

Messer Group

Gases
Know-how
Service



Confidence in a competent partner



Atmosphere for success

Our concept of an atmosphere for success is relevant in two respects. Firstly, we obtain air gases such as oxygen, nitrogen, argon and noble gases from the atmosphere – gases that are absolutely essential for many industrial applications.

Secondly, we are creating an atmosphere for success through our geographical and thematic proximity to our customers. In Messer's core markets of Europe and Asia, our network of production facilities ensures an independent and secure gas supply. Innovations that are geared to market requirements deliver a competitive edge in terms of cost-effectiveness, quality and efficiency.

100 % committed to your goals

Messer is the largest family-owned industrial gas enterprise – but I think of it more as a family of companies for whose present and future I feel personally responsible.

You can count on a high level of business continuity which is not compromised by any external interests. We are fully focused on ensuring that our products and services are geared towards bringing you success. In our day-to-day dealings with each other, you will benefit from direct decisions and a high degree of flexibility.

We have over 100 years of experience spanning the full spectrum of gases and technologies and would like to share this with you. Messer will support you in the development phase of a new application or help you optimise your production through the use of gases. Wherever we work together, we will be 100% committed to your goals.

A handwritten signature in black ink, appearing to read 'Stefan Messer'. The signature is fluid and cursive.

Stefan Messer, CEO Messer Group



The latest generation of air separators feature state-of-the-art technology.

Messer Group facts and figures:

- About 5,200 employees
- 60 operational companies in over 30 countries
- Over 120 company locations in Europe and Asia
- Six specialty gases plants in Europe and China
- 84 filling plants for technical gases
- 53 air separation plants, further 11 under construction
- 12 sources of carbon dioxide in Europe
- More than 1,200 gas centres worldwide

Messer Group

Our Vision

Messer is an important industrial gases group in its core markets of Europe and China.

Messer is and will remain an independent family-run business.

We think and act decisively for a long term and measure ourselves by our sustained success. Together with our partners and associated companies in the field of wear, fusion, and cutting technologies as well as precision instrumentation we develop synergies and meet our customers' needs expertly, reliably and with a flair for innovation.

This is what makes us the first choice for our customers and employees.

Our Mission

As an owner-managed family business with a rich tradition we are focused on the future whilst taking into account the different conditions in our existing markets. We also use our experience and expertise to building up our position in new markets.

Ranging from acetylene to xenon we offer our customers a wide range of technical and medical gases and food and specialty gases. Our product range is completed by our excellent services and state-of-the-art technical plants and equipment.

In our highly modern technology centers we work together with our customers to develop application technologies for the use of gases in almost every industry, in food technology, medicine, science and research.

Our efficient and dedicated employees, our flexibility and the closeness we feel to our customers in local markets makes us their preferred partner.

Through entrepreneurial flair, farsighted thinking and the continuous improvement of our processes, we create added value for our customers and so secure our mutual success in the long term.

Solid finances and fair profits guarantee our independence and support sustainable growth.

Our Values

Customer orientation

We are focused on the individual requirements of our customers and help them to improve their competitiveness and their performance.

Employee orientation

We train, develop and promote motivated and efficient employees with integrity. We expect our employees to be resourceful and responsible team players.

Responsible behavior

We take our social responsibilities towards our employees and to society very seriously:

- **Safety:** We are committed to the safety of our staff and the safe production, handling and use of our products.
- **Health:** We set working standards that ensure sound health and well-being for every individual.
- **Environment:** As a member of the wider society, we are committed to protecting the environment.

Corporate responsibility

By responsibly managing our resources and applying the talents of our employees we are increasing the worth of our company in the long term.

Excellence

Our actions are based on technical expertise, innovation, flexibility and the ability to make quick decisions.

Mutual trust and respect

We believe that cooperation is based on trust, sincerity, transparency and frank communication. We respect and abide by the culture and social customs of the countries in which we work.

Supply and technologies



Gas supply: independent and secure

Gases are as important as water and electricity for many industrial processes. This is why Messer provides a reliable gas supply from its own product sources.

Naturally, flexibility and individuality are also built into our supply programme. From cylinders and cylinder bundles to tanks as well as on-site facilities or pipelines, you will receive exactly the quantity of gas you require, either in liquid or gaseous form. The purity of the gas can be as high as 99.9999 %, depending on your requirements and the gas in question.



Messer supplies the appropriate gases in the optimum supply formats and purities.

Your advantages:

- High security of supply through independent gas sources
- Extensive product range for a diversity of applications
- Gas purities of up to 99.9999 %
- Customised delivery (cylinder, cylinder bundle, tank, on-site facility, pipeline)

Generating benefits directly on site

In our view, an optimum gas supply is characterised by efficiency and environmental compatibility. On-site facilities, which produce the required gases directly at your premises, are an interesting option in this regard. In the case of medium to high quantity requirements, on-site gas production removes the need for gas transportation by road tanker, along with the associated costs and emissions. The reliability of the supply is extremely high because the gases are produced in precisely the place where they are needed – at your premises.

Gases and know-how for your success



Practice-oriented innovations are developed in the competence centres of Messer Group.

Technologies: geared to customers and relevant to the market

Innovations are often about discovering what is possible. The engineers at Messer adopt a different approach: rather than looking for what is possible they look for what brings you as many advantages as possible.

It is precisely these types of innovations that our competence centres in Europe and Asia are geared towards. In these centres, our application specialists develop processes that give you an appreciable advantage within your sector.

Partnership as a principle

Even in the development phase of a new application, we rely on close cooperation based on partnership. We listen carefully to your requirements and help you produce higher quality products while lowering costs and enhancing safety.

Messer relies on cooperation based on partnership, as in this case during a water quality check in a chemical plant.

Overview of our competence centres:

- Industry, metallurgy, heat treatment, burner technology: Gumpoldskirchen, Austria
- Food industry, chemistry, pharmaceuticals: Mitry-Mory, France
- Cutting and Welding: Krefeld, Germany; Budapest, Hungary; Dällikon, Switzerland; Shanghai, China
- Cryogenic grinding of food, plastics, etc.: Krefeld, Germany

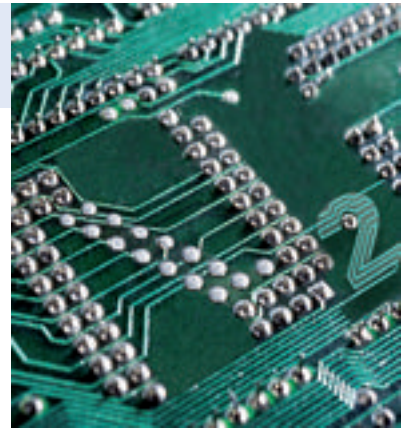


Diversity and quality for every application

N₂ Nitrogen

Nitrogen makes up 78 % of air and is able to displace oxygen. This explains why nitrogen is used in particular for applications where oxygen is undesirable. In cryogenic liquid form, nitrogen is an efficient coolant.

Typical applications include the protection of production processes, e.g. printed board assemblies, the cooling and freezing of food, the inerting of pipelines or tanks as well as cryogenic applications in industry.



O₂ Oxygen

The most common element on earth is a colourless and odourless gas that makes up 21 % of air. Oxygen is indispensable for processes where high temperatures are required.

As an industrial gas, however, oxygen is not only used in metallurgy and steel-making. It is also used to support biological processes in environmental technology, e.g. wastewater treatment. Furthermore, medical oxygen is an important element for healthcare.



CO₂ Carbon dioxide

For industrial applications, high purity carbon dioxide is generally used, which is obtained as a by-product in the chemical industry or extracted from underground sources. It can be used as a liquid, gas or in solid form as dry ice.

Carbon dioxide plays just as important a role in the cooling and freezing of food as it does in water treatment. It gives drinks a sparkling freshness, and even innovative processes such as dry ice blasting require carbon dioxide.



Ar Argon

At 0.933 % by volume, argon is the most common noble gas in the atmosphere. Argon possesses a high chemical inertness, and these inert properties help protect products and production systems from unwanted contact with oxygen.

This applies wherever a protective atmosphere enhances the quality and safety of products or production systems. Other applications include the cleaning and purging of molten metal and the annealing of high-alloy special steels.

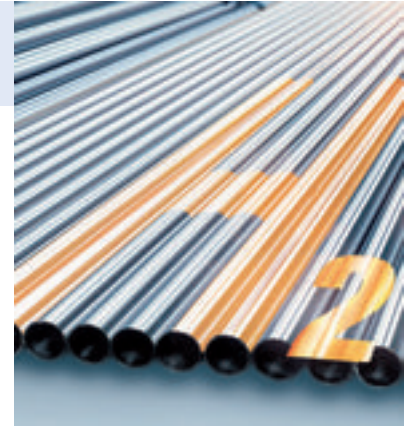


Gases

H₂ Hydrogen

Hydrogen is the lightest and most abundant chemical element in the Universe. It is present in all living organisms. For industrial applications, hydrogen is produced from natural gas or by electrolysis of water.

Hydrogen is used for annealing high alloy steels and sintered parts as well as for oxide reduction in molten metal. It is used as an efficient fuel in glass polishing.



Cutting and welding gases

Strong when it gets hot

Argon, helium and carbon dioxide – or mixtures of these gases – are typical shielding gases for welding. Acetylene, propane, propylene and oxygen play an important role in oxy-fuel technology.

Welding gases are used in TIG and MIG welding, MAG welding and forming. In laser material processing, gases are used to produce the laser beam or to form a protective atmosphere.

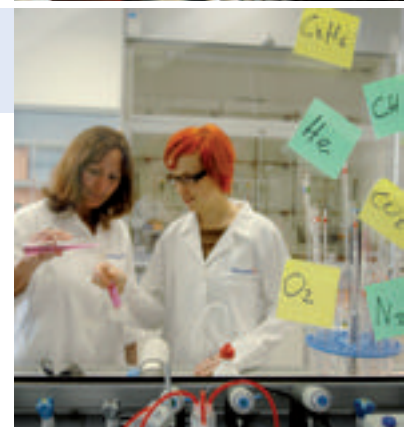


Specialty gases

Individuality made by Messer

The diversity of possible applications is matched by the range of gases and gas mixtures that are tailored to them.

Typical applications for specialty gases include the cooling of superconducting magnets in MRI scanners with liquid helium, the use of high purity gases as carrier and process gases for analysis or the filling of balloons with helium.



Medical gases

Fundamental elements of health

Whether it be in clinical treatment or in emergency medicine – medical gases, including oxygen, nitrogen and nitrous oxide, are a vital element of health care.

Medical oxygen is used for respiration while liquid nitrogen is required for cryotherapy, cryosurgery and the storage of biological material. Meanwhile, nitrous oxide is indispensable in analgesia, anaesthetic induction and combined anaesthesia.



Contact

NEON KRYPTON XENON
CARBON DIOXIDE
ARGON HELIUM
NITROGEN
OXYGEN



If you have any questions or require assistance from one of our applications experts, please do not hesitate to contact us.

Contact persons in your country can be found at:

www.messergroup.com/de/Standorte

This and many other brochures can also be downloaded as a PDF file from the Internet at: www.messergroup.com

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MESSER 

Messer Group GmbH
Messer-Platz 1
65812 Bad Soden / Taunus
Tel. +49 (0) 6196 7760-0
Fax +49 (0) 6196 7760-442
info@messergroup.com
www.messergroup.com

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