

Energy Saving Refrigerated Air Dryers

HES SERIES 2500 TO 3000 SCFM (4248 TO 5097 NM³/H)





Where Ideas Become Solutions

SPX FLOW is a place where innovation is valued, and the real needs of business are understood. We transform ideas into powerful solutions to help our customers meet their goals, overcome day-to-day challenges and thrive in a complex, always-changing marketplace.

Utilizing the latest technological advancements, HES Series refrigerated dryers offer a new way of thinking and an innovative approach to efficiently treat compressed air.

SAVING ENERGY IS A GLOBAL PRIORITY

Compressed air users world-wide are integrating energy management best practices into their operations, with the goal of reducing power consumption and lowering their energy costs.

Demonstrating our commitment to continuous development of sustainable solutions, the HES Series significantly lowers total cost of operation by consuming electrical power (kWh) in direct proportion to real-time demand.

MEETING THE NEEDS OF TODAY AND TOMORROW

We believe our customers are partners in the innovation process. Insight is continually gathered to understand the end-user experience of today and gain vision to the opportunities of tomorrow.

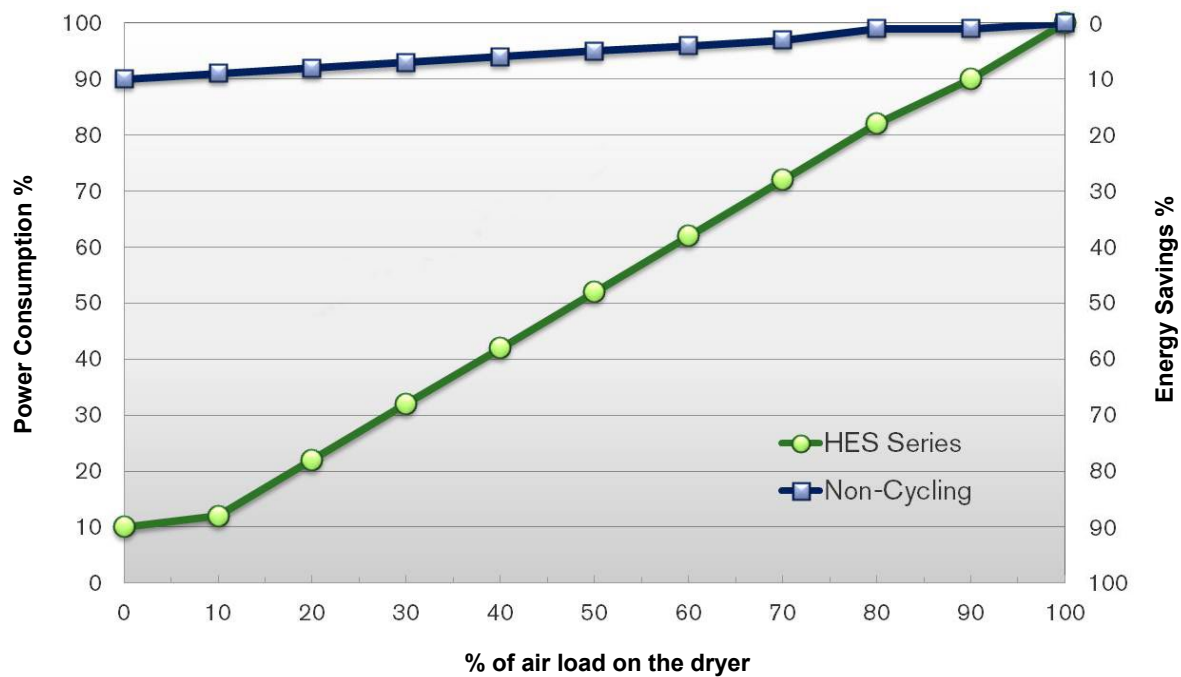
Measurable Energy Savings

In a typical manufacturing facility, up to 30% of electricity consumed is for generating and treating compressed air. To reduce total cost of operation and qualify for utility company incentive programs, proper air treatment equipment selection and application is required.

LOAD MATCHING PERFORMANCE

Compressed air load profiles in most manufacturing facilities fluctuate. The HES Series provides cost-effective energy savings by matching electrical power consumed in direct proportion to incoming air demand. Near linear load matching is achieved from 0 to 100%.

Digital scroll refrigerant compressors precisely match inlet heat load on the dryer with the required input power...No more...No less.



“REBATE READY”

The table below projects annualized cost savings of HES Series refrigerated air dryers as compared to non-cycling designs.

AVERAGE AIR FLOW	ENERGY CONSUMPTION	ANNUALIZED COST SAVINGS	
		2500	3000
100%	100%	-	-
75%	78%	\$1,065	\$1,408
50%	54%	\$3,330	\$4,373
25%	33%	\$5,226	\$6,855
0%	9%	\$7,490	\$9,820

Operating Conditions: 100°F (37°C) inlet and ambient temperature, 100 psig (6.9 barg) operating pressure, 8,760 working hours per year, \$ 0.10 / kWh energy cost.

Innovation By Design

SUSTAINABLE ENERGY SAVING SOLUTIONS

To maximize full energy savings potential, refrigeration systems are designed with digital scroll compressors that load and unload based on real-time air load demand.

- Less energy is consumed during periods of unloading, delivering proportional energy savings
- Rugged design is compliant to ingestion of liquid and solids, enables non-compressible substances to pass freely through the compressor
- All models utilize environmentally friendly R404A refrigerant, recognized globally as an efficient and safe HFC solution

ENGINEERED FOR PREMIUM PERFORMANCE

Compressed air is chilled to the specified pressure dew point in stainless steel brazed plate heat exchangers, offering corrosion resistance for the life of the dryer.

- Each plate is press formed with chevron patterns, creating turbulent flow, providing a self cleaning effect
- Smooth, non-fouling stainless steel surfaces promote low resistance to flow, improving system efficiency
- Heat exchangers are fully encapsulated in non-degrading insulation to maintain thermal efficiency

ADVANCED CABINET DESIGN

The unique cabinet construction enables 360-degree access to critical components.

- Cam lock panel removal provides trouble-free entry for routine maintenance
- Baked polyester, powder coated cabinets withstand harsh environments and maintain long-term visual appeal
- Inlet and outlet connections are located on top of the dryer, promoting ease of installation



CLEAN, DRY, FILTERED AIR

HES series dryers are self-contained air treatment stations, furnished with integrated high performance filtration.

- Meets ISO 8573-1: 2010 Air Quality Class standards for particle removal, pressure dew point and remaining oil
- All dryers are equipped with two stage separation to remove solid particulate 3.0 micron and larger, with remaining oil content of 5.0 mg/m³
 - » Delivers ISO Quality Class 3- Solids; Class 4- Oil
- Optional cold coalescing filters capture solid particulate 0.01 micron and larger, with remaining oil content of < 0.01 mg/m³
 - » Delivers ISO Quality Class 1- Solids; Class 1- Oil

SYSTEM PROTECTION ON DEMAND

No-air-loss, level actuated demand drains efficiently remove condensate from the system, without loss of compressed air.

- Condensate drain lines terminate at discharge connections conveniently located on the side of the dryer
- Drain assembly is equipped with an isolation valve and strainer to optimize service
- Push to test button located on the operator interface enhances system reliability

BEST-IN-CLASS WARRANTY

As an extra measure of protection, Hankison offers an extended warranty beyond the standard 2 year coverage.

- Purchase an HES maintenance kit on an annual basis and receive 3 additional years of protection, parts and labor
- Register your dryer online and receive email reminders when it's time for annual maintenance at www.spxflow.com/hankison



Customer Driven Solutions

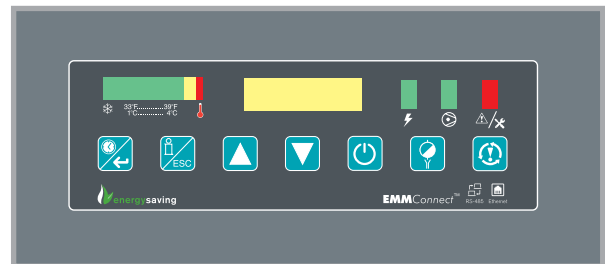
ENERGY MANAGEMENT MONITOR (EMMCONNECT™)

HES Series dryers are equipped with EMMConnect™ controls to monitor system performance, manage operation of the digital scroll compressor and track energy savings.

The operator interface features a membrane touch panel, with diagnostics communicated in a user-friendly text display. A bank of light emitting diodes operate sequentially providing indication of dew point temperature in real-time.

Advanced, User Friendly Control

- Easy to read display provides continuous operating feedback
- Service reminders for ease of regularly scheduled maintenance
- Multiple alarms and safeties protect your investment
- Energy saving control for more efficient operation
- Event log stores critical data for the operating life of the machine
- Data logging continuously stores 60 days of operating parameters
- Ethernet communication capability for web-based remote monitoring
- RS485 industrial communication protocol for remote monitoring capability
- Master scheduler automatically controls preferred timing of dryer operation
- Multiple Language capability for global application



Product Specifications

MAXIMUM WORKING PRESSURE	MINIMUM WORKING PRESSURE	MAXIMUM INLET AIR TEMPERATURE	MINIMUM INLET AIR TEMPERATURE	MAXIMUM AMBIENT AIR TEMPERATURE	MINIMUM AMBIENT AIR TEMPERATURE
psig (barg)	psig (barg)	°F (°C)	°F (°C)	°F (°C)	°F (°C)
232 (16)	30 (2)	130 (54)	40 (4)	110 (43)	40 (4)

MODEL	RATED FLOW ¹		VOLTAGES ²	POWER ³	INLET/OUTLET	DIMENSIONS inches			WEIGHT
	scfm	nm ³ /h				V/ph/Hz	kW	H	
HES2500	2500	4248	Standard: 380-420/3/50 460/3/60	16.80	6" FLG	85	55	60	2315
HES3000	3000	5097	Optional: 230/3/60 575/3/60	18.20	6" FLG	85	55	60	2646

Dryers meet agency approvals: CSA (CAN/CSA-C22.2 No.236-05) - Heating and Cooling Equipment and UL Standard No.1995. Canadian Registration Numbers- standard separator vessel and optional cold coalescing vessel.

1 Dryer flow ratings are in accordance with ISO 7183 (option A2) conditions: inlet air at 100 psig (7 barg) and 100°F (38°C) saturated, ambient air at 100°F (38°C), operating on 60 Hz power supply.

2 Optional Voltages: 575/3/60 models utilize mounted transformers to step-down incoming power to 460/3/60; 230/3/60 models utilize mounted transformers to step-up to 460/3/60.

3 Full flow kW value operating on 460/3/60 Hz power supply.

4 DIN Flanges available.

Correction Factors for Inlet Air Pressure and Temperature

INLET AIR PRESSURE		INLET AIR TEMPERATURE				
psig	barg	90°F 32°C	100°F 38°C	110°F 43°C	120°F 49°C	130°F 54°C
30	2.1	0.92	0.71	0.56	0.44	0.35
50	3.5	1.07	0.83	0.66	0.54	0.44
80	5.5	1.19	0.95	0.77	0.63	0.52
100	6.9	1.25	1.00	0.82	0.68	0.56
125	8.6	1.30	1.05	0.86	0.72	0.61
150	10.3	1.34	1.08	0.90	0.75	0.64
175	12.1	1.37	1.11	0.92	0.78	0.66
200	13.8	1.39	1.14	0.95	0.80	0.68

Correction Factors for Ambient Temperature*

AMBIENT TEMPERATURE	80°F 27°C	90°F 32°C	100°F 38°C	110°F 43°C
Multiplier	1.12	1.06	1.00	0.94

* Air-cooled models only. For water-cooled use a 1.15 multiplier if cooling water is less than 95°F (35°C).

ISO 8573-1: 2010 Air Quality Classes

AIR QUALITY CLASS	SOLID PARTICLES MAXIMUM NUMBER OF PARTICLES PER M ³			WATER VAPOR PRESSURE DEW POINT		OIL TOTAL OIL CONCENTRATION: AEROSOL, LIQUID & VAPOR	
	0.10 - 0.5 micron	0.5 - 1.0 micron	1.0 - 5.0 micron	°C	°F	mg / m ³	ppm _{w/w}
0	As specified by the equipment user or supplier and more stringent than class 1						
1	≤ 20,000	≤ 400	≤ 10	≤ -70	≤ -94	0.01	0.008
2	≤ 400,000	≤ 6,000	≤ 100	≤ -40	≤ -40	0.1	0.08
3	-	≤ 90,000	≤ 1,000	≤ -20	≤ -4	1	0.8
4	-	-	≤ 10,000	≤ +3	≤ +37	5	4
5	-	-	≤ 100,000	≤ +7	≤ +45	-	-

Standard filtration delivers ISO Quality Class:

- Solids-3
- Pressure Dew Point-4 to 5
- Oil-4

Optional filtration provides ISO Quality Class:

- Solids-1
- Pressure Dew Point-4 to 5
- Oil-1

HES Series

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Global Locations

SPX FLOW USA

HANKISON HEADQUARTERS

4647 SW 40th Avenue
Ocala, Florida 34474-5788 U.S.A.
P: (724) 745-1555
F: (724) 745-6040
E: hankison.americas@spxflow.com

HANKISON RENTAL

100 Commerce Drive, Suite 40
Washington, PA 15301
P: (724) 225-1470
F: (724) 222-1317
E: hankison.rental@spxflow.com

10399 New Decade Drive
Pasadena, TX 77507
P: (800) 379-3711
E: hankison.rental@spxflow.com

SPX FLOW

SOUTH AMERICA

Rua Joao Daprat, 231 b
09600-010-SÃO Bernardo
Do Campo, SP
Brazil
T: +55 (11) 2166-4050
F: +55 (11) 2166-4070

SPX FLOW

GERMANY

Konrad-Zuse-Str. 25
D-47445 Moers Germany
T: (+49) 2841-8190
F: (+49) 2841-87112
E: info@spxdehydration.de

SPX FLOW

ASIA PACIFIC

5th Floor, Park Center,
No.1568 Huashan Road,
Shanghai China
T: +86 (021) 2208-5840
F: +86 (021) 2208-5866

SPX FLOW

INDIA

SPX India PVT, LTD
Manufacturing G-72/73
Riico Industrial Area
Mansarovar, RAJASTHAN
Jaipur 302 020
India
T: (+91) 141-2396759
F: (+91) 141-2395048

SPX FLOW

KOREA

#940-1 Yerim-Ri
Jeonggwan-Myeon
Gijang-Gun
Busan
Rep. of Korea
T: +82 (51) 728-5360
F: +82 (51) 728-5359

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4647 SW 40th Avenue
Ocala, Florida 34474-5788 U.S.A.
P: (724) 745-1555
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www.spxflow.com/hankison

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