

INDUSTRIAL VALVES



**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

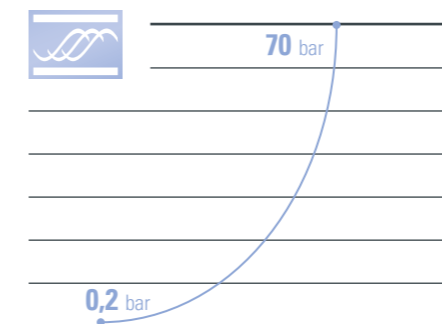


- good price / performance ratio
- brass turned from solid material

Media

LIQUIDS

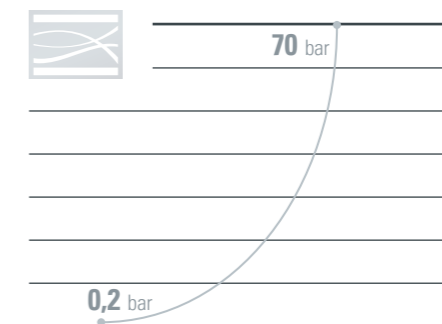
from -270°C to +400°C



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

AIR, GASES AND VAPOURS

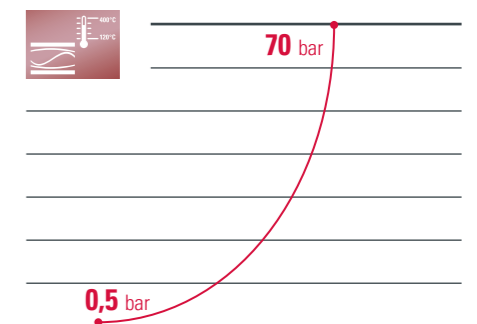
from -270°C to +400°C



- 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

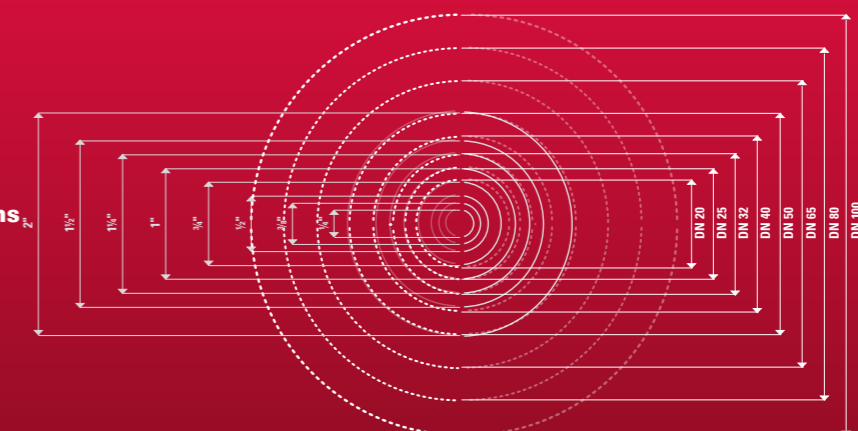
Connections



Threaded connections
1/4" bis 2"



1/4" - 2"



Flange connections
DN 15 to DN 100

DN 15 - DN 100



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	UK PA	ASME	CRN	ERC	TS	KC	KCs	ACS	WRAS	DNV	R	ABS	Shipbuilding	RI	RA	DB	Railway
SAFETY VALVES ANGLE-TYPE																				
455	■	■	■	■			■	■					■	■		■	■			
852	■	■	■	■			■	■	■				■	■		■	■			
355	■	■	■	■			■	■					■	■		■	■			
451	■	■	■	■	■	■	■	■	■				■	■		■	■			■
451r	■	■	■	■			■	■					■	■		■	■			
851	■	■	■	■	■	■	■	■	■				■	■		■	■			■
460	■	■	■	■	■		■	■	■				■	■		■	■			■
652	■	■	■	■			■	■		■			■	■		■	■			
420	■	■	■	■			■	■					■	■		■	■			■
461	■	■	■	■			■	■					■	■		■	■			■
861	■	■	■	■			■	■					■	■		■	■			■
642	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
645	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
6420	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
6450	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
492	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
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	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
431	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
631	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■

Series	Materials	Connection type	Media						Temperature in °C							Set pressure in bar																								
			neutral			non-neutral			liquid	air/gases	steam	liquid	air/gas	steam	-300	-200	-100	-50	0	50	100	150	200	250	300	350	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			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
ATMOSPHERIC DISCHARGE SAFETY VALVES																																								
410			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
810			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
412			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
812			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
413			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
813			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
PRESSURE RELIEF VALVES																																								
628			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
601			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
612		<																																						

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 1/4" bis 2 1/2"



Flange connections

from DN 25 to DN 65



Clamp connection

von DN 20 bis DN 32

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 suitability 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 back-pressure 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.

SAFETY VALVES SERIES 852

made of gunmetal,
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 aggressive 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.

SAFETY VALVES SERIES 355

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



The series of flanged safety valve 355 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. Using spheroidal graphite cast iron for the housing allows a particularly inexpensive variant to be produced.

This is of particular interest for applications with heating water and steam as well as lower requirements with regard to high corrosion resistance. This series can be supplied either with open or closed cap. The range of variants is further extended by offering bellows in either elastomer or stainless steel and either a metal or soft-sealing valve seal.

SAFETY VALVES SERIES 451

made of stainless steel, angle-type
with threaded connections



The benefits and applications of this series made of high-alloyed stainless steel begin, where versions made of gunmetal are at their limits.

The flexibility of the various versions offer the optimal configuration for every application. In addition to the basic version the numerous sealing possibilities and materials, back-pressure compensating metal bellows and/or a gastight cap offer the necessary optional extras required to fulfill the highest safety requirements.

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 prevent the safety valve seat seal from being able to „stick“ due to contact with the medium.

SAFETY VALVES SERIES 851

made of gunmetal, angle-type
with threaded connections



A proven series with an extremely compact design: with its very good price/performance ratio this valve has been proving its reliability for many years.

In addition to the flexible basic version, according to the version and sealing material in question, this valve can be used for a varied range of applications, media and temperatures. As an optional extra, these valves can be fitted with metal bellows and/or a gastight cap.

Consequently, these valves can be configured for applications involving non-neutral, inflammable, toxic and viscous media.

 **Temperatures**
from -60°C to +400 °C

 **Pressures**
from 0,2 bar to 40 bar

 **Flange connections**
from DN 15 to DN 100



Data sheet

 **Temperatures**
von -60°C bis +225 °C

 **Pressures**
von 0,5 bar bis 25 bar

 **Flange connections**
von DN 40 bis DN 50



Data sheet

 **Temperatures**
von -10°C bis +350 °C

 **Pressures**
von 0,2 bar bis 40 bar


 **Flange connections**
von DN 15 bis DN 100



Data sheet

 **Temperatures**
from -60°C to +400 °C

 **Pressures**
from 0,5 bar to 70 bar


 **Threaded connections**
from 1/2" to 2"



Data sheet

 **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

 **Temperatures**
from -60°C to +225 °C

 **Pressures**
from 0,5 bar to 50 bar

 **Threaded connections**
from 1/2" to 2"



Data sheet

Type test approved safety valves angle-type

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.

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.

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 medias.

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

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.

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.

SAFETY VALVES SERIES 642 UND 645

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





The safety valves made from gunmetal are designed to protect pressure tanks and pressure systems for neutral and non-neutral vapours, gases and liquids.

These series are also used in steam boilers and steam plants with due consideration of plant-specific regulations and in combination with suitable valve designs and sealing materials.

The areas of application of these multi-purpose safety valves with separating-diaphragm between the housing and cap range from heating and air conditioning technology to mechanical engineering, boiler construction and ship building.

 **Temperatures**
from -60 °C to +225 °C


 **Pressures**
from 0,2 bar to 25 bar


 **Threaded connections**
from 3/8" to 1"



Data sheet

 **Temperatures**
from -50 °C to +200 °C


 **Pressures**
from 1 bar to 16 bar

 **Threaded connections**
from 1/2" to 2"



Data sheet


 **Temperatures**
from -40 °C to +260 °C

 **Pressures**
from 0,5 bar to 50 bar

 **Threaded connections**
from 1/4" to 3/8"



Data sheet

 **Temperatures**
from -60 °C to +225 °C

 **Pressures**
from 0,5 bar to 70 bar

 **Threaded connections**
from 1/4" to 1/2"



Data sheet

 **Temperatures**
from -60 °C to +225 °C

 **Pressures**
from 0,5 bar to 50 bar


 **Threaded connections**
from 1/4" to 1/2"



Data sheet

 **Temperatures**
from -50 °C to +205 °C

 **Pressures**
from 0,5 bar to 16 bar

 **Threaded connections**
from 1/2" to 2 1/2"

 **Flange connections**
from DN 25 to
DN 65



Data sheet



Data sheet

Type test approved safety valves angle-type

SAFETY VALVES SERIES 6420 AND 6450

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



The technical features of the valve series 642 and 645 form the basis of the extended product range in which connection flexibility and corrosion resistance are paramount. The two-piece construction of the valve housing allows many different connection types to be used on the valve inlet.

The inlet nozzles and the inner parts coming into contact with the media are made from highly corrosion-resistant stainless steel, which enables 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 1/2" to 2 1/2"



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 -60 °C to +200 °C



Pressures
from 50 bar to 1500 bar



Threaded connections
from 1/4" 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 1/4" to 3/4"



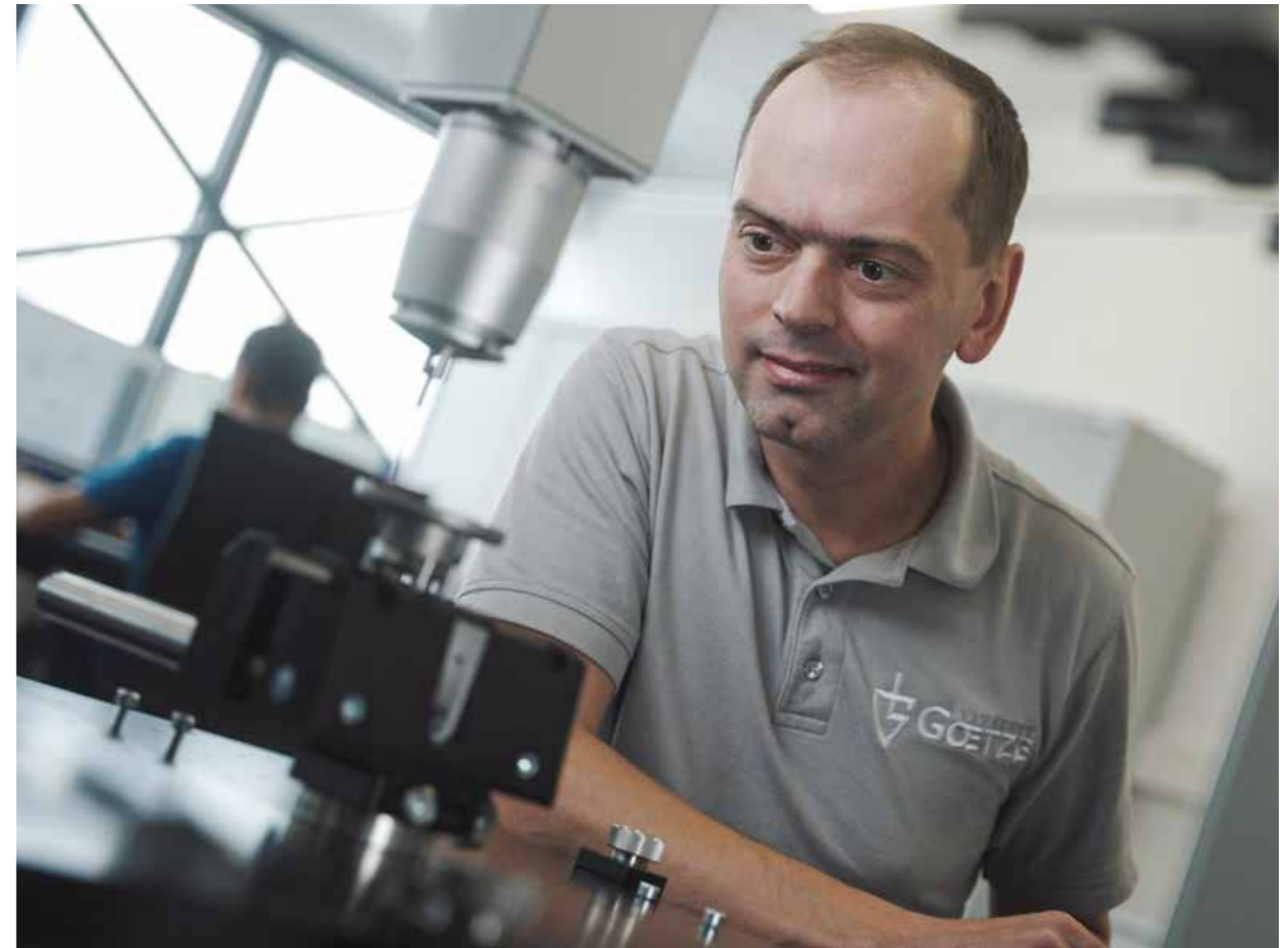
Data sheet

HIGHEST DEMANDS ON VALUE AND RELIABILITY

As our customer, you can rely on products that make no compromises in terms of functionality, durability and resistance. All safety valves and fittings are tested in-house. Without exception. Not just random samples, but every single fitting is subjected to a quality check before it leaves our premises. Through numerous standard requirements and also factory standards, we ensure that our valves are subjected to several quality controls. You can rely on that!

QUALITY IS PART OF OUR PHILOSOPHY

It is shared - and lived - by all our employees. Our experienced and trained personnel ensure that we achieve the highest standards of value and reliability. These demands are set by the applications in which our safety valves and fittings are used.



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: $\leq 100 \text{ mg/m}^2$
- Limit value for particle impurities: $\leq 100 \mu\text{m}$

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 1/4" 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:



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.

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.

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.

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.

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.

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 50 bar



Threaded connections
from 1/4" to 1"



Data sheet



Temperatures
from -60°C to +225°C



Pressures
from 0,2 bar to 50 bar



Threaded connections
from 1/4" to 2"



Data sheet



Temperatures
from -60°C to +225°C



Pressures
from 0,2 bar to 50 bar



Threaded connections
from 1/2" to 2"



Data sheet



Temperatures
from -60°C to +225°C



Pressures
from 0,2 bar to 50 bar



Threaded connections
from 1/2" to 2"



Data sheet



Temperatures
from -60°C to +225°C



Pressures
from 0,2 bar to 6 bar



Threaded connections
from 1/2" to 2"



Data sheet



Temperatures
from -60°C to +225°C



Pressures
from 0,2 bar to 6 bar



Threaded connections
from 1/2" 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 addition, 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 valve with proportional opening characteristics and an extremely compact design. In addition to the basic version, these valves are also available for the most varied customer requirements as a gas-tight version or with lifting lever. The various sealing materials available mean that this valve is suitable for a wide range of media and temperatures.

As a closed, gas-tight version without lifting mechanism it is suitable for many types of media. This makes this series an economically interesting alternative for plants which do not require any approval or which do not fall under the pressure equipment directive (PED).



Temperatures
from -60°C to +225°C



Pressures
from 0,2 bar to 20 bar



Threaded connections
from 3/8" to 2"



Data sheet

PRESSURE RELIEF VALVES SERIES 601

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



This angle-type pressure relief valve with lever and weight is an ideal alternative when in the case of low capacities a TÜV type tested valve is not necessary. The set pressure can be very easily adjusted by the user. Provided the valve is used correctly, its simple and robust design guarantee a high degree of reliability.

The valve is ideal for the protection of pressure tanks/systems for neutral vapours, gases and liquids as well as for steam boilers and steam plants, provided that proportional characteristics are desired and only small blow-off capacities are required (e.g. protection of the expansion due to heating).



Temperatures
from -60°C to +225°C



Pressures
from 0,6 bar to 6 bar



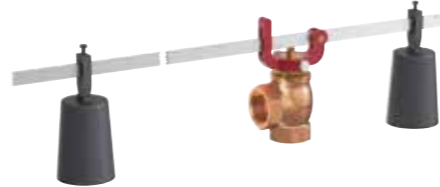
Threaded connections
from 1/2" to 2"



Data sheet

PRESSURE RELIEF VALVES SERIES 612

made of gunmetal, with double lever
and weights, angle-type with thread-
ed 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 1/2" to 2"



Data sheet

INDIVIDUALITY AND RELIABLE COMPETENCE

**WITH EXPERTISE, WE IMPLEMENT NEW AND CUSTOM-
ISED 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.

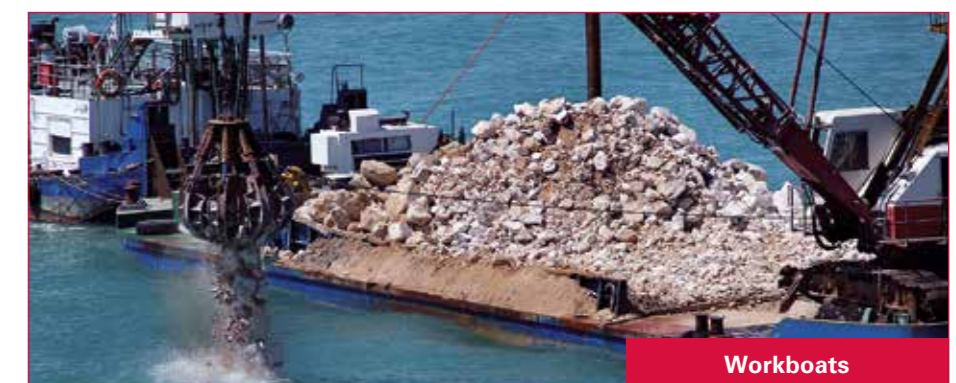
OVERFLOW AND PRESSURE CONTROL VALVES ARE USED HERE:



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

MANY SPECIAL CONNECTION OPTIONS



OVERFLOW AND PRESSURE CONTROL VALVES SERIES 418

made of stainless steel, angle-type with threaded connections

MANY SPECIAL CONNECTION OPTIONS



OVERFLOW AND PRESSURE CONTROL VALVES SERIES 617

made of gunmetal, angle-type, with threaded connections



OVERFLOW AND PRESSURE CONTROL VALVES SERIES 618

made of gunmetal, angle-type, with threaded connections



OVERFLOW AND PRESSURE CONTROL VALVES SERIES 453

made of stainless steel, angle-type with threaded connections

MANY SPECIAL CONNECTION OPTIONS



OVERFLOW AND PRESSURE CONTROL VALVES SERIES 853

made of gunmetal, 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.

Highly corrosion-resistant overflow valve – closed, gastight version. This is suitable for all media and due to its large spring range is suitable for a wide range of applications. Therefore it is also ideally suitable, when a customer wants to stock a valve suitable for a wide range of applications and varying set pressures.

This valve is particularly maintenance-friendly due to an easily replaced valve cartridge. The valve can also be easily set or adjusted during operation.

By means of an external setting mechanism this valve can be set or adjusted by the operator during operation. The closed, gastight version with large spring ranges offers a wide range of application possibilities. This valve is also widely used as an overflow valve in applications where the plant pressure often changes.

Due to its versatility and large spring ranges, this valve can be highly recommended as a stock item.

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 spring ranges as well as various sealing materials.

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.

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 0,2 bar to 20 bar

 **Threaded connections**
from 3/8" to 2"
DN 10 - DN 50



Data sheet

 **Temperatures**
from -60°C to +225°C


 **Pressures**
from 0,2 bar to 30 bar

 **Threaded connections**
from 3/8" to 1 1/4"
DN 10 - DN 32



Data sheet

 **Temperatures**
from -60°C to +225°C

 **Pressures**
from 0,2 bar to 20 bar


 **Threaded connections**
from 3/8" to 2"



Data sheet

 **Temperatures**
from -60°C to +225°C

 **Pressures**
from 0,2 bar to 20 bar

 **Threaded connections**
from 3/8" to 2"



Data sheet

 **Temperatures**
from -60°C to +260°C

 **Pressures**
from 0,5 bar to 25 bar

 **Threaded connections**
from 1/2" to 2"



Data sheet

 **Temperatures**
from -60°C to +225°C

 **Pressures**
from 0,5 bar to 25 bar

 **Threaded connections**
from 1/2" 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.

OVERFLOW AND PRESSURE CONTROL VALVES SERIES 430

made of stainless steel, straightway form, with threaded connections



This diaphragm-controlled overflow valve allows high flow rates at low differential pressure. In its closed, gastight version it is suitable for liquid and gaseous media.

Fitted with Viton seals, its range of applications is extended so that it is suitable for media such as oil, petrol, kerosine or oil-laden compressed air.

Extremely service-friendly due to replacement valve cartridge. The set pressure can easily be read-off the (optional) pressure gauge. Optionally available with female thread.

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.

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 possibility 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.

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 -60°C to +225°C

 **Pressures**
from 0,2 bar to 20 bar


 **Threaded connections**
3/8"



Data sheet

 **Temperatures**
from -20°C to +120°C

 **Pressures**
from 0,5 bar to 10 bar

 **Threaded connections**
from 1/2" to 2"



Data sheet

 **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

 **Temperatures**
from -20°C to +120°C

 **Pressures**
from 0,5 bar to 10 bar

 **Threaded connections**
from 1/2" to 2"



Data sheet

 **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 1/2" 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:



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
1/2"



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
1/2"



Data sheet

AERATION VALVES TYPE 1940/45

made of stainless steel
with threaded connection



This is a vent valve for pipelines, pipeline systems, vessels and heat exchangers in which the pressure should not fall below the atmospheric pressure.

It is used for emptying vessels and protecting against vacuum build-up in tanks, pipelines, heat exchangers and vessels in steam plants.



Temperatures
from -60°C to +225°C



Pressures
from -6 mbar to - 800 mbar



Threaded connection
from 1/2" to 2"



Data sheet



Data sheet

AERATION VALVES TYPE 1960/65

made of brass
with threaded connection



All characteristics and technical features of the stainless steel versions are the same in the series 1960/1965 made from gunmetal.

It is a vent valve for pipelines, pipeline systems, vessels and heat exchangers in which the pressure should not fall below the atmospheric pressure.

It is used for emptying vessels and protecting against vacuum build-up in tanks, pipelines, heat exchangers and vessels in steam plants.



Temperatures
from -60°C to +225°C



Pressures
from -6 mbar to - 800 mbar



Threaded connection
from 1/2" to 1"

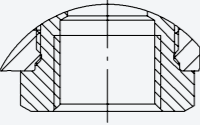
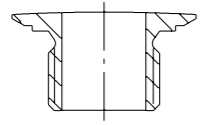
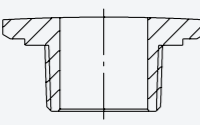
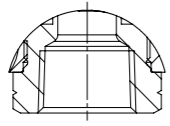
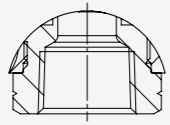
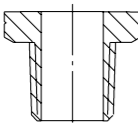
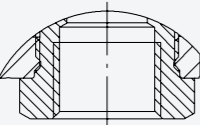
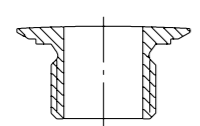
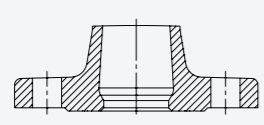


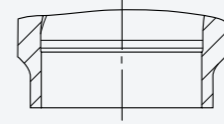
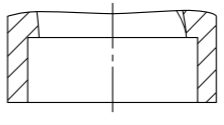
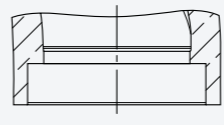


Data sheet



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
FL		Cast flange connection according to DIN EN 1092

Connection type	Drawing	Description
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		Loose flange connection according to DIN EN 1092 up to max. PN 100 x = Pressure rating A = Without sealing groove B = With sealing groove
FLAxA, FLAxB		Loose flange connection according to ASME B 16.5 up to max. 600 lbs x = Pressure rating A = Without sealing groove B = With sealing groove

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

500.000 VALVES PER YEAR

out of a wide product portfolio – „Made in Germany“

Our locations

GERMANY, LUDWIGSBURG

CHINA, BRAZIL, USA | OWN DISTRIBUTORS

-270 °C – +400 °C

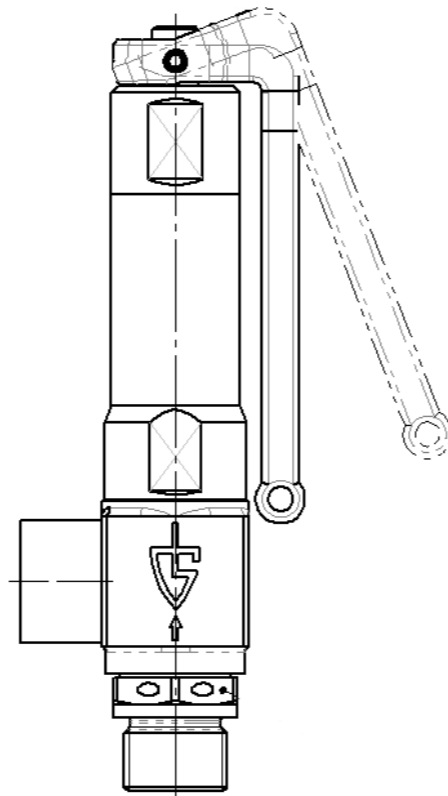
uncompromising performance

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

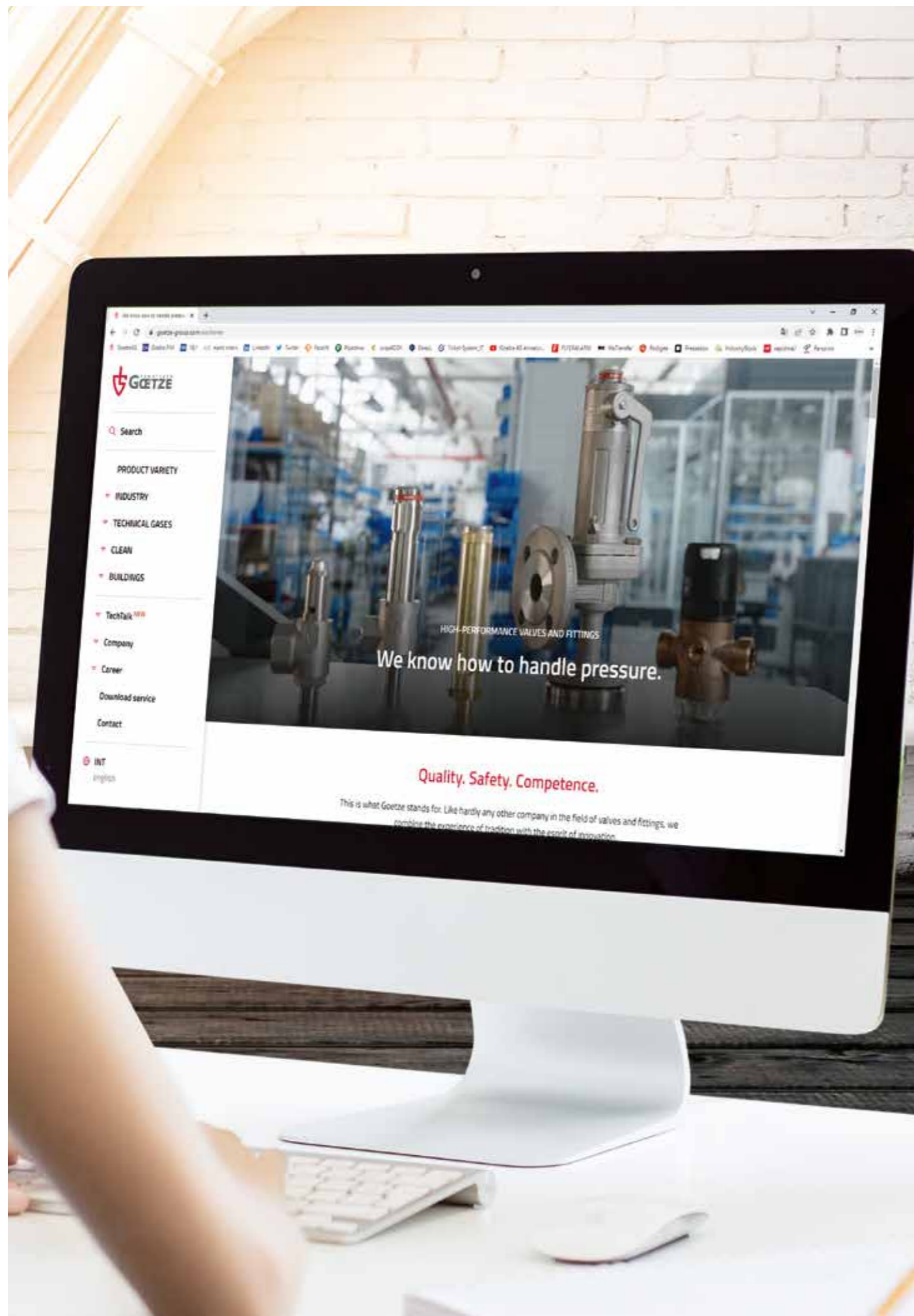
At any time, you can reach a competent contact partner as part of our in-house team at Goetze. Whether it is for the product selection, the configuration of the right valve, urgent requests, whether per telephone call or per mail, there is a personal multilingual consultant at your disposal. With over 500.000 valves per year „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.





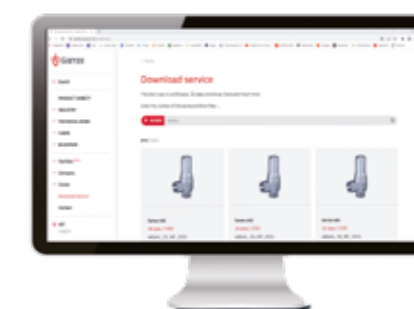
INTERNET SERVICE OF GOETZE

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. On our website you will find them under the section „Service/Download“



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



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