

## TXK • FLEX • HXK Series



## Why Do Compressed Air Systems Need Drying?

SPX FLOW provides compressed-air dryers and filters that remove oil, water, dirt, rust and pipe scale. Contaminants found in compressed air can adversely affect all components of an air distribution system, and can cause a malfunction of pneumatic control in the instrument air system.

Properly treated compressed air can improve work efficiency and reduce maintenance. Desiccant and refrigerated type compressed air dryers are used in the control air systems of power plants.

## About SPX FLOW

SPX FLOW, Inc. (NYSE:FLOW) is a leading manufacturer of innovative flow technologies, many of which help define the industry standard in the market segments they serve. From its headquarters in Charlotte, North Carolina, it operates a sales and support network, centers of manufacturing excellence, and advanced engineering facilities, throughout the world. Its cutting-edge flow components and process equipment portfolio includes a wide range of pumps, valves, heat exchangers, mixers, homogenizers, separators, filters, UHT, and drying technology that meet many application needs. Its expert engineering capability also makes it a premium supplier of customized solutions and complete, turn-key packages to meet the most exacting of installation demands.

[www.spxflow.com](http://www.spxflow.com)

## Refrigerated Air Dryers

# TXK Series

15~50 scfm

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 TXK series non-cycling dryers were designed to meet these demands.

## Feature

Static condenser with no cooling fan

- Worldwide-patented product
- No maintenance required
- Excellent quiet operation
- Lowest operating cost

Perfect application for indoor installation such as hospital and laboratory

Robust design & compact size

Unique refrigerant control system

- Air-to-refrigerant reheating system

Energy saving through waste heat recovery

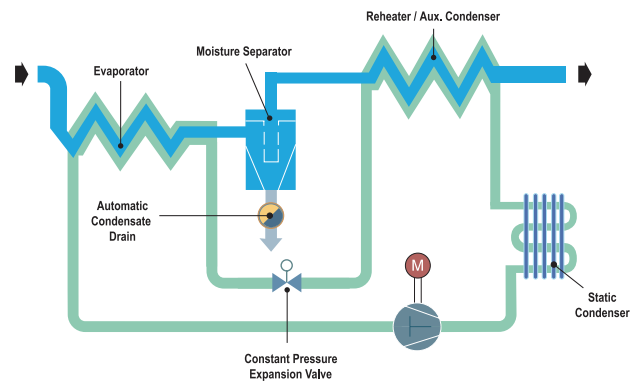
- No condensate on outlet pipe

Excellent dew point performance under all conditions



## How it works

Warm saturated air enters the evaporator where it is cooled by refrigerant being controlled by a constant pressure expansion valve. Water vapor condenses into a liquid for removal at the moisture separator by a drain. The cold, dry air is reheated as it passes through the reheater. This prevents dryer outlet air pipeline sweating. The static condenser eliminates the need for a cooling fan and simplifies the system.



## TXK Series Specification

Model	Flow Capacity (Nm <sup>3</sup> /min)	Unit (kW)	Power Supply	Inlet/Outlet Connections (PT)	Weight (kg)	Dimensions (H x W x D mm)	Refrigerants
<b>TX15K</b>	0.50	0.24	220~240V / 1PH / 50Hz	3/8"	20	382 x 320 x 320	R-134a
<b>TX25K</b>	1.00	0.34		3/4"	32	568 x 368 x 394	
<b>TX35K</b>	1.33	0.42		3/4"	32	568 x 368 x 394	
<b>TX50K</b>	1.67	0.58		3/4"	44	568 x 500 x 500	

- Rating Conditions : 42°C inlet temperature, 7.0barG inlet pressure, 100% relative humidity, 35°C ambient temperature
- Maximum/minimum inlet pressure : 16barG/2barG, Maximum/minimum inlet air temperature : 60°C/4°C, Maximum/minimum ambient air temperature : 43°C/2°C

## Capacity Correction Factors

### Inlet Air Pressure (barG)

barG	4	5	6	7	8	9	10	11	12
<b>Factor</b>	0.82	0.88	0.95	1.00	1.05	1.09	1.13	1.16	1.18

### Inlet Air Temperature (°C)

°C	30	35	40	42	45	50	55	60
<b>Factor</b>	1.77	1.36	1.08	1.00	0.89	0.74	0.62	0.52

### Ambient Air Temperature (°C)

°C	20	25	30	35	40	45	50
<b>Factor</b>	1.20	1.13	1.07	1.00	0.94	0.85	0.74

### Frequency (Hz)

Hz	50	60
<b>Factor</b>	1.00	1.20

**Example :** What is the capacity of a 6.67 Nm<sup>3</sup>/min model when the compressed air at the inlet to the dryer is 10barG and 45°C and ambient temperature is 35°C?

**Answer :** 6.67 Nm<sup>3</sup>/min (rated flow from Product Specification Table) x 1.08 (correction factor for inlet pressure from Table 1) x 0.68 (correction factor for inlet temperature from Table 2) x 0.88 (correction factor for ambient temperature from Table 3) = 4.31 Nm<sup>3</sup>/min

## Refrigerated Air Dryers

# FLEX Series

85~1500 scfm

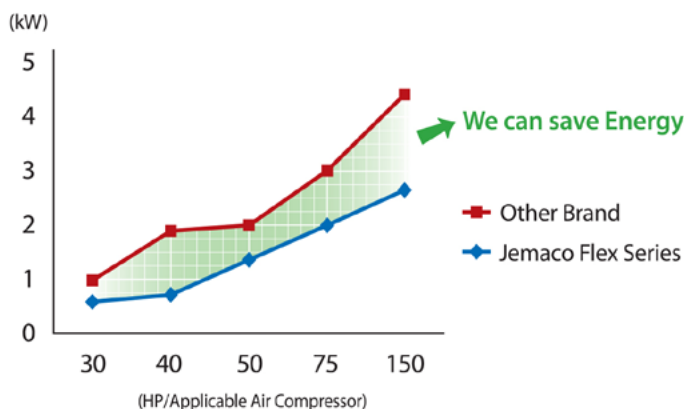
The FLEX series are optimized air dryers for hot and humid climate in the tropical regions. An advanced stainless steel brazed plate heat exchanger is applied, and it deters refrigeration load with great efficiency of heat-transfer. The innovative and simplified refrigeration circuit provides reliable operation, low operating cost and versatile installation.

### Feature

- Optimized for hot and humid climate in the tropical regions
- Stainless steel brazed plate heat exchangers optimize heat transfer and service life
- Separator, re-heater and evaporator combined into 1 compact efficiency unit
- Improved ventilation by up-flow cooling air design
- Low pressure drop reduces operating costs
- Low power consumption
- Easy to install package saves time and money
- Environmentally friendly R-134a & R-407C refrigerants



### Power Consumption Comparison



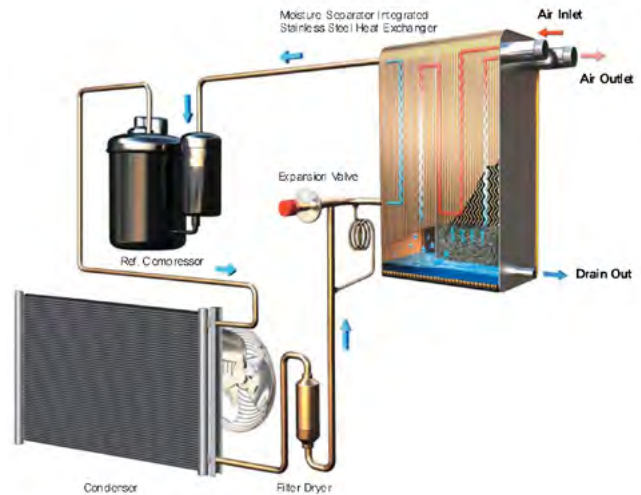
### Digital Control Board - DCB II



- : Dewpoint Temperature Indicator
- : Compressor On Light
- : Selection
- : Drain Push-to-Test
- : Condensate Draining

## How it works

Warm, saturated compressed air enters the air to air heat exchanger and is cooled by exiting air. The precooled air then enters the air to refrigerant heat exchanger and is further chilled causing water vapor to condense. Condensed moisture is collected from the air stream by an integral separator with stainless steel demister. Liquid condensate is removed from the separator by an automatic timer. Cold air is then reheated in the air to air heat exchanger to eliminate sweating on the downstream pipe line. Clean, dry air exits the dryer and is now qualified for use of purpose.



## FLEX Series Specification

Model	Flow Capacity (Nm <sup>3</sup> /min)		Unit (kW)	Power Supply	Inlet/Outlet Connections (PT)	Weight (kg)	Dimensions (H x W x D mm)	Refrigerants
	PDP 10°C *	PDP 3°C **						
<b>FLX 85</b>	2.41	2.46	0.52	220~240V 1PH 50Hz	1"	50	641 x 363 x 881	R-134a
<b>FLX 110</b>	3.11	3.18	0.59		1"	52	641 x 363 x 881	
<b>FLX 150</b>	4.25	4.35	0.71		2"	67	761 x 443 x 931	R-407C
<b>FLX 240</b>	6.80	6.95	1.36		2"	77	761 x 443 x 1,031	
<b>FLX 370</b>	10.48	10.71	2.00		2"	97	811 x 493 x 1,111	
<b>FLX 450</b>	12.74	13.03	2.38		2"	100	811 x 493 x 1,111	
<b>FLX 530</b>	15.00	15.34	2.66		2"	128	811 x 553 x 1,211	
<b>FLX 800</b>	22.64	23.15	5.80	380V / 3PH / 50Hz 415V / 3PH / 50Hz	FLG 3"	285	1,572 x 724 x 1,154	
<b>FLX 1250</b>	35.38	36.17	7.30		FLG 4"	340	1,572 x 724 x 1,204	
<b>FLX 1500</b>	42.47	43.42	7.10		FLG 4"	400	1,622 x 804 x 1,280	

\* Standard rated condition (PDP 10°C) : 50°C inlet air temperature, 35°C ambient air temperature, 7.0barG inlet pressure, 100% relative humidity

\*\* Condition (PDP 3°C) : 35°C inlet air temperature, 25°C ambient air temperature

\* Max./Min. inlet pressure : 16barG/3barG \* Max./Min. inlet air temperature : 65°C/4°C \* Max./Min. ambient air temperature : 50°C/4°C

## Capacity Correction Factors

### Inlet Air Pressure (barG)

barG	4	5	6	7	8	9	10	13	16
Factor	0.75	0.84	0.92	1.00	1.03	1.07	1.09	1.18	1.23

### Inlet Air Temperature (°C)

°C	40	45	50	55	60	65
Factor	1.15	1.08	1.00	0.83	0.70	0.60

### Ambient Air Temperature (°C)

barG	25	30	35	40	43	50
Factor	1.20	1.06	1.00	0.75	0.60	0.45

### Pressure Dew Point (°C)

°C	3	5	7	10
Factor	0.71	0.79	0.86	1.00

### Free Air Delivery

Standard	Nm <sup>3</sup> /min	ISO1217	JIS	icfm
Factor	1.00	1.07326	1.148	1.18

## Refrigerated Air Dryers

# HXK Series

2000~12000 scfm

The HXK series, built-in with our highly advance stainless steel plate heat exchanger, deters refrigeration load with great efficiency of heat-exchanging. Saving in electrical power and convenient in maintenance are its unique feature

### Feature

**Stainless steel brazed plate heat exchanger**

- No rust water and corrosion
- One-pass structure : Heat exchanger and re-heater

**Automatically adapts to system needs**

**Fully automatic operation saves money**

**Every unit comes pre-assembled with quality components**

**User-friendly controller**

- Power-on LED, Compressor-on LED, On/Off rocker switch and dew point bar graph LED display

**Reliable timed electric drain with push-to-test button on the front panel**

**Electro-galvanized steel cabinet with two part epoxy coating**

- Providing long term corrosion resistance

**Environmentally friendly R-407C refrigerant**

**No Loss drain valve(optional)**

### Optional/SCMII (System Control MonitorII)

**LCD main window displays**

- Dryer run, Auto drain valve on, Fan motor on, Alarm

**LCD monitor displays**

- Inlet, Ambient/Cooling water, Chiller inlet & discharge refrigerant temperatures, Discharger refrigerant temperatures

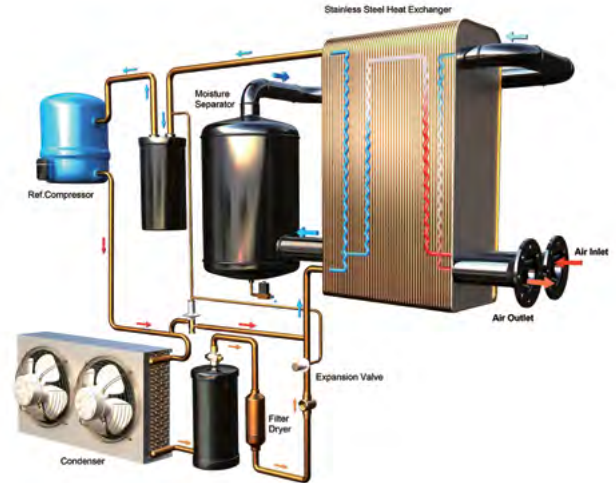
**Membrane touch panel**

**Programmable timer drain settings**



## How it works

Saturated incoming compressed air is quickly chilled in the air-to-air heat exchanger by the cold compressed air as it exits the air-to-refrigerant (evaporator). Here, the cold, dry air is reheated to prevent pipeline sweating and reduce compressor energy before exiting the dryer. In the evaporator, the air temperature is reduced to that of the cold refrigerant. A moisture separator lowers the velocity and mechanically separates the condensate from the air stream. An automatic drain removes the condensate. The air-to-air heat exchanger re-heats the air and clean, dry compressed air exits the dryer.



## HXK Series Specification

Model	Flow Capacity (Nm <sup>3</sup> /min)	Unit (kW)	Power Supply	Inlet/Outlet Connections (FLG)	Weight (kg)	Dimensions (H x W x D mm)	Refrigerants
<b>HX2000K</b>	60.00	9.5	380~420V 3PH 50HZ	6"	1,000	1,628 x 1,050 x 1,800	R-407C
<b>HX2500K</b>	75.00	10.3		6"	1,050	1,628 x 1,050 x 1,800	
<b>HX3000K</b>	90.10	11.8		6"	1,100	1,628 x 1,050 x 1,800	
<b>HX4000K</b>	120.00	15.1		8"	2,000	2,320 x 1,500 x 2,850	
<b>HX5000K</b>	150.10	20.8		8"	2,300	2,320 x 1,500 x 2,850	
<b>HX6000K</b>	180.30	25.7		8"	2,500	2,320 x 1,500 x 2,850	
<b>HX8000K</b>	240.10	38.5		8"	3,500	2,320 x 1,500 x 3,800	
<b>HX10000K</b>	300.30	46.6		10"	4,800	2,400 x 1,600 x 4,800	
<b>HX12000K</b>	360.30	52.7	10"	5,000	2,400 x 1,600 x 4,800		

- Rating Conditions : 35°C inlet temperature, 7.0barG inlet pressure, 100% relative humidity, 25°C ambient temperature.
- Maximum/minimum inlet pressure : 12.1barG/3barG, Maximum/minimum inlet air temperature : 49°C/4°C, Maximum/minimum ambient air temperature : 43°C/4°C
- Dimension is for air-cooled condenser type. Water-cooled condenser type is available, consult factory.
- Models for the high temperature condition are optional, consult factory.

## Capacity Correction Factors

### Inlet Air Pressure (barG)

barG	4	5	6	7	8	9	10	11	12
<b>Factor</b>	0.87	0.92	0.96	1.00	1.03	1.07	1.10	1.12	1.14

### Inlet Air Temperature (°C)

°C	30	35	40	45	49
<b>Factor</b>	1.22	1.00	0.84	0.71	0.60

### Ambient Air Temperature (°C)

°C	20	25	30	35	40	43
<b>Factor</b>	1.06	1.00	0.92	0.85	0.78	0.72

### Frequency (Hz)

Hz	50	60
<b>Factor</b>	1.00	1.20

**Example :** What is the capacity of a 6.67 Nm<sup>3</sup>/min model when the compressed air at the inlet to the dryer is 10barG and 45°C and ambient temperature is 35°C?

**Answer :** 6.67 Nm<sup>3</sup>/min (rated flow from Product Specification Table) x 1.08 (correction factor for inlet pressure from Table 1) x 0.68 (correction factor for inlet temperature from Table 2) x 0.88 (correction factor for ambient temperature from Table 3) = 4.31 Nm<sup>3</sup>/min

**T X K Series**  
**FLEX Series**  
**H X K Series**

Refrigerated Air Dryers



**Nomenclature**

**FLEX Series**

**FLX**  —

Model	Flow capacity (Nm <sup>3</sup> /min)	
	PDP 10°C *	PDP 3°C **
85	2.41	2.46
110	3.11	3.18
150	4.25	4.35
240	6.80	6.95
370	10.48	10.71
450	12.74	13.03
530	15.00	15.34
800	22.64	23.15
1250	35.38	36.17
1250	42.47	43.42

Options	
<b>D</b>	Enclosure : NEMA4 (without cert)
<b>T</b>	Stainless steel 304 air inlet/outlet piping & separator
<b>U</b>	Stainless steel 316 air inlet/outlet piping & separator

**HXK Series**

**HX**  **K** —

Model	Flow capacity (Nm <sup>3</sup> /min)
2000	60.00
2500	75.00
3000	90.10
4000	120.00
5000	150.10
6000	180.30
8000	240.10
10000	300.30
12000	360.30

Options	
<b>D</b>	Enclosure : NEMA4 (without cert)
<b>S</b>	System Control Monitor II
<b>F</b>	Remote Control
<b>R</b>	Water-cooled condenser
<b>T</b>	Stainless steel 304 air inlet/outlet piping & separator
<b>U</b>	Stainless steel 316 air inlet/outlet piping & separator

\* Option "F" can only be applicable when option "S" is selected

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Some specifications in this bulletin may change without notice.  
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