



Centrifugal Air Compressors

Centac® C1000 – 135-220 m³/min



More Than Air, Peace of M

Ingersoll Rand is now well into our second century of providing industries throughout the world with innovative solutions and expertise in compressed air technology and service. With our new line of Centac® oil-free centrifugal compressors, Ingersoll Rand continues the tradition of **Simplicity by Design** fewer parts and integrated components - and takes compressed air **reliability**, **efficiency** and **productivity** to even higher levels.

Ingersoll Rand has demonstrated an ongoing commitment to excellence in product design, manufacture and air quality. When it comes to centrifugal compressors, you can count on Ingersoll Rand to deliver the peace of mind that comes only from dealing with the world leader.



1871

Ingersoll Rock Drill Company was formed, later to become Ingersoll Rand in 1905

1912

Our first oil-free centrifugal compressor introduced

1933

Technology-leading Ingersoll Rand oil-free reciprocating compressor goes to market

1952

The world's first oil-free rotary compressor is introduced

1968

First packaged Centac centrifugal compressor is introduced

ind

"Simplicity is the ultimate sophistication"

Leonardo da Vinci



1980s

Centrifugal technology expanded to several different applications

2005

Ingersoll Rand offers the first centrifugal compressor for standard industry capable of achieving 40 barg

2007

Ingersoll Rand is first to be Class 0 certified for centrifugal compressor technology

2010

Ingersoll Rand introduces the C1000 centrifugal compressor featuring the quickest maintenance and industry-leading performance

A Tradition of Proven Reliability, Ultimate and Unrivaled Productivity

Ingersoll Rand's new line of oil-free centrifugal air compressors embodies the innovation that continues to make Centac® the worldwide benchmark for **reliability**, **efficiency** and **productivity**, even in the harshest of operating environments.

RELIABILITY

Superior Design, Superior Life

- Long-life gearing, bearings and components.
- Leak-free seals and connections .
- Simplified piping, integrated components, fewer connections.

Lower cost of ownership

EFFICIENCY

Optimised Components and Systems

- Industry-leading performance.
- Ultra low pressure drop cooling system.
- 100% oil-free air under all operating conditions.

Reduces energy use and operating costs



Efficiency

This fully enclosed model provides greatly reduced sound levels. The inlet filter and bypass silencer are mounted within the package — water, power and discharge air piping connections are all that are required.



PRODUCTIVITY

User-Friendly Operation and Accessibility

- Easy access to all critical components.
- Plug and play compressor packages for efficient installation.
- Informative and intuitive Web-enabled controller.

Minimizes downtime

How pure is your air?

Knowing industry air quality standards and allowable contaminant levels will help you achieve and maintain acceptable air quality. The lower the ISO class rating, the purer the air will be.

If you need guaranteed pure air for your critical application, then you need Ingersoll Rand. Our centrifugal compressors were rigorously tested by TÜV Rheinland® - a global leader in independent testing and assessment services - and earned ISO 8573-1:2010 Class 0 certification. This is the most stringent class covering oil contamination in aerosol, vapor and liquid forms for the most critical manufacturing processes.



Innovative Design and Performance

The combination of Ingersoll Rand's industry-leading expertise and innovation delivers **exceptional levels of reliability and performance** in our new centrifugal air compressors.

A High-Reliability Coolers

Transverse-mounted water-in-tube coolers can be thoroughly cleaned in place from either side. The coolers are oversized for greater fouling resistance and provide low CTD and pressure drop to increase compressor efficiency and reliability.

B Easy Access to Components

Optimized for superior serviceability, our unique vertically-split design provides fast access to major components to minimize downtime.

C Informative and Intuitive Controller

The high-resolution colour display provides a powerful window into all vital signs of the compressor by continuously monitoring and trending critical parameters. Remote access to the compressor is available from virtually anywhere.

D Simplified, Leak-Free Oil System

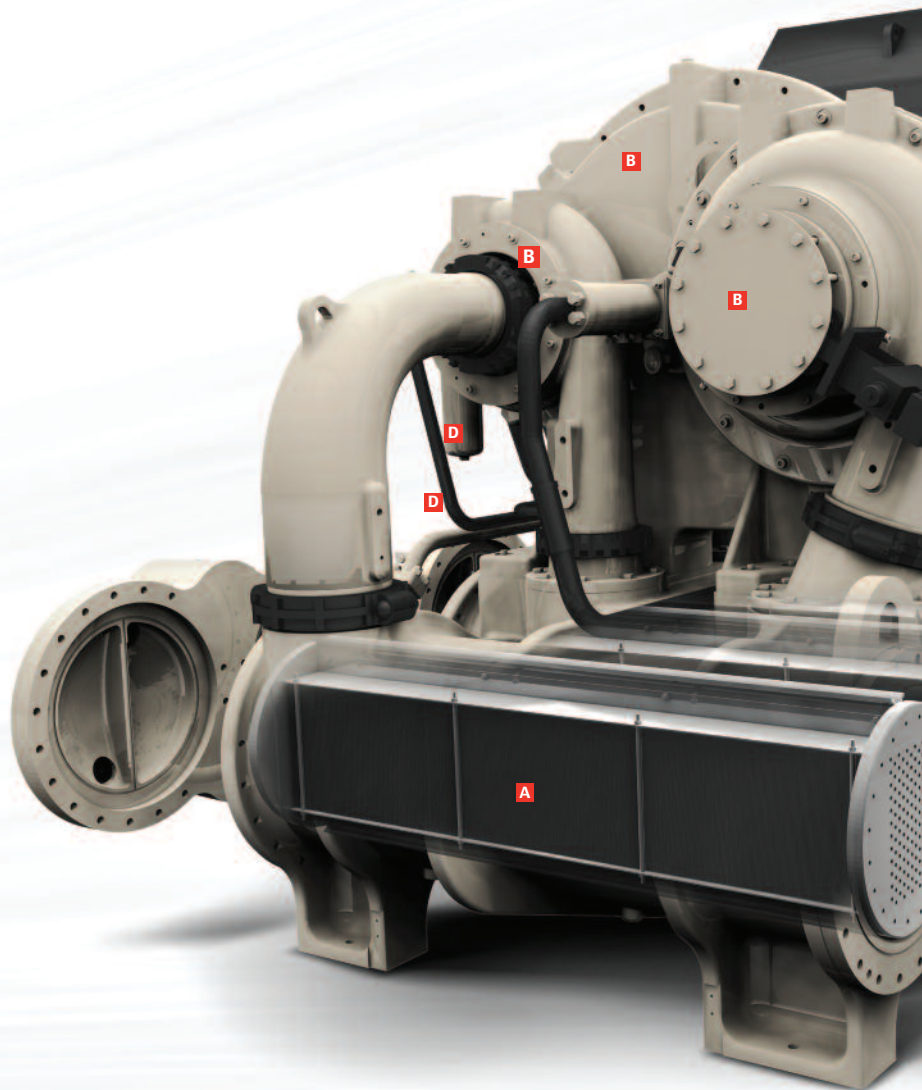
The system features an integrated oil filter in addition to pressure and thermal regulation. Leak-free operation is achieved using O-ring face seals.

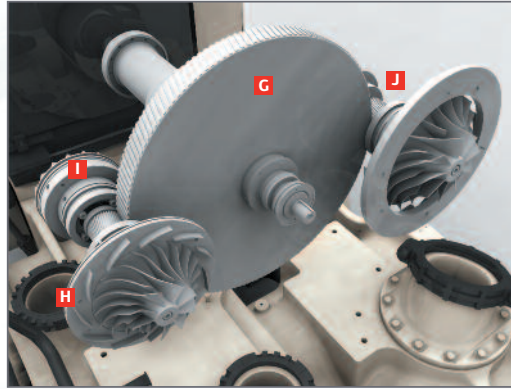
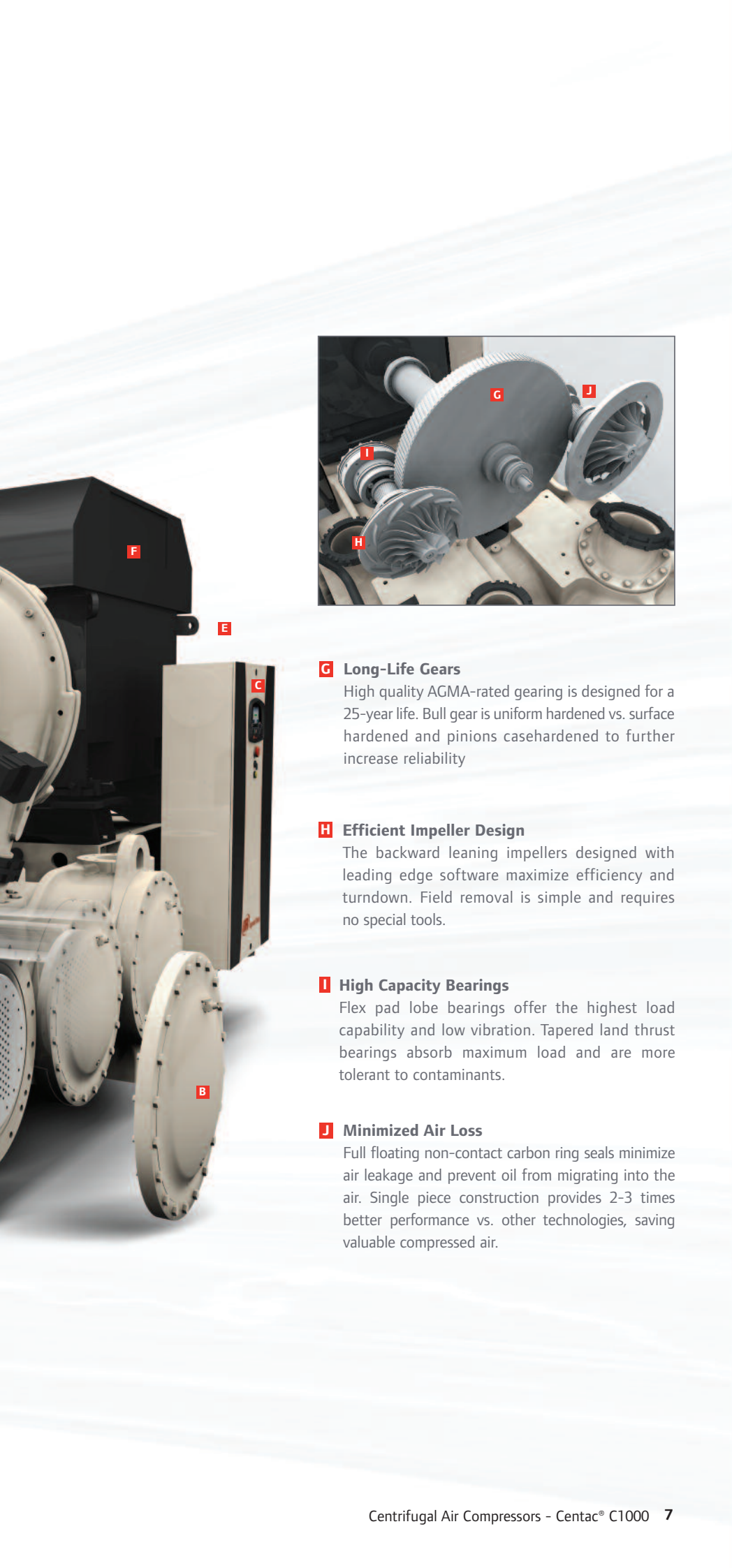
E Low Noise Operation

Personal comfort is enhanced with quiet operation. A low sound enclosure is available for further noise reduction.

F Heavy Duty, High-Efficiency Motor

The motor features sleeve bearings that reduce maintenance and improve durability.





G Long-Life Gears

High quality AGMA-rated gearing is designed for a 25-year life. Bull gear is uniform hardened vs. surface hardened and pinions casehardened to further increase reliability

H Efficient Impeller Design

The backward leaning impellers designed with leading edge software maximize efficiency and turndown. Field removal is simple and requires no special tools.

I High Capacity Bearings

Flex pad lobe bearings offer the highest load capability and low vibration. Tapered land thrust bearings absorb maximum load and are more tolerant to contaminants.

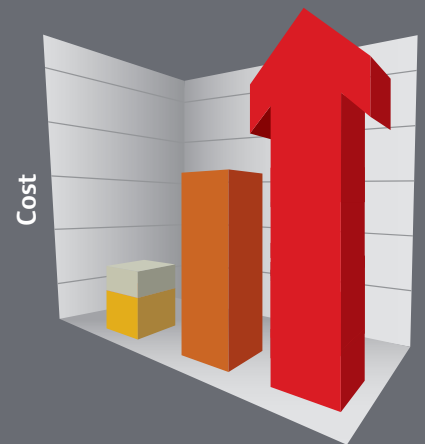
J Minimized Air Loss

Full floating non-contact carbon ring seals minimize air leakage and prevent oil from migrating into the air. Single piece construction provides 2-3 times better performance vs. other technologies, saving valuable compressed air.

Reliability Saves You Money

Capital and maintenance costs account for only a small portion of a compressor’s life-cycle cost. While energy also represents a significant cost component, the single largest contributor to life-cycle cost is loss of production. Unplanned production interruptions are best prevented by using reliable equipment so the return on investment on an Ingersoll Rand centrifugal compressor will be more than worth it over the life of your air system.

Life-Cycle Cost Analysis



Lost Production

- No unscheduled plant shutdowns because of air compressors.

Energy

- Reduce wasted kW.

Capital & Traditional Maintenance

- Lower maintenance costs.
- Fixed cost of ownership.

Intelligent Compressor Control... The Key

Ingersoll Rand controllers help maximize productivity by improving variables that impact cost and output, including performance, maintenance and energy consumption.

A Controller Like No other

The controller features an intuitive high-resolution colour display that provides a window into all vital signs of the compressor. In addition to ensuring peak performance, the controller enables predictive maintenance through continuous monitoring and trending of critical parameters. Enhancing productivity and ease of use, the controller has an open Web page architecture allowing users to remotely interact with the compressor from almost anywhere.



CONNECTIVITY Flexibility and Convenience

- Multiple connection options.
- Modular input/output capability.
- Easy LAN connection.



to System Productivity

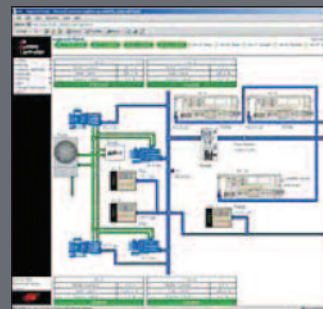
COMMUNICATION

Web-Enabled Simplicity

- Event logging and graphical trending.
- Scheduled compressor data log generator.
- No special software required.
- Available in 26 languages.



ASC Air System Controller



Ingersoll Rand air system controller provides a window into the compressor room by making raw data available to plant operators and managers in formats that are easy to understand, while yielding substantial energy savings.

The ASC uses human machine interface software specifically designed by Ingersoll Rand for compressed air systems.

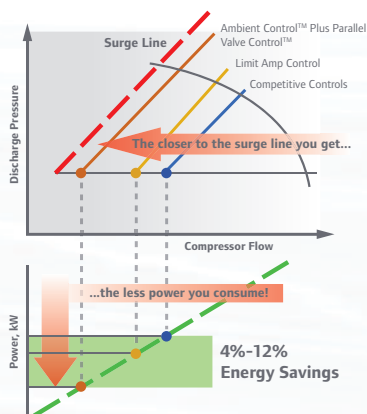
Functions include:

- Total system control over compressors, dryers, cooling towers, pumps and accessories
- Energy management
- Pressure and load-sharing
- System benchmarking and data management
- Enhanced communications

CONTROL

Optimize Your Operation

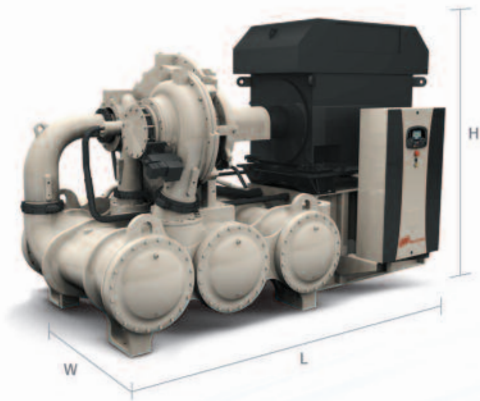
- Optimized turndown.
- Simplified ambient control.
- Advanced surge control.
- Comprehensive machine health and safety monitoring.



A Configuration For Every Need

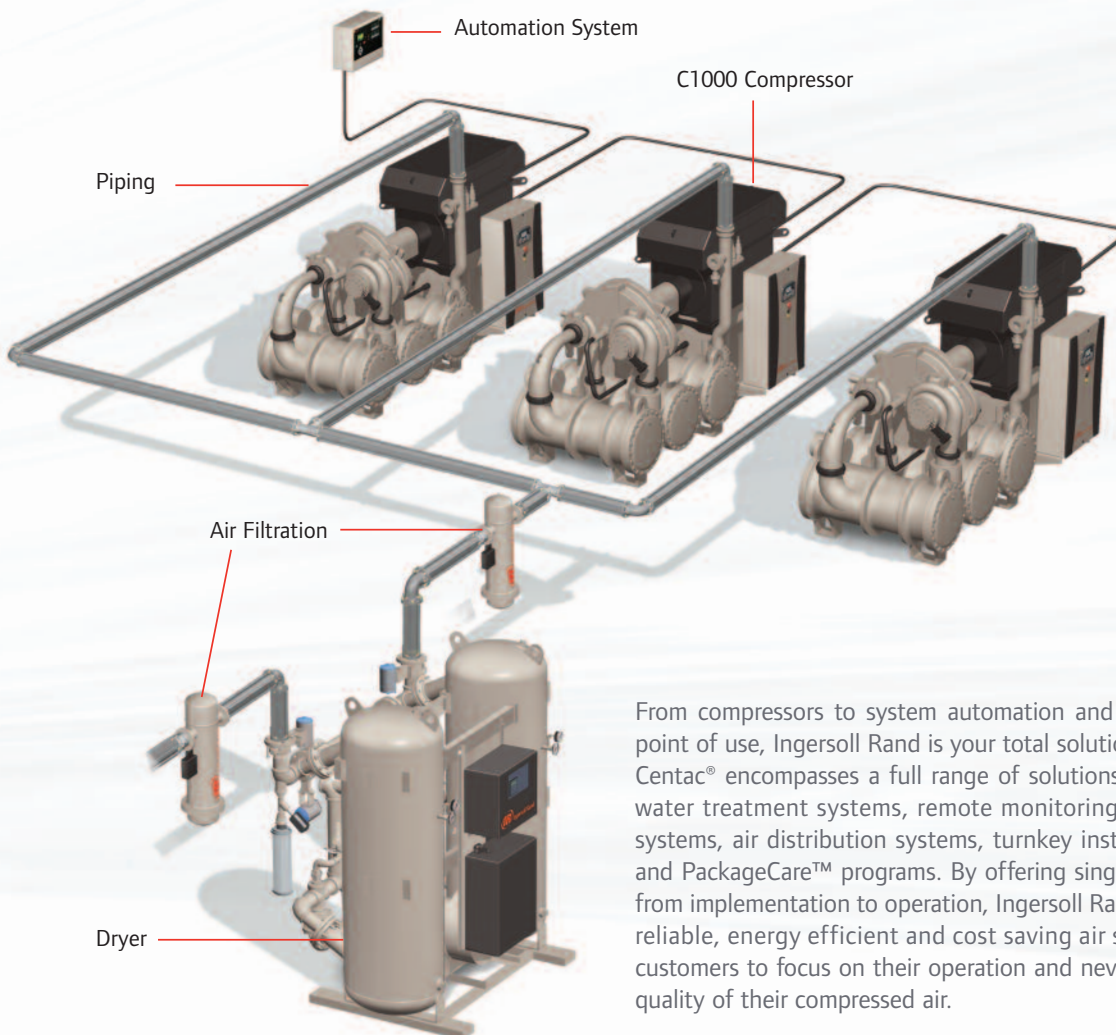
C1000 Performance

Model	Nominal Capacity m ³ /min	Pressure Range bar g	Nominal Driver Power kW	Length mm	Dimensions Width mm	Height mm	Estimated Weight kg
2-Stage Units	135 - 220	3.4 - 4.5	600 - 1000	4300	2200	2700	15000
3-Stage Units	135 - 220	5.5 - 10.5	900 - 1300	4300	2200	2700	16000



Progress is *greener* with Ingersoll Rand

Ingersoll Rand offers industry-leading products and solutions that enable businesses around the world to reduce energy consumption and costs and decrease harmful environmental emissions. From air compressors that reduce energy consumption to electric-powered golf cars with near-zero emissions, Ingersoll Rand provides the knowledge, experience and solutions to help our clients achieve their sustainability goals.



From compressors to system automation and everything in between till point of use, Ingersoll Rand is your total solution provider. Centac[®] encompasses a full range of solutions including: air and cooling water treatment systems, remote monitoring and energy management systems, air distribution systems, turnkey installations, auditing services and PackageCare[™] programs. By offering single-source system capability from implementation to operation, Ingersoll Rand provides customers with reliable, energy efficient and cost saving air system solutions, allowing customers to focus on their operation and never have to worry about the quality of their compressed air.

Global Reach, Local Service



No matter where your facility is located, Ingersoll Rand is committed to serving you 24 hours a day, seven days a week, available to support you with innovative and cost-effective service solutions that will keep you running at peak performance.

Let Ingersoll Rand handle the pressures and responsibilities of owning a compressed air system with our signature service contract.

With PackageCare™, you can...

- Control costs and keep your equipment running at peak efficiency.
- Protect yourself from all repair and replacement expenses over the life of the agreement.
- Maintain or improve the operational efficiency of any compressor, regardless of age, make or model.





Ingersoll Rand (NYSE:IR) advances the quality of life by creating and sustaining safe, comfortable and efficient environments. Our people and our family of brands — including Club Car®, Ingersoll Rand®, Schlage®, Thermo King® and Trane® — work together to enhance the quality and comfort of air in homes and buildings, transport and protect food and perishables, secure homes and commercial properties, and increase industrial productivity and efficiency. Ingersoll Rand products range from complete compressed air systems, tools and pumps to material handling systems. The diverse and innovative products, services and solutions enhance our customers' energy efficiency, productivity and operations. Ingersoll Rand is a \$14 billion global business committed to a world of sustainable progress and enduring results. For more information, visit ingersollrand.com or ingersollrandproducts.com.



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