

HOW TO HANDLE PRESSURE INDIVIDUAL SAFETY, WITHOUT COMPROMISE

Safety valves and fittings for industrial applications

www.goetze-armaturen.com

HOW TO HANDLE PRESSURE

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

GOETZE PRECISION Uncompromisingly different

YOUR PARTNER FOR SOLUTIONS

We are a multifaceted team of qualified specialists from various fields. Behind the name and title you will find one thing in particular: an individual with expertise and experience! We strive to pass on this expertise so that we can offer tailor-made solutions to our customers

WE ARE INTERCONNECTED

Thanks to our in-house team you can be sure to reach a competent point of contact within our company. Whether you need help with product selection, the configuration of a suitable valve or urgent inquiries. You can choose to communicate by phone, email or chat and a personal consultant is available for several different languages.

WE ARE PRECISE

In order to fit all the necessary information onto the valve, we use precision laser marking technology.

WE ARE MODERN

Intelligent minds and skilled hands are the one thing - but for the manufacturing and testing processes at Goetze KG nothing beats the highest level of precision achieved through the use of high-tech equipment: the latest generation of CNC machines and modern testing and analysis technology.

WE ARE THERE WHEN YOU NEED US

Our team of consultants who come to you. Our experience and technical know-how make us your competent advisor and partner for technical solutions.

400.000

valves sold per year "Made in Germany"

Our locations

GERMANY, LUDWIGSBURG CHINA, RUSSIA, UNITED KINGDOM | OWN DISTRIBUTORS

-270 °C -+400 °C

uncompromising performance

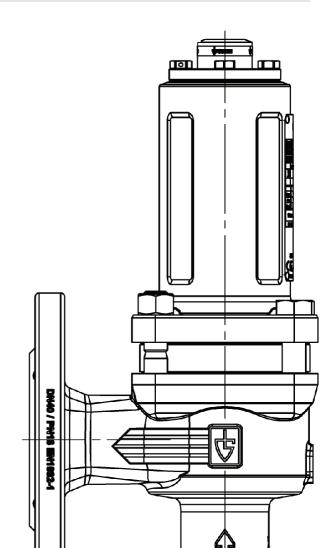
0,2 BAR-630 BAR

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 brand quality.





Medium-sized and family-owned

The company has been run by the family for 70 years and three generations. The competence of Goetze KG is in demand all over the world. Our product families cover a wide range of fields in industry. Manageable units, short set-up times and employees with know-how, skill and experience are what set Goetze KG apart. Not any old anonymous assembly line production. We are always proud to hear when Goetze KG is referred to as a "manufactory".





First-class: service and consultation for your valve

YOUR SATISFACTION IS OUR TOP PRIORITY

Striving for convincing quality is what drives us on. This commitment to high quality represents a cornerstone of our success. It forms the central theme throughout the Goetze KG company, from the initial idea and the selection of materials to the expertise of our employees and the quality inspection of each individual valve.

As your competent partner when it comes to handling pressure, we are always looking to improve even further and present even more product innovations for your applications. This is why we have continuously been bringing new, well thought-out solutions onto the market since 1949. The valves are developed for you with the highest level of precision and technology and are tailored to your specific needs. Yet the most important recognition for us is the satisfaction of our customers. Our employees give their all on a daily basis in order to achieve this goal.

TECHNICAL BASICS

Materials

STAINLESS STEEL

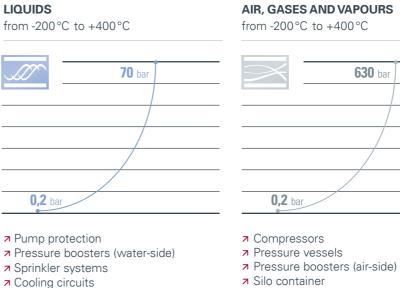




↗ high-quality material オ corrosion-resistant ↗ for plants with particularly aggressive media

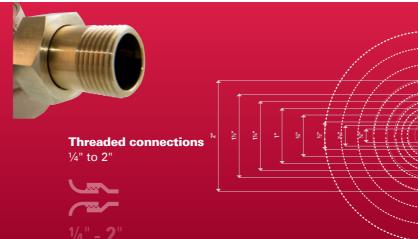
→ robust and of high quality → potable- / sea-water resistant ↗ wide range of applications

Media



↗ Bulk transport vehicles

Connections



BRASS



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

SPHEROIDAL GRAPHITE CAST IRON



↗ robust material ↗ cost-effective material for standard applications

STEAM from +120°C to +400°C **630** b **70** ba 0,5 bar

- → Steam plants → Sterilizers
- ↗ Autoclaves
- ↗ Boilers
- Flange connections DN 15 to DN 100 **DN 15 - DN 100** DN 20 DN 25 DN 32 DN 40 DN 50 DN 80

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-inhand 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: liguids of all kinds, gases, technical vapours and steam. Goetze valves are used with temperatures ranging from -270 °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 guality 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.

OUR CERTIFICATES

We rely on quality – nationally and internationally

PROOF OF THE SAFETY AND RELIABILITY WE OFFER

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.

GENERAL TYPE TEST APPROVALS



APPLICATIONS: POTABLE WATER AND BUILDING TECHNOLOGY



APPLICATIONS: SHIPBUILDING AND RAILWAY





7 CANADIAN REGISTRATION NUMBER (CRN)







MANUFACTURE LICENSE (CHINA) TSG ZF001-2006





APPROVAL (NO)



ΔΡΡΒΟΛΔΙ

Registro Italiano Navale (RINA)

ΔΡΡΒΟΥΔΙ



7 DEUTSCHE BAHN

QUICKFINDER CERTIFICATES

SAFET	Y VALVES	3												 	
Series	National Type Test (TÜV)	C E 2014/68/EU	EU type examination	(A _{SME})	CRN	EAE	TS		ACS Potable water approval		Loyds Register	Shipbuil	lding	Registro Italiano Navale (RINA)	DB Railway
451	-		-			-				-				•	
851	-									-				•	
460	-													•	
652	-					•				-				•	
420	-					-				-				•	
461	-									•				•	
861	-									-				•	
852	-					•				•				•	
455	-					•								•	
355	-					•									
642	-								•	•					
645	-								•	•					
6420	-								•						
6450	•								•						
410	-					•				-				•	
810	-					•				•				•	•
412	-					•				-				•	
812	•					•		•		•				•	•
413	-					•				-				•	
813	•					•				•				•	
492	•					•				-					

	JRE RELIEF VALVE						
Series	C E 2014/68/EU	EAC	DNV·GL	R Lloyd's Register	ABS		Registro Italiano Navale (RINA)
628							
601		•					
612							

Series	()				ABS			Registro Italiano
	2014/68/EU	LIIL	DNV.GL	Loyd's Register		NOT THE OWNER	V	Navale (RINA)
417		•		•				
418		•		•			•	
617		•	•	•			•	
618		•		•			•	
453		•		•			•	
853		•		•			•	
630		•		•			•	
430		•		•			•	
431		•		•		•	•	
631								

HYGIENIC VALVES														
Series	National Type Test (TÜV)	C E 2014/68/EU	EU type examination	(ASME)	CRN	ERC	TS		DNV-GL	R Llayd's Register	BABS		Registro Ita- liano Navale (RINA)	ELEDC
Hygienic 400	•								•					
Hygienic 400.5									•					
Hygienic 4000	•													

PRESSURE REI											
Series	C E 2014/68/EU	EAE	DVGW	ACS	WRAS	() SINTEF	DNVGL	R Lloyds Register	RABS	BUREAU VERITAS	Registro Italiano Navale (RINA)
481	-		•				•				
681	-		•				•				
482	-		•				•				
682	-		•				•				
683	-						•				
484	-										
684	•						•				

QUICKFINDER VALVES

■TYPE TEST APPROVED SAFETY VALVES ANGLE TYPE

Series	1	Connection type				edia			Temperature in °C	Set pressure bar
			liquid	neutral air/gases	steam	n liquid	ion-neutra Air/gas	steam	-300 -200 -100 -50 0 50 100 150 200 250 300 350 400	0 0,5 1 5 10 15 20 30 50 70
451		3								
851										
460		5								
652		Š								
420		5								
461		Ś								
861		5								
852		旨								
455		旨								
355		旨								
642		貨貨								
645		して								
6420		52								
6450		5								

			MOSPHERIC DISCHAR			
Series	Materi- als	Connection type	N	edia	Temperature in °C	Set pressure bar
	7		neutral liquid air/gases steam	non-neutral liquid air/gases steam	-100 -50 0 50 100 150 200 250 300 350 400	0 0,5 1 5 10 15 20 30 50 70
410		52				
810		S C				
412		5				
812		52				
413		52				
813		52				

TYPE TEST APPROVED ATMOSPHERIC DISCHARGE SAFETY VALVES FOR HIGH PRESSURE RATINGS

Series	Materials	Connection type	Me	dia	Temperature in °C	Set pressure bar
			neutral liquid air/gases steam	non-neutral liquid air/gases steam	-100 -50 0 50 100 150 200 250 300 350 400	0 50 100 150 200 300 400 500 600 700
492		52				
492GOX		52				

PRE:	PRESSURE RELIEF VALVES											
Series	Materi- als	Connection type			Me	edia						
		-		neutral			non-neutra	al				
			liquid	air/gases	steam	liquid	air/gases	steam				
628		5										
601		5										
612		5										

OVERFLOW AND PRESSURE CONTROL VALVES

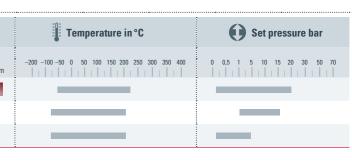
••••••	•••••	••••••	•••••		••••••		••••••	
Series	Materi- als	Connection type			Me	edia		
				neutral			non-neutra	al
			liquid	air/gases	steam	liquid	air/gases	stean
417		52						
418		52						
617		5						
618		55						
453		55						
853		55						
430		55						
431		,>00=						
630		55						
631		>00=						

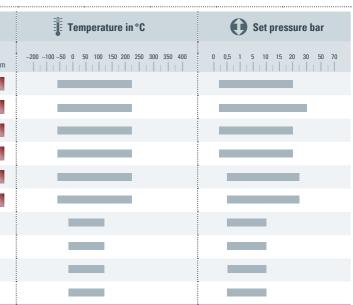
■ SAFETY FITTINGS FOR HYGIENIC APPLICATIONS

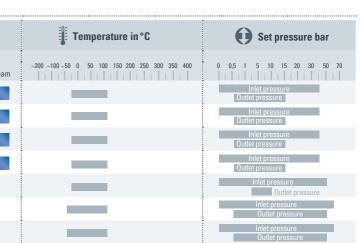
Series	Materi- als	Connection type		Media					Temperature in °C	O Set pressure bar
				neutral			non-neutra	al	-200 -100 -50 0 50 100 150 200 250 300 350 400	0 0.5 1 5 10 15 20 30 50 70
			liquid	air/gases	steam	liquid	air/gases	steam		
400		¥								
400.5		¥								
4000		¥								

■ PRESSURE REDUCING VALVES

		••••••	•••••••		·····		••••••	
Series	Materi- als	Connection type			Me	edia		
				neutral			non-neutra	al
			liquid	air/gases	steam	liquid	air/gases	stean
481		55						
681		5						
482		>00=						
682		>00=						
683		5						
484		5						
684								

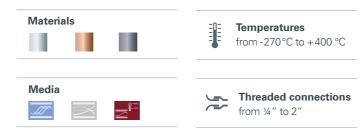








TYPE TEST APPROVED SAFETY VALVES ANGLE-TYPE



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



Steam generators





Pressure vessels in shipbuilding



Power generation

Type test approved safety valves angle-type

SAFETY VALVES SERIES 451

made of stainless steel, angle-type with threaded connections

SAFETY VALVES SERIES 851

made of gunmetal, 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.

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.

SAFETY VALVES SERIES 460

made of stainless steel, angle-type with threaded connections



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

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

Temperatures from -60°C to +400 °C

Pressures 0 from 0,5 bar to 70 bar

Threaded connections from 1/2" to 2"



Pressures 0 from 0,5 bar to 50 bar

Threaded connections from 1/2" to 2"

Data shee



$\mathbf{\Omega}$	Pressures
	Temperatures from -60 °C to +225 °C

from 0,2 bar to 25 bar

Threaded connections from 3/8" to 1"





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.

Fitted with an EPDM seal, this can be used for steam boilers with a volume of less than 10 liters up to a set pressure of 3 bar.

> Temperatures from -60 °C to +200 °C

Pressures from 1 bar to 16 bar



0

Threaded connections from 1/2" to 2"



Type test approved safety valves angle-type

SAFETY VALVES SERIES 420

made of stainless steel, angle-type with threaded connections

SAFETY VALVES SERIES 461

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.

MANY SPECIAL

ONNECTION OPTIONS

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.



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.



Pressures 0 from 0,5 bar to 50 bar

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

Temperatures from -60°C to +225 °C

Pressures 0 from 0,5 bar to 70 bar

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





from 1/4" to 1/2"





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 agressive watery solutions, salt water or a saline atmosphere.

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

Temperatures from -60 °C to +225 °C

> Pressures from 0,5 bar to 25 bar



0

Flange connections DN 40 and DN 50



Type test approved safety valves angle-type

SAFETY VALVES SERIES 355

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



SAFETY VALVES SERIES 455

made of stainless steel, 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.

The series of flanged safety valve 455 captivates with its consistent concept of capacity, function and design. The high capacity of the entire series from DN 15 up to DN 100 is unique in the sector of flanged safety valves. By using exclusively high-quality materials with outstanding media resistance and the option to secure the tightness towards the atmosphere on a high level with a backpressure compensating bellows, this safety valve is suitable for nearly all applications. The pressure range extends from 0.2 to 40 bar and also extremely high temperatures can be applied up to a limit of 400 °C.

SAFETY VALVES SERIES 642 AND 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.



Flange connections from DN 15 to DN 100



- Pressures 0 from 0,2 bar to 40 bar
- Flange connections ∭= from DN 15 to DN 100



	Temperatures from -50 °C to +205 °C	
0	Pressures from 0,5 bar to 16 bar	
	Threaded connections from $\frac{1}{2}$ " to 2 $\frac{1}{2}$ "	Flange connections from DN 25 to DN 65



Data shee

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



0

Threaded connections from 1/2" to 2"







TYPE TEST APPROVED ATMOSPHERIC DISCHARGE SAFETY VALVES

Materials	from -60 °C to +225 °C
Media	Threaded connections from ¼" to 2"

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

ATMOSPHERIC DISCHARGE SAFETY VALVES ARE USED HERE:



Bulk transport vehicles



Tank manufacturing





Compressors



Pantographs

Type test approved atmospheric discharge safety valves

SAFETY VALVES SERIES 410

SAFETY VALVES SERIES 810

made of brass, atmospheric discharge, made of stainless steel, atmospheric with threaded connection discharge, with threaded connection



and air systems made of stainless

steel in aggressive environments or

in secondary areas in the food-, beve-

rage-, pharmaceutical- and cosmetics

industries.

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 larcompressors. ge stainless steel pressure vessels

a stainless steel spring and FPM seal.

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

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

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.

SAFETY VALVES

made of stainless steel, atmospheric

discharge, with threaded connection

SERIES 412

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.









Temperatures

SAFETY VALVES SERIES 413

made of stainless steel, atmospheric discharge, with threaded connection



The discharge of air from pressure vessels filled with liquid, granular or powdery media requires additional safety precautions with so-called "FKS" safety valves. This valve is fitted with a weather shroud and all moving or guided parts as well as the spring housing are protected against soiling.

This makes this valve suitable for the rough conditions on bulk transport vehicles or stationary silos.



Temperatures from -60° C to $+225^{\circ}$ C

Pressures from 0.2 bar to 6 bar



 \mathbf{O}

Threaded connections from 1/2" to 2"



Type test approved atmospheric discharge safety valves

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.

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.

SAFETY VALVES SERIES 492 GOX

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 -60°C to +225°C

from 0,2 bar to 6 bar

Threaded connections

from 1/2" to 2"

Pressures

0

from - 60 °C to + 180 °C

Pressures 0 from 50 bar to 630 bar

Temperatures

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















25

Production process for oxygen applications

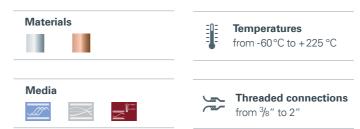
The safety valve 492GOX covers a wide range of applications in the area of oxygen. These valves are used above all in the production of technical and medical gases as well as by compressor manufacturers and plant manufacturers.

When handling oxygen, the greatest care has to be taken throughout the entire production process. Only then can dangers be avoided in these applications. In order to meet these high standards, at Goetze we have a separate production process designed especially for oxygen valves. Assembly takes place in a cleanroom that is separate from the rest of the production facility. The air in this room is subjected to overpressure of 20 millibars and is filtered and conditioned. This also prevents any particles or dirt from entering from the outside.

Qualified and trained staff, compliance with all relevant codes and regular process monitoring of oil and grease-free cleaning, installation, inspection, packaging and labelling grant customers an oxygen-suitable safety valve for their applications.



PRESSURE RELIEF VALVES



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

PRESSURE RELIEF VALVES ARE USED HERE:



Fuel system



Laboratory

Pressures from 0,1 bar to 20 bar

Beverage industry



Pumps

Pressure relief valves

PRESSURE RELIEF VALVES **SERIES 618**

made of gunmetal, angle-type, with threaded connections



PRESSURE RELIEF VALVES **SERIES 628**

made of gunmetal, angle-type, with threaded connections



With proportional opening characteristics and even larger setting ranges of the springs, this valve is ideally suited in cases where a stock value for various applications and set pressures is required and the valve needs to be readily available.

It is designed in particular for plants in which only low amounts of expansion medium have to be discharged.

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).

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 $^{\circ}$ C to +225 $^{\circ}$ C

Pressures 0 from 0,2 bar to 20 bar

Threaded connections from 3/8" to 2"

Temperatures from -60 °C to +225 °C

Pressures 0 from 0,2 bar to 20 bar

Threaded connections from 3/8" to 2"







PRESSURE RELIEF VALVES **SERIES 612**

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



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

This is a versatile alternative if the system to be protected does not fall under the pressure equipment directive and a compact version is not necessary. The set pressure can be very easily adjusted by the user. The pressure relief valve is used above all in low-pressure steam plants, low-pressure industrial applications and large boiler plants.



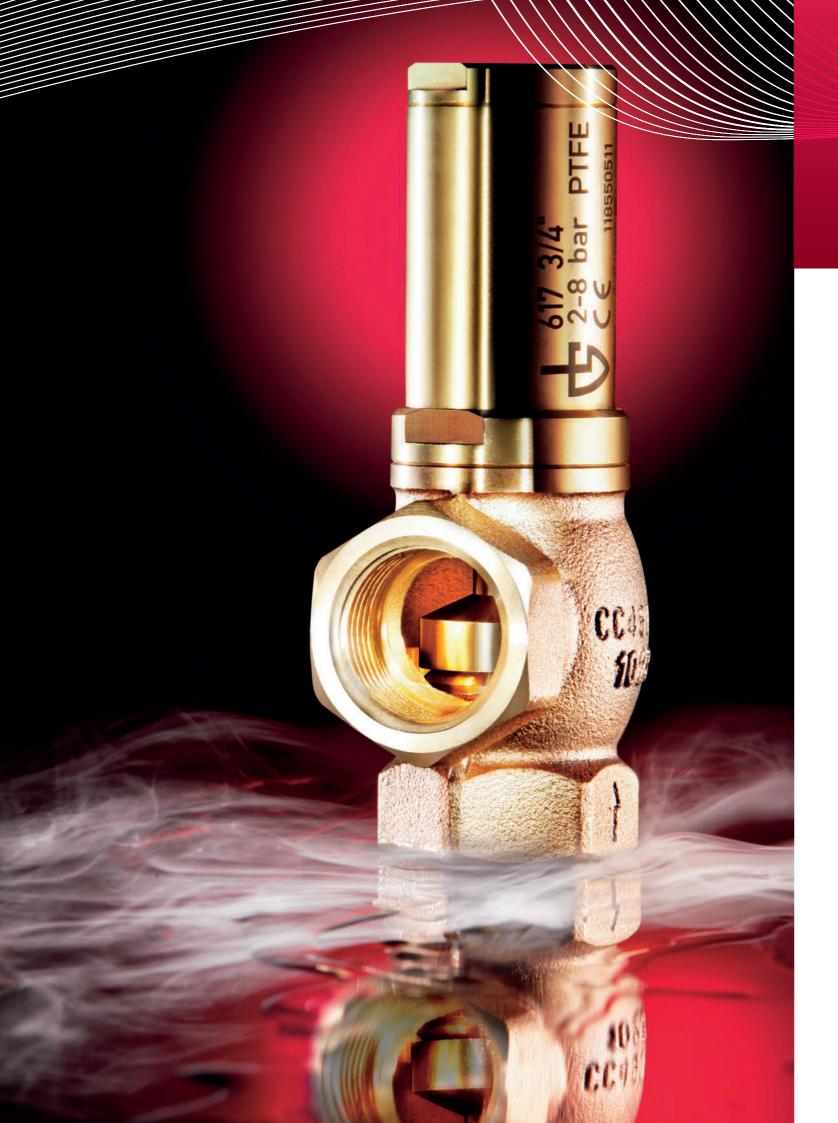
Pressures from 0,1 bar to 4 bar



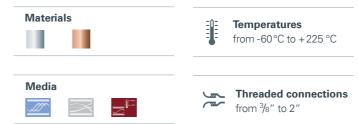
0

Threaded connections from 1/2" to 2"





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

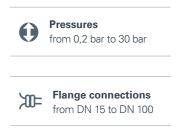
OVERFLOW AND PRESSURE CONTROL VALVES ARE USED HERE:



Wind turbines



De-icing technology



Workboats



Water treatment

Overflow and pressure control valves

OVERFLOW AND PRESSURE CONTROL VALVES SERIES 417

OVERFLOW AND PRESSURE CONTROL VALVES SERIES 418

made of stainless steel, angle-type made of stainless steel, angle-type with threaded connections with threaded connections

MANY SPECIAL CONNECTION OPTIONS

MANY SPECIAL CONNECTION OPTIONS

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.

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.

Highly corrosion-resistant overflow

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.

OVERFLOW AND PRESSURE

made of gunmetal, angle-type,

with threaded connections

CONTROL VALVES SERIES 617

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

Temperatures

Pressures

0

from -60 °C to +225 °C

from 0.2 bar to 20 bar

OVERFLOW AND PRESSURE CONTROL VALVES SERIES 618

OVERFLOW AND PRESSURE CONTROL VALVES SERIES 453

made of gunmetal, angle-type, with threaded connections

made of stainless steel, angle-type with threaded connections



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

These overflow or control valves have been developed for complex applications with, for example, large overflow volumes, viscose media and counter pressures etc. With the stainless steel bellows that compensate counter pressures, a counter pressure affecting the outlet side does not influence the setting of the valve. The springs, designed precisely for the setting ranges, with the complex technical design of function parts in the flow range and the housing lead to the unusually high flow volumes for overflow valves despite the very proportional control reactions.

Temperatures from -60°C to +225°C

Pressures 0 from 0,2 bar to 20 bar

Threaded connections from $\frac{3}{8}$ " to 2"



Temperatures from -60°C to +225°C

Pressures 0 from 0,2 bar to 30 bar

Threaded connections from 3/8" to 11/4"





Data sheet

Pressures 0 from 0,2 bar to 20 bar Threaded connections from 3/8" to 2"

Temperatures

from -60°C to +225°C



0

Pressures

32

OVERFLOW AND PRESSURE CONTROL VALVES SERIES 853

made of gunmetal, angle-type, with threaded connections

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

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



33

Overflow and pressure control valves

OVERFLOW AND PRESSURE CONTROL VALVES SERIES 430

made of stainless steel, straightway form, with threaded connections

OVERFLOW AND PRESSURE CONTROL VALVES SERIES 431

made of stainless steel, straightway form, with flange connections





This diaphragm-controlled overflow value 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.

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

Optionally available with female thread.

Temperatures from -20° C to $+120^{\circ}$ C

Pressures 0 from 0,5 bar to 10 bar

Threaded connections from 1/2" to 2"

Temperatures from -20°C to +120°C

Pressures 0 from 0,5 bar to 10 bar

Flange connections ⊐∏⊂ from DN 15 to DN 100



Temperatures from -20°C to +120°C

Pressures 0 from 0,5 bar to 10 bar

Threaded connections from 1/2" to 2"



Data sheet

OVERFLOW AND PRESSURE CONTROL VALVES SERIES 631

made of gunmetal, straightway form, with flange connections



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

The valve is used to protect pumps in closed circuits against overloading as well as for control purposes in pressure systems for air, neutral/non-neutral gases and technical vapours.

Temperatures from -20° C to $+120^{\circ}$ C

> Pressures from 0,5 bar to 10 bar

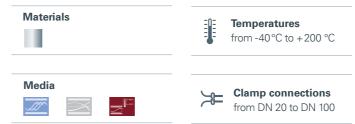
0

Flange connections from DN 15 to DN 100





SAFETY FITTINGS FOR HYGIENIC APPLICATIONS



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.

SAFETY FITTINGS FOR HYGIENIC APPLICATIONS ARE USED HERE:



Pharmaceutical



Food Industry

Pressures from 0,4 bar to 16 bar



Brewery



Beverage Industry

Safety fittings for hygienic applications

SAFETY VALVES SERIES 400

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



The valves in the Goetze Hygienic series are constructed in compliance with the construction features of hygienic design.

This includes smooth, fault-free and optimal surfaces for cleaning, minimum dead space, no gaps and lots of other details. Difficult to clean components are protected against impurities with stainless steel bellows.

The fulfilment of these construction features are proven and confirmed by tests and certificates from the DGUV Committee for Foods and Luxury Items and the EHEDG (European Hygienic Engineering & Design Group). The safety valves are approved for worldwide use in accordance with numerous regulations.

OVERFLOW / PRESSURE CONTROL VALVES 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 media, 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 Media ranges from air to various neutral and non-neutral vapours, gases and liquids.

SAFETY VALVES 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 DN 25 to DN 100, 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 Media is optimally separated from the spring housing. On all surfaces, the 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.



Pressures from 0,4 bar to 16 bar

Clamp connections from DN 20 to DN 32



Pressures from 0,4 bar to 16 bar

Clamp connections from DN 20 to DN 32



	Temperatures from -40 °C to +200 °C
•	Pressures from 0,4 bar to 16 bar
یتر ایتر	Clamp connections from DN 25 to DN 100





The hygienic cleaning process

Hygiene is an omnipresent theme, especially in the area of food and beverage processing. Particularly high demands are made of the surfaces coming into contact with the medium. This is why a dead space-free construction of equipment parts is essential.





PRESSURE REDUCING VALVES

Materials	from -40 °C to + 120 °C
Media	Threaded connections from ¼" to 2"

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.

PRESSURE REDUCING VALVES ARE USED HERE:



Snow-making equipment



Hydraulic control systems



Shipbuilding



Sprinkler systems

Pressure reducing valves

PRESSURE REDUCING VALVES **SERIES 481 AND 681**

made of stainless steel and gunmetal with threaded connections

PRESSURE REDUCING VALVES **SERIES 482 AND 682**

made of stainless steel and gunmetal with flange connections

PRESSURE REDUCING VALVES **SERIES 683**

made of gunmetal, with female 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 1 to 8 bar the additional outlet pressure ranges of 0,5 bar to 2 bar and 5 bar to 15 bar cover a wide application range.

Optionally available with female thread.

Fittings often require flange connections. This is the exact reason for our series in the nominal diameter ranges of DN 15 up to DN 100. Besides the standard versions of these pressure reducing valves made of stainless steel and gunmetal, the valves are also available in nominal diameters from DN 20 to DN 50 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.

This pressure reducing valve is an alternative to the larger versions, in cases where only small flow volumes are required or the media in question is compressed air. With an outlet pressure of max. 50 bar the pressure reducing valve is used, for example, to control the starter air on ships. It goes without saying, that it holds all the necessary marine approvals of the various bodies such as Germanischer Lloyd etc.

This valve is used in many industrial applications particularly for compressed air and neutral gases.

Temperatures

from - 10°C to + 95°C

from 1,5 bar to 10 bar

Threaded connections

from 3/8" to 11/4"

Inlet pressure up to 50 bar,

Outlet pressure adjustable

PRESSURE REDUCING VALVES **SERIES 484**

made of stainless steel, with female threaded connections



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 60 bar and the wide outlet pressure range make these pressure reducing valves the optimal solution for almost all technically demanding applications.

Temperatures from -20°C to +120°C

Inlet pressure up to 40 bar, Outlet pressure adjustable from 0,5 bar to 15 bar

Threaded connections from 1/2" to 2"



Temperatures from -20 $^{\circ}$ C to +120 $^{\circ}$ C

Inlet pressure up to 40 bar, () Outlet pressure adjustable from 0,5 bar to 15 bar

Flange connections from DN 15 to DN 100





Data sheet

	Temperatures from -40°C to + 120°C
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Inlet pressure up to 60 bar, ()Outlet pressure adjustable from 0,5 bar to 50 bar

Threaded connections from ¼" to 2"



PRESSURE REDUCING VALVES **SERIES 684**

made of gunmetal, with female threaded connections



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 handwheel.

The extremely small pressure loss in the pressure adjusting area leads to these high-performance pressure reducing valves having almost no competition.

Temperatures from -40° C to $+120^{\circ}$ C

0

Inlet pressure up to 60 bar, Outlet pressure adjustable from 0,5 bar to 50 bar



Threaded connections from 1/4" to 2"



Vacuum and air valves

VENT 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 0 from -6 mbar to - 800 mbar

from ½" to 1"





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



0

Threaded connection from 1/2" to 1"



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CONNECTION POSSIBILITIES

Connection type	Drawing	Description	Connection typ	e Drawing	Descrip
f		Whitworth threaded cylindrical pipe connection – female – seal not made on thread BSP-P according to DIN ISO 228	<u>FLAxA</u> , <u>FLAx</u>	B ELAXA FLAXB	Loose up to n x = Pre A = Wit B = Wit
m		Whitworth threaded cylindrical pipe connection – male – seal not made on thread BSP-P according to DIN ISO 228	KSDIN		Taper r to DIN valves
BSP-Tm		Whitworth threaded tapered pipe connection – male – seal made on thread male connection BSP-T according to DIN EN 10226			standa Threac
NPTf		US standard tapered pipe thread NPT threaded pipe connection NPT – female – according to ANSI / ASME B 1.20.1 seal made on thread	GSDIN		(diary d valves standa
NPTm		US standard tapered pipe thread NPT threaded pipe connection NPT – male – according to ANSI / ASME B 1.20.1 seal made on thread	KLSDIN		Clamp valves
METf		Metric ISO female connection according to DIN 13 seal not made on thread	KLSISO		Clamp valves
METm		Metric ISO male connection according to DIN 13 seal not made on thread	A-KLSDIN		Aseptio valves and ph
FL		Cast flange connection according to DIN EN 1092	A-GSDIN		Aspetic form A aseptic pharm
<u>FLDxA, FLDxB</u>	ELDXA 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			

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	μισπ	

se flange connection according to ASME B 16.5 o max. 600 lbs

Pressure rating Without sealing groove With sealing groove

er nipple (diary coupling screw joint) according IN 11887 res for food, chemical and pharmaceutical industry idard threaded connections

eaded ferule connection – male – ry coupling screw joint) according to DIN 11887 res for food, chemical and pharmaceutical industry idard threaded connections

np connection according to DIN 32676 res for food, chemical and pharmaceutical industry

np connection according to ISO 2852 res for food, chemical and pharmaceutical industry

ptic clamp ferrule connection DIN 11864-3 res made of stainless steel for aseptic, chemical pharmaceutical industry

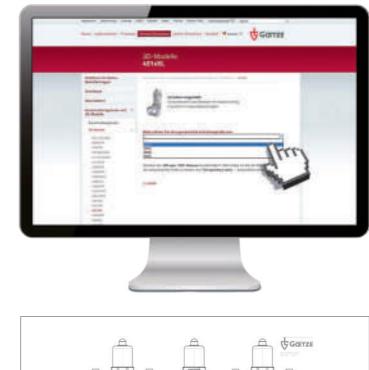
etic threaded ferule connection – male – n A DIN 11864-1 ptic threaded pipe connection for the food, chemical and rmaceutical industry

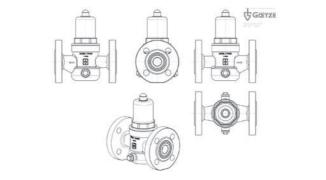
INTERNET SERVICE OF GOETZE

GOETZE PRODUCT NAVIGATOR

You want to find the series you are looking for quicker? Using the Goetze configurator, you can select the desired specifications and characteristics and will be shown a list of matching products. The navigator is for orientation purposes only and does not replace consultation with a technical expert. Give it a try and find the right product for your applications.

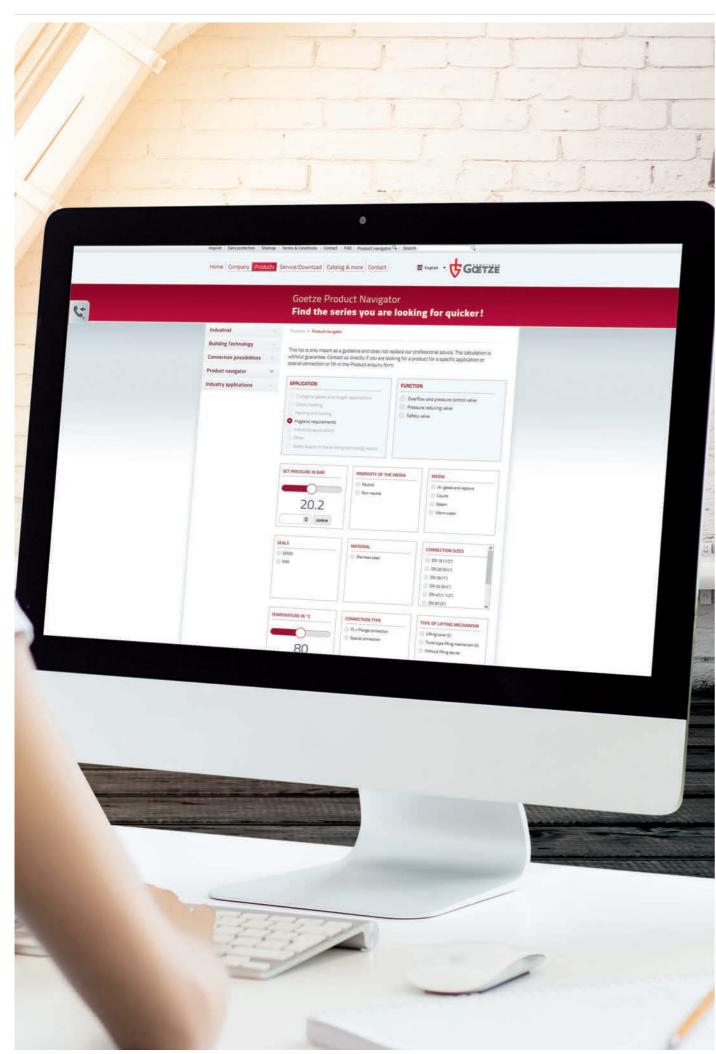
www.goetze-armaturen.com/navigator-en





MOBILE WEBSITE Our website is also available in a version optimised for smart phones. As usual, you may find your products simply and Safety valves mac gunmetal, anglo-ty easily - also en route. with threaded conn Curious? Just take a look! tions

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ALVES | SAFETY VALVES | PRESSURE RELIEFCONT RETY FITTINGS | PRESSURE REDUCING VALVESVALVE RESSURE CONTROL VALVES | SAFETY FITTINGSSAFET EF VALVES | OVERFLOW VALVES | PRESSUREPRESS S | SAFETY VALVES | PRESSURE RELIEF VALVESCONTI NGS | PRESSURE REDUCING VALVES | SAFETYOVERF SSURE CONTROL VALVES | SAFETY FITTINGS EF VALVES | OVERFLOW VALVES |

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