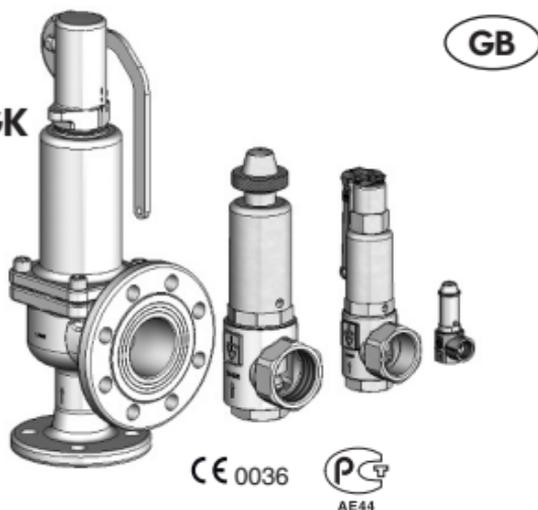


Safety valve

Types 851 / 451
Types 852 / 452 / 352
Types 652 mFK / 652 sGK
Types 861 / 461
Type 420



1 General Notes of Safety

1. Only use the valve:
 - for the specified purpose
 - in satisfactory condition
 - with respect for safety and potential hazards.
2. Always observe the installation instructions.
3. Any defects which could affect the safe operation of the valve have to be remedied immediately.
4. The safety valve is exclusively designed for the range of application described in these installation instructions. Any other use, or a use exceeding the range of application shall be considered as improper use.
5. The manufacturer's warranty shall be null and void if the sealed cover is removed.
6. All assembly work is to be carried out by authorized specialist staff.

Safety valves are high-quality fittings which require a particularly careful handling. The sealing surfaces are precision-machined at the seat and cone to attain the required tightness. Always avoid the penetration of foreign particles into the valve during assembly and during the operation. The tightness of a safety valve can be impaired when using hemp, Teflon tape, as well as through welding beads, among other things. Also rough handling of the finished valve during storage, transport and assembly can result in a safety valve leaking. If the safety valves are painted, make sure that the sliding parts do not come into contact with the paint.

For details on the range of application of the individual versions please refer to the technical documentation (catalogue) of the manufacturer.

Spring-loaded safety valves are to be installed with the spring bonnet pointing vertically upward. To ensure a satisfactory operation of the safety valves they must be installed in such a way that the safety valve is not exposed to any impermissible static, dynamic or thermal loads. Appropriate protection devices must be applied if the medium that discharges upon actuation of the valve can lead to direct or indirect hazards to people or the environment. Always pay attention to possible fumes discharging from the relief bores in the spring bonnet.

Supply

Supply connection pieces for safety valves are to be kept as short as possible and are to be designed in such a way that there can be no pressure loss greater than max. 3 % of the response pressure.

Removal of condensate discharge

In the event of possible condensate formation the pipes or the valves themselves (in flanged version) must be fitted at their lowest point with a continuously operating condensate discharge device. Hazard-free removal of the condensate or medium discharge must be ensured.

The body, pipes and silencers must be protected against freezing.

Blowing-off pipe / backpressure

The blow-off pipe of the safety valves must be designed to ensure that the required mass flow can be discharged pressure-free during the blowing-off process. In safety valves with metal bellows a backpressure of up to max. 4 bar has no impact on the response pressure of the safety valve.

The operating pressure of the plant is to be at least 5 % lower than the closing pressure of the safety valve. In this way, the valve can satisfactorily close again after blowing off. In the event of minor leaks, which may be caused by contamination between the sealing surfaces, the valve can be made to blow off through lifting, for cleaning purposes. If this does not remove the leak, the sealing surface is probably damaged and this can only be repaired at our factory or by authorized specialists. Depending on the version, lifting is either carried out by means of a knurled nut above the spring bonnet (Fig. 1) which is turned counterclockwise (afterwards the knurled nut has to be turned back to the stop) or by actuating the lifting lever on the upper part of the valve (Fig. 2). For delivery purposes the lifting lever is blocked by means of a strap which has to be removed for actuating the lifting device.

Safety valves without bellows

In addition, in the case of safety valves without bellows (Fig. 4), the entire upper part can be unscrewed from the housing using appropriate tools and any residue removed from the seat and the seat sealing.

Prior to removal make sure that the safety valve is not under pressure.

The response pressure of the safety valve is not altered through the reassembly of the upper part in the housing.

Safety valves with metal bellows

In the case of safety valves with metal bellows (Fig. 3) the upper part is not to be separated from the housing, because otherwise tightness is no longer guaranteed in the event of backpressure occurring.

Safety valves with gas-tight cap

On safety valves with gas-tight cap, the top part may not be separated from the housing as this compromises gas tightness. However, if the top part does have to be unscrewed for a repair, it should be ensured that the tension on the spring is released before dismantling. You should also check before dismantling the valve whether there is any medium in the cap and if so, what it is. Potential risk of chemical burns or poisoning.

Lifting for maintenance purposes

It is recommended, and in the case of some regulations is actually specified, that on safety valves with a lifting device the safety valve should be made to blow off by lifting, at intervals to suit the system in question, to assure the function of the safety valve. This is why they can be made to open at the latest as from an operating pressure of $\geq 85\%$ of the response pressure. The lifting device is not to be operated when in a pressure-free state. In steam generating equipment, testing the ease of movement of safety valves must be carried at least every 4 weeks in compliance with TRD 601. Safety valves are the ultimate safety device for the tank or system. They must be able to prevent impermissible overpressure even when all other upstream control and monitoring equipment fail. To ensure these characteristics safety valves require maintenance, just like any other technical device. The maintenance intervals are determined by the operator in dependence of the operating conditions.

In addition to the general installation instructions it must be ensured that the system is made pressure free prior to disassembly of the safety valve.

Repair work on safety valves is only to be carried out by Goetze KG Armaturen or by officially approved specialist workshops authorized by Goetze KG Armaturen using original spare parts only.

Every valve is tested prior to leaving the factory. We grant a warranty for our products which entails the repair, free of charge, of any parts that are returned and verified as being prematurely unsuitable for use due to defective material or manufacturing. We shall not assume any liability for any damage or other such obligations. If the factory seal is damaged, in the event of any incorrect handling or installation, non-observance of these operating and maintenance instructions, contamination or normal wear, warranty claims shall be null and void.



Fig. 1 Lifting by means of a knurled nut

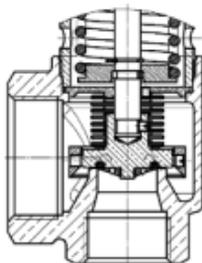


Fig. 3 Safety valve with bellows

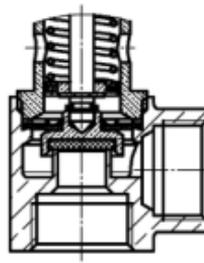


Fig. 5 Safety valve with diaphragm

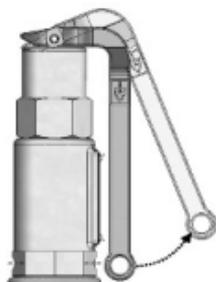


Fig. 2 Lifting by means of a lever

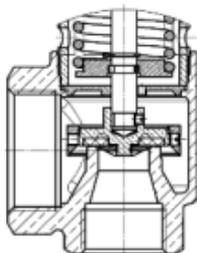


Fig. 4 Safety valve without bellows

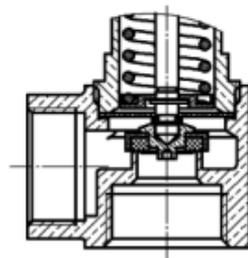
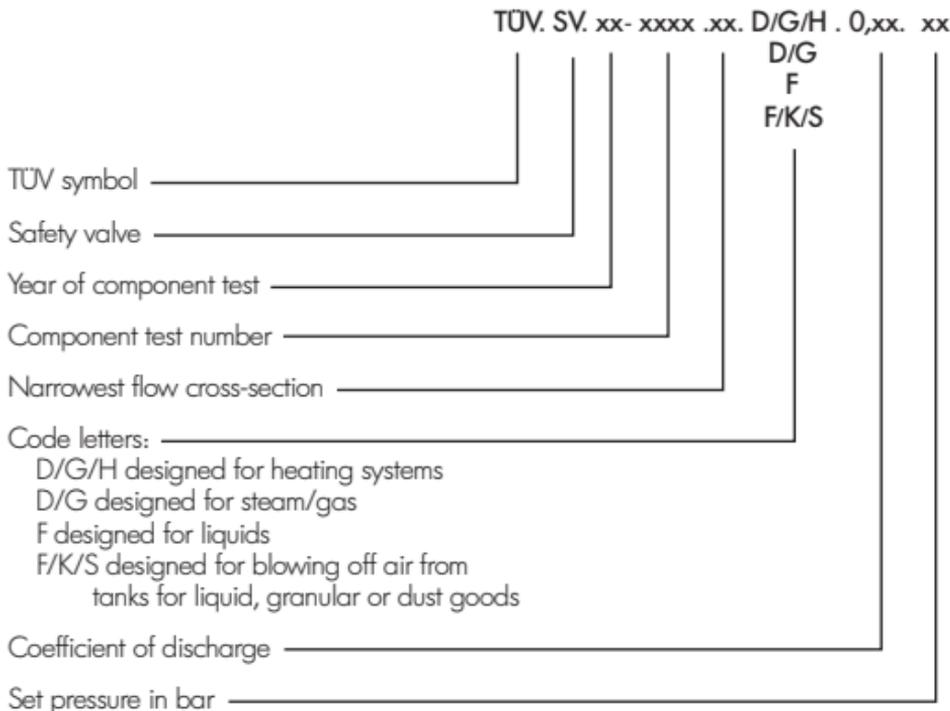


Fig. 6 Safety valve without diaphragm



We check the safety valves for pressure resistance and tightness, adjust the requested set pressure and seal them.

The identification on the type plate or on the spring bonnet of the valve is applied using a permanent marking system.

The type plate is additionally marked with identification codes and technical data in compliance with DIN EN ISO 4126-1.

Declaration of Conformity

according to Annex VII of the Directive 97/23/EC

We, **Goetze KG Armaturen, D-71636 Ludwigsburg**
declare under sole responsibility that the delivered product:

Safety valve

Type	TUV component test no.	EC type approval certificate no.
451 P/PL; T/TL 851 P/PL; T/TL	318	✓
451 bH; 851 bH	665	✓
451 G; 851 G	666	✓
451 E/EL; 851 E/EL	268	✓
451 F; 851 F	684	✓
352 452 852	2007	✓
652 mFK	293	✓
652 sGK	312	✓
861 / 461	2061	✓
420	2069	✓

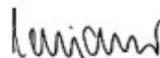
to which this declaration relates, has been manufactured in compliance with the Directive 97/23/EC, DIN EN ISO 4126 and the German regulations AD 2000- A2/A4, TRD 421/721 and was subjected to the conformity assessment procedure:

Modules B+D

There is an EC type approval certificate for the component for pressure equipment.

The monitoring of the production quality assurance is performed by
TUV SUD Industrie Service GmbH (ICE 0036).

Ludwigsburg, 19.07.2012
(Place and date issued)



D. Weimann
Management