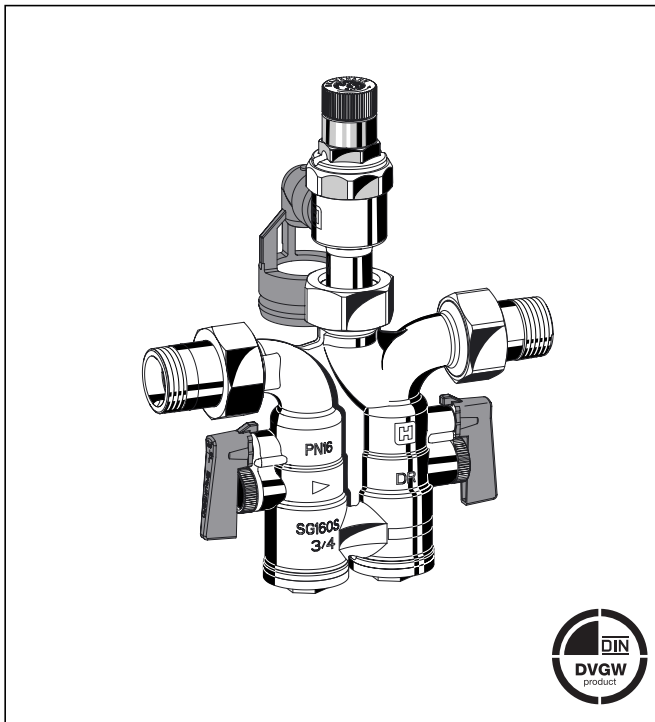


SG160S

Safety group with interchangeable safety valve insert

Product specification sheet



Application

Type SG160S safety groups are used to protect pressurised water heaters according to the requirements of DIN 4753, Part 1, DIN 1988 and DIN EN1488.

They are compact appliances which incorporate all the necessary safety devices such as non return valve, shutoff valves, test point and diaphragm type safety valve in one unit. The automatic self opening and closing of the safety valve protects the downstream hot water unit. The non return valve prevents back pressure, backflow and back syphonage of contaminated water.

Special Features

- DVGW approved
- Fully approved for noise level protection to group 1
- Safety valve tested to TRD 721 for the pressure range 1.0 to 10.0 bar
- Easy venting
- Complies with KTW requirements

Range of Application

For closed water heaters in compliance with DIN 4753, Part 1 and EN 1717. Tested to TRD 721 for pressure range 1.0 bar to 10.0 bar.

Medium	Water
Operating pressure	Maximum 20% below safety valve set pressure

Technical Data

Installation position	Horizontal and vertical
Set pressure	Set by manufacturer at 6.0, 8.0 or 10.0 bar. Special settings between 1.0 bar and 10.0 bar can also be supplied.
	Subsequent alteration of the setting is not permitted and is impossible without destroying the security cap.
Operating temperature	Maximum 40 °C
Connection sizes	1/2" - 1"

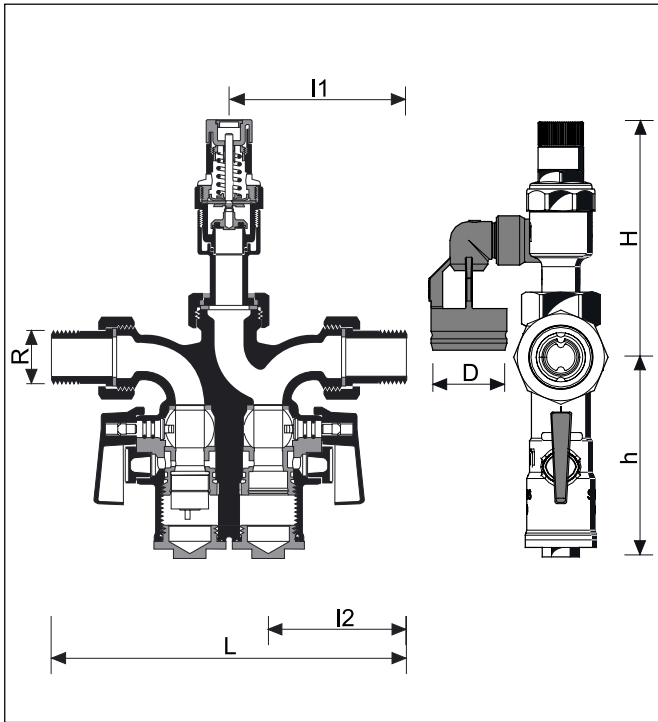
Construction

The safety group comprises:

- Housing with G 1/4" test socket on both sides
- Connections (versions AA, AB and AC)
- Shutoff valves
- Removable non return valve
- Approved safety valve exchange insert
- Discharge tundish
- Connection for expansion vessel

Materials

- Dezincification-resistant brass housing
- Brass connections
- High grade synthetic material shutoff valves, test socket, non return valve, safety valve insert and discharge tundish
- Fibre reinforced NBR diaphragm
- NBR seals



Method of Operation

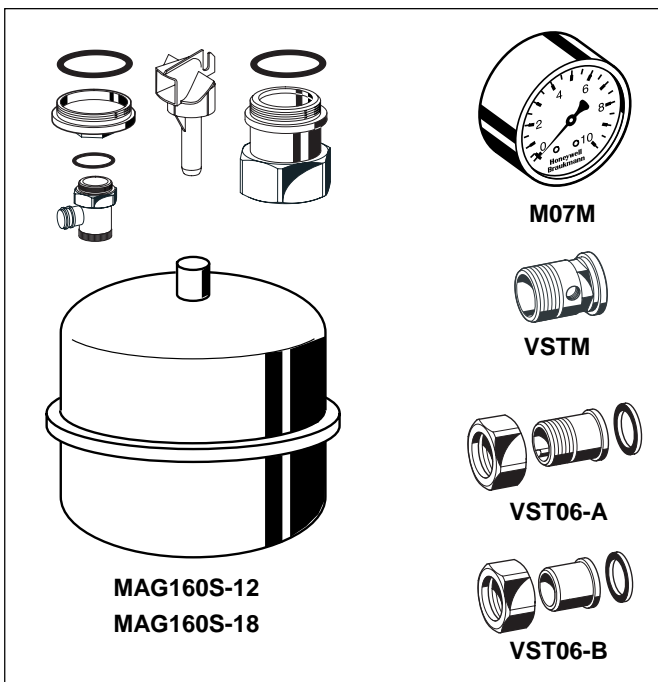
SG160S safety groups combine non return valve, shutoff valves, test point and diaphragm type safety valves in one appliance. Flow first passes through the non return valve and this flow holds the valve disc in the open position against the force of a spring. The safety valve downstream of the non return valve is direct-acting whereby the disc is pushed up by the pressure from the system against a spring which is holding the valve closed. The shutoff valves enable the non return valve to be checked and serviced.

Options

- SG160S- ... AA = With threaded male connections, set pressure 6.0 bar
- SG160S- ... AB = With threaded male connections, set pressure 8.0 bar
- SG160S- ... AC = With threaded male connections, set pressure 10.0 bar
- SG160S- ... EA = Without fittings, set pressure 6.0 bar
- SG160S- ... EB = Without fittings, set pressure 8.0 bar
- SG160S- ... EC = Without fittings, set pressure 10.0 bar

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Connection size

Connection sizes	R	1/2"	3/4"	1"
Nominal sizes	R	3/4"	3/4"	3/4"
Approximate weight	Option A	kg	1,64	1,70
	Option E		-	1,40
Tundish external -ø (mm)	D	40	40	40
Dimensions	(mm)			
	L	178	186	204
	l1	89	93	102
	l2	68,5	72,5	81,5
	H	124,5	124,5	124,5
	h	105,5	105,5	105,5
For water heaters with capacity up to	(litres)	200	1000	1000
Safety valve approval numbers		TÜV · SV · 02 - 700 · (1/2", 3/4", 1") · W · p (6 bar)		
		TÜV · SV · 98 - 617 · (1/2", 3/4", 1") · W · p (8, 10 bar)		
DIN/DVGW-Reg. No.		NW-6311 BP 0068		



Accessories

MAG160S-12

MAG160S-18 Expansion vessel with connection set

Connection set with plug incl. draining cock, adapter and flow controller
 MAG160S-12 = volume 12 l
 MAG160S-18 = volume 18 l

M07M

Pressure gauge

Housing diameter 63 mm, rear connection thread G1/4".
 Ranges: 0 - 4, 0 - 10, 0 - 16 or 0 - 25 bar.
 Please indicate upper value of pressure range when ordering

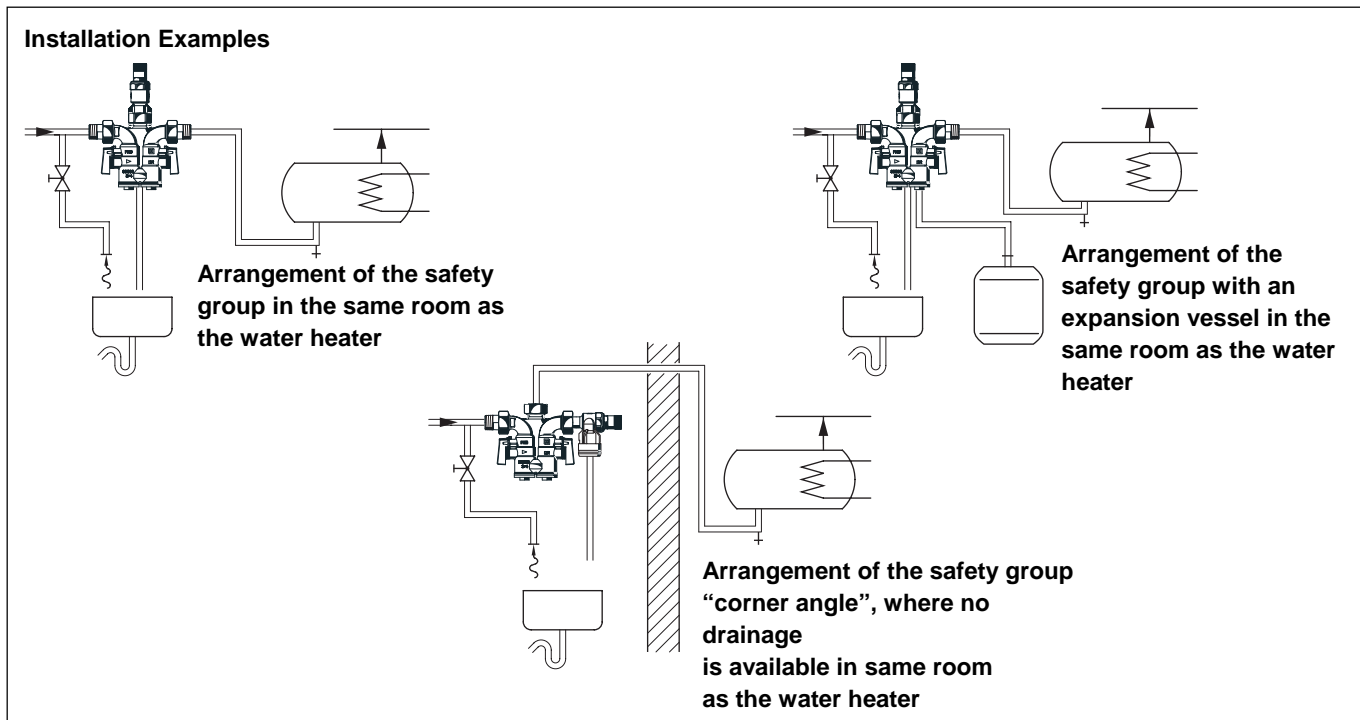
VSTM

Connection for pressure gauge

VST06

Connection set

With threaded or solder connections
 A = Threaded male connections
 B = Solder connections



Installation Guidelines

- The safety valve must be installed in the cold water supply pipework upstream of the water heater.
- Installation in horizontal or vertical pipeline possible.
- 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 can be fitted in an adjacent area. EN 1717 is to be observed.

Typical Applications

SG160S safety groups are installed in accordance with their specification upstream of water heaters.

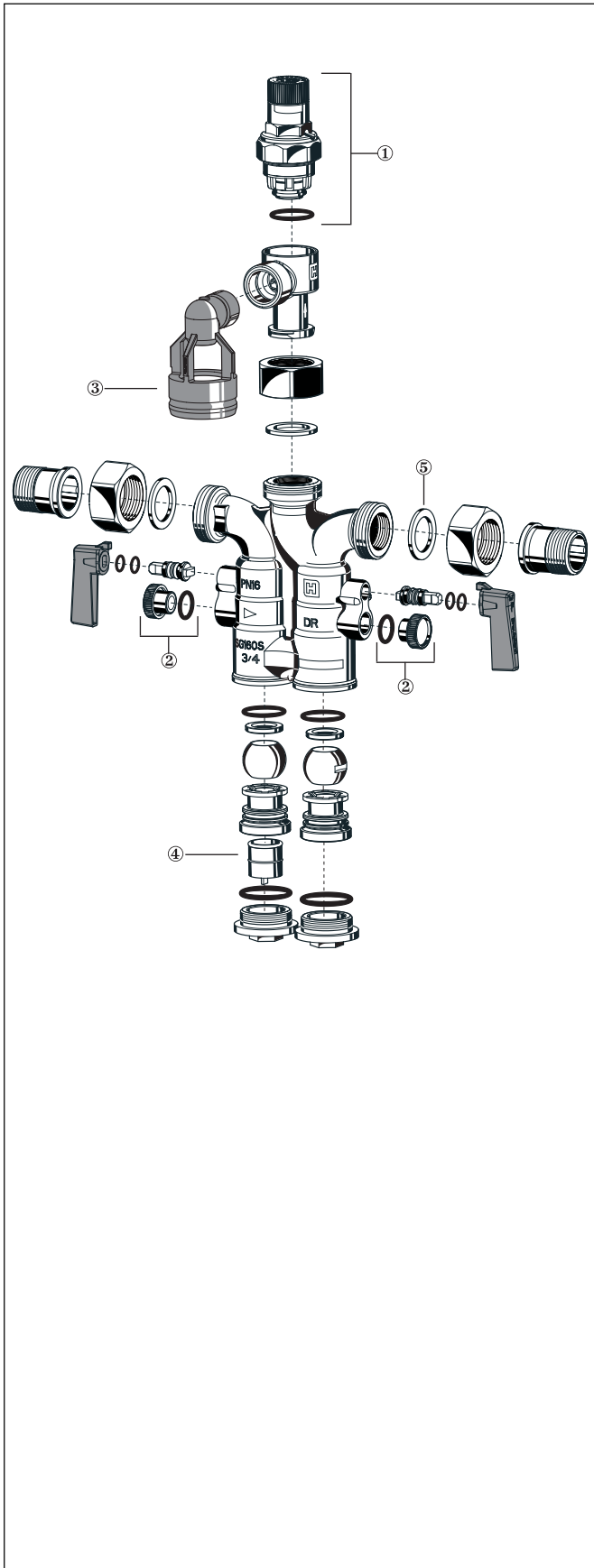
The following are some typical uses

- 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	Non return valve: Check function by opening test plug and closing lower shutoff valve	Annually	User
	Safety valve: 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 SG160S Safety Group
(From 2004 onwards)**

Description	Nominal size	Part number
① Safety valve exchange insert Approval No. 6 bar	TÜV · SV · 02 - 700 · (1/2", 3/4", 1") · W · p	
Approval No. 8 and 10 bar	TÜV · SV · 98 - 617 · (1/2", 3/4", 1") · W · p	
6 bar	1/2" - 1"	A152-3/4AA
8 bar	1/2" - 1"	A152-3/4AB
10 bar	1/2" - 1"	A152-3/4AC
② Plug with O-ring R 1/4" (packs of 5)	1/2" - 1"	S06K-1/4
③ Discharge tundish	1/2" - 1"	TA160S
④ Non return valve disc complete	3/4"	2110200
⑤ Sealing ring (packs of 10)	1/2"	0901443
	3/4"	0901444
	1"	0901445

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