

REFRIGERATED COMPRESSED AIR DRYERS

HPR SERIES

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Since 1948, people around the globe have relied on Hankison to deliver the right solutions to efficiently meet the needs of today's applications for compressed air treatment. HPR Series non-cycling refrigerated compressed air dryers offer the right combination of technology and simplicity to keep your air system at a dry, 38°F (+3°C) pressure dew point, from 5 through 500 scfm.

GAIN EFFICIENCY

Air-powered products and processes operate best with clean and dry compressed air. Productivity improves. Rejects decrease. Maintenance personnel are able to be proactive and work from their schedule. The entire facility runs smoothly and contributes to financial stability and competitiveness.

BUILT-IN DURABILITY AND RELIABILITY

All HPR Series dryers are built for durability, in a space-saving design. Sturdy sheet steel is formed and protected by an epoxy-based powder coat finish. Reliable reciprocating refrigeration systems use environmentally friendly R-134a refrigerant. R-134a is known for its ability to maintain stable temperatures to protect the integrity of the 38°F (+3°C) pressure dew point. HPR Series can handle the pressure.

DRY COMPRESSED AIR

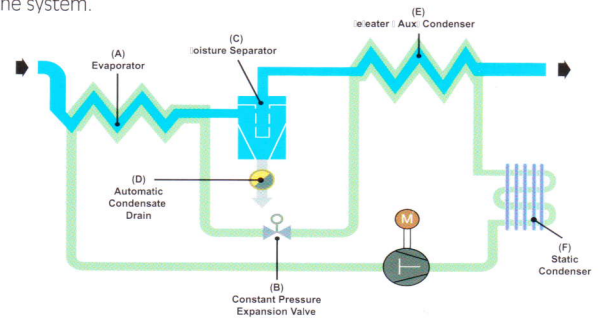
Pure & Simple

Research indicates that many customers want reliability and dry compressed air at an affordable price. No fancy bells and whistles - just dry air, pure and simple. The HPR Series non-cycling dryers were designed to meet these demands.

HOW IT WORKS

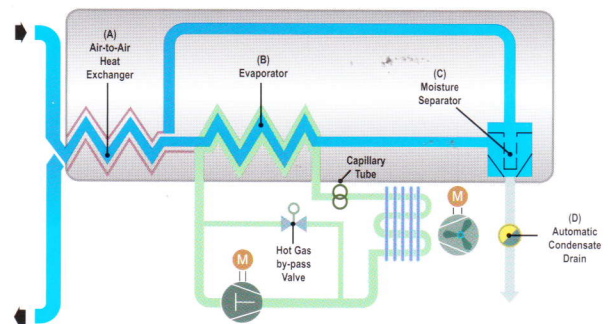
Models HPR5-10 through HPR50

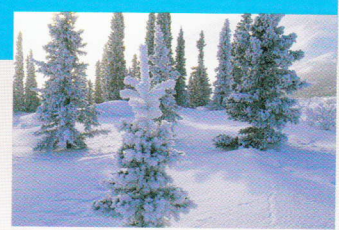
Warm saturated air enters the Evaporator (A) where it is cooled by refrigerant being controlled by a Constant Pressure Expansion Valve (B). Water vapor condenses into a liquid for removal at the moisture separator (C) by an Automatic Drain (D). The cold, dry air is reheated as it passes through the Reheater (E). This prevents pipeline sweating. The Static Condenser (F) eliminates the need for a cooling fan and simplifies the system.



Models HPR75 through HPR500

Warm saturated air enters the air-to-air heat exchanger (A) where it is pre-cooled by the outgoing chilled air, and then passes through the air-to-refrigerant (evaporator) heat exchanger (B) where it is further cooled by the refrigeration system. Water vapor condenses into liquid droplets to be removed by the Moisture Separator (C) then, discharged from the dryer by an automatic drain (D). Chilled dry air returns through the air-to-air heat exchanger (A) where it is reheated before exiting the dryer.





HPR SERIES - STANDARD FEATURES

- Easy to install package saves time. Simply connect the pipes and plug in the power cord (models HPR200-500 are hard-wired)
- Adapts to system needs without complicated controls. Fully automatic operation saves money.
- Every unit comes pre-assembled with quality components. Long service life.
- Steady 38°F pressure dew point. Ensures maximum moisture removal every day.
- On/off switch illuminates when compressor is on
- At-a-glance control panel dew point indication verifies performance (HPR25-HPR500)

HPR SERIES - MODELS THROUGH 50SCFM

- Static condenser recycles waste heat to eliminate cold, sweaty pipes
- Integral Moisture Separator
- Timer operated drain with isolation valve/strainer (float drain on HPR5-10)
- Models HPR5-10 and HPR15 designed to adapt to legacy Hankison HVAC installations
- On/off switch illuminates when compressor is on

HPR SERIES - MODELS 75 TO 500 SCFM

- Integral 304 stainless steel heat exchanger, mesh demister and, moisture separator for long life
- Timer operated drain includes isolation valve/strainer to protect valve from rust and scale
- Panel mounted drain timer controls (HPR200-500)
- LED style dew point indicator (HPR200-500)
- Panel filter captures ambient dirt and dust to keep condenser clean (HPR100-500)



PRODUCT FEATURES AND SPECIFICATIONS

HPR SERIES PRODUCT FEATURES

Model	Lighted Compressor on/off switch	Dew point indicator	115v/60/1 grounded, 8 foot, power cord	Timer operated drain valve, insulation valve, strainer	Panel mounted drain valve adjustments	Refrigeration System								CSA Approved
						R-134a, HFC Refrigerant	Reciprocating Compressors	Copper tube-on-tube heat exchanger	Constant Pressure Expansion Valve	304ss heat exchanger, demister & moisture separator	Capillary Tube & Hot Gas Bypass Valve	Fan Cycling	High Pressure Cut-out Switch	
HPR5-10 & 15	S	-	S	S ¹	-	S	S	S	S	-	-	-	-	S
HPR25-50	S	S	S	S	-	S	S	S	S	-	-	-	-	S
HPR75-150	S	S	S	S	-	S	S	-	-	S	S	S	-	S
HPR200-500	S	S	-	S	S	S	S	-	-	S	S	S	S	S

* Float Drain is standard of model HPR5-10

HPR SERIES PRODUCT SPECIFICATIONS

Model	Capacity ¹		Inlet/Outlet npt. male	Power Supply	Input Power ² kW	Refrigerant	Height		Width		Depth		Shipping Weight	
	scfm	Nm ³ /min					in	mm	in	mm	in	mm	lbs.	kg.
HPR5-10	10	28	3/8	115/1/60	0.20	R134a	15	381	13	320	13	320	64	29
HPR15	15	42	3/8		0.24		15	381	13	320	13	320	69	31
HPR25	25	71	3/4		0.41		22	569	15	368	15	368	88	40
HPR35	35	99	3/4		0.46		22	569	15	368	15	368	92	42
HPR50	50	142	3/4		0.57		22	569	20	500	20	500	101	46
HPR75	75	212	3/4		0.72		20	510	19	480	21	526	110	50
HPR100	100	283	1		0.74		21	525	13	330	30	761	123	56
HPR125	125	354	1	0.76	21		525	13	330	30	761	133	60	
HPR150	150	425	1	1.11	21		525	13	330	30	761	153	69	
HPR200	200	566	1-1/2	460/3/60	1.42		30	762	17	437	36	904	183	83
HPR250	250	708	1-1/2		1.98		30	762	17	437	36	904	211	96
HPR300	300	850	1-1/2		2.05		30	759	20	518	38	953	218	99
HPR400	400	1133	2		2.50		30	759	21	541	38	953	232	105
HPR500	500	1416	2		3.06		32	800	25	640	41	1052	262	119

¹ Rated Flow Capacity - Conditions for rating dryers are in accordance with CAGI (Compressed Air and Gas Institute) Standard ADF 100: Refrigerated Compressed Air Dryers - Methods for Testing and Rating. Conditions for rating above dryers are: compressed air at dryer inlet: 100 psig (7kg/cm²) and 100°F (38°C) saturated; ambient temperature: 100°F (38°C); operating on 60 Hz power supply. At rated conditions, pressure drop is less than 5 psi.

² At 35°F (2°C) evaporator and 100°F (38°C) ambient

Capacity Correction Factors

To adjust dryer capacity for conditions other than rated, use Correction Factors (multipliers) from Tables 1 and 2.

Example: What is the capacity of a 200 scfm model when the compressed air at the inlet to the dryer is 150 psig and 100°F (38°C), and the ambient temperature is 90°F (32°C)?

Answer: 200 scfm (rated flow from Specifications Table) x 1.13 (correction factor for inlet temperature and pressure from

Table 1) x 1.06 (correction factor for ambient temperature from Table 2) = 240 scfm

Table 1: Dryer Sizing Chart

Inlet Air Temp. °F (°C)	Inlet Air Pressure psig (bar) Correction Factor						
	80	100	125	150	175	200	250
90 (32)	1.17	1.23	1.31	1.37	1.42	1.47	1.49
100 (38)	0.95	1.00	1.07	1.13	1.18	1.22	1.24
110 (43)	0.79	0.82	0.91	0.95	0.99	1.03	1.05
120 (49)	0.66	0.70	0.74	0.80	0.84	0.89	0.91

Table 2: Correction Factor

Ambient Air Temperature °F (°C)	Correction Factor
80 (27)	1.12
90 (32)	1.06
100 (38)	1.00
110 (43)	0.94

OPERATING CONDITIONS

Models	Max. Inlet Air Press. psig	Min. Inlet Air Press. psig	Max. Inlet Air Temp.	Min. Inlet Air Temp.	Max. Ambient Temp.	Min. Ambient Temp.
5-10 - 50	250	30	120°F	40°F	110°F	45°F
75-500	232	10	120°F	40°F	110°F	45°F



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