Refrigerant Dryers CPX 10 - 4200

People. Passion. Performance.

Chicago Pneumatic

CPX 10 - 4200
CPX
REFRIGERANT DRYER

The inlet air of a compressor contains humidity and contaminants like dust, oil, etc. During compression, these contaminants reach a high concentration. This can cause wear and corrosion in your downstream equipment, with potentially costly interruptions in your production, and a reduction in the efficiency and service life of your equipment.

By cooling the compressed air, a refrigerant dryer removes most of the water content. Our CPX range ensures high-quality dry air, increasing efficiency and productivity as well as the life span of your equipment and tools.

The benefits of refrigerant dryers

Clean and dry air
- Increases your overall productivity
- Improves your final product quality
- Protects your downstream equipment against corrosion, rust and air leaks
- Avoids costly service interventions

User benefits

Simple installation
- Lightweight and compact design
- Easy to transport
- Easy and fast installation using the optional filter supports and bypass option (CPX 10-60)

Solid quality
- High reliability was a key driver when developing the CPX dryer range
- First-class components tested under extreme operating conditions
- Constant dewpoint under any load conditions

Easy maintenance and accessibility
- Low maintenance
- Reliable components are easily accessible
- Long service intervals

Cost savings
- Very little maintenance required
- Low energy consumption
- Energy savings due to low pressure drops
- No loss of compressed air due to level-controlled condensate drain

Advanced refrigerant solutions
- Low refrigerant gas load
- New microchannel condenser requires lower gas load (CPX 850-4200)
- Refrigerant gas with low GWP

CPX 10-700

Reliable dry air with the lowest operational costs

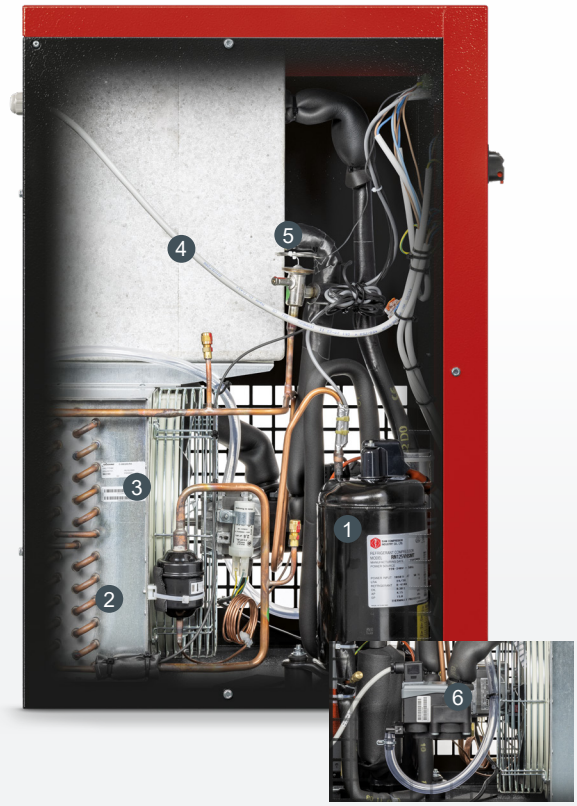
As low as Class -;4;- according to ISO 8573-1:2010

Low pressure drop

Robust design

Compact footprint and easy installation

Very low maintenance



Solid performance

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. **Motor-driven fan**
   For the condenser cooling air flow.
4. **3-In-1 heat exchanger**
   With high-efficiency operation to minimize pressure drop and footprint.
5. **Hot gas bypass valve**
   Controls the refrigerant capacity under all load conditions to prevent ice formation in the system.
6. **Automatic discharge of condensate**
   Energy-saving and self-adjusting, allows only moisture to discharge and prevents waste discharge of valuable compressed air.

Available options CPX 10-60

Bypass valve and filter support*

Continue using the filters during maintenance or malfunction of the dryer and avoid costly downtime.

Filter support*

Install two filters at the back of the dryer to reduce your dryer's footprint.

* Filters not included.

CPX 850-4200

Reliable dry air with the lowest operational costs

As low as Class -;4;- according to ISO 8573-1:2010

Low pressure drop

High-efficiency dryer lowers CO_2 emissions

New microchannel refrigerant condenser reduces gas charge and therefore your carbon footprint

Very low maintenance

State-of-the-art engineering

1. **Scroll refrigerant compressor**
   Scroll technology delivers a stable performance with industry-leading efficiency and COP.
2. **Air-air exchanger**
   Designed for high thermal exchange and low load losses.
3. **Air/refrigerant evaporator:**
   a. 1 for CPX 850-2500, 2 for CPX 3000-4200.
   b. Up to 25% lower pressure drop.
   c. Reduces dryer size.
4. **Hot gas bypass valve**
   Controls the refrigerant capacity under all load conditions to prevent ice formation.
5. **Control panel**
   Ensures easy, advanced control and monitoring.
6. **Free contacts**
   Allow for remote start/stop, general alarm and drain alarm.
7. **Refrigerant condenser**
   Microchannel design ensures a smaller physical and environmental footprint.

Technical data

According to ISO 7183:2007

Model	Air Treatment Capacity			R410A - 50Hz		R513A - 50Hz		R513A - 60Hz		Inlet / Outlet connections	Dimensions (mm)	Weight up to
				Power consumption	Voltage	Power consumption	Voltage	Power consumption	Voltage			
	l/min.	m³/h	cfm	W	V/Ph/Hz	W	V/Ph/Hz	W	V/Ph/Hz	gas/DN	A x B x C	kg
CPX 10	350	21	12,4	–	–	130	230/1/50	170	230/1/60	3/4" M	493 x 350 x 450	19
CPX 20	600	36	21,2	–	–	164	230/1/50	172	230/1/60	3/4" M	493 x 350 x 450	19
CPX 30	850	51	30	–	–	190	230/1/50	222	230/1/60	3/4" M	493 x 350 x 450	20
CPX 40	1200	72	42,4	–	–	266	230/1/50	306	230/1/60	3/4" M	493 x 350 x 450	25
CPX 60	1800	108	63,6	–	–	284	230/1/50	364	230/1/60	3/4" M	493 x 350 x 450	27
CPX 80	2350	141	83	–	–	674	230/1/50	726	230/1/60	1" F	497 x 370 x 764	44
CPX 100	3000	180	106	–	–	716	230/1/50	763	230/1/60	1" F	497 x 370 x 764	44
CPX 125	3600	216	127	631	230/1/50	933	230/1/50	590	230/1/60	1" 1/2 F	557 x 460 x 789	62
CPX 150	4100	246	145	705	230/1/50	933	230/1/50	727	230/1/60	1" 1/2 F	557 x 460 x 789	60
CPX 180	5200	312	184	905	230/1/50	933	230/1/50	745	230/1/60	1" 1/2 F	557 x 460 x 789	64
CPX 225	6500	390	230	969	230/1/50	1276	230/1/50	1315	230/1/60	1" 1/2 F	587 x 580 x 899	82
CPX 270	7700	462	272	1124	230/1/50	1276	230/1/50	1325	230/1/60	1" 1/2 F	587 x 580 x 899	92
CPX 350	10000	600	353	1540	400/3/50	1912	400/3/50	2021	460/3/60	2" F	1070 x 805 x 962	157
CPX 425	12000	720	424	1980	400/3/50	1912	400/3/50	2341	460/3/60	2" F	1070 x 805 x 962	170
CPX 530	15000	900	530	2010	400/3/50	2629	400/3/50	2511	460/3/60	2" 1/2 F	1070 x 805 x 962	176
CPX 700	18000	1080	636	2770	400/3/50	2629	400/3/50	3334	460/3/60	2" 1/2 F	1070 x 805 x 962	188
CPX 850	24000	1440	848	3500	400/3/50	3108	400/3/50	4490	460/3/60	3" M	1005 x 1132 x 1399	285
CPX 1000	30000	1800	1059	3690	400/3/50	3485	400/3/50	5020	460/3/60	3" M	1005 x 1121 x 1596	350
CPX 1200	35000	2100	1236	4550	400/3/50	4179	400/3/50	6820	460/3/60	3" M	1005 x 1121 x 1596	361
CPX 1500	45000	2700	1589	6097	400/3/50	4970	400/3/50	7880	460/3/60	DN 100	1005 x 1121 x 1826	447
CPX 1700	50000	3000	1766	6540	400/3/50	6358	400/3/50	9640	460/3/60	DN 100	1005 x 1531 x 1826	573
CPX 2200	62400	3744	2204	7100	400/3/50	6150	400/3/50	9750	460/3/60	DN 100	1005 x 1531 x 1826	630
CPX 2500	70000	4200	2472	7290	400/3/50	6256	400/3/50	9870	460/3/60	DN 100	1005 x 1531 x 1826	630
CPX 3000	84000	5040	2966	8260	400/3/50	7344	400/3/50	11700	460/3/60	DN 150	1455 x 1979 x 1826	1004
CPX 3500	99000	5940	3496	10200	400/3/50	8463	400/3/50	13580	460/3/60	DN 150	1455 x 1979 x 1826	1010
CPX 4200	120000	7200	4238	12180	400/3/50	12113	400/3/50	16970	460/3/60	DN 150	1455 x 1979 x 1833	1116

Notes:

Reference conditions:

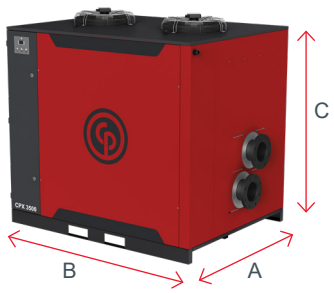
- **Operating pressure:** 7 bar. (102 psi)
- **Inlet temperature:** 35°C (95° F)
- **Room temperature:** 25°C (77° F)
- **Pressure dewpoint:**
  +4°C +/-1°C (39 °F. +/- 2°F.)
- Available in different volteges and frequencies

Operating limit conditions:

- **Max. operating pressure:**
  16 bar (232 psi) CPX 10-60
  14 bar (203 psi) CPX 80-4200
- **Max. inlet temperature:**
  55°C. (131 °F.) CPX10-270
  60°C. (140 °F.) CPX350-4200
- **Min./Max. ambient temperature:**
  +5°C.; +43°C. (+41°F. ; +109 °F.) CPX10-270
  +5°C.; +46°C. (+41 °F.; 115 °F.) CPX350-4200

Optional for CPX (10-60):

- Bypass + filter support
- Filter support



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

Room temperature	°C (°F)	**25 (77)**	30 (86)	35 (95)	40 (104)	43 (109)	46 (115)
	A	**1**	0.91	0.81	0.72	0.67	0.62

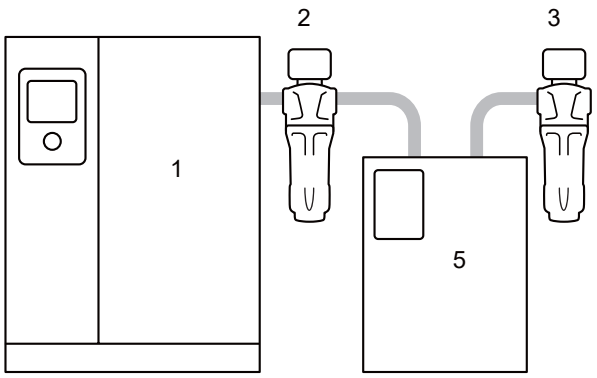
Inlet temperature	°C (°F)	25 (77)	30 (86)	**35 (95)**	40 (104)	46 (115)	50 (122)	55 (131)	60 (140)
	B	1.10	1.05	**1**	0.82	0.69	0.58	0.49	0.42

Operating pressure	bar (psi)	6 (87)	**7 (102)**	8 (116)	10 (145)	13 (189)	14 (203)	15 (218)	16 (232)
	C	0.97	**1**	1.03	1.07	1.12	1.15	1.16	1.17

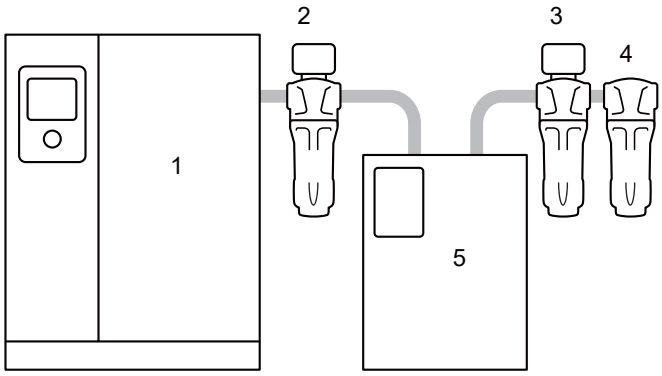
The new flow rate value can be obtained by dividing the current or real flow rate by the correction factor related to the real operation conditions.

Typical installations

High-quality air with reduced dewpoint (air purity to ISO 8573-1:class 1:4:2)



High-quality air with reduced dewpoint and oil concentration (air purity to ISO 8573-1:class 1:4:1)



1. Compressor with after cooler
2. G filter
3. C filter
4. V filter
5. Refrigerant dryer

Vertical receiver is always suggeste.

Chicago Pneumatic

At Chicago Pneumatic we have a passion for performance and long-lasting partnerships. Since 1901, we have been committed to reliability based on technology and trust.

People. Passion. Performance.

For more information, please contact your CP partner:

Use only authorized parts. Any damage or malfunction caused by the use of unauthorized parts is not covered by Warranty or Product Liability.