




HIGH-PERFORMANCE  
**VALVES AND FITTINGS**  
FOR THE INDUSTRY



We know how to  
**handle  
pressure**

Products  
made in Germany.  
ASME-certified.





**W**ith new developments in the area of **flanged valves and clean valves** up to size **NPS 4**, Goetze has extended its product range for other sectors and application possibilities. For our family-run business the wishes and requirements of our customers are always the main focus, no matter whether you are looking for individual custom-made products or searching for solutions. With our experience and expertise we are the specialist and the right solution partner for you. Extensive tests, **outstanding quality** and international certifications are the successful pillars of the entire Goetze product range. With our family-run Goetze KG, you may always expect new and surprising things – based on our well-proven combination between innovation and tradition.

Detlef Weimann  
Managing Director, Goetze KG Armaturen

Tobias Weimann  
Head of Sales Department, Goetze KG Armaturen

#### Tailor-made solutions for more safety

We keep your industry running on the right track with innovative technologies. You can choose from a wide range of safety valves, overflow and pressure control valves, fittings and pressure reducing valves.



## GOETZE HIGH-PERFORMANCE VALVES AND FITTINGS

Angle-type safety valves  
for industrial applications

ASME-certified

14



Atmospheric  
discharge safety valves  
for industrial applications

ASME-certified

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Overflow and pressure  
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Safety valves and fittings  
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ASME-certified

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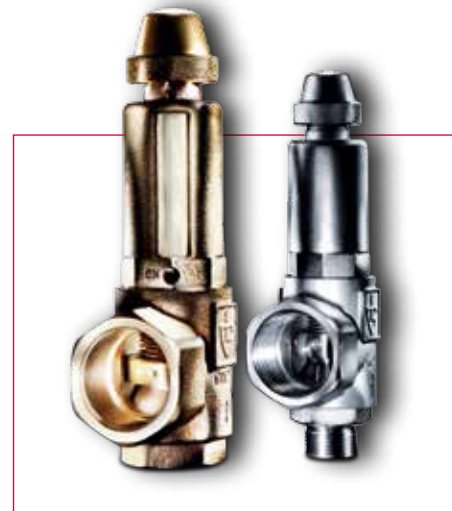


# WE KEEP YOUR INDUSTRY RUNNING ON THE RIGHT TRACK WITH INNOVATIVE TECHNOLOGIES

**All our products** are manufactured based on the premise "individuality for more safety." Our wide product range of high performance valves and fittings offers you the choice of a diversity of applications, media and temperatures – always tailored to your individual area of application.

Customers worldwide appreciate the large variety of our products – always tailor-made to the individual applications and media. Our product developments find excellent application opportunities in almost all sorts of industries. Therefore, we meet all requirements regarding materials, cer-

tifications, surface finish and connection types. Even at high temperatures or temperatures below freezing point, the invisibly installed Goetze valves always have a high reliability. Our top quality sealing materials cope with all challenges.



## OUR KEY INDUSTRIES

- Food industry
- Pharma industry
- Compressors
- Plant and mechanical engineering
- Cargo
- Ship building







## TAILOR-MADE SOLUTIONS FOR MORE SAFETY

Family-owned from the beginning: The competence of Goetze KG Armaturen has been in demand for more than 65 years. Our wealth of experience is as broad and varied as our areas of application for our high-performance fittings. Our well thought-out family of products covers every industrial application: Liquids of all kinds, gases, technical vapours and steam. Goetze valves are used with temperatures ranging from -454 °F up to 752 °F and the greatest possible safety is always first priority. We have the right solution for you: Take our word for it!

We have been designing and manufacturing safety valves for over 65

years. With over 300000 valves per year – we are your competent partner for all matters relating to the handling of pressure.



### Professional advice

Our team of consultants who come to you. We are your competent advisor and partner for technical solutions with experience and professional know-how.



### ASME-certified quality standards

Our products are certified in compliance with the ASME Code and comply with international testing standards.



### Constant development

Flexible structures mean that the route to a customized product is short. With our technical expertise we realize new and enhanced designs in the shortest time possible.



### Accurate assembly

The "work station": manageable units, short set-up times and employees with the necessary know-how, skill and experience. Not any anonymous assembly line production. We are always proud to hear when the Goetze KG is referred to as a "manufactory".



### State-of-the-art high tech

Intelligent minds and skilled hands are the one thing – however for the manufacturing process at Goetze KG nothing can beat the highest level of precision achieved through the use of high-tech production equipment: Computer controlled CNC machines.



### Comprehensive testing

You can rely on this: Every single valve is tested in our factory. This is not only a random spot check: Each valve is subjected to an ISO-certified quality control test, before it is allowed to leave the factory.



### Reliable competence

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, per mail or per chat, there is a personal multilingual consultant at your disposal.



### Laser marking

In order to fit all the necessary information onto the valve, we use precision laser marking technology. This means that we are also able to take individual customized marking requirements of customers into consideration.



# GOETZE KG ARMATUREN MILESTONES

**Goetze KG Armaturen** was established under difficult conditions during the years following World War II, when it started to evolve under modest circumstances from a sound and successfully run valves and fittings factory to the global distributor of specialty products that it is today.

Gerhard Götze had been the director of a valves and fittings company from the State of Saxon in Germany even before the war, so he had already gathered extensive industry experience during this time. Forced to flee his home town of Dresden at the end of the war, he established with minimum funds and a great deal of effort and personal commitment the modest manufacturing facilities of Gerhard Götze KG in 1949.

The humble beginnings took place in a former horse barn in the Queen Olga Barracks and the goal was to establish

a well-run and state-of-the-art production facility – not an easy feat. From the start, his two sons were also part of the small team facilitating the development efforts.

The oldest son Rolf supported his father in administrative management, while the younger son Günter, who was an engineer, was responsible for the development of the products. The company was already realizing respectable in the 1950s. In 1961, the Götze company relocated its facilities to Robert-Mayer-Strasse in Ludwigsburg. As a result of the positive growth performance, in 1965 a decision was made to expand the factory build-

**2002**  
General management is taken over by the personally liable executive director Detlef Weimann

Strategic realignment of the range of products towards an industrial sector

ings. Staff was increased to 75 employees – a record number at this time.

In 1988, management was passed on to Rolf Götze as personally liable general partner. The performance during the subsequent years can be defined as calm and steady based on a sound foundation. The proven concept remained unchanged. A great deal of value was attributed to high quality production and continued operation at the Ludwigsburg location, however the number of employees was reduced to 35. The company was then strategically realigned when Detlef Weimann, himself a descendant of the Günter Götze fam-

**2010**  
Company name change from Gerhard Götze KG to Goetze KG Armaturen  
Logo modified



ily line, purchased the general partner's shares in 2002. Since then, the portfolio of products has tripled and the company has focused strongly on the export markets.

Today, the Goetze family-operated business is proud to look back on generations of highly responsible family members. With its latest innovations and impressive gain in market share over the last few years, the next generation will also be able to take great pleasure in continuing to be the driving force behind the further expansion of the business.

**Today**  
Revenue has increased five-fold since 2002 and the number of products has tripled 95 employees  
Three international subsidiaries in the United Kingdom, Russia and China



From left to right: Sonja Weimann, Stephanie Lin, Detlef Weimann and Tobias Weimann

„In order to be able to keep up with the technical development in today's world, a wealth of **experience developed over many years is required.**“

Founder Gerhard Götze



**1949**  
Gerhard Götze & Co. was founded



**1951**  
Expansion of the production program: Purchase of new machines

**1960**  
Real estate that was purchased as a precaution were traded in return for a new property for the factory

**1961**  
Relocation to the newly constructed factory on Robert-Mayer-Strasse

**1962**  
First high revenues from valves and fittings sales

**1965**  
Expansion of the factory building  
Staff at a figure of 75 employees



**1988–2002**  
Rolf Götze (son of the company's founder) becomes the sole managing director



Machinery during the initial years with turning shop, metalworking shop and tool-making production

## Trip to the United States

Gerhard and Günter Götze first traveled to the United States for study purposes in 1964. They visited several different US valves and fittings factories starting from New York to Chicago and from Los Angeles to San Francisco.





# TECHNICAL BASICS



### Stainless steel

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

### HIGH-QUALITY MATERIALS

Continuous material tests are the first pre-requisite to our particularly high quality. For example, our gunmetal components are already lead-reduced and as a matter of principle we do not use hot-forged brass. Our brass components are always turned from solid material.



### Gumetal

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



### Brass

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



### Spheroidal graphite cast iron

- robust material
- cost-effective material for standard applications

**Cold. Heat. High pressure.** Aggressive fluids, gases, vapours and cryogenic media. Highly sensitive fields of application in industrial and commercial plants. This is where our valves are to be found.

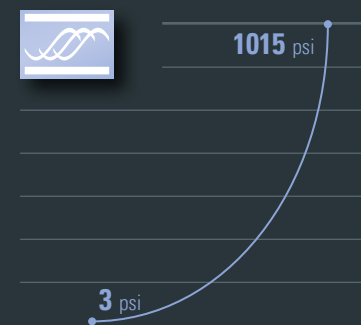
Even where plastic would be permissible, we use solid metal. For boilers and compressors, for pumps and pipelines, marine engines, solar plants and bulk transport vehicles. Our comprehensive range of high-quality, innovative and reliable valves covers all industrial applications. The fittings and valves manufactured by the Goetze KG are available in brass or in stainless steel, in spheroidal graphite cast iron or gunmetal depending on the application and medium. In addition, numerous connection versions are available: threaded- or flange-con-

nections in various sizes as well as special connections according to specific customer demands. The Goetze KG always orientates itself in the execution of the valve according to customer demands: from customized versions to lot quantities of just one unit. All fittings are manufactured under the the premise "Individuality for more safety". This has developed to become the basis for a comprehensive, innovative high-quality product range which leaves nothing to wish for and which is continually being extended and improved.

**-454°F to +752°F**

### Liquids

from -454°F to +752°F



- Pump protection
- Pressure boosters (water-side)
- Sprinkler systems
- Cooling circuits
- Cryogenic machining
- Tunnel cooling systems

**-454°F to +752°F**

### Air, gases and vapours

from -454°F to +752°F

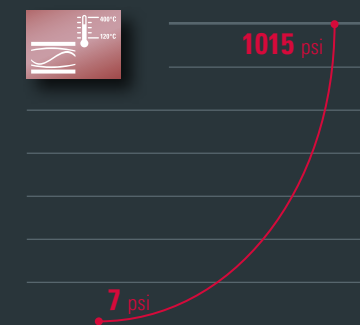


- Compressors
- Pressure vessels
- Pressure boosters (air-side)
- Silo container
- Bulk transport vehicles
- Cryogenic gas storage
- LNG applications

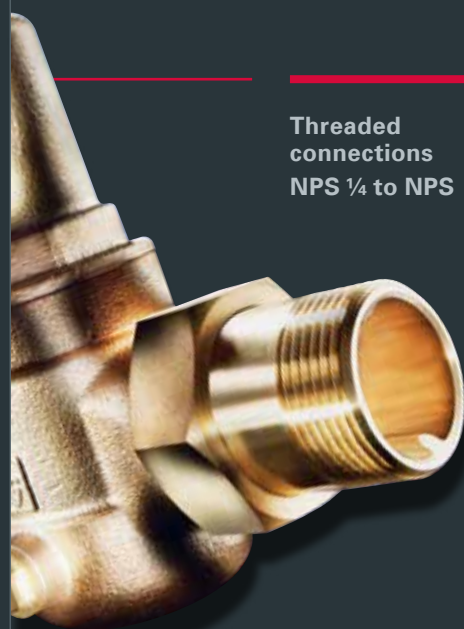
**+248°F to +752°F**

### Steam

from +248°F to +752°F



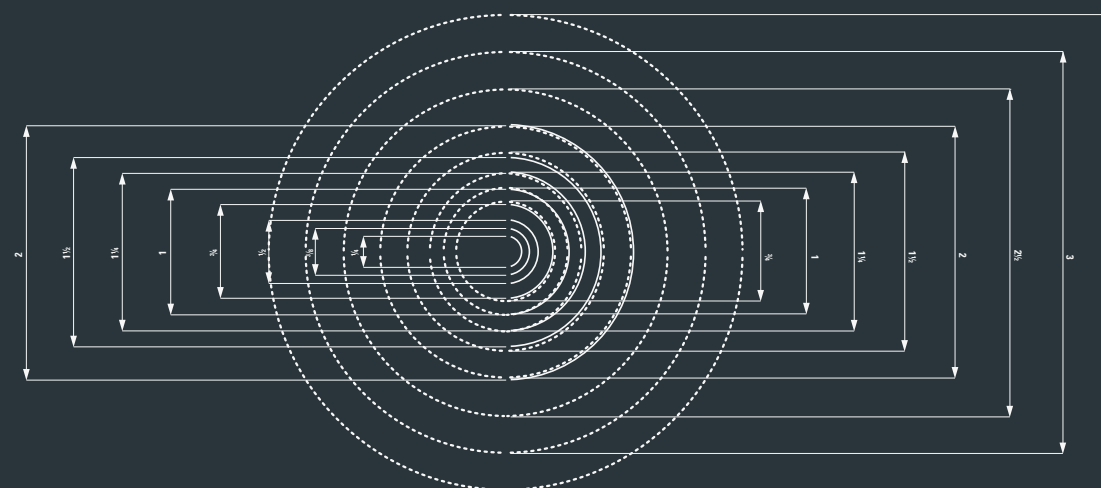
- Steam boiler of the groups I, II, IV
- Steam plants
- Sterilizers
- Autoclaves
- Boilers



**Threaded connections**  
NPS 1/4 to NPS 2



**NPS**  
1/4 – 2



**NPS**  
3/4 – 4

**Flange connections**  
NPS 3/4 to NPS 4



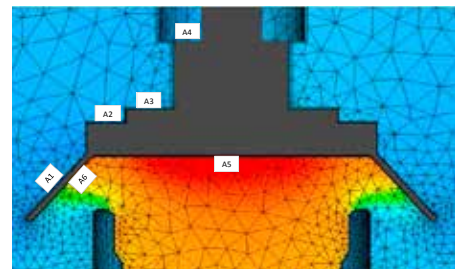
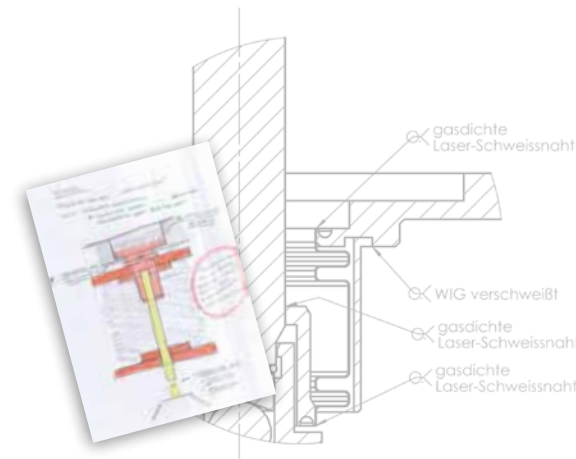


# PIONEERING IN INNOVATIVE VALVE TECHNOLOGIES SINCE 1949 – AND COUNTING

The development of safety valves is, compared to other valves, especially complex and requires a high level of experience and specific expertise. Each development starts with a detailed specification sheet.

However, there is a long way to go until the first functional model is produced. With a high effort of personnel, comparisons of the constructive proposals are made, fea-

sibility studies are conducted and at an early stage, the testing of mountability is done. Finally, the functional models for the in-house test benches are ready.



**In extensive tests ...**  
...each spring is tested for the selected pressure range on the newly established dynamometer. With the highest level of safety, precision and comprehensibility at any time.

**A lot of ideas are collected during the development phase.**  
Initially as handwritten sketches. What follows is the consideration between pro and contra and the feasibility and last but not least the costs.



## Cryogenic Safety Valves

now available in gunmetal



After the successful launch of the stainless steel valves 2400, the series has now been completed by a version made of gunmetal.

The gunmetal version 2480 was created as an alternative. It fulfils the same high requirements of capacity and function as the series made of stainless steel. Furthermore, the new gunmetal safety valve is available with the same connection and different performance levels.

## Venting Valves 1940/1945

new accessories

Venting valves for the protection against vacuum in tank systems and heat exchangers.



NEW PRODUCTS

## Safety Valves Series 642/645

long lifetime and low maintenance requirements

The safety valves series 642 and 645 are used to protect pressure vessels and pressure systems for neutral and non-neutral vapours, gases and liquids.



## Safety Valves Series 4000

fulfils highest requirements of hygienic applications

With this series, the requirements of EHEDG and FDA in the field of safety valves for hygienic applications are realized in a unique way.





# ASME-CERTIFIED ANGLE-TYPE SAFETY VALVES FOR INDUSTRIAL APPLICATIONS

**You can choose** from a wide range of safety valves for many different applications, media and temperatures. There is a technically and economically optimal version for each and every application. Our valves distinguish themselves through exceptional performance combined with a compact design.

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 752°F.



## FIELDS OF APPLICATIONS

- Industrial applications
- Process equipment construction
- Chemical plants
- Power plants
- Biogas plants
- Shipbuilding and repair
- Plant engineering
- Energy industry
- Secondary areas in the food, beverage, pharmaceutical and cosmetics industry



## SPECIFICATIONS

### Materials



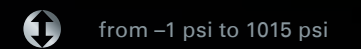
### Media



### Temperatures



### Pressures



### Threaded connection



### Flange connection







**Safety valves**


# Series 451


Many special connection options


made of stainless steel

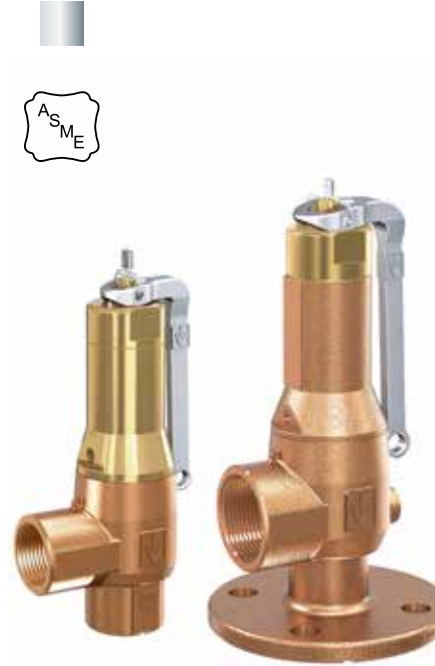
angle-type with threaded connections

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.

 **Threaded connections**  
from NPS ½ to NPS 2

 **Temperatures**  
from -76°F to +752°F

 **Pressures**  
from 7 psi to 1015 psi



**Safety valves**


# Series 642 / 645

made of gunmetal


angle-type with threaded or flange connections

Used to protect pressure vessels and pressure systems for neutral and non-neutral vapours, gases and liquids. They are also applied in steam boilers and steam plants for steam, taking into account the plant-specific regulations and making use of the suitable valve versions and sealing materials. The fields of application of these multi-purpose safety valves range from heating and air conditioning as well as machinery and boiler engineering to marine equipment. Valves from a connecting size up from NPS 2 are available now.

 **Threaded connections**  
from NPS ½ to NPS 2 ½

 **Flange connections**  
from NPS ½ to NPS 2 ½

 **Temperatures**  
from -58°F to +401°F

 **Pressures**  
from 7 psi to 232 psi




**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.

 **Threaded connections**  
from NPS ½ to NPS 2

 **Temperatures**  
from -76°F to +437°F

 **Pressures**  
from 7 psi to 725 psi




**Vent valves**

# Series 1940 / 1945


made of stainless steel

with threaded connections

Vent valves with a high throughput capacity and compact design, available made of high-quality stainless steel. Particularly in the case of pressure vessels where varying temperatures occur, these must often not only be protected against over-pressure, but also against the build up of a high vacuum. The 1945 is fitted with a stainless steel spring and can easily be set within a required vacuum value between -1 psi and -11 psi. Particular highlights of this range are high throughput capacity combined with relatively small connection diameters.

 **Threaded connections**  
from NPS ½ to NPS 1

 **Temperatures**  
from -76°F to +437°F

 **Pressures**  
from -1 psi to -11 psi



# ASME-CERTIFIED ATMOSPHERIC DISCHARGE SAFETY VALVES FOR INDUSTRIAL APPLICATIONS

**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.

In spite of their small size and compact design these atmospheric discharge safety valves are able to achieve huge blow-off capacities. Thus, they are even suitable for large pressure vessels

and enable their protection for trouble-free filling or emptying. The occurrence of dangerous overpressures in the range of 3 to 9137 psi are prevented by atmospheric discharge.



## FIELDS OF APPLICATIONS

Industrial applications

Compressors

Bulk transport vehicle manufacturers and service companies

Stationary silos, silo systems, tank manufacturing

Railway applications for passenger- and freight transport



## SPECIFICATIONS

### Materials



### Media



### Temperatures



from -76 °F to +437 °F

### Pressures



from 3 psi to 9137 psi

### Threaded connections



from NPS 1/4 to NPS 2





## Safety valves


## Series 410

made of stainless steel  
atmospheric discharge  
with threaded connections


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.


 **Threaded connections**  
from NPS ¼ to NPS 1


 **Temperatures**  
from -76°F to +437°F

 **Pressures**  
from 3 psi to 725 psi



 **Threaded connections**  
from NPS ¼ to NPS 1

 **Temperatures**  
from -76°F to +437°F

 **Pressures**  
from 3 psi to 725 psi

## Safety valves

## Series 810

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.


made of brass  
atmospheric discharge  
with threaded connections


## High-performance safety valves


## Series 412

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 653 psi. It is suitable for air and gases which can be freely discharged into the environment.

made of stainless steel  
atmospheric discharge  
with threaded connections

 **Threaded connections**  
from ½ NPS to 2 NPS

 **Temperatures**  
from -76°F to +437°F

 **Pressures**  
from 3 psi to 725 psi





## High-performance safety valves


## Series 812

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 653 psi, which can be freely discharged into the atmosphere.

made of brass  
atmospheric discharge  
with threaded connections

 **Threaded connections**  
from NPS ½ to NPS 2

 **Temperatures**  
from -76°F to +437°F

 **Pressures**  
from 3 psi to 725 psi




**High-performance safety valves**


# Series 413

- made of stainless steel
- atmospheric discharge
- with threaded connections

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.


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


 **Temperatures**  
from -76°F to +437°F

 **Pressures**  
from 3 psi to 87 psi



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

 **Temperatures**  
from -76°F to +437°F

 **Pressures**  
from 3 psi to 87 psi

**High-performance safety valves**

# Series 813

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.

- made of brass
- atmospheric discharge
- with threaded connections

**High-pressure safety valves**


# Series 492


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.




- made of stainless steel
- atmospheric discharge
- with threaded connections



 **Threaded connections**  
from NPS 1/4 to NPS 3/4

 **Temperatures**  
from -76°F to +356°F

 **Pressures**  
from 725 psi to 9137 psi



# OVERFLOW AND PRESSURE CONTROL VALVES

**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 medium can then circulate through the bypass system of the pump or through the piping network.

Due to their flexible setting options these overflow and pressure control valves offer clear advantages for a huge range of applications. In the case of those versions with an external adjustment feature, the set pressure can be adjusted by the user under operating conditions and back-pressure without the media entering into the atmosphere.

Depending on the type of sealing material, the valves can be used for temperatures up to 437°F. Overflow valves cannot be a replacement for safety valves. Each plant must be protected against overpressure by means of a safety valve.



## FIELDS OF APPLICATIONS

Industrial applications

Process equipment construction

Pump protection

Test rig construction

Mining

Workboats

De-icing technology



## SPECIFICATIONS

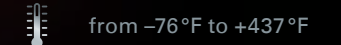
### Materials



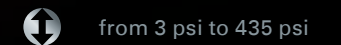
### Media



### Temperatures



### Pressures



### Threaded connections



### Flange connection





**Overflow and pressure control valves**

# Series 417



Many special connection options

made of stainless steel

angle-type

with threaded connections

externally adjustable

If the 617 series made of gunmetal and brass cannot be used due to an aggressive medium 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.

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

**Temperatures**  
from -76°F to +437°F

**Pressures**  
from 3 psi to 290 psi

**Overflow and pressure control valves**

# Series 617

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.



made of gunmetal

angle-type

with threaded connections

externally adjustment

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

**Temperatures**  
from -76°F to +437°F

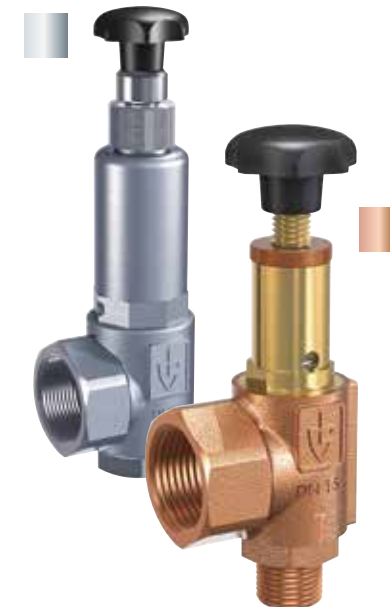
**Pressures**  
from 3 psi to 290 psi

**Overflow and pressure control valves**

# Series 618

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.

Many special connection options



made of gunmetal

angle-type

with threaded connections

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

**Temperatures**  
from -76°F to +437°F

**Pressures**  
from 3 psi to 290 psi



**Overflow and pressure control valves**

# Series 453 / 853

made of stainless steel and gunmetal

angle-type with threaded connections

externally adjustable by hand wheel

The 453 series has 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.

Series 853 – the alternative to the stainless steel version made of corrosion resistant gunmetal. Apart from the medium resistance of the housing material, the design is identical to the series 453. A suitable sealing material can be chosen for almost every medium. 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.

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

**Temperatures**  
from -76°F to +437°F

**Pressures**  
from 7 psi to 363 psi

**Overflow and pressure control valves**


**Series 430**




Optionally available with female thread

- 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.

 **Threaded connection**  
from NPS 1/2 to NPS 2

 **Temperatures**  
from 14°F to +203°F

 **Pressures**  
from 7 psi to 145 psi


**Overflow and pressure control valves**

**Series 431**


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.



- made of stainless steel
- straightway form
- with flange connections

 **Flange connections**  
from NPS 1/2 to NPS 3

 **Temperatures**  
from 14°F to +203°F

 **Pressures**  
from 7 psi to 145 psi


**Overflow and pressure control valves**


**Series 631**


In cases where flange connections are required, this valve offers the same features as the 630 version. The robust all-metal design makes this valve ideal for harsh operating- and environmental conditions, when sensitive control is required. The set pressure can easily be read-off the (optional) pressure gauge.

- made of gunmetal
- straightway form
- with flange connections



 **Flange connections**  
from NPS 1/2 to NPS 4

 **Temperatures**  
from 14°F to +203°F

 **Pressures**  
from 7 psi to 145 psi

**Overflow and pressure control valves**


**Series 630**

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

- made of gunmetal
- straightway form
- with threaded connections

 **Threaded connection**  
from NPS 1/2 to NPS 2

 **Temperatures**  
from 14°F to +203°F

 **Pressures**  
from 7 psi to 145 psi



# SAFETY VALVES AND FITTINGS FOR HYGIENIC APPLICATIONS

**The new safety valves** from the hygienic series are made fully of stainless steel and are equipped with clamping connections and food-safe threaded connections. Angle-type valves, tested and certified by the DGUV and the EHEDG, fulfil numerous international regulations and are concept designed for worldwide use in systems deployed in the pharmaceutical and food industry.

These valves are characterised by the particularly smooth, fault-free surfaces. This makes them perfect for cleaning. Our engineers also made sure there

were no gaps when constructing these valves: whether it be at the valve inlet or when fixing all elastomere parts.



## FIELDS OF APPLICATIONS

- Food industry
- Breweries industry
- Beverages industry
- Pharmaceutical industry
- Medical technology
- Clean service applications
- Cosmetics Industry
- Dairy plants

## SPECIFICATIONS

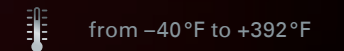
### Materials



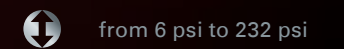
### Media



### Temperatures



### Pressures



### Clamp connections



# GOETZE PRODUCT INNOVATION



## Safety valve Series 4000

made of stainless steel  
angle-type with stainless steel spring


In the sector of hygienic applications or clean service applications, very high requirements are applied on optimal cleanability and dead space free construction of equipment parts. At the development of the new safety valve series 4000, ranging from NPS 3/4 to NPS 4, these exact principles have been fulfilled and therefore exist in a safety valve for the first time. By using a conical diaphragm instead of a rubber flange, the area affected by the medium is optimally separated from the spring housing. On all surfaces, the primary conical valve seal and the housing seals, these


principles have been fully implemented. Thus all surfaces are easy to clean.


For the lifting of the valves, additionally there is a pneumatic piston actuator and optionally a proximity switch for the display of the valve opening available.

In this totality, the requirements of the EHEDG and FDA in the sector of safety valves for hygienic or clean service applications are realized in a unique way.

Valves from a connecting size up from NPS 2 are available now.

 **Clamp connections**  
from NPS 3/4 to NPS 4

 **Temperatures**  
from -40°F to +392°F

 **Pressures**  
from 6 psi to 232 psi





## Overflow / pressure control valve Series 400.5


made of stainless steel  
angle-type with clamp connections  
and food connections

Just like the hygienic safety valves, these overflow/control valves are also implemented in line with the construction features of hygienic design and confirmed in tests by the DGUV Committee for Foods and Luxury Items. Depending on the use and medium, the seals are available with approvals in accordance with FDA, USP, 3-A and ADI-FREE.

The valves are particularly used to control processes and systems in the food and pharmaceutical industries. Suitability of the medium ranges from air to various neutral and non-neutral vapours, gases and liquids.

 **Clamp connections**  
from NPS 3/4 to NPS 1 1/4

 **Temperatures**  
from -40°F to +392°F

 **Pressures**  
from 6 psi to 232 psi



# SAFETY VALVES AND FITTINGS FOR CRYOGENIC APPLICATIONS

**The new cryogenic valves** by Goetze KG are pioneering in their application and can be used in many industries. Low-temperature gases are used in many industries, ranging from food processing to medical technology all the way to energy production. The outstanding quality of the new cryogenic valves by Goetze has been confirmed by their approval for use with both gases and vapours – and for liquids too. This means that for the first time a low-temperature safety valve is available, that is also ideally suited for mixed phases.

A typical application, for example, is increasing the shelf life of food which sees nitrogen being used as a protective atmosphere against oxidation. With

liquid nitrogen's low storage temperature of -321 °F it is exactly controlled in order to shock-freeze frozen food at -94 °F.

## FIELDS OF APPLICATIONS

Nitrogen storage systems

Tunnel cooling systems

LNG applications

Ground freezing

Cryogenic machining

Dry ice blasting

### Tunnel cooling systems

The low storage temperature for liquid nitrogen, at down to -321 °F, is used to freeze foodstuffs to around -94 °F using precise temperature regulation. In addition, protective nitrogen atmospheres to prevent oxidation are used to increase the shelf-life of food products.

### Cryo container systems

Cryogenic liquefied gases are stored in various containers ranging in size from 1000 litres up to 100m<sup>3</sup> and under storage pressures of up to 1015 psi, depending upon requirements and applications. Possible applications include medical oxygen supply systems or argon containers for welding gas supply in specialist welding companies.

### LNG Applications

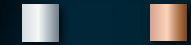
Facilities to handle liquefied natural gas are being built on a small scale for the energy markets of tomorrow. Cryo valves are being used in distribution, transport, regasification or for consumer use, creating an infrastructure that provides an interim solution on the way to hydrogen-based energy supply.

### Cryogenic machining

Materials that are hard to work, such as titanium or superalloys, require new tool-cooling technologies due to the high temperatures that are created. Advantages of cooling with liquid nitrogen include significantly improved tool stability and no further need to use drilling emulsions that afterwards must be regenerated or disposed of.

## SPECIFICATIONS

### Materials



### Media



### Temperatures



from -328 °F to +392 °F

### Pressures



from 3 psi to 1015 bar

### Threaded connection



from NPS ¼ to NPS 1 ½






**Safety valve**


# Series 2400


made of stainless steel

angle-type with threaded connections

The safety valves of this series have been awarded full approval for vapours and gases as well as for liquids. All components of the valve are specially cleaned during the production process and are thus oil- and grease free in accordance with DIN EN 12300. Because of this every valve is suitable for use in systems using oxygen and is accordingly marked. The use of 1.4404 and 1.4408 high-alloy stainless steels renders the safety valves particularly resistant to extremely cold temperatures. For the use with gases that are in contact with food an FDA-compliant sealing material has been used. The valve setting and seat insert are separately sealable which makes unauthorised adjustments easily noticeable. Overpressure from 3 psi up to 1015 psi is purged safely with a consistently high level of performance.

 **Threaded connection**  
from NPS ¼ to NPS 1 ½

 **Temperatures**  
from -328°F to +392°F


 **Pressures**  
from 3 psi to 1015 psi
**Ball diverter valve**


# Series 2700

made of stainless steel

with threaded connections

The optimal design of the flow channels within the diverter ball valve enable particularly high flow rates. This significantly reduces flow pressure losses to the safety valves and safe operation remains ensured. The use of 1.4404 and 1.4408 high-alloy stainless steels enables high resistance against internal and external influences. For the use with gases that are in contact with food an FDA-compliant sealing material has been used. Thanks to the oil- and grease-free manufacturing process, the diverter ball valve are suitable for use in systems using oxygen. With the ergonomically shaped handle and the separate testing connections, the diverter ball valve is optimally prepared for the maintenance of the safety valves.

 **Threaded connection**  
from NPS ¾ to NPS 1 ¼

 **Temperatures**  
from -328°F to +248°F


 **Pressures**  
PN 63
**Safety valve**


# Series 2480

made of gunmetal

angle-type with threaded connections

The well proven safety valves series 2400 made of stainless steel receive a variant sister series, type 2480, that is made of gunmetal. It is characterised particularly by an increased outlet by one or two nominal diameters. Thus, within one valve size, there are two different performance classes available. Functionality and performance comply exactly with the sister series and it is just as stable in terms of function and high performance capability. All valves made of gunmetal are as a matter of course suitable for oxygen use and comply with basically all common delivery requirements of international standards like DIN EN, ASTM, EIGA and CGA as well as the specifications of the gas producers.

 **Threaded connection**  
from NPS ¼ to NPS 1

 **Temperatures**  
from -328°F to +392°F

 **Pressures**  
from 3 psi to 1015 psi
**Ball diverter valve**


# Series 2780

made of gunmetal

with threaded connections

As already implemented with the stainless steel series 2700, the gunmetal diverter ball valve 2780 possesses a flow geometry with very low pressure loss. The safe functionality of the safety valves mounted on the diverter ball valve is therefore better ensured. Additionally, opposite to the vertically mounted safety valves, there are also connections for bursting discs available. Due to the consistent cleaning of all component parts, the gunmetal diverter ball valve is also optimally suited for use in systems using oxygen.

 **Threaded connection**  
from NPS ¾ to NPS 1 ¼

 **Temperatures**  
from -328°F to +248°F

 **Pressures**  
PN 63



# PRESSURE REDUCING VALVES

**Pressure reducing valves** from the Goetze KG are available in a wide range of sizes, in order to offer the right solution for a wide variety of applications and connection types. Whether stainless steel or gunmetal in all-metal design. Flange- or threaded connection, you will find that we can offer you the optimum combination for your application.

Our pressure reducing valves are suitable for applications involving water up to +248°F, compressed air, neutral gases and non-adhesive liquids. Furthermore, they can easily be used in commercial, industrial and private appli-

cations. A special feature is the simple handling in case of servicing or repair. The complete set of functional parts, in the form of a valve cartridge can be replaced or cleaned without removal of the valve itself.



## FIELDS OF APPLICATIONS

Industrial applications

Chemical plants

Process equipment construction

Building technology

Shipbuilding

Snow-making equipment

Fire-fighting equipment

Hydraulic control systems

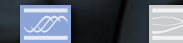
Sprinkler systems

## SPECIFICATIONS

### Materials



### Media



### Temperatures

from -40°F to +248°F

### Pressures

Inlet pressure up to 870 psi,  
Outlet pressure adjustable

### Threaded connection

from NPS 1/4 to NPS 2

### Flange connection

from NPS 1/2 to NPS 4




## Pressure reducing valves

# Series 481 / 681

made of stainless steel and gunmetal

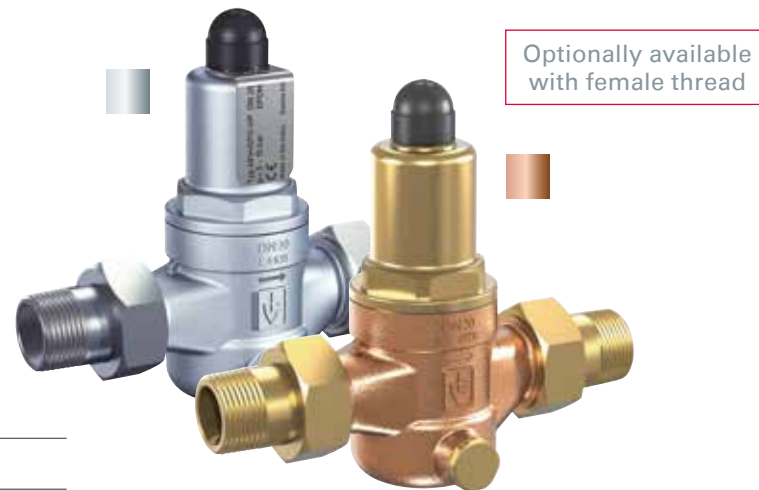
with threaded connections

The proven, robust pressure reducing valves in full-metal-version with threaded connectors have not only proven themselves in drinking water application, but especially also in rough industrial operating conditions with many different, also aggressive substances and at fluctuating environmental temperatures. The materials used are optimised for water of different qualities and for warm water applications. Besides the standard range of adjustment of 15 to 116 psi the additional outlet pressure ranges of 7 psi to 29 psi and 72 psi to 218 psi cover a wide application range.

 **Threaded connection**  
from NPS ½ to NPS 2

 **Temperatures**  
from 14°F to +203°F

 **Inlet pressure up to 580 psi**  
**Outlet pressure adjustable**  
from 7 psi to 218 psi



Optionally available with female thread


## Pressure reducing valves

# Series 482 / 682

Fittings often require flange connections. This is the exact reason for our series in the nominal diameter ranges of NPS ½ to NPS 3, series 682 up to NPS 4. Besides the standard versions of these pressure reducing valves made of stainless steel and gunmetal, the valves are also available in nominal diameters from NPS ¾ to NPS 2 in high-pressure and a low-pressure version. Upon request we can also equip the stainless steel pressure reducing valves for various pressure ranges with stainless steel pressure gauges.

For highest service-friendliness also in the case of the flange versions, a replacement internal cartridge with integrated dirt trap is available.

 **Flange connections**  
from NPS ½ to NPS 3 / NPS 4

 **Temperatures**  
from 14°F to +203°F

 **Inlet pressure up to 580 psi**  
**Outlet pressure adjustable**  
from 7 psi to 218 psi

made of stainless steel and gunmetal

with flange connections




## Pressure reducing valves


# Series 484

These diaphragm and piston pressure reducing valves made of stainless steel and with female threaded connections for pneumatic and hydraulic applications are distinguished particularly by high flow rates and low pressure losses even in situations of high performance demands. Their extremely precise control characteristics, the inlet pressure of up to 870 psi and the wide outlet pressure range make these pressure reducing valves the optimal solution for almost all technically demanding applications.

made of stainless steel

with female threaded connections

 **Threaded connections**  
from NPS ¼ to NPS 2

 **Temperatures**  
from -40°F to +248°F

 **Inlet pressure up to 870 psi**  
**Outlet pressure adjustable**  
from 7 psi to 725 psi




## Pressure reducing valves


# Series 684

All characteristics and technical features of the stainless steel versions also apply to the series 684 made of corrosion-resistant gunmetal. The fully relieved valves which therefore even out inlet pressure variations are available with and without secondary venting and each in a diaphragm or a piston version. Pressure adjustment is carried out without tools via the ergonomically formed hand-wheel. The extremely small pressure loss in the pressure adjusting area leads to these high-performance pressure reducing valves having almost no competition.

made of gunmetal

with female threaded connections

 **Threaded connection**  
from NPS ¼ to NPS 2

 **Temperatures**  
from -40°F to +248°F

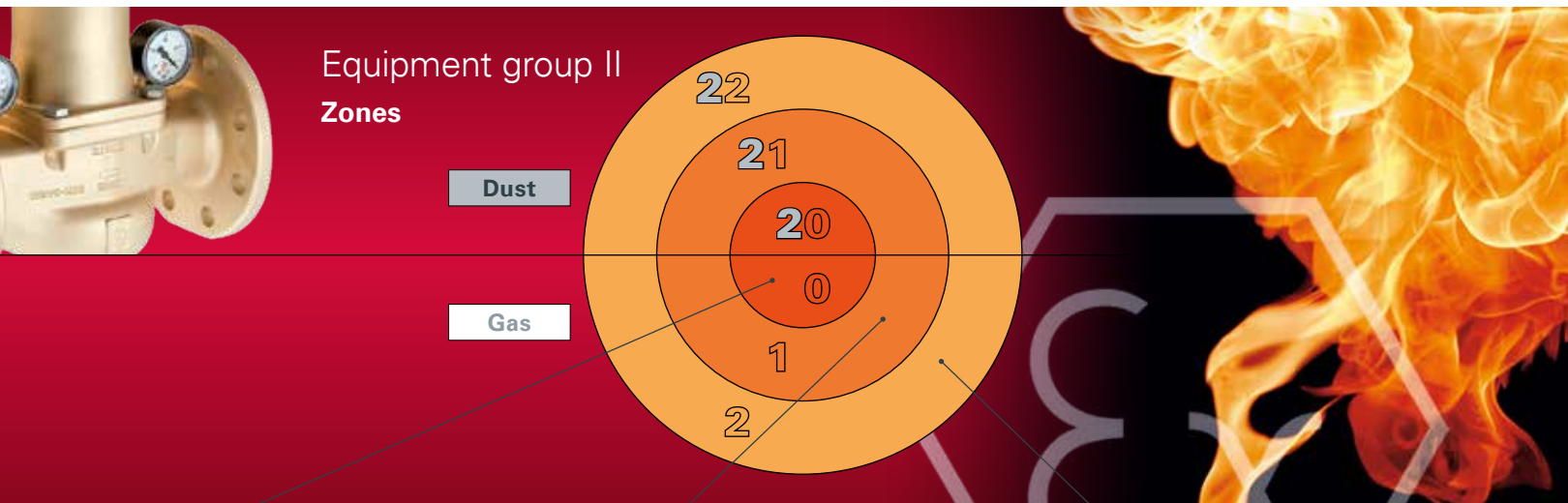
 **Inlet pressure up to 870 psi**  
**Outlet pressure adjustable**  
from 7 psi to 725 psi





# VALVES AND ATEX!

**Goetze valves are fundamentally suitable for use in potentially explosive areas.** Consequently they were subjected to a conformity assessment according to the ATEX Product Directive 2014/34/EU. As an independent, notified body, the TÜV Süd was commissioned with the assessment of our products.



### Category 1

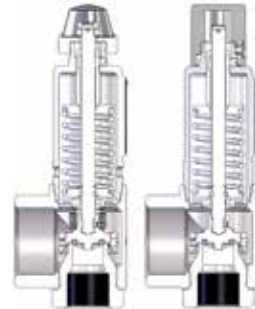
Example: Within a fuel tank or gas tank



Valve with bellows **and** gastight cap

### Category 2

Example: Sewage treatment plant – condensate collecting tank for biogas



Valve with bellows **or** gastight cap

### Category 3

Example: Paint shop after extraction system



All valve types possible

With Goetze you can rest assured.

### Certified explosion protection.

The safety of our customers is of paramount importance to Goetze. That's why Goetze offers more:

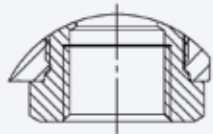
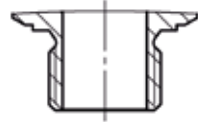
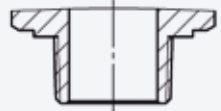
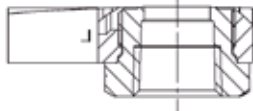
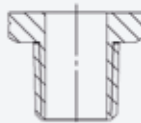
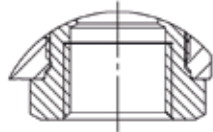
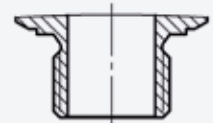
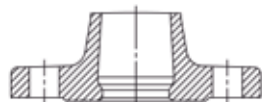
- ✔ the highest level of safety in all ATEX zones
- ✔ reliable advice: which products meet your requirements?
- ✔ safe products for each ATEX zone according to TÜV criteria

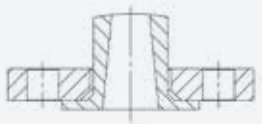
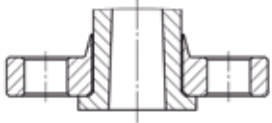
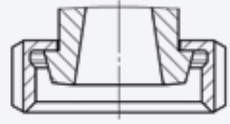
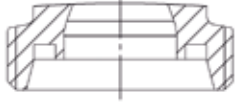


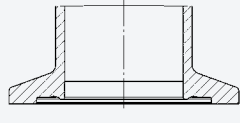
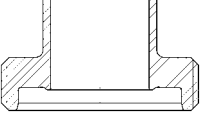


## Selection Chart for Goetze ATEX Products:

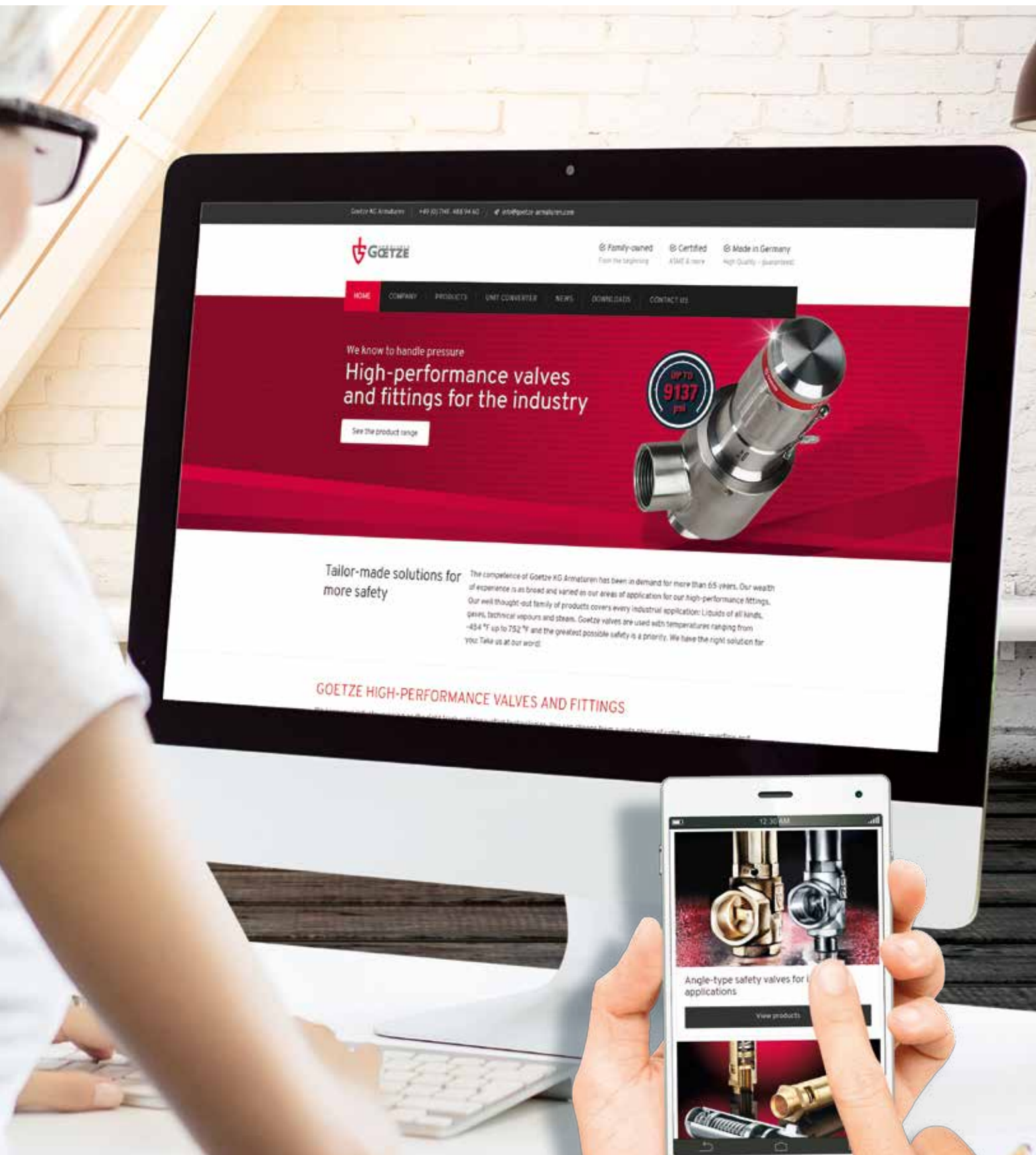
Equipment group I		Equipment group II			
Equipment for use in <ul style="list-style-type: none"> <li>○ The mining industry</li> <li>○ Open cast mining</li> <li>○ Deep mining</li> </ul>		Equipment for use in other potentially explosive areas			
Category M1	Category M2	Category 1	Category 2		Category 3
Requirement: <b>extremely high level of safety</b>	Requirement: <b>high level of safety</b>	Requirement: <b>extremely high level of safety</b>	Requirement: <b>high level of safety</b>		Requirement: <b>normal level of safety</b>
Operation guaranteed even in the case of rare incidences	Shutdown in case of occurrence of a potentially explosive atmosphere possible	Danger: <b>continuously, frequently, long-term</b>	Danger: <b>occasionally</b>		Danger: <b>rarely or short-term</b>
		<b>Zone 0</b> G Gas	<b>Zone 20</b> D Dust	<b>Zone 1</b> G Gas	<b>Zone 21</b> D Dust
				<b>Zone 2</b> G Gas	<b>Zone 22</b> D Dust
Safety valves					
420tbGFO; tbGFL 451tbGO; tbFO; tbGFO 452tbGO; tbFO; tbGFO 455tbGF(O,L) 851tbGO; tbFO; tbGFO 852tbGO; tbFO; tbGFO	400bGFK 420tGF(O,L) 451bG(O,K,L); bF(O,K,L); bGF(O,K,L) 451tGO; tFO; tGFO 452bG(O,L); bF(O,L); tGF(O,L) 452tG(O,L); tF(O,L); tGF(O,L) 455bGF(O,L) 460tGF(O,L) 461tGFO; tGO; tFO 492tGO 851bG(O,K,L); bF(O,K,L); bGF(O,K,L) 851tGO; tFO; tGFO 852bG(O,L); bF(O,L); bGF(O,L) 852tG(O,L); tF(O,L); tGF(O,L) 861tGFO; tGO; tFO 2400tGFO 2480tGF(O,L)	420tbGFO ; tbGFL 451tbGO; tbFO; tbGFO 452tbGO; tbFO; tbGFO 455tbGF(O,L) 851tbGO; tbFO; tbGFO 852tbGO; tbFO; tbGFO	400bGFK 420tGF(O,L) 451bG(O,K,L); bF(O,K,L); bGF(O,K,L) 451tGO; tFO; tGFO 452bG(O,L); bF(O,L); tGF(O,L) 452tG(O,L); tF(O,L); tGF(O,L) 455bGF(O,L) 460tGF(O,L) 492tGO 851bG(O,K,L); bF(O,K,L); bGF(O,K,L) 851tGO; tFO; tGFO 852bG(O,L); bF(O,L); bGF(O,L) 852tG(O,L); tF(O,L); tGF(O,L) 861tGFO; tGO; tFO 2400tGFO 2480tGF(O,L)	451sG(K,L); sF(K,L); sGF(K,L) 452sG(O,L); sF(O,L); sGF(O,L) 455sGF(O,L) 461sGF(K,L) 492sGK 652 810 / 410 812 / 412 813 / 413 851sG(K,L); sF(K,L); sGF(K,L) 852sG(O,L); sF(O,L); sGF(O,L) 861sGF(K,L) 2400sGF(K,L)	
Overflow and pressure control valves					
452tbGFU; tbGU; tbFU 453tbGFO 852tbGFU; tbGU; tbFU 853tbGFO	400.5bGFK 417tGFO 418tGFO 452tGFU; bGFU 453tGF(O,K) 608tGFO 617tGFO 618tGFO 852tGFU; bGFU; 853tGF(O,K)	452tbGFU; tbGU; tbFU 453tbGFO 852tbGFU; tbGU; tbFU 853tbGFO	400.5bGFK 417tGFO 418tGFO 452tGFU; bGFU 453tGF(O,K) 608tGFO 617tGFO 618tGFO 852tGFU; bGFU; 853tGF(O,K)	630 / 430 631 / 431	
Pressure reducing valves					
	681 / 481 682 / 482 484mGO; mGFO; kGO; kGFO 684mGO; mGFO; kGO; kGFO		681 / 481; 682 / 482 484mGO; mGFO; kGO; kGFO 684mGO; mGFO; kGO; kGFO	681 / 481 683 682 / 482 484mGS; kGS; mGFS, kGFS 684mGS; kGS; mGFS, kGFS	
Diverter ball valve					
	2700 2780		2700 2780		

# OVERVIEW OF THE CONNECTIONS

Connection type	Drawing	Description
<b>f</b>		Whitworth threaded cylindrical pipe connection – female – thread doesn't form seal BSP-P according to DIN ISO 228
<b>m</b>		Whitworth threaded cylindrical pipe connection – male – thread doesn't form seal BSP-P according to DIN ISO 228
<b>BSP-Tm</b>		Whitworth threaded tapered pipe connection – male – thread does form seal male connection BSP-T according to DIN EN 10226
<b>NPTf</b>		US standard tapered pipe thread NPT threaded pipe connection NPT – female – according to ANSI / ASME B 1.20.1 seal made on thread
<b>NPTm</b>		US standard tapered pipe thread NPT threaded pipe connection NPT – male – according to ANSI / ASME B 1.20.1 thread does form seal
<b>METf</b>		Metric ISO female connection according to DIN 13 thread doesn't form seal
<b>METm</b>		Metric ISO male connection according to DIN 13 thread doesn't form seal
<b>FL</b>		cast flange connection according to DIN EN 1092

Connection type	Drawing	Description
<b>FLDIN</b>		loose flange connection according to DIN EN 1092 up to max. PN 40
<b>FLANSI</b>		loose flange connection according to ASME B 16.5 up to max. 600 lbs
<b>KSDIN</b>		taper nipple (diary coupling screw joint) according to DIN 11887 valves for food, chemical and pharmaceutical industry standard threaded connections
<b>GSDIN</b>		threaded ferule connection – male – (diary coupling screw joint) according to DIN 11887 valves for food, chemical and pharmaceutical industry standard threaded connections
<b>KLSDIN</b>		clamp connection according to DIN 32676 valves for food, chemical and pharmaceutical industry
<b>KLISO</b>		clamp connection according to ISO 2852 valves for food, chemical and pharmaceutical industry
<b>A-KLSDIN</b>		aseptic clamp ferrule connection DIN 11864-3 valves made of stainless steel for aseptic, chemical and pharmaceutical industry
<b>A-GSDIN</b>		aseptic threaded ferule connection – male – form A DIN 11864-1 aseptic threaded pipe connection for the food, chemical and pharmaceutical industry

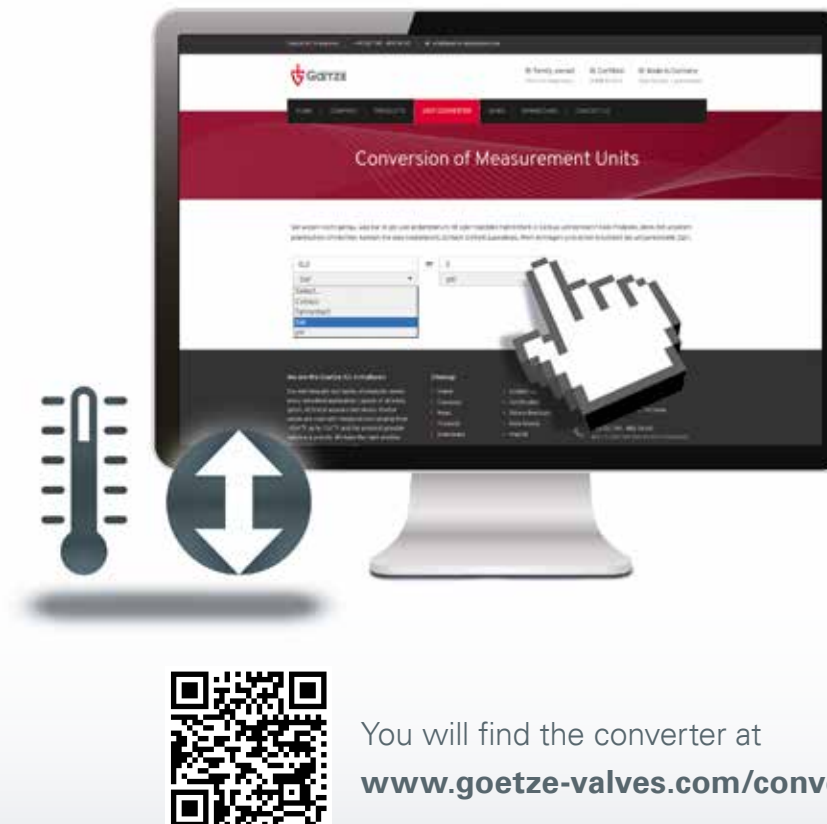




## INTERNET SERVICE OF GOETZE

**On our website** you will find not only a unit converter but also datasheets available for download, latest news and further information about our products. All contents are also available for quick and easy mobile access. Curious? Just take a look.

[www.goetze-valves.com](http://www.goetze-valves.com)



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You will find the converter at  
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