

NC Series™
75-2,400 SCFM Models

Multi-Module Series™
3,250-19,200 SCFM Models

Non-Cycling Refrigerated Compressed Air Dryers



**Independently Verified
Performance** (200-1000 SCFM models)

CFX® *Stainless Steel
Heat Exchangers*

NC Series™

Refrigerated Compressed Air Dryers

75-2,400 SCFM

Compressed air is used commonly for powering tools and equipment, in production and finishing processes and to control valves and instruments. The compression process itself causes concentrations of water, compressor lubricant aerosols, and air-borne particulates to increase to levels that can damage tools, increase maintenance requirements or spoil finished product.

Efficient Operation

NC Series™ dryers cool compressed air using a hermetically sealed refrigeration system. Moisture from the cool air condenses and is efficiently separated and discharged from the dryer. The result is clean, dry air that is suitable for the most demanding applications.

NC Series™ dryer components are sized and matched to enable consistent dew point at full or partial moisture loading in all industrial environments:

- **Fully hermetic refrigeration systems minimize maintenance requirements**
- **Generously sized condensers deliver rated performance even in elevated ambient temperatures**
- **ZEKS exclusive moisture separator design provides 99% separation efficiency**
- **ZEKS CFX®-based precooler/reheater cools incoming compressed air to reduce the load on the refrigeration system thereby minimizing energy cost**
- **ZEKS CFX®-based precooler/reheater warms outgoing compressed air to eliminate pipe sweating**



NC Series™ model 400 NCG
shown in standard configuration.

ZEKS Performance Has Been Independently Verified!

Through participation in the Compressed Air and Gas Institute (CAGI) Performance Verification Program, actual performance and energy consumption of 200-1000 SCFM NC Series™ dryers have been independently validated. Visit www.zeks.com to view ZEKS refrigerated dryer Data Sheets.

Insist upon a dryer with performance that has been independently validated.



Multi-Module Series™

Refrigerated Compressed Air Dryers

3,250 - 19,200 SCFM

Built-In Redundancy Provides Superior High Volume Air Treatment

For large volume compressed air applications, Multi-Module Series™ dryers provide the benefits of NC Series™ dryers plus:

Redundancy –

Multi-Module Series™ dryers are an assembly of individual air treatment modules, each with refrigeration system, heat exchangers, moisture separator and drain. Two or more modules are integrated to form eleven dryer models with air treatment capacities from 3,250 - 19,200 SCFM. This modular approach provides inherent redundancy of critical dryer components, eliminating the need to operate and maintain more than one dryer. Individual electrical disconnects on each module enable the dryer to remain operational and continue to provide compressed air treatment even if a module must be isolated for service or maintenance.

Versatility and Expandability –

Individual modules in each dryer model share a single INLET and a single OUTLET air header, each with dual connection capability. This permits connection to either side of the dryer to suit site conditions. Multi-Module™ dryers have also been engineered to address the ever-changing manufacturing environment. Because header centerline position is common among all models, planned increase in air treatment capacity can be accommodated through addition of modules.



Multi-Module Series™ model 4000 NCFM shown configured with water-cooled refrigeration condensers.

The Standard of Excellence For Heat Exchanger Design

ZEKS patented CFX® heat exchangers have been engineered exclusively for compressed air drying. The unique design features:

- **100% Stainless Steel Construction**
- **Very Low Pressure Drop**
- **3-5 Times More Flow Area Than Competitive Exchangers**
- **Greater Fouling Resistance Than Competitive Exchangers**
- **Higher Energy Efficiency Than Competitive Exchangers**
- **ZEKS Exclusive 10-Year Warranty**



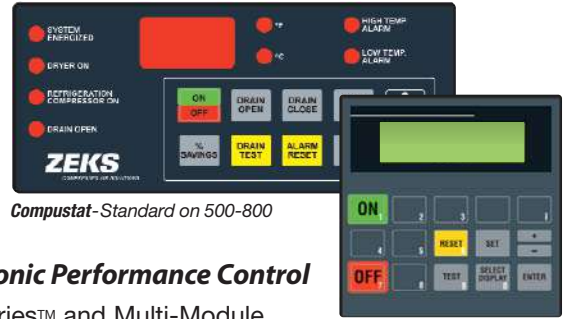
Protected under U.S. Patent Nos. 6,186,223 and 6,244,333

Even well maintained compressed air systems can contain corrosive impurities that are introduced at the air compressor intake. The corrosion-resistance of CFX® stainless steel heat exchangers addresses this threat, providing durability in environments where exchangers made of copper or other metals are not suitable.

Durable Construction

The internal structure of NC Series™ and Multi-Module Series™ dryers is made of heavy gauge galvanized steel. Full external cabinet is powder coated with removable panels that allow convenient access to all serviceable components.

...Engineered to maximize operating efficiency and provide continuous trouble-free service in a broad range of compressed air applications.



Compustat-Standard on 500-800

DPC-Standard on 1000-2400, optional on 75-400

Electronic Performance Control

NC Series™ and Multi-Module Series™ dryer operation is automatically controlled to ensure continuous air treatment. Both Compustat and DPC controllers enable the user to monitor the dryer refrigeration system as well as adjust condensate drain timing at the touch of a button.

Compustat Controller – Standard on 500-800 models. Includes LED display to communicate dryer operating status.

DPC Controller – Optional on 75-400 models. Enhanced version standard on 1000-2400 models. Includes backlit LCD to communicate dryer operating status.

DPC Plus Controller – Optional on 500-2400 models and standard on 3250-19200 models. Provides all the features of the DPC Controller, with the addition of air temperature and pressure displays.

Display Of:	Dryer Model			
	75-400	500-800	1000-2400	3250-19200
• Chiller Temp.	0	S	S	S
• Refrig. Suction Pres.	S (Gauge)	S (Gauge)	S	S
• Refrig. Suction Temp.	NA	+	S	S
• Refrig. Discharge Pres.	NA	+	S	S
• Refrig. Comp. Running Time	0	+	S	S
• Dryer Running Time	0	+	S	S
• Diagnostic Memory	0	+	S	S
• Inlet Air Pres. and Temp.	NA	+	+	S
• Outlet Air Pres. and Temp.	NA	+	+	S
Drain Time Adjustment	0	S	S	S
Automatic Dryer RESTART	0	S	S	S
Remote START/STOP-Ready	0	S	S	S
Remote Alarm Contact	0	S	S	S
MODBUS Communication-Ready	0	+	S	S

- S - Standard feature with either Compustat or DPC
- 0 - Option provided by DPC
- NA - Not Applicable
- +
- Included with DPC Plus Option

NC Series™ and Multi-Module Series™ Features

Standard:

- **Stainless Steel CFX® Heat Exchangers**
Patented CFX® stainless steel heat exchangers used in all precooler/reheater and chiller assemblies.
- **Fully Hermetic Refrigeration Compressor(s)**
Quiet, reliable operation.
- **High Efficiency Moisture Separator**
Collects condensate, eliminates moisture reentrainment.
- **Timed Electric Condensate Drain**
Fully adjustable with large port that resists clogging.
- **Electronic Performance Controller** (optional on 75-400)
Enables performance modification and real-time monitoring of dryer functions.
- **Air-Cooled Refrigeration Condenser** (75-2,400)
Condenser is mounted to maximize air flow.
- **Water-Cooled Refrigeration Condensers** (3,250-19,200)
Internally mounted condenser in each module makes use of available cooling supply.
- **Multiple Electric Disconnects** (3,250-19,200)
Enable isolation of individual modules for service while dryer remains operational.
- **Single Point Electric Service Connection**
Minimizes installation cost.
- **Closed Frame Construction**
Full powder coated cabinet protects internal components.
- **Air Circuit Precooler/Reheater**
Conditions air optimally for compressed air system.
- **Environmentally Friendly Refrigerant**
NC Series™ and Multi-Module Series™ dryers use R-404A refrigerant.

Optional:

- **NEMA 4 Electrics** (200-19,200)
Water tight and dust tight enclosure for indoor/outdoor protection against rain, falling water, and washdown.
- **Water-Cooled Refrigeration Condenser** (200-2,400)
Condenser makes use of available cooling supply.
- **Air-Cooled Refrigeration Condensers** (3,250-19,200)
Condensers maintain individual module efficiency in all ambient conditions.
- **Savair™ No Air-Loss Condensate Drains** (3,250-19,200)
Pneumatically operated demand drains waste no compressed air. Each has a large discharge port that resists clogging.
- **Removable-Head Condensers** (3,250-19,200)
Permit cleaning of the condensers in applications where water has high concentrations of silt or particulate. Units are top-mounted for convenient access.
- **CME Cold Mist Eliminator** (200-400)
99% removal of air compressor lubricant carryover.

Exclusive Warranty

In addition to the standard dryer warranty, refrigeration compressors are warranted for five years and CFX® heat exchangers for ten years.

Refer to:
ZEKS Product Warranty
Policies and Procedures.

Sizing and Selection

Dryer selection is based on matching dryer treatment capacity to the total maximum compressed air volume (SCFM). Select a model that has the required treatment capacity (SCFM) from the Technical Specifications Charts. Use the following Correction Factors to select a model that provides the required dew point for an application that deviates from the standard ISO 7183 rating conditions (selection example provided):

Dryer Selection Example	Inlet Air Temperature	Correction Factor	Inlet Air Pressure	Correction Factor	Ambient Air Temperature	Correction Factor
Air Volume Requirement: 375 SCFM	80°F	.61	50 psig	1.29	80°F	.80
Inlet Air Temperature: 110°F	90°F	.79	75 psig	1.10	90°F	.89
Inlet Air Pressure: 150 psig	100°F	1.00	100 psig	1.00	100°F	1.00
Ambient Air Temperature: 90°F	110°F	1.23	150 psig	.86	110°F	1.16
	120°F	1.51	250 psig	.79	113°F	1.27

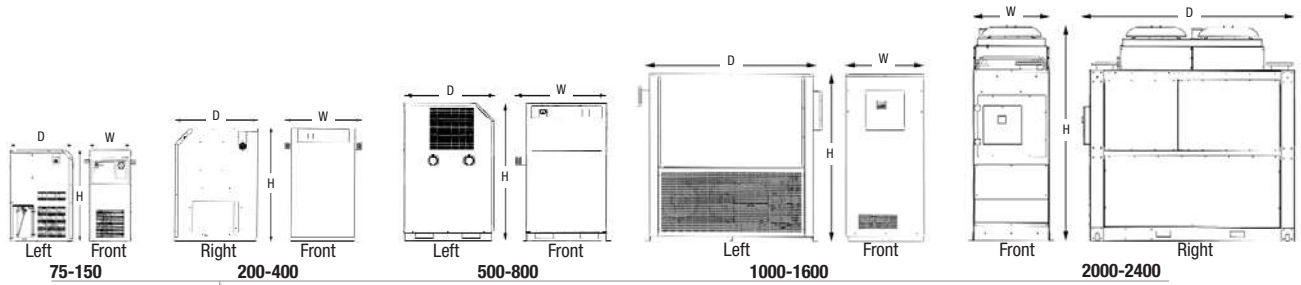
Corrected SCFM can be calculated with the correction factors:

$$1.23 \times .86 \times .89 \times 375 \text{ SCFM} = 353 \text{ SCFM corrected}$$

Select the model that matches or exceeds the corrected treatment capacity (SCFM).

For the example given, it is model 400NCG delivering 38°F PDP.

See *Technical Specifications* charts on back page.



NC Series™

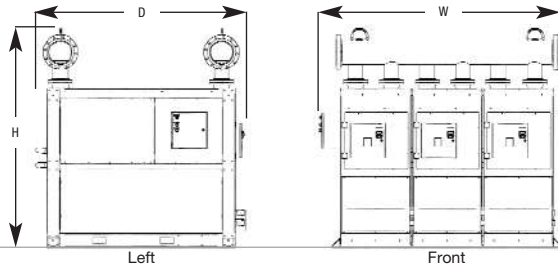
Technical Specifications

MODEL	CAPACITY*		PRESSURE DROP**	DIMENSIONS			SHIP WEIGHT		AIR DRAIN CONNECT	REFRIG COMP CONNECT	REFRIG COMP		OPERATING		REFRIG WATER-COOL	MAX WORKING TYPE	PRESSURE	VOLTAGES§
	38°F PDP	50°F PDP		W IN.	D IN.	H IN.	AIR-COOL LBS.	WATER-COOL LBS.			AIR-COOL HP	WATER-COOL HP	AIR-COOL	WATER-COOL				
75NCG	75	103	1.3	14	21	31	145	NA	1" MPT	1/4"	.3	NA	.67	NA	R404	300 psig	115-1-60 208/230-1-60 220-1-50	
100NCG	100	138	2.5	14	21	31	150	NA	1" MPT	1/4"	.5	NA	1.0	NA	R404	300 psig		
125NCG	125	172	2.0	14	21	31	180	NA	1 1/2" MPT	1/4"	.6	NA	1.3	NA	R404	300 psig		
150NCG	150	207	2.6	14	21	31	200	NA	1 1/2" MPT	1/4"	.6	NA	1.3	NA	R404	300 psig		
200NCG	200	276	1.6	23	31	40	325	360	1 1/2" MPT	1/4"	1.0	1.0	1.8	1.4	R404	300 psig	208/230-3-60 220-3-60 460-3-60 380-3-50 575-3-60	
250NCG	250	345	3.1	23	31	40	340	380	1 1/2" MPT	1/4"	1.5	1.0	2.2	1.4	R404	300 psig		
300NCG	300	414	2.0	23	31	40	375	400	2" MPT	1/4"	1.5	1.5	2.4	1.9	R404	300 psig		
400NCG	400	552	2.9	23	31	40	375	440	2" MPT	1/4"	2.5	2.5	3.6	2.9	R404	300 psig		
500NCE	500	690	2.9	42	40	62	950	720	3" MPT	1/4"	2.5	2.5	3.7	2.9	R404	300 psig		
600NCE	600	828	3.0	42	40	62	950	820	3" MPT	1/4"	3.0	3.0	4.6	3.8	R404	300 psig		
700NCE	700	966	2.7	42	40	62	1,050	840	3" MPT	1/4"	3.5	4.0	5.9	4.7	R404	300 psig		
800NCE	800	1,104	3.0	42	40	62	1,050	850	3" MPT	1/4"	4.0	4.0	5.9	4.7	R404	300 psig		
1000NCF	1,000	1,380	2.4	32	72	69	1,700	1,630	4" FLG	1/4"	5.0	5.0	7.4	6.1	R404	220 psig		
1200NCF	1,200	1,656	3.1	32	72	69	1,725	1,630	4" FLG	1/4"	6.5	5.0	9.5	6.1	R404	220 psig		
1600NCF	1,600	2,208	3.3	32	72	69	1,800	1,790	4" FLG	1/4"	9.0	6.5	11.3	8.9	R404	220 psig		
2000NCF	2,000	2,760	3.5	32	91	90.68	2,450	2,690	6" FLG	1/4"	10.5	8.0	13.8	9.0	R404	220 psig		
2400NCF	2,400	3,312	4.8	32	91	90.68	2,500	2,720	6" FLG	1/4"	12.0	10.5	16.2	11.7	R404	220 psig		

Overall dimensions indicated.

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

§ 200NCG also available in 208-1-60 and 230-1-60 voltages.



Overall dimensions indicated.

Air INLET and OUTLET header centerline remains consistent throughout the Multi-Module Series™ model range.

Module number varies depending on model. See last column in Technical Specifications chart to identify modules per model. 3-module model depicted in this illustration.

Multi-Module Series™
Technical Specifications

MODEL	CAPACITY*		PRESSURE DROP**	OVERALL DIMENSIONS			SHIP WEIGHT	CONNECT SIZE	DRAIN (QTY) SIZE	REFRIG COMP		H ₂ O FLOW	H ₂ O CONN	OPERATING		NUMBER OF MODULES
	38°F PDP	50°F PDP		W IN.	D IN.	H IN.				AIR-COOL (QTY) HP	WATER-COOL (QTY) HP			GPM @85°F	AIR-COOL	
3250NCFM	3,250		3.4	76.5	96	100.2	4,800	8" FLG	(2) 1/2"	(2) 8.0	(2) 6.5	42	1.5 NPT	22.6	17.8	2
4000NCFM	4,000		3.5	76.5	96	100.2	5,000	8" FLG	(2) 1/2"	(2) 10.5	(2) 8.0	52	1.5 NPT	27.6	18.0	2
4800NCFM	4,800		4.8	76.5	96	100.2	5,500	8" FLG	(2) 1/2"	(2) 12.0	(2) 10.5	68	1.5 NPT	32.4	23.4	2
6000NCFM	6,000		3.5	110.25	98	99.53	7,500	10" FLG	(3) 1/2"	(3) 10.5	(3) 8.0	78	2.0 NPT	41.4	27.0	3
7200NCFM	7,200		3.5	110.25	98	99.53	8,000	10" FLG	(3) 1/2"	(3) 12.0	(3) 10.5	102	2.0 NPT	48.6	35.1	3
8000NCFM	8,000		3.5	148	100	102	9,000	12" FLG	(4) 1/2"	(4) 10.5	(4) 8.0	104	2.5 NPT	55.2	36.0	4
9600NCFM	9,600		4.8	148	100	102	10,000	12" FLG	(4) 1/2"	(4) 12.0	(4) 10.5	136	2.5 NPT	64.8	46.8	4
12000NCFM	12,000		4.3	175.5	102	103	14,000	14" FLG	(5) 1/2"	(5) 12.0	(5) 10.5	170	3.0 FLG	81.0	58.5	5
14400NCFM	14,400		4.3	210.5	100	103	17,000	14" FLG	(6) 1/2"	(6) 12.0	(6) 10.5	204	3.0 FLG	97.2	70.2	6
16800NCFM	16,800		4.8	242	104	106	21,000	16" FLG	(7) 1/2"	(7) 12.0	(7) 10.5	238	4.0 FLG	113.4	81.9	7
19200NCFM	19,200		4.8	275	104	106	25,000	16" FLG	(8) 1/2"	(8) 12.0	(8) 10.5	272	4.0 FLG	129.6	93.6	8

* Performance data obtained according to ISO 7183, Table 2, Option A2.

Pressure dew point at 100 psig inlet air pressure, 100°F inlet air temperature, 100°F ambient air temperature.

** Pressure drop ±.5 psi. Pressure drops noted are for the 38°F PDP flows.

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

460/3/60; 380/3/50; 575/3/60 voltages available for 3,250 - 19,200 SCFM models.

220 psig maximum working pressure for 3,250 - 19,200 SCFM models.

Dimensions subject to change without notice.

Shipping weights shown for Multi-Module Series™ are for air-cooled models. Water-cooled model weight is less.

NC Series™ and Multi-Module Series™
Non-Cycling Refrigerated Compressed Air Dryers



1302 Goshen Parkway
West Chester, PA 19380

Phone: 610-692-9100 800-888-2323

Fax: 610-692-9192

Web: www.zeks.com