



MSG[®] Centac[®] Centrifugal Air Compressor Systems

130-4,500 kW (175-6,000 hp)



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 centrifugal compressed air technologies and services. By focusing on you and your business, we provide collaborative solutions that make you successful, offering a total system approach to maximize efficiency and performance.

Take a Systems Approach

Delivering reliable compressed air to your facility goes well beyond the compressor itself. To maximize your return on investment, it is imperative to manage the entire lifecycle of your compressed air system. Your total cost of ownership can be maximized at any point—from design to operation 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 optimization.



Let's Get Started Together

Ingersoll Rand Contracting Services Video





Purely Efficient Centrifugal Technology

Integrally geared centrifugal compressors represent the latest technology, offering significant advantages over outdated, less-efficient and more costly compressor designs. These advantages are inherent in the centrifugal design and translate into lower operating costs and a quick return on your initial investment.



The Importance of ISO Certified Class 0 Oil-Free Air

Using oil-free air prevents oil contamination of your system, eliminates costly waste disposal and reduces maintenance. Our MSC® Centac® centrifugal compressor product line has been engineered to produce oil-free air for more than 60 years. This certification officially acknowledges the ability of our compressors to produce 100% oil-free air per ISO 8573-1, providing you with enhanced quality assurance.



Why You Need Class 0 Air
Contamination Risk in the Food & Beverage Industry

Centrifugal Compressors Designed for Your Application

We offer a broad portfolio of reliable centrifugal products that will adapt to your application. With more than 40,000 centrifugal installations worldwide, on nearly every continent, Ingersoll Rand's products are proven in a number of different industries.



Food & Beverage
Minimize the risk for product contamination and spoilage



Textile
High-tech air jet looms require super clean 100% oil-free air



Oil & Gas
Robust centrifugal systems that meet API standards



Iron & Steel
Proven design to meet demanding manufacturing environments



Chemical
Achieve the highest purity to minimize risk of product liability



Utilities
Instrument quality air is too important to risk for utility applications



Download Our Whitepaper
Maintaining Quality Compressed Air in the Pharma Industry

AIR COMPRESSORS

MSG CENTAC COMPRESSORS

Inefficiencies, contaminants and breakdowns result in costly downtime, product liability or damage to your brand reputation. MSG Centac centrifugal compressors help eliminate these problems, while reducing total lifecycle costs.



MSG CENTAC C800

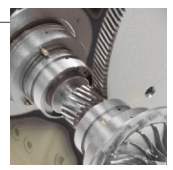
Engineered for Performance

MSG Centac centrifugal compressors are completely packaged on a common base to reduce footprint and are available in a number of configurations.

MSG Centac

Long-Life Components

Long-life rated gears and hydrodynamic bearings enhance durability and maximize the compressor's uptime



Advanced Design

Impeller and diffusers are designed to provide constant pressure control, maximizing efficiency and extend turndown



Simplified Maintenance

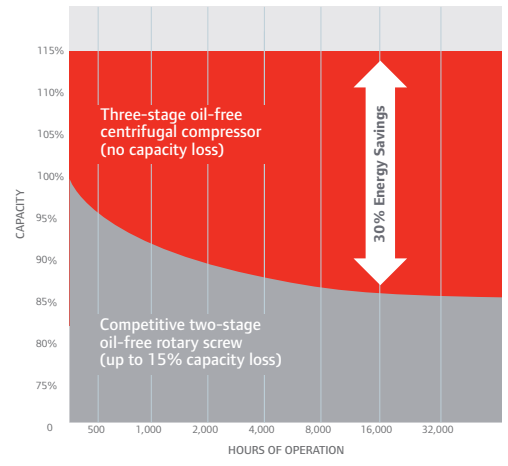
The MSG Centac's package design provides easy access to system components for faster and simpler maintenance




Learn More
Interactive MSG Centac C800 Product Tour

Greater Capacity for Greater Efficiency

Ingersoll Rand MSG Centac centrifugal compressors offer up to a 15% capacity advantage over competitive two-stage, oil-free compressors. This advantage increases to as much as 30% as our capacity remains constant, while competitive capacities decrease by up to 15%.




MSG CENTAC C400



MSG CENTAC C700



MSG CENTAC C1000



MSG CENTAC C3000

MSG CENTAC LOW PRESSURE

MSG CENTAC HIGH PRESSURE

MSG Centac Features and Benefits

Reliability

- **Fewer non-wearing moving parts** ensure consistent performance, long life and less downtime
- **Dynamically balanced rotor assemblies** ensure extremely low vibration
- **Efficient hydrodynamic non-contact bearings** offer virtually unlimited life

Efficiency

- **Multi-stage compressors** combine performance with energy savings
- **Advanced impeller design** provides maximum pressure control over the widest operating range
- **High-performance, low-pressure drop cooling system** minimizes losses, maximizes compressor efficiency and turndown range
- **Fully floating, non-contact carbon ring seals** prevent air leaks and oil from migrating into the compressed air stream

Productivity

- **Fully-tested, ready-to-install package** with easy access to all critical components simplifies installation and maintenance operations
- **Simplified compressor design** provides longer intervals between maintenance
- **Intuitive, energy-saving controller** can be remotely accessed from virtually anywhere



View Products

See Our Entire Portfolio of Centrifugal Products

MSG Centac Performance			
Model	Standard Input Power kW (hp)	Discharge Pressure bar g (psig)	Inlet Flow m ³ /min (cfm)
C400	250-480 (350-600)	3.5-8.6 (65-125)	45-65 (1,600-2,300)
C700	270-700 (350-900)	3.1-10.3 (45-150)	55-115 (1,900-4,000)
C800	350-950 (450-1,300)	3.1-13.1 (45-190)	65-150 (2,300-5,300)
C1000	600-1,300 (800-1,750)	3.1-10.3 (45-150)	135-220 (4,700-7,800)
C3000	1,200-2,600 (1,600-3,500)	3.1-10.3 (45-150)	270-450 (9,500-15,000)
5CII	1,800-4,500 (2,400-6,000)	3.1-10.3 (45-150)	350-800 (12,000-28,000)
Low Pressure	130-1,750 (175-2,350)	1.0-2.1 (15-30)	40-500 (1,500-18,000)
High Pressure	600-3,400 (800-4,500)	11.0-42.1 (160-610)	50-425 (1,800-15,000)



MAINTENANCE PLANS

MAINTENANCE PLANS

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.



The CARE Service Program Advantage

Compressed air is critical to your operation. A proper maintenance strategy is crucial to avoiding unplanned, unbudgeted downtime and production interruptions. By choosing an Ingersoll Rand CARE service program, you are investing in your future with a trusted partner.

Depending on your centrifugal compressor system maintenance requirements, choose from one of these two programs:

PackageCARE™ Total Protection, Eliminate the Risk



- Greatest value for asset management
- Transfer operational risk for up to 10 years
- Includes all scheduled maintenance
- Predictive and analytical tools prevent production interruptions

PlannedCARE™ Comprehensive Parts and Service Coverage



- Predictable, on-time planned maintenance
- Preventative diagnostics to catch potential problems
- Up to 5-year coverage on major airend components in new centrifugal compressors



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 145 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.



Your productivity can be reduced due to ongoing inefficiencies throughout your facility. Use our remanufacturing and system optimization services as economic alternatives to purchasing new equipment to meet long-term sustainability goals.



Remanufacturing Services

Replacing compressed air equipment can significantly impact your bottom line. Fortunately, Ingersoll Rand's remanufactured products can reduce that impact with an economic and environmentally sustainable alternative to new equipment.

Our qualified technicians have extensive knowledge and experience in parts restoration and remanufacturing of centrifugal air compressors, including:

- Compressor overhaul
- Compressor airend remanufacturing
- Clean and dynamic balance of all rotating assemblies
- Cooler refurbishing
- Remanufactured and engineered packages
- Performance re-rates

You will receive a 'like-new' piece of equipment while reducing equipment costs, downtime and energy usage...as well as taking advantage of the latest technology advances.



Replace or Remanufacture?

Learn How to Restore Your Compressor

System Optimization

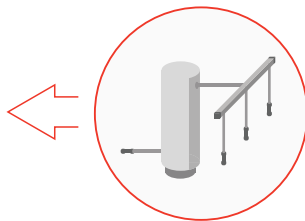
The problems associated with operating a modern compressed air system are fairly complex. That's where Ingersoll Rand assessment solutions can help. We'll develop cost-efficient, long-term solutions that meet your ROI goals, increase productivity, improve air quality and enhance system reliability.



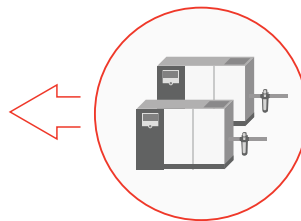
Our rigorous assessment process focuses on long-term sustainability for your entire facility.



Demand



Transmission



Supply

1. Identify Goals
2. Measure & Collect Data
3. Analyze & Identify Root Cause
4. Recommend & Implement Solutions
5. Validate and Sustain Results

Centrifugal Capability Testing

Specifically designed to optimize centrifugal systems, capability testing collects relevant data at current conditions and compares it to the original design. You'll understand the health of your compressor and be able to intelligently budget for immediate and future maintenance needs.



Know the Health of Your Compressor?

Learn More About Capability Testing

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 heat 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 maximizes 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 maximize energy savings or non-cycling dryers for a lower initial cost.

Refrigerated Dryer Features

- **Dew points as low as 3°C (38°F),** meeting 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.

AIR FILTRATION

In-line filters reduce contamination in your air stream to help protect critical processes and valuable equipment. Without effective filtration, you could be subject to increased scrap, poor quality and additional maintenance. Ingersoll Rand filters minimize pressure drop, helping to reduce energy cost.

Better Efficiency

Our advanced in-line compressed air filters reduce contamination in your air stream to help protect critical processes and valuable equipment. Rigorously tested and engineered with superior components, they deliver low pressure drop to improve energy efficiency, and will provide years of reliable performance and consistently high quality air.



Long-Life Coalescing Filters

Ingersoll Rand's NL Module coalescing filters provide compressed air with minimal pressure drop of 0.5 psid for long-term cost savings. These maintenance-free filters feature a high-quality design that extends element life to 10 to 15 years, providing a much longer service life and higher quality air than conventional in-line filters.



Save Energy and Money

Ingersoll Rand electronic and pneumatic no-loss drains eliminate air loss while removing condensate from your compressed air system.

Heavy-Duty No-Loss Drains

No-loss drains are the most reliable, durable and energy-efficient way to remove condensate from air compressors and system components. Choose from two types of drains, depending on your requirements.

Electronic No-Loss Drains (ENLD)

- **Product range** handles air systems up to 1,415 m³/min (50,000 cfm)
- **Operates on demand**, zero air loss design for energy savings
- **Reliable design** prevents clogging and other operational failures
- **High pressure solutions** with max operation up to 63 bar (915 psi)
- **Simplified maintenance** for quick servicing


Pneumatic No-Loss Drains (PNLD II)

- **Product range** handles air systems up to 850 m³/min (30,000 cfm)
- **Full-port ball valve** reduces clogging
- **Fully pneumatic** drain that requires no electricity
- **Stainless steel float** prevents deterioration and corrosion
- **Multiple ¾" inlet orifices** for ease of installation
- **Clear body design** for easy cycling verification

Learn More
See All of Our No-loss Drain Options



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.



**Easy Installation,
Lower Cost**

SimplAir, the quick and efficient alternative to traditional piping.

SimplAir®

Typical steel pipe distribution systems can be costly and labor intensive. Our SimplAir® piping system is your cost-effective alternative for air, inert gas and vacuum lines. Durable aluminum piping, coupled with a large range of “quick-connect” fittings, enable fast, easy installation as well as lower cost of ownership.

SimplAir Features

- **High pipe-to-fitting engagement** increases structural integrity
- **Lightweight and easy to handle** - up to 90% lighter than steel piping
- **Recyclable aluminum** piping material
- **Corrosion-resistant** materials help minimize turbulence and pressure loss
- **Easy to modify** for system expansion



Simplify Installation

Learn How SimplAir Lowers Your Cost of Ownership




Advanced Centrifugal Control

An easy to use compressor controller will make a huge difference in managing your system efficiency as well as your bottom line. Our Xe-145F centrifugal controller’s intuitive, high-resolution color display makes important compressor information easy to find. We also offer multiple retrofit options to upgrade your existing centrifugal compressor.

Xe-145F Controller Features

- **Intuitive and easy to use interface** with high-resolution display
- **Remote access and full control** through Ethernet, service port, remote contacts or Modbus
- **Built-in constant pressure control auto-dual control logics** ensure system reliability by precisely managing discharge pressure to optimize energy consumption
- **Automatic email notifications** of system warnings and trips
- **Advanced control algorithms** help lower energy consumption and reduce mechanical stress
- **Integrated reporting capabilities** for comprehensive system data
- **Energy Smart Set Point (ESS)** adjusts settings to balance and share loads between multiple compressors in the same system



**Connectivity,
Communication and
Control**

The intuitive, web-enabled Xe-145F gives you total control of your centrifugal compressor system from virtually anywhere.



Be in Control

See Our Automation and Control Solutions



Tectrol Gold III Lubricant

Our premium synthetic lubricant, specifically blended for MSG Centac compressors, provides up to 3 years of operating life (24,000 hours), reducing fluid disposal frequency and costs.



Installation Solutions

From receiver tanks to couplings, our installation solutions offer everything you need to deliver clean, dry air from the compressor to your point of use.



Systems Automation

From inline flow controllers to fully integrated system automation, our control solutions deliver reliable, critical system access to lower energy costs.



OEM Replacement Parts

We have the exact genuine OEM parts you need—from a replacement bullgear to a missing bolt—with extensive inventories maintained in strategic locations around the world.



Don't Settle for Knock-Offs
Buy Genuine OEM Replacement Parts

Centrifugal Compressed Air Systems from Start to Finish

Maximize your total cost of ownership with Ingersoll Rand's extensive knowledge of compressor technologies, services, parts and accessories—**we are your trusted partner in compressed air systems.**





Ingersoll Rand (NYSE:IR) advances the quality of life by creating comfortable, sustainable and efficient environments. Our people and our family of brands—including Club Car®, Ingersoll Rand®, Thermo King® and Trane®—work together to enhance the quality and comfort of air in homes and buildings; transport and protect food and perishables; and increase industrial productivity and efficiency. We are a \$14 billion global business committed to a world of sustainable progress and enduring results. For more information, visit www.ingersollrand.com.



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