

REFRIGERATION AIR DRYER

CCAD *Series* Refrigeration air dryers



SERIES

CCAD

CCAD-HP

CCAD-Hz

REGAL

Why dry your compressed air?

Compressed air contains oil, solid particles and water vapors. It is the inherent result of the compression process, which concentrates the natural water vapors and particles in the air that surrounds us. This untreated compressed air poses a substantial risk to your air system and end products. Its moisture content alone can cause corrosion in pipe work, premature failure of pneumatic equipment, product spoilage and more. An air dryer is therefore essential to protect your systems and processes.

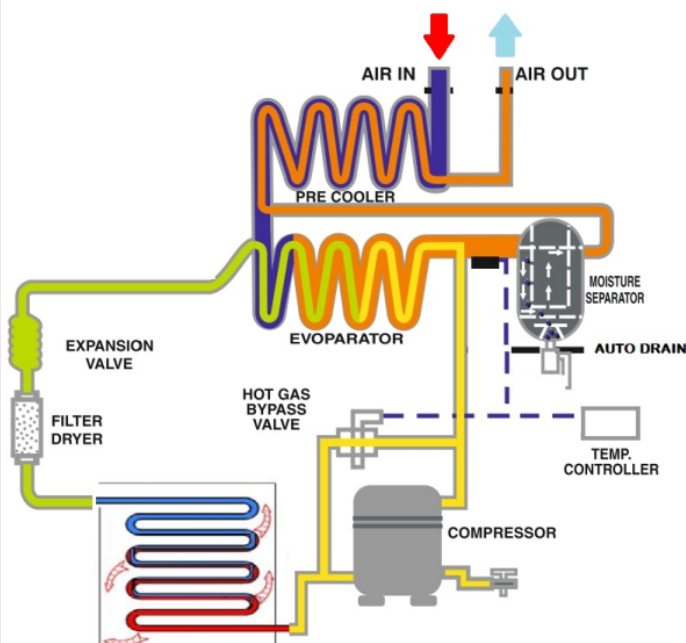
Refrigerant dryers by REGAL

REGAL refrigerant dryers provide the clean and dry air you need to expand the life of your equipment and ensures the quality of your products. Our CCD series dryers are designed in-house and tested using ISO 7183:2007 standards for compressed air purity and tested according.

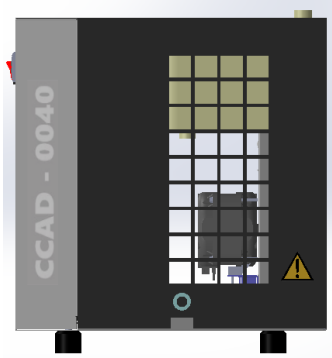
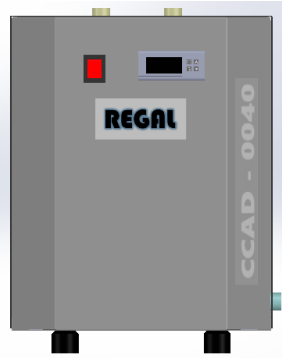


How refrigerant dryers work

A refrigerant dryer uses a refrigerant circuit and heat exchanger(s) to pre-cool air, refrigerate it to condense out moisture vapour, and then re-heat the air to prevent pipe sweating downstream.



- Air-to-air heat exchanger: Incoming air is cooled down by the outgoing dry, cold air
- Air-to-refrigerant heat exchanger: The air is cooled to the required dew point by the refrigerant circuit. The water vapor condenses into water droplets
- Integrated water separator: The moisture is collected and evacuated by the electronic drain
- Refrigerant compressor: Compresses the gaseous refrigerant to a higher pressure
- Regulation device: The hot gas bypass valve regulates the dryer to prevent freezing at lower load conditions
- Refrigerant condenser: Cools the refrigerant so that it changes from a gas to a liquid
- Refrigerant filter: Protects the expansion device from harmful particles
- Thermostatic expansion valve: The expansion process reduces the pressure and cools the refrigerant further
- Liquid separator: Ensures that only refrigerant gas enters the compressor



TECHNICAL SPECIFICATION

CCD - SERIES (GENERAL)

Model no	Capacity		Working pressure range		Power input			Port size	
	CFM	m ³ /hr	Bar	psi	Phase (f)	Voltage (V)	Frequency (Hz)	Inlet	Outlet
CCD-020	20	34.0	7 - 16	101 - 232	1	220	50	1/2" BSP	1/2" BSP
CCD-030	30	51.0	7 - 16	101 - 232	1	220	50	1/2" BSP	1/2" BSP
CCD-040	40	68.0	7 - 16	101 - 232	1	220	50	1/2" BSP	1/2" BSP
CCD-050	50	85.0	7 - 16	101 - 232	1	220	50	1/2" BSP	1/2" BSP
CCD-060	60	101.9	7 - 16	101 - 232	1	220	50	1/2" BSP	1/2" BSP
CCD-080	80	135.9	7 - 16	101 - 232	1	220	50	1" BSP	1" BSP
CCD-100	100	169.9	7 - 16	101 - 232	1	220	50	1" BSP	1" BSP

CCD HP- SERIES (HIGH PRESSURE)

Model no	Capacity		Working pressure range		Power input			Port size	
	CFM	m ³ /hr	Bar	psi	Phase (f)	Voltage (V)	Frequency (Hz)	Inlet	Outlet
CCD HP-030	30	51.0	40 - 42	580 - 610	1	220	50	1/2" BSP	1/2" BSP
CCD HP-040	40	68.0	40 - 42	580 - 610	1	220	50	1/2" BSP	1/2" BSP
CCD HP-060	60	101.9	40 - 42	580 - 610	1	220	50	1/2" BSP	1/2" BSP
CCD HP-090	90	152.9	40 - 42	580 - 610	1	220	50	1" BSP	1" BSP
CCD HP-120	120	203.9	40 - 42	580 - 610	1	220	50	1" BSP	1" BSP

CCD Hz- SERIES (DUAL FREQUENCY 50/60 Hz)

Model no	Capacity		Working pressure range		Power input			Port size	
	CFM	m ³ /hr	Bar	psi	Phase (f)	Voltage (V)	Frequency (Hz)	Inlet	Outlet
CCD HZ-025	25	42.5	7 - 16	101 - 232	1	180-240	50/60	1/2" BSP	1/2" BSP
CCD HZ-040	40	68.0	7 - 16	101 - 232	1	180-240	50/60	1/2" BSP	1/2" BSP
CCD HZ-060	60	101.9	7 - 16	101 - 232	1	180-240	50/60	1/2" BSP	1/2" BSP
CCD HZ-080	80	135.9	7 - 16	101 - 232	1	180-240	50/60	1/2" BSP	1/2" BSP
CCD HZ-100	100	169.9	7 - 16	101 - 232	1	180-240	50/60	1" BSP	1" BSP
CCD HZ-120	120	203.9	7 - 16	101 - 232	1	180-240	50/60	1" BSP	1" BSP

AIR DRYER SELECTION CHART

Inlet temperature - (C1)

Inlet Temperature, °C	30	35	40	45	50	55	60
Conversion Factor	1.2	1.15	1.05	1	0.85	0.8	0.7

Ambient temperature - (C2)

Ambient Temperature, °C	25	30	35	40	45	50
Conversion Factor	1.2	1.14	1.1	1	0.9	0.8

Inlet pressure - (C3)

Inlet Pressure	bar g	4	5	6	7	8	9	10.5	11	12.5	13	14	15	16
	psi g	58	73	87	100	116	131	150	160	180	189	200	218	232
Conversion Factor		0.75	0.85	0.95	1	1.06	1.11	1.15	1.18	1.2	1.22	1.23	1.25	1.28

$$\text{Dryer Nominal Capacity} = \frac{\text{Compressor Actual Capacity}}{C1 \times C2 \times C3 \times C4}$$

Dew point - (C4)

Pressure Dew	3	7	10
Conversion Factor	1	1.15	1.3

CCAD *Series*

Refrigeration air dryers



**Anytime - Anywhere
Service**



On time delivery



Trustable performance



Energy saving design

Sales

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