# QPVS Series

Variable Speed
Refrigerated Air Dryers
210 - 2100 cfm


Quincy
COMPRESSOR

# Designed To Keep Your Business Running Efficiently

## Maximum Efficiency, Minimum Disruptions

### A Machine Designed For Efficiency & Reliability

We understand that in order to maintain the quality we hold high, we must maintain the reliability that keeps your business running efficiently. Deliberate design choices to maximize reliability include:

- Variable speed technology that provides consistently dry air even at high ambient temperatures.
- A drive that matches speed with air demand, but maintains trim power to stabilize dew point even during compressor startup
- Coolant filtration and a hot gas bypass valve that helps to prevent freezing and cooling system failures
- Built-in electrical surge protection in the QPVS650-2100 models for increased reliability and drive support

## Lowest Total Cost of Ownership

### Leading System Efficiency

The QPVS advanced controllers have three different control modes. These control modes are controlled by ambient temperature and can be changed to increase energy savings. To keep operation running smoothly and without delay, the remote monitoring program ICONS is integrated into the QPVS210-635 programming and is a quick field upgrade to the QPVS650-2100 as well. This smart technology monitors the machine operation and recognizes and warns when potential production disruptions can occur.

## Decreased Environmental Impact

### Safety For You And The Environment

Safety is always a priority with Quincy products. Because of the high quality smart design, the QPVS is virtually maintenance and waste free. Deliberate design choices to decrease maintenance and environmental affects:

- A self contained cooling system cycles independently and only at the speed you need.
- A more efficient and environmentally friendly R410A refrigerant.

# Designed To Solve Your Production Problems

## Reduce Your Risk

A consistently stable dew-point ensures that your product maintains reliable quality. The QPVS variable speed drive and compressor work together to protect the dew point you need.

## Reduce Your Cost

Increased VSD energy saving gives you a quick return on investment that is as low as 1.5 years. This equates to increased long-term financial savings.


## Reduce Your Footprint

Compact in physical size and environmental presence. Not only is the QPVS up to 33% physically smaller in size than thermal mass dryers, but also emits up to 55% less $CO^2$.

# Our Customers Say It All

We don't need to talk about why we're the smarter choice or how great our systems are. Our awesome customers do that for us. If you ask, they'll probably tell you that Quincy builds the most reliable compressors on the market. Or, they might say that Quincy systems experience less downtime and require less maintenance.

> Quincy dryers deliver all the fresh air you need and save the life of your tools.
>
> - Sam Memmolo
> Two Guys Garage

> We knew we needed an air system that was going to be able to expand along with our business.
>
> - Neil Henderson
> Mississippi Laminators


> From compressors to dryers, and all in between, reliability is the foundation of our product designs.
>
> - Jon Davis
> Product Marketing Manager

Our customers believe in us, in our company and in our commitment to gain and keep their trust. They rely on Quincy to give them the help and information they need to make the best decisions about air systems. Yes, we would love to sell everyone a Quincy solution, but we believe that if we give you honest informative assistance, we will gain trust and business.

# Core Technologies

## Variable Speed

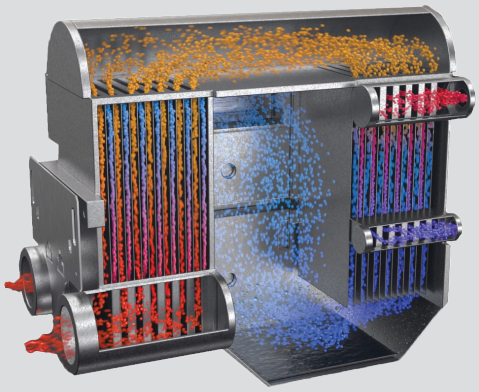
The QPVS utilizes variable speed technology that matches energy usage with compressed air demand. The rugged integrated variable speed drive and energy efficient compressor work together creating up to 80% turn down. This allows for a stable dew-point with the lowest energy required.

## Customizable Control Modes

The integrated advanced color controllers come with customizable control modes. This allows for further customization based off of a site conditions and actual requirements. This equates to even more energy savings.

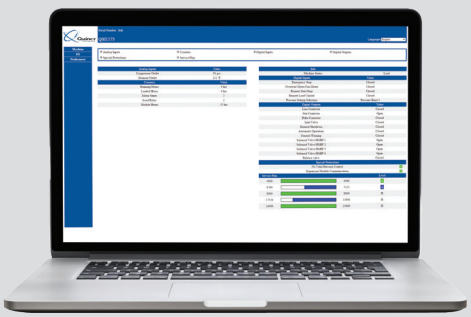

## High-Efficiency Heat Exchanger

The high-efficiency heat exchanger utilizes three chambers and a patented air-to-air side design that reduces pressure drop. This decreased pressure drop creates increased compressor energy savings by reducing the need for excess pressure loss compensation.



## Remote Monitoring

The latest Quincy controller provides on-board tools that make staying connected easier than ever due to networking, monitoring and integrated cellular connectivity. In-cloud analysis of the data helps schedule optimum service intervention, predicts failure and measures overall machine health.



# Variable Speed Refrigerated Air Dryers

## Specifications & Engineering Data: VSD

| Model No. | CFM at 100 PSIG | Refrigerant | Voltage/ Phase Hertz | Cooling | Package kW | Max PSIG | Dimensions | | | Approx. Wt lbs. | Connections In/Out |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Length (in) | Width (in) | Height (in) | | |
| QPVS-210 | 212 | R410A | Multiple | Air | 1.70 | 210 | 41 | 32 | 38 | 287 | 1-1/2" NPT |
| QPVS-300 | 297 | R410A | Multiple | Air | 2.27 | 210 | 41 | 32 | 38 | 290 | 2" NPT |
| QPVS-380 | 381 | R410A | Multiple | Air | 2.30 | 210 | 41 | 32 | 38 | 295 | 2" NPT |
| QPVS-465 | 466 | R410A | Multiple | Air | 4.29 | 210 | 41 | 32 | 38 | 315 | 2-1/2" NPT |
| QPVS-550 | 551 | R410A | Multiple | Air | 5.07 | 210 | 41 | 32 | 38 | 331 | 2-1/2" NPT |
| QPVS-635 | 635 | R410A | Multiple | Air | 6.09 | 210 | 41 | 32 | 38 | 364 | 2-1/2" NPT |
| QPVS-650 | 657 | R410A | Multiple | Air | 4.44 | 203 | 52 | 34 | 47 | 481 | 3" NPT |
| QPVS-650 | 657 | R410A | Multiple | Water | 2.30 | 203 | 52 | 34 | 47 | 481 | 3" NPT |
| QPVS-850 | 869 | R410A | Multiple | Air | 5.74 | 203 | 52 | 34 | 54 | 529 | 3" NPT |
| QPVS-850 | 869 | R410A | Multiple | Water | 2.60 | 203 | 52 | 34 | 54 | 529 | 3" NPT |
| QPVS-1050 | 1081 | R410A | Multiple | Air | 6.11 | 203 | 63 | 34 | 54 | 584 | 3" NPT |
| QPVS-1050 | 1081 | R410A | Multiple | Water | 3.00 | 203 | 63 | 34 | 54 | 584 | 3" NPT |
| QPVS-1600 | 1610 | R410A | Multiple | Air | 9.10 | 203 | 49 | 42 | 56 | 860 | 4" Flange |
| QPVS-1600 | 1610 | R410A | Multiple | Water | 4.30 | 203 | 49 | 42 | 56 | 860 | 4" Flange |
| QPVS-1800 | 1844 | R410A | Multiple | Air | 11.10 | 203 | 62 | 42 | 65 | 992 | 6" Flange |
| QPVS-1800 | 1844 | R410A | Multiple | Water | 5.60 | 203 | 62 | 42 | 65 | 992 | 6" Flange |
| QPVS-2100 | 2140 | R410A | Multiple | Air | 11.40 | 203 | 62 | 42 | 65 | 1014 | 6" Flange |
| QPVS-2100 | 2140 | R410A | Multiple | Water | 6.10 | 203 | 62 | 42 | 65 | 1014 | 6" Flange |

## Correction Factors

### Inlet Air Pressure Correction

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| A | PSI | 85 | 100 | 115 | 130 | 145 | 160 | 175 | 190 |
| | Factor | 0.97 | 1 | 1.03 | 1.05 | 1.07 | 1.09 | 1.11 | 1.12 |

### Inlet Air Temperature Correction

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| B | Temperature °F | 80 | 90 | 100 | 110 | 120 | 130 | 140 |
| | Factor | 1.1 | 1.05 | 1 | 0.82 | 0.68 | 0.56 | 0.47 |

### Ambient Air Temperature Correction

| | | | | |
|---|---|---|---|---|
| C | Temperature °F | 100 | 110 | 115 |
| | Factor | 1.00 | 0.91 | 0.85 |

### Example One: Calculations

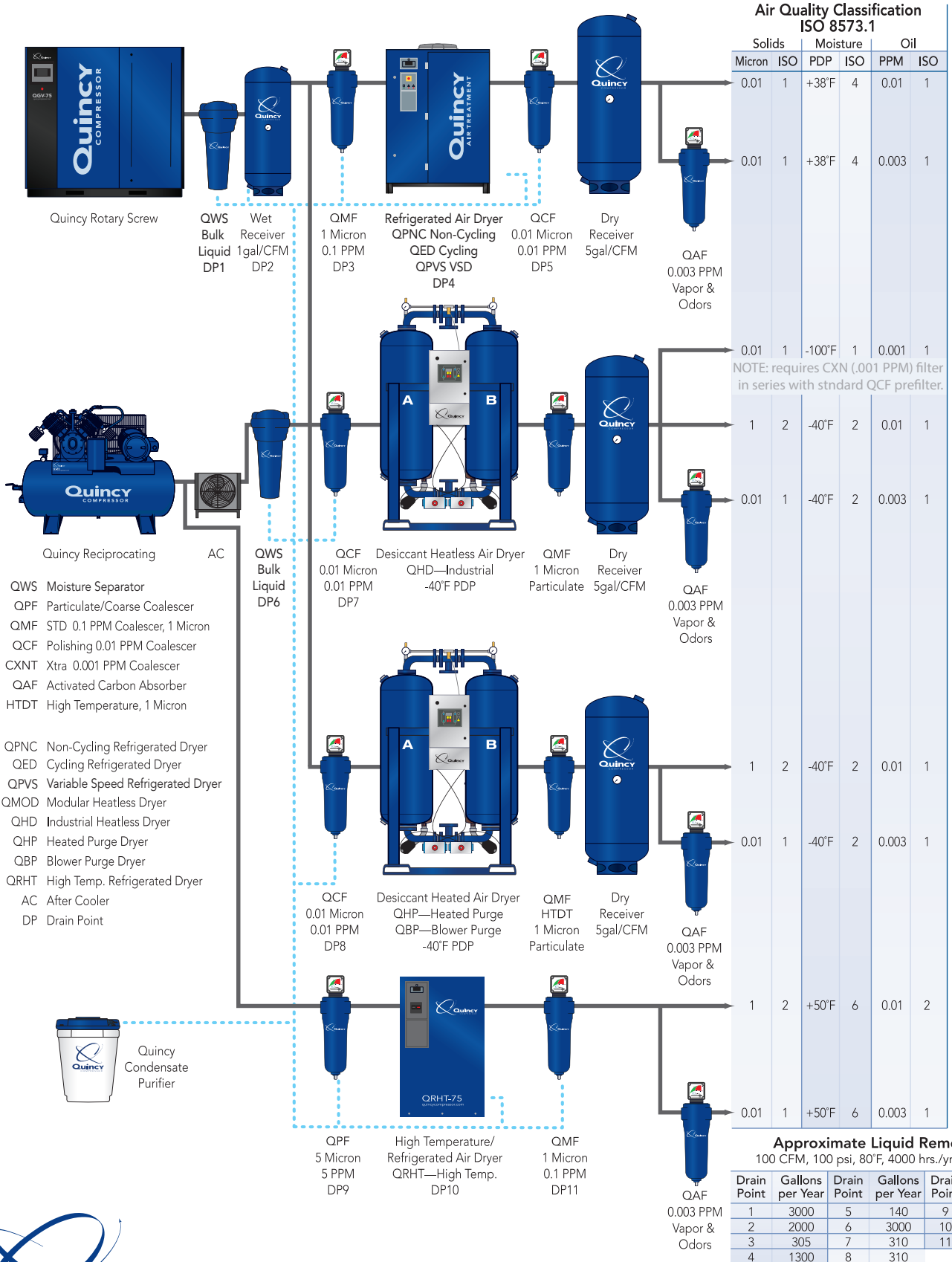
| | |
|---|---|
| Dryer Required | = CFM required / (A) x (B) x (C) |
| | = 500 / (1.03) x (.82) x (1) |
| | = 592 CFM dryer required |
| Select QPVS-635 for this application | |

### Example One: Conditions Requirement

| | |
|---|---|
| Capacity | 500 CFM |
| Inlet Pressure | 115 PSIG |
| Inlet Air Temperature | 110 °F |
| Ambient Temperature | 100 °F |

Notes: Capacity in accordance with recommended NFPA standards and CAGI standards ADF 100. Ratings based on 100°F inlet temperature, 100 PSIG inlet pressure and 100°F max ambient.

# Compressed Air Systems Best Practice




**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 |
| | | NOTE: requires CXN (.001 PPM) filter in series with stndard QCF prefilter. | | | |
| 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 |

**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 | | |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