

CRYOGENIC
INDUSTRIAL GASES



**LOWEST
TEMPERATURES?
MY VALVES
REMAIN COOL.**

Cryogenic valves for
temperatures as low as $-269\text{ }^{\circ}\text{C}$.



HEROSE of Pressure.



RELIABLE PROCESSES IN HIGHLY COMPLEX SYSTEMS – EFFICIENTLY REALISED WITH VALVE AND SAFETY CONCEPTS FROM HEROSE.

As a leading company in the field of industrial valves and fittings, we consistently meet complex challenges with application-oriented engineering solutions.

Our extensive expertise in dealing with various gases, vapours and liquids is based on more than 140 years of industry-specific knowledge that is rivalled by none in this form.

The cost-effectiveness and safety of your process are always our greatest concern. It is for that reason that we devise the best possible solution for your individual application with the help of first-class materials and components, and comprehensive quality assurance.

In 2017, we entered into a unique cooperation with the Australian-Indian valve manufacturer MACK Valves in order to remain at the forefront of technical development and be able to offer our service worldwide.

HEROSE of Pressure – experts in handling compressed media.

Our Approvals:



CRYOGENIC

Safety at the lowest temperatures? HEROSE valves are internationally certified for handling technical gases and liquefied natural gas in the low temperature range. Applications for the storage and transport of cryogenic gases – we routinely work with temperatures as low as $-269\text{ }^{\circ}\text{C}$.

INDUSTRY

Safety at high pressures? In pressure-loaded systems, HEROSE solutions ensure the best possible functionality and consistently increase the overall efficiency of your system. From safety valves in processes for seawater desalination and compressed air-driven braking systems of high-speed trains to compressors – working with up to 550 bar is part of our daily business.

ENERGY

Safety despite demanding environmental conditions? HEROSE components are produced from high-quality materials and subjected to consistent quality checks to make them suitable for handling media in harsh environments. In order to ensure that a reliable power supply is maintained, seawater- and weather-resistant HEROSE valves are used in oil-immersed transformers to regulate the cooling circuit.



PROCESS RELIABILITY DESPITE THE LOWEST TEMPERATURES: OUR APPLICATION-SPECIFIC SOLUTIONS FOR YOUR CHALLENGE.

Whether the requirement is the highest level of purity or ease of handling, HEROSE valves protect pressurised containers and systems with ease – in any industry, and at all times.

Storage

Depending on the purchase quantity, cryogenically liquefied gases are stored in stationary storage tanks of 5,000 to 50,000 litres. Compact filling modules from HEROSE ensure safe and easy operation of the filling process. HEROSE offers all the valves required for filling and emptying of the stationary storage tank.



Processes

In order to manufacture nitrogen, oxygen, argon and other gases industrially in a high-purity concentration, the individual air components are separated in a thermal process in air separation facilities. The necessary maintenance and repair work in the cold box is considerably simplified by, for example, HEROSE top entry valves.



Özcan Demir, a driver at Linde Healthcare, appreciates working with the reliable HEROSE valves. On his daily trips delivering medical oxygen, the shut-off and safety valves from Bad Oldesloe support him during filling and transport operations.

In line with our globally operating client's slogan "Linde Healthcare creates air for life", HEROSE guarantees the supply of oxygen to a large number of people through means of technically excellent products.



Transport

Industrial gases are cryogenically liquefied and transported by specialised tankers from the air separation facility to the buyer. Using HEROSE weight-reduced valves can significantly increase the payload of the vehicles and thus the cost-effectiveness.

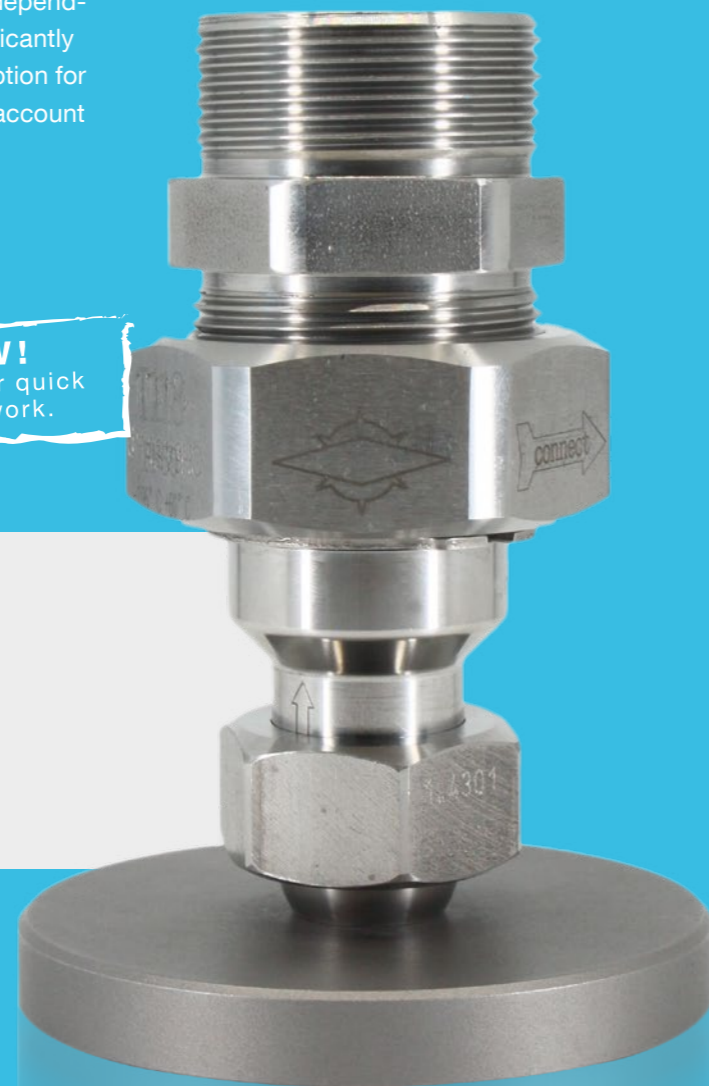


OPTIMAL MAINTENANCE OPERATIONS: EASILY PERFORMED WITH HEROSE VALVES AND FITTINGS.

T118 Valve

In order to avoid costly process interruptions, HEROSE has developed the Type T118 Valve to add to the product range for cryogenic gases. This allows maintenance work on pressure build-up regulators or non-return units without the need to empty the pressure vessel or interrupt any processes – depending on the quantity to be extracted. In addition to a significantly higher level of safety for technicians and an optimised option for maintenance, this translates into substantial savings on account of uninterrupted continuation of the process.

NEW!
Product for quick
repair work.



Technical data:

Sizes:	DN 20
Pressures:	up to 50 bar
Temperatures:	-196 °C till +60 °C
Connections:	Thread
Materials:	Stainless steel

CombiPressure-Regulator

A common way of supplying industrial gases is on-site storage in stationary tanks. Filling and extracting the cryogenically liquefied media requires suitable valves, such as the CombiPressure-Regulator from HEROSE. This keeps the pre-set pressure in the tank constant during extraction of the gas, while at the same time performing an economiser and safety function.

The optimally matched materials allow the valve to be used in a wide range of applications; the newly available bronze variant (type 4182) adds to this broad spectrum.

Like many other HEROSE valves, the CombiPressure-Regulator has application-specific approvals and certifications. Thanks to the highest quality standards and meticulous cleaning measures, this product is qualified for use in demanding oxygen applications.

NEW!
Now available
made from bronze.



Technical data:

Sizes:	DN 20
Pressures:	up to 50 bar
Temperatures:	-196 °C till +60 °C
Connections:	Thread
Materials:	Bronze, stainless steel

MAINTAINING DEMANDING CUTTING PROCESSES FOR STEEL? THE COMBIPRESSURE-REGULATOR FROM HEROSE IS THE SUSTAINABLE ANSWER.

In highly complex facilities, nitrogen is used as a cutting gas for laser-cutting metal. The gas is supplied via a system consisting of a storage tank with a coupled evaporator. This system converts the liquid nitrogen to a gaseous state as needed so that the cutting system can perform clean and reliable cuts at any time. To this end, it is essential to maintain a constant pressure within the system.

BL Lasertechnik GmbH, a medium-sized company from the Bavarian Forest, had many problems with exactly this basic prerequisite during the cutting process which HEROSE was able to eliminate effectively through the application of the CombiPressure-Regulator. The pressure in the storage tank could be kept constant through reliable build-up and release from the point where the regulator was used.

SUSTAINABLY REDUCE MAINTENANCE COSTS: OUR FITTINGS AND VALVES ALLOW MAXIMUM EFFICIENCY.

Diverter-Plug-Valve

The Diverter-Plug-Valve type 7111 is the ideal solution whenever you need the most efficient maintenance options for a compact design. The so-called tap cock is used as a maintenance fitting for safety valves in applications such as storage tanks for cryogenically liquefied gases. Depending on the position of the tap cock, one safety valve can be removed for maintenance purposes, while the other protects the system from unacceptable overpressure. It is thus possible to perform maintenance or replacement of safety valves without interrupting operation. Rupture discs can also be used on the tap cock in addition to the safety valve. Compared to the existing change-over valves, the new Diverter-Plug-Valve is less heavy and more compact in design and allows a higher flow rate.



NEW!
Product with higher volumetric flow and more compact design.

Technical data:

Sizes: DN 32
Pressures: up to 50 bar
Temperatures: -196 °C till +120 °C
Connections: Thread
Werkstoff: Bronze

Top-Entry-Valve

The Top Entry Valve makes it possible to perform maintenance on the taper or upper part without damaging the insulation, since the head-piece screws are located outside the insulation. This results in significant potential for material, cost and time savings. This valve is an extension of typical valves from the field of application for air gases, vapours and cryogenic gases and is used in air separation facilities, among other things. Due to the low operating temperature in these systems, insulation is expensive and represents a major cost, which the solution from HEROSE keeps as low as possible in the event of maintenance. With the expansion of the model range, the Top Entry Valve is available up to size DN 100.



NEW!
Series expansion to DN 100.

Technical data:

Sizes: DN 15 till DN 100
Pressures: up to 50 bar
Temperatures: -196 °C till +120 °C
Connections: Butt weld, socket weld
Werkstoffe: Stainless steel



WANT TO REDUCE THE COMMIS- SIONING COST OF TRANSPORTABLE PRESSURE CONTAINERS? THE PI MARKING OF HEROSE PRODUCTS MAKES THIS POSSIBLE.

Manufacturers usually have to go through many certification procedures before they can release their containers for service. The set of regulations for the international carriage of dangerous goods by road (ADR), which are referred to in EU Directive 2010/35/EU, since its 2015 edition includes the harmonised standards DIN EN 1626 and DIN EN 13648 for valves. Therefore, in addition to having their products certified, container manufacturers must have all the valves approved as well.

HEROSE products are certified in accordance with EU Directive 2010/35/EU. This means that besides certifying their containers, container manufacturers do not need to undertake additional certification of HEROSE products. No separate approvals are required for subsequent maintenance work either. All you have to do is submit the HEROSE documentation for final acceptance, which will save you a considerable amount of time and money.

Various products are available with Pi marking:

- Globe valves
- Gate valves
- Actuated valves
- Safety valves
- Angle valves

We would be happy to send you a detailed list of all products. For this, please contact our technical customer service.



UNCOMPROMISING SAFETY: GUARANTEED FUNCTIONALITY THROUGH MAXIMUM QUALITY IS STANDARD BUSINESS PRACTICE FOR US.

HEROSE specialises in the development and sustainable production of innovative, practical solutions and bringing them up to series-production stage. The reliability of our products to ensure the safety of your process is always our primary concern. We guarantee this through company-wide DIN EN ISO 9001:2015-certified processes, such as comprehensive material and functional tests.

We have a cryogenic, water and air test bench for simulation of extreme conditions and for testing our valves. Qualified specialists manufacture our products on state-of-the-art CNC machines, degrease all components regardless of the intended use with specially developed systems and ensure full traceability through consistent component identification.

We offer our customers reliable solutions through the highest degree of safety and see an opportunity in every challenge we face. Successful solutions for extreme temperatures ranging from -269°C to $+400^{\circ}\text{C}$, special valves for air separation and valves for the liquefaction of natural gas are examples of our drive to innovate ever more effective and efficient concepts.



Leak testing



Materials testing



Labelling of pressure-bearing components



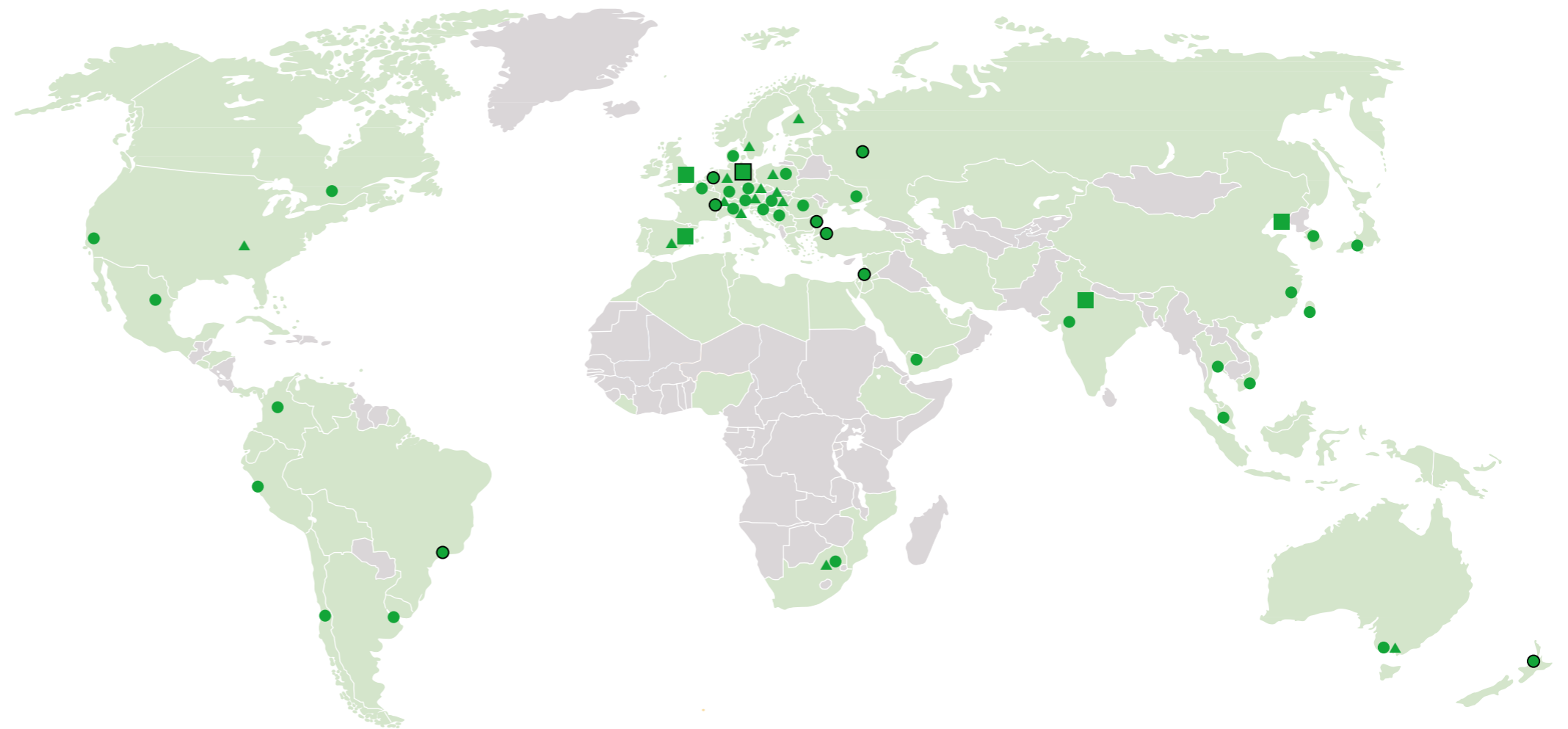
Free of oil and grease

PRODUCTS AND SERVICES AVAILABLE ON ALL CONTINENTS? – WE ARE BY YOUR SIDE ALL OVER THE WORLD.

A global network of local offices and partners makes it possible for us to offer pioneering solutions in more than eighty countries. Thanks to our high-quality valves and fittings, reliable system protection and optimised maintenance options are ensured at all times. In addition to implementing application-optimised valve and safety concepts, customers place their trust in the flexibility of our processes and appreciate our policy of personal consulting. Our customer service is there to ensure that through professional installation and maintenance of all valves and fittings, even sensitive components and products are properly installed in your systems and work reliably.

HEROSE of Pressure:

- Many years of experience in applications involving sophisticated technical media
- Highest technical reliability of the valves and fittings
- Consistent quality assurance and materials of the highest quality
- Worldwide service and maintenance options



- Headquarter
 - International subsidiaries
 - HEROSE partner with authorised service centre
 - HEROSE partner
 - ▲ Authorised service partner
- For the addresses of our partners and authorised service centres please visit herose.com*
- Current HEROSE sales regions

HEROSE



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