

Refrigerated
Air Dryers



Refrigerated Air Dryers

Quincy QPNC Series | Non-Cycling
Quincy QRHT Series | High Temp

Refrigerated Air Dryers

Non-Cycling Designs for Maximum System Efficiency

Non-Cycling Dryers 10 to 3000 CFM

Quincy refrigerated air dryers are manufactured to exact standards in state-of-the-art production facilities, featuring high-capacity, balanced component selection and consistent output. This, combined with a clean, simple design, creates an efficient, reliable and environmentally friendly non-cycling refrigerated air dryer.

Quincy refrigerated air dryers allow plant equipment to run efficiently, and processes more reliably, by providing the cleanest compressed air utility possible. Payback starts immediately upon start up.

Environmentally Safe Refrigerants

- No CFC's or HCFC's
- EPA/SNAP Compliant
- Zero Ozone Depletion Potential (ODP)
- Qualifies for one LEED point
- Higher performance potential
- Higher efficiency potential



QPNC – Non-Cycling Dryer Operation

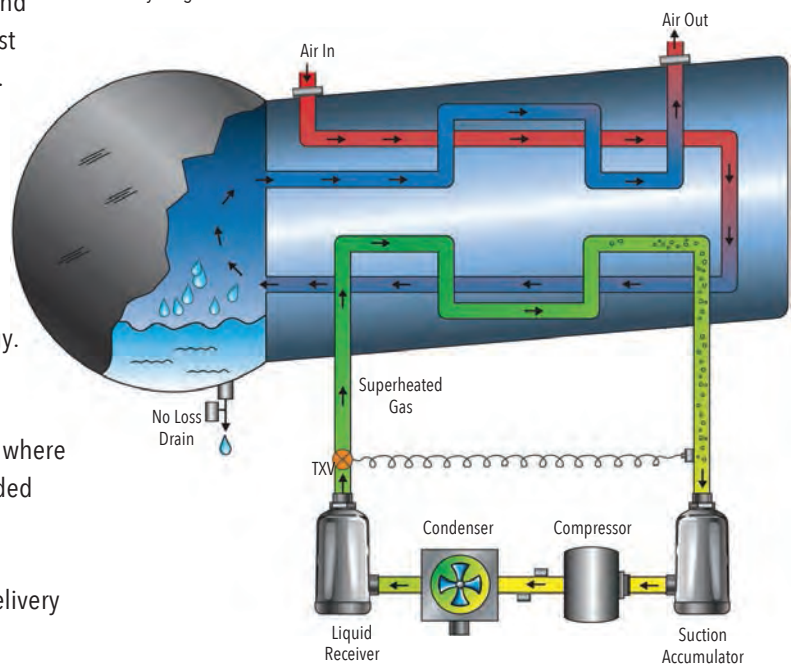
Quincy Non-Cycling dryers use a two-stage heat exchanger system to maintain consistent dew points. Freeze-ups are prevented and optimum performance is maintained by integrating the highest quality components and refrigeration controls into our system.

The system reduces the temperature of the compressed air to approx. +39°F forcing entrained moisture to condense. The mixture of condensed liquids and cold air then flow into the cold point moisture separator where the liquids are collected and removed by a Zero Loss condensate drain. The Zero Loss drain ensures maximum moisture removal while saving energy.

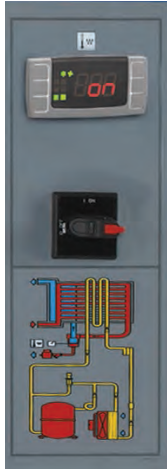
Once liquids have been removed, the cold dry compressed air returns through the cold side of the first stage heat exchanger where it is reheated by the warm incoming air. Pipe sweating is avoided and air volume is increased by reheating.

The compressed air is now considered treated and ready for delivery to downstream products.

Non-Cycling Flow Schematic



Refrigerated Air Dryers



Cycling

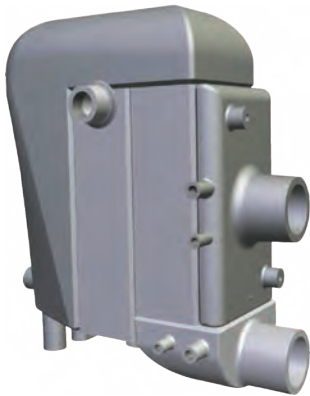
Ease of Operation

- Refrigerant System Flow
- Run & Alarm Indicator Lights
- Analyzer Gauge
- Schematic
- Stop / Start Switch with Lock Out



Non-cycling

Heat Exchangers & Moisture Separators



- Low pressure drop
- Cold Air Module (QPNC 75 -3000)
- Brazed Plate (QPNC 10 - 50)
- Integrated Moisture Separator
- Five-step centrifugal separation
- 10-Year Heat Exchanger Warranty



Saving Energy

Quincy QPNC dryers from 10 to 3000 CFM come standard with the most energy-efficient ZERO LOSS DRAINS.

Quincy refrigerated dryers play the important role of removing condensation from compressor systems. Without a dryer, moisture can accumulate in a compressor. With this moisture comes dirt and other particulate matter, which can cause oxidation and other types of premature wear on delicate compressor components. A refrigerated dryer eliminates the problem by cooling moisture in the air to approximately 39°F, where it condenses and can be removed from the compressor system by way of an automatic drain.



<http://www.quincycompressor.com/dryers/>



Performance You Demand.
Reliability You Trust.

QPNC – Specifications & Engineering Data

Non-Cycling

| Model | CFM at 100 PSIG | m3/hr 7 BAR | Standard Electrics | | Pressure | | Dimensions | | | Approx. Shipping Weight | Connections In/Out | Refrigerant Gas |
|-----------|-----------------|-------------|---------------------|----------------|----------|------------|-------------|------------|-------------|-------------------------|--------------------|-----------------|
| | | | Volts/Phase (Hertz) | Full Load (kW) | Max PSIG | Nominal ΔP | Length (in) | Width (in) | Height (in) | | | |
| QPNC-10 | 10 | 17 | 115/1/60 | 0.2 | 230 | 1.5 | 21 | 14 | 20 | 57 | 0.5" NPT (M) | R134a |
| QPNC-15 | 15 | 25 | 115/1/60 | 0.2 | 230 | 2.2 | 21 | 14 | 20 | 59 | 0.5" NPT (M) | R134a |
| QPNC-25 | 25 | 42 | 115/1/60 | 0.3 | 230 | 2.9 | 21 | 14 | 20 | 70 | 0.5" NPT (M) | R134a |
| QPNC-35 | 35 | 59 | 115/1/60 | 0.3 | 230 | 2.9 | 21 | 14 | 20 | 75 | 0.5" NPT (M) | R134a |
| QPNC-50 | 50 | 85 | 115/1/60 | 0.4 | 230 | 2.9 | 21 | 14 | 20 | 75 | 0.5" NPT (M) | R134a |
| QPNC-75 | 75 | 127 | 115/1/60 | 0.7 | 230 | 2.9 | 23 | 18 | 31 | 112 | 1" NPT (F) | R404A |
| QPNC-100 | 100 | 170 | 115/1/60 | 0.9 | 200 | 2.2 | 25 | 19 | 32 | 134 | 1.5" NPT (F) | R404A |
| QPNC-125 | 125 | 212 | 115/1/60 | 1.0 | 200 | 2.9 | 25 | 19 | 32 | 150 | 1.5" NPT (F) | R404A |
| QPNC-150 | 150 | 255 | 208-230/1/60 | 1.5 | 200 | 1.5 | 26 | 23 | 36 | 198 | 1.5" NPT (F) | R404A |
| QPNC-200 | 200 | 340 | 208-230/1/60 | 1.6 | 200 | 2.9 | 26 | 23 | 36 | 198 | 1.5" NPT (F) | R404A |
| QPNC-250 | 250 | 425 | 460/3/60 | 1.9 | 200 | 3.6 | 26 | 23 | 36 | 198 | 1.5" NPT (F) | R404A |
| QPNC-300 | 300 | 510 | 460/3/60 | 2.3 | 188 | 3.6 | 38 | 29 | 40 | 282 | 2" NPT (F) | R410A |
| QPNC-360 | 360 | 612 | 460/3/60 | 2.6 | 188 | 4.3 | 38 | 29 | 40 | 322 | 2" NPT (F) | R410A |
| QPNC-500 | 500 | 850 | 460/3/60 | 3.2 | 188 | 4.3 | 38 | 29 | 40 | 348 | 2" NPT (F) | R410A |
| QPNC-600 | 600 | 1020 | 460/3/60 | 4.3 | 188 | 4.3 | 38 | 29 | 40 | 364 | 2" NPT (F) | R410A |
| QPNC-750 | 750 | 1275 | 460/3/60 | 5.4 | 188 | 3.6 | 41 | 41 | 61 | 717 | 3" NPT (M) | R404A |
| QPNC-1000 | 1000 | 1700 | 460/3/60 | 5.8 | 188 | 4.3 | 41 | 41 | 61 | 739 | 3" NPT (M) | R404A |
| QPNC-1250 | 1250 | 2125 | 460/3/60 | 7.3 | 188 | 5.0 | 41 | 41 | 61 | 772 | 3" NPT (M) | R404A |
| QPNC-1600 | 1600 | 2720 | 460/3/60 | 12.7 | 188 | 4.3 | 41 | 41 | 61 | 812 | 6" NPT (M) | R404A |
| QPNC-1800 | 1800 | 3060 | 460/3/60 | 13.7 | 188 | 4.3 | 41 | 83 | 61 | 1235 | 6" Flange | R404A |
| QPNC-2200 | 2200 | 3740 | 460/3/60 | 19.2 | 188 | 3.6 | 41 | 83 | 61 | 1323 | 6" Flange | R404A |
| QPNC-2500 | 2500 | 4250 | 460/3/60 | 19.2 | 188 | 3.6 | 41 | 83 | 61 | 1323 | 6" Flange | R404A |
| QPNC-3000 | 3000 | 5097 | 460/3/60 | 22.3 | 188 | 3.7 | 41 | 83 | 61 | 1433 | 6" Flange | R404A |

Notes: Capacity in accordance with recommended NFPA standards and CAGI standard ADF 100. Ratings based on 100°F inlet temperature, 100 psig inlet pressure and 100°F max ambient. kW inputs are shown for air-cooled models including fan motors.

Correction Factors

| Inlet Air Pressure Correction | | | | | | | | | |
|-------------------------------|---------------------|------|------|-----|------|------|------|------|------|
| A | PSIG | 60 | 80 | 100 | 120 | 140 | 150 | 180 | 200 |
| | QPNC 10-3000 Factor | 0.79 | 0.93 | 1.0 | 1.03 | 1.07 | 1.09 | 1.12 | 1.14 |

| Inlet Air Temperature Correction | | | | | |
|----------------------------------|------------------------|------|-----|------|------|
| B | Temp.°F | 80 | 100 | 110 | 120 |
| | QPNC 10 - 250 Factor | 1.05 | 1.0 | 0.87 | 0.67 |
| | QPNC 325 - 3000 Factor | 1.05 | 1.0 | 0.84 | 0.69 |

| Example One: Conditions Requirement | |
|-------------------------------------|----------|
| Capacity | 480 CFM |
| Inlet Pressure | 120 PSIG |
| Inlet Air Temperature | 110°F |
| Ambient Temperature | 100°F |
| Dew Point | 39°F |

| Example One: Calculations | |
|--------------------------------------|----------------------------------------------------------------------|
| Dryer Required | $= \frac{\text{cfm required}}{(A) \times (B) \times (C) \times (D)}$ |
| | $= \frac{480}{(1.03) \times (.84) \times (1) \times (1)}$ |
| | $= 555 \text{ cfm dryer required}$ |
| Select QPNC 600 for this application | |

| Ambient Air Temperature Correction | | | | | |
|------------------------------------|------------------------|------|------|-----|------|
| C | Temp.°F | 80 | 90 | 100 | 110 |
| | QPNC 10 - 250 Factor | 1.12 | 1.03 | 1.0 | 0.92 |
| | QPNC 325 - 3000 Factor | 1.15 | 1.07 | 1.0 | 0.91 |

| Dew Point Correction | | | |
|----------------------|------------------------|---------|---------|
| D | Temp.°F | 37-39°F | 45-50°F |
| | QPNC 10 - 250 Factor | 1 | 1.12 |
| | QPNC 325 - 3000 Factor | 1 | 1.2 |

| Example Two: Conditions QPNC 500 Corrected Flow for: | |
|------------------------------------------------------|----------|
| Inlet Pressure | 120 PSIG |
| Inlet Air Temperature | 110°F |
| Ambient Temperature | 90°F |
| Dew Point | 39°F |

| Example Two: Calculations | |
|---------------------------|----------------------------------------------------------------------|
| Corrected Capacity | $= \text{Std. Capacity} \times (A) \times (B) \times (C) \times (D)$ |
| | $= 500 \times (1.03) \times (.84) \times (1.07) \times (1)$ |
| | $= 463 \text{ cfm}$ |

QRHT – High Temperature Refrigerated Dryer

Space Saving Refrigerated Dryer

QRHT Series Total Air System High Temperature Dryers integrate five different components that perform separate functions. An air-cooled aftercooler, refrigerated dryer, moisture separator, Zero Loss drain, and coalescing filter – these five components work in harmony to ensure clean dry, filtered compressed air.

- 180°F Inlet Temperature
- 3-in-1 Design
- Eliminates Water, Oil and Dirt from Air
- Prevents Damage to Pneumatic Tools
- Fewer Finished Product Defects
- Prevents "Fisheye" Paint Splotches
- Reduces Operational Downtime
- Increase Profitability and Productivity
- Eliminates Air Line Purging



QRHT – Specifications & Engineering Data

High Temperature

| Model | CFM at 100 PSIG | Voltage | Power Consumption kW | Max PSIG | Refrigerant | Dimensions | | | Approx. Wt. lb. | Connections (inches) |
|----------|-----------------|----------|----------------------|----------|-------------|-----------------|----------------|-----------------|-----------------|----------------------|
| | | | | | | Length (inches) | Width (inches) | Height (inches) | | |
| QRHT 25 | 25 | 115/1/60 | 0.4 | 232 | R134a | 20.4 | 13.8 | 17.7 | 57 | 0.5 NPT |
| QRHT 50 | 50 | 115/1/60 | 0.8 | 232 | R404A | 22.6 | 18.1 | 31.0 | 108 | 1 NPT |
| QRHT 75 | 75 | 115/1/60 | 1.6 | 232 | R404A | 22.6 | 18.1 | 31.0 | 168 | 0.75 NPT |
| QRHT 100 | 100 | 115/1/60 | 1.7 | 232 | R404A | 22.6 | 18.1 | 41.0 | 231 | 0.75 NPT |
| QRHT 125 | 125 | 115/1/60 | 2.0 | 232 | R404A | 22.6 | 18.1 | 41.0 | 236 | 0.75 NPT |

Notes: Instrumentation includes: On/off switch, refrigerant suction pressure gauge and drain test button. Coalescing filter is supplied for all models.

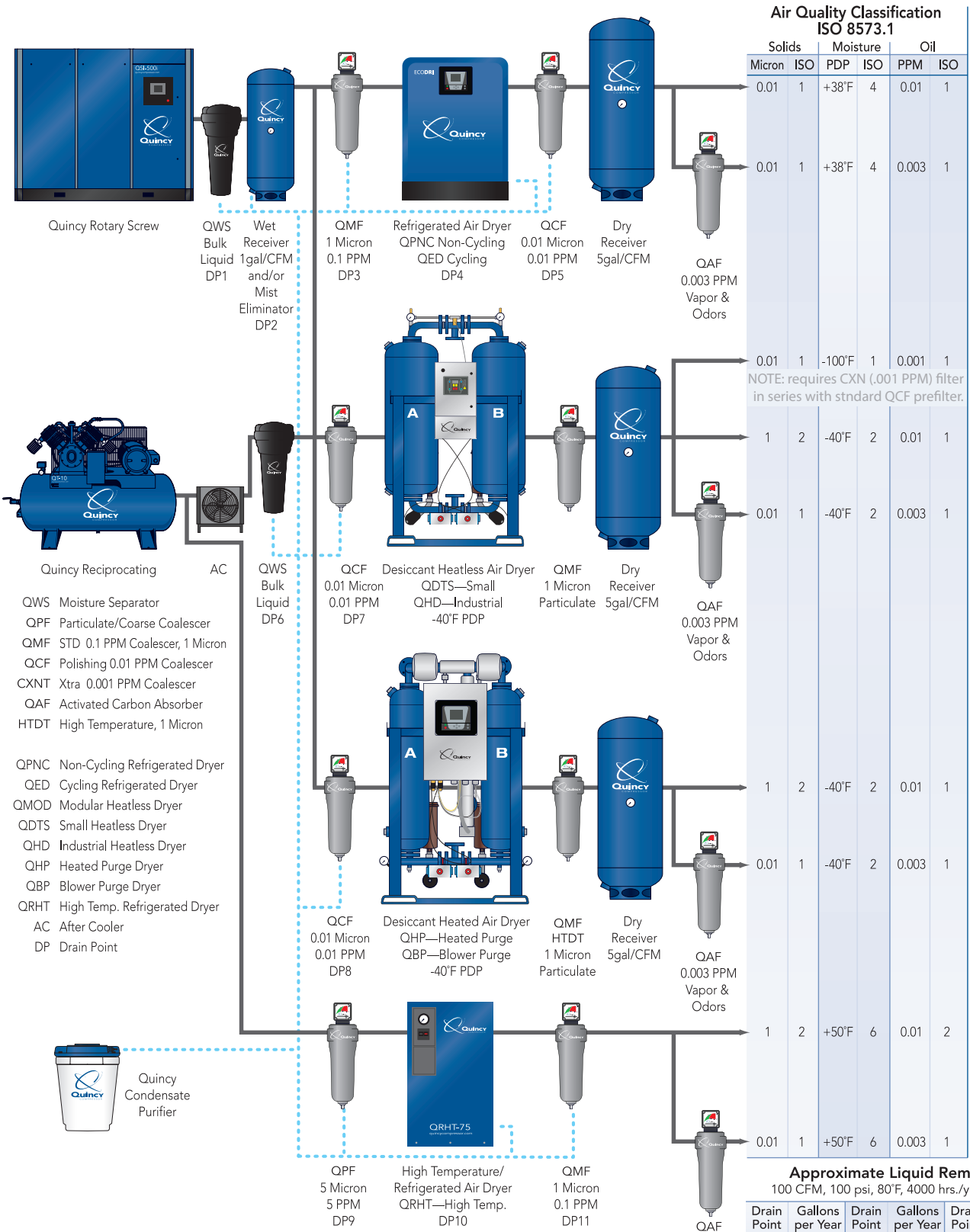
Inlet Flow SCFM

| Model | 50°F PDP | 40°F PDP |
|----------|----------|----------|
| QRHT 25 | 25 | 20 |
| QRHT 50 | 50 | 40 |
| QRHT 75 | 75 | 60 |
| QRHT 100 | 100 | 80 |
| QRHT 125 | 125 | 100 |

SCFM flow is rated at 180°F max. inlet, 100 psig and 100°F ambient

Compressed Air Systems Best Practice

Air Quality Classification ISO 8573.1



| Air Quality Classification ISO 8573.1 | | | | | |
|---------------------------------------|-----|----------|-----|-------|-----|
| Solids | | Moisture | | Oil | |
| Micron | ISO | PDP | ISO | PPM | ISO |
| 0.01 | 1 | +38°F | 4 | 0.01 | 1 |
| 0.01 | 1 | +38°F | 4 | 0.003 | 1 |
| 0.01 | 1 | -100°F | 1 | 0.001 | 1 |
| 1 | 2 | -40°F | 2 | 0.01 | 1 |
| 0.01 | 1 | -40°F | 2 | 0.003 | 1 |
| 1 | 2 | -40°F | 2 | 0.01 | 1 |
| 0.01 | 1 | -40°F | 2 | 0.003 | 1 |
| 1 | 2 | +50°F | 6 | 0.01 | 2 |
| 0.01 | 1 | +50°F | 6 | 0.003 | 1 |

NOTE: requires CXN (.001 PPM) filter in series with standard QCF prefilter.

Approximate Liquid Removal

100 CFM, 100 psi, 80°F, 4000 hrs./yr., 2 PPM

| Drain Point | Gallons per Year | Drain Point | Gallons per Year | Drain Point | Gallons per Year |
|-------------|------------------|-------------|------------------|-------------|------------------|
| 1 | 3000 | 5 | 140 | 9 | 300 |
| 2 | 2000 | 6 | 3000 | 10 | 4320 |
| 3 | 305 | 7 | 310 | 11 | 120 |
| 4 | 1300 | 8 | 310 | | |

- QWS Moisture Separator
- QPF Particulate/Coarse Coalescer
- QMF STD 0.1 PPM Coalescer, 1 Micron
- QCF Polishing 0.01 PPM Coalescer
- CXNT Xtra 0.001 PPM Coalescer
- QAF Activated Carbon Absorber
- HTDT High Temperature, 1 Micron

- QPN Non-Cycling Refrigerated Dryer
- QED Cycling Refrigerated Dryer
- QMOD Modular Heatless Dryer
- QDTS Small Heatless Dryer
- QHD Industrial Heatless Dryer
- QHP Heated Purge Dryer
- QBP Blower Purge Dryer
- QRHT High Temp. Refrigerated Dryer
- AC After Cooler
- DP Drain Point



Quincy Condensate Purifier



Quality Comes in All Shapes and Sizes – But Just One Color.

Quincy Has the Compressed Air Solution for Your Application.

Since 1920, Quincy's trademark blue compressors have been hard at work building our company's reputation for quality and performance in some of the world's most demanding applications and harshest environments.

We're Still Making History.

Today, you'll find that same leadership in Quincy's next-generation compressed air solutions that feature everything from smart controls to green technologies. We know that your company is counting on our reputation. That's why every Quincy product is designed, constructed and proven to deliver exceptional customer value before it is worthy of wearing the Quincy name.

Our Promise to You.

As a customer you can always count on Quincy for a low cost of ownership through stable air pressure, easy maintenance and longer equipment life. And we back it all with some of the strongest extended warranty plans in the industry. No shortcuts and no substitutions. That's the quality of Quincy.

The Quincy Solution

Operating at peak efficiency and providing quality product is a priority for many of our customers. Quincy Compressor, in partnership with our global network of authorized distributors, strives to be your provider for all of your compressed air system needs. From the air compressor to filtration, to dryers and storage solutions, Quincy Compressor is your single-source provider for all of your compressed air system needs.

- **Air Compressors** Quincy Compressor is a premier manufacturer of many different types of air compressors designed for a variety of applications using different compression technologies.

For example the family includes: The Quincy QT is a Reciprocating Splash Lubricated compressor for tough everyday use. The Quincy QP is a reciprocating fully pressure-lubricated compressor for a competitive advantage. The Quincy QR is a reciprocating compressor designed for the most demanding conditions. The Quincy QGD 15-60 HP is a heavy-duty gear driven rotary compressor at a competitive price. The Quincy QSI provides an industrial grade premium fixed speed rotary screw air compressor. The Quincy QGV provides a premium variable speed rotary screw air compressor designed to optimize your energy efficiency.

- **Compressed Air Treatment** Quincy Compressor is your single-source provider of compressed air treatment products to complement your air compressor. Quincy provides refrigerated air dryers, desiccant air dryers, compressed air filtration from 5 to .01 micron, condensate drains, condensate management systems, storage solutions, and flow control valves. Quincy Compressor is truly a single-source provider for all of your compressed air needs.
- **Genuine Parts** Genuine Parts from Quincy Compressor keep your equipment running like new. When servicing your Quincy compressor, insist on Genuine Quincy parts. Not only will you save time and money, but you will gain the peace-of-mind from using only the highest quality parts worthy of the Quincy name.
- **System Controls** Whether you have one air compressor or many from different manufacturers, Quincy Compressor provides you with a way to control and monitor all of your system components in your compressed air system in a way that maximizes your energy efficiency. Whether you need to control your system on site or from half way around the world, Quincy Compressor is your source for reliable, efficient controls.



Performance You Demand. Reliability You Trust.™

701 N. Dobson Avenue

Bay Minette, AL 36507

Phone 251.937.5900

Fax 251.937.0872

Email: info@quincycompressor.com

QuincyCompressor.com

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