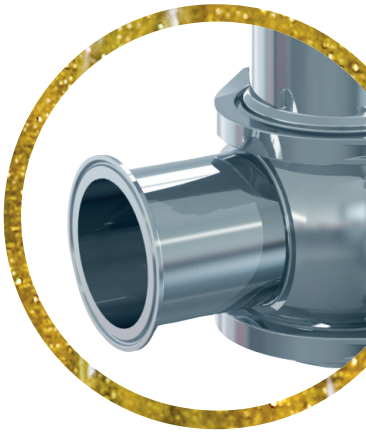
FOOD
BEVERAGE
PHARMA



Customized **solutions**
for your business

ARMATUREN GOETZE

SAFETY VALVES AND 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.

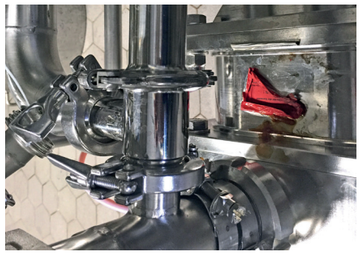
Goetze is also proving its skills in the pharmaceutical industry. Our continously expanding product range caters for this ever growing area of industry. However not only in this field of industry is Goetze also providing safety with its valves, but also in others such as the food industry. Our usual good quality and wide range of certifications guarantee an easy application even under demanding cleaning- and environmental conditions.











FIELDS OF APPLICATIONS

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



TECHNICAL DETAILS

Materials

Media

Temperatures
from -60 °C to +400 °C

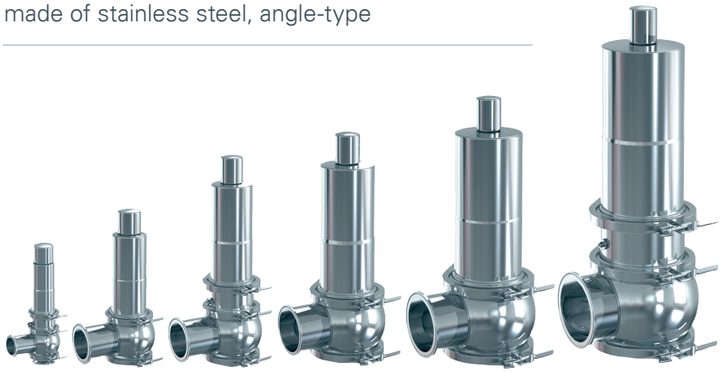
Pressures
from 0,4 bar to 25 bar

Clamp connections
from DN 10 to DN 100

SERIES 4000

Safety valve

made of stainless steel, angle-type



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 primary conical valve seal and the housing seals, these principles have been fully implemented. Thus all surfaces are easy to clean. For the lifting of the valves, additionally there is a pneumatic piston actuator and optionally a proximity switch for the display of the valve opening available. In this totality, the requirements of the EHEDG and FDA in the sector of safety valves for hygienic or clean service applications are realized in a unique way.

Temperatures
from -40 °C to +200 °C

Pressures
from 0,4 bar to 16 bar

Clamp connections
from DN 25 to DN 100

ADVANTAGES OF THE SERIES

- **Smooth and faultless surface finish optimized for cleaning process**
- **Minimal dead space in inlet area and no gaps in the valve**
- **Exposed and rinsed o-ring seals**
- **Shape of valve body avoids forming of puddles in the valve after it has opened**
- **Suitable for CIP/SIP due to pneumatic lifting device**
- **Gap-free installation of seals in contact with the medium**
- **Surface roughness standard Ra < 0,8 µm (Internal product wetted parts)**
- **Ra < 1,6 µm (outside, not product wetted parts)**
- **Moulded diaphragm to divide the product chamber from the spring housing**

Watch our cleaning and disassembling video





SAFETY & HYGIENE – GO HAND IN HAND



Particularly high demands are placed on systems in the food and pharmaceutical industries with regard to the cleanability of the surfaces in contact with the medium. In order to meet the highest demands here as well, Goetze gave top priority to precisely these requirements when developing a safety valve.

The result is our Hygiene Safety Valve 4000. Made of fully forged stainless steel with the familiar slim and compact design. However, one thing distinguishes the 4000 valve from the previous Goetze safety valves. The valve sets new standards when it comes to cleaning: With a very smooth surface of Ra ≤ 0.8 µm all residues can be removed perfectly.

In order to ensure a constant hygienic status during the entire service life of the valve, cleaning and, if necessary, disinfection work must usually be carried out at fixed intervals:

The Goetze valve can be disassembled and cleaned in just a few simple steps. No removal is necessary and cleaning and sterilisation in the installed condition (CIP and SIP cleaning) is very easy. In addition, it is also possible to partially disassemble the valve for cleaning. To do this, first loosen the valve clamp between the housing and the spring bonnet in the depressurised state using standard tools.

This is possible without any effort and with ease. Now the complete valve bonnet can be removed from the housing.

All surfaces that came into contact with the medium can now be professionally cleaned and disinfected.

Finally, the valve is reassembled in reverse order – the valve is ready for use again simply and quickly without having to reset the set pressure. No valuable time is lost due to downtime and cleaning times are minimal.

However, despite the possibility of cleaning, safety comes first. The valve is secured against unauthorised adjustment by a visible sealing disc pressed into the cap. This does away with conventional seal wire, which is not easy to clean, and allows simple assembly or disassembly with standard tools without changing or affecting the set pressure of the valve. This is a unique feature of safety valves used for such applications.

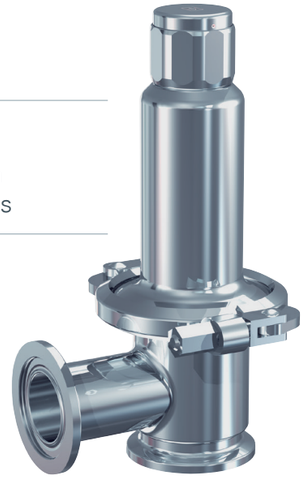
ADVANTAGES OF THE SERIES

- **Smooth and faultless surface finish optimized for cleaning process**
- **Minimal dead space in inlet area and no gaps in the valve**
- **Exposed and rinsed o-ring seals**
- **Shape of valve body avoids forming of puddles in the valve after it has opened**
- **Possible to carry-out CIP/SIP by lifting the disc from the seat**
- **Gap-free installation of seals**
- **Surface roughness standard Ra < 0,8 µm**
- **Option: mechanically polished and/or electro-polished**

SERIES 400

Safety valve

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.

Temperatures
from -40 °C to +200 °C

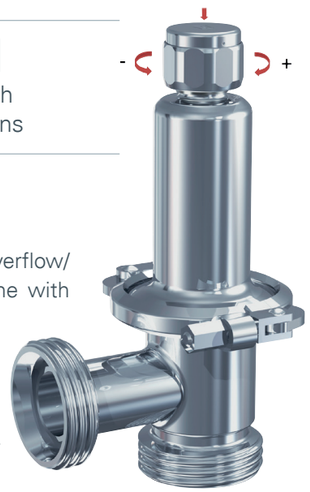
Pressures
from 0,4 bar to 16 bar

Clamp connections
from DN 20 to DN 32

SERIES 400.5

Overflow & Pressure Control Valve

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.

Temperatures
from -40 °C to +200 °C

Pressures
from 0,4 bar to 16 bar

Clamp connections
from DN 20 to DN 32

SERIES 4020/4040/4060

Safety valve

made of stainless steel, angle-type, with hygienic connection

The flow-optimised elastomer diaphragm prevents unwanted contamination, that could occur with a rubber bellows. The surfaces are optimised for hygienic applications as standard and are therefore very easy to clean. Naturally, the valve can be autoclaved. Due to the maintenance-friendly design, all seals that come into with the media can be changed in a few easy steps and without destroying the set pressure seal.

Even in the standard version, the surfaces that come into contact with the media have an optimised roughness of Ra max. 0.75 µm and are mechanically polished.

Temperatures
from -40 °C to +200 °C

Pressures
from 0,4 bar to 16 bar

Series 4020

Threaded connections
from DN 25 to DN 50

Series 4040 / 4060

Threaded connections
DN 25

ADVANTAGES OF THE SERIES

- **Avoidance of microbiological danger spots and contamination due to optimised surface design and self-draining constructive design**
- **Minimised dead space in the inlet area and absence of gaps in the valve**
- **Outlet can be rotated 360° due to clamp connection**
- **CIP/ SIP -capable due to pneumatic lifting**
- **Gap-free installation of the seals in contact with the medium**
- **Moulded diaphragm to separate the product chamber from the spring chamber**
- **Simple and quick maintenance**



Series 4020



Series 4040



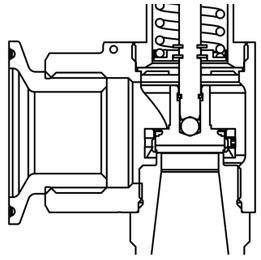
Series 4060



SERIES 451

Safety valve

made of stainless steel, angle-type,
with hygienic connection



Further connection options on request.

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.

Temperatures
from -60 °C to +400 °C

Pressures
from 0,5 bar to 25 bar

Clamp connections
from DN 15 to DN 50

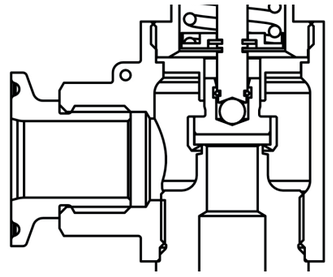
ADVANTAGES OF THE SERIES

- **Various connection types**
- **Flat seal up to 25 bar**
- **Surface Ra < 0,4 µm**
- **Good blow-off capacity**

SERIES 461

Safety valve

made of stainless steel, angle-type
with clamp connections



More connection possibilities on demand.

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

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

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

Temperatures
from -60 °C to +225 °C

Pressures
from 0,5 bar to 25 bar

Clamp connections
from DN 10 to DN 15



ADVANTAGES OF THE SERIES

- **Various connection types**
- **Flat seal up to 25 bar**
- **Surface Ra < 0,4 µm**
- **Good blow-off capacity**

OUR CERTIFICATES

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, DVG W, WRA S, ACS, EA C, 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

- EUROPEAN PED
- NATIONAL TYPE TEST (TÜV)
- EC-TYPE TEST
- TYPE TEST (USA)
- CANADIAN REGISTRATION NUMBER (CRN)
- TR ZU 032/2013 (RU)
- MANUFACTURE LICENSE (CHINA) TSG ZF001-2006
- KOREA GAS SAFETY (KR)
- KOSHA

APPLICATIONS: POTABLE WATER AND BUILDING TECHNOLOGY

- TYPE APPROVAL (DE)
- TYPE APPROVAL (FR)
- TYPE APPROVAL (EN)
- TYPE APPROVAL
- TYPE APPROVAL (PL)
- TYPE APPROVAL (NO)

APPLICATIONS: SHIPBUILDING AND RAILWAY

- TYPE APPROVAL
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- DEUTSCHE BAHN

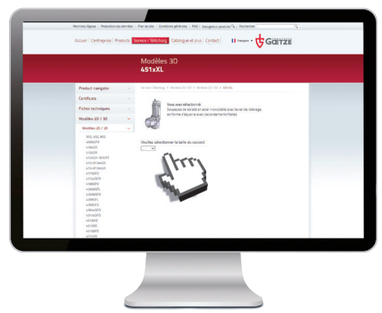
INTERNET SERVICE OF GOETZE

DESIGN AND CALCULATION OF SAFETY VALVES

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

3D MODELS AND TENDER DOCUMENTS

We provide free-of-charge our 3D models in various and common formats. On our website you will find them under the section „Download-Service“.





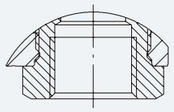
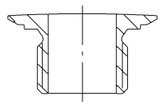
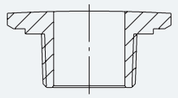
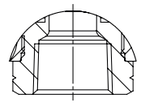
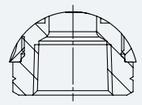
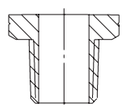
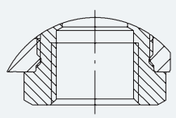
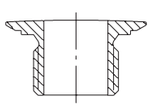
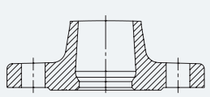
MOBILE WEBSITE

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.

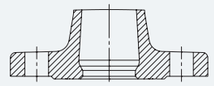
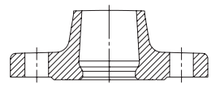
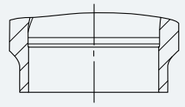
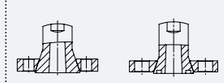
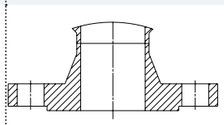
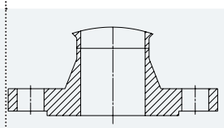
Curious? Just take a look!

www.goetze-group.com

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.

THE GOETZE KG

Individuality for more safety

The competence of Goetze KG Armaturen has been in demand for 75 years. Our wealth of experience is as broad and varied as our areas of application for our high-performance fittings. Our well thought-out family of products covers every industrial application: Liquids of all kinds, gases, technical vapours and steam. Goetze valves are used with temperatures ranging from -270 °C up to +400 °C and the greatest possible safety is a priority.

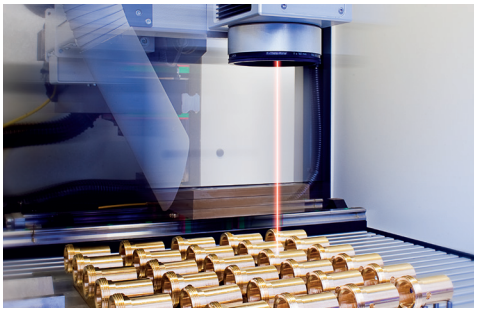
At any time, you can reach a competent contact partner as part of our in-house team at Goetze. Whether it is for the product selection, the configuration of the right valve, urgent requests, whether per telephone call or per mail, there is a personal multilingual consultant at your disposal.

We are your competent partner for all matters relating to the handling of pressure – „Made in Germany".











ARMATUREN GOETZE

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