CRDC Refrigeration Dryers

0.2 - 3.0 m³/min (7 -106 cfm) ISO 7183 50Hz

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Compressed Air the 4th Utility

Compressed air is a safe and reliable power source that is widely used throughout industry. In fact, approximately 90% of all companies use compressed air for some aspect of their operations. Unlike the other utilities, compressed air is generated on-site, giving users much more control over usage and air quality.

All compressed air systems suffer from the same common problems of airborne dirt, oil and water contamination entering the system. These are intensified when air is compressed. Failure to remove these contaminants will result in serious problems within the compressed air network including corroded piping and damaged pneumatic equipment. In addition to the consequences of airborne contamination, the distribution system will also contribute particulate. This all results in higher operating costs, potential downtime and spoilt products.

CRDC Refrigeration Dryers

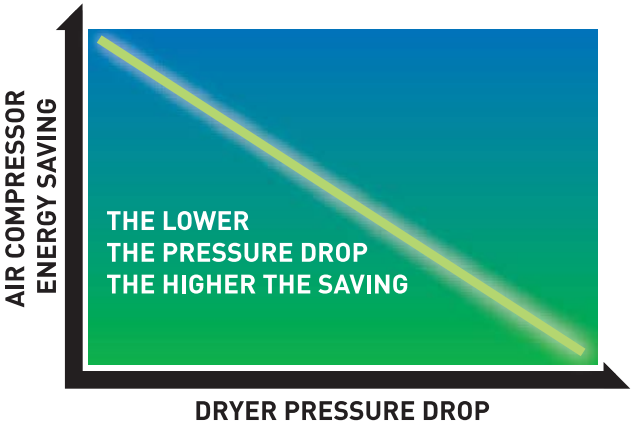
Most plant managers are only too aware of the problems and costs associated with moisture in compressed air systems.

For general purpose applications the refrigeration dryer remains the most popular method of removing this unwanted moisture.

Often the selection of refrigeration dryers is based upon the initial purchase price and product availability, with little or no regard to the delivered air quality or the long term operational costs.

In fact the initial purchase price of a refrigeration dryer accounts for only 25% of it's total cost over a five year period. The direct and indirect operational costs actually account for the remaining 75%.

Energy Efficiency



Poorly constructed heat exchangers and liquid separators create a high pressure differential across the dryer which leads to high operational costs and poor dewpoint performance.

The CRDC dryer range delivers uncompromising performance and the right balance of air quality at the lowest cost of ownership.

Advanced Heat Exchanger

The high performance heat exchanger utilises the excellent thermal transfer properties of aluminium housed in a compact light weight unit. This unique design, consisting of three main parts, offers an average pressure drop of only 0.1 barg, reducing indirect costs by almost half when compared to traditional dryers.

Demister separator

A high capacity demister separator is employed for the removal of condensed liquids. This lowers the air velocity which maximises the condensate separation from the air, even when the dryer is not operating at maximum flow. This design also ensures the differential pressure across the dryer is kept to a minimum.

Condensate drain

The CRDC Refrigeration Dryer range comes complete with three drain options to ensure optimum condensate discharge from the system. The positioning of the drain niche allows for easy access to the drain without the requirement of removing panels.

Refrigerant condenser

High efficiency air cooled condenser. Re-positioned to improve reliability and reduce the risk of dirt contamination.

Refrigerant compressor

Maintenance free hermetically sealed refrigerant compressor. Low refrigerant charge eliminates the requirement for pre heating on start up & prevents any liquid refrigerant returns.

Key Features:

- **Delivers Air Quality to ISO 8573.1:2001 (Classes 4, 5 and 6)**
- **Small compact design**
- **Oversized demister separator resulting in excellent liquid removal**
- **Low pressure differential across the dryer**
- **Energy efficient refrigeration Compressor**
- **Designed to fully utilises R134a refrigerant**
- **Designed to operate at elevated temperatures and pressure**
- **All models incorporate a dewpoint indicator**

Product Selection & Technical Data

Technical Data

Maximum ambient temperature	50°C
Maximum inlet tempterature	65°C
Minimum ambient temperature	5°C
Maximum pressure	16 bar g
Electrical supply	230V 1ph 50hz
Refrigerant:	R134a

* Flow capacities in accordance with ISO8573, air suction of FAD 20°C, 1 bar (14.5psi) at the following operating conditions:

Ambient temperature:	25°C
Inlet temperature:	35°C Relative humidity 60%
Working pressure:	7bar g (102psi g),
Dewpoint:	3°C

Model	Pipe Size	Nominal Flow 3°C Dewpoint			Nominal Flow 10°C Dewpoint			Nominal Absorbed Power		Recommended Filtration	
		m³/min	m³/hr	cfm	m³/min	m³/hr	cfm	kW	hp	General Purpose Pre-Filter	High Efficiency Outlet Filter
CRDC12	½" BSP	0.2	12	7	0.3	18	11	0.12	0.16	A0010CBFX	AA010CBFX
CRDC24	½" BSP	0.4	24	14	0.6	36	21	0.13	0.17	A0010CBFX	AA010CBFX
CRDC36	½" BSP	0.6	36	21	0.9	54	32	0.17	0.23	A0010CBFX	AA010CBFX
CRDC54	½" BSP	0.9	54	32	1.3	78	46	0.25	0.33	A0015CBFX	AA015CBFX
CRDC72	½" BSP	1.2	72	43	1.7	102	60	0.25	0.33	A0015CBFX	AA015CBFX
CRDC108	¾" BSP	1.8	108	64	2.6	156	92	0.49	0.65	A0020DBFX	AA020DBFX
CRDC144	¾" BSP	2.4	144	85	3.5	210	124	0.57	0.76	A0025DBFX	AA025DBFX
CRDC182	¾" BSP	3	180	106	4.4	264	155	0.78	1.04	A0025DBFX	AA025DBFX

Weights and Dimensions

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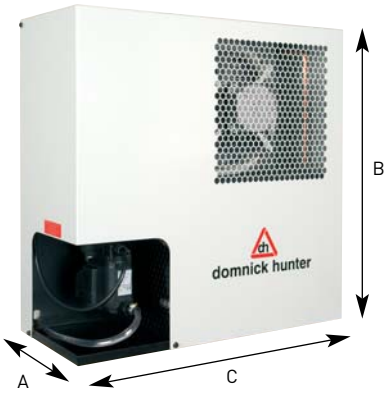
Model	Dimension (mm)			Weight
	A	B	C	Kg
CRDC12	210	430	450	19
CRDC24	210	430	450	19
CRDC36	210	430	450	19
CRDC54	210	505	500	23.5
CRDC72	210	505	500	23.5
CRDC108	225	565	520	26.5
CRDC144	225	565	520	31
CRDC182	225	565	520	35



Oil-X Evolution Compressed Air Filters

Model	Dimension (mm)			Weight
	A	B	C	Kg
A0/AA010CBFX	76	181	153	0.4
A0/AA015CBFX	97	235	201	1
A0/AA020DBFX	97	235	201	1
A0/AA025DBFX	129	275	232	2.2

Air Flow Correction Factors

Capacity correction factors to be used when operating conditions differ from those shown above.
To obtain dryer capacity at new conditions multiply nominal capacity* x C1 x C2 x C3 x C4

Ambient Temperature (C1)

°C	20	25	30	35	40	45	50
°F	68	77	86	95	104	113	122
Correction Factor	1.05	1.00	0.94	0.88	0.81	0.75	0.68

Inlet Temperature (C2)

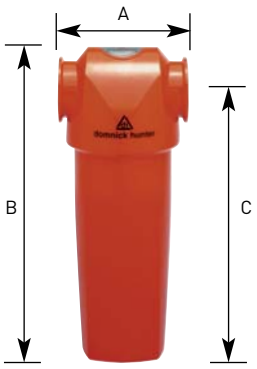
°C	30	35	40	45	50	55	60	65
°F	86	95	104	113	122	131	140	149
Correction Factor	1.22	1.00	0.83	0.69	0.58	0.49	0.46	0.43

Inlet Temperature (C3)

°C	3	4	5	6	7	8	9	10	11	12	13	14	15	16
°F	44	58	73	87	100	116	131	145	160	174	189	203	218	232
Correction Factor	0.73	0.83	0.90	0.95	1.00	1.03	1.07	1.09	1.12	1.13	1.15	1.17	1.18	1.19

Dewpoint (C4)

°C	3	5	7	10
°F	38	41	45	50
Correction Factor	1.00	1.12	1.24	1.46



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