MSG® TURBO-AIR® NX 5000 Centrifugal Air Compressor

Designed with the customer in mind, Ingersoll Rands MSG® TURBO-AIR® NX5000 centrifugal compressor provides industry leading efficiency and lower overall total cost of ownership. Its innovative features deliver maximum uptime, hassle-free operation, and reduced maintenance needs. The MSG® TURBO-AIR® NX compressor series is packaged on a common base for easy installation and available in many configurations to meet your precise needs.

Features

FEATURED IMPROVEMENTS

- Highly efficient aerodynamic components (inlets, impellers, scrolls and diffusers) combined with low mechanical losses and power conserving inlet throttle control (IGV) provide up to 5% better specific power than competitive models.
- Integrated structural base provides a foundation for the main driver and serves as a support platform for the side-mounted lube system/reservoir
- Side-mounted lube reservoir with top-mounted components and standard duplex filters ease maintenance requirements and provide continuous, uninterrupted operation.
- Gearbox inspection covers offer simple accessibility for quick field inspection and onsite assessment of rotating assembly health.
- Split pinion bearing and seal design allows for easy onsite inspection.
- Next generation intercoolers have been optimized for specific flow and pressure requirements and include a straight tube design that is roddable-in-place

- Easy to access dual condensate connections (two connections for each cooler) simplifies and reduces onsite piping and installation
- OEM-optimized cast-in water manifold, with provisions for optional patent-pending integral trim valves all tied together at a single-point customer water connection
- Expertly optimized stage and gas passages utilizing computational fluid dynamics (CFD)

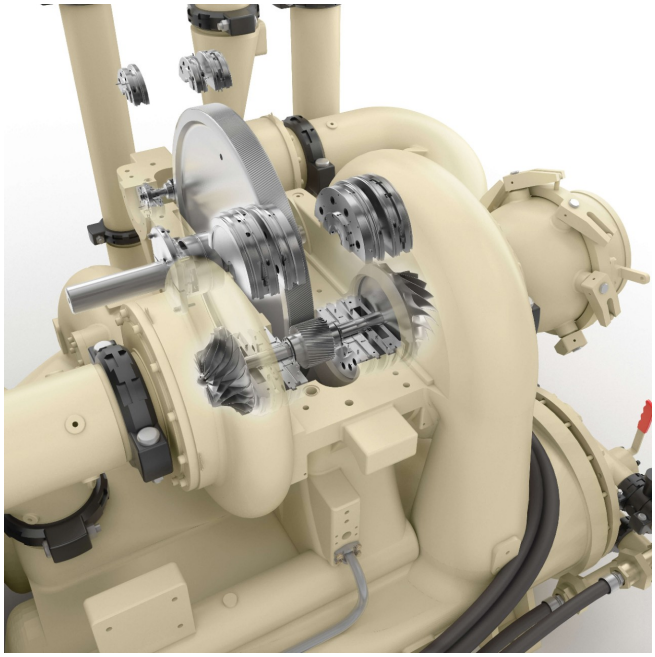
Class 0
ISO 8573
Oil-Free Air

ISO CERTIFIED CLASS ZERO

- Our MSG TURBO-AIR 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, providing our customers with enhanced quality assurance.

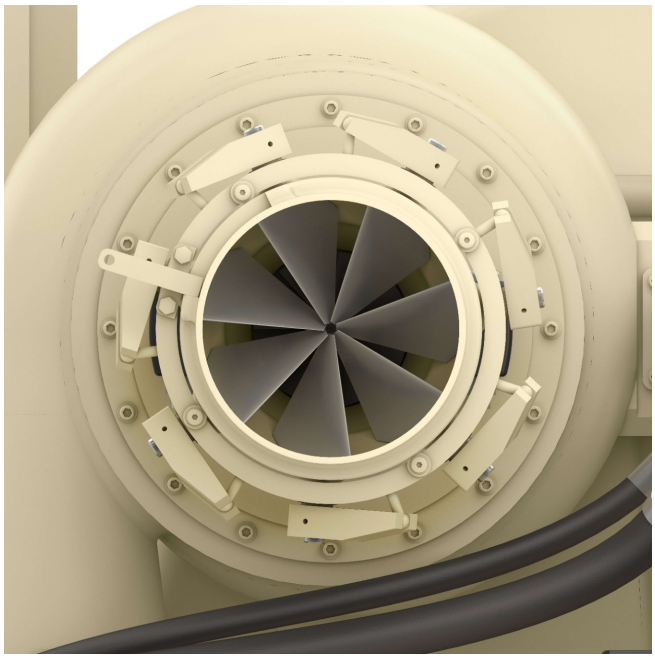
HORIZONTALLY SPLIT GEARBOX, BEARING AND SEALS

The horizontally split gearbox design ensures easy access to major rotating elements, bearing and seals. Conveniently located on the gearbox cover, gearbox inspection ports make quick visual checks of gear and bearing conditions possible.



INLET THROTTLE GUIDE VANE

Newly designed inlet guide vane assembly provides best-in-class turndown range coupled with low pressure drop to optimize overall system efficiency at multiple operating points.

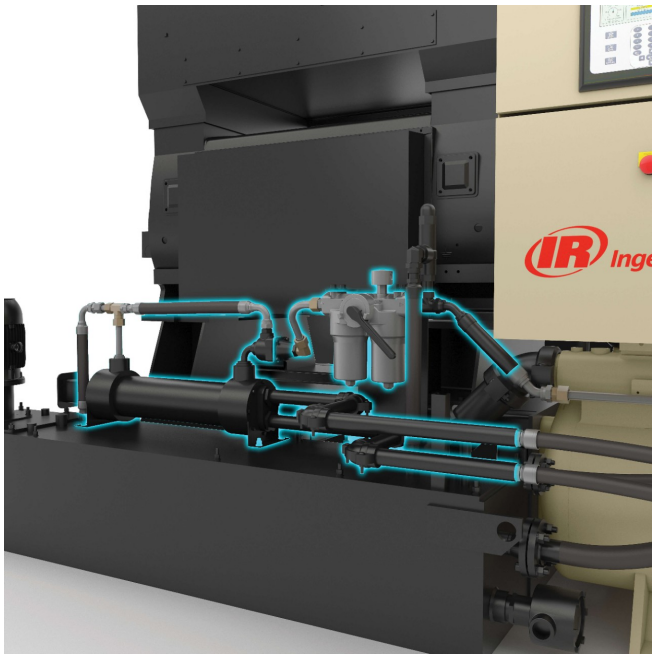


COOLING SYSTEM

Standard 3/8 straight tube coolers provide for a low maintenance heat transfer system with uncompromising performance, low pressure drop and very low cooling water usage. Coolers are designed to ASME Section VIII pressure vessel code and are easy to access, inspect, and service. (Coolers are compliant with PED and GB codes as applicable).

LUBRICATION SYSTEM

Standard duplex oil filters maximize uptime by allowing for routine equipment maintenance without interrupting production. Side-mounted lube oil reservoir with top-mounted components and access port ensures easy access for periodic inspection, maintenance and monitoring



LOW TOTAL COST OF OWNERSHIP

Over time, the energy required to power a compressed air system is the largest cost associated with a compressor; particularly in todays fluctuating energy markets. That is why, to accurately determine the return on your investment, it is important to consider the total life-cycle cost of operating the compressor, including the initial investment, energy consumption and maintenance costs.
The power savings delivered can significantly speed up the payback on your initial investment, and the savings continue to build the more you use the MSG TURBO-AIR NX 5000.

COMPARISON: MSG TURBO-AIR NX 5000 VS OTHER COMPRESSORS

	MSG TURBO-AIR COMPRESSORS	OTHER COMPRESSORS
LOW MAINTENANCE	• Compression elements do not wear or require periodic replacement • Oil filter elements are easily replaced • Bearings designed for extended life	• Require regular maintenance and periodic replacement of air ends • Result in high operating expenses and significant machine downtime
OIL-FREE AIR	• 100% oil-free per ISO 8573-1 certification • Prevent contamination of system	• Oil filters must be installed at discharge • Potential for oil carryover that fouls the process
RELIABILITY	• Centrifugal compressors are proven to have a long mean time between failures (MTBF), and independent research has shown an industry-leading availability of 99.7% • Conservative high-quality gear design	• Contacting compression elements are subject to wear • Limited rotating element life • Designed-in wearing items to generate aftermarket revenues
OPTIMUM CONTROL	• Automatic operation for any operating condition • State-of-the-art MAESTRO™ suite of controls • PLC control available	• Limited control capability • Costly, high-maintenance variable speed configurations
NO VIBRATION	• Essentially vibration-free • No special foundation is required	• Special foundations needed to handle heavy weight • Precautions must be taken to prevent transmission of vibration to other equipment

Model Specifications

Model	Nominal Power kW (hp)	Discharge Pressure barg (psig)	Flow m3/min (cfm)
NX5000	600-1050 (800-1400)	2.5-14.5 (35-210)	125-210 (4500-7500)

Parts & Accessories

MSC® TURBO-AIR® Centrifugal Compressor Replacement Parts

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.