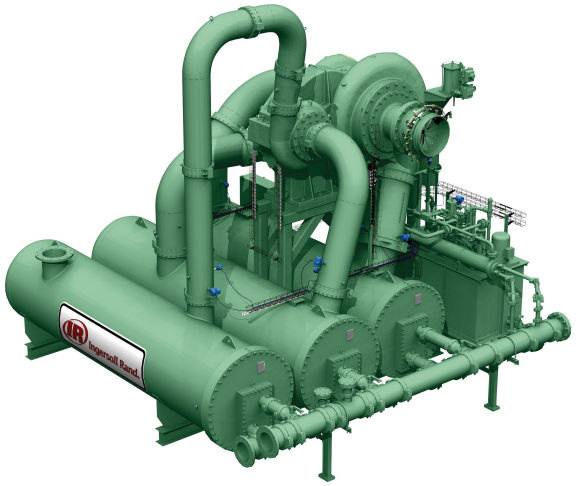
MSG® LMAC™ 30 Centrifugal Air Compressor

The MSG LMAC is an integrally geared centrifugal compressor that has been optimized for applications in air separation units (ASU) as the main air compressor (MAC). The compressor package is designed for ease of installation, operation and maintenance, and to comply with various design code requirements for global installations. The MSG LMAC is available in three models that have been aerodynamically optimized to serve as the MAC in ASUs producing 150 to 400 tons of oxygen per day (TPD).

Features

AIR SEPARATION PROCESS

The volumetric composition of dry atmospheric air is ~78% nitrogen and ~21% oxygen, with the remaining ~1% being made of argon, carbon dioxide and trace amounts of other gases. These gases can be separated in an air separation process where the air is compressed, cooled and separated by molecular weight in a "cold box." Once separated, the gases are again compressed for storage, transportation, or further processing. Ingersoll Rand has the technologies and resources to provide the main air compressor (MAC), booster air compressor (BAC), nitrogen gas compressor (GAN), nitrogen recycle compressor (NRC), and argon gas compressors.



The MSG LMAC is designed specifically to fulfill the role of the MAC with optimized aerodynamic efficiency. Interstage coolers are implemented after each stage of compression to remove the heat of compression and achieve high isothermal efficiency. The MAC is the heart of the ASU; its efficient and reliable operation is critical to the success and viability of the ASU project.

HIGHLY EFFICIENT DESIGN

MSG LMAC compressors are designed to deliver peak performance throughout the entire compressor operating range and feature:

- Custom, 5-axis milled impellers for process-specific aerodynamic designs
- Inlet Guide Vanes (IGV)

- High-efficiency intercoolers and optional aftercooler

ROBUST MECHANICAL DESIGN

MSG LMAC compressors are designed to withstand the rigors of a long and demanding service life with:

- Tapered rider ring thrust collars to absorb loads at low speed
- Tilting pad radial bearings
- AGMA 13 rated bullgear and pinion gears

STANDARDIZED COMPRESSOR PACKAGE

The highly accessible, standardized design allows for shortened delivery times and ease-of-installation/ maintenance by providing:

- Standard engineering drawings
- Package-mounted intercoolers and terminal box/ MAESTRO™ Universal control system
- Horizontally split gearbox
- Side-mounted lubrication console with duplex oil filters standard
- Compressor sub-base

ADDITIONAL APPLICATIONS

In addition to air separation, the MSG LMAC can be deployed for efficient, reliable service in several other applications, including:

- Aerospace
- Automotive
- Electronics
- Fertilizer
- Glass
- Life Sciences
- Mining
- Petrochemical
- Pharmaceuticals
- Power Generation
- Steel

Model Specifications

Specification	Metric	Imperial
Standard Input Power	up to 4475 kW	up to 6000 hp
Discharge Pressure	up to 9.5 barg	up to 140 psig
Inlet Flow	583 to 833 m3/min	20,600 to 29,400 CFM

About Ingersoll Rand Inc. Ingersoll Rand Inc. (NYSE:IR), driven by an entrepreneurial spirit and ownership mindset, is dedicated to helping make life better for our employees, customers and communities. Customers lean on us for our technology-driven excellence in mission-critical flow creation and industrial solutions across 40+ respected brands where our products and services excel in the most 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.