INDUSTRIAL VALVES

ARMATUREN GOETZE

INDIVIDUAL SAFETY, WITHOUT COMPROMISE

Safety valves and fittings for industrial applications

WHAT SETS GOETZE AND THEIR INDUSTRIAL PRODUCTS APART

SHORT DELIVERY TIMES AROUND THE GLOBE

Whether you need safety valves, pressure reducing valves, pressure relief valves or other products from our range: you will benefit from the short global delivery times for all our products. All orders can generally be processed within 3-5 working days. You're in a hurry? Then use our express production and your order can be ready for dispatch within 48 hours.

INDIVIDUALITY

Our expertise enables us to implement new and custom-made developments in a short time. All valves are produced on the premise of „individuality for more safety". In product development, individual custom-made solutions go hand-in-hand with our own new developments. This combined pool of development has now given rise to an extensive and high-quality range of products which is being continuously extended and leaves nothing to be desired.

WIDE RANGE OF PRODUCTS

Our well thought-out families of products cover every industrial application: liquids of all kinds, gases, technical vapours and steam. Goetze valves are used with temperatures ranging from -255 °C to +400 °C. Regardless of whether it is safety valve, pressure reduction valve, pressure relief valve or overflow valve, the greatest possible safety is always given priority.

RELIABLE COMPETENCE

Technical consulting is not only the focus of our in-house team. We provide support for our customers throughout the entire life cycle of the valve and assist those persons who have to work with the fittings every day by providing you with the necessary information and instruction. Our field representatives are tasked with providing customers with the best possible consultation service at the customer's own facility and supporting them in all questions concerning our products.

HIGH STANDARDS

Not only the products but also the materials used have to meet the highest standards. This is why the materials are examined by trained personnel as soon as they arrive, in order to ensure the best quality from the very beginning. After production, each individual valve is subjected to an ISO-certified quality control test before it is allowed to leave the factory.

TECHNICAL BASICS FOR INDUSTRIAL PRODUCTS

Materials

STAINLESS STEEL

- high-quality material
- corrosion-resistant
- for plants with particularly aggressive media

GUNMETAL

- robust and of high quality
- potable- / sea-water resistant
- wide range of applications

BRASS

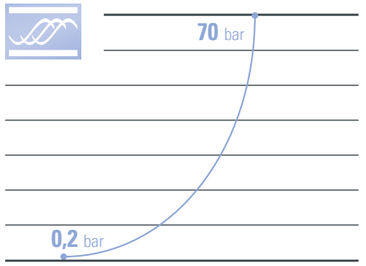
- good price / performance ratio
- brass turned from solid material

CAST STEEL

- robust material
- cost-effective material for standard applications

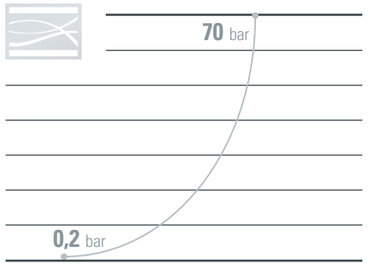
Media

LIQUIDS
from -270 °C to +400 °C



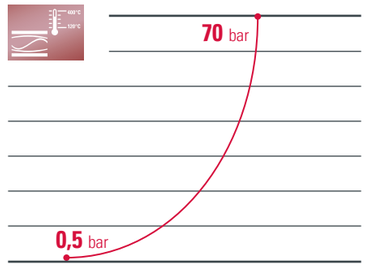
- Pump protection
- Pressure boosters (water-side)
- Sprinkler systems
- Cooling circuits

AIR, GASES AND VAPOURS
from -270 °C to +400 °C



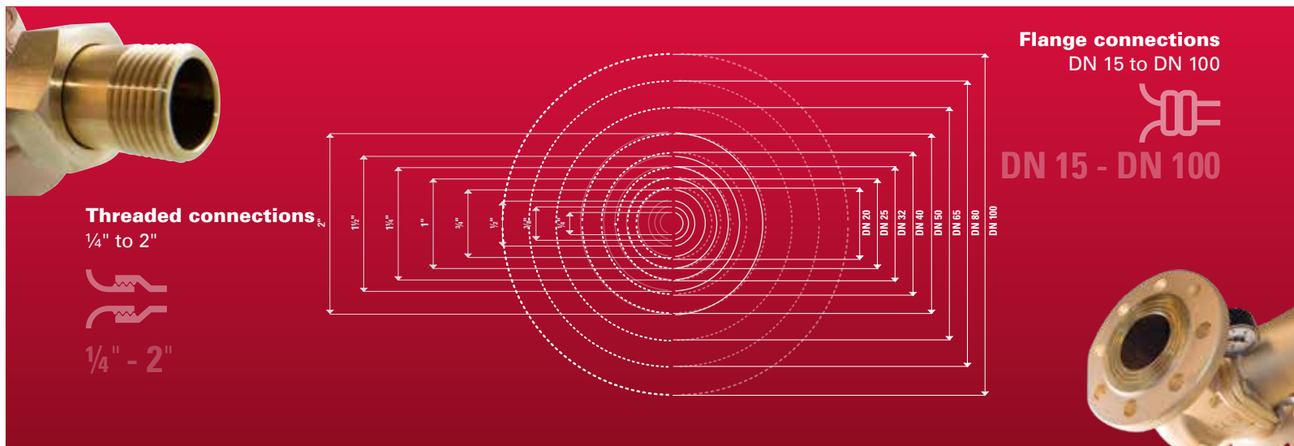
- Compressors
- Pressure vessels
- Pressure boosters (air-side)
- Silo container
- Bulk transport vehicles

STEAM
from +120 °C to +400 °C



- Steam boiler
- Steam plants
- Sterilizers
- Autoclaves
- Boilers

Connections



OUR CERTIFICATES

We rely on quality – nationally and internationally

CE Certification according to the European Pressure Equipment Directive is mandatory for many products and markets. Additional certificates are however proof of our individual quality, such as: TÜV, DVGW, WRAS, ACS, EAC, SINTEF. Last but not least, DIN ISO 9001 stands for the internal quality management process, with its comprehensive functionality and performance assessment. The particularly strict regulations of the national rules guarantee the highest possible degree of safety – especially when it comes to the reliability of your plant.

Series	National Type Test (TÜV)	CE 2014/68/EU	EC type examination	ASME	CRN	EAC	TS	KC	KCs	ACS	WRAS	DNV	LR	ABS	BV	GL	RINA	DB
										Portable water approval		Shipbuilding						Railway
SAFETY VALVES ANGLE-TYPE																		
455	■	■	■			■	■					■	■		■	■		
852	■	■	■			■						■	■	■	■	■		
355	■	■	■			■	■					■	■	■	■	■		
451	■	■	■	■	■	■	■	■				■	■	■	■	■	■	
451r	■	■																
851	■	■	■	■	■	■	■	■				■	■	■	■	■	■	
460	■	■	■	■		■	■	■				■	■	■	■	■	■	
652	■	■	■									■	■	■	■	■	■	
420	■	■	■			■	■					■	■	■	■	■	■	
461	■	■	■			■	■					■	■	■	■	■	■	
861	■	■	■			■	■					■	■	■	■	■	■	
642	■	■	■	■	■	■		■		■	■	■	■	■	■	■	■	
645	■	■	■	■	■	■		■		■	■	■	■	■	■	■	■	
6420	■	■	■	■	■			■		■	■	■		■		■		
6450	■	■	■	■	■			■		■	■	■		■		■		
492	■	■	■	■	■	■	■	■				■	■	■	■	■	■	
255/ 255 ANSI	■	■	■			■												
4420/ 4450	■	■	■	■														
ATMOSPHERIC DISCHARGE SAFETY VALVES																		
410	■	■	■	■	■	■	■	■	■			■	■	■	■	■		
810	■	■	■	■	■	■	■	■	■			■	■	■	■	■	■	■
412	■	■	■	■	■	■	■	■	■			■	■	■	■	■	■	
812	■	■	■	■	■	■	■	■	■			■	■	■	■	■	■	■
413	■	■	■			■						■	■	■	■	■		
813	■	■	■			■						■	■	■	■	■		
PRESSURE RELIEF VALVES																		
628		■				■						■	■	■	■	■		
601		■				■												
612		■				■												
OVERFLOW AND PRESSURE CONTROL VALVES																		
608		■				■							■					
417		■				■						■	■	■	■	■	■	
418		■				■						■	■	■	■	■		
617		■				■						■	■	■	■	■		
618		■				■						■	■	■	■	■		
453		■				■						■	■	■	■	■	■	
853		■				■						■	■	■	■	■	■	
630		■				■						■	■	■	■	■	■	
430		■				■						■	■	■	■	■	■	
431		■				■						■	■	■	■	■	■	
631		■				■						■	■	■	■	■	■	

Series	Materials	Connection type	Media: neutral liquid	Media: neutral air/gases	Media: neutral steam	Media: non-neutral liquid	Media: non-neutral air/gas	Media: non-neutral steam	Temperature in °C: -300 -200 -100 -50 0 50 100 150 200 250 300 350	Set pressure in bar: 0 0,5 1 5 10 15 20 30 50 70 1500
SAFETY VALVES ANGLE-TYPE										
455										
852										
355										
451										
451r										
851										
460										
652										
420										
461										
861										
642										
645										
6420										
6450										
492										
492GOX										
255/ 255 ANSI										
4420/ 4450										
ATMOSPHERIC DISCHARGE SAFETY VALVES										
410										
810										
412										
812										
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OVERFLOW AND PRESSURE CONTROL VALVES										
417										
418										
617										
618										
453										
853										
608										
430										
431										
630										
631										

TYPE TEST APPROVED SAFETY VALVES ANGLE-TYPE

Materials

Temperatures
from -60 °C to +400 °C

Pressures
from 0,2 bar to 1500 bar

Media

Threaded connections
from ¼“ to 2½“

Flange connections
from DN 15 to DN 100

Clamp connection
from DN 15 to DN 65

No matter what media our customers use – our comprehensive product range covers practically every application. Hereby, the sealing materials play a particularly important role: These can be selected not only according to their suitabilty for a very wide variety of media – even aggressive ones – but also for thermal loads up to 400 °C.

ANGLE-TYPE SAFETY VALVES ARE USED HERE:


Plant engineering


Pressure vessels in shipbuilding


Steam generators

Type test approved safety valves angle-type

SAFETY VALVES SERIES 455

made of stainless steel, angle-type with flange connections

The series of flanged safety valve 455 captivates with its consistent concept of capacity, function and design.

The high capacity of the entire series from DN 15 up to DN 100 is unique in the sector of flanged safety valves.

By using exclusively high-quality materials with outstanding media resistance and the option to secure the tightness towards the atmosphere on a high level with a backpressure compensating bellows, this safety valve is suitable for nearly all applications.

The pressure range extends from 0.2 to 40 bar and also extremely high temperatures can be applied up to a limit of 400 °C.

Temperatures
from -60 °C to +400 °C*

Pressures
from 0,2 bar to 40 bar

Flange connections
from DN 15 to DN 100

*depending on version, on request till -270°C

Data sheet

SAFETY VALVES SERIES 852

made of stainless steel, angle-type with flange connections

This safety valve range is also completely made of corrosion-resistant materials. The body is made of gunmetal and the stainless steel spring and internal parts, which are made of stainless steel, are hard to beat in terms of corrosion-resistance, especially when confronted with agressive watery solutions, salt water or a saline atmosphere.

The best possible version is available for virtually every application imaginable, whether this requires metal to metal sealing to meet highest tightness requirements or a metal supported o-ring seal made of a variety of materials or even back-pressure compensating gastight metal bellows or a gastight spring housing.

Temperatures
from -60 °C to +225 °C

Pressures
from 0,5 bar to 25 bar

Flange connections
from DN 40 to DN 50

Data sheet

SAFETY VALVES SERIES 355

made of spheroidal graphite cast iron, angle-type with flange connections

The 355 series of flanged safety valves impresses with its consistent concept in terms of performance, function and design.

The use of spheroidal graphite cast iron as the body material results in a particularly cost-effective variant. This is particularly interesting for applications with heating water and Steam as well as lower corrosion resistance requirements.

This series can optionally be supplied with an open or closed bonnet. In addition, a wide range is available with Elastomere or stainless steel bellows and both metallic and soft-sealing valve gaskets.

Temperatures
from -10 °C to +350 °C

Pressures
from 0,2 bar to 40 bar

Flange connections
from DN 15 to DN 100

Data sheet

SAFETY VALVES SERIES 255 AND 255 ANSI

made of cast steel, angle-type, with flange connections

The 255 series is characterised by robust cast steel and a wide range of variants for a variety of industrial applications. These safety valves cover nominal diameters from DN 15 to DN 100 and offer a consistent performance, function and design concept that enables both vertical and horizontal installation. The series is particularly easy to maintain thanks to its low overall height and the option of using a full-nozzle design. Ideal for fast-reacting processes in chemical plants.

For US standards, the ANSI version is available with ASME B16.5 flanges and API 526 valve stem lengths, which facilitates integration into corresponding systems.

Temperatures
from -85 °C to +400 °C

255 | Pressures
from 0,2 bar to 40 bar

255 ANSI | Pressures
from 0,2 bar to 20 bar

Flange connections
from DN 15 to DN 100

Data sheet 255 Data sheet 255 ANSI

SAFETY VALVES SERIES 451

made of stainless steel, angle-type with threaded connections

The advantages and applications of this series made of high-alloy stainless steel begin where gunmetal versions reach their limits. The flexibility of the versions provides an optimum configuration for every application.

In addition to the basic version, a wide range of seal designs and materials, a back-pressure compensating Metallic bellows and/or a gas-tight bonnet offer the necessary special equipment to fulfil the highest safety requirements.

Temperatures
from -60 °C to +400 °C

Pressures
from 0,5 bar to 70 bar

Threaded connections
from ½“ to 2“

Data sheet

SAFETY VALVES SERIES 451R

made of stainless steel, angle-type with clamp connections and bursting disc

With the 451r series with the KUB-Clean bursting disc in combination, Goetze ensures the comprehensive protection of systems. During routine operation this device prevents the smallest amounts of biological agents being released by safety valves which may leak. Combined with the requirements of Hygienic Design and CIP/SIP capability, the bursting disc in combination with the safety valve also prevents the safety valve seal from being able to can prevent the safety valve seat seal from being able to „stick” due to contact with the medium.

Temperatures
from -40 °C to +200 °C

Pressures
from 2,0 bar to 25 bar

Clamp connection
from DN 20 to DN 32

Data sheet

Type test approved safety valves angle-type

SAFETY VALVES SERIES 851

made of gunmetal, angle-type with threaded connections

A proven series with an extremely compact design. With a very good price-performance ratio, it has been proving its reliability for years. In addition to the flexible basic versions, the valve can be used for a wide range of applications, media and temperatures, depending on the version and seal.

As an option, these safety valves can be fitted with Metallic bellows and/or gas-tight bonnet. This means that these valves can also be configured for applications with non-neutral, flammable or toxic media and for viscous media.

Temperatures
from -60 °C to + 225 °C

Pressures
from 0,5 bar to 50 bar

Threaded connections
from ½“ to 2“

Data sheet

SAFETY VALVES SERIES 460

made of stainless steel, angle-type with threaded connections

If the high capacity safety valves with their numerous feature variations for standard applications are technically too complex and oversized from a capacity point of view, but a particular emphasis is placed on quality and corrosion resistance, this stainless steel all-round talent is the perfect solution.

Whether with or without lifting device, the gas tightness of the spring housing is always guaranteed.

Temperatures
from -60 °C to + 225 °C

Pressures
from 0,2 bar to 25 bar

Threaded connections
from ⅜“ to 1“

Data sheet

SAFETY VALVES SERIES 652

made of gunmetal, angle-type with threaded connections

This safety valve made of gunmetal is an economical alternative to high-performance safety valves, in cases where only small blow-off capacities are required. The version 652mFK for neutral liquids is ideal for the protection of pumps and pressure vessel systems, in cases where boiling point is never reached or if no evaporation of the media can occur. A diaphragm protects the moving parts and compression spring against the Media.

The version without diaphragm, type 652sGK is ideal for protecting small compressed air systems.

Depending on the sealing material, this valve can be used for neutral, non-toxic compressible media with varying temperatures.

Temperatures
from -50 °C to + 200 °C

Pressures
from 1 bar to 16 bar

Threaded connections
from ½“ to 2“

Data sheet

SAFETY VALVES SERIES 420

made of stainless steel, angle-type with threaded connections

These angle-type safety valves are available for the first time with TÜV and European component approval. This allows the use of tested and approved quality on the smallest pressure tanks and small steam boilers with neutral and non-neutral gas and liquid media.

The cutting ring threaded connections available as an option make this valve quick and easy to install for use in small pipelines.

Temperatures
from -40 °C to + 260 °C

Pressures
from 0,5 bar to 50 bar

Threaded connections
from ¼“ to ⅜“

Data sheet

SAFETY VALVES SERIES 461

made of stainless steel, angle-type with threaded connections

The consequential expansion of the valve series 451 with smaller nominal diameters now allows the best and therefore most efficient design of safety valves with smaller discharge volumes.

The proven versatility in different variations leads to use for a variety of media with different aggregate conditions.

The possibilities for use are in medical process equipment construction and in the food, beverage, pharmaceutical and cosmetics industries in secondary areas.

Temperatures
from -60 °C to + 225 °C

Pressures
from 0,5 bar to 70 bar

Threaded connections
from ¼“ to ½“

Data sheet

SAFETY VALVES SERIES 861

made of gunmetal, angle-type with threaded connections

Efficiency was the main focus of this development. For the optimum protection of small steam generators, smaller sterilisers and autoclaves, compact and component tested safety valves in increasingly smaller nominal diameters are required in many cases.

The tried and tested and versatile 851 series was therefore extended with additional smaller nominal diameters to meet the demands of the market.

Temperatures
from -60 °C to + 225 °C

Pressures
from 0,5 bar to 50 bar

Threaded connections
from ¼“ to ½“

Data sheet

Type test approved safety valves angle-type

SAFETY VALVES SERIES 642 AND 645

made of gunmetal, angle-type with threaded connections and flange connections

Series 642 gunmetal safety valves are used to protect pressure vessels and pressure systems for neutral and non-neutral vapours, gases and liquids. The series are also used in steam boilers and steam systems, taking into account the system-specific regulations and using suitable valve designs and sealing materials.

The areas of application for these multi-purpose safety valves with separating Diaphragm between body and bonnet range from heating and air-conditioning technology to mechanical engineering and boiler construction through to marine equipment.

Temperatures
from -50 °C to +205 °C

Pressures
from 0,5 bar to 16 bar

Threaded connections
from ½" to 2 ½"

Flange connections
from DN 25 to DN 65

Data sheet

Data sheet

SAFETY VALVES SERIES 6420 AND 6450

made of gunmetal, angle-type with threaded connections and flange connections

The technical features of the 642 and 645 valve series form the basis of the product extension, which emphasises connection flexibility and corrosion resistance. The two-part design of the valve body offers the option of numerous connection types at the valve inlet.

The inlet connections or the valve inlet housing and the valve areas directly exposed to the medium are made of highly corrosion-resistant stainless steel. This allows the valves to be used in an even wider range of applications.

Temperatures
from -50 °C to +205 °C

Pressures
from 0,5 bar to 16 bar

Threaded connections
from ½" to 2½"

Data sheet

Data sheet

SAFETY VALVES SERIES 492

made of stainless steel, atmospheric discharge, with threaded connection

A safety valve which impresses with its small dimensions and design for the protection of high-pressure air systems and high-pressure compressors.

Can optionally be ordered with a gas-tight rotatable angled housing for guided flow-off or for connecting a discharge pipe for non-neutral gaseous media.

Through its special technical construction and design the series covers a pressure range that has not been catered for up to now.

Temperatures
from -50 °C to +205 °C

Pressures
from 50 bar to 1500 bar

Threaded connections
from ¼" to 1"

Data sheet

SAFETY VALVES SERIES 492GOX

made of brass, atmospheric discharge, with threaded connection

Safety valves specially used for applications with oxygen are needed in multiple industries. Particularly in the production of technical gases, medical gases, by compressor manufacturers as well as component manufacturers and plant manufacturers.

The high-pressure safety valve is equipped with an outlet housing which can be adjusted by 360° and is suitable for gaseous oxygen, oxygen mixtures and gases.

A special property of the Goetze safety valve 492GOX is that it was explicitly inspected and approved for oxygen with adiabatic pressure shocks in a range between 50 bar and 420 bar at 60 °C. The compact design and the rotating outlet with threaded connection allowing for adjusting the valve's discharge angle even after installation make the safety valve 492GOX an innovative gain in the Goetze product portfolio.

Temperatures
from -40 °C to +60 °C

Pressures
from 50 bar to 420 bar

Threaded connections
from ¼" to ¾"

Data sheet

SAFETY VALVES SERIES 4420 UND 4450

made of stainless steel, with threaded connection

The new stainless steel valves in the 4420/4450 series are designed for use in pressure vessels and systems for the protection of neutral and non-neutral gases, vapours and liquids.

The single-trim design of the series, which includes a uniform spindle assembly over the entire pressure range, facilitates maintenance and makes the valves ideal for service workshops. In addition to the standard threaded connections (male/female thread ISO/NPT), aseptic and special connections are also possible.

This flexibility also makes the valves suitable for sensitive areas such as food, beverage, pharmaceutical and biotechnology applications.

Temperatures
from -50 °C to +205 °C

4420 | 4450
from 0,2 bar to 25 bar |
from 0,5 bar to 16 bar

4420 | 4450
from ½" to 1 ¼" | from ½" to 1"

Data sheet 4420

Data sheet 4450

Purified Gases Production Process

In many areas of the application of technical gases, particularly high demands are placed on the purity of the gases and on the fittings in use. They are used above all in the production of technical and medical gases, for hydrogen in fuel cells, by compressor manufacturers and plant constructors. manufacturers and plant constructors.

The handling of high-purity gases requires extreme care throughout the entire production process. This is the only way to avoid hazards in the application. In order to meet these high standards, Goetze has a production process (Purified Gases) specially designed for high-purity gases.

PRODUCTION PROCESS:

- Receipt of the enquiry followed by a technical check by our sales department whether the sealing materials and lubricants are suitable for the pressures and temperatures required in the application.

  For critical gases, such as oxygen and hydrogen, compliance with essential processes is necessary. In the area of oxygen applications, it is necessary to use sealing materials that have been tested by the Federal Institute for Materials Testing (BAM) for this specific application.

  In applications with hydrogen, there are also requirements for the purity (e.g. in fuel cell systems) of the gas and thus for the components, as well as for the properties of the sealing materials to be used (Norsok Standard M-710 for o-rings).

- Cleaning of the individual parts with specific solvents and ultrasound. The individual parts are then packed in closed transport boxes.

- The assembly, testing, packaging and labelling of the valves is carried out at our own assembly stations. These steps serve the purpose of achieving corresponding limit values of hydrocarbon compounds and particle impurities.
  - Limit value for hydrocarbon impurities: ≤ 100 mg/m2
  - Limit value for particle impurities: ≤ 100 µm

- Dispatch of the valves to the customer.

Professionally trained personnel, compliance with all relevant regulations and recurring processes, monitoring of the cleaning which is free of oil, grease and particles, assembly, testing, packaging and labelling guarantee customers a valve which conforms to high-purity gas standards for their applications.

Separate assembly area for valves in high purity gas applications

TYPE TEST APPROVED ATMOSPHERIC DISCHARGE SAFETY VALVES

Materials

Temperatures
from -60 °C to +225 °C

Pressures
from 0,2 bar to 50 bar

Media

Threaded connections
from ¼“ to 2“

Through new innovations in our range of high performance safety valves for air, we are continually expanding our product range and setting new standards in the field of safety. These innovative new developments of atmospheric discharge safety valves are particularly suitable for the protection of compressors, air-receivers and bulk transport vehicles.

ATMOSPHERIC DISCHARGE SAFETY VALVES ARE USED HERE:


Bulk transport vehicles


Compressors


Pantographs

Type test approved atmospheric discharge safety valves

SAFETY VALVES SERIES 410

made of stainless steel, atmospheric discharge, with threaded connection

Our smallest and most compact compressed air safety valve with enormous blow-off capacity, so that high-performance compressors can be protected.

This safety valve is also ideally suited for the protection of large stainless steel pressure vessels and air systems made of stainless steel in aggressive environments or in secondary areas in the food-, beverage-, pharmaceutical- ,and cosmetics industries.

Temperatures
from -60 °C to + 225 °C

Pressures
from 0,2 bar to 50 bar

Threaded connections
from ¼“ to 1“

Data sheet

SAFETY VALVES SERIES 810

made of brass, atmospheric discharge, with threaded connection

The basic model within the range of small safety valves for compressed air. It is compact and due to its good blow-off capacities is particularly suitable for the protection of pressure vessels and compressors.

However, even for large pressure vessels this valve can be employed due to its excellent price / performance ratio. This valve is equipped as standard with a stainless steel spring and FPM seal.

Temperatures
from -60 °C to + 225 °C

Pressures
from 0,2 bar to 50 bar

Threaded connections
from ¼“ to 2“

Data sheet

SAFETY VALVES SERIES 412

made of stainless steel, atmospheric discharge, with threaded connection

This high performance safety valve made of stainless steel is unique in its class. Its slim and elegant exterior conceals the highest level of precision and performance.

At the same time, this valve can be ordered with a set pressure up to 50 bar. It is suitable for air and gases which can be freely discharged into the environment.

Temperatures
from -60 °C to + 225 °C

Pressures
from 0,2 bar to 50 bar

Threaded connections
from ½“ to 2“

Data sheet

SAFETY VALVES SERIES 812

made of brass, atmospheric discharge, with threaded connection

The basic model within the range of high performance safety valves. Up to date technology and highest precision, high-quality components such as a stainless spindle and spring fitted into a slender body made of brass.

This valve is suitable for air and gaseous media up to a set pressure of 50 bar, which can be freely discharged into the atmosphere.

Temperatures
from -60 °C to + 225 °C

Pressures
from 0,2 bar to 50 bar

Threaded connections
from ½“ to 2“

Data sheet

SAFETY VALVES SERIES 413

made of stainless steel, atmospheric discharge, with threaded connection

The discharge of air from pressure vessels filled with liquid, granular or powdery media requires additional safety precautions with so-called „FKS“ safety valves.

This valve is fitted with a weather shroud and all moving or guided parts as well as the spring housing are protected against soiling. This makes this valve suitable for the rough conditions on bulk transport vehicles or stationary silos.

Temperatures
from -60 °C to + 225 °C

Pressures
from 0,2 bar to 6 bar

Threaded connections
from ½“ to 2“

Data sheet

SAFETY VALVES SERIES 813

made of brass, atmospheric discharge, with threaded connection

All aspects and special safety features of the „FKS“ valves made of stainless steel have been fully implemented in this series. However all technical and safety features are contained in a brass body.

These valves are an optimal solution with respect to their price / performance ratio for use on bulk transport vehicles and stationary silos.

Standard version with weather shroud, stainless steel spring and FPM (Viton) seal.

Temperatures
from -60 °C to + 225 °C

Pressures
from 0,2 bar to 6 bar

Threaded connections
from ½“ to 2“

Data sheet

PRESSURE RELIEF VALVES

Materials

Temperatures
from -60 °C to +225 °C

Pressures
from 0,1 bar to 20 bar

Media

Threaded connections
from 3/8“ to 2“

Pressure relief valves are suitable for equipment which does not fall under the Pressure Equipment Directive and in cases where only small blow-off capacities are required. In additon, due to their large setting ranges per spring, they are ideally suited to be held in stock for various applications and set pressures. The set pressure can be set and altered by the user.

PRESSURE RELIEF VALVES ARE USED HERE:

Beverage industry

Pumps

Laboratory

Pressure relief valves

PRESSURE RELIEF VALVES SERIES 628

made of gunmetal, angle-type, with threaded connections

A proven all-round pressure relief valve with proportional characteristics in an extremely compact design.

In addition to the basic version, these valves can be supplied in a gas-tight version or with lifting lever, to meet a wide range of customer requirements. The possible sealing variants allow them to be used for a wide range of media and temperatures.

The closed, non-liftable and gas-tight versions are suitable for a wide range of different media. This series is therefore a cost-effective alternative for systems that do not require acceptance testing and systems that do not fall under the scope of the Pressure Equipment Directive.

Temperatures
from -60 °C to +225 °C

Pressures
from 0,2 bar to 20 bar

Threaded connections
from ⅜“ to 2“

Data sheet

PRESSURE RELIEF VALVES SERIES 601

made of gunmetal, with lever and weight, angle-type with threaded connections

This angle-shaped pressure relief valve with lever and weight is an ideal solution for applications requiring low capacities without the need for a TÜV-approved valve.

The set pressure can be changed very easily by the user. The simple and robust design guarantees high reliability when used correctly.

The valve is used to protect pressure vessels/systems for neutral vapours, gases and liquids as well as for steam boilers and steam systems if proportional behaviour is required and only low blow-off quantities are required (e.g. protection against expansion due to heating).

Temperatures
from -60 °C to +225 °C

Pressures
from 0,6 bar to 6 bar

Threaded connections
from ½“ to 2“

Data sheet

PRESSURE RELIEF VALVES SERIES 612

made of gunmetal, with lever and weight, angle-type with threaded connections

This angle-type pressure relief valve with double lever and weights offers precise protection against overpressure in the case of low set pressures.

This is a versatile alternative if the system to be protected does not fall under the pressure equipment directive and a compact version is not necessary. The set pressure can be very easily adjusted by the user.

The pressure relief valve is used above all in low-pressure steam plants, low-pressure industrial applications and large boiler plants.

Temperatures
from -60 °C to +225 °C

Pressures
from 0,1 bar to 4 bar

Threaded connections
from ½“ to 2“

Data sheet

INDIVIDUALITY AND RELIABLE COMPETENCE

WITH EXPERTISE, WE IMPLEMENT NEW AND CUSTOMISED FURTHER DEVELOPMENTS IN A SHORT SPACE OF TIME

All fittings are manufactured under the premise of „individuality for more safety“. In development, individual customer solutions and our own new developments go hand in hand. In the meantime, this mixture has resulted in a comprehensive and high-quality product range that leaves nothing to be desired and is continuously being expanded.

Technical advice is not only the focus of our in-house team. We offer our customers support throughout the entire life cycle of the valve and support the people who have to work with the valves on a daily basis by explaining and introducing them. Our external sales force also aims to provide the customer with the best possible advice and support on site for all questions relating to our products - reliably and close to the customer.

OVERFLOW AND PRESSURE CONTROL VALVES

Materials

Temperatures
from -60 °C to +225 °C

Pressures
from 0,2 bar to 30 bar

Media

Threaded connections
from 3/8" to 2"

Flange connections
from DN 15 to DN 100

These overflow and pressure control valves with proportional opening and closing characteristic are particularly suitable for test rigs, pump circuits or as pressure control or pressure relief valves. They are usually used to protect an existing pump in a closed-circuit from overloading and overheating. The media can then circulate through the bypass system of the pump or through the piping network.

OVERFLOW AND PRESSURE CONTROL VALVES ARE USED HERE:


Wind turbines


De-icing technology


Workboats

Overflow and pressure control valves

OVERFLOW AND PRESSURE CONTROL VALVES SERIES 417

made of stainless steel, angle-type with threaded connections

If the 617 series made of gunmetal and brass cannot be used due to an aggressive media or an aggressive environment, the new 417 series made of highly corrosion resistant stainless steel provides a solution.

The sealed and gas-tight design covers an even wider application range.

The valves can be conveniently adjusted or aligned using the external adjustment, which means that perfect alignment to the operating conditions of the system is possible. They can, however, also be set and sealed at the factory.

Temperatures
from -60 °C to +225 °C

Pressures
from 0,2 bar to 20 bar

Threaded connections
from ⅜“ to 2“
DN 10 - DN 50

Data sheet

OVERFLOW AND PRESSURE CONTROL VALVES SERIES 418

made of stainless steel, angle-type with threaded connections

Highly corrosion-resistant overflow valve in a closed, gas-tight design. Depending on the sealing equipment, it is suitable for a variety of compressible and non-compressible media and also offers a wide range of applications thanks to its large adjustment ranges.

This makes it ideal for keeping valves in stock for various applications and different pressures.

Maximum ease of maintenance is guaranteed by a replaceable valve cartridge.

Adjustments can also be made during operation.

Temperatures
from -60 °C to +225 °C

Pressures
from 0,2 bar to 30 bar

Threaded connections
from ⅜“ to 1¼“
DN 10 - DN 32

Data sheet

OVERFLOW AND PRESSURE CONTROL VALVES SERIES 617

made of gunmetal, angle-type, with threaded connections

This overflow control valve can be set or adjusted during operation via an external adjustment.

The closed, gas-tight design with large adjustment ranges offers a wide range of applications. It has also proven its worth as an overflow valve and bypass valve in systems with frequently changing pressures.

Thanks to their versatility and wide adjustment ranges, these valves are particularly recommended for stockpiling.

Temperatures
from -60 °C to +225 °C

Pressures
from 0,2 bar to 20 bar

Threaded connections
from ⅜“ to 2“

Data sheet

OVERFLOW AND PRESSURE CONTROL VALVES SERIES 618

made of gunmetal, angle-type, with threaded connections

Robust, proportional overflow valve – gastight version. Allround overflow valve for pump protection and bypass control applications, due to its compact design, possibility of user-adjustment within the soring ranges as well as various sealing materials.

Temperatures
from -60 °C to +225 °C

Pressures
from 0,2 bar to 20 bar

Threaded connections
from ⅜“ to 2“

Data sheet

OVERFLOW AND PRESSURE CONTROL VALVES SERIES 453

made of stainless steel, angle-type with threaded connections

These overflow or control valves have been developed for complex applications with, for example, large overflow volumes, viscose media and counter pressures etc. With the stainless steel bellows that compensate counter pressures, a counter pressure affecting the outlet side does not influence the setting of the valve.

The springs, designed precisely for the setting ranges, with the complex technical design of function parts in the flow range and the housing lead to the unusually high flow volumes for overflow valves despite the very proportional control reactions.

Temperatures
from -60 °C to +260 °C

Pressures
from 0,5 bar to 25 bar

Threaded connections
from ½“ to 2“

Data sheet

OVERFLOW AND PRESSURE CONTROL VALVES SERIES 853

made of gunmetal, angle-type, with threaded connections

The alternative to the stainless steel version made of corrosion resistant gunmetal. Apart from the Media resistance of the housing material, the design is identical to the stainless steel series 453.

A suitable sealing material can be chosen for almost every Media. The valves can be set to the required pressure and sealed in the factory, or can be conveniently adjusted by the customer in the corresponding spring range using the hand wheel.

The setting or adjustment can also be made during operation.

Temperatures
from -60 °C to +225 °C

Pressures
from 0,5 bar to 25 bar

Threaded connections
from ½“ to 2“

Data sheet

Overflow and pressure control valves

OVERFLOW AND PRESSURE CONTROL VALVES SERIES 608

made of gunmetal, angle-type with threaded connections

The compact overflow valve of the 608 series is particularly suitable for low volume flows.

Thanks to the proportional opening characteristic and the large adjustment ranges, it can be ideally used as a compact all-round valve.

The overflow pressure can be easily adjusted during operation by means of the handwheel mounted on the gas-tight valve bonnet.

Temperatures
from -60 °C to + 225 °C

Pressures
from 0,2 bar to 20 bar

Threaded connections
⅜“

Data sheet

OVERFLOW AND PRESSURE CONTROL VALVES SERIES 430

made of stainless steel, straightway form, with threaded connections

The diaphragm-controlled overflow valve enables high flow rates at low differential pressures. The closed, gas-tight version is suitable for liquid and gaseous media.

Equipped with Viton, the field of application is extended to media such as oil, petrol, paraffin or oil-containing compressed air. Extremely easy to maintain thanks to replaceable valve cartridge.

The setting can be easily read off the pressure gauge (accessory). Optionally available with internal thread.

Temperatures
from -20 °C to + 120 °C

Pressures
from 0,5 bar to 10 bar

Threaded connections
from ½“ to 2“

Data sheet

OVERFLOW AND PRESSURE CONTROL VALVES SERIES 431

made of stainless steel, straightway form, with flange connections

High flow rates at low differential pressures. Can be adjusted and set externally during operation, for liquid and gaseous media, service friendly due to replacement cartridge.

This overflow valve made of high-alloyed stainless steel combines all of these advantages. According to the sealing- and diaphragm materials employed, these valves can be used for neutral and non-neutral media.

Temperatures
from -20 °C to + 120 °C

Pressures
from 0,5 bar to 10 bar

Flange connections
from DN 15 to DN 100

Data sheet

OVERFLOW AND PRESSURE CONTROL VALVES SERIES 630

made of gunmetal, straightway form, with threaded connections

The alternative to stainless steel made of corrosion-resistant gunmetal.

The advantages of an external adjustment possbility during operation, high flow rates at low differential pressures, suitability for liquid and gaseous media. Easy service due to the replacement valve cartridge make this diaphragm-controlled overflow valve suitable for a wide range of applications.

Optionally available with female thread.

Temperatures
from -20 °C to + 120 °C

Pressures
from 0,5 bar to 10 bar

Threaded connections
from ½“ to 2“

Data sheet

OVERFLOW AND PRESSURE CONTROL VALVES SERIES 631

made of gunmetal, straightway form, with flange connections

In cases where flange connections are required, this valve offers the same technical features as the 630 version of the overflow valve. The robust all-metal design makes these overflow valves ideal for harsh operating and environmental conditions when sensitive control is required.

The set pressure can easily be read off the (optional) pressure gauge. The valve is used to protect pumps in closed circuits against overloading as well as for control purposes in pressure systems for air, neutral/non-neutral gases and technical vapours.

Temperatures
from -20 °C to + 120 °C

Pressures
from 0,5 bar to 10 bar

Flange connections
from DN 15 to DN 100

Data sheet

AERATION AND VENT VALVES

Materials

Temperatures
from -60 °C to +225 °C

Pressures
from -6 mbar to -800 mbar

Media

Threaded connections
from ½“ to 2“

Vent valves, also called vacuum breakers, protect the vessel, plant and piping system from unwanted negative pressure. Under normal operating conditions, the valve is closed. If the internal pressure of the vessel drops below the atmospheric pressure or the set differential pressure, the valve opens and sucks air into the vessel or the piping. The targeted venting prevents damage such as deformation. Venting valves are provided for venting pressure vessels and systems during filling and emptying filling and emptying.

AERATION AND VENT VALVES ARE USED HERE:

Heat exchanger

Heating systems

Steam systems

Aeration and vent valves

AERATION AND VENT VALVES TYPE 620

made of gunmetal
with copper float

Venting of pressure tanks and -systems for filling and emptying and to purge liquid residues.

- heating systems in industrial- and building-technology
- venting of piping systems

The float valve has to be installed vertically at the highest point of the plant and at places where air build-ups can occur.

Decompression takes place, when the ball float is in the lowest position. In this position the air can freely escape through the valve. After decompression, the flowing water lifts the float and closes the valve so that no water can escape.

Venting takes place when the water level has dropped and the float releases the valve.

Temperatures
from -30 °C to + 120 °C

Pressures
pressure-tight up to 6 bar

Threaded connection
½“

Data sheet

AIR VALVE TYPE 625

made of brass
with weight load

For the protection of pressureless tanks and piping systems to avoid vacuum during discharging or cooling-down.

These vacuum valves are also called „sniffing valves“. They open in case of a vacuum and release the air until the vacuum has been alleviated.

- emptying of tanks

Temperatures
from - 10 °C to + 225 °C

Pressures
pressureless

Threaded connection
½“

Data sheet

AERATION VALVES TYPE 1940/45

made of stainless steel
with threaded connection

The valve is used as a venting valve for pipelines, pipework systems, tanks and heat exchangers in which the pressure should not fall below atmospheric pressure.

The valve is used for emptying containers and protecting against vacuum formation in tanks, pipelines, heat exchangers and containers in vapour systems.

Temperatures
from -60 °C to + 225 °C

Pressures
from -6 mbar to - 800 mbar

Threaded connection
from ½“ to 2“

Data sheet Data sheet

AERATION VALVES TYPE 1960/65

made of brass
with threaded connection

All the special features and technical functional characteristics of the stainless steel versions are also present in the 1960/1965 gunmetal series.

It is used as a venting valve for pipelines, pipework systems, tanks and heat exchangers in which the pressure should not fall below atmospheric pressure.

The valve is used for emptying containers and for protection against vacuum formation in tanks, pipelines, heat exchangers and containers in steam systems.

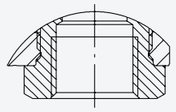
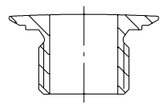
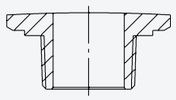
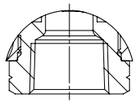
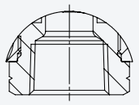
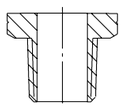
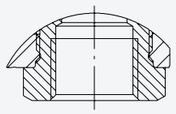
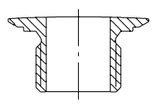
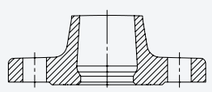
Temperatures
from -60 °C to + 225 °C

Pressures
from -6 mbar to - 800 mbar

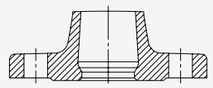
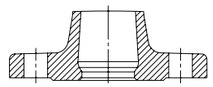
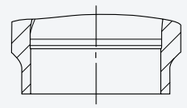
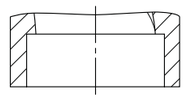
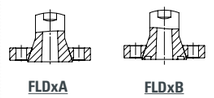
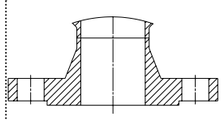
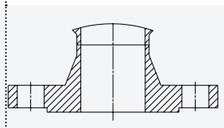
Threaded connection
from ½“ to 1“

Data sheet Data sheet

CONNECTION POSSIBILITIES

Connection type	Drawing	Description
f		Whitworth male threaded pipe connection cylindrical; seal not made on thread BSP-P according to DIN ISO 228
m		Whitworth male threaded pipe connection cylindrical; seal not made on thread BSP-P according to DIN ISO 228
BSP-Tm		Whitworth male threaded pipe connection tapered; seal made on thread male connection BSP-T according to DIN EN 10226
NPTf		US standard tapered pipe thread NPT female threaded pipe connection NPT according to ANSI / ASME B 1.20.1 seal made on thread
NPTFf		US tapered pipe thread for dry closure NPTF female threaded pipe connection NPTF according to ANSI / ASME B1.20.3 seal made on thread
NPTm		US standard tapered pipe thread NPT male threaded pipe connection NPT according to ANSI / ASME B 1.20.1 seal made on thread
METf		Metric ISO female connection according to DIN 13 seal not made on thread
METm		Metric ISO male connection according to DIN 13 seal not made on thread
FCDxA		FCD = Flange connection moulded to DIN EN 1092 x = Pressure rating PN | 1 = PN10; 2 = PN16; 3= PN25; 4 = PN40 A = Standard with sealing strip form B[1]

[1] Other versions of the sealing strip on request.

Connection type	Drawing	Description
FCAxA		FCA = flange connections moulded according to ASME B 16.5 x = Pressure rating / class | 1 = Class 150; 2= Class 300 A = Standard with sealing strip raised face[1]
FCBxA		FCB = Cast flange connections according to ASME B 16.24 x = Pressure rating / class | 1 = Class 150; 2= Class 300 A = Standard with raised face sealing strip[1]
SE		Welding end SE1 for pipes according to DIN EN ISO 1127 SE2 for pipes according to ASTM A312 S10 SE3 for pipes according to ASTM A312 S40 SE4 for pipes according to DIN 11850 row 2; DIN 11866-A; DIN EN 10357 series A SE5 for pipes according to DIN EN ISO 1127; DIN 11866-B; DIN EN 10357 series C SE6 for pipes according to BS 4825-1; DIN 11866-C
SM		Welding socket SM1 for pipes according to DIN EN ISO 1127 SM2 for pipes according toh ASTM A312 S10 SM3 for pipes according to ASTM A312 S40
LM		Soldering socket LM1 for pipes according to DIN EN ISO 1127 LM2 for pipes according to ASTM A312 S10 LM3 for pipes according to ASTM A312 S40 LM4 for pipes according to DIN EN 12449
FLDxA, FLDxB	 FLDxA FLDxB	FLD = loose flange to DIN EN 1092 up to max. PN100 x = Pressure class PN | 1 = PN10; 2 = PN16; 3= PN25; 4 = PN40; 5 = PN63; 6= PN100 A = Standard with raised face form B[1] B = Sealing strip with groove form D[1]
FLAxA, FLAxB	 FLAxA FLAxB	FLA = loose flange according to ASME B 16.5 up to max. 600 lbs x = Pressure rating / class | 1 = Class 150; 2= Class 300; 3 = Class 400; 4 = Class 600 A = Standard with sealing strip raised face[1] B = Sealing strip with ring joint face[1]
FWDxA		FWD = Welding neck flange according to DIN EN 1092 x = Pressure class PN | 1 = PN10; 2 = PN16; 3= PN25; 4 = PN40; 5 = PN63; 6= PN100 A = Standard with sealing strip form B[1]
FWAxA		FWA = Welding neck flange according to ASME B 16.5 x = Pressure rating / class | 1 = Class 150; 2= Class 300; 3 = Class 400; 4 = Class 600 A = Standard with sealing strip raised face[1]

[1] Other versions of the sealing strip on request.

Pressure reducing valve for industrial use

GOETZE PRESSURE REDUCING VALVES FOR MORE SAFETY IN INDUSTRIAL PROCESSES.

How can industrial processes ensure that risks from leaks, for example, are minimised and that regular maintenance is as simple as possible?

Pressure reducing valves in industrial applications face a number of challenges and must be correctly sized, manufactured and installed to ensure operator safety and process efficiency.

In industrial applications, our Goetze pressure reducing valves contribute to safety by maintaining the correct pressure at various points in the system.

The advantages of Goetze pressure regulators:

- Precise regulation
- High-quality materials
- Simplified maintenance
- Certifications and conformity
- Comprehensive expertise
- Customer support and training

Discover our pressure reducers now in our Water & Buildings brochure.

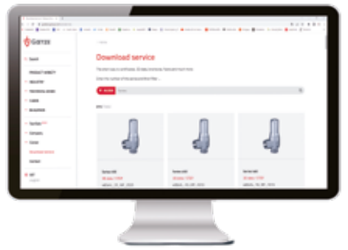
INTERNET SERVICE OF GOETZE

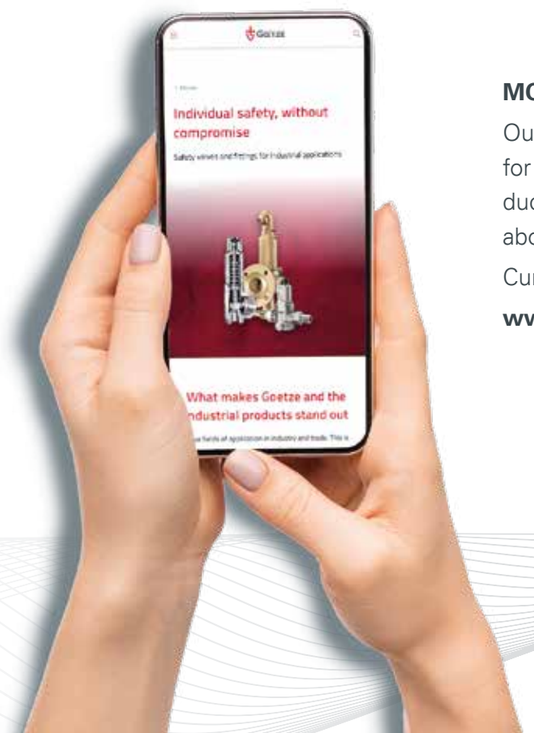
DESIGN AND CALCULATION OF SAFETY VALVES

With the help of a design programme and with the alpha-w value as well as the narrowest flow diameter of our safety valves, the valve suitable for discharging the required volume can be determined according to AD regulation A2-2000, in accordance with the international and European standard DIN EN ISO 4126, API 520 and ASME BPVC-VIII. Our experts offer you competent advice on the optimal and economical sizing of your valve.

3D MODELS AND TENDER DOCUMENTS

We provide free-of-charge our 3D models in various and common formats.





MOBILE WEBSITE

Our website is also available in a version optimised for smart phones. As usual, you may find your products simply and easily – also when you are out and about.

Curious? Just take a look!

www.goetze-group.com

HOW TO HANDLE PRESSURE

The competence of Goetze KG Armaturen has been in demand for more than 70 years. Our wealth of experience is as broad and varied as our areas of application for our high-performance fittings.

The Goetze product range

Our locations

GERMANY, LUDWIGSBURG

CHINA, BRAZIL, USA | OWN DISTRIBUTORS

-270 °C – +400 °C

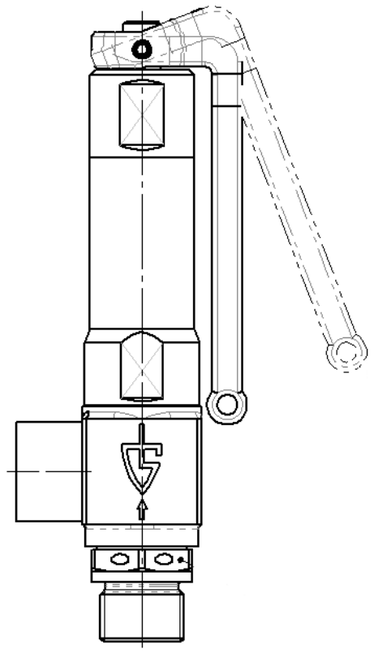
uncompromising performance

0,2 BAR – 1500 BAR

extensive pressure range

Goetze's concentrated expertise

We support our customers with our many years of experience in this sector at the highest level. Thanks to the expertise of our qualified development team, we are able to continuously develop new and innovative products and adapt to individual customer requirements. Using precise manual work and precision manufacturing, we are able to advance the ideas and product innovations of our customers – customer-focused, solution-oriented, flexible and always in German brand quality.



THE GOETZE KG ARMATUREN

Individuality for more safety

The competence of Goetze KG Armaturen has been in demand for 70 years. Our wealth of experience is as broad and varied as our areas of application for our high-performance fittings. Our well thought-out product portfolio covers every industrial application: Liquids of all kinds, gases, technical vapours and steam. Goetze valves are used with temperatures ranging from -270 °C up to +400 °C. The greatest possible safety is a priority.

PROFESSIONAL AND COMPETENT ADVICE

At any time, you can reach a competent contact partner as part of our in-house team at Goetze. Whether it is for the product selection, the configuration of the right valve, urgent requests, whether per telephone call or per mail, there is a personal multilingual consultant at your disposal. With our valves and fittings - "Made in Germany" - we are your competent partner for all matters relating to the handling of pressure.

Technical consulting is not only the focus of our in-house team. We provide support for our customers with the necessary information and instructions throughout the entire life cycle of the valve thereby assisting those persons who have to work with the fittings every day. Our field representatives are tasked with providing customers with the best possible consultation service at the customer's facility and supporting them in all questions concerning our products.

GLOBAL TRADE

Goetze products – available worldwide, directly and quickly. No matter whether through Goetze or our trading partners. Our sales subsidiaries and local dealers will always provide the advice you need to find the product that suits you best. Discover our dealer network and find your local dealer.

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