Direct Expansion Refrigerated Air Dryer

FLOW CAPACITY: 10 to 4200 scfm

We purchased a nano DXR when our old dryer failed and we are happy with the installation.

Parts manufacturer - Southeastern US

Simple Reliability

The DXR dryers are engineered for continuous operation, consistently delivering dry air.

Ambient air contains high levels of moisture, dust, hydrocarbons and other contaminants and, when left untreated, the results are corrosion, bacteria, mold growth and freezing within your compressed air lines. This contamination can cause damage to downstream equipment and lead to increased maintenance, downtime and product spoilage.

While compressed air filters will remove solid particulate, liquids and aerosols, they cannot remove the moisture that remains in the form of vapor. This vapor can condense into liquid water throughout your compressed air system as the pressure and temperature of the compressed air changes.

nano R^4 DXR Direct Expansion Refrigerated Air Dryers

- Simple, easy installation
- Clean, dry compressed air at ISO Class 4, 5 or 6 as necessary
- Steady, guaranteed dew point
- Low pressure drop
- Zero air loss drain effectively removes water without air loss.

How it works

Direct Expansion Refrigeration

A DXR direct expansion refrigerated air dryer uses a refrigerant circuit and heat exchanger(s) to pre-cool air, refrigerate it to condense out moisture vapor, and then re-heats the air to prevent pipe sweating downstream.

A Hot, moist compressed air enters the pre-cooler section of the 3 in 1 heat exchanger where it is pre-cooled by the exiting dry air.

B Pre-cooled compressed air then enters the air to refrigerant evaporator where it reaches its coldest point and achieves its lowest dew point.

C Condensed moisture is being removed by an integrated moisture separator and zero air loss condensate drain prior to re-entering the air to air heat exchanger where incoming hot air reheats the exiting cold compressed air.

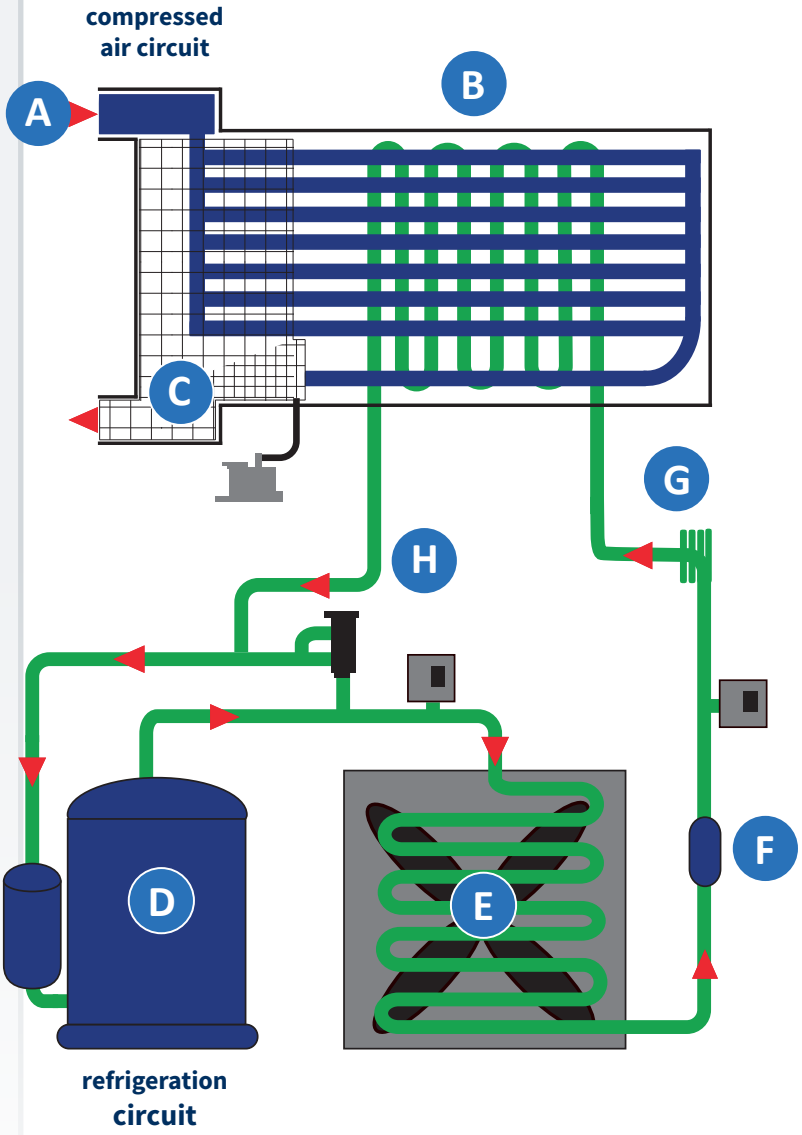
D The refrigerant compressor pressurizes the returning refrigerant gas.

E An air cooled condenser removes the heat from the refrigerant and condenses it back to a liquid state.

F The refrigerant filter ensures that there is no water or particulate circulating through the system.

G The DXR uses a capillary tube for expanding the refrigerant. Having no moving parts ensures the reliability of the system.

H A hot gas bypass is used to ensure the optimal temperature is maintained in the heat exchanger preventing freezing and ice formation in the unit.



Features

User Friendly Digital Controller

- Displays outlet dew point
- Alarms contacts on models DXR 0050 N to DXR 4200 N
- Remote start stop on models DXR 0325 N to DXR 4200 N
- Automatic restart after power loss
- Service reminder alarm

Energy Efficient Aluminium Block Heat Exchanger

- Combined air-to-air and air-to-refrigerant heat exchanger design
- Fully insulated for thermal efficiency
- Integrated water separator

Zero Air Loss Drain

- Energy savings drain included on all models.
- Prevents the loss of valuable compressed air.

Hot Gas Bypass Valve

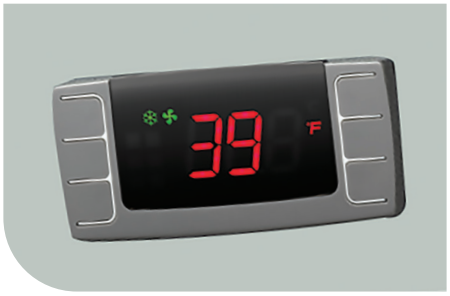
- Ensures stable pressure dew point and eliminates the possibility of condensate freezing.

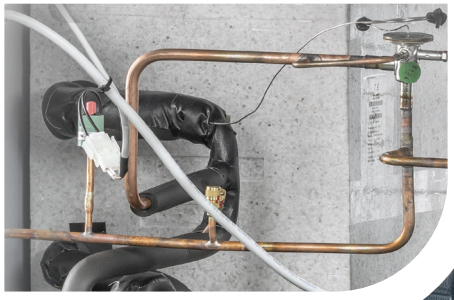
Performance Validated Filtration

- Pre and after filter packages available to provide additional energy savings and improved air quality.

Robust & Reliable Refrigeration system

- Low GWP refrigerants - R513A and R410A
- Hot gas bypass valve
- Crank case heater included for DXR 1600 N to DXR 4200 N.





Benefits

Optimum Energy Efficiency & Consistent Dew Point

- Aluminium block heat exchanger with integrated water separator and air-to-air heat exchanger ensures maximum cooling efficiency.
- Integrated water separator provides low and consistent pressure dew point.
- Zero air loss drain effectively removes water without air loss.

Capillary Tube & Hot Gas Bypass

- Self-regulating providing reliability and low maintenance with less components than more complex ranges.

Space Saving Design

- Fully packaged into a simple compact design, DXR will fit into the smallest spaces.

Easy to Install

- Plug and play design concept

Robust Construction

- Powder coated galvanized steel panels are corrosion resistant.

Environmentally Friendly

- R513A or R410A refrigerant

Up to 600 scfm, models use durable piston compressors for long life and reliable performance, while 850 scfm+ models feature quiet, energy-efficient scroll compressors with low maintenance.

Energy efficient NED zero air loss drain expels liquid condensate from the heat exchanger without wasting compressed air.

Product Specifications

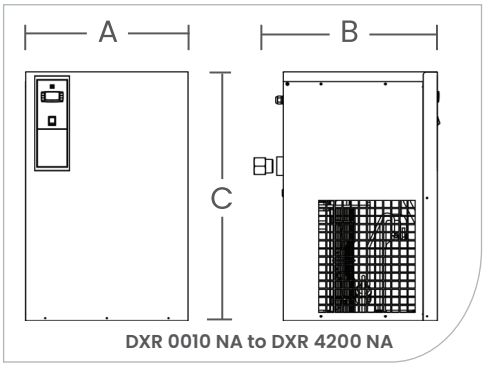
MODEL	INLET & OUTLET (1)	RATED FLOW (2)	ABSORBED POWER (3)	DIMENSIONS (INCHES)			APPROX. WEIGHT	POWER SUPPLY (V/PH/60HZ) (3)				REFRIGERANT
	NPT/Flg	SCFM	kW	A	B	C	LBS	115/1	230/1	460/3	575/3	
DXR 0010 N	½" (M)	10	0.2	14	20	18	42	X				R513A
DXR 0015 N	½" (M)	15	0.2	14	20	18	42	X				R513A
DXR 0020 N	½" (M)	20	0.2	14	20	18	45	X				R513A
DXR 0030 N	½" (M)	30	0.3	14	20	18	56	X				R513A
DXR 0050 N	½" (M)	50	0.9	15	21	31	113	X				R513A
DXR 0065 N	¾" (M)	65	0.9	15	21	31	113	X				R513A
DXR 0085 N	1" (F)	85	1.0	19	23	32	119	X				R513A
DXR 0105 N	1" (F)	105	1.0	19	23	32	119	X				R410A
DXR 0125 N	1" (F)	125	1.0	19	23	32	135	X				R410A
DXR 0150 N	1" (F)	150	1.5	19	23	32	146		X	X		R410A
DXR 0185 N	1½" (F)	185	1.6	23	24	36	170		X	X		R410A
DXR 0230 N	1½" (F)	230	2.0	23	24	36	170			X		R410A
DXR 0250 N	1½" (F)	250	2.4	23	24	36	185			X		R410A
DXR 0325 N	2" (F)	325	2.3	32	41	38	320			X		R410A
DXR 0400 N	2" (F)	400	3.2	32	41	38	349			X		R410A
DXR 0500 N	2 ½" (F)	500	3.2	32	41	38	364			X		R410A
DXR 0600 N	2 ½" (F)	600	4.2	32	41	38	362			X		R410A
DXR 0850 N	3" (M)	850	5.8	45	40	55	507			X	X	R410A
DXR 1050 N	3" (M)	1050	6.0	44	40	63	717			X	X	R410A
DXR 1250 N	3" (M)	1250	6.7	44	40	63	745			X	X	R410A
DXR 1600 N	4" Flg	1600	7.8	44	40	72	860			X	X	R410A
DXR 1800 N	4" Flg	1800	9.4	60	40	72	1019			X	X	R410A
DXR 2200 N	4" Flg	2200	9.5	60	40	72	1120			X	X	R410A
DXR 2400 N	4" Flg	2400	9.7	60	40	72	1120			X	X	R410A
DXR 3000 N	6" Flg	3000	11.4	78	57	72	1786			X	X	R410A
DXR 3500 N	6" Flg	3500	12.8	78	57	72	1797			X	X	R410A
DXR 4200 N	6" Flg	4200	17.1	78	57	72	1985			X	X	R410A

SPECIFICATIONS	DXR 0010 N to DXR 0030 N	DXR 0050 N to DXR 0250 N	DXR 0325 N to DXR 4200 N
Design operating pressure range (psig)	60 to 232	60 to 203	60 to 203
Maximum inlet air temperature (°F)	131	131	140
Maximum ambient temperature (°F)	41 to 114.8	41 to 114.8	41 to 114.8

PRESSURE CORRECTION FACTORS (5)					
Operating pressure (psig)	87	100	116	145	188
Correction factor	0.97	1.00	1.03	1.07	1.12

INLET TEMPERATURE CORRECTION FACTORS (5)									
Inlet air temperature (°F)	77	86	95	100	104	114	122	131	140
Correction factor	1.10	1.06	1.02	1.00	0.93	0.75	0.65	0.50	0.40

AMBIENT TEMPERATURE CORRECTION FACTORS (5)						
Inlet temperature (°F)	77	86	95	100	104	114
Correction factor	1.00	0.91	0.81	0.72	0.67	0.62



DXR 0010 NA to DXR 0400 NA

(1) ½" to 3" are NPT threaded connections, 4" and up are supplied with ANSI flanged connections.
(2) Rated flow capacity: Conditions for rating dryers are in accordance with ISO 7183 (Option A2). Compressed air at dryer inlet: 100 psig and 100°F; ambient air temperature: 100°F; operating on 60Hz power supply.
(3) Nominal absorbed power at rated operating conditions using 115/1/60 or 230/1/60 or 4603/60 power supply (if applicable). For absorbed power at 575V or other conditions, contact support@airandgassolutions.com.
(4) Specify voltage requirements when ordering.
(5) To be used as a rough guide only. All applications should be confirmed by nano sizing software. Contact support@nano-purification.com for sizing assistance.
(6) Technical specifications subject to change without notice. Direct inquiries to support@airandgassolutions.com.
*2 year warranty with pre-filtration and non-corrosive piping system installed

Experience.
Customer.
Service.

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