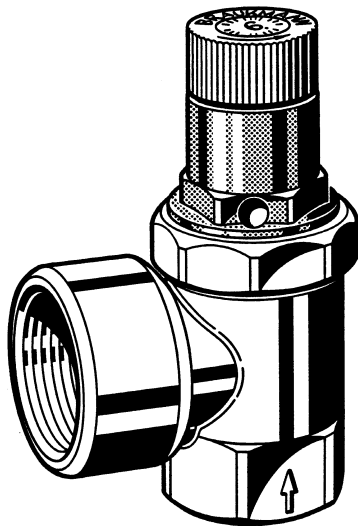


SM152

Diaphragm safety valve for closed water heaters

Product specification sheet

CE 0035



Construction

- Angled housing
- Safety valve exchange insert, approved and comprising:
 - Screw-in section with hexagon
 - Spring bonnet
 - Security cap with certification and rating plate
 - Venting knob
 - Sealing disc
 - Diaphragm
 - Setting spring

Materials

- Brass housing
- High grade synthetic material screw-in section (for up to 6.0 bar set pressure) or brass (for set pressures above 6.0 bar)
- High grade synthetic material spring bonnet
- High grade synthetic material security cap
- High grade synthetic material venting knob
- Hot water resistant elastomer seal disc
- Hot water resistant elastomer diaphragm
- Spring steel setting spring

Application

Type SM152 diaphragm-type safety valves are used to protect pressurised water heaters according to the requirements of DIN 4753, Part 1 and DIN 1988.

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

- Tested to TRD 721
- Easy venting
- Replacement insert makes servicing simple
- Complies with KTW requirements
- Standardised discharge connection
- Certified to Pressure Equipment Directive 97/23/EG, Reference No. CE 0035

Range of Application

For closed water heaters in compliance with DIN 4753, Part 1 and DIN 1988 Tested to TRD 721 for pressure range 1.0 bar to 10.0 bar.

Medium Water

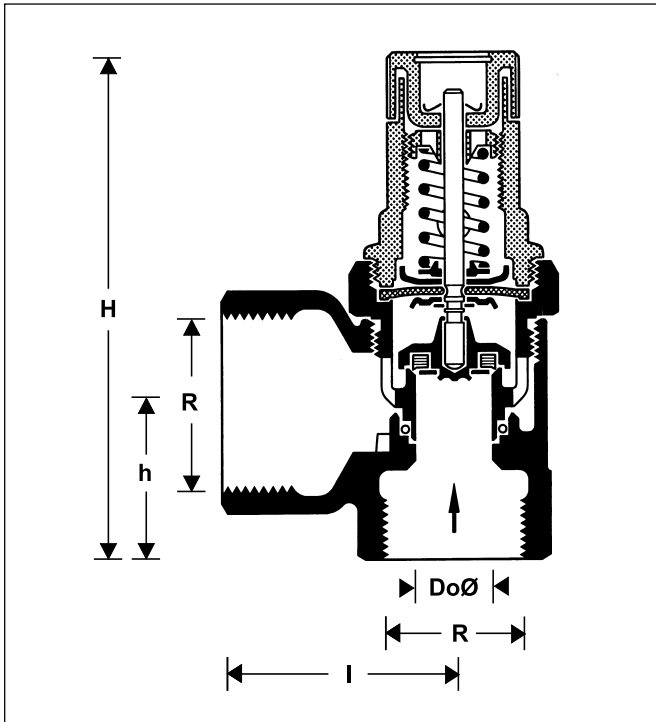
Technical Data

Installation position	Horizontal with spring bonnet upwards
Set pressure	Set by manufacturer at 6.0, 8.0 or 10.0 bar. Special settings between 1.0 bar and 10.0 bar are also available. Subsequent alteration of the setting is not permitted and is impossible without destroying the security cap.

Operating temperature Maximum 95° C

Connection sizes 1/2" - 1 1/4"

Valve size is defined by the size of the inlet connection.



Method of Operation

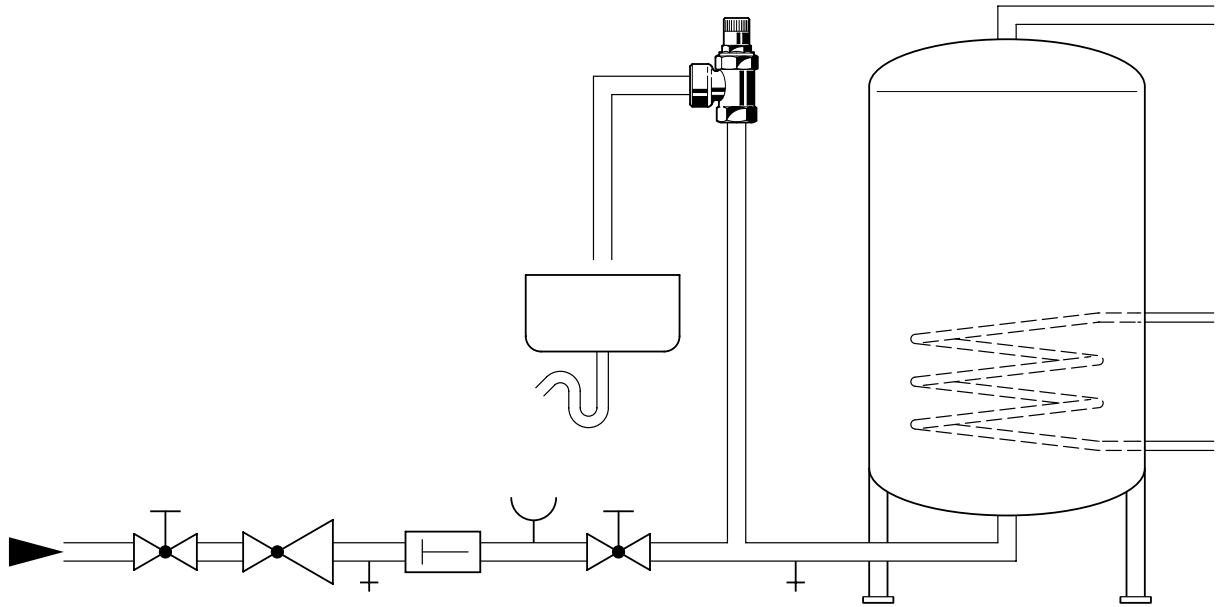
SM152 diaphragm-type safety valves are direct-acting safety valves in which the disc is pushed up by the pressure from the system against a spring which is holding the valve closed. If the opening force exceeds the force exerted by the spring, then the valve disc is lifted off the valve seat and the 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

- SM152- ... AA = Not chrome plated, set pressure 6.0 bar
- SM152- ... AB = Not chrome plated, set pressure 8.0 bar
- SM152- ... AC = Not chrome plated, set pressure 10.0 bar
- SM152- ... BA * = Chrome plated, set pressure 6.0 bar
- SM152- ... BC * = Chrome plated, set pressure 10.0 bar

* 1/2" connection size only
 put in R Inlet Special versions available on request

Connection sizes					
Inlet	R	1/2"	3/4"	1"	1 1/4"
Outlet	R	3/4"	1"	1 1/4"	1 1/2"
Dimensions (mm)					
	H	87	91	123	130
	h	23	28	40	47
	l	36	42	50	55
	ø Do	14	14	18	18
For water heaters with capacity (litres)		up to 200	up to 1000	up to 5000	over 5000
Maximum permissible heat input (kW)		75	150	250	2200
TÜV Approval Nos.		TÜV · SV · 93 - 617 · (1/2" + 3/4", 1") · W · p (6-10 bar)			
		TÜV · SV · 93 - 616 · 1 1/4" · W · 2200 · p (1-10 bar)			
		TÜV · SV · 02 - 700 · (1/2" + 3/4") · W · p (1-6 bar)			

Installation Example**Installation Guidelines**

- The safety valve must be installed in the cold water supply pipework before the water heater.
- The installation must be carried out so that:
 - There are no shutoff valves or fittings, narrowing of the pipework or strainers between the water heater and the safety valve.
 - Good access is provided for service and maintenance.
 - The safety valve is fitted above the top of the water heater to avoid the need for draining down when exchanging the safety valve insert.
 - If there is no drainage facility in the room where the heater is installed, then the safety valve may be fitted in an adjacent area. DIN 1988, part 2 is to be observed.

Typical Applications

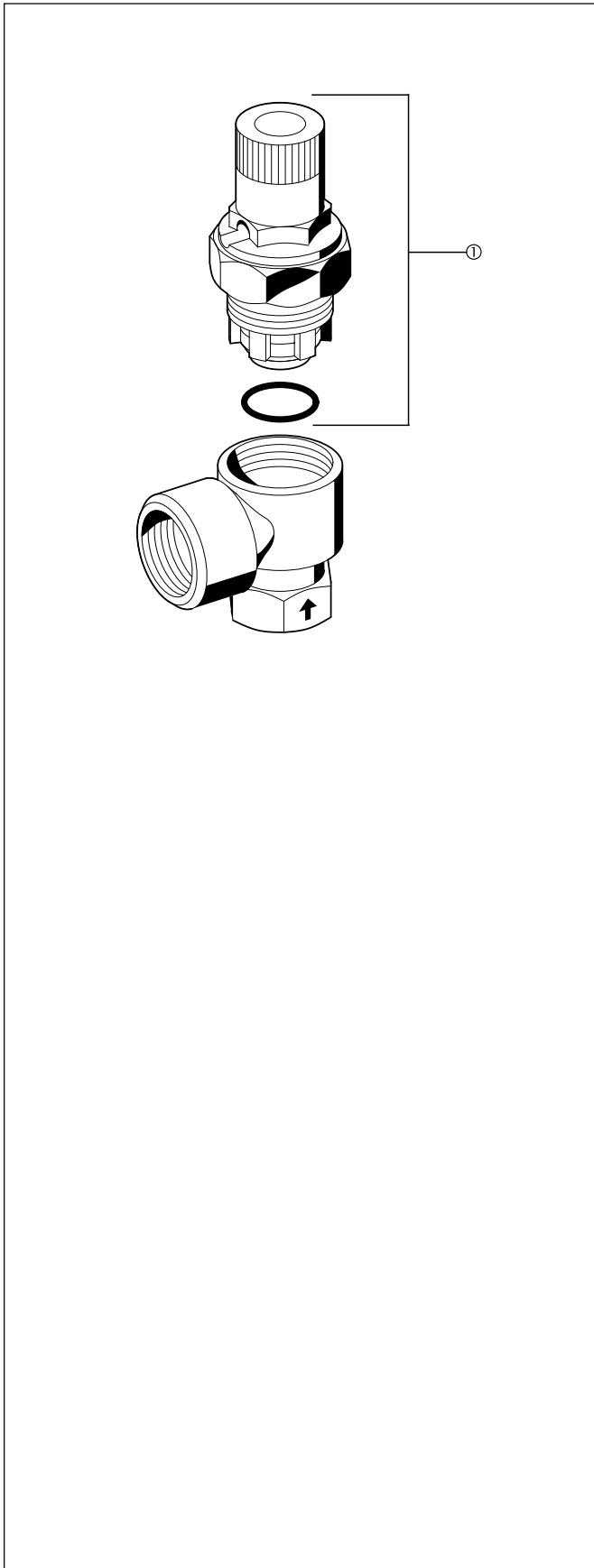
Diaphragm safety valves are installed in accordance with their specification upstream of water heaters. The following are some typical uses

- Central hot water supply systems
- Hot water storage units

Inspection and 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 and test	Check operation: Vent the valve during normal operation of the system. The discharged water should run away properly and the valve then fully shut off when released.	Every six months	User or specialist
Maintenance	If the valve does not function properly, venting several times may correct the situation. If not, a full overhaul of the valve will be necessary.	Annually	Specialist



**Spare Parts for SM152 Diaphragm Safety Valves
(From 1981 onwards)**

Description	Nominal size	Part number
① Safety valve insert		
Approval No.	TÜV · SV · 83/88/93 - 617 - 1/2" + 3/4" · W · p	
Approval No.	TÜV · SV · 83/88/93 - 617 - 1" · W · p	
Approval No.	TÜV · SV · 83/88/92 - 700 - 1/2" + 3/4" · W · p	
Approval No.	TÜV · SV · 83/88/92 - 700 - 1" · W · p	
6.0 bar	1/2"	A152-1/2AA
	3/4"	A152-3/4AA
	1"	A152-1AA
8.0 bar	1/2"	A152-1/2AB
	3/4"	A152-3/4AB
	1"	A152-1AB
10.0 bar	1/2"	A152-1/2AC
	3/4"	A152-3/4AC
	1"	A152-1AC
Safety valve insert with chrome plated body		
Approval No.	TÜV · SV · 83/88/93 - 617 - 1/2" + 3/4" W · p	
8.0 bar	1/2"	A152-1/2BB
	3/4"	A152-3/4BB
10.0 bar	1/2"	A152-1/2BC
	3/4"	A152-3/4BC
Safety valve insert		
Approval No.	TÜV · SV · 83/88/93 - 616 - 1 1/4" · W · (2200) · p	
6.0 bar	1 1/4"	A160-11/4AA
8.0 bar	1 1/4"	A160-11/4AB
10.0 bar	1 1/4"	A160-11/4AC

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