

CRD Dryer

Refrigeration dryers

High Efficiency & Energy Saving



CRD refrigeration dryers have been designed for the efficient removal of water from compressed air.

Equipped with the patented SmartSave energy-saving feature CRD Dryers continually and precisely modulate their mode of operation to meet prevailing operating conditions, resulting in accurate dew-point monitoring with corresponding aligned power consumption.

Furthermore, indirect cost savings, reducing the “hidden costs” of pressure drop are maximised by the use of a patented “all-in-one” aluminium heat-exchanger-SmartPack. Here the provision of large open channels and no-interconnecting pipe-work enables the free, un-interrupted passage of air through the dryer, resulting in pressure drops second to none.



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Product Features:

- Suitable for all compressed air applications
- Suitable for all compressor types, including variable flow
- The most energy efficient compressed air fridge dryer
- Low pressure drops for lower operational costs
- Cost of ownership reduced
- Significantly contributes to the indirect reduction of CO₂ into the environment

Philosophy:

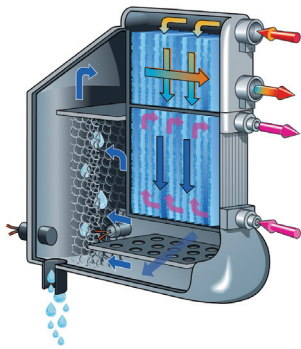
Parker domnick hunter has been supplying industry with high efficiency filtration and purification products since 1963. Our philosophy ‘Designed for Air Quality & Energy Efficiency’ ensures products that not only provide the user with clean, high quality compressed air, but also with low lifetime costs and reduced CO₂ emissions.



ENGINEERING YOUR SUCCESS.

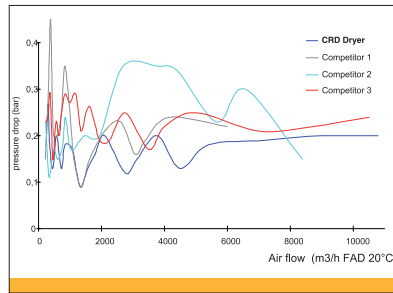
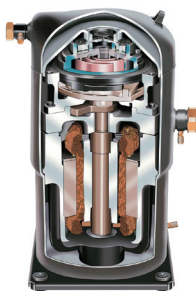
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The **SmartPack** exchanger (patent-pending) is an extremely robust, all-in-one aluminium module with no connecting pipe-work. It offers one of the lowest pressure drop performances in it's class and in terms of energy saving acts as an internal "thermal-mass cold-store," utilising un-used refrigeration energy during periods of variable load.



The CRD Dryer features exclusively **compliant scroll compressors** (from CRD0720 upwards), offering energy savings of up to 20% compared to other systems.

Resistant to liquid refrigerant returns and with 50% less moving parts than similar technologies, these compressors are extremely reliable and very robust. Low vibration levels also serve to prolong the refrigeration circuit life.



Maximum dew point performance is assured by:

- large air channels leading to low air flow velocity
- an oversized demister separator offering optimum condensate separation even at partial air flows



An additional standard feature on models from CRD0720 upwards is **SmartControl**.

This multi-functional display provides accurate digital dewpoint reading and visual indication of the coded alarm monitoring of the dryer.

SmartControl additionally manages the **SmartSave** feature (patent pending), informing the user when the dryer is operating in energy saving mode. A display indicates the average percentage savings on energy being achieved. Maintenance intervals are periodically displayed whilst the provision of a status report (indicating the last eight events) and hours-run meter simplify service.

Standard voltage-free contacts, MODBUS compatible supervisor (no gateway required) and an optional RS485 serial card connection allow remote monitoring of the dryer.

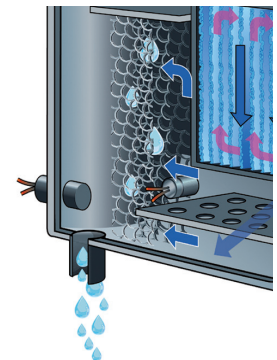
Low Pressure Drops

Every 140mbar of pressure drop adds approx. 1% to the cost of electrical power required by the compressor

- a dew point sensor positioned in the air flow to ensure optimum control.
- Thermal Shield Insulation (TSI) - contributing to very low overall power consumption.

An integral zero-air loss drain **SmartDrainer** is fitted as standard to CRD0720 and upwards.

A large capacity condensate drainage chamber is an integral part of the heat exchanger. The zero-air-loss drain is synchronised to open automatically on sensing the level of condensate present in the drainage chamber. This valve closes again before any compressed air can escape. In the unlikely event of a fault during drain operation, self-diagnostic troubleshooting software signals an alarm and the drain continues to function thereafter in timed mode, returning to zero-air-loss operation when the fault has been rectified.



Technical data

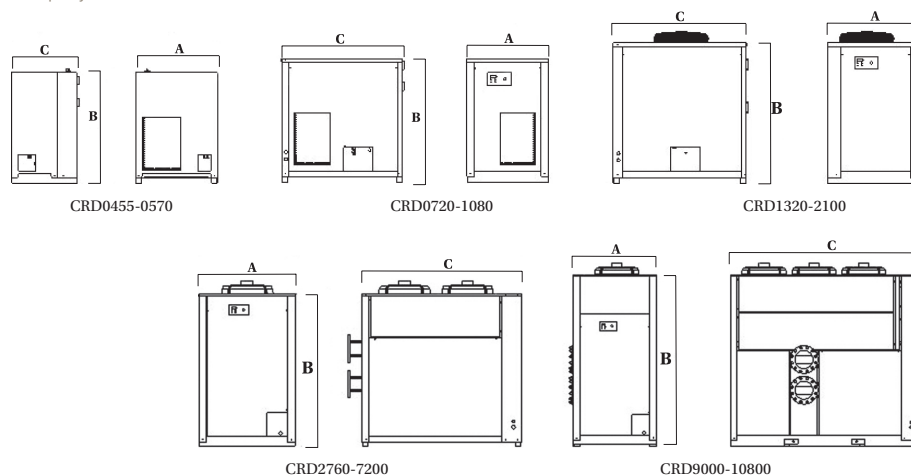
Model	technical data				dimensions (mm)			weight (kg)	Pre filter	Post filter
	air flow		abs. power	air	width	height	depth			
	m ³ /h	m ³ /min	kW	conec.	A	B	C			
CRD0455	450	7,5	0,9	1 1/2"	703	945	562	83	AO035GBFX	AA035GBFX
CRD0570	570	9,5	1,38	1 1/2"	703	945	562	83	AO035GBFX	AA035GBFX
CRD0720	720	12	1,13	2"	706	1.064	1.046	145	AO040HBFX	AA040HBFX
CRD0840	840	14	1,14	2"	706	1.064	1.046	145	AO045HBFX	AA045HBFX
CRD1080	1.080	18	1,46	2"	706	1.064	1.046	155	AO045HBFX	AA045HBFX
CRD1320	1.320	22	1,68	2 1/2"	806	1.316	1.166	230	AO050IBFX	AA050IBFX
CRD1560	1.560	26	2,19	2 1/2"	806	1.316	1.166	240	AO050IBFX	AA050IBFX
CRD1810	1.800	30	2,41	2 1/2"	806	1.316	1.166	245	AO055IBFX	AA055IBFX
CRD2100	2.100	35	3,06	2 1/2"	806	1.316	1.166	250	AO055IBFX	AA055IBFX
CRD2760	2.760	46	3,14	DN100	1.007	1.690	1.097	470	AO250ODFX	AA250ODFX
CRD3120	3.120	52	3,54	DN100	1.007	1.723	1.097	490	AO250ODFX	AA250ODFX
CRD3780	3.780	63	4,64	DN100	1.007	1.722	1.657	580	AO300ODFX	AA300ODFX
CRD4500	4.500	75	5,73	DN150	1.007	1.722	1.657	670	AO350PDFX	AA350PDFX
CRD5420	5.400	90	7,63	DN150	1.007	1.722	1.657	690	AO350PDFX	AA350PDFX
CRD7200	7.200	120	8,92	DN150	1.007	2.048	1.657	830	AO350PDFX	AA350PDFX
CRD9000	9.000	150	12,35	DN200	1.007	2.208	2.257	1.100	AO400QDFX	AA400QDFX
CRD10800	10.800	180	15,96	DN200	1.007	2.208	2.257	1.190	AO400QDFX	AA400QDFX

Performances refer to air-cooled models with air suction of FAD 20°C/1 bar A, and the following operating conditions: air suction 25°C/60% RH, 7 barg working pressure, pressure dew point in accordance with class 5 of DIN ISO 8573-1, 25°C cooling air temperature, 35°C compressed air inlet temperature. All indicated data refers to DIN ISO 7183. All models supplied with refrigerant R407C and for operation up to 14 barg. 50Hz models CRD0455-0570 supplied with 230V/1ph/50Hz power supply, models CRD0720-10800 with 400V/3ph/50Hz. Water-cooled versions available from model 220. CRD0455-2100 models with BSPP-F connections. The 60Hz version of the CRD Dryer models are available from 7m³/min air flow.

Air flow correction factors for differing working conditions

A) Working pressure correction factors	barg	3	4	5	6	7	8	9	10	11	12	13	14
		0,74	0,83	0,9	0,96	1	1,04	1,07	1,08	1,11	1,12	1,14	1,15
B) Air inlet temperature correction factors	°C	30	35	40	45	50	55	60	65				
		1,23	1	0,84	0,7	0,59	0,5	0,45	0,4				
C) Ambient temperature correction factors	°C	20	25	30	35	40	45	50					
		1,06	1	0,95	0,9	0,83	0,77	0,72					

To obtain the actual air flow multiply the nominal air flow by the above correction factors (ie. Air flow x A x B x C). CRD Dryer can operate up to an ambient temperature of 50°C and inlet temperature of 65°C. The above correction factors are approximate: for a precise selection always refer to the software selection program or contact your Parker sales company.



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