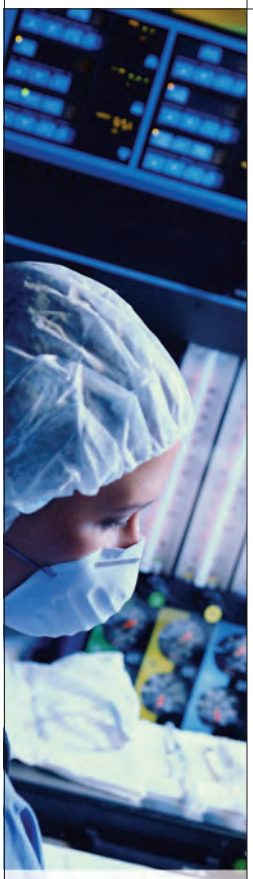
Quincy COMPRESSOR

Desiccant Air Dryers

HEATLESS
HEATED PURGE
BLOWER PURGE
MODULAR

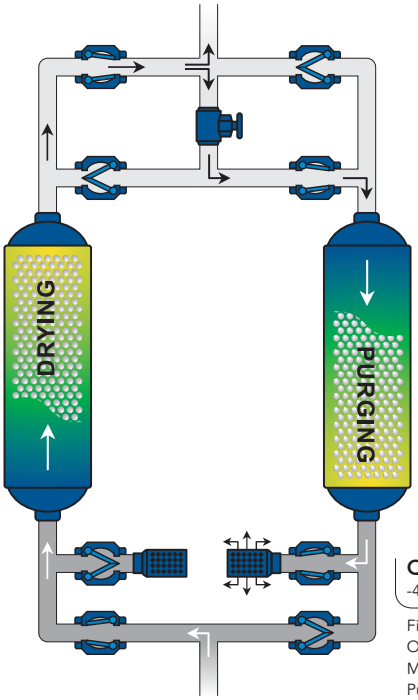
DESICCANT AIR DRYERS



- Quincy desiccant air dryers purify compressed air by adsorbing water vapor.
- Pressure dewpoints of -40°F to -100°F are attained by directing the follow of wet compressed air through a bed of highly adsorbent Q-Sorb desiccant.
- "Q-Sorb" is an enhanced formula of activated alumina. It provides better uniformity, more efficient use of available surface area, less dusting, longer life and lower pressure drop.
- Heatless dryers use a small portion of the dried compressed air to purge the off-line tower.
- Heated Purge dryers use an even smaller portion of the dried compressed air combined with heat for regeneration.
- Blower Purge dryers combine heat with forced ambient air for regeneration.
- Optimum performance and energy efficiency are maintained by employing a selected integration of dedicated valves, unit specific electronic controls, monitoring devices, and demand controls.
- 5 Year Warranty on all actuated switching valves.

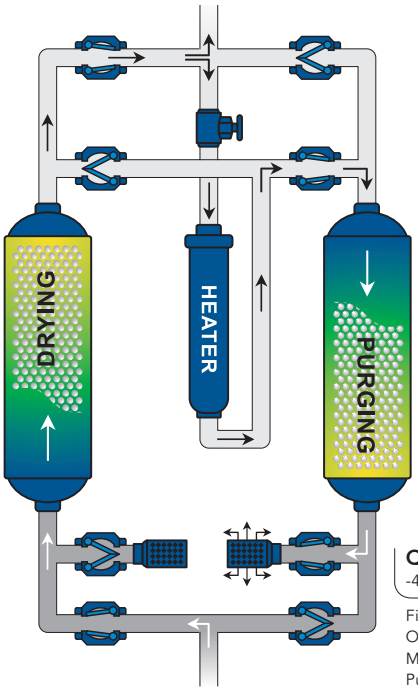
QHD Heatless Desiccant Dryer

FLOW SCHEMATICS



QHD Heatless
-40°F to -100°F Dewpoint

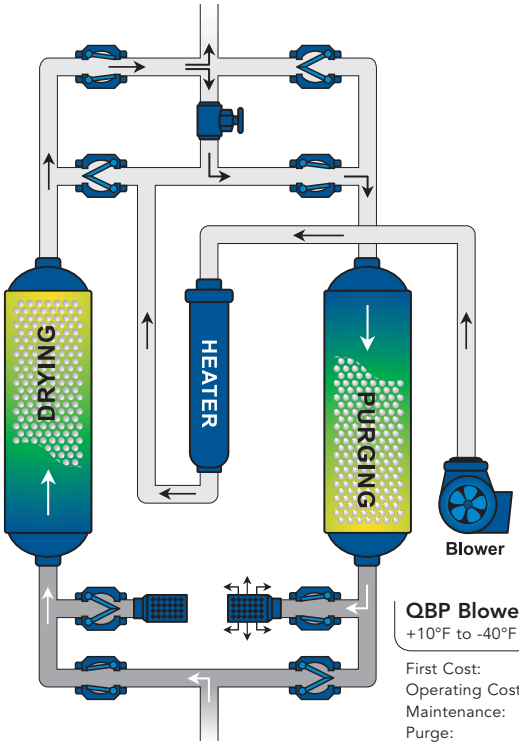
First Cost:	Low
Operating Cost:	Medium to High
Maintenance:	Low
Purge:	15%



QHP Heated Purge
-40°F to -100°F Dewpoint

First Cost:	Medium
Operating Cost:	Low
Maintenance:	Low
Purge:	7%
w/MBR Option:	3.5% Avg.

- To regenerate the off-line tower, atmospheric dry purge air flows through the regenerating bed.
- Purge air dries the moisture laden desiccant beads and is expelled to the atmosphere through the mufflers.
- Moisture load, velocity, contact time and cycle time determine the amount of desiccant required, and the size of the vessels.
- To ensure optimum moisture adsorption, velocities are kept below 50 feet per minute. The air is in contact with the desiccant for at least 4.5 seconds ensuring performance, while keeping a low pressure drop.



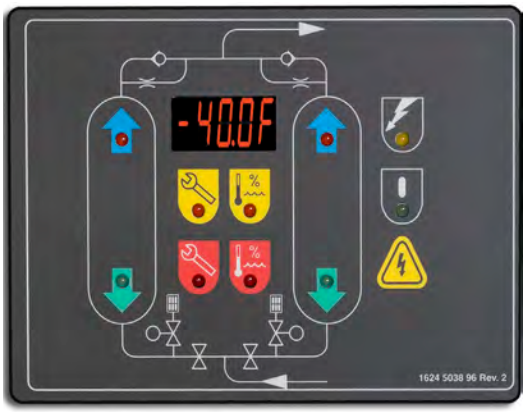
QBP Blower Purge
+10°F to -40°F Dewpoint

First Cost:	High
Operating Cost:	Low
Maintenance:	Medium
Purge:	1.75% Avg.

DEDICATED ELECTRONIC CONTROLS

STANDARD ELECTRONIC CONTROLLER FOR HEATLESS DRYERS

- Sequence Annunciator with Digital Dewpoint Readout
- Cycle Stop- allows dryer to cycle with compressor
- Power On/In Operation/Regeneration-Indicators
- Alarm and Warning Contacts/Sensor Alarm
- Service Warning Indicator and Alarm
- Remote Start/Stop Capability and Automatic Restart after Power Outage
- Optional Demand Control, (Easy) Field Demand Control Retrofit Kit
- Dewpoint Warning and Alarm with Optional Demand Control
- UL/cUL Certification
- CAN-BUS Communication

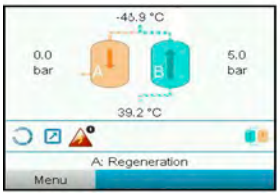


DIGITAL DEMAND CONTROL

- Optional on all models
- Saves Energy-Regulates purge in direct response to demand
- Adjusts energy consumption to fluctuating operating conditions
- Prolongs desiccant, valve, filter and element life- Reduces overall maintenance
- Circuitry is integral to the standard controller- Quick field installation kit available
- High speed, rugged ceramic sensor (NIST Traceable) with sensor warning and alarm
- Digital Dewpoint Readout, Dewpoint Warning and Alarm, Adjustable Dewpoint Settings (Integral in Standard Controller)

"HMI" CONTROLLER

- Standard on all QHP/QBP dryers
- Demand Control/Sequence Annunciator/ Adjustable Dewpoint
- Cycle Stop-Allows dryer to cycle with compressor
- Loaded Hours and Actual Demand Control Time display
- Fixed Cycle Time and Total Hours display
- Cycle Counter and Weekly Timer-Set Run/Stop schedule
- Energy Saving Calculator and Dewpoint Trending
- Integrated Web Server with Web Interface (LAN Connection)
- CAN Communication
- Multi Language Support
- Multilevel, Security Password Protection
- Remote Stop/Start/ Automatic restart after Power outage
- Service reminders with Service History Log
- Event History Log



MICROBURST REGENERATION (PATENTED) FULL-LOAD ENERGY SAVER

The only purge saving option available on the market for full load conditions. This algorithm along with dew point measurements cut purge flows by 50%.

- Includes Advance "HMI" Controller
- Available on QHP dryers
- Full load energy savings
- Integral Demand Control
- Cuts energy consumption by 50%
- Fast Payback
- Fully Instrumented
- Digital Dewpoint Readout
- Full Purge Default Mode

Desiccant Dryer Comparison - 1050 cfm		
	Purge	Compressor
Model	Flow	HP
QHD	147 cfm	30 HP
QHP std.	73.5 cfm	20 HP
QHP microburst	37 cfm	10 HP

*@ $.10 kWh 24/7 operation microburst **SAVES $13,070** per year at full load

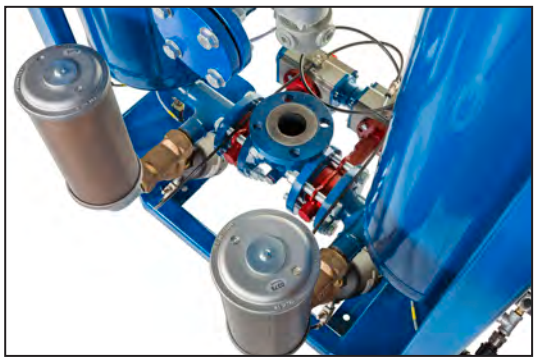
SUPERIOR COMPONENTS

Q-SORB ENHANCED DESICCANT

Quincy's exclusive Q-Sorb desiccant is the first significant improvement in activated alumina in many years.

- Enhanced Formula
- Improves Adsorption
- Lower Pressure Drop
- Higher crush strength
- Reduced Channeling
- Less dusting
- Direct replacement
- More Efficient
- Longer life

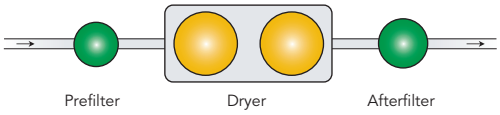
PREMIUM VALVE CONFIGURATION- FIVE YEAR WARRANTY



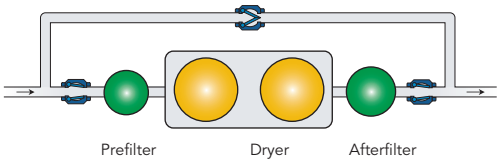
- High Performance Valves
- High Cycle Life
- Designed for low torque
- No Maintenance Required
- Low Pressure Drop
- Double acting actuators
- Fail safe operation - Ensures no disruption of air
- Industry Best 5-year Warranty

SYSTEM PACKAGES

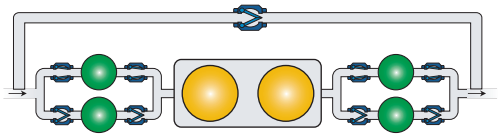
Quincy offers several factory filter packages that optimize filter selection and component placement. These factory mounted high-performance prefilters and afterfilters ensure total system integrity and reduce installation costs.



Package 1:
Includes Dryer with Mounted Filters



Package 2:
Includes Dryer with Mounted Filters and 3 Valve Bypass



Package 5:
Includes Dryer with Dual Selectable Prefilters, Afterfilters and 9 Valve Bypass

PACKAGE FILTRATION

Pre Filter Model CPN

- Type — Polishing Coalescer
- Rating — 0.01 PPM
- Dry Pressure Drop — 2 PSID

The factory-selected coalescing prefilter is installed at the dryer inlet. The polishing CPN and coalescing prefilter protects the dryer from liquid contamination and includes an electronic condensate drain with element condition indicator. The Aluminum filters feature a push-to-fit element connection design and color coded element end caps. The housing are electrophoretic coated and carry a 10-year warranty.

Afterfilter Model CSN

- Type — Standard/Particulate Coalescer
- Rating — 1 Micron
- Dry Pressure Drop — 1 PSID

To protect downstream equipment from the harmful effects of desiccant dust, Quincy has selected our high-efficiency, CSN, 1 micron particulate filter. Q-Sorb produces so little dust, this afterfilter will have an extended life expectancy. The filter is equipped with a standard. The housings are configured the same as the prefilter and are interchangeable.

QMOD HEATLESS DESICCANT AIR DRYERS

FEATURES

- Compact footprint saves floor space, fits anywhere
- Point of use, lab or compressor room
- Can be installed in either a vertical or horizontal position
- NPT connections allow easy installation and service access
- Floor mounting brackets provide stability (standard on models 00045 and larger)
- Wall mounting brackets available for models 00008 - 00035

PERFORMANCE

- Lab and instrument quality compressed air
- Class 1.2.1 standard (-40°F PDP @ 100 psi)
- Class 1.1.1 capable (-100°F PDP @ 100 psi)
- Max pressure = 232 psi
- ISO 8573:1 compliant
- Low delta P - <3 psi
- CRN approved*

ELECTRONICS

- Universal voltage
- 110/220 VAC and 12/24 VDC
- NEMA 35/ IP65 Controller
- Available PC software interface
- Diagnostic alarms

- Multiple inlet and outlet ports (00008 through 00035)
- Diagnostic Control Center
- Quick change desiccant cartridges with integral afterfilter
- Electrophoretic coating protects manifold and filter
- Polishing prefilter with dual timer, electronic drain

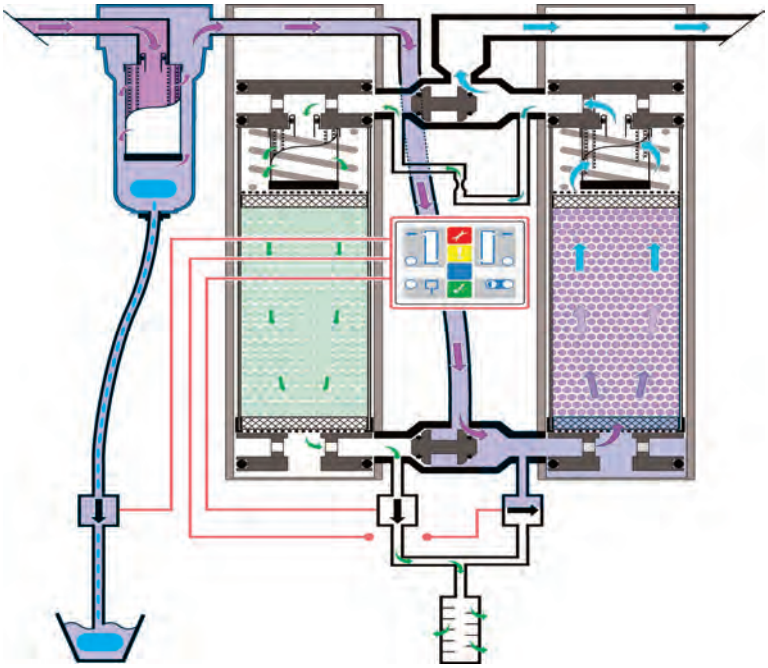
*QMOD 8-35 No CRN in Alberta, Canada
*QMOD 45-365 CRN in all Canadian provinces

QMOD OPERATION

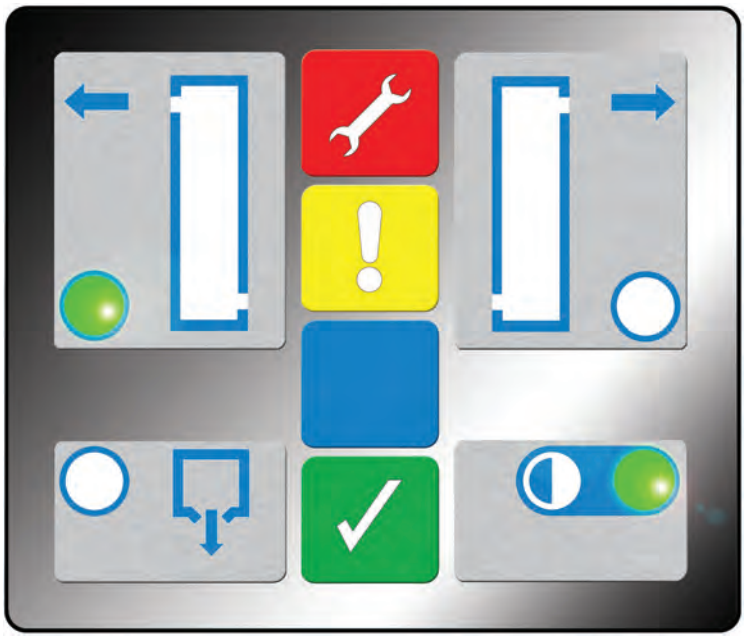
Quincy QMOD desiccant air dryers purify compressed air by filtering impurities and adsorbing water vapor from a compressed air stream.

To remove and drain liquids, aerosols and mists, the flow of untreated compressed air is initially directed through a 0.01PPM polishing pre-filter. The filtered compressed air is then directed up through one of two chambers that hold specially designed purification cartridges. Each cartridge contains a bed of high performance desiccant and a particulate afterfilter. The desiccant material adsorbs the remaining water vapor and the integral afterfilter finishes the process by collecting any remaining particulate matter. The compressed air is then delivered to the distribution system, or point of use, as a clean, dry utility.

The QMOD dryer offers dew point performance of either -40°F PDP or -100°F PDP.



QMOD DIAGNOSTIC CONTROL CENTER



- Service due - 12,000 hour intervals
- Solenoid fault
- Drain valve fault
- Controller fault
- Low voltage

- Service Warning -500 hours before service is due

- Power On/Off
- Right Chamber Purging
- Right Chamber Repressurizing
- Left Chamber Purging
- Left Chamber Repressurizing

- Adjustable alarm settings allow flexibility*
- RS 232 Communication for data collection via PC *
- Running hours display*
- Dry contact for remote alarm

* Requires optional QMCD software package

QMOD SIZING TABLE

All units provided with prefilter and afterfilter

Model	Inlet Pipe Size (NPT)	Inlet Flow Rate (SCFM)	Dryer Config.	Dimensions Length (In.)	Width (In.)	Height (In.)	Weight (lbs)
QMOD00008	3/8"	8	Simplex	11.1	3.6	22.0	33
QMOD00010	3/8"	10	Simplex	11.1	3.6	25.0	36
QMOD00015	3/8"	15	Simplex	11.1	3.6	32.1	43
QMOD00025	3/8"	25	Simplex	11.1	3.6	47.4	53
QMOD00035	3/8"	35	Simplex	11.1	3.6	62.9	68
QMOD00045	3/4"	45	Simplex	20.5	6.5	27.6	117
QMOD00055	3/4"	55	Simplex	20.5	6.5	31.5	130
QMOD00065	3/4"	65	Simplex	20.5	6.5	35.4	141
QMOD00085	1"	85	Simplex	20.5	6.5	43.3	165
QMOD00105	1"	105	Simplex	20.5	6.5	55.5	201
QMOD00135	1 1/4"	135	Simplex	20.5	6.5	63.4	225
QMOD00175	1 1/4"	175	Simplex	20.5	6.5	79.1	271
QMOD00215	1 1/2"	215	Duplex	20.5	12.9	55.5	379
QMOD00275	1 1/2"	275	Duplex	20.5	12.9	63.4	423
QMOD00365	1 1/2"	365	Duplex	20.5	12.9	79.1	511

Note: The temperature and pressure correction factors below should be applied to the above flow rates to suit the application and ensure dryer performance. All flow rates are based on 100 psig and 95°F at the dryer inlet.

Specification	
Standard pressure dewpoint	-40°F
	-100°F
Minimum working pressure	58 psig
Maximum working Pressure	232 psig
Electronic controls	12VDC - 24VDC, 100VAC - 240VAC
Minimum inlet temperature	35°F
Maximum inlet temperature	122°F
Minimum ambient temperature	41°F

Example
Capacity Correction for a 175 cfm Heatless Dryer Operating at 130 psig & 104°F

Corrected Capacity = Required Capacity x Pressure Correction x Temperature Correction
175 x 1.25 x .93
203 scfm

OR

Dryer Required = Required Capacity / Pressure Correction /Temperature Correction
175 / 1.25 / .93
150 scfm

Dryer Correction Factors

Inlet Pressure Capacity Correction													
Inlet psig	58	72	87	100	116	130	145	160	174	189	203	218	232
Pressure correction	0.62	0.75	0.87	1	1.12	1.25	1.37	1.5	1.62	1.75	1.87	2.0	2.12

Inlet Temperature Capacity Correction							
Inlet temperature (°F)	68	77	86	95	104	113	122
Temperature correction factor	1.07	1.06	1.04	1.00	0.93	0.78	0.64

Dewpoint Correction		
Dewpoint (°F)	-40°F	-100°F
Dewpoint correction factor	1	.7

Heatless

Model	cfm @ 100 psig	Purge SCFM	Pressure DewPoint Deg F	Voltage	Av. Power Consumption KW	Air Conn. n/Out	Q-Sorb lbs./Tower	Dimensions *Basic Dryer L In.	W In.	H In	*Approx. Wt. lbs
QHD 125	125	14	-40	115/1/60	.01	1"R.F.Flange	65	39.4	24.1	65.7	550
QHD 200	200	28	-40	115/1/60	.01	2"R.F.Flange	130	39.8	30.8	73.2	775
QHD 250	250	35	-40	115/1/60	.01	1.5"NPT	165	33.7	30.7	66.4	925
QHD 300	300	42	-40	115/1/60	.01	1.5"NPT	195	40.9	30.1	69.3	1144
QHD 400	400	56	-40	115/1/60	.01	1.5"NPT	265	40.9	33.1	69.3	1144
QHD 500	500	70	-40	115/1/60	.01	2"R.F.Flange	340	44.4	35.9	78.6	1375
QHD 650	650	91	-40	115/1/60	.01	2"NPT	410	43.3	36.4	75.3	2170
QHD 750	750	91	-40	115/1/60	.01	2"NPT	410	43.3	36.4	75.3	2170
QHD 850	850	119	-40	115/1/60	.01	3"R.F.Flange	510	76.3	41.0	103.0	2100
QHD 1050	1050	147	-40	115/1/60	.01	3"R.F.Flange	618	76.3	41.0	103.0	2300
QHD 1220	1220	171	-40	115/1/60	.01	3"R.F.Flange	727	82.4	41.0	95.0	2900
QHD 1700	1700	238	-40	115/1/60	.01	4"R.F.Flange	1018	97.0	46.0	102.5	4300
QHD 2000	2000	280	-40	115/1/60	.01	4"R.F.Flange	1237	97.0	46.0	102.5	4700
QHD 2600	2600	364	-40	115/1/60	.01	4"R.F.Flange	1500	96.5	46.0	124.5	5800
QHD 3000	3000	420	-40	115/1/60	.01	6"R.F.Flange	1817	104.0	63.3	131.9	7700
QHD 3400	3400	476	-40	115/1/60	.01	6"R.F.Flange	2035	104.0	63.3	131.9	8200

* Model Number indicates SCFM flow at 100 PSIG, 100°F

Heated Purge

Model	cfm @ 100 psig	Purge cfm	Pressure DewPoint Deg F	Voltage	Av. Power Consumption kW	Air Conn. In/Out	Q-Sorb lbs./Tower	Dimensions *Basic Dryer L In.	W In.	H In.	*Approx Wt. lbs.
QHP 250	250	17.5	-40	460/3/60	2.1	2"R.F.Flange	95	37.3	34.3	72.2	980
QHP 325	325	21	-40	460/3/60	2.9	2"R.F.Flange	141	37.3	38.5	74.3	1260
QHP 400	400	28	-40	460/3/60	4.2	2"R.F.Flange	170	37.3	38.9	74.3	1410
QHP 500	500	35	-40	460/3/60	4.7	2"R.F.Flange	220	36.3	42.5	75.0	1530
QHP 650	650	45	-40	460/3/60	5.3	2"R.F.Flange	286	41.4	42.7	75.0	1820
QHP 750	750	53	-40	460/3/60	5.7	2"R.F.Flange	330	47.0	44.9	76.7	2200
QHP 850	850	59.5	-40	460/3/60	7.9	3"R.F.Flange	509	76.3	41.0	99.3	2014
QHP 1050	1050	73.5	-40	460/3/60	10.8	3"R.F.Flange	611	76.3	41.0	99.3	2200
QHP 1220	1220	85.4	-40	460/3/60	11.8	3"R.F.Flange	732	82.4	41.0	91.3	3315
QHP 1500	1500	105	-40	460/3/60	15.8	4"R.F.Flange	900	97.3	53.8	105.9	5200
QHP 1700	1700	119	-40	460/3/60	15.8	4"R.F.Flange	1018	97.3	53.8	105.9	5200
QHP 2000	2000	140	-40	460/3/60	18.0	4"R.F.Flange	1209	97.3	53.8	105.9	5000
QHP 2600	2600	182	-40	460/3/60	22.3	4"R.F.Flange	1527	96.5	53.9	127.9	5550
QHP 3000	3000	210	-40	460/3/60	26.3	6"R.F.Flange	1845	104.0	65.1	131.3	7400
QHP 3400	3400	238	-40	460/3/60	29.0	6"R.F.Flange	2035	104.0	65.1	132.0	7900

Blower Purge

Model	cfm @ 100 psig	Heater kW	Blower kW	Voltage	Av. Power Consumption kW	Air Conn. In/Out	Q-Sorb lbs./Tower	Dimensions *Basic Dryer L In.	W In.	H In.	*Approx Wt. lbs.
QBP 250	250	C/F	C/F	460/3/60	3.0	2"R.F.Flange	95	37.3	33.7	77.3	C/F
QBP 325	325	C/F	C/F	460/3/60	3.2	2"R.F.Flange	141	37.3	36.2	74.3	C/F
QBP 400	400	C/F	C/F	460/3/60	5.0	2"R.F.Flange	170	37.3	36.2	74.3	C/F
QBP 500	500	C/F	C/F	460/3/60	5.5	2"R.F.Flange	220	36.3	36.2	75.0	C/F
QBP 650	650	C/F	C/F	460/3/60	5.6	2"R.F.Flange	286	44.4	39.8	75.0	2621
QBP 750	750	C/F	C/F	460/3/60	5.8	2"R.F.Flange	330	47.0	40.9	76.5	2853
QBP 850	850	12	.9	460/3/60	12.9	3"R.F.Flange	510	76.3	49.3	105.6	3568
QBP 1050	1050	12	2.1	460/3/60	14.1	3"R.F.Flange	630	76.3	49.3	105.6	5264
QBP 1220	1220	18	2.6	460/3/60	20.6	3"R.F.Flange	732	82.4	49.3	97.6	5727
QBP 1700	1700	27	4.6	460/3/60	31.6	4"R.F.Flange	1020	97.0	56.5	105.9	6696
QBP 2000	2000	27	5.5	460/3/60	32.5	4"R.F.Flange	1260	97.0	56.5	105.9	8969
QBP 2600	2600	36	6.3	460/3/60	42.3	4"R.F.Flange	1620	96.5	56.5	127.9	9405

* Model Number indicates SCFM flow at 100 PSIG, 100°F
** Purge only during 50 minute polishing cycle

CORRECTION FACTORS

Inlet Pressure Capacity Correction

Inlet psig	Factors QHD	QHP	QBP
50	0.56	0.56	0.56
60	0.65	0.65	0.65
70	0.74	0.74	0.74
80	0.83	0.83	0.83
90	0.91	0.91	0.91
100	1	1	1
110	1.09	1.09	1.09
120	1.18	1.18	1.18
130	1.27	1.27	1.27
140	1.37	1.37	1.37
150	1.43	1.43	1.43

Inlet Temperature Capacity Correction

Inlet Temp	Factors QHD	QHP	QBP
90	1.0	1.0	1.0
95	1.0	1.0	1.0
100	1.0	1.0	1.0
105	0.85	0.85	0.85
110	0.74	0.74	0.74
115	0.64	0.64	0.64
120	0.55	0.55	0.55

Example

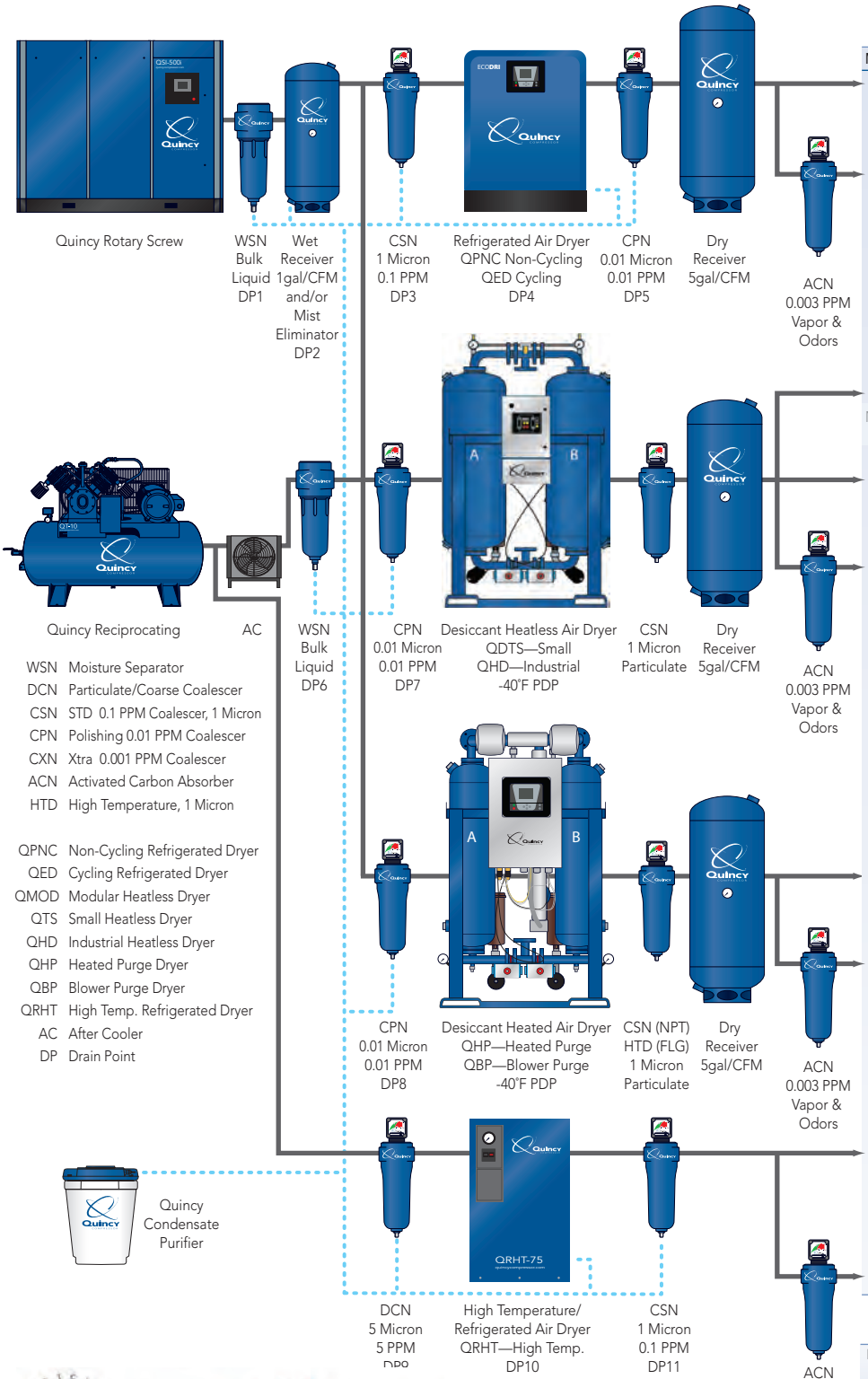
Capacity Correction for a 1000 cfm Heated Purge Dryer Operating at 120 psig & 110°F

Corrected Capacity = (Required Capacity) x (Pressure Correction) x (Temperature Correction)
1000 x 1.18 x .74
873 scfm

OR

Dryer Required = (Required Capacity) / (Pressure Correction) / (Temperature Correction)
1000 / 1.18 / .74
1145 scfm

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
HTD High Temperature, 1 Micron

QPNC Non-Cycling Refrigerated Dryer
QED Cycling Refrigerated Dryer
QMOD Modular Heatless Dryer
QTS 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

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 standard CPN 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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