Quincy COMPRESSOR

ECO DRI

HEAT EXCHANGER
10 YEAR WARRANTY
Quincy

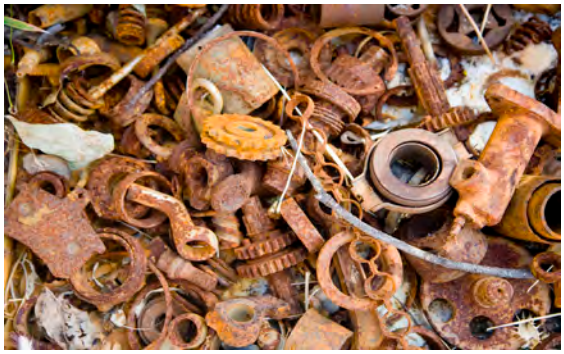
ECO DRI
CYCLING REFRIGERATED AIR DRYERS
100 TO 8000 CFM

A Greener Choice

ECO DRI CYCLING AIR DRYERS

WHY DRY COMPRESSED AIR?

Compressed air has been considered the fourth utility, and is used in almost all industrial applications. In order for compressed air to be an effective utility, it must be free of contaminants. Contaminants include solids, liquids and gases. Untreated compressed air presents the risk of either damaging the air system or the end use product. The most basic and potentially most harmful of these is moisture. The relative humidity (RH%) affects the moisture content contained in your compressed air. When ambient temperatures drop, a dryer that cycles based on temperature alone can put the system in jeopardy of moisture contamination. The most effective method of moisture control is by maintaining a constant RH%. The new Quincy ECO DRI cycling refrigerated air dryer maintains a 30% RH in all site conditions, to ensure dry compressed air is achieved.



BENEFITS OF A CLEAN, DRY SYSTEM

- Protects your equipment
- Leakage Reduction
- Reduces equipment maintenance costs
- Prolongs your equipment life
- Improves quality of the final product
- Boosts your productivity (less downtime)

ECO DRI CYCLING AIR DRYERS

A R_HEVOLUTION IN CYCLING THERMAL MASS TECHNOLOGY

- Energy Efficient
- Simple Operation
- Compact Design
- Flow switch (250 cfm and up)
- Steady RH, for corrosion control
- No antiquated glycol bath to cool
- Less leak points than glycol system
- Newest technology in decades
- Automatic adjustments based on conditions
- Zero loss drains
- 2-year Full Coverage Warranty
- Industry best 10-year Heat Exchanger Warranty

ECO DRI CYCLING AIR DRYERS

SUPERIOR EFFICIENCY AND PROTECTION

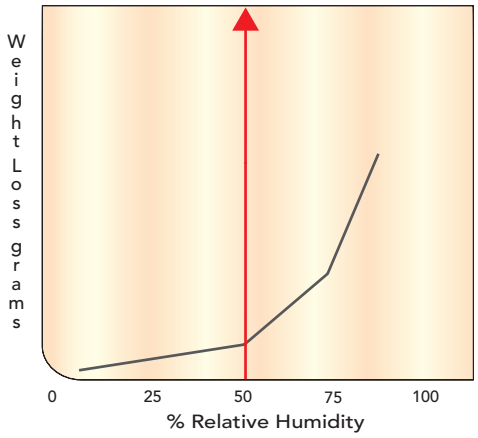
The Quincy ECO DRI uses the latest in cycling refrigerated technology, providing the best energy savings in its class. The Smart RH Technology not only ensures the air is dried to a non-corrosive RH level, but it also automatically protects against freezing conditions.

The cycling sensors automatically revert the mode of operation to non-cycling, when freezing conditions are present. On models above 250 CFM, the installed flow switch, turns off the dryer when no flow is detected. No other dryer offers this feature.

SMART R_H THERMAL MASS

Conventional cycling dryers must cool a large glycol bath down to a fixed +39°F temperature. At normal conditions this would yield a 12% RH when all that is required to protect the system from corrosion is 50% RH. The chart to the right shows that from 50% RH down to 12% RH is a relatively flat curve, with no additional benefit.

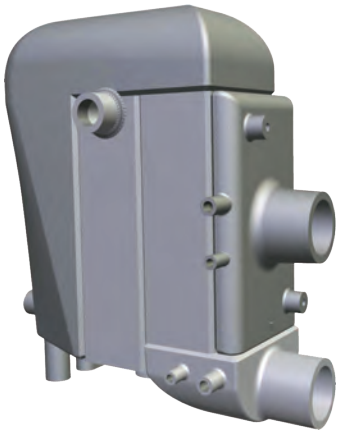
Quincy's ECO DRI cycling dryers maintain a target 30% RH, automatically adjusting based on the temperature conditions. This technology allows for maximum energy savings by operating only as much as needed.

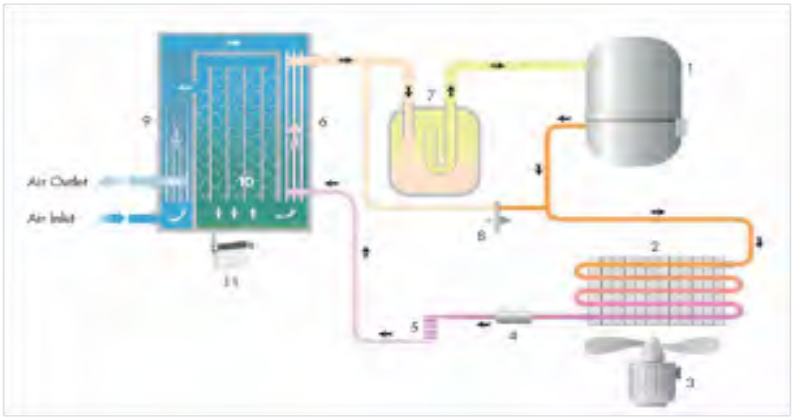


Source data:Vernon W.H.J Second experimental report to the Atmospheric Research committee, British Non-ferrous metals Research Association

THERMAL CORE 10 YEAR WARRANTY

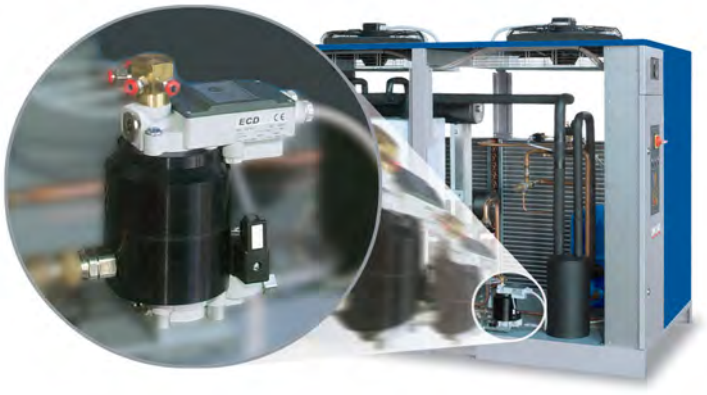
Quincy's three stage thermal core heat exchanger design, materials, and construction ensure maximum reliability and efficiency. The thermal core module combines the 1st stage, air to air, pre-cooler/re-heater, the 2nd stage, refrigerant to air, evaporator and the 3rd stage integral moisture separator and zero loss drain. Quincy's heat exchangers are engineered with quality and reliability in mind because of this, Quincy confidently offers an industry best 10-year heat exchanger warranty, bringing you the quality you demand and the reliability you trust from Quincy Compressor.





DRAIN SYSTEMS

All Quincy ECO DRI systems are equipped with high efficiency, environmentally friendly zero loss electronic drains. Energy efficient drains for energy efficient dryers.



ECO DRI CYCLING AIR DRYERS

DEDICATED INFOLOGIC

In the primary cycling mode Quincy's dedicated infologic controller will respond to real time data acquired by the sensors, and adjusts the thermal core temperature necessary to keep compressed air relative humidity at 30%, well below the corrosion point.

QED 250-600 controller shown

ADDITIONAL CONTROL PANEL FEATURES

- Remote monitoring
- CAN communication protocol
- Voltage free contacts for remote alarm
- Auto Restart
- LAT Lowest Air Temp
- Ambient temperature
- Relative humidity (Rh)
- Freezing Alarm

REFRIGERATION COMPRESSORS

QED 300 through 2100 are filled with R410A refrigerant, along with our exclusive 21st century rolling piston compressor. Quincy's rolling piston high efficiency compressor delivers efficient performance, while protecting the environment.

- R410A refrigerants ensure the lowest environmental impact
- Phase monitor ensures proper rotation
- Rotary technology
- Few moving parts
- Long life time
- Low noise level
- Less vibrations
- QED 100-250 use R134A refrigerant
- QED 2600-8000 use R404A refrigerant

A Greener Choice

ECO DRI— SPECIFICATIONS & ENGINEERING DATA

Cycling Model	cfm @ 100 psig	Refrigerant	Volts/Phase Hertz	Power Consumption Kw	Max psig	Dimensions L In.	W In.	H In.	Approx. Wt. lb.	Connections In/Out
QED 100	100	R134a	115/1/60	.8	232	28.2	15.3	26.8	150	1" NPT
QED 125	125	R134a	115/1/60	1.0	189	31.3	19	31.7	155	1" NPT
QED 150	150	R134a	230/1/60	1.0	189	31.3	19	31.7	200	1" NPT
QED 200	200	R134a	230/1/60	1.5	189	31.3	19	31.7	210	1" NPT
QED 250	250	R134a	230/1/60	2.3	189	46.1	33.7	60.6	250	1 1/2"NPT
QED 300	300	R410A	230/1/60	3.2	189	46.1	33.7	60.6	300	1 1/2"NPT
QED 350	350	R410A	230/1/60	3.1	189	46.1	33.7	60.6	330	2" NPT
QED 450	450	R410A	460/3/60	2.5	189	46.1	33.7	60.6	350	2" NPT
QED 500	500	R410A	460/3/60	2.9	189	46.1	33.7	60.6	350	2" NPT
QED 600	600	R410A	460/3/60	3.1	189	46.1	33.7	60.6	375	2" NPT
QED 650	650	R410A	460/3/60	4.6	203	38.8	33.5	46.9	440	3" NPT
QED 850	850	R410A	460/3/60	3.2	203	38.8	33.5	54.1	725	3" NPT
QED 1050	1050	R410A	460/3/60	5.0	203	60	33.5	54.1	725	3" NPT
QED 1250	1250	R410A	460/3/60	7.6	203	49	41.7	56.3	750	4" Flange
QED 1600	1600	R410A	460/30/60	8.1	203	49	41.7	56.3	1220	4" Flange
QED 1800	1800	R410A	460/30/60	10.2	203	49	41.7	56.3	1250	6" Flange
QED 2100	2100	R410A	460/30/60	11.9	203	49	41.7	56.3	1350	6" Flange
*QED 2600	2600	R404A	460/30/60	13.6	189	51.2	53.1	74	1350	8" Flange
*QED 3000	3000	R404A	460/30/60	14.1	189	110	53.1	74	2830	8" Flange
*QED 4000	4000	R404A	460/30/60	26.0	189	110	53.1	74	2850	8" Flange
*QED 5000	5000	R404A	460/30/60	9.8	189	110	53.1	74	3000	8" Flange
*QED 8000	8000	R404A	460/30/60	13.2	189	110	90.8	75.2	4500	10" Flange

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.

* Consult Factory for Quote

CORRECTION FACTORS

Inlet Air Pressure Correction

A	psi	60	80	100	120	140	150	180	200
	Factor	0.83	0.94	1	1.03	1.05	1.08	1.09	1.11

Inlet Air Temperature Correction

B	Temp.°F	100	110	120
	Factor	1	0.84	0.69

Ambient Air Temperature Correction

C	Temp.°F	100	110
	Factor	1.00	0.91

Example One: Conditions
Requirement

Capacity	465 cfm
Inlet Pressure	120 psig
Inlet Air Temp.	110°F
Ambient Temp.	100°F

Example One: Calculations

Dryer Required = $\frac{\text{cfm required}}{\text{(A) x (B) x (C)}}$

= $\frac{465}{(1.03) \times (.84) \times (1)}$

= 537 cfm dryer required

Select QED 600 for this application

Example Two: Conditions
QED 500 Corrected Flow for:

Inlet Pressure	120 psig
Inlet Air Temp.	110°F
Ambient Temp.	100°F

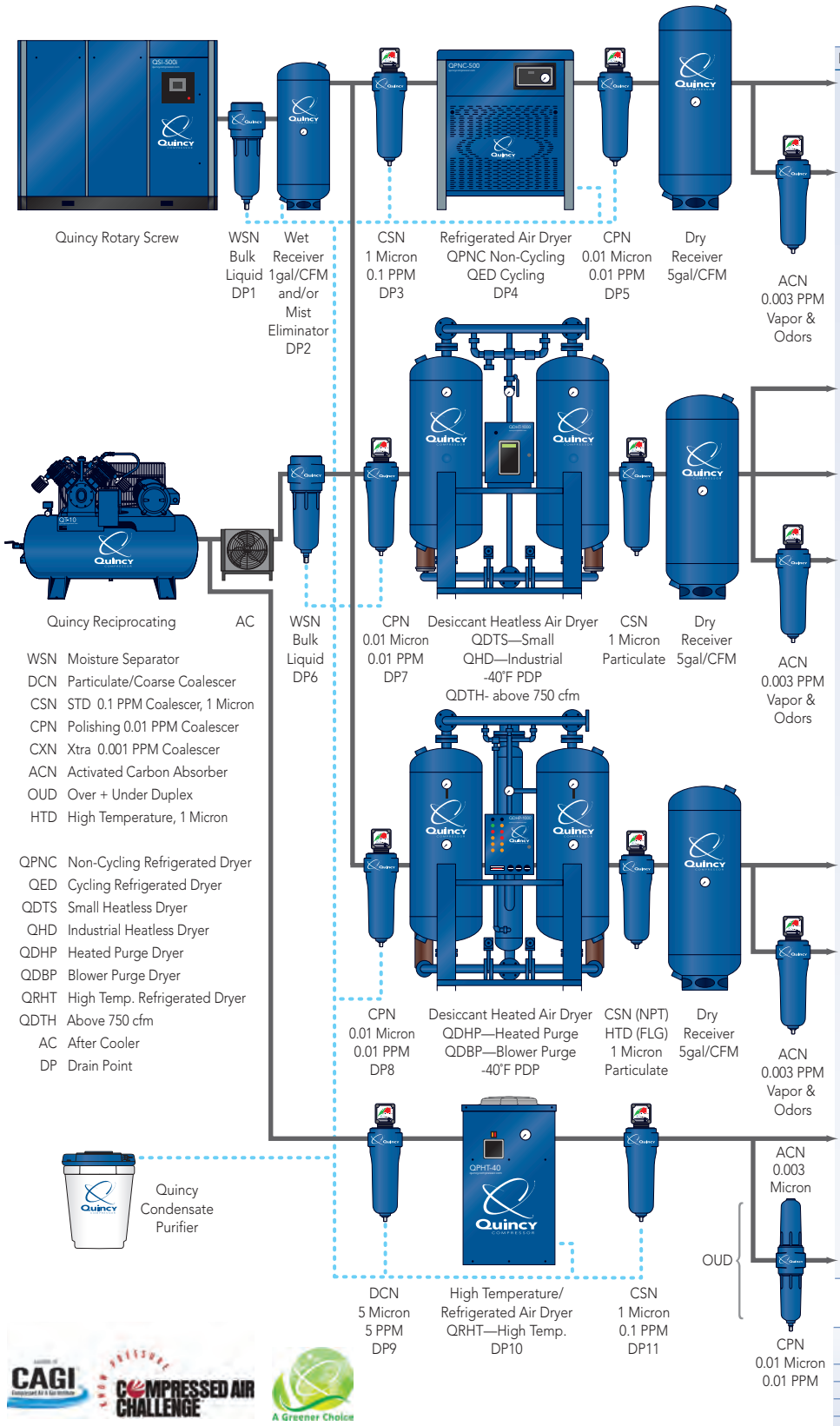
Example Two: Calculations

Corrected Capacity = Dryer Capacity x (A) x (B) x (C)

= 500 x (1.03) x (.84) x (1)

= 433 cfm

COMPRESSED AIR SYSTEMS BEST PRACTICE



WSN Moisture Separator
DCN Particulate/Coarse Coalescer
CSN STD 0.1 PPM Coalescer, 1 Micron
CPN Polishing 0.01 PPM Coalescer
CXN Xtra 0.001 PPM Coalescer
ACN Activated Carbon Absorber
OUD Over + Under Duplex
HTD High Temperature, 1 Micron

QPNC Non-Cycling Refrigerated Dryer
QED Cycling Refrigerated Dryer
QDTS Small Heatless Dryer
QHD Industrial Heatless Dryer
QDHP Heated Purge Dryer
QDBP Blower Purge Dryer
QRHT High Temp. Refrigerated Dryer
QDTH Above 750 cfm
AC After Cooler
DP Drain Point

Air Quality Classification ISO 8573.1						Wet System Avg. ΔP	
Solids		Moisture		Oil			
Micron	ISO	PDP	ISO	PPM	ISO	psi	Mbar
0.01	1	+38°F	4	0.01	1	10.7	738
0.01	1	+38°F	4	0.003	1	11.8	814
0.01	1	-100°F	1	0.001	1	14.2	979
NOTE: Requires CXN (.001 PPM) filter in series with standard CPN prefilter.							
1	2	-40°F	2	0.01	1	9.2	634
0.01	1	-40°F	2	0.003	1	10.3	710
1	2	-40°F	2	0.01	1	9.2	634
0.01	1	-40°F	2	0.003	1	10.3	710
1	2	+50°F	6	0.01	2	7.8	538
0.01	1	+50°F	6	0.003	1	10.0	689

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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