

## Refrigerated Compressed Air Dryers

HPR & HPRN VALUE SERIES



**COMPRESSED**  
AIR ADVISORS  
Inc.

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**Hankison**<sup>®</sup>

## Reliable Operation...

Customers around the world have relied on Hankison for great value in air treatment solutions. Hankison Value Line Refrigerated Dryers offer a simple solution based on a long history of industry leading technology.



Efficient Smooth Copper Heat Exchangers

## HPR5/10 – HPR50 5/10 – 50 scfm

### BETTER BY DESIGN

- Smooth bore, copper tube-on-tube heat exchangers deliver low pressure dew point performance
- Centrifugal separator efficiently captures liquid condensate at varying inlet loads
- Static condenser design – provides trouble free , quiet operation

### RELIABLE CONDENSATE MANAGEMENT

- Models 10-15 scfm: Pneumatically operated internal float drain
- Models 25-50 scfm: Electronic drain valve

### EASE OF MONITORING

- Models 10-15 scfm: Lighted On/Off switch
- Models 25-50 scfm: Lighted On/Off switch and dew point temperature indicator

### OPTIONS

- Air bypass valve allows ease of service
- Wall mount bracket enables flexible installation

### SAFETY FIRST – ENVIRONMENTAL FRIENDLY

- CFC free R134a refrigerant
- CSA approved



Air Bypass Valve

# HPR75 – HPR400

## 75 – 400 scfm

### TIME PROVEN DESIGN

- 316 stainless steel, brazed plate heat exchangers efficiently dry the air to the specified pressure dew point.
- Hot gas by-pass valve maintains constant evaporator temperature
- Replaceable ambient air filter protects the condenser from airborne contaminants
  - » *Maintenance kits include ambient air filter*

### CONDENSATE MANAGEMENT

- Integral stainless demister/separator captures liquid condensate and solid particles
- Electronic drain valve automatically discharges condensate from the dryer

### STAY IN CONTROL

- Model 75-150 scfm: Lighted On/Off switch and dew point indicator
- Models 200-400 scfm: Lighted On/Off switch, LED dew point temperature indicator, timer drain adjustment on the panel

### SAFETY FIRST – ENVIRONMENTAL FRIENDLY

- CFC free R134a refrigerant
- CSA approved

Value at its finest...

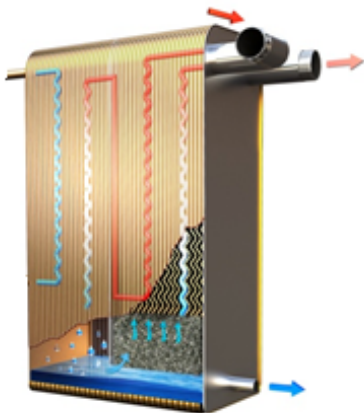


Adjustable Timed Electric Drain



Controls: Models 200-400 scfm

Performance at its best...



Stainless Steel Demister/Separator



Controls: Models 200-1200 scfm

## HPRN75 – HPRN1200 75 – 1200 scfm

### GLOBALLY PROVEN PERFORMANCE

- Stainless steel, cross flow heat exchangers optimize heat transfer and service life
  - » *ISO 8573-1 Air Quality: Class 4-5 pressure dew point*
  - » *Smooth, non-fouling channels promote low pressure drop*
- Herringbone geometry stamped into the stainless steel plates creates turbulent flow, for a self-cleaning effect
  - » *No pre-filter required for full 2 year warranty*
  - » *5 year heat exchanger warranty*
- Compact design saves floor space

### EFFICIENT CONDENSATE MANAGEMENT

- Increased calming zone and integral demister/separator captures liquid condensate and solid particles
  - » *Effectively removes condensate from 0 to 100% flow conditions without moisture carry-over*
- Furnished with a timed electric condensate drain
  - » *Includes a Y-strainer to protect the valve from rust and scale*

### EASY TO MONITOR

- Models 75-150: Illuminated On/Off Switch; dew point temperature display indicator to monitor inlet load conditions
- Models 200-1200 scfm: Illuminated On/Off Switch; LED dew point temperature display; dry alarm contact
  - » *Equipped with panel mounted drain timer control*

### SAFETY FIRST – ENVIRONMENTAL FRIENDLY

- Models 75-125 scfm CFC free R134a
- Models 150-1200 scfm R407c refrigerant
- CSA approved

# International Air Quality Class Standards

## ISO 8573-1 AIR QUALITY STANDARD

**ISO 8573-1**, the international standard for compressed air quality, defines the amount of contamination permissible in compressed air.

The ISO standard identifies three primary forms of contamination in compressed air systems – solid particles, water and oil. Contaminants are classified and assigned a quality class, ranging from Class 0, the highest purity level, to Class 6, the most relaxed.

**HPR and HPRN series refrigerated air dryers offer the perfect balance between technology and simplicity to dry compressed air systems to ISO 8573-1 Air Quality Class 4 to 5 – pressure dew points.**



### OPTION PRE-FILTRATION

NGF series – PF grade filtration – removes solid and oil contaminants from the air stream before entering the dryer.

#### ISO Air Quality Class:

- Solids – Class 2
- Remaining Oil – Class 4
- Removes solids 1.0 micron and larger
- Remaining oil content 2.0. mg/m<sup>3</sup>

### OPTION AFTER-FILTRATION

NGF series – HF grade filtration – provides high efficiency oil removal protecting downstream equipment .

#### ISO Air Quality Class:

- Solids – Class 1
- Remaining Oil – Class 1
- Removes 99.999+% of solids  $\geq$  0.01 micron
- Remaining oil content < 0.01 mg/m<sup>3</sup>

# Product Specifications

MODEL <sup>1</sup>	RATED FLOW SCFM <sup>2</sup>	RATED FLOW M <sup>3</sup> /H	REFRIGERANT	VOLTAGE	POWER KW	INLET/OUTLET CONNECTIONS	DIMENSIONS (INCHES)			WEIGHT LBS
							H	W	D	
<b>HPR5-10</b>	5	17	R 134a	115/1/60	0.2	3/8" OD	15	13	13	64
<b>HPR15</b>	15	25	R 134a	115/1/60	0.24	3/8" OD	15	13	13	69
<b>HPR25</b>	25	42	R 134a	115/1/60	0.41	3/4" NPT	22	16	15	88
<b>HPR35</b>	35	59	R 134a	115/1/60	0.46	3/4" NPT	22	16	15	92
<b>HPR50</b>	50	85	R 134a	115/1/60	0.57	3/4" NPT	22	20	20	101
<b>HPRN75</b>	75	127	R 134a	115/1/60	0.52	1" NPT	24	14	32	123
<b>HPRN100</b>	100	170	R 134a	115/1/60	0.65	1" NPT	24	14	32	129
<b>HPRN125</b>	125	212	R 134a	115/1/60	0.68	1" NPT	24	14	32	135
<b>HPR150-1</b>	150	255	R 134a	115/1/60	1.11	1" NPT	21	13	30	161
<b>HPRN150-2</b>	150	255	R 407c	230/1/60	0.91	1" NPT	24	14	35	152
<b>HPRN200-2</b>	200	340	R 407c	230/1/60	1.53	2" NPT	30	18	37	196
<b>HPR200-4</b>	200	340	R 134a	460/3/60	1.42	1 1/2" NPT	30	17	36	183
<b>HPRN250-2</b>	250	425	R 407c	230/1/60	1.87	2" NPT	30	18	37	181
<b>HPR250-4</b>	250	425	R 134a	460/3/60	1.98	1 1/2" NPT	30	17	36	211
<b>HPRN300-2</b>	300	510	R 407c	230/1/60	2.09	2" NPT	32	19	44	252
<b>HPR300-4</b>	300	510	R 134a	460/3/60	2.05	1 1/2" NPT	30	20	38	219
<b>HPRN400-2</b>	400	680	R 407c	230/1/60	2.83	2" NPT	32	19	48	270
<b>HPR400-4</b>	400	680	R 134a	460/3/60	2.5	2" NPT	30	21	38	232
<b>HPRN500-4</b>	500	850	R 407c	460/3/60	3.18	2" NPT	32	21	48	328
<b>HPRN600<sup>3</sup></b>	600	1,020	R 407C	460/3/60	3.8	2" NPT	32	22	50	353
<b>HPRN800<sup>3</sup></b>	800	1,360	R 407C	460/3/60	5.4	3" FLG	59	30	42	687
<b>HPRN1000<sup>3</sup></b>	1,000	1,700	R 407C	460/3/60	6.6	4" FLG	64	29	45	786
<b>HPRN1200<sup>3</sup></b>	1,200	2,040	R 407C	460/3/60	8.7	4" FLG	64	29	45	810

<sup>1</sup> 1 = 115V (HPR150-1); 2 = 230V (HPRN150-2); 4 = 460V (HPR200-4)

<sup>2</sup> Rated Flow Capacity – Conditions for rating dryers are in accordance with ISO 7183 (Option A2). Compressed air at dryer inlet: 100 psig (6.7 barg) and 100°F (38°C); ambient air temperature: 100°F (38°C); operating on 60 Hz power supply.

<sup>3</sup> Available in water cooled

At rated conditions, pressure drop is less than 5 psig.

## Operating Conditions

FLOW MODEL	MAX INLET AIR PRESSURE		MIN INLET AIR PRESSURE		MAX INLET AIR TEMPERATURE		MIN INLET AIR TEMPERATURE		MAX AMBIENT AIR TEMPERATURE		MIN AMBIENT AIR TEMPERATURE	
	PSIG	BARG	PSIG	BARG	°F	°C	°F	°C	°F	°C	°F	°C
5-10 to 50	250	17	30	2	120	49	40	4	110	43	45	7
75 to 500	232	16	10	1	120	49	40	4	110	43	45	7
600-1200	232	16	43	3	120	49	45	7	110	43	34	1

## Capacity Correction Factors

To adjust the dryer capacity for non-standard conditions, use the Capacity Correction Factors (multipliers) from Tables 1 & 2.

### -sizing EXAMPLE:

What is the capacity of an HPRN100 at 100F inlet air temperature, 150 psig working pressure, and 110F ambient air temperature?

### ANSWER:

100 scfm (rated flow from product specification table) x 1.08 (correction factor for inlet air temperature, table 1) x 0.94 (correction factor for ambient air temperature, table 2) = 102 scfm

**Table 1 - Capacity Correction Factors**

INLET AIR PRESSURE		INLET AIR TEMPERATURE			
PSIG	BARG	90°F/32°C	100°F/38°C	110°F/43°C	120°F/49°C
80	5.6	1.19	0.95	0.77	0.63
100	6.9	1.25	1	0.82	0.68
125	8.6	1.3	1.05	0.86	0.72
150	10.3	1.34	1.08	0.9	0.75
175	12.1	1.37	1.11	0.92	0.78
200	13.8	1.39	1.14	0.95	0.8
250	17.2	1.43	1.17	0.98	0.83

**Table 2 - Ambient Air Temperature**

AMBIENT AIR TEMPERATURE	80°F/ 27°C	90°F/ 32°C	100°F/ 38°C	110°F/ 43°C
<b>Multiplier</b>	1.12	1.06	1	0.94



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