

Centrifugal Compressors for the Petrochemical Industry

From process gas to critical utility air compression, Ingersoll Rand offers highly reliable centrifugal compressors, optimized for efficiency and compliant with the industry's toughest standards.



Custom Solutions for Your Application

Reliable TURBO-AIR® and MSG® centrifugal compressed air systems are designed to operate in the harsh environments found in critical petrochemical production processes. Our custom package designs will help you lower installation and maintenance costs, while meeting applicable industry standards.

Typical compressed air and gas applications include:

Production Processes

- Olefins
- Aromatics
- Fertilizer
- Methanol

Gas Applications

- Ethylene
- Propylene
- Butylene
- Syngas
- Refrigeration
- Hydrogen

Air Applications

- Main Process
- Utility
- Decoking
- Conveying
- Flare Assist

Specifications	
Feature	Data
Flow Range	Up to 60,000 cfm (1,700 m ³ /min)
Pressure Range	Up to 1,450 psi (100 bar)
Gases	Propane, propylene, nitrogen, mixed refrigerants and more
Certifications & Classifications	ISO 9001, 29001 & 14001, API, CE, PED, ATEX, CHINA CODE, GOST, KOSHA, ASME

Why Choose Ingersoll Rand Centrifugal Compressors?

Features	
Attribute	Description
High Reliability and Availability	Custom material selection to suit environment or process gas components and conditions
	Reliable non-wearing parts leads to longer intervals between scheduled maintenance
	Highly resilient to damage caused by surging
	Industry-tested proven designs
Optimized Efficiency	Advanced control systems improve efficiency and meet SIL requirements
	Custom designed 5-axis milled impellers using latest CFD and FEA software
	Up to three pinions per compressor to optimize impeller aerodynamics
	Inlet guide vanes offer efficient flexible operation
Stringent Industry Compliance	State-of-the-art PLCs ensure efficient operation with high-availability
	Designed to meet API 617 or API 672, ASME and CE codes and standards as required
	Customizable to meet your specifications
Process and Environmentally Friendly	Compliance to local codes and standards as needed
	Variety of sealing options to reduce valuable product loss
	Advanced seal support systems prevent damaging gas condensate from entering the seals
Low Cost Installation and Maintenance	Atmospheric separation between scroll and gearbox prevents oil from entering process flow
	Inherently vibration free, requiring minimal foundation work
	Custom package layouts ensure ease of access to maintenance components
	Pre-assembled delivery on skids minimizes overall site installation time and cost
	Horizontally split gearbox and small rotor size greatly reduce maintenance

Compressor Features

Up to 6 stages on 3 rotors

Flexible package options to simplify installation, including a variety of engineered packaging configurations, single-point lift and packaging at regional locations around the world

State-of-the-art instruments and controls, including proprietary integrated surge control, trip voting, load sharing, start-up logic, monitoring and protection, as well as remote monitoring and diagnostics available

Water or air-cooled heat exchangers supplied per project requirements, including closed-loop cooling water systems for a complete solution

Horizontal split gearbox and bearing assembly simplifies inspection and maintenance

Variety of drivers available, including electric motors (API 541), steam turbine (API 611 or 612) and gas turbine

Integral or standalone lubrication systems designed to customer specifications and/or API 614

Integral or standalone seal support system tailored to your specific gas process

Dry disc or diaphragm coupling according to customer specifications and API 671



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