



## REFRIGERATION AIR DRYERS CDX from 4 to 840

TECHNOLOGY YOU CAN TRUST

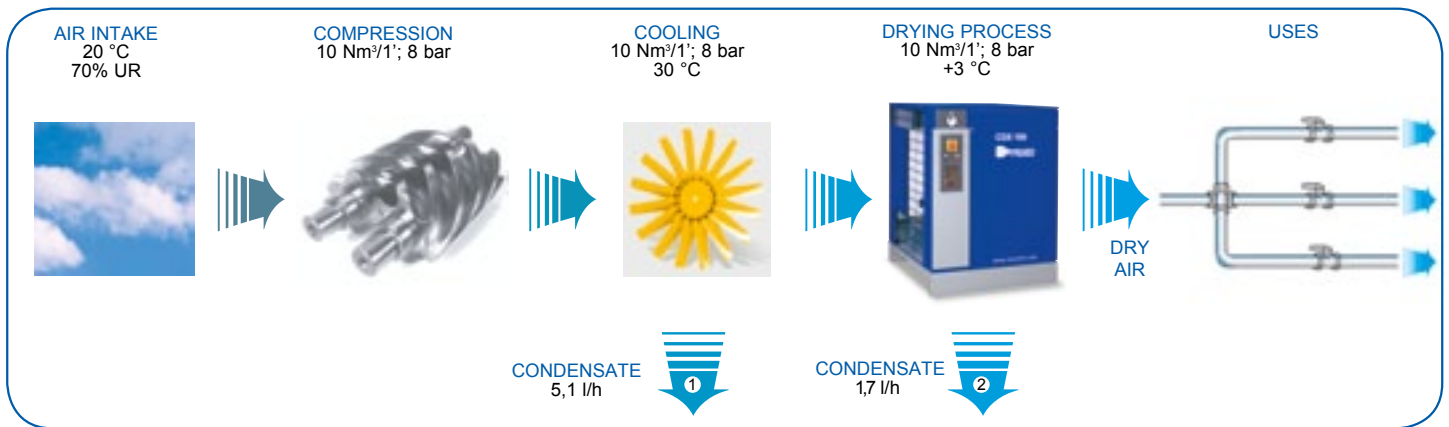
# Using a dryer is worth it

Humidity is a component of atmospheric air, which can be found in our compressed air distribution systems and the machines that use the compressed air in the form of condensate and/or vapour.

If the condensate can be easily separated and discharged, humidity, in the form of vapour, will follow the compressed air flow all the way to the final product.

When it then cools, a part of this humidity present in the compressed air condenses and over time causes serious damage to the distribution network, the machines using the compressed air and the final product.

For example, 5.1 l/h of condensate is separated from a compressor with an output capacity of 10 Nm<sup>3</sup>/min and an ambient intake air temperature of 20°C and 70% relative humidity, whilst operating at a delivery pressure of 8 bar(g) and cooling the air to 30°C. 1



If the compressed air is then dried even more to a dewpoint of +3°C, a further 1.7 l/h of condensate can be separated. 2

## The distribution unit costs less

and can be installed without slopes to drain points, without separators and without condensate drains, but with simple "T" slopes coming directly from the distribution ring.

## Lower maintenance costs:

- for the distribution network, as there is no need to clean line separators or check the operation of the drains, which at times may even be spread over very wide areas.
- for machine applications and pneumatic tools, as the absence of condensate eliminates the main cause of breakdowns.

## Energy savings

due to fewer line pressure drops.

## Longer life

for pneumatic equipment, as the use of dry air guarantees reliable performance over time.

## Greater productivity

because of fewer untimely breakdowns due to machine faults.

## Higher final product quality

both for applications where compressed air comes directly into contact with the product and where the air acts purely to assist movement of the machine's servomechanisms.

## It increases profits and improves the company's image.

That's why maintenance managers, production managers, and air compressor specialists make sure their systems have a DRYER.

# CDX dryers • Layout

**① REFRIGERANT COMPRESSOR**

driven by an electric motor, cooled using refrigerant fluid and protected against thermal overload.

**② REFRIGERANT CONDENSER**

air-cooled and with a large exchange surface for high thermal exchange.

**③ IP54 MOTOR-DRIVEN VENTILATOR**

for the condenser cooling air flow.

**④ AIR/REFRIGERANT EVAPORATOR**

with high thermal exchange and low leakage rates.

**⑤ CONDENSATE SEPARATOR**

High-efficiency.

**⑥ AIR-AIR EXCHANGER**

with high thermal exchange and low load losses.

**⑦ REFRIGERANT FLUID SEPARATOR**

high-efficiency refrigerant fluid.

**⑫ HOT GAS BYPASS VALVE**

controls the refrigerant capacity under all load conditions preventing any formation of ice within the system.

**⑰ COLLECTOR FILTER**

for collecting any impurities to protect the condensate discharge system.

**⑬ FILTER REFRIGERANT.**



CDX 77



CDX 500

**⑬ ⑰ INSTRUMENT PANEL** for control, consisting of: dewpoint level indicator, ON/OFF switch, voltage indicator and fault alarm.

**⑱ AUTOMATIC DISCHARGE OF CONDENSATE**, which is ecological and capable of preventing unwanted discharge of compressed air.

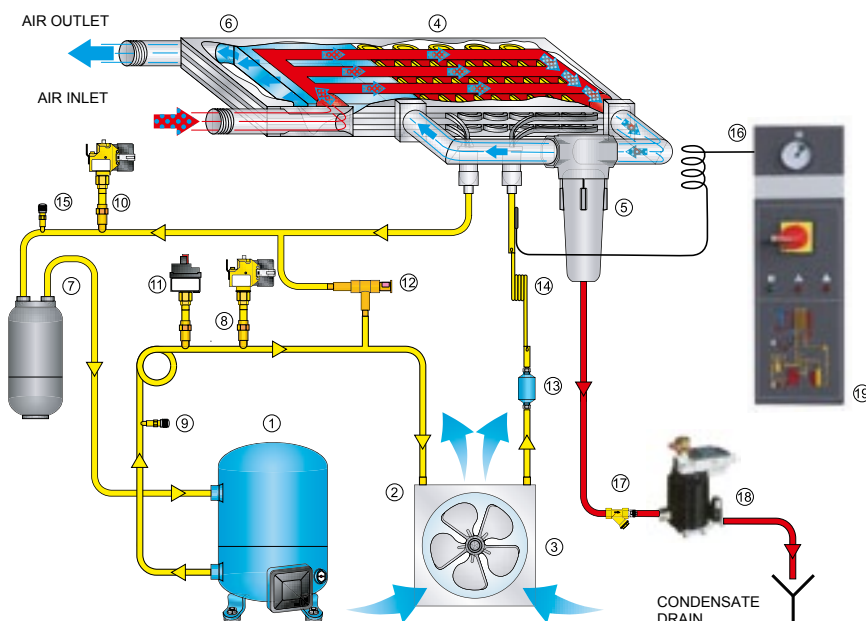


DIAGRAM CDX 500

- ① Refrigerant fluid compressor
- ② Condenser
- ③ Motor-driven ventilator
- ④ Air/Refrigerant Evaporator
- ⑤ Condensate separator with a demister filter
- ⑥ Air/air heat exchanger
- ⑦ Refrigerant fluid separator
- ⑧ Maximum pressure switch
- ⑨ Service valve
- ⑩ Minimum pressure switch
- ⑪ Pressure switch, fan control
- ⑫ Hot gas bypass valve
- ⑬ Refrigerant fluid filter
- ⑭ Capillary Tube
- ⑮ Service valve
- ⑯ Dewpoint thermometer
- ⑰ Impurity collector
- ⑱ Automatic discharge of condensate
- ⑲ Instrument panel

# Quality • Installation • Maintenance

Ceccato Aria Compressa S.p.A. is one of the world's leading manufacturers of dryers and is the only air compressor manufacturer that designs and manufactures all the dryers they use for their range of compressors in their own factories.

## Quality

High reliability attained through the development of the dryers in the CDX range.

First-class components that have been tested under the worst possible operating conditions.

Constant dewpoint under any load condition.

Automatic operation.



## Installation

Its unique light and compact design makes it easy to transport by whatever means you choose to use. Installation of the CDX dryer is simple and does not require any special equipment nor any special foundation work, whether it is a new system or an update to an existing system.

All that's necessary is a pneumatic and an electrical connection and the dryer is ready to use.

Installation is only complete once filters have also been fitted.



## Maintenance

Years of experience, the quality of the components we use, the generous size of the unit, its simple design and effective control system all contribute towards making these units safe and reliable over time.

All the dryers in the CDX range have been designed and built with particular attention given to its operation and performance using first-class components that have been tested in the field for many years.

The refrigerant dryer offered by Ceccato Aria Compressa S.p.A. is a unit that:

- requires low maintenance and long intervals between overhauls;
- has few components subject to stress.

# Savings • Environment



## Savings

High energy savings due to low pressure drops throughout the system.

No wastage of compressed air because of the intelligent automatic discharge of condensate.

A cleaner compressed air distribution network without leakage.

Greater reliability and longer life of applications.

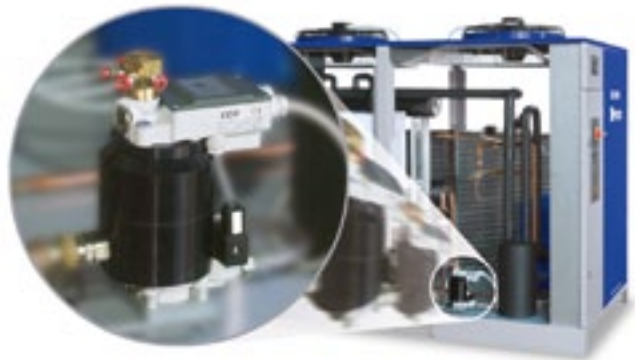
Less maintenance and easier maintenance both due to the reliability of the components and the easy access to any internal component.

Safe and reliable operation.

## Intelligent automatic discharger of condensate

### Advantages

- Discharges only water, NOT compressed air  
= **Energy savings**
- Noise-free, no acoustic impact  
= **Environmental protection**



## Additional environmental friendliness thanks to the right ecological gas

Complies with current EC regulations

Thermal insulation to guarantee high efficiency

One step ahead with **R410A** :






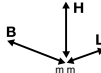

- 25% Energy Saving by use of rotary refrigerant compressor technology
- extreme low Global Warning Potential (GWP)



That's why maintenance managers, production managers, and air compressor specialists make sure their systems have a DRYER made by Ceccato Aria Compressa S.p.A.



**TECHNICAL DATA** (according to ISO 7183 and Cagi Pneurop PN8NTC2)

Type													refrigerant
	bar	psi	l/1'	m³/h	cfm	W	V/Hz/Ph	gas/DN	L	W	H	Kg	gas
<b>CDX 4</b>	16	232	350	21	12,4	130	230/50/1	3/4" M	350	500	450	19	R134a
<b>CDX 6</b>	16	232	600	36	21,2	164	230/50/1	3/4" M	350	500	450	19	R134a
<b>CDX 9</b>	16	232	850	51	30,0	190	230/50/1	3/4" M	350	500	450	20	R134a
<b>CDX 12</b>	16	232	1.200	72	42,4	266	230/50/1	3/4" M	350	500	450	25	R134a
<b>CDX 18</b>	16	232	1.825	110	64,4	284	230/50/1	3/4" M	350	500	450	27	R134a
<b>CDX 24</b>	13	188	2.350	141	83,0	609	230/50/1	1" F	370	500	764	44	R404A
<b>CDX 30</b>	13	188	3.000	180	106	673	230/50/1	1" F	370	500	764	44	R404A
<b>CDX 36</b>	13	188	3.600	216	127	793	230/50/1	1 1/2" F	460	560	789	53	R404A
<b>CDX 41</b>	13	188	4.100	246	145	870	230/50/1	1 1/2" F	460	560	789	60	R404A
<b>CDX 52</b>	13	188	5.200	312	184	1.072	230/50/1	1 1/2" F	460	560	789	65	R404A
<b>CDX 65</b>	13	188	6.500	390	230	1.190	230/50/1	1 1/2" F	580	590	899	80	R404A
<b>CDX 77</b>	13	188	7.700	462	272	1.446	230/50/1	1 1/2" F	580	590	899	80	R404A
<b>CDX 100</b>	13	188	10.000	600	353	1.319	400/50/3	2" F	735	898	962	128	R410A
<b>CDX 120</b>	13	188	12.000	720	424	1.631	400/50/3	2" F	735	898	962	146	R410A
<b>CDX 150</b>	13	188	15.000	900	530	1.889	400/50/3	2" F	735	898	962	158	R410A
<b>CDX 180</b>	13	188	18.000	1.080	636	2.110	400/50/3	2" F	735	898	962	165	R410A
<b>CDX 240</b>	13	188	24.000	1.440	848	3.900	400/50/3	3" F	1.020	1.082	1.535	325	R404A
<b>CDX 300</b>	13	188	30.000	1.800	1.060	4.460	400/50/3	3" F	1.020	1.082	1.535	335	R404A
<b>CDX 350</b>	13	188	35.000	2.100	1.237	5.550	400/50/3	3" F	1.020	1.082	1.535	350	R404A
<b>CDX 450</b>	13	188	45.000	2.700	1.589	6.715	400/50/3	DN125	1.020	1.082	1.535	380	R404A
<b>CDX 500</b>	13	188	50.000	3.000	1.766	6.800	400/50/3	DN125	1.020	2.099	1.535	550	R404A
<b>CDX 700</b>	13	188	70.000	4.200	2.472	10.200	400/50/3	DN125	1.020	2.099	1.535	600	R404A
<b>CDX 840</b>	13	188	84.000	5.040	2.966	12.300	400/50/3	DN125	1.025	2.099	1.535	650	R404A

NOTES:

- ① Reference conditions:
- Operating pressure: : 7 bar (100 psi)
- Operating temperature : 35 °C
- Room temperature : 25 °C
- Pressure dewpoint: : +3 °C +/- 1
- Available in different voltages and frequency

- Optional for CDX (4-18):
- Bypass + filter support
- Filter support

Limit conditions:

- Working pressure : 16 bar (232 psi) CDX 4-18
- : 13 bar (188 psi) CDX 24-840
- Operating temperature : 55 °C
- Min/Max room temperature : +5 °C; +45 °C



**Correction factor for conditions differing from the project K = A x B x C**

Room temperature	°C					Operating temperature	°C							
	25	30	35	40	45		30	35	40	45	50	55		
A	1,00	0,92	0,84	0,80	0,74	B	1,24	1,00	0,82	0,69	0,58	0,45		
	(CDX 4-77)						(CDX 4-77)							
C	1,00	0,91	0,81	0,72	0,62	C	1,00	1,00	0,82	0,69	0,58	0,49		
	(CDX 100-840)						(CDX 100-840)							
Operation pressure	bar		5	6	7	8	9	10	11	12	13	14	15	16
	C		0,90	0,96	1,00	1,03	1,06	1,08	1,10	1,12	1,13	1,15	1,16	1,17
				0,90	0,97	1,00	1,03	1,05	1,07	1,09	1,11	1,12	(CDX 100-840)	

The new flow rate value can be obtained by dividing the current or real flow rate by the correction factor related to the real operation conditions.

CECCATO ARIA COMPRESSA S.p.A. aims to constantly improve its products. We reserve the right to change specifications and product design without prior notice.



Design  
Manufacture, Sales and  
Service of air compressors,  
Air dryers and air filters

