CompAir

SUSTAINABLE MANUFACTURING

Refrigeration Dryer

Reduced Carbon footprint.

Low total cost of ownership.

Small footprint.

Assure iConn

Energy efficient compressed air treatment

CD-Series

Non-Cycling Refrigeration Dryers

Optimised energy efficiency
for a sustainable future.

First-class air treatment efficiency

For CompAir, quality and efficiency are just as important for compressed air treatment as they are for compressed air generation. Just like CompAir compressors, the CD-Series refrigerant dryers also provide a consistently high performance with optimum efficiency for many industrial compressed air applications. EU regulations are constantly pushing the boundaries for improved sustainability and a reduction in global CO_2 footprint. These new dryers from CompAir are a step ahead – supporting sustainability with low GWP refrigerants (R513A) for ISO Class 4 (+3°C PDP) markets.

Investment protection through compressed air quality

Modern production systems and processes demand high quality compressed air, which is defined in the 6 classes outlined in international standard ISO 8573-1:2010 as illustrated below. These are only achievable with filtration, water separation and drying. Users in the food and pharmaceutical industry must adhere to stringent compressed air quality guidelines, as well as local legislation. Other industries may also follow specific advice regarding, the quality compressed air they use to ensure the protection and efficiency of process equipment and finished product.

Compressed air quality classes according to ISO 8573-1:2010

ISO 8573-1: 2010 Class	Solid Particulate				Water		Oil
	Maximum number of particles per m³			Mass Concentration	Vapour Pressure Dewpoint	Liquid	Total Oil (aerosol liquid and vapour)
	0.1 - 0.5 µm	0.5 - 1 µm	1 - 5 µm	[mg/m³]	[°C]	[g/m³]	[mg/m³]
0	As specified by the equipment user or supplier and more stringent than Class 1						
1	≤ 20,000	≤ 400	≤ 10	–	≤ -70	–	0.01
2	≤ 400,000	≤ 6,000	≤ 100	–	≤ -40	–	0.1
3	–	≤ 90,000	≤ 1,000	–	≤ -20	–	1
4	–	–	≤ 10,000	–	≤ +3	–	5
5	–	–	≤ 100,000	–	≤ +7	–	–
6	–	–	–	≤ 5	≤ +10	–	–

> Using environmentally-friendly R513A refrigerants with the lowest Global Warming Potential contributes to reducing greenhouse gas emissions.

Impressive return on investment and operational reliability

The use of clean dry compressed air ensures high levels of reliability, guarantees that quality standards are met, and can reduce production costs. CompAir offer a range of solutions for drying utilising modern cooling technology.

Features & benefits:

- **High reliability –** plug-in solution works from zero to 100% load
- **Energy efficient –** 10% less energy consumption & 27% pressure drop reduction
- **High sustainability –** up to 32% reduction in CO_2 footprint
- **Smaller footprint –** 40% smaller than comparable machines
- **iConn remote monitoring enabled adding to reliability and total peace of mind**
  - No unplanned downtime
  - Optimised efficiency
  - Covered by Assure Warranty

Save energy with refrigerant dryers

Operators primarily focus on compressed air quality and purchase cost. Differences in the operating costs of refrigerant dryers are often less likely to be considered. The CompAir refrigerant dryers are characterised by their energy efficiency, which helps to reduce running costs, thanks to patented heat exchanger technology.

- High quality heat exchanger with low pressure loss
- Full feature, multi-function innovative control panel
- Anti freeze mode – shuts dryer off to avoid icing
- Low operating costs
- Alarm display with history of alarms
- Effective condensate separation
- Easy to install, operate and maintain
- Simplified access to unit for easy maintenance

Reliable, efficient & clean dry air

CompAir CD-series refrigerant dryers deliver a comprehensive, cost-effective solution to multiple applications across a wide range of sectors including automotive, manufacturing, petrochemical, oil and gas, dry cleaning and light processing to name a few.

Optimum efficiency by Design

Using refrigerated dryers from CompAir will provide clean, dry air which means less corrosion in the air distribution system, less damage to air-powered tools, and reduced potential for contamination in the production process. The design features of CompAir CD dryers not only ensure constant dew point at all load levels, but also deliver continuous dry air performance that meets the most challenging ISO 7183 industry standards.

Low cost of ownership

CompAir's refrigerated dryers provide the very best combination of high efficiency, low pressure drop and small footprint which reduces power consumption, reduces installation time and facilitates maintenance.

Options

- No loss drain
- Sea water cooled
- Different voltages
- ANSI/NPT air connections
- Remote control
- Different gas

Features are your benefits

Air Cooled Condensation (as standard)
Water and Sea Water versions are optional from CD100F.

Victaulic Connections (optional)
For quick and easy connection of pipework.

Reliable Design
Scroll compressors with corrosion resistant materials. They feature fewer moving parts, are fully-instrumented and monitored for reliability, and are protected by IP42 rated electrical enclosures.

Reduced Footprint
30% smaller than previous model.

> CompAir's refrigerated dryers provide the very best combination of high efficiency, low pressure drop and small footprint

Innovative Control Panel

With all the main functions you would expect to control and monitor the unit:

- Anti freeze mode – shuts dryer off to avoid icing
- Alarm display: Dew Point, high/low temperature, High ambient temperature
- Remote ON/OFF (optional)
- Alarm history
- Condensate drain management

New Heat Exchangers

Designed and developed in our laboratories to deliver the highest levels of performance with the lowest pressure drop. The adoption of the new CompAir heat exchanger has enabled the removal of the inlet and outlet headers.

Smart Drain (From CD216F)

With sensor installed directly in the moisture separator and control logic managed by the main Control Panel.

Specifically designed for challenging applications

The CD Refrigerated Dryer Range is one range for all applications. These units provide a small footprint with complete, affordable solutions for applications ranging from dry cleaning to automotive body shops, to light processing and manufacturing applications. The high capacity units are designed for large-scale industrial, automotive and petrochemical applications.

Outstanding efficiency thanks to custom designed heat exchangers and patented control board

The CD-series of refrigeration air dryers has been designed to maximise efficiency and reliability. All models are equipped with a high efficiency heat exchanger including an integrated condensate separator. The heat exchangers, completely designed and developed in our labs, are capable of achieving the highest levels of performance required from the market, together with a very low pressure drop rate.

Thanks to our patented solution, the programmable control board will adjust the fan speed according to the load in order to guarantee, under any working conditions, a constant and high level performance.

Every unit is equipped with a wide range of adjustable settings and alarm outputs such as high dew point temperature, anti freezing alarm, fault probe, and so on.

CD-series dryers are all equipped with a programmable electronic condensate discharger, suitable for working with high efficiency in all kind of conditions.

Reliable design

Model shown CD1460F

Scroll compressor

Models CD130 to CD3840F are fitted with a scroll refrigerant compressor. Scroll compressors with corrosion resistant materials deliver cost efficient, long-life performance. They feature fewer moving parts, are fully-instrumented and monitored for reliability, and are protected by IP42 rated electrical enclosures.

This makes them the optimum investment for high-volume needs with a lot at stake.

Every unit delivers advanced microprocessor control with multi-level menus, password protection and alarms.

Models shown CD9F, CD130F, CD3200F

No-loss drain

The powerful no loss electronic drain is standard and eliminates the need for pre-setting the unit. It uses state-of-the-art software combined with a special transducer interface to measure the presence of condensate so that it is released only when needed. Continuous monitoring ensures fast and effective discharge of the condensate with no deficit of compressed air.

Correction Factors

Correction Factors for working pressure														
bar	3	4	5	6	7	8	9	10	11	12	13	14	15	16
FC1	0.7	0.78	0.85	0.93	1	1.06	1.11	1.15	1.18	1.2	1.22	1.24	1.25	1.26

Correction Factors for inlet air temperature							
°C	30	35	40	45	50	55	60
FC2	1.2	1	0.85	0.71	0.58	0.49	0.42

Correction Factors for dew point temperature								
°C	3	4	5	6	7	8	9	10
FC3	1	1.04	1.09	1.14	1.18	1.25	1.3	1.33

Correction Factors for ambient temperature (for air cooled)							
°C	25	30	35	40	42	45	50*
FC4	1	0.96	0.92	0.88	0.85	0.8	0.7

*units up to, and including CD160F

Correction Factors for different water inlet temperature (for water cooled version)								
°C	15	20	25	29.4	30	35	38	40
FC4	1.08	1.06	1.03	1	0.99	0.95	0.91	0.88

Calculation for correct Dryer Air flow = Nominal Dryer Air Flow x FC1 x FC2 x FC3

CompAir Refrigeration Dryer - Technical Data

CompAir Dryers from 0.42 m³/min to 383.33 m³/min

Model	Air Flow-rate 3°C	Absorbed nominal power	Power Supply	Dew Point	Max Pressure	Air Connection	Refrigerant	Dimensions W x D x H	Weight
	m³/min	kW	V/Ph/Hz	ISO Class	bar g	BSP		[mm]	[kg]
CD4F	0.42	0.12	230/1/50	4	16	⅜"	R513A	305 x 360 x 408	19
CD7F	0.70	0.14	230/1/50	4	16	½"	R513A	390 x 432 x 441	26
CD9F	0.90	0.17	230/1/50	4	16	½"	R513A	390 x 432 x 441	28
CD12F	1.20	0.17	230/1/50	4	16	½"	R513A	390 x 432 x 441	28
CD18F	1.80	0.41	230/1/50	4	16	¾"	R513A	420 x 516 x 551	36
CD24F	2.40	0.5	230/1/50	4	16	¾"	R513A	420 x 516 x 551	42
CD30F	3.00	0.5	230/1/50	4	16	¾"	R513A	420 x 516 x 551	44
CD37F	3.75	0.7	230/1/50	4	16	1"	R513A	500 x 679 x 980	48
CD43F	4.33	0.81	230/1/50	4	16	1"	R513A	500 x 679 x 980	49
CD50F	5.00	0.61	230/1/50	4	16	1 - ½"	R513A	500 x 718 x 980	79
CD60F	6.00	0.74	230/1/50	4	16	1 - ½"	R513A	500 x 718 x 980	79
CD80F	8.00	0.81	230/1/50	4	16	1 - ½"	R513A	500 x 718 x 980	85
CD100F	10.00	1.26	230/1/50	4	16	2"	R513A	720 x 750 x 1360	134
CD130F	13.00	1.67	400/3/50	4	13	2"	R513A	720 x 750 x 1361	164
CD160F	15.83	2.03	400/3/50	4	13	2"	R513A	720 x 750 x 1362	168
CD216F	21.67	2.24	400/3/50	4	14	3"	R513A	806 x 1012 x 1539	234
CD250F	25.00	2.58	400/3/50	4	14	3"	R513A	806 x 1012 x 1539	234
CD300F	30.00	3.1	400/3/50	4	14	3"	R513A	806 x 1012 x 1539	234
CD375F	37.50	3.65	400/3/50	4	14	3"	R513A	806 x 1012 x 1539	290
CD430F	43.33	4.22	400/3/50	4	14	3"	R513A	806 x 1012 x 1539	290
CDA533F	53.33	6.38	400/3/50	4	14	DN150 PN16	R513A	880 x 1819 x 1796	417
CDA700F	70.00	5.96	400/3/50	4	14	DN150 PN16	R513A	880 x 1819 x 1796	465
CDA800F	80.00	6.81	400/3/50	4	14	DN150 PN16	R513A	880 x 1819 x 1796	465
CD900F	90.00	9.81	400/3/50	4	13	DN150 PN16	R513A	1510 x 1500 x 1555	780
CD1000F	100.00	10.9	400/3/50	4	13	DN150 PN16	R513A	1510 x 1500 x 1555	780
CD1460F	146.67	13.2	400/3/50	4	13	DN200 PN16	R513A	2270 x 1590 x 1570	1058
CD1600F	160.00	13.56	400/3/50	4	13	DN200 PN16	R513A	2270 x 1590 x 1570	1128
CD1920F	191.67	16.24	400/3/50	4	13	DN200 PN16	R513A	2270 x 1590 x 1570	1205
CD2920F	293.33	26.4	400/3/50	4	13	2 x DN200 PN16	R513A	4600 x 1590 x 1570	2116
CD3200F	320.00	27.12	400/3/50	4	13	2 x DN200 PN16	R513A	4600 x 1590 x 1570	2256
CD3840F	383.33	32.48	400/3/50	4	13	2 x DN200 PN16	R513A	4600 x 1590 x 1570	2410

Water cooled from 10.00 m³/min to 383.33 m³/min

Model	Air Flow-rate 3°C	Absorbed nominal power	Power Supply	Dew Point	Max Pressure	Air Connection	Refrigerant	Dimensions W x D x H	Weight
	m³/min	kW	V/Ph/Hz	ISO Class	bar g	BSP		[mm]	[kg]
CD100FW	10.00	0.96	230/1/50	4	16	2"	R513A	752 x 750 x 1273	143
CD130FW	13.00	1.55	400/3/50	4	13	2"	R513A	752 x 750 x 1273	168
CD160FW	15.83	1.89	400/3/50	4	13	2"	R513A	752 x 750 x 1273	168
CD216FW	21.67	2.04	400/3/50	4	14	3"	R513A	806 x 1012 x 1422	265
CD250FW	25.00	2.36	400/3/50	4	14	3"	R513A	806 x 1012 x 1422	265
CD300FW	30.00	2.83	400/3/50	4	14	3"	R513A	806 x 1012 x 1422	265
CD375FW	37.50	3.38	400/3/50	4	14	3"	R513A	806 x 1012 x 1422	375
CD430FW	43.33	3.90	400/3/50	4	14	3"	R513A	806 x 1012 x 1422	375
CDA533FW	53.33	5.7	400/3/50	4	14	DN150 PN16	R513A	880 x 1819 x 1796	460
CDA700FW	70.00	5.38	400/3/50	4	14	DN150 PN16	R513A	880 x 1819 x 1796	486
CDA800FW	80.00	6.15	400/3/50	4	14	DN150 PN16	R513A	880 x 1819 x 1796	486
CD900FW	90.00	8.98	400/3/50	4	13	DN150 PN16	R513A	1510 x 1500 x 1437	740
CD1000FW	100.00	9.973	400/3/50	4	13	DN150 PN16	R513A	1510 x 1500 x 1437	740
CD1460FW	146.67	12.14	400/3/50	4	13	DN200 PN16	R513A	2270 x 1590 x 1440	1010
CD1600FW	160.00	12.43	400/3/50	4	13	DN200 PN16	R513A	2270 x 1590 x 1440	1060
CD1920FW	191.67	14.9	400/3/50	4	13	DN200 PN16	R513A	2270 x 1590 x 1440	1117
CD2920FW	293.33	24.28	400/3/50	4	13	2 x DN200 PN16	R513A	4600 x 1590 x 1570	2020
CD3200FW	320.00	24.86	400/3/50	4	13	2 x DN200 PN16	R513A	4600 x 1590 x 1570	2120
CD3840FW	383.33	29.8	400/3/50	4	13	2 x DN200 PN16	R513A	4600 x 1590 x 1570	2234

CompAir

Innovation & Engineering Excellence

A leading global manufacturer of a wide range of world-class compressed air solutions, CompAir is dedicated to providing a complete solution for our industry partners. From the latest advances in oil-free and oil-lubricated technologies to a complete range of downstream equipment, air treatment and accessories.

An extensive network of dedicated CompAir sales companies and premium partners across all continents provide global expertise with a truly local service, ensuring our advanced technology is backed up with the right support.

CompAir has consistently been at the forefront of compressed air systems development, culminating in some of the most energy efficient and low environmental impact compressors on the market today, helping customers achieve or surpass their sustainability targets.

CompAir compressed air product range

Advanced Compressor Technology

Lubricated

- Rotary Screw
  - > Fixed and Regulated Speed
- Portable
- Vane

Oil-Free

- Water Injected Screw
  - > Fixed and Regulated Speed
- Two Stage Screw
  - > Fixed and Regulated Speed
- Rotary Scroll
- Ultima®

Complete Air Treatment Range

- Filter
- Refrigerant and Desiccant Dryer
- Condensate Management
- Heat of Compression Dryer
- Nitrogen Generator

Modern Control Systems

- CompAir DELCOS Controllers
- SmartAir Master Plus Sequencer
- iConn - Smart Compressor Service

Value Added Services

- Professional Air Audit
- Performance Reporting
- Leak Detection

Leading Customer Support

- Custom Engineered Solutions
- Local Service Centres
- Genuine CompAir Parts and Lubricants

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