

# PETX™

HIGH PRESSURE AIR DRYER

*Compressed Air Treatment  
For PET Container Applications*

*120 – 4,300 scfm Capacity Models*



*Stainless Steel  
Heat Exchangers*



# ***Continuous Duty and The Durability of Stainless Steel For***

Compressed air plays a vital role in PET (polyethylene terephthalate) container production. Consistently clean air at high pressure is required for molding operations and to power and control production equipment. The compression process itself causes concentrations of moisture, oil aerosols, and air-borne particulates and vapors in the air to increase to levels that can stop production, increase maintenance requirements, or spoil finished product.

PET-X™ refrigerated dryers from ZEKS are engineered and constructed specifically to meet the rigorous air treatment requirements for PET container applications. They integrate perfectly into this process environment where continuous duty is expected and where consistent performance and reliability are demanded. The standard models are generously equipped, include durable stainless steel heat exchangers, and meet all mandatory certifications for high pressure PET container processes.

## ***PET-X™ Dryer Operation***

All models in the PET-X dryer family incorporate a complete refrigeration system and heat exchangers to cool compressed air as it passes through the dryer following the high pressure air compressor. Cooling causes moisture and contaminants that become concentrated in the compressed air to condense which enables them to be removed from the airstream in a high efficiency separator. The harmful moisture and contaminants are then discharged from the dryer through an automatic high pressure solenoid drain for proper disposal. Compressed air is warmed as it leaves the dryer to eliminate pipe sweating and to maintain air system efficiency.

## ***Engineered For Dependability***

High quality fully hermetic compressors are sized to handle maximum moisture loading and continuous duty for each model in the PET-X dryer family. All refrigeration system components are sized and matched to enable a steady and continuous 38°F dew point in all operating conditions. Standard dryer configuration includes air-cooled condensers that maintain operating efficiency in all environments. An adjustable hot-gas bypass valve protects the dryer from freeze-up and facilitates a long, trouble-free service life. Refrigeration lines include valves for convenient charging in the event service is required.



# PET Container Production

## Stainless Steel CFX® Heat Exchangers

One of the weaknesses of most dryers applied to PET applications is copper heat exchangers. They can be destroyed in a short period of time due to the contaminants that are compressed at high pressure. ZEKS patented CFX® stainless steel heat exchangers are ideally suited to the high pressure PET container production environment. Robust all-welded construction of the exchangers has far fewer seams and joints than other exchanger types and they are less susceptible to the negative effects of pulsation and high pressure. Operating efficiency is maximized by virtue of a high heat transfer coefficient and industry-leading low pressure drop. The exchangers, constructed of corrosion resistant 304L stainless steel, have a multi-path flow area that induces a continuous self-cleaning action that minimizes fouling potential. CFX Corrugated, Folded heat eXchangers exceed all ASME requirements for safe operation in PET applications.



Diagram depicts exchanger cross section

Protected under U.S. Patent Nos. 6,186,223 and 6,244,333

## CFX = Benefits For PET

- **100% Stainless Steel**
- **All-Welded Construction**
- **Very Low Pressure Drop**
- **ZEKS Exclusive 10-Year Warranty**

## Durable Construction

Internal structural pieces are heavy gauge galvanized steel. Full cabinet is powder-coated with removable panels for convenient access to all internal components.

## Exclusive Warranty Coverage

In addition to the standard dryer warranty, compressors are warranted for five years. CFX heat exchangers are covered for 10 years – a testament to their reliability.

## Digital Performance Control

All PET-X dryers come standard with ZEKS Digital Performance Control (DPC™). This microprocessor-based controller indicates the dryer's chiller temperature as well as other critical parameters as shown in the chart below. The DPC Controller's HMI (Human Machine Interface) includes a 16 character backlit display as well as an integral keypad, permitting interaction with the PET-X dryer under all lighting conditions. With the DPC Controller, refrigeration parameters can be viewed and timing of the standard, high-pressure solenoid drain can be adjusted to more closely match seasonal conditions.



Digital Display of:	PET-X Model			
	5-8	9-12	13-16	17-21
• Chiller Temperature	0	S	S	S
• Refrigerant Suction Pressure	S (Gauge)	S (Gauge)	S (Gauge)	S
• Refrigerant Suction Temperature	NA	0	0	S
• Refrigerant Discharge Pressure	NA	0	S	S
• Dryer Running Time	0	S	S	S
• Diagnostic Memory	0	S	S	S
• Air Pressure and Temperature	NA	0	0	0
Condensate Drain Time Adjustment	0	S	S	S
Automatic Dryer RESTART	0	S	S	S
Remote Dryer START/STOP	0	S	S	S
Remote Communication-Ready	0	S	S	S
Condensate Level Alarm-Ready	0	S	S	S
Auto. Refrig. Compressor Heater Delay	NA	NA	NA	S

S - Standard Feature    0 - Optional Feature    NA - Not Applicable

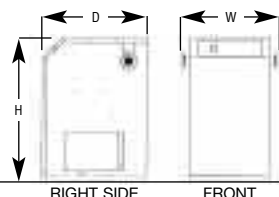
**PETX™**

HIGH PRESSURE AIR DRYER

**For Continuous High Pressure  
PET Air Treatment**

## PET-X™ Dryer Sizing and Model Selection

PET-X air treatment capacity is based on total flow volume (scfm) of the high pressure air system and its pressure rating. Capacities indicated in the chart below are for 680 psig pressure rating. Select the PET-X dryer model that meets or exceeds the maximum flow volume of the air system at 680 psig. Consult factory for correct model selection at different operating pressures.



Overall dimensions indicated.

Air, electric service, and drain connection configurations vary per model. Contact factory for details.

### PET-X

#### Technical Specifications

MODEL	CAPACITY SCFM* 38°F PDP		PRESSURE DROP** PSI	DIMENSIONS IN.			SHIP WEIGHT LBS.		AIR CONNECT IN/OUT	DRAIN CONNECT FPT	REFRIG COMP HP		OPERATING KW***		REFRIG TYPE	WORKING PRESSURE†	MAX VOLTAGES
	AIR COOL	WATER COOL		W	D	H	AIR COOL	WATER COOL			AIR COOL	WATER COOL	AIR COOL	WATER COOL			
5PETX	121	NA	1.3	18.25	21.12	31.5	150	NA	1 1/2" MPT	1/4"	.3	NA	.67	NA	R404	680 psig	115-1-60 208/230-1-60 220-1-50
6PETX	198	NA	2.5	18.25	21.12	31.5	150	NA	1 1/2" MPT	1/4"	.5	NA	1.04	NA	R404	680 psig	
7PETX	212	NA	2.0	18.25	21.12	31.5	175	NA	1 1/2" MPT	1/4"	.6	NA	1.27	NA	R404	680 psig	
8PETX	227	NA	2.6	18.25	21.12	31.5	175	NA	1 1/2" MPT	1/4"	.6	NA	1.27	NA	R404	680 psig	
9PETX	371	467	1.6	28.19	32.6	40.1	200	325	2" MPT	1/4"	1.0	1.0	1.70	1.35	R404	680 psig	208/230-3-60 220-3-50 460-3-60 380-3-50 575-3-60
10PETX	384	483	2.0	28.19	32.6	40.1	335	335	2" MPT	1/4"	1.0	1.0	1.59	1.25	R404	680 psig	
11PETX	455	656	2.0	28.19	32.6	40.1	380	380	2 1/2" MPT	1/4"	1.5	1.5	2.12	1.67	R404	680 psig	
12PETX	612	857	2.9	28.19	32.6	40.1	390	390	2 1/2" MPT	1/4"	2.5	2.5	3.48	2.89	R404	680 psig	
13PETX	768	1,057	2.4	44.25	39	61.5	730	720	3" FLG	1/4"	2.5	2.5	3.59	2.89	R404	680 psig	
14PETX	981	1,326	3.0	44.25	39	61.5	830	820	3" FLG	1/4"	3.0	3.0	4.50	3.72	R404	680 psig	
15PETX	1,092	1,462	2.7	44.25	39	61.5	850	840	3" FLG	1/4"	3.5	3.5	5.39	4.25	R404	680 psig	
16PETX	1,237	1,719	3.0	44.25	39	61.5	870	870	3" FLG	1/4"	4.0	4.0	5.60	4.55	R404	680 psig	
17PETX	1,610	1,924	2.4	32.5	76.38	69	1,570	1,525	4" FLG	1/4"	5.0	5.0	6.21	4.67	R22	680 psig	
18PETX	2,017	2,384	3.1	32.5	76.38	69	1,570	1,560	4" FLG	1/4"	6.0	6.0	7.58	5.92	R22	680 psig	
19PETX	2,325	2,750	3.3	32.5	76.38	69	1,795	1,775	4" FLG	1/4"	8.0	6.5	9.88	6.68	R22	680 psig	
20PETX	2,690	3,301	3.5	32	91	90	2,505	2,490	6" FLG	1/4"	8.0	8.0	10.03	7.73	R22	680 psig	
21PETX	3,542	4,305	4.8	32	91	90	2,550	2,530	6" FLG	1/4"	10.5	10.5	12.90	10.11	R22	680 psig	

\* Performance data presented in accordance with CAGI Standard No. ADF 100, "Refrigerated Compressed Air Dryers – Methods for Testing and Rating." Pressure dew point at 680 psig, 100°F inlet air, 100°F ambient air.

Dimensions subject to change without notice.

\*\* Pressure drop ±.5 psi.

\*\*\* Average of total kilowatts per hour of dryer operation at full rated capacity.

### Standard Features

- 38°F pressure dew point
- High quality, fully hermetic refrigerant compressor
- Air-cooled refrigeration condenser
- Environmentally friendly refrigerant
- High pressure moisture separator
- Protection against high pressure exchanger leak
- 680 psig maximum operating pressure
- Stainless steel CFX® heat exchangers
- Digital Performance Controller (parameters vary per PET-X model)
- Refrigerant suction pressure gauge (5PETX–16PETX)
- High pressure solenoid condensate drain
- ASME and CRN pressure vessel rating
- Fully enclosed, powder coated cabinet

### Optional Features

- Water-cooled refrigeration condenser (9PETX–21PETX)
- Weatherproof protection against rain and splashing water
- NEMA 4 electrics (5PETX–21PETX)
- Complete 304L stainless steel air circuit
- Prefilter: 1 micron ZTF
- Afterfilter: .01 micron ZTF

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MEMBER  
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AND GAS INSTITUTE®  
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