



Oil-Free Rotary Screw Air Compressor Systems

185-355 kW



Your Trusted Partner in Compressed Air

Staying ahead of your competition with advanced compressed air systems and services that boost productivity, lower operating expenses and extend equipment life is critical to your success.

No matter the industry or application, you can count on Ingersoll Rand as a trusted partner for oil-free compressed air technologies and services. By focusing on you and your business, we provide collaborative solutions that make you successful, offering a total systems approach to maximise efficiency and performance.

Take a Systems Approach

Delivering reliable oil-free compressed air to your facility goes well beyond the compressor itself. Optimise total cost of ownership (TCO) through a systems approach that employs the best air compression technologies that deliver reliability for life—from design to decommissioning.

Your business will benefit from Ingersoll Rand's partnership through our extensive experience and global expertise to ensure reliability, lower maintenance costs, ease of serviceability and system optimisation.



Let's Get Started Together

Ingersoll Rand Contracting Services Video

Let's Get Started Together

Throughout the entire lifecycle, our systems approach helps you achieve the lowest operating cost.





When High Air Purity is a High Priority

There's a lot riding on the quality of your air. The presence of particles, condensation, oil and oil vapor in a compressed air system can lead to downtime, product spoilage and recall, damage to your brand reputation, or worse, harmed consumers and product liability.

For lower cost of ownership

Higher initial costs for oil-free systems are more than offset by lower operational and maintenance costs over a system's life to maintain the highest air quality

For reliability

A robust product and system design delivers top quality air, protecting sensitive downstream equipment, lowering maintenance and extending equipment life

For productivity

The use of an oil-free Class 0 certified compressor guarantees contamination-free air, eliminating the risk of product spoilage and waste

For serviceability

Our oil-free equipment is designed specifically to make maintenance easy by providing clear access to consumable components

Class 0 ISO 8573 Oil-Free Air

ISO 8573-1 Air Quality Classes

Quality Class	Oil & Oil Vapor mg/m ³
0	< 0.01
1	0.01
2	0.1
3	1
4	5

Class 0 is the most stringent air class defined by ISO 8573, part 1. Our oil-free compressors are certified Class 0 for no oil content by TUV to ensure your air quality exceeds specifications.

Oil-Free Compressors for Your Application

Ingersoll Rand offers a wide portfolio of reliable oil-free products that will adapt to your industry and application. We will assess and propose the best oil-free solution to increase the productivity of your installation, **providing zero risk of contamination of your final product.**



Why You Need Class 0 Air

Contamination Risk in the Food & Beverage Industry



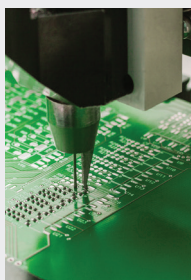
Food & Beverage

Product transportation, storage packaging, filling, capping, cooling, spraying, cleaning, fermentation, aeration, PET blow molding



Pharmaceutical

Tablet production, coating, mixing, holding, product filling, packaging, bottling, aseptic applications



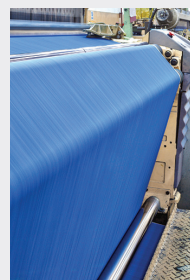
Electronics

PCB cleaning after production, pneumatic component transfer, sensitive valves operation



Chemical

Process air, pneumatic valves, control cylinders, gas separation, pneumatic conveying, de-stratification, air blanketing, service air



Textile

Pneumatic valves, cylinder control, jet looms, spinning frames, sewing machines, blow guns



Utilities

Instrument air, pneumatic valves, control cylinders, fuel purging, service air, fuel atomisation, air motors



Download Our Whitepaper

Maintaining Quality Compressed Air in the Pharma Industry

Air compressor use accounts for a significant part of your energy costs. Designed using advanced computer modeling techniques, our team of skilled engineers have created rotary screw compressors that not only maximise efficiency and airflow, but also operate reliably to improve your company's bottom line.



**315 kW FIXED SPEED
OIL-FREE COMPRESSOR**

A Lifetime of Efficient Operation

Beginning at installation, and throughout their entire lifecycle, our oil-free compressors optimise your total cost of ownership by reducing energy consumption

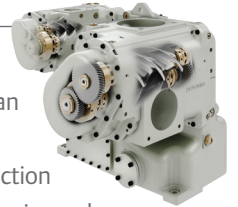


Launch The Video
See an Overview of Our Oil-Free Capabilities

What Makes Our 100% Oil-Free Rotary Screw Compressors Unique?

World-Class Efficiency

Our new state-of-the-art modular airend design features an optimized rotor profile that delivers significantly improved efficiency and best-in-class airflow. A high-efficiency induction motor featuring ample sized cooling and low pressure drops is used in conjunction with Ingersoll Rand's oil-free fixed and variable speed compressors, providing the optimum combination of high airflow with the lowest energy consumption.



Robust Components

Proven, trouble-free airends with patented UltraCoat™ technology, enhanced bearing arrangements, a rugged motor design, V-Shield™ leak-free PTFE stainless steel braided hoses and O-Ring face seals, integrated oil lubrication and hydraulically actuated inlet valves provide reliability for life.



Flexible Design Options

Our compressors offer air-cooled and water-cooled configurations, extreme ambient temperature options, high dust filtration and outdoor modifications for harsh environments to best match your application.



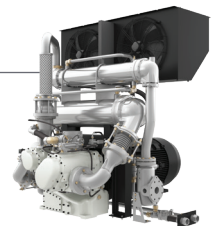
Simple and Serviceable

Our oil-free compressor package design is simple and spacious – no special tools are required to perform maintenance, and all components are easily accessible. Our durable consumables and wearables lengthen service intervals.



Higher Rated Cooling Capacity

Our compressor systems are designed for 46°C (115°F) operation, versus other designs at 40°C (104°F). This provides an additional cooling margin for trouble-free operation at higher temperatures, prevents shutdown as heat exchangers foul, and protects against corrosion in water-cooled models for more efficient operation.



Oil-Free Rotary Screw Air Compressors, 185-355 kW

With industry leading specific power*, Ingersoll Rand's oil-free screw compressor package components provide the optimum combination of high airflow with the lowest energy consumption. With an efficient package design and robust components, you are guaranteed 100% oil-free, Class 0 compressed air without sacrificing the reliability you've come to trust.

Choose our fixed speed, oil-free compressors for constant demand, or variable speed (VSD) for best-in-class efficiency with fluctuating demand.



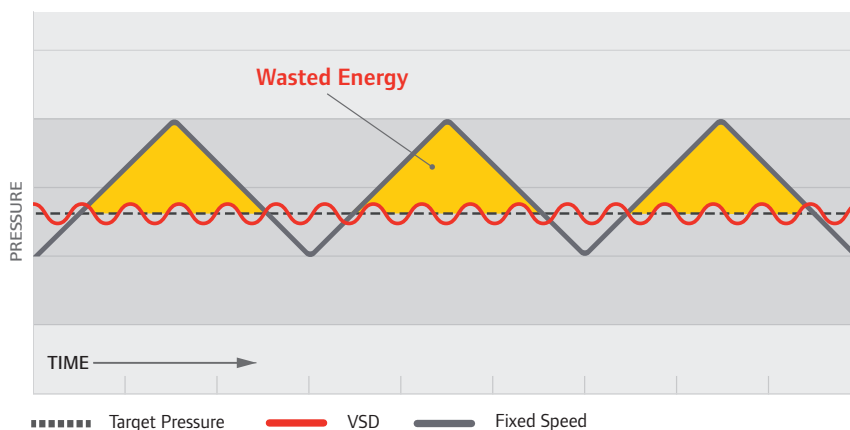
250 kW Variable Speed
Oil-Free Compressor

The Variable Speed Advantage

We fully integrate matched variable speed drives with the appropriate motors to maximise efficiency and reliability. The high-performance induction motor provides wide turndown and the ability to turn off immediately at minimum speed, so there's no need to continue running unloaded. VSD air compressors maximise energy savings while delivering reliable, clean air.

Achieve up to 35% Savings over traditional fixed speed

Fixed speed compressors usually require a larger control band, while VSD compressors operate much closer to the target pressure. Every 1 bar (14.5 psi) over required pressure costs an additional 7% in power!



Advanced Compressor Control

The Luminance-series of intelligent controllers feature an intuitive user interface and enhanced control, functionality, and remote access with commonly used Web browsers. Sequential control of four compressors can be achieved without the need for additional hardware, thus resulting in improved efficiency and stable pressure. The built-in Internet of Things (IoT) function connects to HELIX™ platform for realtime monitoring and protection of the unit, thus achieving peak productivity.

How We Build Reliability into Every Component

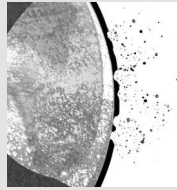
Rotor Performance—The Key to Reliable Compressor Operation

Compressor rotors take a beating. Over time, their surfaces can deteriorate, making rotors increasingly susceptible to compressed air impurities and temperature fluctuation.

Ingersoll Rand eliminates this problem with UltraCoat, an advanced rotor and housing protection process that ensures the most durable coating, with unmatched adhesion properties and temperature resistance.

Typical Problems of Coatings on Oil-Free Rotors

Rotor Coatings Wear Off



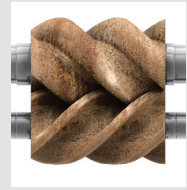
Contaminants cause coatings to deteriorate, leaving microcavities on the rotor surface.

Exposing Steel Rotors



Once the coating wears off, carbon steel rotors used in competitor's products will corrode.

Resulting in Damage

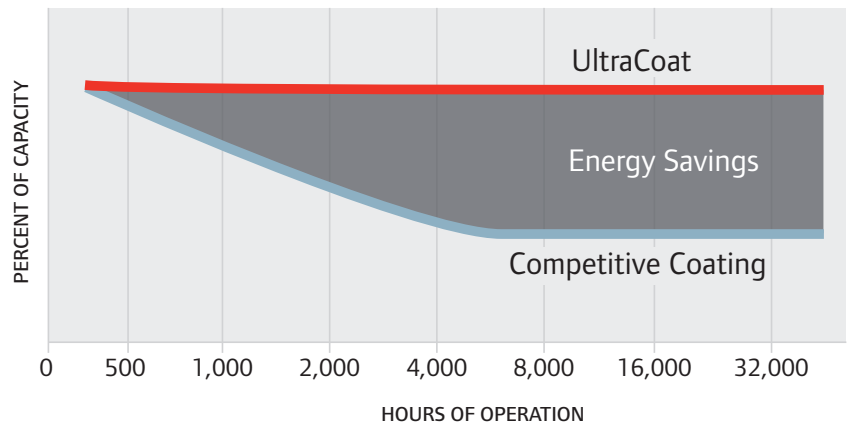
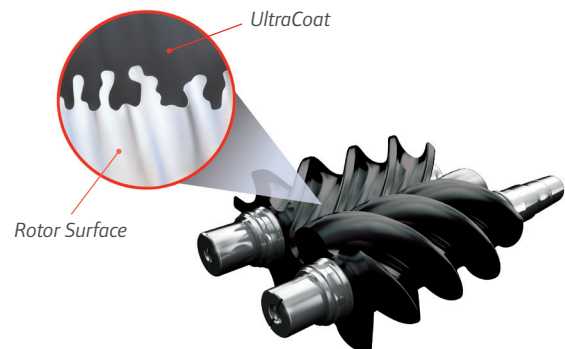


Rust and pitting will develop, leading to damaged rotors, inefficient operation and possible compressor failure.

UltraCoat—Energy Savings and Longer Life

UltraCoat is comprised of a patented MoS_2 (molybdenum disulfide) blend that forms a virtually unstoppable chemical and mechanical bond with the rotor's surface.

This long-lasting formula continuously delivers the precision and lubricity required for tight tolerance performance in the compressor's rotary screw. In conjunction with a best-in-class second-stage stainless steel rotor, UltraCoat delivers greater reliability in performance and air quality, rotor longevity, increased uptime, and reduced energy costs.



View Products

See our entire portfolio of oil-free compressors

Innovative Design, Flexible Choices

Our compressor systems provide flexible equipment choices, as well as advanced solutions that ensure reliable flow—even in extreme operating environments. That's what you expect from Ingersoll Rand. That's what you get from our oil-free rotary screw compressors.



Optimise Your Demand

Mix and match motors and airends to achieve the exact level of performance and economy your operation and budget require.



- i** **Efficiency for Constant Demand:** Fixed speed compressors featuring the reliable and efficient TEFC induction motor
- n** **Efficiency for Variable Demand:** VSD compressors with the highest efficiency motor available
- ie** **Premium Efficiency for Constant Demand:** Fixed speed compressors with the continuous duty TEFC induction motor and enhanced features for improved performance and efficiency
- ne** **Premium Efficiency for Variable Demand:** VSD compressors with enhanced features for improved performance and efficiency

Built to Work in Virtually Any Environment

Extreme Environment Options	<i>i</i>	<i>ie</i>	<i>n</i>	<i>ne</i>
▶ Outdoor modification/rain protection	•	•		
▶ Low ambient temperature protection to -23°C	•	•		
▶ High ambient rating up to 55°C	•	•		
▶ Premium high dust filtration	•	•		
▶ Harsh water cooling system (water-cooled only)	•		•	
▶ Seawater cooling system (water-cooled only)	•		•	

Oil-free Compressors – 50 Hz Performance			
Model	Nominal power kW	Max pressure barg	Capacity (FAD) m ³ /min
E200i-E355i	200-355	7.5-10.5	31.8-52.9
E200ie-E355ie	200-355	7.5-10.5	32.3-53.4
E200n-E355n	200-355	4.0-10.7	11.4-50.9
E200ne-E355ne	200-355	4.0-10.7	11.9-51.3
Oil-free Compressors – 60 Hz Performance			
Model	Nominal power hp	Max pressure psig	Capacity (FAD) cfm
E185i-E355i	250-450	110-155	1,000-1,845
E185ie-E355ie	250-450	110-155	1,018-1,859
E200n-E355n	250-450	60-155	401-1,796
E200ne-E355ne	250-450	60-155	419-1,812

AIR TREATMENT



Moisture and contamination in compressed air cause significant problems in equipment operation, such as rust, scale and clogged orifices that result in product damage or costly shutdowns. Making our air treatment equipment an integral component of your compressed air system will improve productivity, system efficiency and product or process quality.



HOC Dryers: Maximum Performance, Minimal Energy Use

HOC dryers recover the heat that is a natural by-product of the compression process to provide moisture-free air, while consuming virtually no energy.

Desiccant Dryers

Choose desiccant dryers when very low dew points are necessary for high-quality air and to prevent potential freeze-up. Depending on whether you require lower initial capital costs, or lower energy use, choose from heat-of-compression (HOC), heatless, externally heated or heated blower desiccant models.



Desiccant Dryer Features

- **Delivers reliable -40°C (-40°F) pressure dew point** in most operating conditions
- **High-strength desiccant** and durable valves
- **Low pressure drop design** saves energy
- **Advanced microprocessor control** is easy to use and maximises uptime



View Products

Find the Right Dryer for Your Application

Refrigerated Dryers

Our cost-effective refrigerated dryers provide clean, dry air for most industrial applications. Choose efficient cycling dryers to maximise energy savings or non-cycling dryers for a lower initial cost.

Refrigerated Dryer Features

- **Dew points as low as 3°C (38°F)**, meeting ISO Class 4 requirements
- **Corrosion-free heat exchanger design** for reliable operation
- **Intuitive microprocessor control** for easy operation
- **Compact design** for easy serviceability



Cost-Effective Operation

Choose refrigerated dryers for lower capital, operating and maintenance costs for many industrial applications.



zero gas consumption + micro power consumption

With guaranteed reliability, the dryer minimizes the water content of compressed air, thus preventing contamination of the final product by the compressed air, and enhancing the accepted product percentage.*

*It is currently only available in China.

IRDR Compression Heat Rotary Desiccant Air Dryer

Compared to traditional switching operation, IRDR series compression heat rotary desiccant air dryer guarantees the constant provision of dry compressed air. Thanks to its zero gas consumption design, it can achieve high efficiency production, low carbon emission and lower operating cost for the plant, thus enabling visualization of whole-process energy saving, while reducing the trouble of wearing parts and improving the production efficiency for our customers.

Features of IRDR Compression Heat Rotary Desiccant Air Dryer

- **Energy saving**, smooth air flow, small pressure loss, low dew point
- **Continuous and efficient single-tower purification** for ideal adsorption effect
- **No electric or pneumatic switching valve** and no wearing parts for lower maintenance costs
- **Environmental-friendly product design** for low dust and noise level (below 50 dB)

OIL-FREE PARTS AND ACCESSORIES



A compressed air system is a significant investment. You expect consistently reliable, clean, dry air at the lowest possible operating cost. Choose our genuine parts and accessories to ensure that your compressor is running efficiently and productively.



F-Series In-Line Filters

Our advanced compressed air filters reduce

contamination in your air stream to help protect finished goods, critical processes and valuable equipment.



Heavy-Duty No-Loss Drains

No-loss electronic and pneumatic drains are the most

reliable, durable and energy-efficient way to remove condensate from air compressors and system components.



Power Management

Lower your cost of ownership with our power management solutions, including

disconnects, fuses and transformers.



Compressed Air Receiver Tanks

Our air receiver tanks are available in horizontal and vertical orientations,

are designed for extra air storage and made with steel for long-lasting durability.



Filters

Ingersoll Rand provides the highest-quality OEM filters for preventative

maintenance that eliminate the risk of using will-fit parts.



OEM Replacement Parts

We have the exact genuine OEM parts you

need with extensive inventories maintained in strategic locations around the world.



Don't Settle for Knock-Offs

Learn about the True Value of Genuine OEM Parts

Installation Solutions

We offer a complete range of products and services in compressed air system installation, integration and commissioning. Regardless of the size and scope of the job, Ingersoll Rand has the capability to manage your project from start to finish.



Project Management Services

Fully integrated services managed by experts that ensure efficient operation



SimplAir® Piping Systems

Durable aluminum piping and “quick-connect” fittings enable easy installation



View OEM Parts

See our Portfolio of Oil-Free Accessories

MAINTENANCE



Ensure reliability for the life of your compressed air equipment with our CARE service programs. With CARE, we have one goal —to earn the right to be your trusted partner.



Total Protection, Eliminate the Risk

PackageCARE™ represents the greatest value for asset management by transferring operational risk to Ingersoll Rand. We are responsible for scheduled maintenance, as well as using predictive and analytical tools to help prevent unexpected interruptions in your production.



Preventative and Predictive

PackageCARE™ is proactive. Other companies only replace parts after they have failed.



No Extra Cost

We are committed to keeping equipment operational at no additional cost.



Trustworthy Pricing

Competitive agreements increase in price for parts and service labor at the will of the supplier.



Risk Transfer

Extended warranties on competitive agreements typically cover defects in materials and workmanship, specifically excluding wear and tear, corrosion, etc. PackageCARE™ covers it all.



No Fine Print

The fine print on many agreements with extended warranties allows companies the opportunity to deny claims. Additionally, certain aspects of a repair are not covered, such as consumables or travel. With PackageCARE™, there's no fine print.



No Paperwork Hassles

Extended warranties require you to maintain certain records or submit information to the supplier, otherwise coverage can be denied.



No Surprises

Most extended warranty contract language states they can terminate for convenience. With PackageCARE™, we cannot walk away.



Flexibility

PackageCARE™ has more flexibility than an agreement with extended warranty. You can add older equipment, dryers and filters or include a rental compressor.



Find the Best CARE Plan for You
Answer 7 Questions to Find Out!

IT ALL ADDS UP TO PEACE OF MIND



Lower Cost of Ownership

CARE service programs provide the most cost-effective solutions based on your customized maintenance strategy.



Quality Results

Ingersoll Rand factory-trained service technicians are backed by more than 160 years of industry experience.



Increased Uptime

Our CARE programs help decrease unplanned downtime and costly production interruptions.



Efficient Energy Use

Peak system efficiency is achieved through properly performed maintenance and inspection.



Peace of Mind

Our world-class services will help you achieve the results you need, while you focus on what's important to your business.

Emergencies, maintenance and persistent inefficiencies in your plant can lead to air losses, thus reducing productivity. Our integrated products and services can reduce short-term production losses and achieve long-term sustainable development goals.

Lower Your Operating Costs

To optimise your total cost of ownership, you need to look beyond just the air compressor. Here are some additional ways that Ingersoll Rand can help you reduce energy and equipment costs:



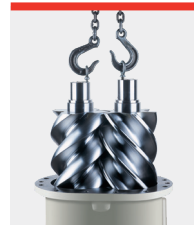
IR5500 Controller

Variable-speed energy conservation system adopts variable speed control technology, and the exhaust volume of compressor can be perfectly combined with the gas consumption volume of user, thus avoiding the rated power loss of air compressor caused by frequent loading and unloading.



Heat recovery system

Throughout your plant, the heat generated during air compression can be recycled and used for a variety of different purposes.



Airend re-manufacturing

We can provide professional, fast and reliable re-manufacturing service for your long-operating air compressor or internal airend and other parts, prolong the service life of your compressor, improve the operation efficiency, and reduce the unexpected shutdown caused by the failure of air compressor

Performance assessment service



Electronic assessment



Air leakage assessment

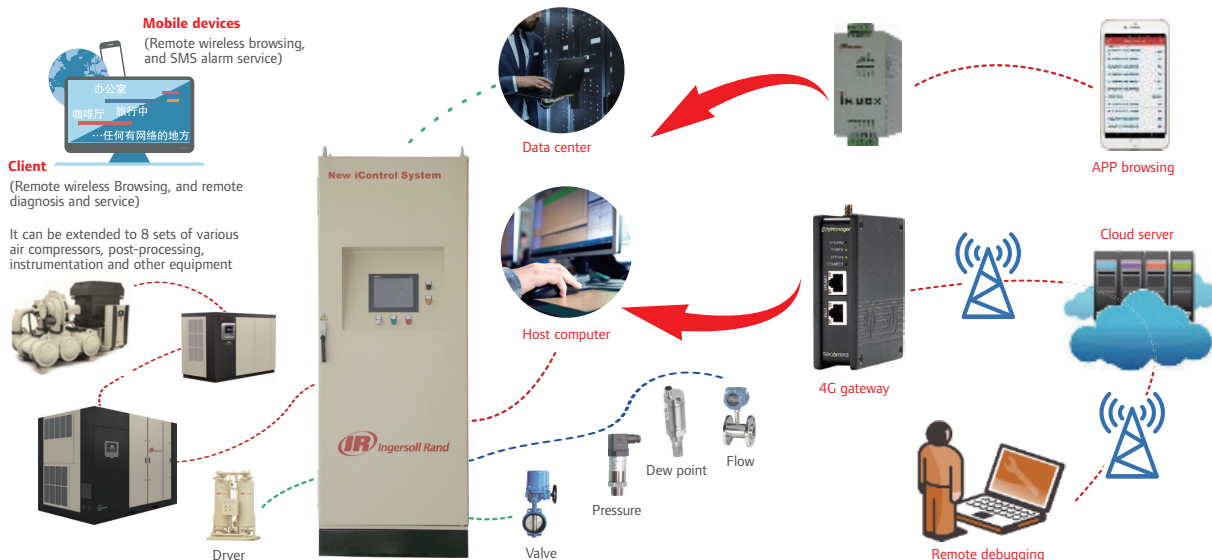


System assessment

By identifying, analyzing and rectifying the problems in your complete compressed air system - our global service team can use big data analytics to uncover root causes, and recommend cost-effective solutions to increase your profits and reduce your total operating costs.

System Automation

System assessments usually identify the wastes resulting from a lack of appropriate controls. Our complete system automation solution can reduce energy costs and stabilizes pressure.





Ingersoll Rand Inc. (NYSE:IR), driven by an entrepreneurial spirit and ownership mindset, is dedicated to Making Life Better for our employees, customers, shareholders, and planet. Customers lean on us for exceptional performance and durability in mission-critical flow creation and industrial solutions. Supported by over 80+ respected brands, our products and services excel in very complex and harsh conditions. Our employees develop customers for life through their daily commitment to expertise, productivity, and efficiency. For more information, visit www.IRCO.com.

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