



MSG[®] 12/14/16 Centrifugal Air & Gas Compressor

MSG compressors are custom designed and built for individual customer needs for a variety of applications. Our MSG style compressors are manufactured with a highly engineered air flow components, designed for easy, low-cost installation and operation.

Features

MSG[®] INTEGRALLY GEARED CENTRIFUGAL COMPRESSORS

MSG (multi-stage geared) compressors offer outstanding design flexibility. MSG compressors are application engineered with numerous available configurations:

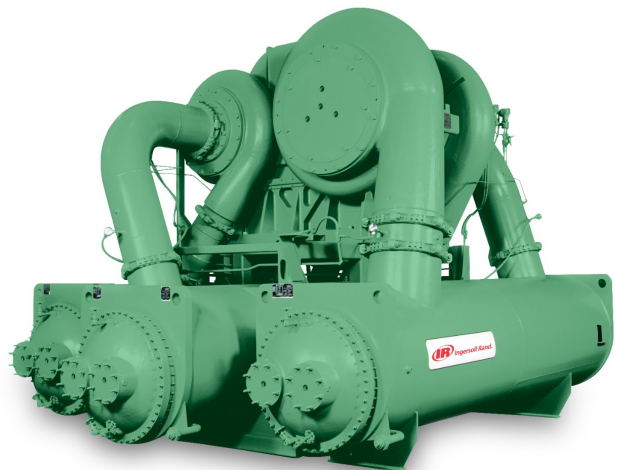
- Flows from 70 to 3800 m³/min (2500 to 135,000 CFM)
- Input capacity to over 18,650 kW (25,000 hp)
- Discharge pressures to 100 barg (1450 psig)

FEATURES

Oil-Free Air and Gas

- Prevents system contamination
- Reduces the potential for compressed air pipeline fires caused by oil carryover
- No costly waste disposal associated with oil-laden condensate
- Eliminates the expense and maintenance of oil separation filters at the discharge

High Reliability



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- MSG centrifugal compressors are designed to be extremely reliable due to: Conservative high-quality gear design Long-life pinion bearing design Thrust loads absorbed at low speed Stainless steel compression elements
 - Conservative high-quality gear design
 - Long-life pinion bearing design
 - Thrust loads absorbed at low speed
 - Stainless steel compression elements

Low Compressor Operating Life Cycle Cost

MSG centrifugal compressors provide better overall operating efficiency than positive displacement or other centrifugal compressors.

- Excellent efficiencies at full load, part load and no load
- Low maintenance cost
- Increased uptime from high-reliability design (limits the need for multiple unit installations for basic reliability reasons)
- No sliding or rubbing parts in the compression process that can cause wear and thereby efficiency loss



Easy Operation/Maintenance

- State-of-the-art MAESTRO control systems
- Fully automated operation for any process conditions
- Machine self-diagnostics
- Compression elements do not wear or require periodic replacement
- Accessible horizontally split gearbox for quick inspection
- Removable intercooler and aftercooler bundles for easy cleaning

Simple Installation

- Compressor, lubrication system, intercoolers, shaft coupling, coupling guard, interconnecting piping, etc. on a common base
- Easy installation with no special foundation requirements
- Easy component accessibility
- Site connection point flexibility
- Reduced floor space required
- Dynamic compression process is pulsation-free, so installation of additional dampening equipment is not required.

APPLICATIONS

Engineered Air Applications

- Industrial gases
- Instrument air
- American Petroleum Institute (API) standards
- Soot blowers
- Large plant air
- Power industry related

Gas Compressor Applications

- Fuel gas boosting
- Natural gas gathering
- Hydrocarbon refrigeration gas
- Carbon monoxide
- CO₂ (wet or dry)
- SynGas
- Low molecular weight recycle gas
- High-pressure nitrogen
- Landfill gas

MSG centrifugal compressors are exceptional by design.

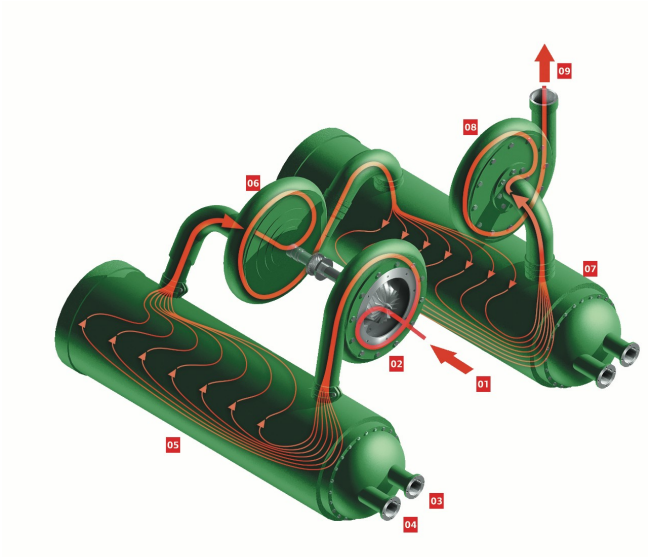
- One, two or three rotors, up to six stages per gearbox
- Horizontal splitline(s) for easy access to parts

GAS FLOW ARRANGEMENT

MSG centrifugal compressors feature an advanced arrangement of gas flow components. Advantages of this arrangement include:

- Directed gas movement to reduce turbulence induced friction
- Air is cooled after every stage to provide high isothermal efficiency

Air Flow Diagram 01: Compressor inlet 02: First-stage compressor volute 03: Coolant in 04: Coolant out 05: First-stage intercooler 06: Second-stage compressor volute 07: Second-stage intercooler 08: Third-stage compressor volute 09: Compressor discharge



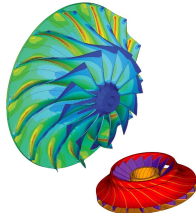
Model Specifications

Specification	Metric	Imperial
Standard Input Power	up to 11,185 kW	up to 15,000 hp
Discharge Pressure	up to 100 barg	up to 1450 psig
Inlet Flow	850 to 1670 m3/min	30,000 to 59,000 CFM

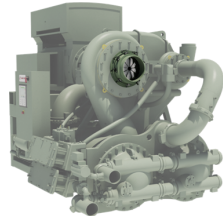
Parts & Accessories



MSG® Centrifugal Compressor Replacement Parts



Upgrade - Aerodynamic Enhancements for Centrifugal Compressors



Upgrade - Variable Inlet Guide Vanes for Centrifugal Compressors



Centrifugal Oil Filters



Field Overhaul Services



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.