WATER & BUILDINGS

ARMATUREN GOETZE

THE PRESSURE REDUCING VALVE SPECIALIST

Safety valves and fittings for water applications

WHAT SETS GOETZE AND THEIR BUILDING TECHNOLOGY PRODUCTS APART

GLOBAL TRADE

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

AVAILABILITY

We offer reliable availability of our standard products for the building technology sector. Products with standard settings and specifications can be shipped from the factory within 3 - 5 working days. This ensures that you receive your order reliably and on time.

RELIABLE COMPETENCE

Technical consulting is not the only 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 them with the necessary information and instructions. It is the task of our field representatives to provide our customers with the very best technical advice at the customer's premises to support them in all aspects related to our products.

ONLINE SERVICES

BIM data, 3D models or product navigator – Goetze offers various services online, so you can ideally integrate the products into your process already at the planning stage. In our online portal, you can download single data sets for individual nominal widths or an exclusive product range file for the series 9000, for example.

EASY INSTALLATION AND MAINTENANCE

Goetze building technology products are extremely easy to install. Thanks to standardised threaded or flanged connections, they can be installed in all conventional lines. The pressure reducing valves can be maintained and the safety valves relieved effortlessly in an installed position. New features, such as the transparent filter cup on the 9000, make it easy to detect the degree of soiling and thus determine any maintenance necessary required.

TECHNICAL BASICS

Materials

STAINLESS STEEL

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

GUNMETAL

- robust and of high quality
- wide range of applications
- also available in a lead-free design

SPHEROIDAL GRAPHITE CAST IRON

- robust material
- cost-effective material for standard applications

BRASS

- good price/performance ratio
- cost-effective material for standard applications

Media

LIQUIDS

Temperatures:
-270 °C to +400 °C

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

AIR, GASES AND VAPOURS

Temperatures:
-270 °C to +400 °C

- Compressors
- Pressure vessels
- Pressure boosters (air-side)
- Silo container

STEAM

Temperatures:
+120 °C to +400 °C

- Steam
- Steam plants
- Sterilizers
- Autoclaves
- Boilers

HOT WATER

Temperatures:
up to +120 °C

- Heating systems
- Intrinsically safe solar plants
- Heating, ventilation
- Co-generation plants (CHP)

POTABLE WATER COLD

Temperatures:
up to +40 °C

- Domestic water supply
- Machines/systems with connection to potable water line
- Water utilities

POTABLE WATER HOT

Temperatures:
up to +85 °C / +95 °C

- Central potable water heater
- Process water heater
- Potable water tank

SOLAR PLANTS

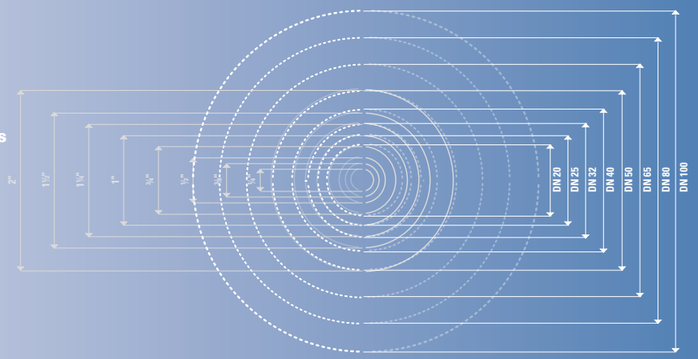
Temperatures:
up to +160 °C

- Steam
- Steam plants
- Solar plants

Connections

Threaded connections
⅜" to 2"

⅜" - 2"



Flange connections
DN 15 to DN 125

DN 15 - DN 125

BUILDING TECHNOLOGY BY GOETZE

Tradition & innovation hand-in-hand

Driving new innovations and upholding tradition is never a contradiction in terms at Goetze KG. Since its founding in 1949, the fittings factory has manufactured heavy-duty gunmetal products for protecting plants using air, water and heating systems against overpressure or for reducing the inlet pressure to a required level. Gunmetal still plays a crucial role in products from Goetze KG – and is continuously optimised to ensure that market demands are ideally met. The development of the new pressure reducing valve, for example, focused on ensuring that the gunmetal used is environmentally compatible and compliant with potable water requirements. For this reason, the material used is lead-free to prevent lead from entering the recycling loop and therefore also fulfils requirements such as RoHS. For more than 70 years, the supply of valves for building technology applications has been a core area of Goetze KG's business. In addition to the building technology sector, under the leadership of Detlef Weimann, the industrial valve business has been constantly developed and new solutions for customers and their plants have been found. In 2015, the product range was expanded to include safety fittings for cryogenic applications. Our aim is to perfectly fulfill customer requirements at all times. Despite our expanded business sectors, building technology is still one of our most important branches. No matter, whether valves for heating applications, pressure reducing valves, safety valves for solar applications or the safeguarding of fire extinguishing systems:

Goetze products can be found in many buildings today – from multi-storey buildings to single-family houses. Your safety is our top priority in every situation. Experience Goetze quality for yourself in our products and technical advice.

1949
Founding Gerhard Götze

1961
Move to the Robert-Mayer-Straße

1988-2002
Goetze under the direction of Rolf Götze

2002
D. Weimann aquires the general partner´s shares and joins company as managing director

2006-2009
Modernization of manufacturing site

2010-2012
Building extension: in-house casino, training rooms

2015-2016
Founding of the sales subsidiaries in China and Russia

2019
70th anniversary and founding of the sales subsidiary in Brazil

2020
New product line Goetze Competence Centre Water & Buildings

OUR CERTIFICATES

We rely on quality – nationally and internationally

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

PRESSURE REDUCING VALVES

Series	CE 2014/68/EU	EAC	DVGW	ACS	WRAS	SVGW SSIGE		SINTEF		DNV	ABS	BUREAU VERITAS		Lloyd's Register	RINA
9000	■	■	■	■	■	■	■		■		■				
9040	■	■	■	■	■	■	■		■		■				
9160	■		■	■	■		■								
481	■	■	■	■	■		■		■	■	■	■	■	■	■
681	■	■	■	■	■		■	■	■	■	■	■	■	■	■
382	■	■	■	■	■		■								
482	■	■	■	■	■		■		■	■	■	■	■	■	■
682	■	■	■	■	■		■		■	■	■	■	■	■	■

SAFETY VALVES

Series	TÜV component approval	CE 2014/68/EU	EU type examination	EAC	TS	ACS		DNV	Lloyd's Register	ABS	BUREAU VERITAS		DVGW
651mWNK	■	■	■	■	■	■	■	■	■	■		■	
355bGFL	■	■	■	■	■			■	■		■	■	
455bGFL	■	■	■	■	■			■	■		■	■	■
852bFL	■	■	■	■				■	■	■	■	■	■
451	■	■	■	■	■			■	■	■	■	■	■
851	■	■	■	■	■			■	■	■	■	■	■
460tGFL	■	■	■	■	■			■	■	■	■	■	■
461tGFO	■	■	■	■	■			■	■	■	■	■	■
652mFK		■		■				■	■	■	■	■	■
642mGFL	■	■	■	■				■	■	■	■	■	■
645mGFL	■	■	■	■				■	■	■	■	■	■
6420mGFL	■	■	■	■				■		■		■	■
6450mGFL	■	■	■	■				■		■		■	■
651mH	■	■	■	■	■			■	■	■		■	
451bH	■	■	■	■				■	■	■	■	■	
851bH	■	■	■	■	■			■	■	■	■	■	
852bHL	■	■	■	■				■	■	■	■	■	
455bHL	■	■	■										
355bHL	■	■	■										
255bHL	■	■	■										
451bHF	■	■	■	■	■			■	■	■	■	■	
851bHF	■	■	■	■				■	■	■	■	■	
652mFK	■	■	■	■				■	■	■	■	■	
651mSK	■	■	■	■	■			■	■	■		■	
451bG	■	■	■	■				■	■	■	■	■	
851bG	■	■	■	■				■	■	■	■	■	
852bGL	■	■	■	■				■	■	■	■	■	

PRESSURE REDUCING VALVES

Series	Materials	Connection type	Media: neutral – liquid	neutral – air/gases	neutral – potable water cold	neutral – potable water hot	non-neutral – liquid	non-neutral – air/gases	non-neutral – potable water cold	non-neutral – potable water hot	Temperature in °C: –50 –25 0 25 50 75 100 125	Set pressure bar: 0 0,5 1 5 10 15 20 30 50
9000					■	■			■	■		Inlet pressure / Outlet pressure
9040					■	■			■	■		Inlet pressure / Outlet pressure
9160					■	■			■	■		Inlet pressure / Outlet pressure
481			■	■	■	■	■	■	■	■		Inlet pressure / Outlet pressure
681			■	■	■	■	■	■	■	■		Inlet pressure / Outlet pressure
382					■	■			■	■		Inlet pressure / Outlet pressure
482			■	■	■	■	■	■	■	■		Inlet pressure / Outlet pressure
682			■	■	■	■	■	■	■	■		Inlet pressure / Outlet pressure

DVGW-CERTIFIED SAFETY VALVES FOR DRINKING WATER APPLICATIONS

Series	Materials	Connection type	Media: neutral – liquid	neutral – air/gases	neutral – steam	non-neutral – liquid	non-neutral – air/gases	non-neutral – steam	Temperature in °C: -300 -200 -100 -50 0 50 100 150 200 250 300 350	Set pressure bar: 0 0,5 1 5 10 15 20 30 50 70
455bGFL			■		■	■		■		
852bFL			■		■	■		■		
451			■		■	■		■		
851			■		■	■		■		
460tGFL			■		■	■		■		
461tGFO			■		■	■		■		
642/645mGFL			■		■	■		■		
6420/6450mGFL			■		■	■		■		
652mFK			■		■	■		■		

TÜV/CE SAFETY VALVES FOR HEATING AND COOLING

Series	Materials	Connection type	Media: neutral – hot water	neutral – liquid	non-neutral – hot water	non-neutral – liquid	Temperature in °C: –100 –50 0 50 100 150 200	Set pressure bar: 0 0,5 1 5 10 15 20 30
651mH			■		■			
451bH			■		■			
851bH			■		■			
852bHL			■		■			
455bHL			■		■			
355bHL			■		■			
255bHL			■		■			
451bHF			■	■	■	■		
851bHF			■	■	■	■		
652mFK				■		■		

TÜV/CE SAFETY VALVES FOR SOLAR PLANTS AND DISTRICT HEATING

Series	Materials	Connection type	Media: neutral – solar	neutral – hot water	neutral – steam	neutral – air/gases	neutral – liquid	non-neutral – solar	non-neutral – hot water	non-neutral – steam	non-neutral – air/gases	non-neutral – liquid	Temperature in °C: –100 –50 0 50 100 150 200 250 300 350 400	Set pressure bar: 0 0,5 1 5 10 15 20 30 50 70
651mSK			■					■						
451bG			■	■		■		■	■		■			
851bG			■	■		■		■	■		■			
852bGL			■	■		■		■	■		■			
455bGFL			■	■		■	■	■	■		■	■		
355bGFL			■	■		■	■	■	■		■	■		

WATER SUPPLY FITTINGS FOR THE BUILDING TECHNOLOGY SECTOR

Materials

Media

Temperatures
from -20 °C to +120 °C

Threaded connections
from $^{3}/_{8}$" to 2"

Pressures
from 0,5 bar to 10 bar
Inlet pressure up to 40 bar
Outlet pressures adjustable

Flange connections
from DN 15 to DN 125

Our pressure reducing valves with potable water approvals, both with threaded or flange connections do not only cover all classic areas of the water supply sector: They are often used for applications in sprinkler systems, in water-treatment or desalination plants. The materials of all wetted parts do not only fulfill the stringent national DVGW regulations but also those in France (ACS), the UK (WRAS) and Norway (SINTEF).

FITTINGS FOR BUILDING TECHNOLOGY ARE USED HERE:

Buildings

Potable water purification

Water systems

Sprinkler systems


Building services


Construction machinery


Safety showers


Irrigation systems

Series 9000

PRESSURE REDUCING VALVES SERIES 9000

made of lead-free gunmetal
with threaded connections

The first Goetze tap with functional parts made of plastic was developed for the environmentally and health-conscious user.

The lead-free body of the pressure reducing valve does not release any harmful substances into the drinking water and is corrosion-resistant in all water qualities. At the same time, the environment is protected by avoiding heavy metals.

The valve insert is made from a high-quality plastic used in medical technology and is resistant to cavitation, temperature and media. The flow rate of the pressure reducing valve has also been sized for maximum performance. A higher maximum flow rate is possible by optimising the flow and by using physical effects in the valve, a higher flow rate is possible with the same pressure drop.

The integrated 160 µm fine strainer insert protects the valve and downstream installation from dirt particles and is easy to clean without having to remove the valve insert and readjust the outlet pressure. The degree of contamination can be recognised through the transparent filter cup.

Another feature is the visible adjustment scale on both sides. This makes the setting process even more convenient by displaying the current set pressure in each position. This means that the setting can be made without a pressure gauge, special tools or operating pressure.

Temperatures
from +5 °C to +85°C

Inlet pressure up to 25 bar,
Outlet pressure adjustable from 0,5 bar to 12 bar

Threaded connections
from ½“ to 2“

Series 9040

PRESSURE REDUCING VALVES SERIES 9040

made of stainless steel
with threaded connections

The 9000 series is also available in a modified version as the 9040 series made of stainless steel. The V4A stainless steel body does not release any harmful substances into the drinking water and is corrosion-resistant in all water qualities. The corrosion resistance is also sized for aggressive media.

The stainless steel version is used, for example, in systems in which food, cosmetics, beverages or other demanding media are processed.

The pressure reducing valve also features the easy-to-clean filter screen with transparent filter cup to protect the downstream system, the valve insert made of high-performance plastic and the setting scale visible on both sides.

For hot water and PN25 applications, a filter cup made of V4A is also available as an alternative.

In this case, the valve insert is also made entirely of plastic and the user benefits from all the advantages of the 9000 series as well as the properties of V4A stainless steel.

Temperatures
from +5 °C to +85°C

Inlet pressure up to 25 bar,
Outlet pressure adjustable from 0,5 bar to 12 bar

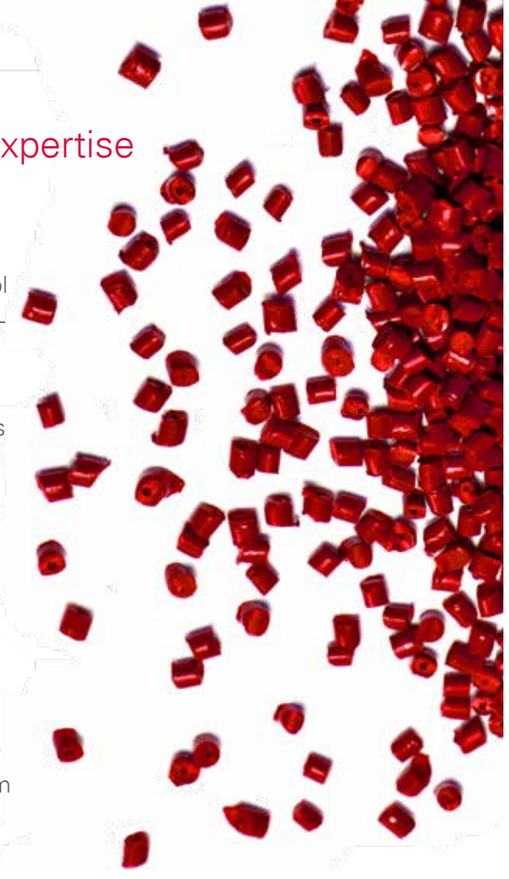
Threaded connections
from ½“ to 2“


Washing facilities


Water systems


Industrial kitchens


Bottling plants

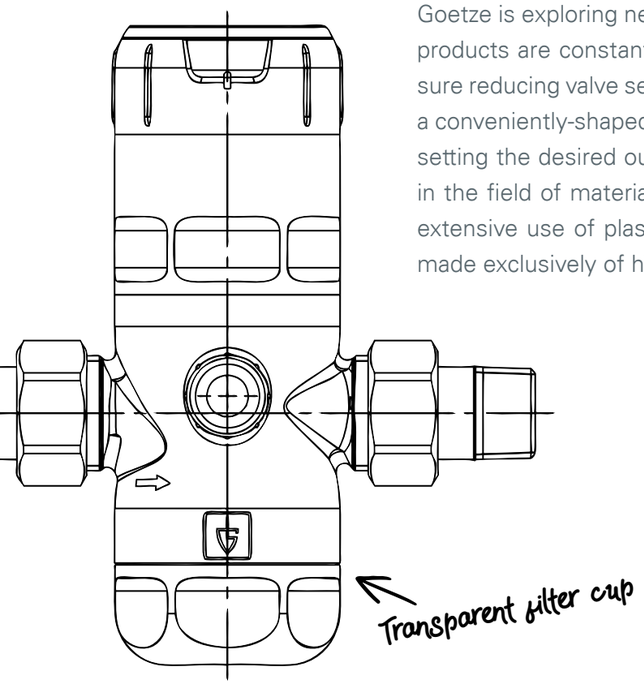


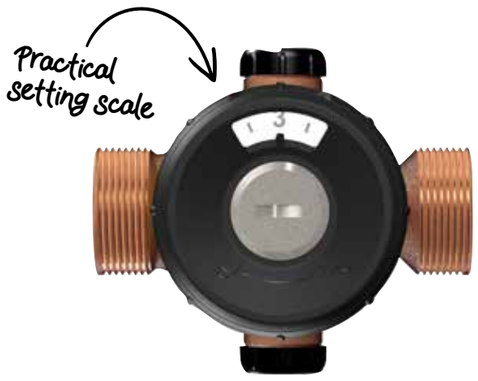
Two years, four heads and a great deal of expertise

New developments always involve a lot of time, patience and attention to detail. This of course is true in the case of our new pressure reducing valve series 9000. A team of experts from our water control division has been working meticulously on this innovation for two years. 58 tools for the production of cast-, plastic- and elastomer parts and many man-hours later, Goetze is able to present an innovative product in its range to protect the potable water supply. This requires compliance with special standards in order to guarantee clean and safe potable water at all times. The development was characterised by various project phases. Firstly, concepts were developed optimised and validated using modern simulation software. Once the parts had been designed, the very latest technology was employed to create the prototypes. The first parts, which were directly subjected to flow and strength tests, were manufactured using the metal 3D printing technique. This means that right from the start maximum resistance can be verified and guaranteed. After fatigue- and production part tests, we now have a new product that stands for maximum operational safety, simple maintenance and a high degree of convenience.

Functions ideally supported by an innovative design

Goetze is exploring new avenues not only in product development but its products are constantly advancing in terms of design as well. The pressure reducing valve sets itself apart, above all, through an integrated filter, a conveniently-shaped adjustment handle and a clearly arranged scale for setting the desired outlet pressure. Goetze is also breaking new ground in the field of materials. For the very first time, the company is making extensive use of plastics, the transparent filter cup, for example, being made exclusively of high-quality plastic.





Offering even more benefits through plastic

The new pressure reducing valve consists of a combination of materials unique for Goetze. As with numerous other products, the housing is made of gunmetal. Which is lead-free and offers the highest possible corrosion resistance.

The elimination of lead offers further benefits: The environment is sustainably protected by the avoidance of heavy metals and future-proof recyclability is possible.

The use of selected plastics from medical technology, however, is new: for such components as the spring housing, the adjustment handle as well as in the filter cup and associated filter. The valve insert is even made of a plastic that is mainly used in medical technology.

The materials used set themselves apart in particular through high strength, hardness and rigidity even at high temperatures. In addition, plastics suffer little to no cavitation at all. But there is also enormous creative leeway in terms of the design itself. You benefit, for example, from the high degree of transparency that allows soiling to be detected quickly and the pressure reducing valve to be maintained accordingly.

By expanding the material combination, the user benefits from the positive properties of the plastic without having to forego the usual quality for which Goetze KG is known.

High-quality plastics
For conveying media in the medical technology sector

Transparent filter cup
In transparent for detecting the degree of soiling

Lead-free gunmetal RG+

The lead-free gunmetal RG+ is the result of consistent development from the lead-containing gunmetal RG 5 lead-reduced CuSn5Zn5Pb2-C, which has proven itself for years. It is the preferred material for drinking water installations.

Inside the microstructure, lead has been substituted by sulphur, however it has no effect on the basic properties such as excellent corrosion resistance, tensile strength, elongation, hardness and machinability.

The new RG+ material was extensively tested in the laboratory and over several years in the field. The alloy is standardised by DIN SPEC 2701 and part of the Federal Environment Agency's positive list of metallic materials suitable for drinking water hygiene since 2018.

As well as for the conventional gunmetal, a high tin content in the new alloy ensures the optimum coating structure. In addition to high corrosion resistance it also guarantees long-term safety.

Therefore, the lead-free gunmetal RG+ can be used in all water qualities according to the drinking water ordinance and according to all drinking water-related standards in Europe without any restrictions.

The material has excellent hygienic properties. With a maximum lead content of 0.10% the requirements of national and international legislation, such as for the US are met and is also compliant to the REACH regulation, and will certainly meet future material requirements as well.

Lead-free gunmetal
Safe, environmentally-friendly, corrosion resistant

Fittings for water supply and building technology sector

PRESSURE REDUCING VALVES SERIES 382

made of spheroidal graphite cast iron, with flange connections

The 382 pressure reducing valve is used in a wide variety of water applications. Whether in apartment blocks, office complexes, hospitals or hotels - it regulates the pressure perfectly wherever large quantities of water are required. Thanks to its low pressure drop, the pressure reducing valve 382 is even used in municipal water supplies.

Only high-quality, approved materials are used for the 382 pressure reducing valve. Thanks to its spheroidal graphite cast iron body, the 382 pressure reducing valve is ideally equipped to withstand the mechanical stresses of the installation.

Its high-quality polyamide coating, which is applied by dipping, offers maximum corrosion resistance - even against seawater and abrasive water.

The valve insert made of V4A stainless steel can be removed quickly and easily for maintenance.

The flanged pressure reducer is equipped with an adjustment scale in the bonnet for easy back pressure adjustment without operating pressure.

Temperatures
from +5 °C to +65 °C

Inlet pressure up to 25 bar,
Outlet pressure from
0,5 bar to 12 bar

Flange connections
from DN 50 to DN 125

PRESSURE REDUCING VALVES SERIES 9160

made of brass, with threaded connections

The 9160 series - the smallest water pressure reducing valve in the Goetze portfolio.

These mini pressure reducing valves in nominal diameter DN 8 are used particularly in applications such as coffee machines, water dispensers or soft drink dispensers with a fixed water connection. The small size is particularly important here, as the pressure reducing valve is often integrated into the body of the appliance.

In flat water installations, the mini pressure reducing valve is often used in nominal diameters DN 15 and DN 20.

The integrated filter screen protects the appliance and the installation from particles and impurities. An adjustment scale in the bonnet allows pressureless presetting with a screwdriver.

Nominal diameters DN 15 and DN 20 can be installed with optionally available fitting screw connections. Alternatively, they can also be installed directly using female threads.

The body is made of dezincification resistant brass, also available in lead-free brass on request. Fitting screw connections and pressure gauges are available as accessories.

Temperatures
from +5 °C to +60 °C

Inlet pressure up to 16 bar,
Outlet pressure from
0,5 bar to 12 bar

Threaded connections
from ⅜“ to ¾“

PRESSURE REDUCING VALVES SERIES 481 AND 681

made of stainless steel and gunmetal, with threaded connections

The tried and tested, robust pressure reducing valves in full-metal construction with screw connections have proven themselves not only in the drinking water sector, but especially in harsh operating conditions in the industrial sector for a wide range of media, including aggressive media and at fluctuating ambient temperatures.

The materials are optimised for a wide range of water qualities and hot water applications. In addition to the standard pressure range of 1 to 8 bar, the additional 0.5 to 2 bar and 5 to 15 bar Back pressure ranges cover a wide range of applications.

Optionally available with female thread.

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 ½“ to 2“

PRESSURE REDUCING VALVES SERIES 482 AND 682

made of stainless steel and gunmetal, with flange connections

Flange connections are often required for fittings. These series are available in the nominal diameter range from DN15 to DN100 for precisely this purpose. In addition to the standard version, there is also a high-pressure and a low-pressure version for these pressure reducing valves made of stainless steel and gunmetal in the nominal diameters DN20 to DN50.

On request, we can also equip the stainless steel pressure reducing valves with stainless steel pressure gauges for the various pressure ranges.

For maximum ease of maintenance, the exchangeable functional cartridge with strainer is also available for the flange versions.

Temperatures
form -20 °C to +120 °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

SAFETY VALVES WITH DIAPHRAGM SERIES 651MW

made of gunmetal, angle type, with threaded connections

651mWNK enlarged outlet (TÜV/CE)
651mWIK with inlet and outlet diameter equal

Particularly in the case of valves which are employed in potable water installations, we do not accept any compromises regarding the materials used. Only the highest quality materials suitable and approved for potable water applications are used in these valves. These types of safety valves with diaphragm are installed in the cold water pipe before the hot water heater to protect it from inadmissible overpressure.

Temperatures
from -10 °C to +95 °C

Pressures
from 3 bar to 10 bar

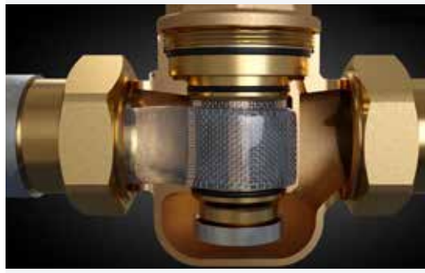
Threaded connections
from ½“ to 1 ¼“

Pressure reducing valve – simply explained

Assembly instructions are also available as a video

Pressure reducing valve – Installation, maintenance and function simply explained with our assembly

video. See how the pressure reducing valve is fitted in a line with threaded connections and how it then works. With a fascinating view into the valve itself and flow graphics.



Watch the pressure reducing valve video now!

DVGW-CERTIFIED SAFETY VALVES FOR DRINKING WATER APPLICATIONS

Materials

Media

Temperatures
from -60 °C to +400 °C

Threaded connections
from ¼“ to 2½“

Pressures
from 0,5 bar to 70 bar

Flange connections
from DN 15 to DN 100

DVGW CERT
UBA Konformität Hygiene

Our DVGW-certified safety valves for drinking water applications ensure reliable protection in sensitive water systems. They reliably prevent overpressure and thus ensure the safety and longevity of drinking water systems. Due to the high quality and precision of Goetze safety valves, they meet all the relevant requirements and offer an optimal solution for the safe operation of drinking water installations.

FITTINGS FOR BUILDING TECHNOLOGY ARE USED HERE:

Drinking water distribution

Water treatment

DVGW-certified safety valves for drinking water applications

SAFETY VALVES SERIES 455bGFL

made of stainless steel, in angle type with flange connections

The 455 series of flanged safety valves offers a consistent concept in performance, function and design – ideal for drinking water applications.

With nominal diameters from DN 15 to DN 100, it covers a wide range and offers high media resistance thanks to high-quality materials.

The optional bellows ensures improved tightness to the atmosphere and prevents any media leakage.

With a pressure range of 0.2 to 40 bar, this valve is versatile and robust, optimal for safe use in demanding drinking water installations.

Temperatures
from -60 °C to +400 °C*

Pressures
from 0,2 bar to 40 bar

Flange connections
from DN 15 to DN 100

*depending on the design, on request down to -270°C

SAFETY VALVES SERIES 852bFL

made of gunmetal, in angle type with flange connections

The high-performance safety valves in the 852 series, made of gunmetal with bellows, are suitable for drinking water applications and for protecting systems that have to withstand high temperatures.

The metallic bellows protect moving parts from deposits, while the spring chamber and spring are protected from moisture and high temperatures – ideal for demanding applications in drinking water systems with temperature loads.

Temperatures
from -60 °C to +225 °C

Pressures
from 0,5 bar to 25 bar

Flange connections
from DN 40 to DN 50

SAFETY VALVES SERIES 451

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

High-performance safety valves made of stainless steel with bellows for protecting non-intrinsically safe solar heating systems with temperatures up to over 200°C, as well as for district heating supply systems, steam boilers and pressure vessels.

The metal bellows protect sliding and moving parts from the medium and thus from dangerous deposits. The spring chamber and spring are protected from penetrating steam and high temperatures.

Temperatures
from -60 °C to +400 °C

Pressures
from 0,5 bar to 70 bar

Threaded connections
from ½“ to 2“

SAFETY VALVES SERIES 851

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

A proven series of safety valves for drinking water applications in a compact design. With its excellent price-performance ratio, it has been providing reliable protection for years.

In addition to the flexible basic versions, the valve can be individually adapted to the requirements of the drinking water installation thanks to various sealing materials and designs.

These valves are optionally available with special features such as metallic bellows and a gastight spring bonnet, which enable safe use in a wide range of applications – always in compliance with the strict hygiene requirements for drinking water.

Temperatures
from -60 °C to +225 °C

Pressures
from 0,5 bar to 50 bar

Threaded connections
from ½“ to 2“

SAFETY VALVES SERIES 460tGFL

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

This versatile safety valve made of 316 stainless steel is suitable for drinking water applications where maximum corrosion resistance and reliability are required.

It offers outstanding quality despite its compact design and is available in a flexible version with or without lifting device.

The gas-tight bonnet ensures a reliable seal, so that the valve can also be used in sensitive applications with the highest hygiene standards.

Temperatures
from -60 °C to +225 °C

Pressures
from 0,2 bar to 25 bar

Threaded connections
from ⅜“ to 1“

SAFETY VALVES SERIES 461tGFO

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

The 451 series extends the safety valve options to include smaller nominal diameters and is specially designed for applications with lower flow rates in the drinking water sector.

With a wide range of variants, the valve can be configured for a wide range of requirements, making it ideal for smaller drinking water installations and applications with sensitive hygiene requirements, such as in medical devices or in the beverage industry.

Temperatures
from -60 °C to +225 °C

Pressures
from 0,5 bar to 70 bar

Threaded connections
from ¼“ to ½“

DVGW-certified safety valves for drinking water applications

SAFETY VALVES SERIES 642 / 645 mGFL

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

For larger static heights, pressure boosting systems are often required in drinking water installations.

Thanks to its approval and suitability for drinking water, the pressure vessel, which is operated with water and an air cushion, can be reliably protected with a safety valve from the 642 and 645 series from Goetze. This ensures that the pressure always remains within safe limits and that the drinking water installation is optimally protected.

Temperatures
from -50 °C to + 205 °C

Pressures
from 0,5 bar to 16 bar

Threaded connections
from ½" to 2 ½"

Flange connections
from DN 25 to DN 65

SAFETY VALVES SERIES 6420 / 6450mGFL

made of gunmetal, in angle type, with threaded connections

Pressure boosting systems are often necessary for larger static heights in drinking water installations. The safety valves of the Goetze series 6420 and 6450 offer reliable protection and, thanks to their approval, are particularly suitable for use with drinking water.

They are characterised by a high degree of connection flexibility, and the medium-contacting internal parts made of stainless steel ensure hygiene and corrosion resistance - ideal for long-term use in sensitive drinking water applications.

The 6420 and 6450 series can be equipped with loose flanges depending on availability. This facilitates both integration into existing systems and the replacement of existing valves.

Temperatures
from -50 °C to + 205 °C

Pressures
from 0,5 bar to 16 bar

Flange connections
from DN 50 to DN 80

SAFETY VALVES SERIES 652mFK

made of gunmetal, full-metal construction, angle type with threaded connections

The diaphragm safety valve in the 652mFK-EPDM series is particularly suitable for protecting closed drinking water circuits.

Made of corrosion-resistant gunmetal in a full-metal construction, it fulfils the strict hygiene requirements in drinking water systems and offers unbeatable value for money.

These safety valves are ideally suited as a standard solution in drinking water installations and systems with high aseptic requirements.

Temperatures
from - 50 °C to + 150 °C

Pressures
from 1 bar to 16 bar

Threaded connections
from ½" to 2"

SECURING THE DRINKING WATER DISTRIBUTION WITH SAFETY VALVES FROM GOETZE

In drinking water distribution, protection against overpressure is of crucial importance for reliably protecting the infrastructure and water quality in supply networks. Particularly in urban water networks and large building complexes, efficient protection against high pressure fluctuations is necessary to protect pipes, connections and devices and to maintain the aseptic quality of the drinking water.

In drinking water systems, the pressure is often regulated by pressure reducing valves, which are installed in so-called pressure transfer shafts. These systems reduce the network pressure to a safe level that is suitable for further distribution. However, even the best pressure control is not always able to fully absorb sudden pressure peaks, for example due to unforeseen pump failures or sudden changes in the water network. This is where Goetze safety valves come in, providing a reliable addition to pressure transfer chambers.

Goetze safety valves, including the 851, 6420, 455 and 852 series, offer comprehensive overpressure protection and are specially designed for the requirements of drinking water distribution. All these valves have DVGW certification and meet the strict hygiene requirements of the UBA (German Federal Environment Agency) directives, ensuring impeccable water quality.

With Goetze safety valves, drinking water distribution has a reliable partner for maximum safety and hygiene in water supply. This effectively protects the drinking water network from pressure damage, increases security of supply and maintains water quality in the pipes.

TÜV/CE SAFETY VALVES FOR HEATING AND COOLING

Materials

Temperatures
from -50 °C to +150 °C

Pressures
from 0,5 bar to 25 bar

Media

Threaded connections
from ½“ to 2“

Flange connections
from DN 15 to DN 100

The product range is designed for hot water and heating systems as well as for cooling and air conditioning systems in single homes and multidwelling buildings and large building complexes. As an example, the safety valves for such installations are fitted with special sealing materials, which are suitable for glycol concentrations of up to 100%. A maximum degree of safety is of paramount importance when we develop new products. Even for combined plants, so-called „Combined Heating and Cooling Systems“, safety valves with the necessary approvals are available from our product range.

TÜV/CE SAFETY VALVES FOR HEATING AND COOLING ARE USED HERE:

Heating systems

Combined heat and power plant modules

Building cooling systems

Large-scale heating systems

TÜV/CE safety valves for heating and cooling

SAFETY VALVES SERIES 651mH

made of gunmetal, all-metal construction, angle type with threaded connections

651mHNK with enlarged outlet (TÜV/CE)
651mHIK with inlet and outlet diameter equal

Robust safety valve with diaphragm with an all-metal construction. Designed to protect hot-water- and heating-systems. This unmatched design, which does not have any plastic parts, means that these valves are also suitable for very high external temperatures.

Temperatures
from - 10 °C to + 120 °C

Pressures
from 2,5 bar to 3 bar

Threaded connections
from ½" to 2"

SAFETY VALVES WITH BELLOWS SERIES 451bH

made of stainless steel, angle type with threaded connections

For demanding requirements in hot-water and heating-systems, there is also a version available made of high-quality corrosion- and acid-resistant stainless steel.

This valve is suitable for all hot- water systems, where protection cannot be achieved by using a standard safety valve with diaphragm with the standard set pressures of 2,5 or 3 bar, for example in the case of all large building complexes.

Temperatures
from -10 °C to + 120 °C

Pressures
from 0,5 bar to 25 bar

Threaded connections
from ½" to 2"

SAFETY VALVES WITH BELLOWS SERIES 851bH

made of gunmetal, angle type with threaded connections

High performance safety valve with bellows, made of high quality, corrosion-resistant gunmetal. Heating systems with set pressures other than 2,5 or 3 bar are required to be protected by such safety valves.

Apart from indirectly heated plants, the sizing of the valves is based on the heating output of the boiler.

Temperatures
from -10 °C to + 120 °C

Pressures
from 0,5 bar to 25 bar

Threaded connections
from ½" to 2"

SAFETY VALVES WITH BELLOWS SERIES 852bHL

made of gunmetal, angle type with flange connections

This safety valve series consists entirely of corrosion-resistant materials. The gunmetal housing, the stainless steel spring and all internal parts made of stainless steel are difficult to beat in terms of resistance, especially in aggressive waters, salt water or saline atmospheres. Whether metallically sealing or, to meet the most stringent tightness requirements, with metallically supported O-ring seal in a diverse range of materials or with counter-pressure compensating metal bellows, there is an ideal design for every application.

Temperatures
from -10 °C to +120 °C

Pressures
from 0,5 bar to 25 bar

Flange connections
DN 40 and DN 50

TÜV/CE safety valves for heating and cooling

SAFETY VALVES WITH BELLOWS SERIES 455bHL

made of stainless steel,
angle type with flange connections

In addition to the spheroidal graphite cast iron version, flanged safety valves are also available in high-alloy stainless steel. With metallic-supported elastomer bellows and elastomer seals, these D/G/H safety valves are specially approved for protecting large heating systems in industry and building technology as well as in combined heat and power plants and district heating supply systems. The valves fulfil the requirements of the Swiss SWKI.

Temperatures
from - 10 °C to + 120°C

Pressures
from 0,5 bar to 25 bar

Flange connections
from DN 15 to DN 100

SAFETY VALVES WITH BELLOWS SERIES 355bHL

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

The 355 series flanged safety valve impresses with its consistent concept in terms of performance, function and design. The use of cast iron as the housing material creates an especially cost-effective variant. This is particularly beneficial for heating applications and steam, as well as lower requirements for corrosion resistance.

The metallically supported, moulded elastomer seal offers safety in the temperature range from -10°C to 120°C.

Temperatures
from - 10°C to + 120°C

Pressures
from 0,5 bar to 25 bar

Flange connections
from DN 15 to DN 100

SAFETY VALVES WITH BELLOWS SERIES 255bHL

made of cast steel,
angle type with flange connections

The flanged safety valves in the 255bHL series impress with their robust design in cast steel and cover nominal diameters from DN 15 to DN 100. They offer a consistent performance, function and design concept that allows for both vertical and horizontal installation.

The low overall height and the option of a full nozzle design make this series particularly easy to maintain. Thanks to the full-metal construction, the valves are also suitable for use at high ambient or radiation temperatures.

As a standard-lift safety valve, the 255bHL series is specially designed for protecting closed, thermostatically ensured water heating systems with flow temperatures of up to 120°C and meets the requirements of TRD 721, DIN 4751 and DIN EN 12828 for all static heights or nominal outputs above 350 kW.

Temperatures
from - 10°C to + 120°C

Pressures
from 0,5 bar to 25 bar

Flange connections
from DN 15 to DN 100

SAFETY VALVES WITH BELLOWS SERIES 451BHF / 851bHF

made of stainless steel / gunmetal,
angle type with threaded connections

These valves fulfil the highest demands on the corrosion resistance of the materials. With stainless steel bellows and metal-supported elastomer seals, these D/G/H and F-approved safety valves can be used to protect heating and cooling systems in industry and building technology. This is a universally applicable safety valve, especially for indirect heating and cooling via heat exchangers. The valves fulfil the requirements of the Swiss SWKI

Temperatures
from -40 °C to +120 °C

Pressures
from 0,5 bar to 25 bar

Threaded connections
from ½“ to 2“

SAFETY VALVES WITH DIAPHRAGM SERIES 652mFK

made of gunmetal, all-metal construction,
angle type with threaded connections

The safety valve with diaphragm version 652mFK-EPDM is especially designed for the protection of closed cooling circuits. This valve, made of corrosion-resistant gunmetal, with an all-metal construction, is resistant for plants and cooling media with a cooling media containing up to 100% glycol.

It‘s unbeatable value for money makes this a standard valve specified in tenders for cooling and air-conditioning plants.

Temperatures
from -50 °C to +150 °C

Pressures
from 1 bar to 16 bar

Threaded connections
from ½“ to 2“

TÜV/CE SAFETY VALVES FOR SOLAR PLANTS AND DISTRICT HEATING

Materials

Media

Temperatures
from -60°C to +400°C

Pressures
from 0,5 bar to 50 bar

Threaded connections
from ½“ to 2“

Flange connections
from DN 15 to DN 100

The safety valves for solar plants are designed and tested for high media temperatures.
Even for the SOL-valves for intrinsically safe plants, the materials have been tested up to 160°C.

TÜV/CE SAFETY VALVES FOR SOLAR PLANTS AND DISTRICT HEATING ARE USED HERE:

Solar power plants (collectors)

District heating supply

District heating generation

Solar heating systems (collectors)

TÜV/CE safety valves for solar plants and district heating

SAFETY VALVES WITH DIAPHRAGM SERIES 651mSK

made of gunmetal, angle type
with threaded connections

Diaphragm safety valve for protecting small and medium-sized, intrinsically safe solar heating systems. The valve is characterised by a number of special features: Temperature resistance tested up to 160 °C, 100 % metallic and with different connections up to a size of one inch.

The valve is component-tested in accordance with TÜV directives for closed, intrinsically safe solar heating systems with flow temperatures of up to 120 °C. Depending on the connection size, it is suitable for a heating output of up to 200 kW.

Temperatures
from -10 °C to +120 °C

Pressures
from 2 bar to 10 bar

Threaded connections
from ½“ to 1“

SAFETY VALVES WITH BELLOWS SERIES 851bG / 852BGL

made of gunmetal, angle type
with threaded or flange connections

These high-performance safety valves with bellows are suitable for protecting non-intrinsically safe solar heating systems with temperatures of over 200 °C as well as district heating supply systems, steam boilers and pressurised containers. The metallic bellows protects sliding and moving parts from the medium and thus from dangerous deposits. The spring chamber and spring are protected against penetrating steam and high temperatures.

Temperatures
from -60 °C to +225 °C

Pressures
from 0,5 bar to 50 bar

Threaded connections
from ½“ to 2“

Flange connections
DN 40 and DN 50

SAFETY VALVES WITH BELLOWS SERIES 451bG / 455bGFL

made of stainless steel, angle type
with threaded or flange connections

These highly corrosion- and temperature-resistant stainless steel safety valves from the 451 series with stainless steel bellows fulfil the highest demands in terms of temperature resistance and features. For protecting non-intrinsically safe solar heating systems and district heating supply systems with temperatures above 200 °C.

Temperatures
from -60 °C to +400 °C

Pressures
from 0,2 bar to 70 bar

Threaded connections
from ½“ to 2“

Flange connections
from DN 15 to DN 100

SAFETY VALVES WITH BELLOWS SERIES 355bGFL

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

The safety valve with flanged connections made of spheroidal graphite iron offers ideal protection for non-intrinsically safe solar heating systems with temperatures up to 200°C and above as well as for district heating supply systems, steam boilers and pressure vessels.

The metal bellows protects sliding and moving parts from the medium and thus from dangerous deposits.

In addition, the compression spring and spring chamber are protected against steam penetration and high temperatures. By using spheroidal graphite iron as the body material, this series can be an economical alternative, depending on the application.

Temperatures
from -10 °C to +350 °C

Pressures
from 0,2 bar to 40 bar

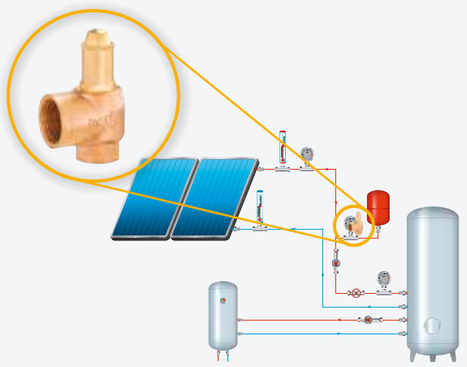
Flange connections
from DN 15 to DN 100

Thermal solar systems

Thermal solar systems are technical installations that absorb sunrays, and with the aid of the carrier medium, transport the energy to heating systems or hot water boilers and emit this in a usable form.

Medium temperatures of well over 160 °C are usual in larger systems. We talk about an inherently-safe solar heating system when the expansion tank absorbs a thermal volume dilation and compensates for this change in volume by generating steam.

In this process, there is no automatic feed of the heat carrier (medium) and, accordingly, this includes the typical small system located on the roofs of many residential properties.

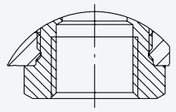
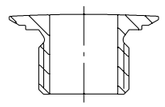
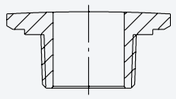
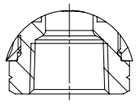
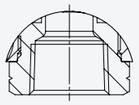
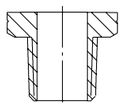
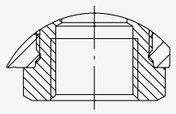
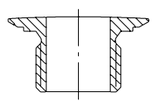
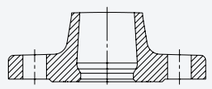


Type 651mSK with identification code SOL for closed, intrinsically safe solar heating systems with initial temperatures of up to 120 °C.

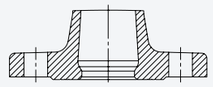
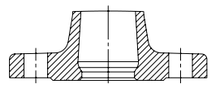
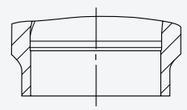
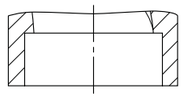
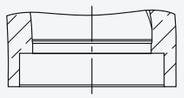
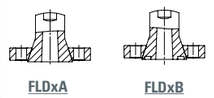
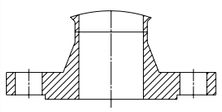
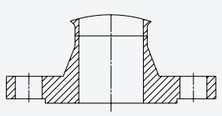
FOR HIGHER TEMPERATURES

Type 851/451bG and 852bGL/355/455bGFL with EPDM up to 170 °C (↗ glycol mixture) or with PTFE up to 225 °C or for stainless steel versions with a metallic seal up to 400 °C.

CONNECTION POSSIBILITIES

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

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

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

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

EXPAND YOUR POSSIBILITIES

Discover industrial valves for building services applications

In this brochure, we show you a variety of specially developed valves and pressure reducing valves that are optimised for use in building services applications. But did you know that some of our industrial valves can also play a valuable role in this area?

Industrial valves also offer decisive advantages and high reliability in building services engineering. Our industrial valves have proven to be efficient and safe solutions, particularly in complex pressurised systems, fire extinguishing systems and drinking water supply systems.

Would you like to find out more about the versatile applications of these valves? Simply scan the QR code and you will be taken directly to our 'Industrial brochure', where you will find detailed information on the following valve series:

- **Series 417 & 617:**
  Overflow and control valves (pressure maintenance valves), which are ideal for protecting booster pumps and ensuring optimum pressure conditions in drinking water supply systems and fire extinguishing systems.

- **Series 630 & 631:**
  Pressure relief and control valves (back pressure valves) with robust threaded and flanged connections, providing precise pressure regulation and high flow rates in water supply and heating systems.

- **Series 642 & 645:**
  Safety valves, are perfect for use in pressure vessels and pressurised systems, including heating and air conditioning applications.

- **Series 6420, 6450, 851, 652:**
  For specific applications in building services engineering, from the protection of pressure boosting systems to flexible solutions for different media and temperature ranges.

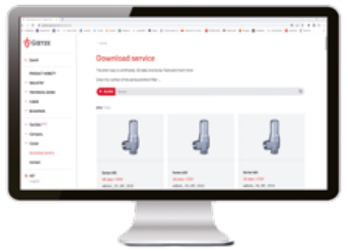
INTERNET SERVICE OF GOETZE

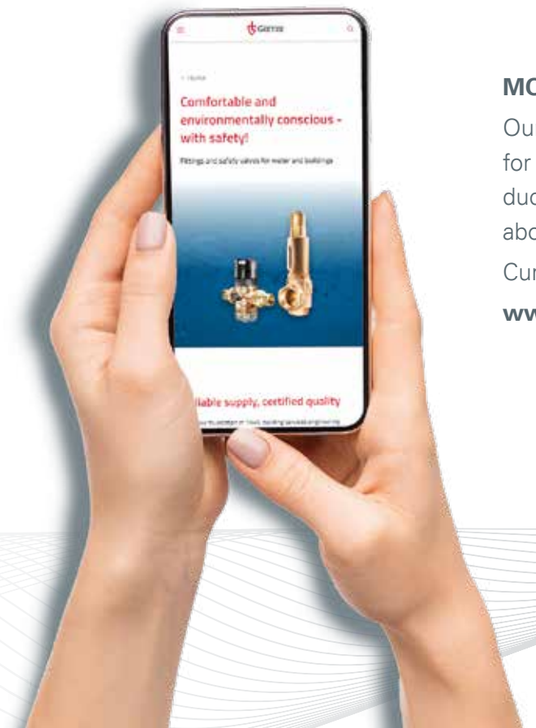
DESIGN AND CALCULATION OF SAFETY VALVES

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

3D MODELS AND TENDER DOCUMENTS

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





MOBILE WEBSITE

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

Curious? Just take a look!

www.goetze-group.com

HOW TO HANDLE PRESSURE

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

Our products for building technology

CONVENIENT & ENVIRONMENTALLY-CONSCIOUS SAFETY
from a diverse product range – „Made in Germany“

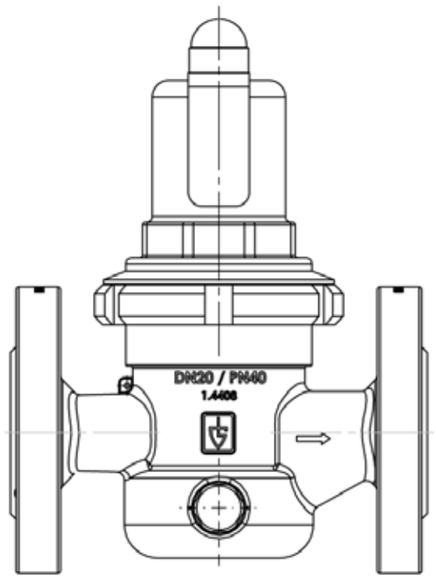
YEARS OF EXPERIENCE
since being founded in 1949

UNCOMPROMISING PERFORMANCE
in the areas of water supply, heating, cooling, district heating and solar plants

0,5 BAR – 40 BAR
extensive pressure range, both for inlet pressure and outlet pressure

Goetze's comprehensive expertise

We support our customers with our many years of e
perience in this sector at the highest professional lev
Thanks to the expertise of our qualified developme
team, we are able to continuously develop new and inr
vative products and are able to adapt these to individu
customer requirements. Making use of skilled manual
bour and precise manufacturing methods, we are able
realize the ideas and product innovations of our custome
– customer-focused, solution-oriented, flexible and alwa
in top branded quality „Made in Germany“.



THE GOETZE KG ARMATUREN

Individuality for more safety

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

PROFESSIONAL AND COMPETENT ADVICE

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

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

GLOBAL TRADE

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

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