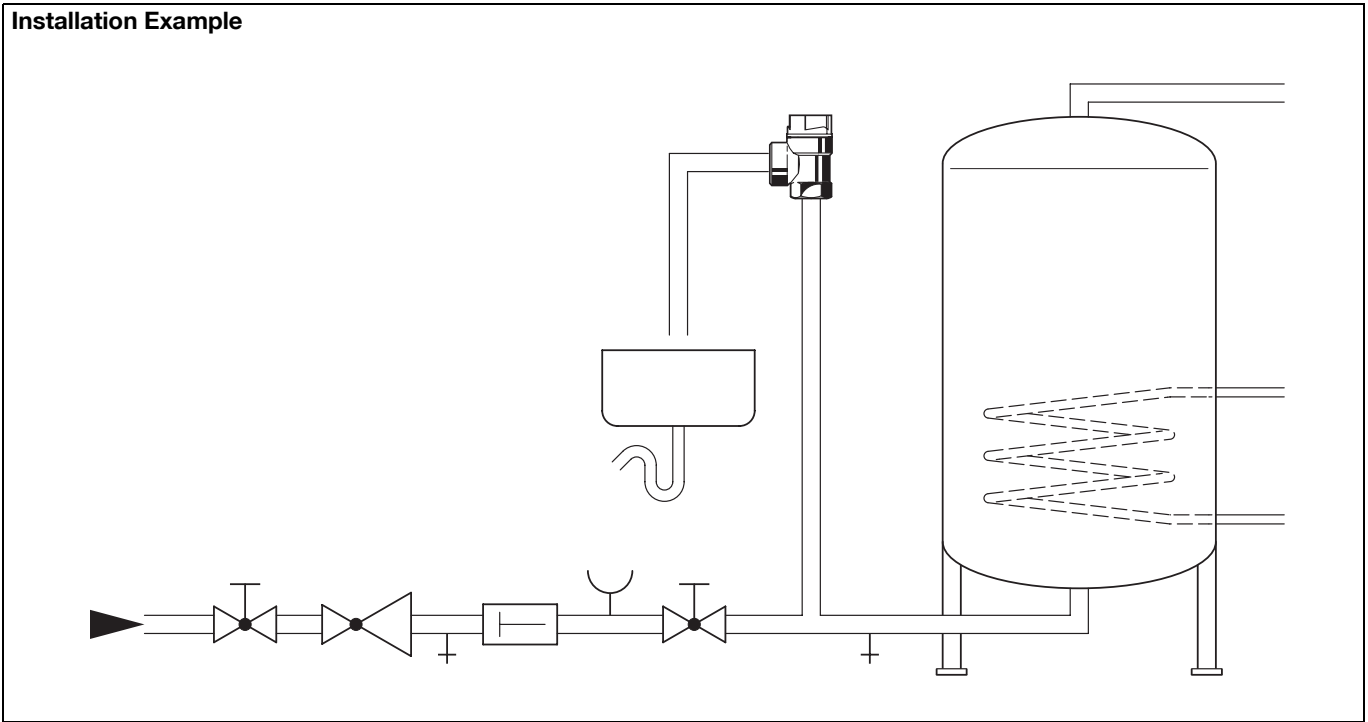
OS.-No.	Set pressure	Connection size Inlet	Connection size Outlet
SM150- 1/2ZA	6,0 bar	Rp ^{1/2} " IG	Rp ^{1/2} " IG
SM150- 1/2ZF	7,0 bar	Rp ^{1/2} " IG	Rp ^{1/2} " IG
SM150- 1/2ZB	8,0 bar	Rp ^{1/2} " IG	Rp ^{1/2} " IG
SM150- 1/2ZC	10,0 bar	Rp ^{1/2} " IG	Rp ^{1/2} " IG
SM150- 1/2A	6,0 bar	Rp ^{1/2} " IG	Rp ^{3/4} " IG
SM150- 1/2F	7,0 bar	Rp ^{1/2} " IG	Rp ^{3/4} " IG
SM150- 1/2B	8,0 bar	Rp ^{1/2} " IG	Rp ^{3/4} " IG
SM150- 1/2C	10,0 bar	Rp ^{1/2} " IG	Rp ^{3/4} " IG
SM150- 3/4ZA	6,0 bar	Rp ^{3/4} " IG	Rp ^{3/4} " IG
SM150- 3/4ZF	7,0 bar	Rp ^{3/4} " IG	Rp ^{3/4} " IG
SM150- 3/4ZB	8,0 bar	Rp ^{3/4} " IG	Rp ^{3/4} " IG
SM150- 3/4ZC	10,0 bar	Rp ^{3/4} " IG	Rp ^{3/4} " IG
SM150- 3/4A	6,0 bar	Rp ^{3/4} " IG	Rp1" IG
SM150- 3/4F	7,0 bar	Rp ^{3/4} " IG	Rp1" IG
SM150- 3/4B	8,0 bar	Rp ^{3/4} " IG	Rp1" IG
SM150- 3/4C	10,0 bar	Rp ^{3/4} " IG	Rp1" IG

Connection size Inlet	R	1/2" IG	3/4" IG	1/2" IG	3/4" IG
Connection size Outlet	R	1/2" IG	3/4" IG	3/4" IG	1" IG
Dimensions	(mm)	60	62	60	62
	H	33	33	33	36
	Ø D _o T	32	46	46	46
Weight	g	135	145	140	150
For water heaters with capacity (litres)		up to 200	up to 1000	up to 200	up to 1000
Maximum permissible heat input (kW)		50	100	50	100
TÜV Approval Nos.		-	-	TÜV · SV · ...* - 2017 · 13 · W · p	

..* valid Approval No.

Only the products with an outlet diameter larger than the inlet diameter are TÜV-certified.

Installation Example



Installation Guidelines

- Safety valve must be installed in the cold water supply pipe-work before the water heater
- The installation must be carried out so that:
 - o There are no shutoff valves or fittings, narrowing of the pipework or strainers between the water heater and the safety valve
 - o Good access is provided for service and maintenance
 - o that the safety valve is positioned above the heat generator
 - o that between the safety valve and heat exchanger a max. 1 m long straight connection line with the size of the inlet diameter is installed
- The safety valve must be mounted so that in its installed condition no external forces act on it
- The discharge line must be performed to the size of the safety valve outlet diameter and may not have more than 2 elbows and or be longer than 2m
- The discharge line must be installed with an incline

Typical Applications

Membrane safety valves are installed according to their specification upstream from heat generators.

The following are some typical applications:

- Central hot water supply systems
- Hot water storage units

Maintenance

In accordance with DIN 1988, Part 8, the following operations should be carried out regularly. A planned maintenance scheme is recommended.

	Operation	Interval	Carried out by
Inspection	Function check by verifying the response: While the system is operating, briefly open the safety valve by turning the cap. After closing the cap the valve must close again the backed up water drain completely.	Every six months	User or specialist
Maintenance	If a malfunction is detected, a repair can be attempted by opening and closing the cap several times. A replacement is necessary if this action is not successful.	Annually	Specialist

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