



# MSG<sup>®</sup> TURBO-AIR<sup>®</sup> 3000 Centrifugal Air Compressor

The MSG TURBO-AIR 3000 was built on a standard frame, featuring highly-engineered air flow component. It is designed for easy, low-cost installation and operation. The MSG TURBO-AIR 3000 was designed with a built-in aftercooler that eliminates the need for a separate pipeline type cooler, and a packaged check valve for faster installation and easier maintenance.

## Features

### COMPONENTS

- **Impellers:** Five-axis-milled impellers designed and manufactured with advanced techniques and methods
- **Vaned Diffusers:** Optimized vane design and placement for increased efficiency
- **Lubrication System:** Self-contained, low-pressure lubrication system
- **Intercoolers/Aftercooler:** Water-in-tube intercooler and aftercooler bundles slide out for easy inspection and cleaning
- **Advanced Pinion Bearing Design:** Designed for extended life and operation at any operational load.
- **Seals:** Designed with non-contacting and non-wearing labyrinth air and oil seals. No buffer air required for oil-free air. Do not require periodic replacement like carbon ring seals.
- **Horizontally Spilt Gearbox:** Allows for easy access when the jobsite maintenance policy requires periodic inspection.
- **Variable Inlet Guide Vanes:** Variable inlet guide vanes can offer power savings of up to 9% when operating in turndown. Inlet guide vanes impart a whirling motion to the inlet air flow in the same direction as the impeller operation, reducing the work input. Net power savings can be realized at



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## ISO CERTIFIED CLASS 0

The 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.



## 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 today's 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.

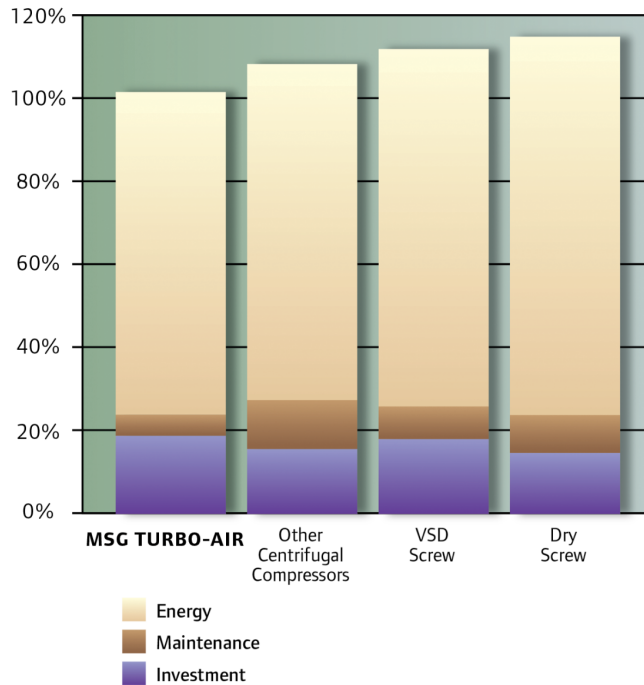
As the chart to the right demonstrates, the MSG TURBO-AIR 3000 provides some of the lowest total lifecycle costs of any compressor, including dry screw, variable speed drive (VSD) screw and other centrifugal compressors. Compared to other machines of similar capacity, MSG TURBO-AIR 3000 compressors are one of the most efficient oil-free compressors at full load, part load and no load.

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 3000.

## STANDARDS COMPLIANCE:

- ISO 8573-1 Class 0
- American Petroleum Institute (API)
- ISO 9001:2008
- ISO 14001:2004

Life-Cycle Cost Comparison (over 10 years of operation at 80% loaded)



## BENEFITS OF MSG TURBO-AIR COMPRESSORS:

### *ISO 8573-1 Certified Oil-Free Air*

- Prevents oil contamination of your system
- Limits the potential for compressed air pipeline fires caused by oil carryover
- Eliminates costly waste disposal problems associated with oil-laden condensate
- Eliminates the expense and associated maintenance requirements of oil-removal filters, since no oil enters the compressed air stream in the compressor

### *Simple Installation*

- True unloading capability helps to take advantage of opportunities for energy savings
- Increased uptime compared to alternative technologies translates into reduced operating life-cycle costs
- Reduced number of external connections
- Compact design reduces required floor space
- Meets OSHA's sound level requirements without sound enclosure

### *Low-Cost Operation*

- True unloading capability helps to take advantage of opportunities for energy savings
- Increased uptime compared to alternative technologies translates into reduced operating life-cycle costs
- Excellent part-load efficiencies for any operating load
- No sliding or rubbing parts in the compression process causing wear or efficiency loss

### *Easy Operation*

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- The MAESTRO Universal control panel provides a built-in web server, allowing compressor monitoring using your local intranet
  - Significant annual savings in operating cost by providing more precise control
  - Easy-to-use, automatic operation

#### *Easy Maintenance*

- Compression elements do not wear or require periodic replacement
- No oil-removal filters to clean or replace
- Accessible, horizontally split gearbox for quick inspection
- Intercooler and aftercooler bundles are easy to remove for inspection and cleaning
- Water-in-tube design intercooler and aftercooler allow for simple mechanical cleaning
- Maintenance-free dry coupling

#### *High Reliability*

- Thrust loads absorbed at low speed
- Non-contacting air and oil seals
- Stainless steel compression elements
- Conservative, high-quality gear design
- Extended life pinion bearing design
- 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%

## Model Specifications

Specification	Metric	Imperial
Standard Input Power	300-600kw	400-800hp
Discharge Pressure	3.5-10.3 barg	50-150psig
Inlet Flow	55-120m <sup>3</sup> /m	2000-4285cfm
Weight	5543 kg	12000lb

## Parts & Accessories



**MSG® TURBO-AIR® Centrifugal Compressor Replacement Parts**



**Field Overhaul Services**



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