



HANKISON



HPRD SERIES

HIGH PRESSURE

REFRIGERATED

COMPRESSED

AIR DRYERS

PET Compressed Air Treatment

Designed for 500, 700, and 900 psi (35, 49, and 63 bar), Hankison high pressure compressed air dryers and filters form an important part of PET blow molding compressed air installations around the world. Carrying a trusted brand name known for reliability since 1948, Hankison equipment eliminates water, solid particulates, and oil from the compressed air lines which are at the heart of every blow molding installation.

Aeronautical valve and control testing, pharmaceutical testing and packaging, and injection molding are also very common applications for the HPRD Series.

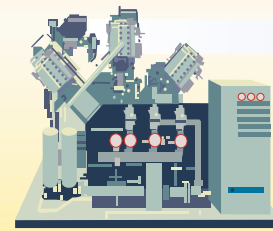


Global Certifications and Technical Services

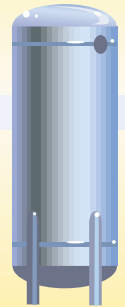
PET blow molding installations are found all over the world and Hankison International provides the necessary support. Mandatory product certifications such as CE, CSA, CRN, and ASME are standard on all of our high pressure equipment. Whether you need to comply with a pressure vessel code or with a machinery directive, Hankison equipment will carry the necessary regulatory approvals.

Technical Service is also available worldwide through the global network of Hankison International companies and approved service providers.

Typical PET Blow Molding Compressed Air Installation



Air Compressor



Receiver Tank
Receiver Tank Location as Applicable

Heat Exchangers

Smooth surface, self-cleaning, copper heat exchangers maintain stable 38°F (3°C) dew points and low system pressure drops for the life of the unit without requiring a prefilter.

Nondegrading foam insulates the heat exchangers to fully preserve the cooling effect.

Condensate Management

Staged separation effectively removes the large liquid loads and prevents moisture reentrainment.

Programmable electronic timed drains include highly accurate solid state timers with adjustments for valve open time and for the time between cycles. A rugged solenoid valve that resists clogging by particulates is used.

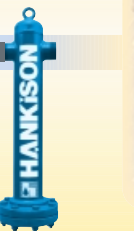




HPRD Series



**HF Series
Grade 7**



**HF Series
Grade 3**



Efficient and Environmentally Friendly Refrigeration System

Environmentally friendly HFC refrigerants, R-134a (models up to 3 HP) and R-404a (4 HP models and above), are combined with energy efficient and reliable reciprocating and scroll compressors, respectively. The non-cycling, hermetically sealed system allow close temperature control even during rapid load changes. This provides the consistently dry air guarantee which PET blow molding applications require. A highly accurate hot gas by-pass valve maintains a 35°F (2°C) evaporator temperature

without freeze-ups. Designed for reliability, the system features the necessary filter/dryers and accumulators required to maintain a clean refrigeration system and prevent liquid from returning to the compressor.



HF Series High Pressure Filters

To complete the installation, solid particulates and oil must be removed from the compressed air used for PET blow molding. A typical installation would require a 1 micron particulate filter and a 0.008 ppm (0.01 mg/m³) oil removal filter installed after the high pressure refrigerated compressed air dryer.

Hankison Grade 7 and Grade 3 high pressure filters feature two-stage filter elements with corrosion resistant inner and outer cores.

Grade 7 general purpose 1 micron particulate filter: The first stage captures larger particles with alternate layers of fiber media and a media screen. The second stage captures the fine 1 micron solid particles with multiple layers of epoxy bonded, blended fiber media.

Grade 3 ultra high efficiency 0.001 ppm (0.001 mg/m³) oil removal filter: The first stage acts as a prefilter and a flow disperser. The second stage has multiple layers of matrix blended fiber media which provides the fine coalescing action required.



Typical PET Blow Molding Compressed Air Quality Specification

Pressure Dew Point	Max. Solid Particulate	Max. Oil Content
38°F (3°C)	1 Micron	0.008 ppm (0.01 mg/m ³)
ISO 8573.1 Class 4	ISO 8573.1 Class 2	ISO 8573.1 Class 1
HPRD Series Refrigerated Dryer	HF Series Grade 7 Filter	HF Series Grade 3 Filter

Table 1 - Engineering Data

Model	Flow ⁽¹⁾		Pressure Drop ⁽¹⁾		MWP		Refrigeration System ⁽²⁾		Standard Voltages ⁽³⁾	In/Out Connections NPT/BSP ⁽⁴⁾	Dimensions in (mm)			Weight lb (kg)	HF Series Filters	
	scfm	m³/h	psig	bar	psig	bar	HP	kW			H	W	D		1 Micron Model	0.001 Oil Model
HPRD-0.17-500	13	22	1.2	0.08	500	35	1/8	0.25	1,2,4,5	3/8" OD	14 (356)	16 (410)	15 (381)	57 (26)	HF7-24-8-62	HF3-24-8-62
HPRD-0.20-500	20	34	2.4	0.17	500	35	1/8	0.37	1,2,4,5	3/8" OD	14 (356)	16 (410)	15 (381)	65 (30)	HF7-24-8-62	HF3-24-8-62
HPRD-0.25-500	50	86	1.8	0.12	500	35	1/4	0.56	1,2,4,5	1/2"	17 (432)	22 (565)	16 (406)	104 (48)	HF7-24-8-62	HF3-24-8-62
HPRD-0.50-500	93	160	0.9	0.06	500	35	1/2	0.92	1,3,4,5	1"	23 (589)	32 (819)	20 (495)	206 (94)	HF7-24-8-62	HF3-24-8-62
HPRD-0.50-900	64	110	0.2	0.01	900	63	1/2	0.92	1,3,4,5	1"	23 (589)	32 (819)	20 (495)	186 (85)	HF7-24-8-62	HF3-24-8-62
HPRD-0.75-500	178	306	0.8	0.06	500	35	3/4	1.18	1,3,4,6	1 1/2"	23 (589)	32 (819)	20 (495)	235 (107)	HF7-24-8-62	HF3-24-8-62
HPRD-0.75-900	100	172	0.5	0.03	900	63	3/4	1.18	1,3,4,6	1"	23 (589)	32 (819)	20 (495)	208 (95)	HF7-24-8-62	HF3-24-8-62

Dimensions and weights are for reference only. Request certified drawings for construction purposes.

(1) Flow and pressure drop at MWP (Maximum Working Pressure) and at 60 Hz, 100°F, 38°C inlet and 100°F, 38°C ambient temperature

(2) Figures shown are condensing unit manufacturer's published ratings @ 35°F, 2°C evaporator and 100°F, 38°C ambient

(3) 1. 115/1/60 2. 230/1/60 3. 208-230/1/60 4. 100/1/50 5. 220-240/1/50 6. 230/1/50 7. 208-230/3/60 8. 460/3/60 9. 200-220/3/50 10. 400/3/50 11. 575/3/60

(4) Please specify NPT or BSP

Table 2 - Correction Factors for Compressed Air Inlet Temperature and Pressure

Inlet Pressure	Inlet Temperature				
	80°F (27°C)	90°F (32°C)	100°F (38°C)	110°F (43°C)	120°F (49°C)
300 psig to MWP 20 bar to MWP	1.49	1.19	1.00	0.83	.72

Table 3 - Correction Factors for Ambient Air Temperature

Ambient Temperature	Capacity Adjustment Factor
80°F (27°C)	1.12
90°F (32°C)	1.06
100°F (38°C)	1.00
110°F (43°C)	0.94
Water-cooled (85°F, 27°C Cooling Water)	1.15

Table 4 - Correction Factors for Outlet Pressure Dew Point

Dew Point	ISO 8573.1 Class	Factor
38°F (3°C)	4	1.0
45°F (7°C)	5	1.2
50°F (10°C)	6	1.3

Table 5 - Correction Factors for Electrical Frequency

60 Hz	1.00
50 Hz	0.83

Determining Dryer Capacity

To determine the maximum inlet flow capacity of a dryer at various operating conditions, multiply the rated capacity from Table 1 by the multipliers shown in Table 2, 3, 4, and 5. Maximum capacity using all correction factors CANNOT be more than twice the rated capacity.

Global Leader in Efficiently Treating Compressed Air



HANKISON
INTERNATIONAL
hankisonintl.com

Division of Hansen Inc.
Canonsburg, PA 15317-1700 U.S.A.
Tel 724-745-1555 Fax 724-745-6040