3,750–12,500 SCFM | ENERGY SAVING REFRIGERATED DRYERS

RSD Series
Efficient Compressed Air Treatment Solutions

Compressed air users across the globe are integrating energy management best practices into their operations, with the goal of reducing power consumption and lowering their energy costs.

Utilizing the latest technological advancements, RSD Series refrigerated dryers offer a new way of thinking and innovative approach to efficiently treat compressed air.

Demonstrating our commitment to continuous development of sustainable solutions, the RSD Series significantly lowers total cost of operation by consuming electrical power (kWh) in direct proportion to real-time demand.

Meeting the Needs of Today

End-users demand compressed air systems that are easy to design, install, monitor and maintain.

The RSD Series features modular construction offering multiple design variations for flexible arrangement. Dimensionally standardized air treatment modules are efficiently combined to form larger capacity units.

Anticipating Opportunities of Tomorrow

Operational through-put and minimal down time is critical to maintain a competitive business advantage over the long term.

Redundancy in critical components offers fault-tolerant operation, delivering optimal system reliability. The RSD Series offers back-up drying protection presenting alternative drying capability in the presence of component failure.
Measurable Energy Savings

In a typical manufacturing facility, up to 30% of electricity consumed is for generating compressed air. To reduce total cost of operation and qualify for utility company incentive programs, proper air treatment equipment selection and application is required.

Load Matching Performance

Compressed air load profiles in most manufacturing facilities fluctuate. The RSD Series provides cost-effective energy savings by matching electrical power consumed in direct proportion to incoming air demand. Linear load matching is achieved from 0 to 100%.

Digital Scroll Compressors

To maximize full energy savings potential, modules are designed with digital scroll refrigeration compressors that load and unload based on real-time demand. Significantly less energy is consumed during periods of unloading, delivering proportional energy savings.

ANNUALIZED COST SAVINGS

<table>
<thead>
<tr>
<th>MODEL</th>
<th>AVERAGE HEAT LOAD (%)</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>30%</td>
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<tr>
<td>RSD12500</td>
<td>$28,185</td>
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</table>

Cost of power $0.10/kWh; 8760 operating hours

*Rapid Return on Investment

The table provides annualized cost savings of RSD Series refrigerated air dryers compared to non-cycling designs.*
Modular Construction

Multi-Station Design

Dryer systems are organized by connecting up to five individual modules in a line-up arrangement to construct the desired flow capacity.

Modules may be configured in 1,250 and 2,500 scfm (2,124–4,148 nm³/h) increments precisely matching system air flow demand.

Self-sufficient modules easily interface with couplings to form larger systems, responding to increased air demand.

Complete Module Isolation

Full flow air-side isolation valves permit maintenance of individual modules without interrupting the air supply to other modules.

Each module maintains separate water regulating valves, strainers and water isolation valves for ease of maintenance.

Modules are furnished with a disconnect switch, enabling the operator to remove electrical power without de-energizing other modules in the system line-up.

Ease of Movement

Independent modules are fully enclosed with fork channels constructed in the base pan allowing movement with a pallet jack into tight spaces and through low clearances. Modules are 40% lighter-weight than glycol designs. No crane is required for installation.

Modular by Design

Self-sufficient modules easily interface with couplings to form larger systems, responding to increased air demand.
System Redundancy

Fault-Tolerant Operation

Redundancy in critical components presents system back-up, ensuring uninterrupted air supply when a module is removed from operation.

Systems may be operated with additional modules gaining the added benefit of lower pressure drop plus back-up redundancy, without compromising power consumption.

Common sub-components include:
- Stainless steel brazed plate heat exchangers
- Module isolation valves
- Integral filtration
- No-air-loss condensate drains
- Water-cooled condenser
- Digital scroll refrigeration system

Installation Versatility

The modules share a common inlet air header and outlet air header that are engineered to maintain even air flow distribution and minimize system pressure drop. Headers may be blanked off at either end offering dual installation capability.

Integral Filtration

Each module is a self-contained air treatment station, furnished with integral high performance filtration and energy saving no-air-loss demand drains.

Integral filtration is accessed through the top and removable back panel for ease of service.

Standard modules are equipped with two stage separation to remove solids 3 micron and larger, with a remaining oil content of 4 mg/m³.

Optional cold coalescing filters capture solids 0.01 micron and larger, with a remaining oil content of 0.008 mg/m³.
Customer Focus

Master Energy Monitor

The Master Energy Monitor is an intuitive operator interface that monitors system performance, tracks energy savings and actively communicates with individual dryer modules. The monitor is equipped with a MODBUS RS-485 interface and ethernet with MODBUS TCP/IP support.

A membrane keypad, with a full menu of universally recognized symbols, enables the user to selectively retrieve information from any given module. The operator may program parameters for predictive maintenance and predetermined times for module on and off times.

Information is communicated in a highly visible LCD (liquid crystal display) screen with four (4) line — twenty (20) character capability.

Measured Energy Savings Performance

- Instantaneous Load (as a %)
- Cumulative Energy Savings (currency in $)
- Projected Annual Savings (currency in $)
- Average Monthly Load (last 30 days as a %)
- Average Daily Load (last 24 hours as a %)

Individual Module Operation & Real-Time Status

- Module Status (on/off, scheduled on/off, standby)
- Refrigerant Suction Temperature (°F/°C)
- Refrigerant Suction Pressure (psi/bar)
- Coldest Air Temperature (°F/°C)
- Refrigerant Discharge Temperature (°F/°C)
- Refrigerant Discharge Pressure (psi/bar)

Alarm Indication & History

- Drain-Failure to Discharge
- Crankcase Heater Current not Detected
- Low Refrigerant Suction Pressure
- High Refrigerant Discharge Pressure
- Coldest Air Temperature
- Routine Maintenance Interval
- A real-time clock, with power back-up, fault time-stamps for month/day/year — hour/min/sec

Each Module Is Equipped With The Following Led Indicators

- Alarm (red)
- Active Fault (yellow)
- Power On (green)

Premium Warranty

2 Years—Standard
3 Years—Extended
5 Years—Total

Parts and labor included. Contact your local distributor for more details.
## Product Specifications

<table>
<thead>
<tr>
<th>MODEL</th>
<th>RATED FLOW (SCFM)</th>
<th>NUMBER OF MODULES</th>
<th>REFRIGERANT COMPRESSOR HORSEPOWER (KW)</th>
<th>AVAILABLE VOLTAGES (4)</th>
<th>OPERATING POWER CONSUMPTION (5)</th>
<th>IN/OUT CONNECTION</th>
<th>WATER FLOW @ 85° F GPM</th>
<th>WATER SUPPLY CONNECTION NPT (F)</th>
<th>OVERALL DIMENSIONS (IN)</th>
<th>TOTAL WEIGHT (LBS)</th>
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<td>85 81</td>
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</table>


Canadian Registration Numbers- standard separator vessel and optional cold coalescing housing.

Standard separators include one vessel and are equipped with an electric demand drain. Units with optional cold coalescing filters are equipped with a dedicated electric demand drain- one per housing.

### MAXIMUM WORKING PRESSURE PSIG (BAR)

<table>
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<tr>
<th>MAXIMUM WORKING PRESSURE PSIG (BAR)</th>
<th>MINIMUM WORKING PRESSURE PSIG (BAR)</th>
<th>MAXIMUM INLET AIR TEMPERATURE °F (°C)</th>
<th>MINIMUM INLET AIR TEMPERATURE °F (°C)</th>
<th>MAXIMUM AMBIENT AIR TEMPERATURE °F (°C)</th>
<th>MINIMUM AMBIENT AIR TEMPERATURE °F (°C)</th>
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### CORRECTION FACTORS FOR INLET AIR PRESSURE AND TEMPERATURE

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<th>100°F (38°C)</th>
<th>INLET AIR TEMPERATURE</th>
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<th>120°F (49°C)</th>
<th>130°F (54°C)</th>
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<td>200</td>
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### ISO 8573-1: 2010 AIR QUALITY CLASSES

<table>
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<tr>
<th>AIR QUALITY CLASS</th>
<th>SOLID PARTICLES</th>
<th>WATER VAPOR PRESSURE DEW POINT</th>
<th>OIL TOTAL OIL CONCENTRATION: AEROSOL, LIQUID &amp; VAPOR</th>
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<td>5</td>
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</table>

Standard filtration delivers ISO Quality Class:

- 3 Solids
- 4-5 Pressure Dew Point
- 5 Oil

Optional filtration provides ISO Quality Class:

- 3 Solids
- 4-5 Pressure Dew Point
- 1 Oil
The leader in every market we serve by continuously improving all business processes with a focus on innovation and velocity.