

PNEUMATECH[®] INC.

DESIGNED

*for economical, trouble-free
performance and long-life reliability*



MANUFACTURED


*with high-quality components
and innovative techniques*



SUPPORTED

by a world-wide distribution network



CHILLED  MEDIA™
**CYCLING REFRIGERATED
AIR/GAS DRYERS**

WORLD LEADERS IN COMPRESSED AIR SYSTEM MANAGEMENT

Pneumatech has been manufacturing cycling design dryers for over 30 years

Exclusive Features and Benefits

Cooling is provided instantly to dehumidify your plant's compressed air when conditions change from low load to full load.

- Chilled Media circuit utilizes **both conduction and convection** heat transfer principles for more efficient operation. A pump continuously circulates the Chilled Media™, in our exclusive Counterflow Convection Cooling™ (3C™) design heat exchangers.
- System will pull down to operating temperatures within minutes, unlike other cycling designs.
- Dryer cycles based on precise compressed air dew point temperature.
- Exclusive dual cycling thermostats, sensing both the dew point temperature and, as an added safety, the Chilled Media™ to insure the dryer cycles during all load conditions.

System will experience minimal pressure drop due to innovative technology.

- Exclusive Pneumatech shell and tube heat exchanger design.
- Plain copper tube construction prevents clogging and fouling of the heat exchanger, minimizing unwanted pressure drop.
- Efficient five-step centrifugal separator removes condensed moisture from the air.

Easy, trouble-free maintenance and reduced service costs.

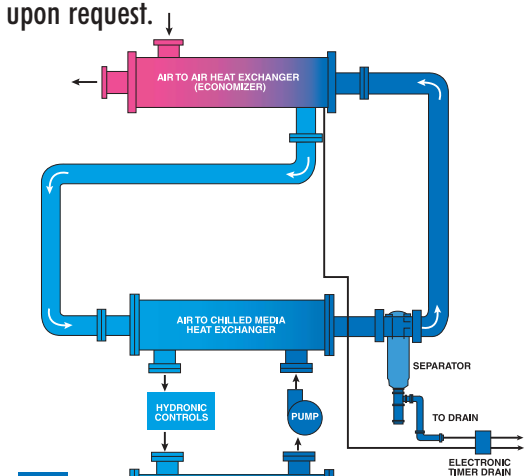
- Dual, programmable auto drains; Air Free™ drain option available upon request.
- Auto drain line has a particle strainer with a shut-off valve.
- Pneumatech's unique modular air system construction.
- Non-blended R-22 pure fluid refrigerant.
- Easy access door to electrical panel.



1) Counter Flow: Heat transfer efficiency is significantly improved by flowing the fluids (Air, Chilled Media and Refrigerant) in opposite directions.

2) Convection: Circulation of the Chilled Media (convection) creates turbulent flow for more efficient cooling.

3) Cooling: Refrigeration system designed and sized exclusively for air dryer application.



Flow Diagram

Digital Dry Guard™ (DDG) Control

Introducing the Digital Dry Guard (DDG), a microprocessor based control now standard on models AC(W)-250 to AC(W)-4000. The most advanced operator control panel for refrigerated dryers on the market.

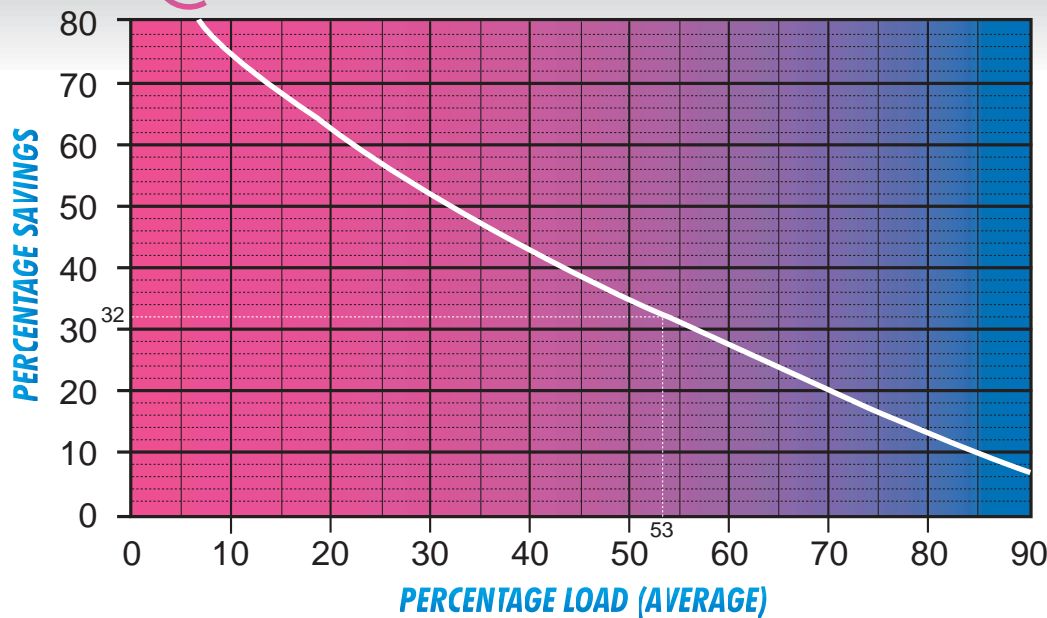
The Digital Dry Guard displays:

- Inlet Air temperature
- Chilled Media temperature
- Ambient temperature
- Fahrenheit and Centigrade selection
- Alarm indicator
- Compressor running indicator
- Service due indicator
- Programmable auto-drain



Energy Savings Estimates

for Chilled  Media™ Cycling Dryers vs. Non-Cycling Refrigerated Air Dryers



Annual Operating Hours: 6,680. Non-cycling dryers run continuously.

Example: Air dryer Model: AC-500, Capacity: 500 SCFM, Power Cost: \$.06/KWH

USAGE CHART

	MON-FRI		SATURDAY		SUNDAY	
	FLOW (SCFM)	TAU (SCF)	FLOW	TAU	FLOW	TAU
1st SHIFT	450	1,080,000	375	180,000	0	0
2nd SHIFT	250	600,000	0	0	0	0
3rd SHIFT	75	180,000	0	0	0	0

* Assumes both non-cycling and cycling dryers are shut off after 1st shift Saturday through Sunday.

**Power consumption of AD-500 Non-Cycling dryer from bulletin A-7-A.

Total air usage (TAU) per week: 2,040,000 CU. FT

Total dryer capacity (TDC) per week: 3,840,000 CU. FT*

Average load percentage = TAU x 100 / TDC = 2,040,000 x 100 ÷ 3,840,000 = 53%

Non-Cycling dryer power input/year: 4.6 KW** x 6680 H = 30,728 KWH

Cycling dryer at 53% load (average) runs 68% of the time = 32% savings. (From graph above)

Power input/year: 4.6 KW x 6680 H x .68 = 20,895 KWH

Ambient/inlet air temp. correction factors:

Cool Climate = 1.20 Warm Climate = 1.15

Annual savings S: (30,728 - 20,895) x .06 x 1.2 =

\$707.98

Annual savings at \$.10/KWH: 707.98 x .10/.06 =

\$1,179.96

Pneumatech Chilled Media™ Cycling Air Dryers

Standard Features

1. Digital Dry Guard™ (DDG) Control
2. Dual cycling thermostats
3. Programmable auto drain(s)
4. 3C™ design heat exchangers
5. Modular construction air and refrigeration system
6. Heavy duty fan motors with ball bearing and enclosed intake end frame for long life
7. Oversized air cooled condenser to withstand higher ambient temperatures and to provide built-in reserve capacity for dirty industrial environments
8. Metal cabinet with easy access panels (600 SCFM & below)
9. Condensing unit exclusively designed and manufactured for air dryer application
10. Factory tested for automatic operation with a full charge of refrigerant and oil
11. Dryer can be shut off during non-operating hours unlike other cycling designs
12. Shell and tube design water cooled condensers with removable end bonnets for easy maintenance
13. Regulating valve for water conservation and system efficiency (water-cooled units)
14. Water cooled condensers designed for multisource water supplies (city & tower water)
15. Commercially available and interchangeable refrigeration controls for fast service

Specifications

MODEL SIZES	CAP. * SCFM (MM ³ /HR)	REFRIGERATION H.P.	ELECT. KW INPUT	WATER USAGE** GPM (LPM)			DIMENSIONS INCHES (MILLIMETERS) L x W x H	CONNECTIONS-INCHES		APPROX. SHIP. WT. LBS. (KGS.)	ELECT. POWER SUPPLY VOLTAGE -PHASE-CYCLES
				CITY 55-60 F (12-16 C)	TOWER 85-90 F (29-32 C)	HEAT REJECTION BTU/AIR		AIR	WATER		
AC-100	100 (170)	3/4	1.3	1.1 (2.08)	0.55 (4.16)	10,400	32 x 23 x 32 (813 x 584 x 813)	1" NPT (F)	3/8" NPT	375 (170)	115-1-60 208/230-1-60
AC-150	150 (255)	1	1.48	1.0 (3.79)	2.0 (7.57)	11,350	39 x 31 x 44 (991 x 787 x 1118)	1 1/2" NPT (F)	1/2" NPT(F)	550 (249)	208/230-1-60
AC-250	250 (425)	2	2.12	1.6 (6.06)	3.2 (12.11)	17,000	39 x 31 x 44 (991 x 787 x 1118)	1 1/2" NPT (F)	1/2" NPT(F)	600 (272)	208/230-3-60 OR 440/480-3-60 575-3-60 (Opt.; Std. in Canada)
AC-325	325 (552)	2	3.36	2.6 (9.84)	5.2 (19.68)	28,600	39 x 31 x 44 (991 x 787 x 1118)	2" NPT (F)	1/2" NPT(F)	700 (318)	
AC-400	400 (680)	3	3.91	2.8 (10.60)	5.6 (21.20)	36,435	53 x 33 x 45.25 (1346 x 838 x 1149)	2" NPT (F)	1/2" NPT(F)	850 (386)	
AC-500	500 (850)	3	3.91	3.0 (11.36)	6.0 (22.71)	37,400	53 x 33 x 45.25 (1346 x 838 x 1149)	2" NPT (F)	1/2" NPT(F)	900 (408)	
AC-600	600 (1020)	4	4.36	4.0 (15.14)	8.0 (30.28)	43,180	53 x 33 x 45.25 (1346 x 838 x 1149)	3" NPT (F)	3/4" NPT(F)	1100 (499)	
AC-750	750 (1274)	5	6.36	6.2 (23.47)	12.4 (46.93)	63,800	72 x 42 x 57.5 (1829 x 1067 x 1461)	3" NPT (F)	3/4" NPT(F)	1200 (544)	
AC-1000	1000 (1699)	5	6.36	6.5 (24.60)	13.0 (49.21)	64,900	72 x 42 x 57.5 (1829 x 1067 x 1461)	3" NPT (F)	3/4" NPT(F)	1500 (680)	
AC-1200	1200 (2039)	7 1/2	7.53	6.7 (25.36)	13.5 (51.10)	78,000	72 x 42 x 62.75 (1829 x 1067 x 1594)	4" FL. 150#	1" NPT(F)	1700 (771)	
AC-1500	1500 (2549)	7 1/2	7.53	7.0 (26.50)	14.0 (52.99)	79,500	72 x 42 x 60.25 (1829 x 1270 x 1530)	4" FL. 150#	1" NPT(F)	1800 (816)	
AC-1700	1700 (2889)	10	10.71	10.5 (39.74)	21.0 (79.49)	114,000	72 x 42 x 60.25 (1829 x 1270 x 1530)	4" FL. 150#	1" NPT(F)	2100 (953)	
AC-2000	2000 (3398)	10	10.71	11.5 (43.53)	23.0 (87.06)	116,000	72 x 42 x 60.25 (1829 x 1270 x 1530)	4" FL. 150#	1" NPT(F)	2500 (1134)	
AC-2500	2500 (4248)	15	15.40	15.0 (56.78)	30.0 (113.55)	169,200	115 x 60 x 64 (2921 x 1524 x 1626)	6" FL. 150#	1 1/2" NPT(F)	3500 (1588)	
AC-3200	3200 (5437)	20	20.19	21.0 (79.49)	42.0 (158.97)	193,000	125 x 68 x 91 (3175 x 1727 x 2311)	6" FL. 150#	2" IN., 1 1/2" OUT.	4200 (1905)	
AC-4000	4000 (6796)	25	24	30.0 (113.56)	60.0 (227.12)	305,000	150 x 75 x 95 (3810 x 1905 x 2413)	8" FL. 150#	2" FL.	6900 (3130)	

Pneumatech reserves the right to change or revise specifications and product design in connection with any features of our products. Such changes do not entitle the buyer to corresponding changes, improvements, additions or replacements for equipment previously sold or shipped.

* Capacity ratings, in accordance with recommended NFPA standards and Compressed Air & Gas Institute (CAGI) Standard No. ADF 100. Capacity ratings based on 100°F (38°C) inlet temp. and 100 PSIG (7.03 Kg.cm²) inlet pressure and 100°F (38°C) maximum ambient temp. Maximum pressure 150 PSIG (10.55Kg/cm²)

** Watercooled models only.

ACCESSORIES	DRYER MODELS		
	125 - 150	250 - 600	750 - 4000
Digital Dry Guard™ Control†	Opt.	Std.	Std.
Power on/off switch	Std.	Std.	Std.
Power on light	Std.	NA	NA
Alarm light	Std.	Std.	Std.
Refrig. Dual press. Control	Std.	Std.	Std.
Dew Pt. Temp. gauge/display††	Opt.	Opt.	Opt.
Air-in pressure gauge	Opt.	Opt.	Opt.
Air-in temp. gauge/display††	Opt.	Std.	Std.
Air-out pressure gauge	Opt.	Opt.	Opt.
Air-out temp. gauge/display††	Opt.	Opt.	Opt.
Refrig. Suction press. (Analyzer) gauge	Std.	Std.	Std.

† Digital Dry Guard™ Control (DDG) includes: Inlet air temperature, chilled media temperature, ambient temperature, Fahrenheit and Centigrade selection, alarm indicator, compressor running indicator, service due indicator, programmable auto-drain. Digital Dry Guard™ options: Dew point temperature, Air-free auto-drain, New mini air-free auto-drain

†† Analog gauge provided on AC-100 & AC-150. Displayed on Digital Dry Guard Control AC(W)-250 to AC(W)-4000.

ACCESSORIES	DRYER MODELS		
	125 - 150	250 - 600	750 - 4000
Refrig. Discharge press. (Analyzer) gauge¹	Opt.	Opt.	Opt.
Low ambient (fan) control	Std.	Std.	Std.
Low air pressure shut-down switch	Opt.	Opt.	Opt.
Ambient filters	Opt.	Opt.	Opt.
NEMA - 3R, 4, 7, 9, 12	Opt.	Opt.	Opt.
Cabinet	Std.	Std.	Opt.
Open Frame design	NA	NA	Std.
Water cooled condenser	Opt.	Opt.	Opt.
Cupro-nickel water cooled condenser	Opt.	Opt.	Opt.
200, 250 or higher working pressure	Opt.	Opt.	Opt.

¹ Standard on water-cooled models

- To order watercooled units, use ACW designation (e.g. ACW-2000).
- Dew point range preset at Factory (Field Adjustable)
- AC-750 and larger models are open frame construction
- For larger or smaller capacity dryers, please consult factory
- For correction factors see Bulletin A-7-A
- Available voltages: 208/230-3-60, 440/480-3-60, 575-3-60 optional (std. in Canada)
- Also available in 50 cycles

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