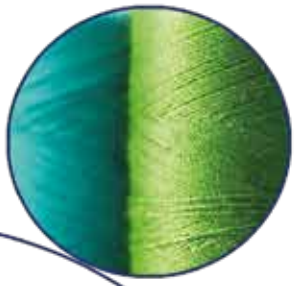
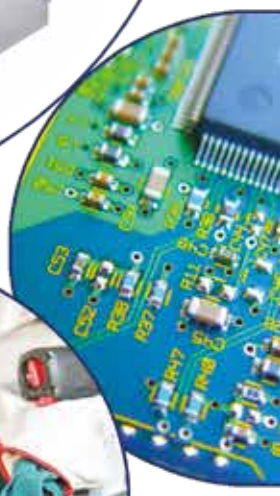




direct expansion refrigerated air dryers

flow capacity: 17 to 7140 Nm^3/hr (10 to 4200 scfm)

“We purchased a nano DX
and we are happy with the

parts manufacturer - southeastern US

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 vapour. This vapour can condense into liquid water throughout your compressed air system as the pressure and temperature of the compressed air changes.

simple reliability

The DXR dryers are designed for constant operation continually giving you dry air.

R when our old dryer failed installation.”

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

www.nano-purification.com

BENEFITS

optimum energy efficiency and 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 and 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 galvanised steel panels are corrosion resistant

environmentally friendly

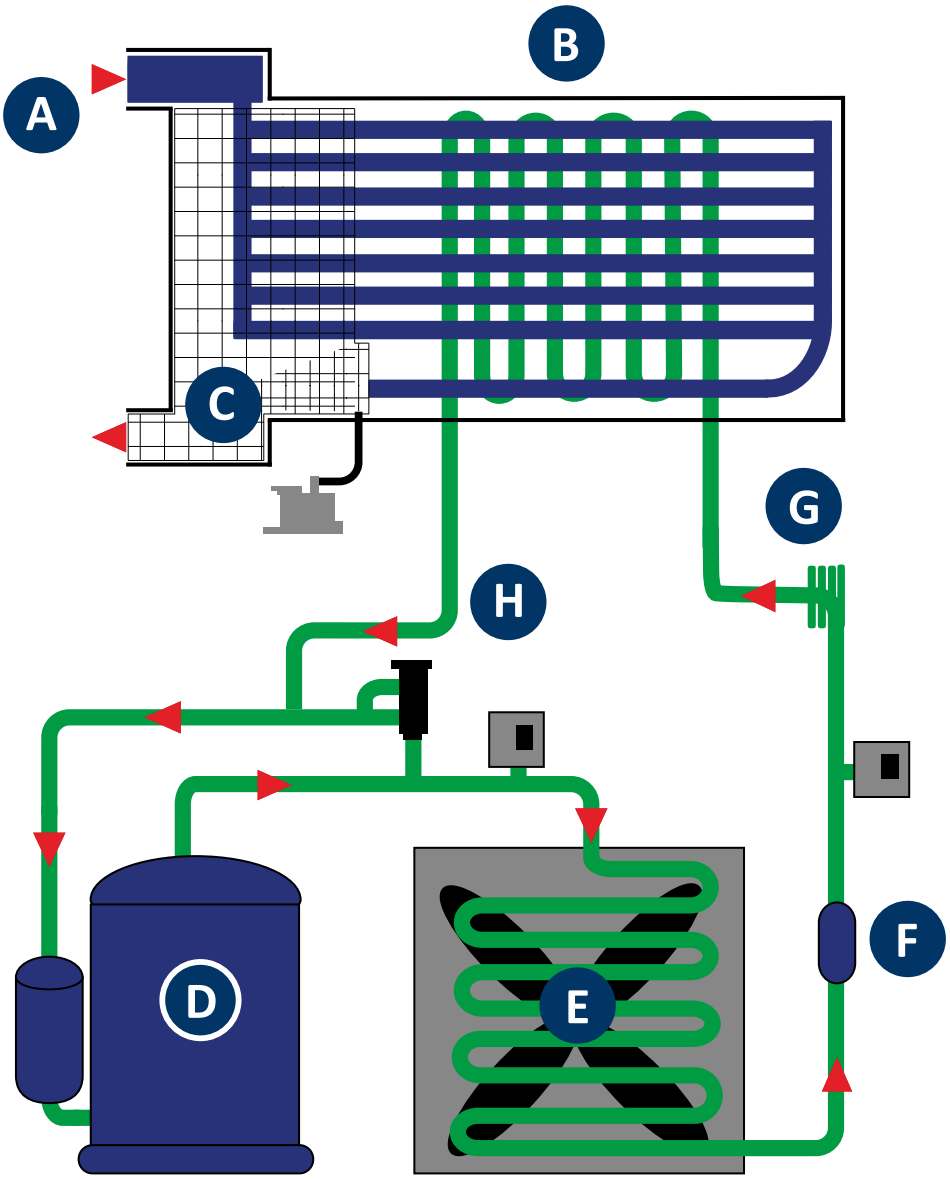
- R513A or R410A refrigerant

HOW IT WORKS

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 vapour, and then re-heats the air to prevent pipe sweating downstream.

compressed air circuit

refrigeration circuit



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

B precooled 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 reentering the air to air heat exchanger where incoming hot air reheats the exiting cold compressed air

D the refrigerant compressor pressurises 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 0050E to DXR 4200E
- remote start stop on models DXR 0325E to DXR 4200E
- 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 filter packages available to provide additional energy savings and improved air quality

robust and reliable refrigeration system

- low GWP refrigerants - R513A and R410A
- hot gas bypass valve
- crank case heater included for DXR 1600E to DXR 4200E

SPECIFICATIONS

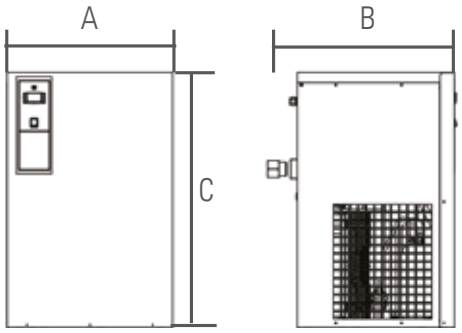
dryer model	inlet & outlet		rated flow [1]	absorbed power [2]	dimensions (mm)			approx. weight	power supply (V/Ph/60Hz) [3]		refrigerant
	BSPP/FLG	Nm^3/h	scfm	kW	A	B	C	kg	230V/1Ph/50Hz	400V/3Ph/50Hz	
DXR 0022E	G 3/4" (M)	22	13	0.13	350	493	450	19	X		R513A
DXR 0036E	G 3/4" (M)	36	21	0.16	350	493	450	19	X		R513A
DXR 0050E	G 3/4" (M)	50	29	0.19	350	493	450	20	X		R513A
DXR 0072E	G 3/4" (M)	72	42	0.27	350	493	450	25	X		R513A
DXR 0108E	G 3/4" (M)	108	64	0.28	350	493	450	27	X		R513A
DXR 0140E	G 1" (F)	140	82	0.67	370	497	764	44	X		R513A
DXR 0180E	G 1" (F)	180	106	0.72	370	497	764	44	X		R513A
DXR 0216E	G 1 1/2" (F)	216	127	0.63	460	557	789	62	X		R410A
DXR 0245E	G 1 1/2" (F)	245	144	0.71	460	557	789	60	X		R410A
DXR 0313E	G 1 1/2" (F)	313	184	0.91	460	557	789	62	X		R410A
DXR 0389E	G 1 1/2" (F)	389	229	0.97	580	557	899	82	X		R410A
DXR 0461E	G 1 1/2" (F)	461	271	1.12	580	557	899	82	X		R410A
DXR 0601E	G 2" (F)	601	354	1.54	805	1040	962	145		X	R410A
DXR 0720E	G 2" (F)	720	424	1.98	805	1070	962	158		X	R410A
DXR 0900E	G 2 1/2" (F)	900	530	2.01	805	1070	962	165		X	R410A
DXR 1080E	G 2 1/2" (F)	1080	636	2.77	805	1070	962	164		X	R410A
DXR 1440E	R 3" (M)	1440	848	3.50	1132	1005	1399	230		X	R410A
DXR 1800E	R 3" (M)	1800	1059	3.69	1121	1005	1596	325		X	R410A
DXR 2099E	R 3" (M)	2099	1235	4.55	1121	1005	1596	338		X	R410A
DXR 2700E	DN100-PN16	2700	1589	6.10	1121	1005	1826	390		X	R410A
DXR 2999E	DN100-PN16	2999	1765	6.54	1531	1005	1826	462		X	R410A
DXR 3744E	DN100-PN16	3744	2471	7.10	1531	1005	1826	508		X	R410A
DXR 4198E	DN100-PN16	4198	2966	7.29	1531	1005	1826	508		X	R410A
DXR 5040E	DN150-PN16	5040	3496	8.26	1979	1455	1826	810		X	R410A
DXR 5940E	DN150-PN16	5940	4238	10.20	1979	1455	1826	815		X	R410A
DXR 7200E	DN150-PN16	7200	2471	12.18	1979	1455	1833	900		X	R410A

specifications	DXR 0022E to DXR 0050E	DXR 0022E to DXR 0050E	DXR 0601E to DXR 2200E
design operating pressure range	4.1 to 16 barg	4.1 to 14 barg	4.1 to 14 barg
maximum inlet air temperature	55°C	55°C	60°C
maximum ambient temperature	5 to 46°C	5 to 46°C	5 to 46°C

pressure correction factors [4]					
operating pressure (barg)	6	7	8	10	13
correction factor	0.97	1.00	1.03	1.07	1.12

inlet temperature correction factors [4]								
inlet air temperature (°C)	25	30	35	40	46	50	55	60
correction factor	1.11	1.05	1.00	0.82	0.69	0.58	0.49	0.42

ambient temperature correction factors [4]						
inlet temperature (°C)	25	30	35	40	43	46
correction factor	1.00	0.91	0.81	0.72	0.67	0.62



DXR 0140E - DXR 0180E

(1) rated flow capacity: conditions for rating dryers are in accordance with ISO7183 . Compressed air at dryer inlet: 7 bar and 35°°C; ambient air temperature: 35°C
(2) nominal absorbed power at rated operating conditions using 230/1/50 or 400/3/50 power supply (as applicable)
(3) specify voltage requirements when ordering
(4) to be used as a rough guide only. All applications should be confirmed by n-psi sizing software. Contact sales@n-psi.co.uk for sizing assistance

*2 year warranty with pre-filtration and non-corrosive piping system installed

EXPERIENCE. CUSTOMER. SERVICE.

Leading edge technology and hundreds of years of *experience*. . .nano-purification solutions, your world-class manufacturer of state-of-the-art compressed air and gas solutions to industry.

Our commitment at nano is to work alongside our *customers* and provide unique solutions with the highest quality products to solve your specific challenges.

A wealth of experience and leading edge products are only part of the equation. nano recognize that world-class customer *service* is the most important component to any successful business.

DESIGN

Our experienced team of design engineers are always looking for new and unique technologies and products to bring you the highest level of performance and lowest overall operating cost.

RESEARCH & DEVELOPMENT

Our R&D team endeavor to provide solutions that go beyond developing an existing product. They are continually researching new technologies which can provide unique advantages over competitive offerings.

MANUFACTURE

The reliable and energy saving nano R^4 range of direct expansion refrigerated air dryers are manufactured in our state-of-the-art facility to the highest standards of build quality to ensure equipment reliability and high levels of performance.

ENVIRONMENTALLY FRIENDLY

Through both product development and manufacturing, we strive to produce high quality products compliant to both local and global environmental legislation. Reduction of carbon footprint through energy saving products and use of environmentally friendly components are our commitment to you.

bcas BRITISH COMPRESSED AIR SOCIETY LIMITED

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