

20-25
30-40-50
60-75
HORSEPOWER

ROTORCHAMP™ OF
CLEAN AIR GROUP
ROTARY SCREW COMPRESSORS



**SIMPLE DESIGN.
EXCEPTIONAL RELIABILITY.**



The leader in clean air compressor systems

Today's world demands oil-free air. Environmental concerns, government regulations and the evolution of manufacturing make it more of a necessity than ever.

Our challenge is to provide the most reliable compressors that deliver oil-free air with maximum efficiency. With decades of experience in oil-less design and manufacturing, we continue to bring you new ways to make your clean-air compressor system reliable and easy to use.

The new RotorChamp OF Series meets that challenge. A design that injects water directly into the compression chamber results in excellent sealing and cooling for more efficient and reliable operation. It eliminates the need for a second stage; its single-stage design concept provides the utmost simplicity and reliability.

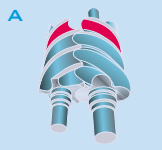
Drawing on experience in industries like healthcare, we've designed a very simple, efficient, oil-free screw compressor that uses water instead of oil as a sealant and cooling medium. The result is the ultimate oil-free screw compressor unit on the market today.



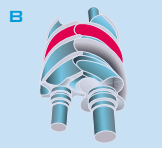
20-75 HORSEPOWER

100% CONTINUOUS DUTY CYCLE

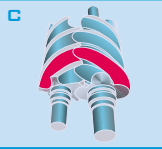
ROTARY SCREW COMPRESSOR SYSTEMS



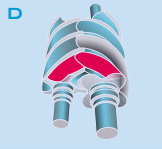
AIR INLET



AIR COMPRESSION



AIR COMPRESSION



COMPRESSED AIR DISCHARGE

ROTARY SCREW COMPRESSOR PRINCIPLE

SUPERIOR TECHNOLOGY

DOES YOUR PROCESS REQUIRE CLEAN, COOL, OIL-FREE COMPRESSED AIR?

The complexities associated with the removal of lubricant and excessive heat from compressed air are resolved by the RotorChamp OF – if oil and heat are not introduced in the first place, there is no need to eliminate them!

THE ROTORCHAMP OF DELIVERS – SIMPLY AND EFFECTIVELY!

OIL-FREE COMPRESSED AIR SOLUTIONS

The Champion RotorChamp OF water-injected rotary screw compressor delivers oil-free air with the design simplicity and performance of a single-stage compressor. This first practical application of water-injected technology in a rotary screw compressor is an efficient alternative to the dry, high-speed, multi-stage approach to oil-free air. The RotorChamp OF meets the need for critical applications where the supply of compressed air must be oil-free such as instrumentation air, food and beverage, electronics manufacturing, pharmaceutical and laboratory processes as well as chemical and coating production.

WATER INJECTION IS THE KEY

Water is simply injected into the compression chamber of the RotorChamp OF to effect near perfect sealing and to act as a direct contact coolant to effectively remove the heat of compression. Having nearly 2½ times the cooling capacity of oil, water is clearly a superior coolant – the result is cool operation, but more importantly, cool discharge temperatures. Clean, pure and reliable operation is made possible by an integrated REVERSE-OSMOSIS hyperfiltration system that purifies water before being admitted to the RotorChamp OF.



Reverse-Osmosis Hyper Filtration Establishes and Maintains System Purity

GY FOR OIL-FREE AIR.

EFFICIENT, INTELLIGENT DESIGN FOR CRITICAL APPLICATIONS

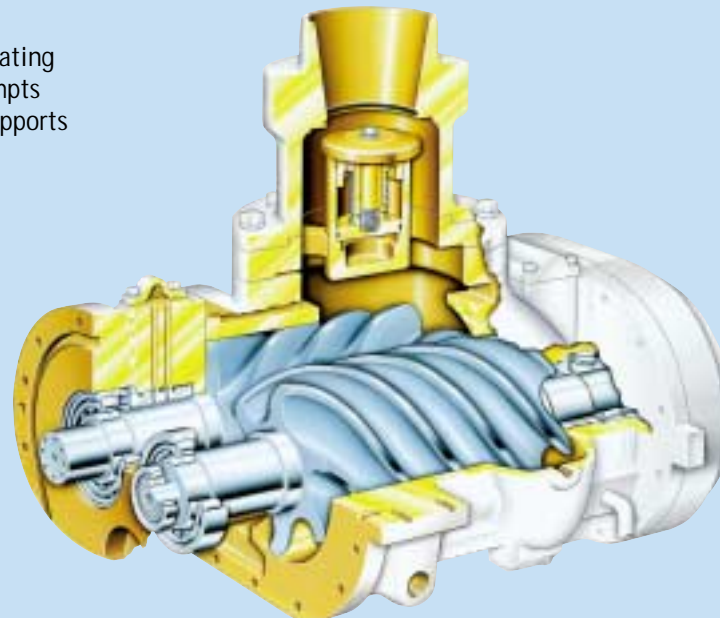
- Single-stage operation eliminates the need for and maintenance of oil coolers, interstage cooling and multiple condensate separation points
- Precisely machined stainless steel and bronze components are utilized for the ultimate in compatibility, durability and reliability
- An advanced, proprietary seal design separates the compression chamber from the lubricated components to create a "neutral zone" with atmospheric drain for superior reliability and redundancy
- The closed-loop coolant system automatically maintains the required operating level by admitting purified water from the reverse-osmosis storage vessel or by draining to ensure the most efficient operation under all conditions
- Load/No load and Modulated operating modes are available to meet the compressed air requirements of any application
- A powder-coated acoustic enclosure, which allows generous access to major service points, is standard equipment and provides low noise operation and simplified maintenance

AUTO SENTRY® W MICROPROCESSOR CONTROLLER

- Microprocessor based control ensures precise, reliable operation while simplifying operation and troubleshooting
- Full text display and complete compressor schematic provides concise machine operating parameters, status and maintenance prompts
- Control features automatic restart and supports multiple unit sequencing



Single Stage Water Injected Rotary Screw Compressor



PHARMACEUTICALS

LABORATORIES

FOOD PROCESSING

CHEMICAL PROCESSING

PLASTICS MANUFACTURING

ELECTRONICS PRODUCTION

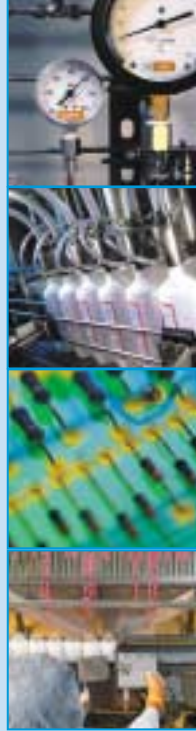
RESEARCH FACILITIES

MEDICAL DEVICE MANUFACTURING

AQUARIUMS



RotorChamp OF
20-30 HP



THE TECHNOLOGY LEADER IN OIL-FREE AIR.

STANDARD PRODUCT FEATURES

- Single-stage, water-injected, oil-free rotary screw compressor with load/no load or modulated capacity control
- 230/460 volt, 60 hertz, 3 phase, 1.15 SF, ODP EPAct efficient drive motor
 - RCOF 20-30 – 3600 rpm belt driven w/adjustable slide motor base
 - RCOF 40-75 – 1800 rpm C-flanged permanently aligned, direct coupled
- Low sound acoustic enclosure
- OSHA approved drive and fan guarding
- Rigid steel base with protective powder paint coating
- Heavy-duty 5 micron canister type inlet filter with remote inlet port
- 10 micron replaceable circulating water filter
- Automatic water management system with PLC controlled reverse-osmosis hyperfiltration water purification with replaceable elements
- Corrosion resistant piping and control tubing
- Low approach aftercooler with moisture separator
- Copper tube heat exchanger
- TEFC fan motor/s on air-cooled models
- Water-cooled RCOF 40-75
- ASME stainless steel separator/reservoir
- Discharge check valve
- NEMA 12 control center includes:
 - Auto Sentry® W controller
 - Mounted main motor and fan starter
 - Control voltage transformer
 - Emergency stop button
- Auto Sentry W microprocessor based, touch pad controller with full text display and comprehensive system diagnostics:
 - Constant run and Automatic start/stop modes of operation
 - Real-time display of system pressure, air end discharge temperature, total/loaded hours, operating mode, reservoir pressure, blowdown/automatic timer and water injection pressure

- Service/maintenance advisories include change air/circulating water filter, high/low discharge temperatures and lube service
- Protective shutdowns include change water filter, high discharge temperature, high reservoir pressure, high water level, float switch, motor overload and power failure
- Programmable auto restart
- Remote start/stop, alarm relay and auxiliary shutdown (optional on RCOF 20-30)

OPTIONAL EQUIPMENT

- Wye-Delta motors and starting
- NEMA 4 control center
- TEFC and Premium Efficiency motors
- Alternate voltages

PERFORMANCE/SPECIFICATIONS

Model	Motor HP	CFM @ 100 PSIG ⁽¹⁾	Sound Level dBA ⁽²⁾	Dimensions LxWxH in ⁽³⁾	Approx. Weight Lbs.
RCOF 20	20	74	73	67x34x72	1150
RCOF 25	25	97	74	67x34x72	1200
RCOF 30	30	119	74	67x34x72	1275
RCOF 40	40	150	77	122x59x64	3450
RCOF 50	50	205	77	122x59x64	3500
RCOF 60	60	261	77	122x59x64	3560
RCOF 75	75	322	78	122x59x64	3620

(1) Full package performance with CFM measured at the terminal discharge of the package in accordance with CAGI acceptance test code PN2CPTC2. (2) Sound level performance with dBA measured in accordance with CAGI/PNEUROP Test Code. (3) Weights shown are approximate for air cooled models.



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ONE SOURCE.**

