

→ Specialty gases for commercial laboratories,
research institutes and universities

THE LINDE GROUP

Linde

The total solution for your
analytical requirements.



HiQ® Specialty Gases Solutions.

Precision matters... in everything we do.



You have enough variables with your daily research and laboratory results to worry about the quality of your instrumentation gases. That is why Linde introduced HiQ® Specialty Gases products. HiQ® represents the best there is in the world of high purity gases, process and calibration gas mixtures, precision engineered gas supply solutions, and the high quality services needed for optimum results. Delivered in a form and frequency tailored to each application. In a highly complex and specialised business sector, our vision is simple: we provide precisely what our customers need, whenever and however they need it.

High-purity carrier and instrument gases

HiQ® specialty gases and specialty equipment have an important role in many areas of research, development and commercial laboratories. Requirements range from use as a raw material in chemical synthesis to a catalyst in chemical reactions. Instrument grade pure gases such as synthetic air, helium, hydrogen or nitrogen are used to zero and purge analytical equipment. HiQ® high purity gases are also used, for example, in chromatography, ICP analysis and atomic absorption spectroscopy measurements (AAS).

Calibration and Process gas mixtures

Gas Mixtures are unique to application and industry requirements. A wide range of calibration gas mixtures, from binary to multi-component requirements, are used to ensure proper calibration and correct operation in a variety of analytical equipment.

Every mixture recipe is written by a Linde technical expert, who follows strict quality and safety guidelines to provide you with the proper gas product required for each particular purpose.

Within areas of environmental monitoring, many local governments require that instrument and sensor calibration gases be traceable to a national standard to ensure overall uncertainties for pollution data are within specified limits. Linde offers a variety of calibration standards accredited to ISO 17025, and ISO Guide 34.

Chemical and Rare gases

HiQ® offers the highest purity of rare gases, such as Neon, Krypton and Xenon supplied in a variety of cylinder packages and amounts. Deuterium and other isotopic products can be sourced on request.

Research Hydrocarbon products include Ethane, Methane and others are available in a variety of purity grades and package sizes to meet every requirement.

Chemical gases, such as Carbon Monoxide, Hydrogen Chloride, Ammonia, and Sulphur Dioxide can be supplied to meet requirements from small cylinder to large bulk containers or trailers.

Remote packaging requirements

Analytical and monitoring requirements are not confined to the laboratory. Off site testing can be a part of your daily activity, and you need a specialty gases package that is as mobile as you require.

Linde developed a unique solution to this problem - ECOCYL® portable specialty gas solutions. ECOCYL® are small, refillable cylinders equipped with cylinder valve, pressure regulator and flow meter fully integrated within the cylinder protection cap. The result is an easy, ready for use system. The end user only needs to open the cylinder valve and connect it to his system. And, as ECOCYL® is refillable, no disposal issues to be concerned about as well.



Giving you the green light for success.

Precision matters... across industries & markets. Linde works with many leading corporations, manufacturers, research organisations, government agencies and small niche specialists, providing a complete range of specialty gases for the widest range of applications. Research and testing laboratories require a vast library of standard and customer specific gas products, both pure gases and gas mixtures. Linde has the experience and ability to understand, and meet these requirements.

- An extensive gas mixture database containing over 25,000 individual recipes, with new products created every week.
- Specialty Gas facilities accredited to meet the requirements for ISO 17025, and Guide 34 reference materials.
- HiQ® 60 Extended Shelf life program for pure gases and gas mixtures offering you flat line analytical stability for 60 months from date of manufacturer.
- SPECTRA SEAL® environmental products offer stability for reactive environmental monitoring standards.



More than just gas delivery. Enjoy the benefits of Services from Linde Gas.



It's not only quality that makes the difference between any gas and HiQ® specialty gases. We want to make gas handling as easy and safe as possible for you. Therefore we offer a variety of Services to help you to increase safety and improve efficiency.

Product Stewardship

All manufacturing industries face constantly rising expectations to continuously improve the safety and environmental performance of their product. Linde's product stewardship concept ensures that all of our products meet or exceed these expectations and that they comply with all national or international legal requirements.

Product stewardship is a holistic approach to product responsibility. It involves identifying and evaluating the possible hazards and risks that may stem from a product throughout all stages of its lifecycle – from research and development through manufacturing, storage, transport, retail and usage to recycling or disposal. The risk potential is assessed in relation to employees, neighbours, customers and the environment. The aim is then to avoid or reduce these risks as far as possible.

Safety Training

No matter whether gas usage is a large or seemingly small part of your total operations, knowledge about the properties and potential risks of different gases can lead to increased levels of safety. With over 150 years in the gas business, Linde instructors are the experts when it comes to gases and gas safety. Allow our highly trained instructors to teach you how to safely use, store and handle different compressed and liquefied gases.

If you require customised safety training, please contact your local Linde sales representative to learn more about the different solutions we can offer. We often create customised safety training courses on specific gas applications – we can even integrate internal facility or company regulations into the training.

Administrative Efficiency

Administrative processes, such as inventory management, ordering products or controlling deliveries and invoices, are activities which do not create value for your customers. Although you desire to reduce costs through quick and easy processes, you need a high level of transparency to ensure that your costs are under control. At first glance, these goals may seem to contradict each other.

With our experience as a supplier of goods and services, we are able to translate these seemingly contradictory goals into solutions that simplify your purchasing and payment processes. We understand that you need easy processes that focus on your key requirements. Therefore, we offer you tailor-made solutions which make your processes easier and more transparent.

Supply Reliability

For your analysis, you need to ensure constant availability of gases. At the same time, you want to focus on your main tasks and not worry about the gas supply. Therefore, you need a partner who is able to deal with your unique delivery requirements and is able to support you when you have to react to an unforeseen demand.

With Linde by your side, you can concentrate on your core business. We strive to ensure that unscheduled interruptions will be a thing of the past for you – in gas delivery as well as gas supply. If anything unexpected happens, you can count on us. We are there to serve you!



HiQ[®] Specialty Equipment and Gas Distribution Systems

Precision matters... in our gas equipment. When using specialty gases for analysis and high-tech production, it's essential to maintain the integrity of the gas between cylinder and instrument or reactor. The quality of your gas supply can be no better than the quality of your gas distribution system. Therefore, it is very important to design and plan your specialty gases system carefully. HiQ[®] specialty equipment and gas distribution systems have been developed to meet the various supply conditions of research, development and commercial laboratories while maintaining gas purity and performance.

REDLINE[®] gas supply panels, cylinder regulators, and point of use are designed to meet purity requirement up to 99.9999%. REDLINE[®] is a modern, carefully designed range of gas supply equipment developed to match the fast increasing demands of today – and tomorrow.

BASELINE[®] gas supply products are our entry level for the world of specialty gas equipment. Designed for gas purities up to 99.999%, BASELINE[®] offers stability and operational value that industrial regulators cannot offer.

HiQ[®] Cylinder Storage solutions ensure gas cylinder safety. Choose from indoor single cylinder type to a full size outdoor storage container complete with ready-to-use gas supply systems to ensure a protected environment for gas cylinder storage and handling.

HiQ[®] Laboratory Gas Generators – for laboratories where storage or the use of gas cylinders may be unsuitable. Small and reliable, these generators provide gas on-site for instant use and will shut off the gas supply automatically if there's a power failure. Variable flow rates are available, dependant on the gas purity required.

As part of the Linde group, we have experience in bringing large and small-scale engineering projects to market. In addition to our gas supply panels and installations, we also can offer external ready-to-use gas storage and supply systems (containers) to complete any system.



Getting ahead through innovation.

With its innovative concepts, Linde is playing a pioneering role in the global market. As a technology leader, it is our task to constantly raise the bar. Traditionally driven by entrepreneurship, we are working steadily on new high-quality products and innovative processes.

Linde offers more. We create added value, clearly discernible competitive advantages, and greater profitability. Each concept is tailored specifically to meet our customers' requirements – offering standardized as well as customized solutions. This applies to all industries and all companies regardless of their size.

If you want to keep pace with tomorrow's competition, you need a partner by your side for whom top quality, process optimization, and enhanced productivity are part of daily business. However, we define partnership not merely as being there for you but being with you. After all, joint activities form the core of commercial success.

Linde – ideas become solutions.

Linde AG

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