

Atlas Copco

Desiccant Air Dryers for Simple Reliability
CD series (120-1600 l/s, 763-3392 cfm)



Sustainable Productivity



How does a desiccant dryer work?

Wet air passes directly through the desiccant medium which adsorbs the moisture. The desiccant medium has a finite capacity for adsorbing moisture before it must be dried out, or regenerated. To do this, the tower containing saturated desiccant medium is depressurized and the accumulated water is driven off. How this happens depends on the type of desiccant dryer. Heatless dryers use only compressed air as a purge.

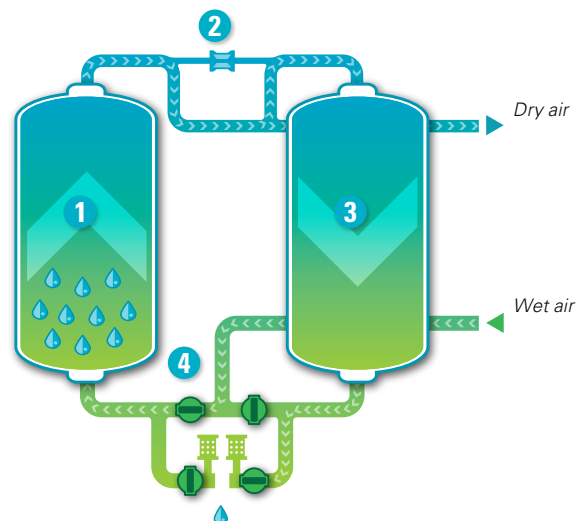
The drying process

Wet compressed air flows upward through the desiccant which adsorbs the moisture, from bottom to top (1).

The regeneration process

Heatless desiccant dryers:

- ▶ Dry air from the outlet of the drying tower is expanded to atmospheric pressure (2) and sent through the saturated desiccant, forcing the adsorbed moisture out (3).
- ▶ After desorption, the blow-off valve is closed and the vessel is re-pressurized (4).



Switching

- ▶ After regeneration, the functions of both towers are switched (4).



High reliability

Compressed air entering the air net is always 100% saturated. When it cools, the moisture will condense, causing damage to your air system and finished products. Removing moisture from compressed air with a pressure dewpoint as low as $-40^{\circ}\text{C}/-40^{\circ}\text{F}$, Atlas Copco desiccant dryers eliminate system failures, production downtime and costly repairs.

Competitive performance

A dewpoint down to $-40^{\circ}\text{C}/-40^{\circ}\text{F}$ together with simple and easy controls guarantee the dryer operates in the best way possible.

Good efficiency

Properly sized pipes and valves ensure a limited pressure drop. Several options are available to increase the efficiency and to reduce the energy consumption.

Limited maintenance

Atlas Copco dryers have a small footprint thanks to the all-in-one design and a convenient list of available options. Delivered ready for use, installation is straightforward, minimizing costly production downtime. All internal components are easily accessible to facilitate maintenance. The use of high-grade desiccant and high-quality valves results in three-year maintenance intervals.

Assuring your peace of mind

Through continuous investment in our competent, committed and efficient service organization, Atlas Copco ensures superior customer value by maximizing productivity. With a presence in over 160 countries, we offer professional and timely service through interaction and involvement. Uptime is guaranteed by dedicated technicians and 24/7 availability.

CD: Simple reliability



1 High-quality desiccant

- Reliable high adsorption capacity desiccant for maximum performance.
- Pressure dewpoint of $-40^{\circ}\text{F}/-40^{\circ}\text{C}$.



2 Butterfly valves

- High-performance butterfly valves with actuators ensure long lifetime.

3 Modular piping with flanged connections

- Flanged piping simplifies maintenance and minimizes the chance of leakages.
- Properly sized piping.

4 Filters*

- Pre-filter(s) protect desiccant against oil contamination, increasing the lifetime of the desiccant.
- After-filter protects the network against desiccant dust, avoiding network contamination.
- Can be mounted directly on the inlet and outlet of the dryer, for low pressure drop.
- Allow for easy assembly and maintenance as no extra piping or filter connections are required.

5 Cubicle

- Nema 4 protected.
- Electronic control board.
- Timer-based operation.
- Optional capacity based operation (PDP Control).
- Load/unload freeze contact.

6 Robust and compact design

- Standard frame, including forklift slots and lifting eyes for easy handling.
- Vessel connecting flanges are integrated into the top and bottom shells, lowering the total unit height.

7 Check valve

- Nickel-plated.
- Wafer type.
- Integrated purge nozzle.

* Filters are standard on CD 160-300 (shipped loose) and optional on CD 400-1600

Advanced control and monitoring

Atlas Copco's optional Elektronikon® control and monitoring system takes continuous care of your CD desiccant dryer to ensure optimal productivity and efficiency at your site. Available on CD 400-1600 .

User-friendly interface

Available in 32 languages, this graphical 3.5-inch high-definition color display with pictograms and LED indicators for key events is easy to use. The keyboard is durable to resist tough treatment in demanding environments.



Comprehensive maintenance display

Valuable items of information displayed include the ServicePlan indicator and preventive maintenance warnings.

Control and monitoring



Internet-based visualization

The Elektronikon® system monitors and displays key parameters such as dewpoint, vessel pressure and inlet temperature, and includes an energy-savings indicator. Internet-based visualization of your dryer is possible by using a simple Ethernet connection.

AIRConnect™

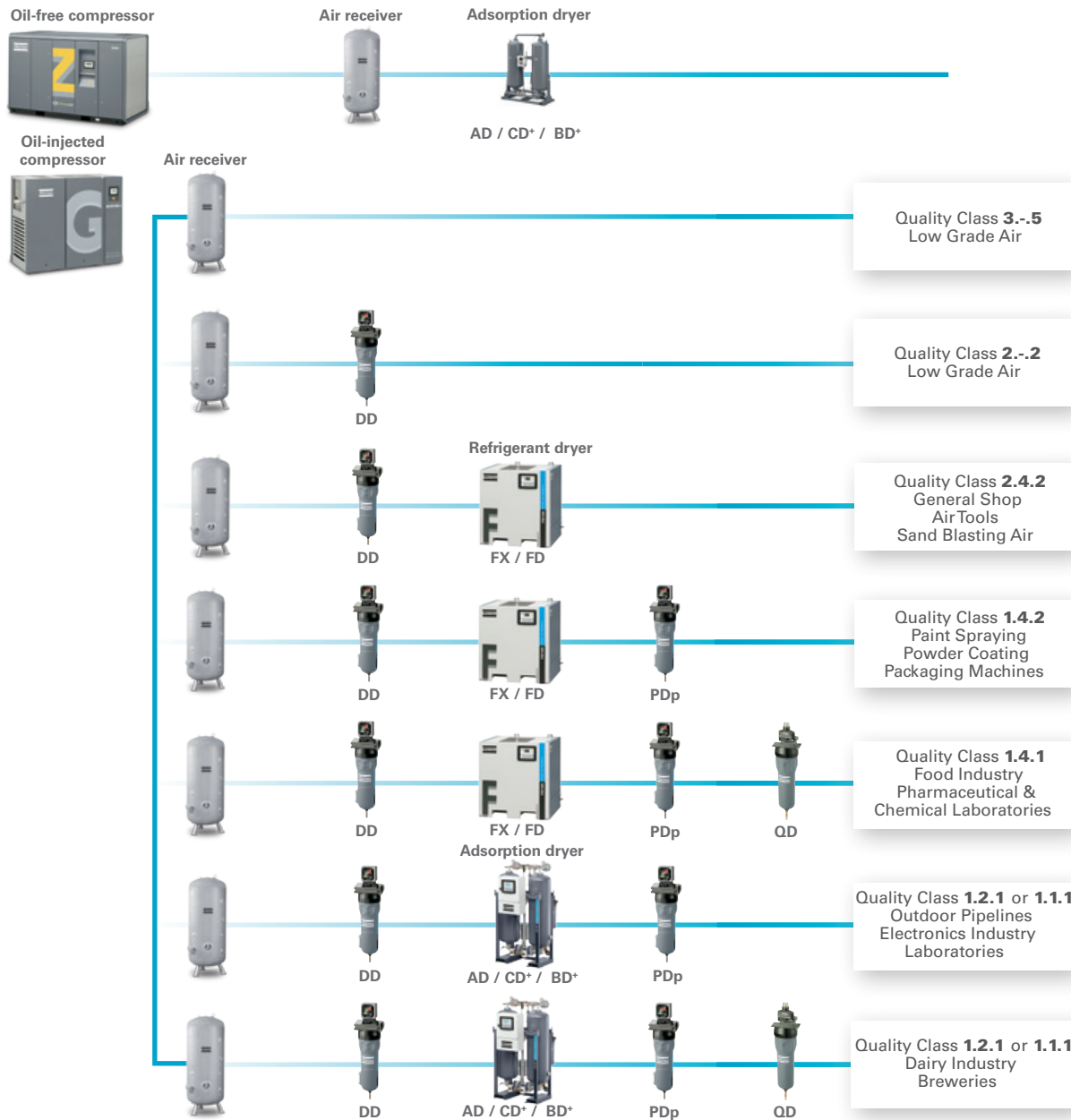
AIRConnect™ is an optional advanced remote monitoring package that offers complete analysis and accurate management. It is fully customizable to meet specific customer needs, from simple alarm notification via email or SMS to visualization via fieldbus, LAN or internet, including advanced reporting services. Available on CD 400-1600.



Atlas Copco quality air configurator

Compressed Air Purity ISO 8573-1: 2010. The international standard for compressed air purity provides a system of classification for the three main contaminants present in the compressed air systems: dirt, water and oil. As member of the ISO committee, Atlas Copco designs filtration solutions to provide compressed air purity that meets or exceeds the levels shown in the standard above.

ISO 8573-1:2010	Dirt			Mass concentration mg/m ³	Water		Oil Total oil (aerosol liquid and vapor) mg/m ³
	Maximum number of particles per m ³				Vapor pressure dewpoint	Liquid g/m ³	
	0.1 - 0.5 micron	0.5 - 1 micron	1 - 5 micron				
0	As specified by the equipment user or supplier and more stringent than Class 1						
1	≤ 20000	≤ 400	≤ 10	-	≤ -70°C/-94°F	-	0.01
2	≤ 400000	≤ 6000	≤ 100	-	≤ -40°C/-40°F	-	0.1
3	-	≤ 90000	≤ 1000	-	≤ -20°C/-4°F	-	1
4	-	-	≤ 10000	-	≤ +3°C/+37.4°F	-	5
5	-	-	≤ 100000	-	≤ +7°C/+44.6°F	-	-
6	-	-	-	≤ 5	≤ +10°C/+50°F	-	-
7	-	-	-	5 - 10	-	≤ 0.5	-
8	-	-	-	-	-	0.5 - 5	-
9	-	-	-	-	-	5 - 10	-
X	-	-	-	> 10	-	> 10	> 10



Optimize your system

Scope of supply

Air circuit

- Modular in- and outlet piping
- In- and outlet air flanges
- Insulated heater pipe and connection pipe to vessels (only on BD)

Connections

- ANSI flanges

Electrical components

- Pre-mounted electrical cubicle
- Electronic timer card
- Elektronikon® control and monitoring system on BD (optional)
- Voltage free contacts for remote alarm and warning signals (only on models with Elektronikon)

Framework

- Base frame with forklift slots
- Lifting holes

Mechanical approval

- ASME approval
- CRN approval

Additional features & options

Options	CD 120-300	CD 400-1600
Maximum working pressure 14,5 bar(e)/210 psig	•	-
PDP control	•	•
Pre- and after-filter package for GA oil-injected compressor	■	•
Pre- and after-filter package for Z oil-free compressor	-	•
Pressure relief valves	■	■
Sonic nozzle	•	•
High inlet temperature variant	•	•
Pneumatic control	•	•

■ Standard • Optional - Not available

Technical specifications

Heatless desiccant dryers

DRYER TYPE	Inlet flow FAD 7 bar(e)/100 psig			Pressure drop (excluding filters)		Inlet/outlet connections 50 Hz: G/PN16 60 Hz: NPT/DN	Filter sizes (recommended)			Dimensions						Weight	
	l/s	m³/hr	cfm	bar	psi		Pre-filters		After-filter	mm			in			kg	lbs
							1 µm 0.1 ppm	0.01 µm 0.01 ppm	1 µm	L	W	H	L	W	H		
CD 120	120	432	254	0.19	3	1½"	DD120	PD120	PDp120	728	950	1695	29	37	67	340	750
CD 180	180	648	381	0.19	3	1½"	DD150	PD150	PDp150	848	1089	1731	33	43	68	415	915
CD 220	220	792	466	0.19	3	1½"	DD175	PD175	PDp175	848	1089	1731	33	43	68	445	981
CD 300	300	1080	635	0.19	3	2	DD280	PD280	PDp280	960	1106	1816	38	43	72	600	1322
CD 400	400	1440	848	0.19	3	3	DD390	PD390	PDp390	1041	1930	3616	41	76	103	950	2094
CD 480	480	1728	1017	0.19	3	3	DD520	PD520	PDp520	1041	1930	2616	41	76	103	1030	2270
CD 575	575	2070	1218	0.19	3	3	DD520	PD520	PDp520	1041	2082	2413	41	82	95	1310	2888
CD 800	800	2880	1695	0.19	3	4	DD780	PD780	PDp780	1219	2463	2514	48	97	99	1940	4276
CD 950	950	3420	2013	0.19	3	4	DD1050	PD1050	PDp1050	1219	2463	2514	48	97	99	2120	4673
CD 1200	1200	4320	2543	0.19	3	4	DD1050	PD150	PDp1050	1219	2463	2514	48	97	99	2600	5732
CD 1450	1250	4500	3073	0.19	3	6	DD1400	PD1400	PDp1400	1625	2641	3352	64	104	132	3445	7594
CD 1600	1600	5760	3390	0.19	3	6	DD1400	PD1400	PDp1400	1625	2641	3352	64	104	132	3700	8157

Reference conditions:

Compressed air inlet temperature: 35°C/100°F

Inlet relative humidity: 100%

Dryer inlet pressure for 11 bar variants, after inlet filtration



Driven by innovation

With more than 135 years of innovation and experience, Atlas Copco delivers the products and services to help maximize your company's efficiency and productivity. As a global industry leader, we are dedicated to offering high air quality at the lowest possible cost of ownership. Through continuous advancements, we strive to safeguard your bottom line and bring you peace of mind.



Local interaction

Atlas Copco Compressors LLC is headquartered in Rock Hill, SC. Our 187,000 sq. ft. manufacturing plant is one of several Atlas Copco production units across the U.S., including a custom design facility in Houston, TX. We take the best possible care of our customers through four regional customer centers and appointed authorized distributors, supported by a 131,000 sq. ft. distribution center and a network of field based personnel throughout the country. Across all of our different business types and brands, Atlas Copco employs approximately 3,300 people in the U.S.



Committed to sustainability

In 2010, Atlas Copco was named one of the Top 100 Sustainable Companies in the World for the fifth consecutive year. Through our Water for All organization, Atlas Copco is committed to supporting projects that supply clean water to those who need it most. Visit www.water4all.org for more information. All Atlas Copco Compressors facilities in the United States are triple certified to ISO 14001, ISO 9001 and OHSAS 18001; a set of standards to protect the environment, ensure product quality, and promote our employees' health and occupational safety.

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