The most effective protection against overpressure from 5 mbar to 45 bar / 0.07 psi to 650 psi

SECURE YOUR SYSTEMS AND COMPONENTS WITH SAFETY RELIEF VALVES FROM WITT

DAVID BREIL, SALES MANAGER – WITT-GASETECHNIK
PROTECTION AGAINST OVERPRESSURE

WITT safety relief valves safeguard pipes, pressure vessels and system components from excessive gas pressure

For operators of pressurised systems and components they are the last line of defense before excess pressure becomes a disaster: Safety relief valves. Safety relief valves from WITT provide effective protection against overpressure by blowing off vapours and gases from pipes, pressure vessels and system components. WITT offers individually tested safety relief valves with individually adjustable opening pressures from 5 mbar to 45 bar / 0.07 psi to 650 psi. Their small size, position-independent installation and sturdy materials allow a wide range of applications. WITT safety relief valves are available in brass, stainless steel or aluminium, also as a manually ventilated version as well as with or without condensate outlet. We supply our safety relief valves with confirmation by TÜV as verification that the opening pressure of each individual valve is correctly set.

FUNCTION

WITT safety relief valves are spring loaded, direct-acting safety relief valves. As soon as the set opening pressure is reached, a spring-loaded element in the valve triggers and opens for blow-ing off. After the pressure equalisation, the valve closes automatically and would respond again immediately in the event of a renewed pressure increase. Depending on the gas and application, the valves can either blow off freely or be connected to a blow-off pipe. The opening pressure is set at the factory for WITT valves, appropriate to the permissible operating pressure of the system to be protected.

APPLICATIONS

TANK CONSTRUCTION

No matter whether transport containers, storage tanks, biogas tanks or mixing and metering vessels – WITT safety relief valves protect diverse applications in the area of tank construction, even against the lowest overpressures.

INDUSTRIAL FURNACE CONSTRUCTION

Industrial furnace construction often involves working with protective gas atmospheres. The process chambers should be protected against over-pressure – ideally with safety relief valves from WITT.

INSULATORS AND REACTORS

Insulators and glove box systems frequently involve work in a protective gas atmosphere. WITT safety relief valves protect the housing and the reactors installed to clean the inert gas against overpressure and ensure safe work.

PIPES AND PLANT CONSTRUCTION

Pipes with various gases must be protected against overpressure in pipes and system construction. This can involve simulation systems, research plants, systems and pipes for recovering helium or also supply facilities for nitrogen shielding in the semiconductor industry.

HYDROGEN VEHICLES

Hydrogen-powered vehicles must be protected with safety valves in line with the regulation EC 79/2009. WITT offers a safety relief valve specially approved by the Kraftfahrt-Bundesamt (German Federal Motor Transport Authority) for this purpose, thereby satisfying the highest requirements.

MATERIALS

WITT safety relief valves are made from high-quality materials. They are extremely robust and suitable for a wide variety of gases and applications. Brass is normally the standard material used for housings in numerous applications. For aggressive and corrosive gases, the housings are made from high-quality stainless steel (1.4341/AISI 321, 1.4404/AISI 316L, 1.4305/AISI 303 or 1.4571/AISI 316Ti). Depending on the gas type and customer requirement, diverse sealing materials are available, ensuring safety even under the most demanding conditions.

CONNECTIONS

You can order WITT safety relief valves with various connections. Besides the standard versions with normal male and female threads, designs with KF or CF flanges, VCR or UNF threads are also available. Adapters are available for connecting to blow-off lines.

CERTIFIED QUALITY

Modern production and a comprehensive quality management system guarantee the highest WITT quality for your safety. WITT safety relief valves are manufactured in accordance with best engineering practices and the relevant safety regulations for design, material selection and resistance. For maximum security, WITT typically offers a 100% component test for the model series SV805/SV805A, in other words, every safety valve of this series is individually pre-tested to ensure fault-free reliability before it is delivered. We supply our safety relief valves with confirmation by TÜV as verification that the opening pressure of each individual valve is correctly set.

THE BENEFITS OF WITT SAFETY RELIEF VALVES

- Minimum opening pressures make even the smallest pressure rises controllable
- Opening pressure individually adjustable depending on the model in the range from 5 mbar to 45 bar / 0.07 psi to 650 psi
- High blow-off volume up to approx. 970 m³/h / 34,240 scfh
- Diverse applications for all technical gases in the temperature range from -60 °C to +270 °C / -76 °F to 518 °F (varies depending on model)
- Suitable for O₂
- 100 % component testing for maximum safety (SV805/SV805A)
- TÜV confirmation verifies the individually set opening pressure
- Compact construction and location-indepen-dent installation for problem-free assembly
- Optionally available in brass, stainless steel and aluminium (AV919)
- Sealing material corresponding to the gas type or on customer request
- Various inlet and outlet connections, adapter for connection to a blow-off pipe
- Some models optionally with condensate outlet
- Some models with manual ventilation function
- Free of oil and grease
OUR PORTFOLIO

› ROBUST ALL-ROUNDER

SV805 AND SV805A
- A classic among WITT safety relief valves
- Reliably protects tanks and pipes against excess pressure
- Individual opening pressure between 0.5 and 45 bar / 7 psi and 652 psi
- Maximum volume flow up to approx. 665 m³/h / 23,470 scfh for air
- Compliant with Pressure Equipment Directive 2014/68/EU
- Compact size
- Installation irrespective of position
- Suitable for numerous applications
- On request, also available with a condensate outlet
- Model SV805A also has a ventilation function, allowing functionality testing at any time when installed
- TÜV individual certification (module F according to 97/23/EC)

MATERIALS
SV805/SV805A
Housing: Brass 2.0402 or 2.0401, stainless steel 1.4404 or 1.4541
Seal: CR, EPDM, FFKM, FPM, HNBR, VMQ

AV619 AND AV919
- The best choice for protection against minimum overpressures at high blow-off volumes
- The highest response sensitivity in the range from 5 to 500 mbar / 0.07 to 7 psi makes even the smallest pressure rises manageable
- Maximum blow-off volume up to approx. 970 m³/h / 34,240 scfh for air
- Reliable protection for tanks, pipes and other system components
- Can also be used as vacuum valves for securing an underpressure owing to the high density and a low leakage rate
- Installation irrespective of position
- TÜV certificate verifies the individually set opening pressure on request

MATERIALS
AV619
Housing: Brass 2.0401, stainless steel 1.4305 or 1.4404
Seal: CR, EPDM, FFKM, FPM, HNBR, NBR, VMQ
AV919
Housing: Stainless steel 1.4571, anodised aluminium
Seal: CR, EPDM, FFKM, FPM, NBR, VMQ

AV319
- High safety in mini format – the AV654 is the smallest WITT safety valve
- Also protects against lowest overpressures
- Very sensitive response with individual opening pressure in the range from 10 to 80 mbar / 0.14 to 1.14 psi
- Maximum blow-off volume of approx. 0.9 m³/h / 32 scfh for air
- Minimum weight and compact dimensions
- Ideal for applications in a closed space or with special weight requirements
- Installation irrespective of position
- TÜV certificate verifies the individually set opening pressure on request

MATERIALS
AV319
Housing: Brass, stainless steel 1.4305 or 1.4404
Seal: CR, EPDM, FPM, Isolast, NBR

SV811L
- Specially developed for securing hydrogen-powered vehicles
- Protects hydrogen systems against hazardous overpressure in a wide spectrum from 4.5 to 45 bar / 65 to 652 psi
- Corresponds to regulation EC 79/2009 of the European Parliament
- Approved by the Kraftfahrt-Bundesamt (German Federal Motor Transport Authority) for use in vehicles
- Compact design
- Installation irrespective of the position
- Diverse connection options
- High-quality stainless steel for maximum resistance and endurance
- TÜV certificate verifies the individually set opening pressure on request

MATERIALS
SV811L
Housing: Stainless steel 1.4404
Seal: EPDM

AD 2000, TÜV, DIN EN ISO 4126
## OVERVIEW OF ALL MODELS

<table>
<thead>
<tr>
<th>Material</th>
<th>Model</th>
<th>Remarks</th>
<th>Opening pressure</th>
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<th>Quick connection</th>
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<td>0.085 bar – 5 bar</td>
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**OUR PROMISE**

**HIGH-QUALITY SAFETY TECHNOLOGY**

**VERY GOOD PRICE/PERFORMANCE RATIO**

**INDIVIDUAL SAFETY RELIEF VALVES AND SPECIAL SOLUTIONS**

**DECADES LONG WITT KNOW-HOW**

Other connections available on request
OUR PRODUCT RANGE

GAS CONTROL EQUIPMENT
- Gas mixing systems
- Gas metering systems
- Gas analysers
- Leak detection systems
- Gas pressure vessels
- Engineering of customised systems

GAS SAFETY EQUIPMENT
- Flashback arrestors
- Non-return valves / check valves
- Quick couplers
- Safety relief valves
- Stainless steel devices
- Gas filters
- Pressure regulators
- Outlet points
- Lance holders
- Ball valves
- Automatic hose reels
- Test equipment
- Accessories
- Customised safety equipment