

COOL Refrigeration Air Dryers



**Wear and corrosion
threaten your
air distribution
network**

**Our COOL RANGE of
refrigeration dryers
keeps your
compressed air system
in optimal shape**



 **Quincy**
COMPRESSOR

Cool Refrigeration Air Dryers

The Drying Process

Refrigeration dryers use a refrigerant gas in order to cool the compressed air. As a result the water from the air condenses and can be removed. With this technique we can reach in the **COOL** range a pressure dew point of 45°F. As a result, the refrigeration technology is by far the most used dryer technology, complying for more than 95% of industrial applications. Refrigerant dryers are commonly used with pneumatic applications and in the general industry (e.g. engineering, steel, paper, tannery, garage).



Main Benefits

- Remove the water pollution from your network
- Refrigeration dryer is a simple, low maintenance technology
- Extremely easy to install
- Very compact equipment fits in a minimum space
- Low maintenance requirement
- Compatible with any compressor technology
- Very low energy consumption
- Check your air quality with the dew point indicator
- Higher final product quality
- Increase your overall productivity



Risks to Avoid

Humid, unclean compressed air can cause:

- Corrosion, pollution, leakage and rust of the air net (pipes) and the downstream equipment/tools
- Costly interruptions of the production
- A decreased efficiency of the equipment/tools used
- Reduction of the life span of all equipment involved
- Risk of water contamination in the air network, with potential freezing in winter time
- Increased maintenance costs
- Lower quality of the final product and potential risk of product recalls



Applications

- Pneumatic tools and equipment
- Pneumatic control systems
- Painting application
- Packaging
- Injection molding
- Car shop
- Tire inflation



Compact & Efficient

The COOL range offers reliable components in a simple vertical lay-out:

- Simple to install and easy to operate
- Easy access for quick servicing resulting in low maintenance costs
- Efficient cooling system
- Flexible transportation
- Small footprint
- Stable dew point



Components

- 1 Capillary tube** in order to considerably reduce the pressure and temperature of the refrigerant, improving the cooling process.
- 2 Refrigerant filter** in order to protect the capillary from some possible dirty particles.
- 3 Hot gas by-pass valve:**
 - Injects hot gas from compressor discharge into suction / liquid separator
 - Keeps refrigeration capacity in all load conditions
 - Maintains constant pressure in the evaporator, avoiding freezing
- 4 Timer drain** ensures a proper



- 5 Control panel:** PDP indicator (green zone) & main on-off switch
- 6 Air/Air and Air/Refrigerant Heat Exchanger** with high thermal exchange and low load losses. **Integrated water separator** allows a highly efficient water-air separation.
- 7 Refrigerant compressor** driven by an electric motor, cooled using refrigerant fluid and protected against thermal overload.
- 8 Refrigerant condenser** air-cooled and with a large exchange surface for high thermal exchange.

Technical Table

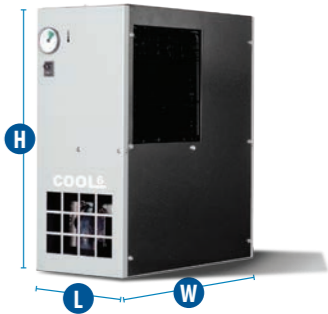
| Type | Max. working pressure | | Air treatment capacity ¹ | | | Nominal electrical power ¹ | Voltage | Inlet/Outlet connections | Dimensions (in.) | | | Weight | Refrigeration gas type |
|----------|-----------------------|-----|-------------------------------------|------|-----|---------------------------------------|----------|--------------------------|------------------|----|----|--------|------------------------|
| | bar | psi | l/min | mc/h | cfm | | | | L | W | H | lbs | |
| COOL 15 | 16 | 232 | 350 | 21 | 15 | 126 | 115/1/60 | 3/4" M | 9 | 22 | 22 | 93 | R134a |
| COOL 25 | 16 | 232 | 600 | 36 | 25 | 126 | 115/1/60 | 3/4" M | 9 | 22 | 22 | 93 | |
| COOL 35 | 16 | 232 | 850 | 51 | 35 | 163 | 115/1/60 | 3/4" M | 9 | 22 | 22 | 93 | |
| COOL 50 | 16 | 232 | 1200 | 72 | 50 | 228 | 115/1/60 | 3/4" M | 9 | 22 | 22 | 97 | |
| COOL 75 | 16 | 232 | 1825 | 110 | 75 | 380 | 115/1/60 | 3/4" M | 9 | 22 | 22 | 132 | |
| COOL 100 | 16 | 232 | 2150 | 129 | 100 | 419 | 115/1/60 | 1" F | 9 | 22 | 22 | 146 | |
| COOL 125 | 16 | 232 | 3000 | 180 | 125 | 664 | 115/1/60 | 1" F | 12 | 28 | 39 | 254 | R404A |
| COOL 150 | 16 | 188 | 3600 | 216 | 150 | 767 | 230/1/60 | 1" 1/2 F | 12 | 28 | 39 | 278 | |
| COOL 200 | 13 | 188 | 4100 | 246 | 200 | 865 | 230/1/60 | 1" 1/2 F | 12 | 28 | 39 | 287 | |
| COOL 250 | 13 | 188 | 5200 | 312 | 250 | 1028 | 230/1/60 | 1" 1/2 F | 12 | 28 | 39 | 344 | |

Reference Conditions:

- Operating Temperature = 95°F
- Room Temperature = 77°F
- Pressure Dewpoint = 50°F
- Working Pressure = 232 PSI Cool 15-125
- Working Pressure = 188 PSI Cool 150-250
- Operating Temperature = 122°F

Limit Conditions:

- Working pressure: 232 PSI COOL 4-36
188 PSI COOL 41-77
- Operating temperature: 122°F
- Min/Max room temperature: 41°F; + 104°F



Correction factor for conditions differing from the project $K = A \times B \times C$

| | | | | | | | | | | | | | | | | | | | |
|----------------------|-----|------|------|------|------|-------------------------|------|------|------|------|------|------|------|----|------|------|------|------|------|
| • Room temperature | °F | 77 | 86 | 95 | 100 | • Operating temperature | | | | | | | | °F | 86 | 95 | 100 | 113 | 122 |
| | A | 1.00 | 0.92 | 0.84 | 0.80 | | | | | | | | | B | 1.24 | 1.00 | 0.82 | 0.69 | 0.54 |
| • Operating Pressure | PSI | 75 | 85 | 100 | 115 | 130 | 145 | 160 | 175 | 190 | 200 | 215 | 230 | | | | | | |
| | C | 0.90 | 0.96 | 1.00 | 1.03 | 1.06 | 1.08 | 1.10 | 1.12 | 1.13 | 1.15 | 1.16 | 1.17 | | | | | | |

Original parts. Your quality assurance.

The 'original part' identification confirms that these components passed our strict test criteria. All parts are designed to match the quality air solution product and are approved for use on the specified quality air solution product. They have been thoroughly tested to obtain the highest level of protection, extending the quality air solution products' lifetime and keeping the cost of ownership to an absolute minimum. No compromises are made on reliability. The use of 'original part' certified quality components helps ensure reliable operation and will not impact the validity of your warranty, unlike other parts. Look for your quality assurance.

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