

**HYDROCARBON
BLENDS AND
OTHER SPECIAL
GASES FOR
THE CHEMICAL
PROCESS
INDUSTRIES**



A complete line

With a product line consisting of more than 25,000 pure gases and custom blends, BOC Gases offers a single convenient source for all your process, environmental, and R&D needs — including



State-of-the-art analytical capabilities help us ensure the accuracy of each cylinder's contents.

on-site generators, bulk and cylinder gases for chemical and petrochemical manufacturing, refining, polymer processing, natural gas processing, and related industries.

We offer a full range of mixtures and certifications, from primary and certified standards, to EPA Protocol Gases, to gas and liquid hydrocarbon blends. You can simplify purchasing and reduce costs by using BOC Gases as your strategic supplier.

BOC GASES CAN MEET ALL YOUR SPECIAL AND INDUSTRIAL GASES NEEDS

Emissions Monitoring (stack, point, ambient, fence-line, personal)

EPA Protocols, Calibration standards

Process Monitoring; Quality Assurance; Research & Development

Carrier and zero gases, Calibration standards

Industrial Hygiene and Safety

Calibration standards, Portable cylinders

Carrier Gases

Air, argon, helium, hydrogen, nitrogen, oxygen

Process Gases

Oxygen, nitrogen, carbon dioxide, helium, hydrogen, argon, and others

Guaranteed quality

With more than 320 facilities worldwide that are ISO 9002 certified, BOC Gases has made a major company-wide commitment to excellence in manufacturing and product quality. A highly trained staff of professional chemists, stringent internal standards, and advanced analytical labs — fully equipped with mass spectrometers, FTIRs, process monitoring analyzers, and gas chromatographs — ensure accuracy and consistency in all pure gases and blends.

Gases are available in purities to 99.9999 percent. Cylinders containing blends are filled using advanced mixture-blending techniques. These include dynamic volumetric filling with on-line monitoring, partial pressure filling, and gravimetric blending, in which each component is weighed into the cylinder on a high-capacity, high-sensitivity balance.

Our proprietary *Spectra-Seal*[®] aluminum cylinders have a passivated interior surface that is chemically inert and free of contaminants. Developed by BOC

Gases to meet the requirements of the EPA and NIST, the Spectra-Seal cylinders can guarantee the stability of special gas mixtures for many years under a wide range of ambient temperatures. Cylinders come with comprehensive documentation, including statements of traceability and accuracy as required by our customers.

A source material optimization program enables us to stock and supply the proper purity components for each customer's blending requirements. Through our Laboratory Information Management System (LIMS), we rigorously evaluate each raw material supplier to verify their capabilities. All source materials are stringently analyzed for purity and for contaminant levels of mixture components.

Distribution you can count on

BOC Gases has a track record for on-time delivery unduplicated in the industry. Efficient mechanisms for production, inventory, and distribution enable us to meet all customer requirements, with rush-order capability available around the clock.

We provide compressed gas in cylinders and tube trailers and liquefied gas in dewars. These gases are manufactured at a network of dedicated plants, strategically located to service the chemical, plastics, petrochemical, and other industries.

With more than 700 independent distributors and company-owned retail facilities, BOC Gases has one of the largest distribution networks of any gases supplier, and can provide reliable local supply on a global scale. In addition, we can stock the gases and blends you need at many BOC Gases locations, ensuring timely delivery of critical gases to your plant.

Use of a company-owned fleet of dedicated cylinder vehicles for both intersite and customer delivery eliminates reliance on common carriers. Our drivers are trained in cylinder handling and delivery to ensure safety and expedite paperwork.



(Above) Carrier gases, zero gases, and calibration standards from BOC Gases provide the purity, accuracy, and consistency that enable accurate equipment calibration.

(Left) A comprehensive cylinder management program helps track cylinders from receipt to pick-up, virtually eliminating lost cylinders.

(Below) BOC Gases' has over a dozen Hazardous Incident Response Teams (HIRTs) positioned nationwide to handle any emergency.

A safety program that's second to none

Because gases are our business, we've developed expertise in the safe handling and application of all bulk and cylinder gases. We have implemented a comprehensive training program for both BOC Gases personnel and our customers in the safe handling of cylinders and gases.

Our comprehensive safety audits can identify hazards in your plant and ensure that employees are trained in the proper handling of gases and related gas safety procedures. Our Hazardous Incident Response Team (HIRT) program operates in conjunction with industry-related safety programs, such as CHEMTREC, the Chemical Manufacturers Association (CMA) national emergency information system, and the Compressed Gas Emergency Action Plan (COMGEAP), adapted by the Compressed Gas Association (CGA). And, with more than a dozen HIRT sites staffed, equipped, and operating, BOC Gases can provide emergency response service wherever it may be needed.



BOC Gases has won a number of major safety awards. These include Leonard Parker Pool Awards and Fleet Safety Awards from the CGA as well as the National Private Truck Council Award for Fleet Safety.

We are an active participant in the CMA's Responsible Care program and other initiatives designed to advance the cause of responsible management of operations and improve performance in terms of health, safety, and the environment. Under Responsible Care, we seek to open channels of communication between the community and industry by applying Total Quality Management principles to our own safety, health, and environmental programs. In addition to being one of the world's leading suppliers of gases, we're also dedicated to becoming one of the world's most responsible corporate citizens.

Technical support tailored for your industry

Degreed chemists and other specialists offer expert technical assistance to customers through our toll-free Technical Hotline, Special Gases Web Site, and one-on-one consultations. Account managers specializing in the process chemicals industry understand your unique needs and problems, and can design appropriate solutions.

BOC Gases has developed proprietary technologies for a wide range of processes. These range from oxygen enrichment for debottlenecking fluid catalytic cracker units, to new systems for solvent recovery and nitrogen inerting, to innovative piston cylinders and ozone-based environmental remediation processes.

Service that adds value

BOC Gases' Site Services provide a customized gases management solution that can enhance the procurement and distribution of process and environmental gases at your facility. The result: increased process up-time, improved safety, simplified gas supply management, and lower total cost.

By focusing on improving the efficiency of gases-related systems and operations, BOC Gases can help you significantly lower your total cost of ownership. We offer a full spectrum of support services ranging from inventory management and first-tier supplier status, to on-site gas supply scheme operation and maintenance, to complete re-engineering of gases and vacuum systems.

We can, at your option, assume responsibility for critical gas functions within your operations. This gives you the flexibility to concentrate on your core competencies — while taking advantage of our expertise in gases management and operation.

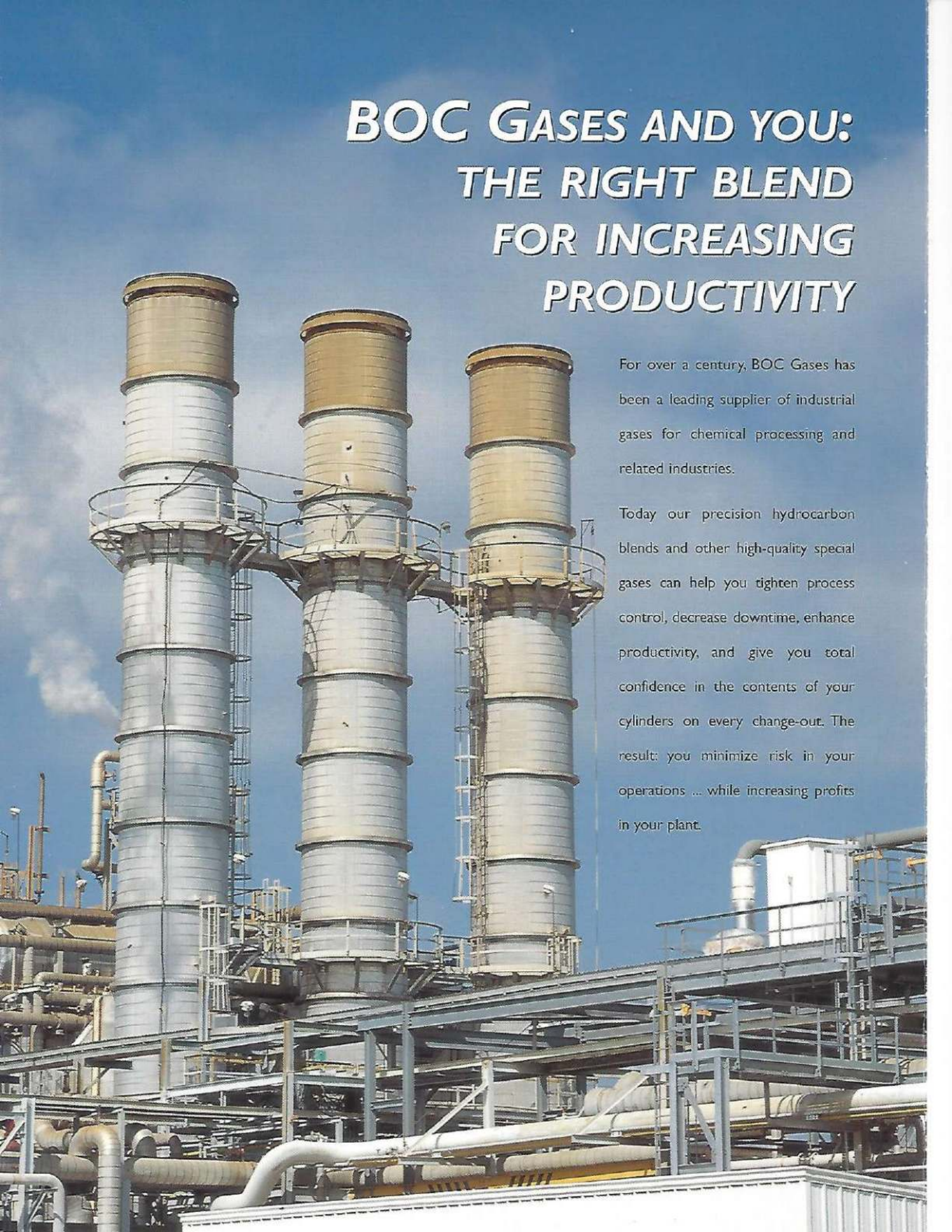
Electronic commerce can further simplify ordering, inventory monitoring, billing, and cylinder management. Doing business with BOC Gases on-line reduces paperwork, improves efficiency, speeds service, and saves you time and money.

About BOC Gases...

BOC Gases is part of The BOC Group, a multinational company with operations in over 60 countries and more than 2 million customers worldwide. The BOC Group has annual sales of over \$6 billion in industrial gases, health care, vacuum technology, distribution services, and other gas-related products.

Put BOC's quality gas solutions to work in your plant — starting today.

Think it's time to talk with a gases supplier that really knows your business and has real solutions to your problems? Call your BOC Gases representative today. Or visit our Web Site at <http://www.specialgases.com>.



BOC GASES AND YOU: THE RIGHT BLEND FOR INCREASING PRODUCTIVITY

For over a century, BOC Gases has been a leading supplier of industrial gases for chemical processing and related industries.

Today our precision hydrocarbon blends and other high-quality special gases can help you tighten process control, decrease downtime, enhance productivity, and give you total confidence in the contents of your cylinders on every change-out. The result: you minimize risk in your operations ... while increasing profits in your plant.



BOC Gases is a trading name used by operating companies within
The BOC Group, the parent company of which is The BOC Group plc

Visit us on the Internet at <http://www.specialgases.com>

For your local BOC Gases sales office contact

575 Mountain Avenue
Murray Hill NJ 07974
Tel 800 742 4726
Fax 908 417 5699

600 Union Landing Road
Riverton NJ 08077
Tel 609 829 7878
Fax 609 829 6576

1075 Cinclore Drive
Port Allen LA 70767
Tel 504 388 0900
Fax 504 388 0959

4715 N.E. 78th Street
Vancouver WA 98665
Tel 360 695 8944
Fax 360 696 3975

640 Kimberly Drive
Carol Stream IL 60188
Tel 630 690 3010
Fax 630 690 3696

11 Triangle Drive
Research Triangle Park NC 27709
Tel 919 549 0633
Fax 919 549 0627

2009 Bellaire
Royal Oak MI 48067
Tel 810 399 8020
Fax 810 584 2540

4551 North Access Road
Chattanooga TN 37415
Tel 423 752 0425
Fax 423 752 0432

2621 Joe Field Road
Dallas TX 75229
Tel 214 241 9763
Fax 214 241 2916

2305 Kamehameha Highway
Honolulu HI 96819
Tel 808 842 2201
Fax 808 842 2141

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