



SURE REDUCING VALVES | SAFETY VALVES | PRESSURE RELIEF VALVES | OVERFLOW VALVES | PRESSURE
CONTROL VALVES | SAFETY FITTINGS | PRESSURE REDUCING VALVES | SAFETY VALVES | PRESSURE
ES | OVERFLOW VALVES | SAFETY FITTINGS | PRESSURE REDUCING VALVES | SAFETY VALVES | PRESSURE
TY VALVES | PRESSURE RELIEF VALVES | OVERFLOW VALVES | PRESSURE CONTROL VALVES | SAFETY FITTING
SURE REDUCING VALVES | SAFETY VALVES | PRESSURE RELIEF VALVES | OVERFLOW VALVES | PRESSURE
ROL VALVES | SAFETY VALVES | PRESSURE RELIEF VALVES | OVERFLOW VALVES | PRESSURE
FLOW VALVES | SAFETY VALVES | PRESSURE RELIEF VALVES | OVERFLOW VALVES | SAFETY
PRESSURE RELIEF VALVES | SAFETY VALVES | PRESSURE RELIEF VALVES | OVERFLOW VALVES | SAFETY

HOW TO HANDLE PRESSURE COOL SOLUTIONS, EVEN AT EXTREMELY LOW TEMPERATURES

Safety valves and fittings for cryogenic applications



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.

HOW TO HANDLE PRESSURE

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

The Goetze product range

400.000 VALVES PER YEAR

out of a wide product portfolio – "Made in Germany"

Our locations

GERMANY, LUDWIGSBURG

CHINA, RUSSIA, UNITED KINGDOM | OWN DISTRIBUTORS

-270 °C – +400 °C

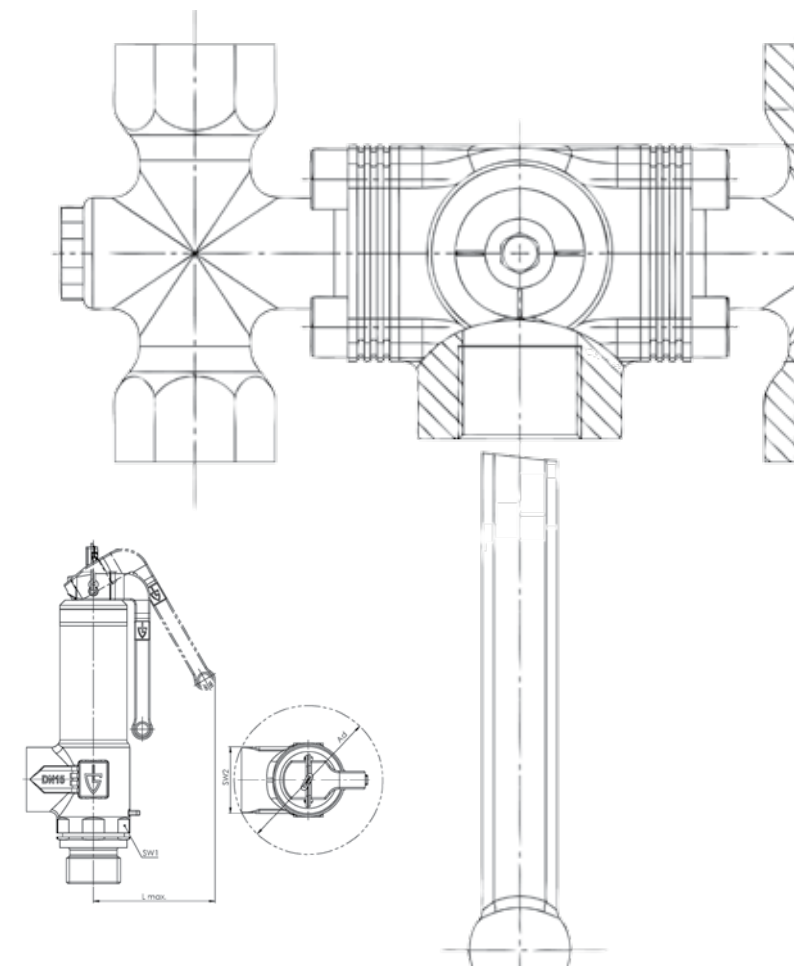
uncompromising performance

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 FOR CRYOGENIC PRODUCTS

Materials

STAINLESS STEEL



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

GUNMETAL

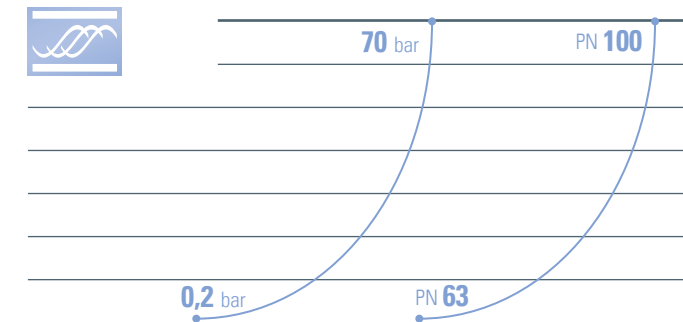


- robust and of high quality
- wide range of applications

Media

LIQUIDS

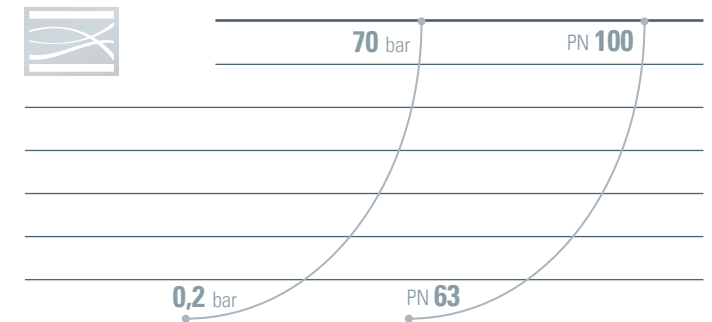
from -200 °C to +200 °C



- Storage of cryogenic gases
- Medical supply systems
- Foodstuff and Pharmaceutical
- Welding shops
- Cooling circuits

AIR, GASES AND VAPOURS

from -200 °C to +200 °C



- Refrigeration plants
- Dry ice blasting plants
- Ground freezing plants
- Cryogenic machining
- Foodstuff and Pharmaceutical

Connections



WHAT SETS GOETZE AND THEIR CRYOGENIC PRODUCTS APART



SHORT DELIVERY TIMES AROUND THE GLOBE

Whether you need safety valves, pressure reducing valves, pressure relief valves or other products from our range: you will benefit from the short global delivery times for all our products. All orders can generally be processed within 3-5 working days. You're in a hurry? Then use our express production and your order can be ready for dispatch within 48 hours.



INDIVIDUALITY

Our expertise enables us to implement new and custom-made developments in a short time. All valves are produced on the premise of "individuality for more safety". In product development, individual custom-made solutions go hand-in-hand with our own new developments. This combined pool of development has now given rise to an extensive and high-quality range of products which is being continuously extended and leaves nothing to be desired.



OIL AND GREASE-FREE PROCESS

All components of the series are specially cleaned during the production process and are thus generally free from oil and grease in accordance with DIN EN 12300 and various works standards from gas producers. Because of this every valve is suitable for use in systems using oxygen and is marked accordingly.



RELIABLE COMPETENCE

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



HIGH STANDARDS

Not only the products but also the materials used have to meet the highest standards. This is why the materials are examined by trained personnel as soon as they arrive, in order to ensure the best quality from the very beginning. After production, each individual valve is subjected to an ISO-certified quality control test before it is allowed to leave the factory.

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



National Type Test (TÜV)
EC type test

➤ EUROPEAN PED



➤ TYPE TEST (USA)



➤ CANADIAN REGISTRATION NUMBER (CRN)



➤ TR ZU 032/2013 (RU)



➤ MANUFACTURE LICENSE (CHINA) TSG ZF001-2006



➤ KOREA GAS SAFETY (KR)

APPLICATIONS: SHIPBUILDING



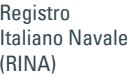
➤ TYPE APPROVAL



➤ TYPE APPROVAL



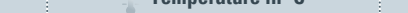
➤ TYPE APPROVAL



➤ TYPE APPROVAL

OVERVIEW OF THE PRODUCTS FOR CRYOGENIC APPLICATIONS

Series	National Type Test (TÜV)	CE 2014/68/EU	EC type test	ASME	CRN	EAC	TS	K	Lloyd's Register	ABS	RINA	Registro Italiano Navale (RINA)
2400	■	■	■	■	■	■	■	■	■	■	■	■
2480	■	■	■	■	■	■	■	■	■	■	■	■
2580		■										
2700		■				■						
2780		■										

Series	Materials	Connection type	Media						 Temperature in °C	 Set pressure bar
			neutral			non-neutral				
			liquid	air/gases	steam	liquid	air/gases	steam		
2400										
2480										
2580										
2700										PN 63
2780										PN 63

SAFETY VALVES AND FITTINGS FOR CRYOGENIC APPLICATIONS

Materials



Temperatures
from -200°C to +200 °C



Pressures
from 0,2 bar to 70 bar
PN63 and PN100

Media



Threaded connections
from ¼" to 1 ½"

The cryogenic valves by Goetze KG are pioneering in their application and can be used in many industries. Low-temperature gases are used in many industries, ranging from food processing to medical technology all the way to energy production. The outstanding quality of the new cryogenic valves by Goetze has been confirmed by their approval for use with both gases and vapours – and for liquids too.

GOETZE VALVES FOR CRYOGENIC APPLICATIONS ARE USED HERE:



Storage of technical gases



Tunnel cooling systems

CRYOGENIC MACHINING

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

TUNNEL COOLING SYSTEMS

The low storage temperature for liquid nitrogen, at down to -196°C, is used to freeze foodstuffs to around -70°C using precise temperature regulation. In addition, protective nitrogen atmospheres to prevent oxidation are used to increase the shelf-life of food products.

CRYO CONTAINER SYSTEMS

Cryogenic liquefied gases are stored in various containers ranging in size from 1.000 litres up to 100m³ and under storage pressures of up to 70 bar, depending upon requirements and applications. Possible applications include medical oxygen supply systems or argon containers for welding gas supply in specialist welding companies.

LNG APPLICATIONS

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

Safety valves and fittings for cryogenic applications

SAFETY VALVES
SERIES 2400

made of stainless steel,
angle-type with threaded connections



The safety valves of this series have been awarded full approval for vapours and gases as well as for liquids, according to ISO 4126-1 and ASME Code Sec. VIII Div. 1. All components of the valve are specially cleaned during the production process and are thus oil- and grease free in accordance with DIN EN 12300. Because of this every valve is suitable for use in systems using oxygen and is accordingly marked. The use of 1.4404 and 1.4408 high-alloy stainless steels renders the safety valves particularly resistant to extremely cold temperatures.

For the use with gases that are in contact with food an FDA-compliant sealing material has been used. The valve setting and seat insert are separately sealable which makes unauthorised adjustments easily noticeable. Overpressure from 0,2 bar up to 70 bar is purged safely with a consistently high level of performance.

- Temperatures**
from -200 °C to +200°C
- Pressures**
from 0,2 bar to 70 bar
- Threaded connections**
from ¼" to 2"



Data sheet

SAFETY VALVES
SERIES 2480

made of gunmetal,
angle-type with threaded connections



The well proven safety valve series 2400 made of stainless steel has received a variant sister series, type 2480, that is made of gunmetal. It is particularly characterised by the fact that the outlet is increased by one to two nominal widths, and hence two different performance categories are available in one valve size. Functionality and performance comply exactly with the sister series and it is just as stable in terms of function and high performance capability. A fundamental requirement for us is that the approvals in accordance with ISO 4126-1 and ASME Code Sec. VIII Div. 1 are also covered. All valves made of gunmetal are as a matter of course suitable for oxygen use and comply with basically all common delivery requirements of international standards like DIN EN, ASTM, EIGA and CGA as well as the specifications of the gas producers.

- Temperatures**
from -200 °C to +200°C
- Pressures**
from 0,2 bar to 70 bar
- Threaded connections**
from ¼" to 2"



Data sheet

DIVERTER BALL VALVE
SERIES 2700

made of stainless steel
with threaded connections



The optimal design of the flow channels within the diverter ball valve enable particularly high flow rates. This significantly reduces flow pressure losses to the safety valves and safe operation remains ensured. The use of 1.4404 and 1.4408 high-alloy stainless steels enables high resistance against internal and external influences.

For the use with gases that are in contact with food an FDA-compliant sealing material has been used. Thanks to the oil- and grease-free manufacturing process, the diverter ball valve are suitable for use in systems using oxygen. With the ergonomically shaped handle and the separate testing connections, the diverter ball valve is optimally prepared for the maintenance of the safety valves.

- Temperatures**
from -200°C to +120 °C
- Pressures**
PN63
- Threaded connections**
from ¾" to 1 ¼"



Data sheet

DIVERTER BALL VALVE
SERIES 2780

made of gunmetal
with threaded connections



As already implemented with the stainless steel series 2700, the gunmetal diverter ball valve 2780 possesses a flow geometry with very low pressure loss. The safe functionality of the safety valves mounted on the diverter ball valve is therefore better ensured. Additionally, opposite to the vertically mounted safety valves, there are also connections for bursting discs available.

Due to the consistent cleaning of all component parts, the gunmetal diverter ball valve is also optimally suited for use in systems using oxygen.

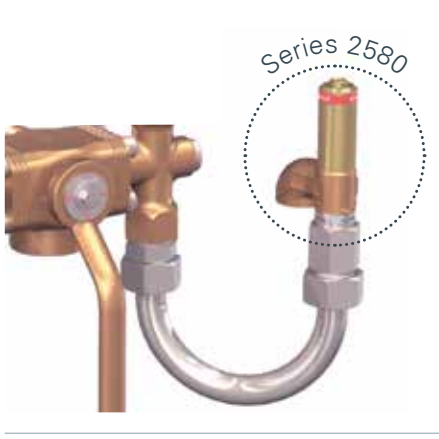
- Temperatures**
from -200°C to +120 °C
- Pressures**
PN63
- Threaded connections**
from ¾" to 1 ¼"



Data sheet

OVERFLOW VALVE
SERIES 2580

made of gunmetal,
angle-type with threaded connections



The overflow valve is characterised by the fact that it ensures a continuous and quiet pressure reduction when used on tanks for the storage of cryogenic liquefied technical gases such as argon, oxygen, nitrogen or carbon dioxide. The overflow valve is adjusted to a pressure below the set pressure of the safety valves and thus prevents the safety valves of the tank from reacting.

Using the overflow valve of type 2580 ensures that the amount of gas that is discharged is no greater than that generated in the tank due to the heat input. When tapping the gas, the valve closes so that no gas is lost unnecessarily. The overflow valve is easily fitted to the lower connections of the ball diverter valve. The connection pipe elbow required for this purpose can be included in the delivery.

- Temperatures**
from -200°C to +200 °C
- Pressures**
from 0,2 bar to 70 bar
- Threaded connections**
from ¼" to ½"



Data sheet

LOCKING
SLEEVE UNIT

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



For simple alignment and positioning of safety valves on the diverter ball valve (DBV). Available in various sizes and materials.

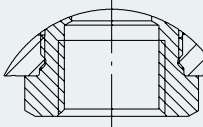
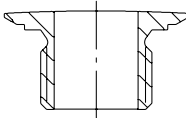
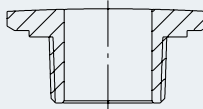
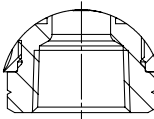
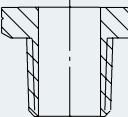
Standard delivery oil- and grease-free with seals made of PTFE with FDA Approval.

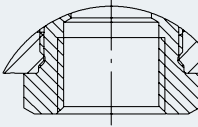
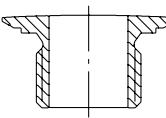
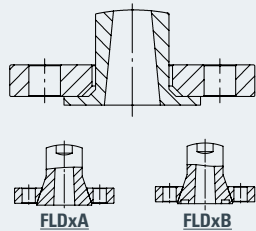
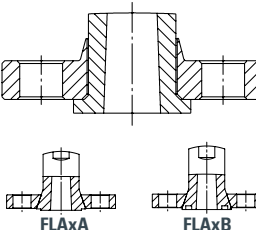
- Temperatures**
from -200°C to +200 °C
- Pressures**
PN100
- Threaded connections**
from ½" to 1"



Data sheet

CONNECTION POSSIBILITIES

Connection type	Drawing	Description
f		Whitworth threaded cylindrical pipe connection – female – seal not made on thread BSP-P according to DIN ISO 228
m		Whitworth threaded cylindrical pipe connection – male – seal not made on thread BSP-P according to DIN ISO 228
BSP-Tm		Whitworth threaded tapered pipe connection – male – seal made on thread male connection BSP-T according to DIN EN 10226
NPTf		US standard tapered pipe thread NPT threaded pipe connection NPT – female – according to ANSI / ASME B 1.20.1 seal made on thread
NPTm		US standard tapered pipe thread NPT threaded pipe connection NPT – male – according to ANSI / ASME B 1.20.1 seal made on thread

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

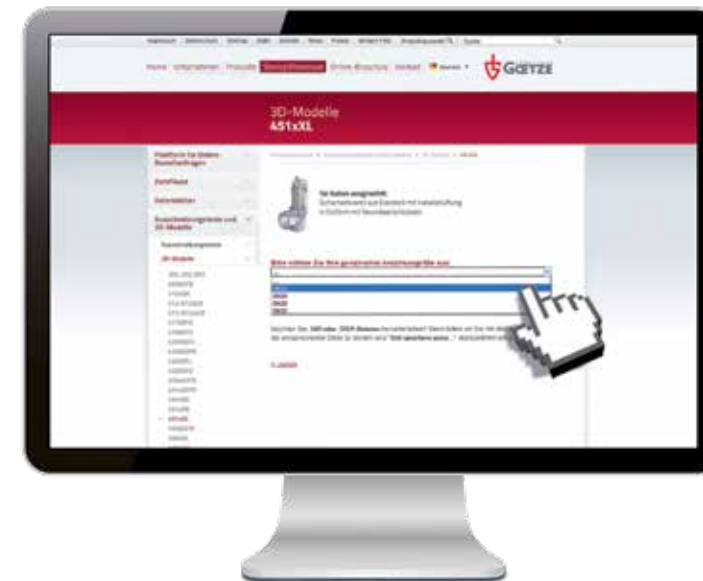


INTERNET SERVICE OF GOETZE

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

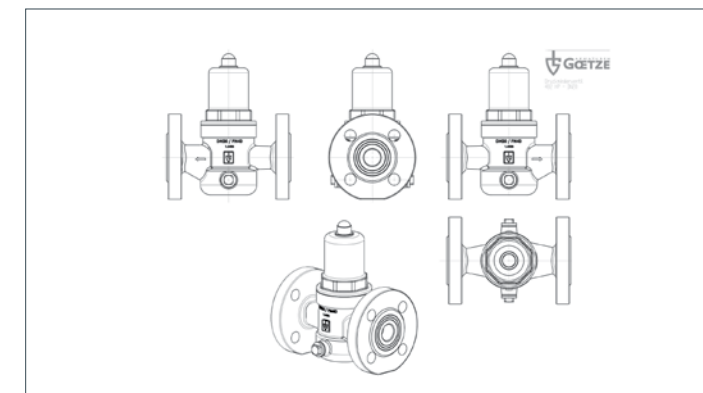


3D MODELS AND TENDER DOCUMENTS

For your planning and tenders, we voluntarily provide data of our 3D models in various and common formats. On our website, you will find them in the sector "Service/Download". Just request once your password and you will get immediate access to all relevant data. Beside the 3D models, we offer prefabricated tender documents that you may simply integrate in your offers.

Here is the link for your registration to the download of our tender documents and 3D models:

www.goetze-armaturen.com/service-en



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 en route.

Curious? Just take a look!

www.goetze-armaturen.com





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