Refrigerant Dryers

CPX 10 - 3000

People.
Passion.
Performance.

Chicago Pneumatic

User Benefits

Simple installation

- Light and compact design
- Easy to transport
- Easy and fast installation using the optional filter supports and by pass 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 level
- Reliable components easily accessible
- Long service intervals

Costs saving

- 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

CPX Refrigerant dryer

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

By cooling down the compressed air, a refrigerant dryer removes the largest part 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 benefit of refrigerant dryers

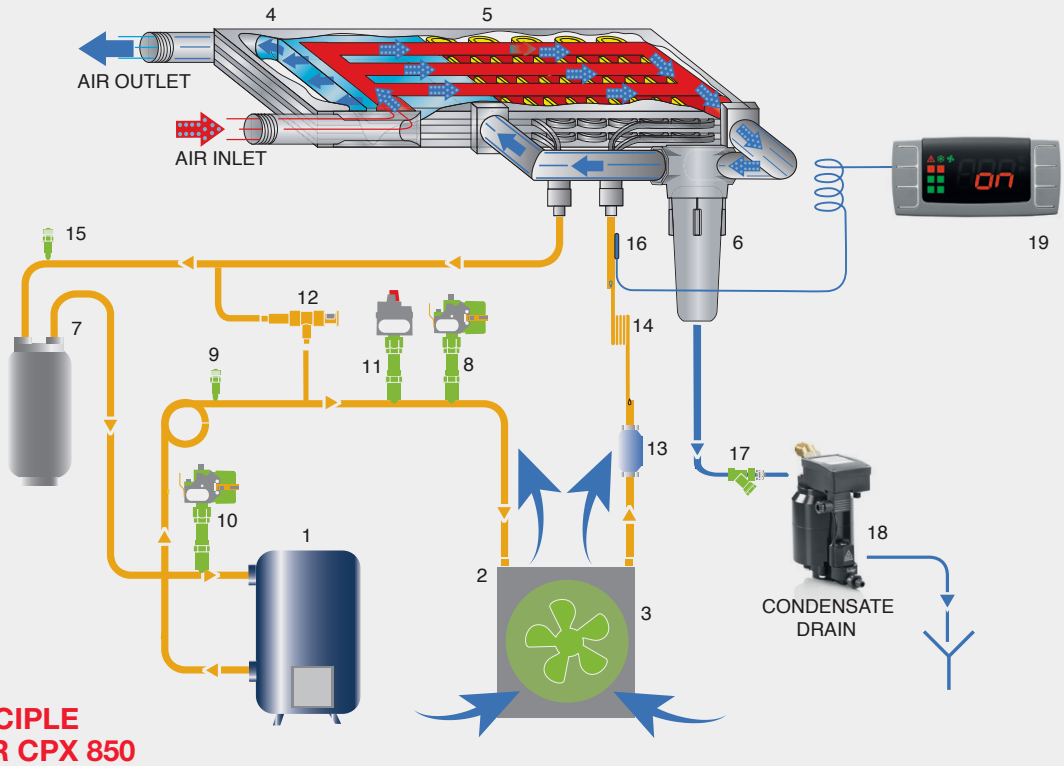
Clean and dry air

- Increase your overall productivity
- Improve your final product quality
- Protect your downstream equipment against corrosion, rust and leakages.
- Avoid costly service interventions

Environmental friendly refrigerant gases

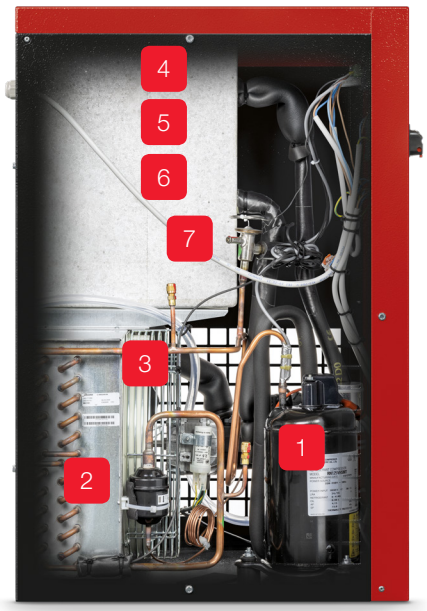
A key objective in the design of the CPX dryer was to deliver a product that offers performance, reliability and safety with the lowest possible environmental impact.

- Environmentally friendly thanks to the use of R513A, R410A and R404A gas.
- No impact on the ozone layer.
- R410A benefits:
  - Low Global Warming Potential (GWP)
  - Energy saving with rotary refrigerant compressor (20 to 30% more efficient then the conventional piston)



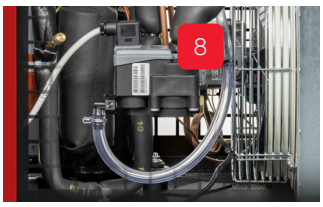
DRYING PRINCIPLE DIAGRAM FOR CPX 850

1. Refrigerant fluid compressor
2. Condenser
3. Motor driven fan
4. Air/air heat exchanger
5. Air/Refrigerant Evaporator
6. Condensate separator with a demister filter
7. Refrigerant fluid separator
8. Maximum pressure switch
9. Service valve
10. Minimum pressure switch
11. Fan pressure switch
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. PDP indicator



The smart choice for high reliability

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. Air-air exchanger with high thermal performance and low pressure drop.
5. Air/refrigerant evaporator with high thermal performance and low pressure drop.
6. Condensate separator for efficient condensate removal.
7. Hot gas bypass valve controls the refrigerant capacity under all load conditions.
8. Automatic discharge of condensate energy saving and self adjusting, allows only moisture to discharge and prevents waste discharge of valuable compressed air.



Technical

ACCORDING TO ISO 7183:2007 AND CAGI PNEUROP PN8NTC2

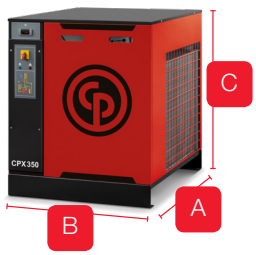
TYPE	MAX. WORKING PRESSURE		AIR TREATMENT CAPACITY [1]			NOMINAL ELECTRICAL POWER [1]	VOLTAGE	INLET/ OUTLET CONNECTIONS	DIMENSIONS (IN.)			WEIGHT	REFRIGERATION GAS TYPE
	bar	psi	l/min	mc/h	cfm	W	V / ph / Hz	gas	A	B	C	Lbs.	
CPX 10	16	232	350	21	12.4	172	115/230/60/1	3/4" M	19.4	13.8	17.7	42	R513A
CPX 20	16	232	600	36	21.2	172	115/230/60/1	3/4" M	19.4	13.8	17.7	42	R513A
CPX 30	16	232	850	51	30	222	115/230/60/1	3/4" M	19.4	13.8	17.7	44	R513A
CPX 40	16	232	1200	72	42.4	306	115/230/60/1	3/4" M	19.4	13.8	17.7	55	R513A
CPX 60	16	232	1825	110	64.4	383	115/230/60/1	3/4" M	19.4	13.8	17.7	60	R513A
CPX 80	14	203	2350	141	83	726	115/230/60/1	1" F	19.6	14.6	30.1	97	R513A
CPX 100	14	203	3000	180	106	763	115/230/60/1	1" F	19.6	14.6	30.1	97	R513A
CPX 125	14	203	3600	216	127	789	115/230/60/1	1" 1/2 F	21.9	18.1	31.1	137	R410A
CPX 150	14	203	4100	246	145	775	115/230/60/1	1" 1/2 F	21.9	18.1	31.1	132	R410A
CPX 180	14	203	5200	312	184	928	115/230/60/1	1" 1/2 F	21.9	18.1	31.1	137	R410A
CPX 225	14	203	6500	390	230	1109	230/60/1	1" 1/2 F	23.1	22.8	35.4	181	R410A
CPX 270	14	203	7700	462	272	1285	230/60/1	1" 1/2 F	23.1	22.8	35.4	181	R410A
CPX 350	14	203	10000	600	353	2300	460/60/3	2" F	42.1	31.7	37.9	320	R410A
CPX 425	14	203	12000	720	424	2650	460/60/3	2" F	42.1	31.7	37.9	348	R410A
CPX 530	14	203	15000	900	530	3220	460/60/3	2" 1/2 F	42.1	31.7	37.9	364	R410A
CPX 700	14	203	18000	1080	636	4200	460/60/3	2" 1/2 F	42.1	31.7	37.9	362	R410A
CPX 850	14	203	24000	1440	848	5470	460/60/3	3" F	42.6	40.2	60.1	717	R410A
CPX 1000	14	203	30000	1800	1060	5870	460/60/3	3" F	42.6	40.2	60.1	739	R410A
CPX 1200	14	203	35000	2100	1237	7430	460/60/3	3" F	42.6	40.2	60.1	772	R410A
CPX 1500	14	203	45000	2700	1589	9740	460/60/3	ANSI 6"	44.1	40.2	60.1	838	R404A
CPX 1700	14	203	50000	3000	1766	9600	460/60/3	ANSI 6"	82.6	40.2	60.4	1213	R404A
CPX 2500	14	203	70000	4200	2472	12500	460/60/3	ANSI 6"	82.6	40.2	60.4	1323	R404A
CPX 3000	14	203	84000	5040	2966	17274	460/60/3	ANSI 6"	82.6	40.2	60.4	1433	R404A

NOTES:

Reference conditions:
- Operating pressure: 7 bar (100 psi)
- Operating temperature : 95°F
- Room temperature: 77°F
- Pressure dewpoint: +39°F +/-1
- Available in different voltages and frequencies

Operating limit conditions:
- Max. operating pressure:
  16 bar (232 psi) CPX 10-60 - 14 bar (203 psi) CPX 80-3000
- Max. inlet temperature: 131°F
  (140°F. for CPX 350-3000)
- Min/Max ambient temperature: +41°F; 113°F
  (+41°F; 115°F for CPX 350-3000)

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

°F	77	86	95	104	109	115	
A	**1.00**	0.92	0.84	0.80	0.79	/	(CPX 10-270)
	1,00	0.91	0.81	0.72	/	0.62	(CPX 350-3000)

Operating temperature

°F	86	95	104	113	122	131	140	
B	1.24	**1,00**	0.82	0.69	0.58	0.45	/	(CPX 10-270)
	1.00	**1.00**	0.82	0.69	0.58	0.49	0.42	(CPX 350-3000)

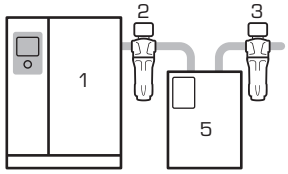
Operating pressure

psi	73	87	102	116	131	145	160	174	189	203	218	232	
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	(CPX 10-270)
	0.90	0.97	**1.00**	1.03	1.05	1.07	1.09	1.11	1.12	1.15			(CPX 350-3000)

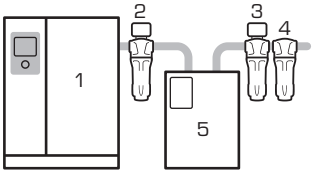
The new flow rate value can be obtained by dividing the current or real flow rate by the correction factor related to the real operation conditions.

Typical installations

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



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



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

Vertical receiver is always suggested

Product features and options

PDP Indicator

The operation of the CPX dryer is monitored by an electronic controller indicating all relevant information:

Technical details:

- Status of the refrigerant dryer
- Status of the fan
- Dew point indication

Alarm display:

- High or low dew point
- Fan probe failure (CPX 40-270)
- Service reminder

Potential free contact

(CPX 80-270)

- PDP alarm
- High refrigerant temperature
- Fan probe failure

(CPX 350-3000)

- General alarm:
  - High/low PDP alarm
  - High-refrigerant temperature
  - Probe failures
  - High-pressure switch
  - Electrical failure
- Drain alarm
- Remote start / stop

Intelligent drain discharge

The full refrigerant dryer range is equipped with a level-controlled condensate drain, a range using electronic sensors to discharge only condensate and without wasting any compressed air.

Benefits

- No loss of compressed air
- Energy saving
- Low noise level

Available options

(for CPX 10-60)

Filter support and bypass*

The optional bypass allows the system to operate using the filters only during maintenance or malfunction of the dryer, thus avoiding any downtime.

Filter support*

This option allows two filters to be installed on the rear side of the dryer, reducing overall dimensions and installation costs.

*Filters are not included in the option.

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CP Compressors
300 Technology Center Way, Suite 550
Rock Hill, SC 29730
1-877-861-CPAC (2722)

CP Compressors Canada
2900 Argentia Rd. Unit 13
Mississauga, Ontario L5N 7X9
1-800-513-3782