

# Turbo Air® 2000 Centrifugal Compressor

Oil-Free Air



## Why Compression Systems?

### OIL-FREE AIR

- Prevents oil contamination of your system
- Removes 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

- Complete package including aftercooler, controls, motor, and lubrication system
- Minimum number of external connections
- Compact design requires minimum floor space
- Package starter options available in full voltage, WYE-Delta or solid state configurations

- Packaged discharge check valve to eliminate costly field installation
- Meets OSHA's sound level requirements without sound enclosure

### EASY OPERATION

- The new Maestro™ Suite of Controls offers three models with one that is sure to be in tune with the needs of your application. Whichever model you choose, Maestro™ provides the compressor industry's most advanced control system to improve efficiency and save energy dollars
- Easy-to-use, totally automatic operation

### HIGH RELIABILITY

- Thrust loads absorbed at low speed
- No wearing parts
- Non-contact air and oil seals
- Stainless steel compression elements
- Conservative high-quality gear design
- Unlimited life pinion bearing design

### EASY MAINTENANCE

- No wearing parts requiring periodic changes or replacement in the compression elements
- No oil removal filters to clean
- Accessible horizontally-split gear box for quick inspection
- Intercooler and aftercooler bundles are easily removed for cleaning
- Water in the tube design intercoolers and aftercooler allows for simple mechanical cleaning
- Maintenance free dry coupling

### LOWEST COST OPERATION

- True unloading capability. Energy savings and increased uptime translate to minimum operating life cycle costs
- Excellent part-load efficiencies for any operating load
- No sliding or rubbing parts in the compression process causing wear and thereby efficiency loss

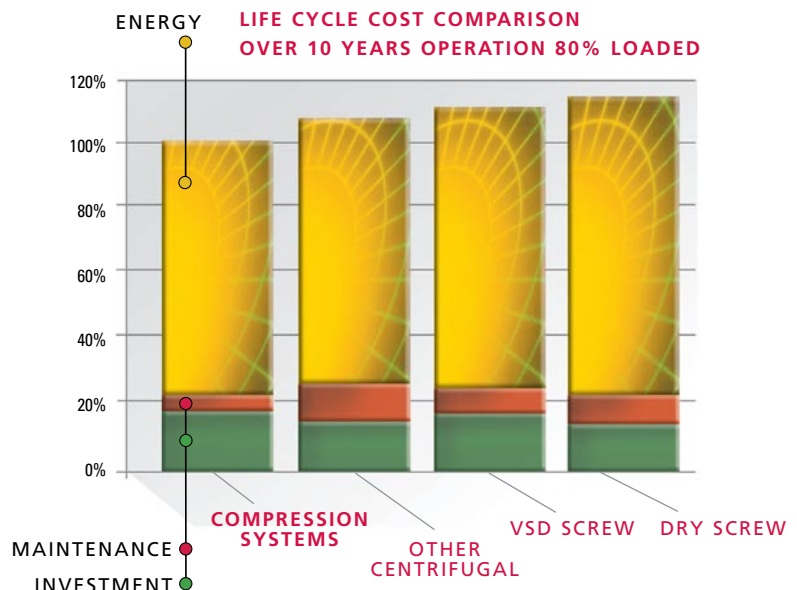
## Lowest Compressor Operating Cycle Cost

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 determine the best return on your investment over the life cycle of a compressor, it is important to consider the initial investment, energy and maintenance.

As the chart demonstrates, the Turbo Air® 2000 provides the lowest total life cycle cost of any compressor, including dry screw, variable speed drive (VSD) screw, and other centrifugal compressors. Keep in mind, VSD manufacturers often tout energy savings with unrealistic turndowns, in excess of 50%. At this point, you would be better off purchasing a smaller compressor and reducing your initial investment. Also, as screw compressors wear out, energy consumption increases.

Compared to other machines of similar capacity, Turbo Air® 2000 compressors are 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 Turbo Air® 2000.



# Turbo Air® 2000 Centrifugal Compressors

## THE MOST EFFICIENT PACKAGE AVAILABLE –

Easy, low cost installation and operation. Includes control center, built-in aftercooler and packaged check valve.

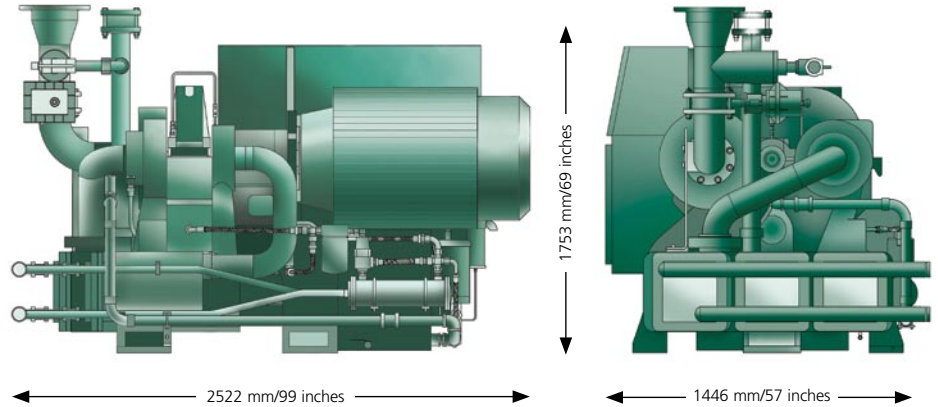
Compressor Motor Sizes Available:  
93-260 KW/125-350 HP

Compressor Discharge Pressure Ranges:  
5-10 BARG/50-150 psig

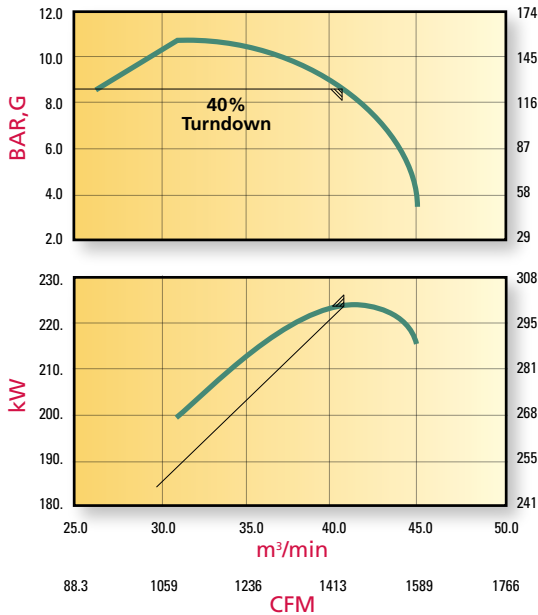
Compressor Flow Ranges:  
14.3-48.1 m<sup>3</sup>/min/505-1700 CFM

Compressor Weight:  
3400 kg/7500 lbs Typical (Motor Dependent)

## BASIC INSTALLATION ARRANGEMENT



## TYPICAL PERFORMANCE CURVE FOR 224 KW/8.6 BAR.G – 300 HP/125 PSIG

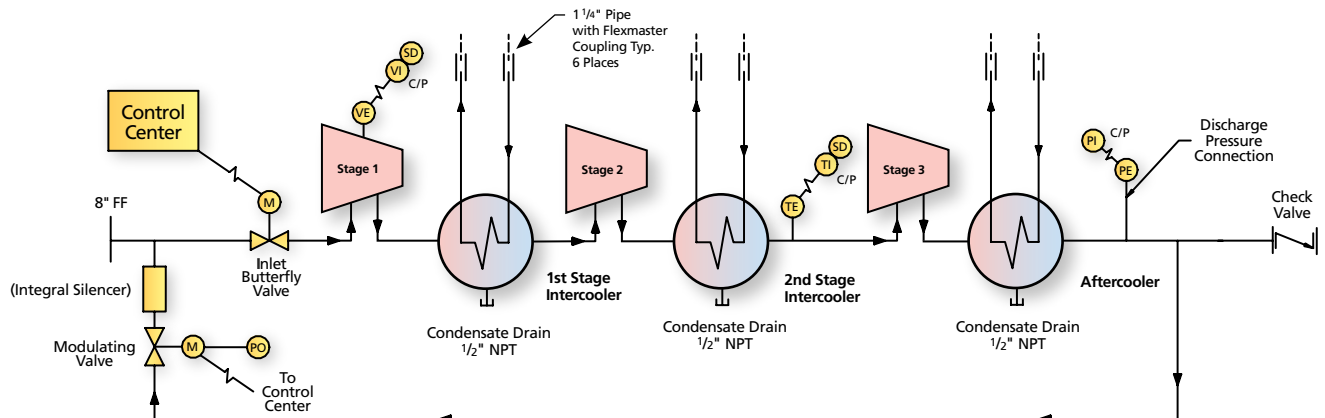


*Impellers – Advanced design combines the best features of a semi-radial backward leaning impeller.*



*Vaned Diffusers – Matching diffusers for superior efficiency.*

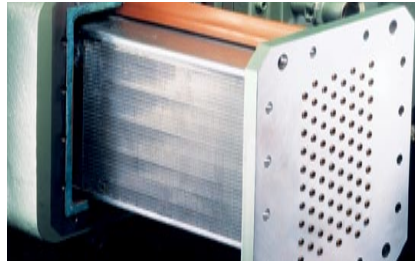
## TYPICAL P & ID



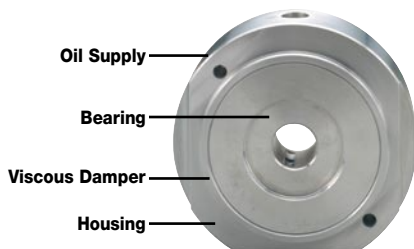
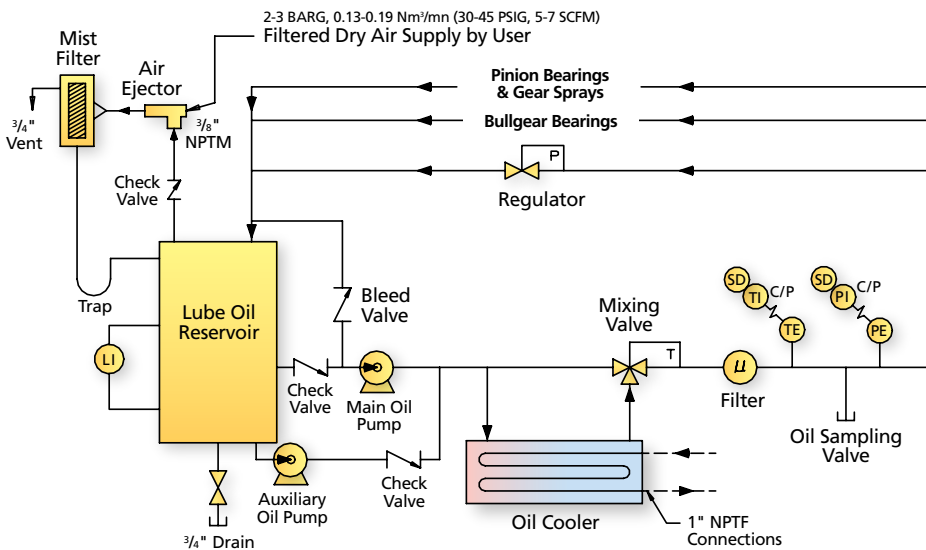
LUBRICATION SYSTEM



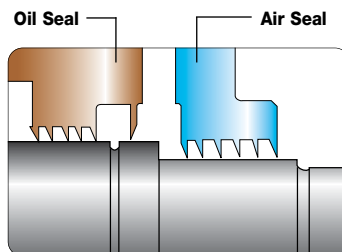
Self contained, low pressure lubrication system.



Intercoolers/Aftercoolers – Water-in-tube intercooler and aftercooler bundles slide out for easy inspection and cleaning.



Superior Pinion Bearing Design – For unlimited life and operation at any load.



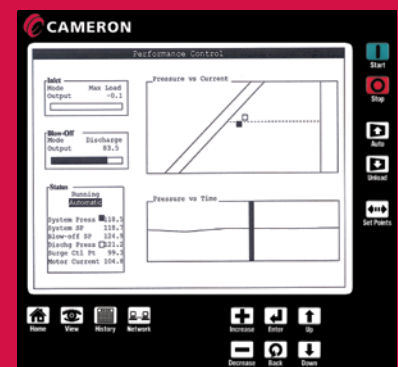
Seals – Non-contact, non-wearing labyrinth air and oil seals. No buffer air required for oil-free air. Eliminates the need for periodic replacement of carbon seals.



Packaged starter options available. Full voltage, WYE-Delta, or solid state.



Horizontal Split Gear Box – Allows for easy access when the customer's maintenance policy requires periodic inspection.



Maestro™ Series of advanced, programmable compressor control systems – The most efficient and reliable compressor control available.

## Control Systems

Cameron's Compression Systems can provide the right control system engineered for your applications.

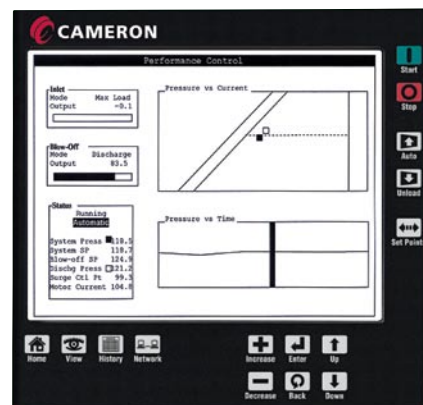
### MAESTRO™ SUITE OF CONTROLS

Maestro is the new suite of control systems from Compression Systems. The Maestro suite contains a model that is sure to be in tune with your needs.



### MAESTRO™ LEGEND

- Provides comprehensive control of your centrifugal compressor and can be configured to coordinate the operation of multiple compressors
- Maintain plant pressure to within 0.07-0.14 bar/1-2 PSI, which allows overall pressure reduction to improve efficiency and reduce air leakage losses, saving energy dollars



### MAESTRO™ PLC

- Utilizes an open architecture Allen Bradley PLC which enables you to use off-the-shelf components that match other panels in your plant
- Available in three control methods: Constant Pressure, Auto/Dual, and Mass Flow



### MAESTRO™ EZ

- An economical control system for basic compressor operation
- A standardized PLC solution with broad built-in capability designed for simplified use



## Locations to Serve You Worldwide

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