



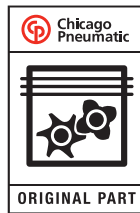
Over 100 years of experience

Since 1901 the Chicago Pneumatic name has represented high-performance tools and equipment designed for an extensive range of applications. Today, Chicago Pneumatic has a global reach, with local customer centers around the world. Chicago Pneumatic products are tailored to the needs of the industrial, vehicle service, and construction markets. Every day we develop and manufacture new products that are meant to meet your demands not only today, but tomorrow as well.

To learn more about our extensive range of tools, hydraulic attachments, industrial and portable compressors, accessories and workshop equipment, please visit www.cp.com.



CP compressors are supported by a network of trained service technicians who can provide complete warranty support, spare parts and technical consultation. For more information on our products, please contact your CP territory sales manager or local authorized CP distributor.



Original parts. Your quality assurance.

The "original part" identification confirms that these components passed our strict test criteria. All parts are designed to match the compressor. They have been thoroughly tested to obtain the highest level of protection, extending the compressors' lifetime and keeping the cost of ownership to an absolute minimum. No compromises are made on reliability. The use of "original part" certified quality components helps ensure reliable operation and will not impact the validity of your warranty, unlike other parts. Look for the quality assurance seal.

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The Compressed Air and Gas Institute, CAGI, is an organization dedicated to improving the compressed air industry through established standards. As a proud member of CAGI, CP Compressors publishes all technical data in accordance with CAGI/PNEUROP PN2CPTC2 guidelines and voluntarily allows products to be selected for participation in CAGI's Performance Verification Program. With CP Compressors, our customers know they are receiving the excellent performance that we publish.



CP Compressors
1800 Overview Drive
Rock Hill, SC 29730
1-877-861-CPAC (2722)

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



Dryers & Filters

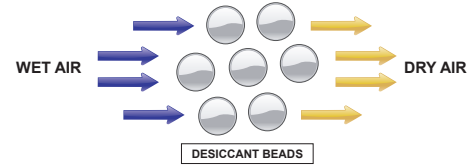
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Absolutely Dry Air

Saturated compressed air enters the dryer and passes over the desiccant, where moisture in the air is adsorbed onto the desiccant beads providing dew points of at least -40°F. Chicago Pneumatic uses large diameter activated alumina at the bottom of the desiccant bed as an active bed support, thus improving the regeneration process.



Standard Features:

- Oversize towers reduce air velocity
 - Prevents desiccant powder from moving downstream
 - Ensures maximum adsorption by desiccant
- Low pressure drop - less than 3 PSID at rated flow
- 6' power cord (CPADM)
- Tower pressure gauges and pressure relief valves
- Check valve/butterfly valves (CPAD)
- Solenoid operated inlet and purge valves (CPADM)

Options:

- Chicago Pneumatic's dew point demand system (DPD):
 - Extend the drying cycle without purging
 - Adjustable dew point settings
 - High humidity alarm*
 - Failure to shift alarm*
 - Has digital dew point display
 - -100°F dew point (5 min. cycle)

*Dry contacts available for these alarms

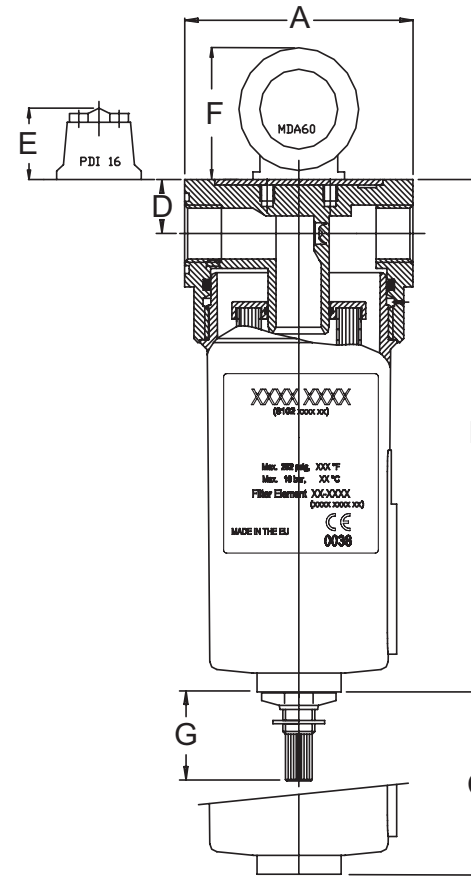
Operating Specifications:

Operating pressure: 100 psig
 Operating temp: 100°F
 Minimum inlet temp: 70°F
 Maximum inlet temp: 120°F
 Design pressure: 150 psig at 450°F (Vessels)
 Outlet dew point: -40°F
 Power supply: 115V - 1PH - 60HZ (1 Amp Fuse)
 Electricals: NEMA 4
 NEMA cycle: 10 minutes
 Desiccant: Activated alumina

CPAD/M - 5 to 3100 SCFM Heatless Regenerative Air/Gas Dryers

Model	Capacity (scfm)	Purge (scfm)	Desiccant (lbs./Tower)	Inlet/Outlet	Weight (lbs.)	L (in.)	W (in.)	H (in.)
CPAD								
CPAD-75	75	10.5	50	1" NPT	500	41	24	60
CPAD-100	100	14	65	1" NPT	550	41	24	74
CPAD-150	150	21	100	1 1/2" NPT	600	51	24	76
CPAD-200	200	28	130	1 1/2" NPT	775	52	28	72
CPAD-250	250	35	165	1 1/2" NPT	800	48	26	84
CPAD-300	300	42	195	2" NPT	1050	56	28	77
CPAD-350	350	50	230	2" NPT	1200	59	31	81
CPAD-400	400	56	265	2" NPT	1285	63	40	82
CPAD-500	500	70	340	2" NPT	1500	63	40	82
CPAD-650	650	91	410	2" NPT	2170	63	42	96
CPAD-750	750	108	460	2 1/2" FLG	2400	76	38	100
CPAD-1000	1000	140	725	2 1/2" FLG	2700	80	40	92
CPAD-1250	1250	175	850	3" FLG	3200	86	44	108
CPAD-1500	1500	210	1020	3" FLG	3750	92	50	92
CPAD-1800	1800	252	1150	4" FLG	4400	102	52	109
CPAD-2100	2100	294	1375	4" FLG	5600	108	54	99
CPAD-2600	2600	364	1650	4" FLG	6800	108	54	111
CPAD-3100	3100	434	1950	6" FLG	7600	114	60	138
CPADM								
CPADM-5	5	.7	3	1/4" NPT	60	16	7	23
CPADM-10	10	1.4	8.5	1/2" NPT	110	22	11	37
CPADM-15	15	2.1	9.5	1/2" NPT	120	22	11	37
CPADM-25	25	3.5	14	1/2" NPT	130	22	11	37
CPADM-35	35	4.9	20	1/2" NPT	150	22	12	37
CPADM-50	50	7	28	1/2" NPT	170	22	12	49

NPT Connection Specifications



NPT Connection

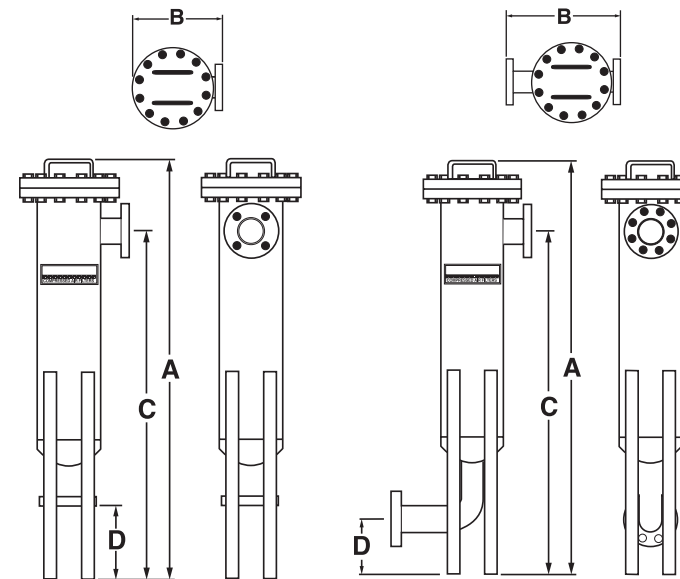
Max Pressure: 232 psig (16 bar)
 Max Temp.: 150°F (65°C)
 Adsorbers max working temp 100°F (38°C)
 Seals: O-ring
 Materials: Aluminum
 Coatings: Anti-corrosion treatment; powder coated exterior
 Design: In-line threaded bowl to head

E = 1.4 in. (35mm)
 F = 3.3 in. (83mm)
 G = 1.3 in. (34mm)

Note: "C" dimension indicates minimum clearance for element removal.

Dimensions In Inches					
Connections (NPT)	A	B	C	D	Weight (lbs.)
3/8"	3.5	7.4	2.4	0.8	2.2
1/2"	3.5	7.4	2.4	0.8	2.2
3/4"	3.5	10.1	3.2	0.8	2.4
1"	4.9	10.3	3.9	1.3	5.3
1"	4.9	14.3	4.7	1.3	6.4
1 1/2"	4.9	17.8	5.5	1.3	7.9
1 1/2"	4.9	25.3	6.3	1.3	10.4
2"	6.4	27.4	20.5	1.9	19.0
2"	6.4	36.8	30.3	1.9	25.8
3"	9.8	42.1	30.7	2.9	61.1
3"	9.8	42.1	30.7	2.9	61.1

Flange Connection Specifications



Housing A

CPF-3-1500
 CPF-4-2000
 CPF-4-3000

Housing B

CPF-4-1500
 CPF-6-2000
 CPF-6-3000

Max Pressure: 150 psig (10 bar)
 Max Temp.: 175°F (79°C)
 Seals: Nitrile standard/Viton optional
 Materials: Carbon steel housing
 Coatings: Primer with enamel finish coat
 Design: ASME coded and stamped vessel

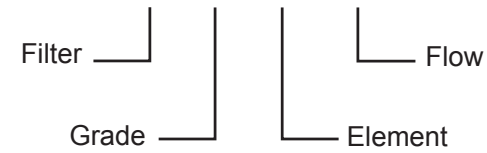
Dimensions In Inches					
Connections (Flanged)	A	B	C	D	Weight (lbs.)
3"	59.75	15.06	50.00	12.00	165
4"	59.75	17.13	50.00	8.50	175
4"	60.00	21.38	50.25	15.00	320
6"	61.50	25.50	50.00	9.50	360
4"	75.38	21.38	64.00	15.00	385
6"	74.50	25.50	63.00	9.50	420

NPT Connections

Model	cfm	NPT Connections
CPF_-35	35	3/8"
CPF_-47	47	1/2"
CPF_-71	71	3/4"
CPF_-118	118	1"
CPF_-200	200	1"
CPF_-300	300	1 1/2"
CPF_-471	471	1 1/2"
CPF_-589	589	2"
CPF_-883	883	2"
CPF_-1413	1413	3"

Model Nomenclature

CPF__(E)-118



Insert letter for filter grade (shown here) based on required purity level. Add an "E" for the element only.

	Filter Grade				
	-M	-S	-A	-D	-P
Filter Type	Coalescing	Fine Coalescing	Activated Carbon	Dust Filter	Pre-Filter
Element Color	Green	Red	Silver	Green	Yellow
Flow Direction	IN to OUT	IN to OUT	IN to OUT	OUT to IN	IN to OUT
Solid Filtration Grade [µ]	1.0	0.01	-	1.0	3.0
Oil Filtration (ppm)	0.1	0.008	0.005	-	-
Initial Pressure Drop (psi)	0.43	1.3	1.01	1.0	0.29
Max. Temperature (C°)	66	66	35	66	66
Max. Pressure Drop (psi)	7.2	7.2	7.2	7.2	7.2

Part Numbers - Filter & Element										
cfm	CPFM	CPFME	CPFS	CPFSE	CPFA	CPFAE	CPFD	CPFDE	CPFP	CPFPE
35	8102807495	2258290000	8102807503	2258290001	8102807511	2258290002	8102807529	2258290000	8102807537	2258290003
47	8102807545	2258290004	8102807552	2258290005	8102807560	2258290006	8102807578	2258290004	8102807586	2258290007
71	8102807594	2258290008	8102807602	2258290009	8102807610	2258290010	8102807628	2258290008	8102808733	2258290011
118	8102808741	2258290012	8102808758	2258290013	8102808766	2258290014	8102808774	2258290012	8102808782	2258290015
200	8102808790	2258290016	8102808808	2258290017	8102808816	2258290018	8102808824	2258290016	8102808832	2258290019
300	8102808840	2258290020	8102808857	2258290021	8102808865	2258290022	8102808873	2258290020	8102808881	2258290023
471	8102808899	2258290024	8102808907	2258290025	8102808915	2258290026	8102808923	2258290024	8102808931	2258290027
589	8102808949	2258290028	8102808956	2258290029	8102808964	2258290030	8102808972	2258290028	8102808980	2258290031
883	8102808998	2258290032	8102809004	2258290033	8102809012	2258290034	8102809020	2258290032	8102809038	2258290035
1413	8102809046	2258290036	8102809053	2258290037	8102809061	2258290038	8102809079	2258290036	8102809087	2258290039

Flange Connections

Model	cfm	Flange Connections
CPF_3-1500	1500	3"
CPF_4-1500	1500	4"
CPF_4-2000	2000	4"
CPF_6-2000	2000	6"
CPF_4-3000	3000	4"
CPF_6-3000	3000	6"

Model Nomenclature

CPF__(E)3-1500



Insert letter for filter grade (shown here) based on required purity level. Add an "E" for the element only.

cfm	Flange	Coalescing		Particulate		Adsorbing	
		CPFC	CPFCE	CPFP	CPFPE	CPFA	CPFAE
1500	3"	1624502079	1624502097	1624502085	1624502100	1624502091	1624502103
1500	4"	1624502080	1624502097	1624502086	1624502100	1624502092	1624502103
2000	4"	1624502081	1624502098	1624502087	1624502101	1624502093	1624502104
2000	6"	1624502082	1624502098	1624502088	1624502101	1624502094	1624502104
3000	4"	1624502083	1624502099	1624502089	1624502102	1624502095	1624502105
3000	6"	1624502084	1624502099	1624502090	1624502102	1624502096	1624502105

CYCLE KNIGHT

The CPAD Cycle Knight Digital Control

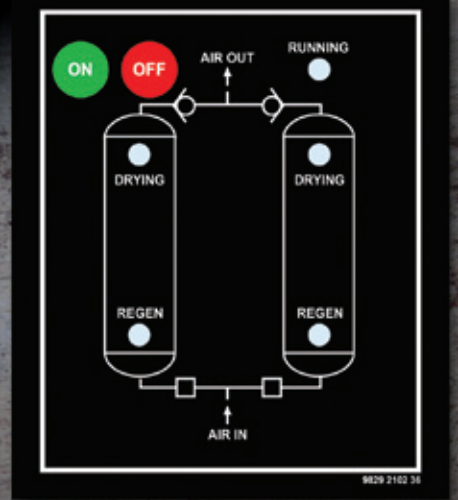
Custom engineered to facilitate the operation of the Chicago Pneumatic CPAD series heatless regenerative dryers.

Cycle Knight Benefits

- Dry contacts for alarm outputs
- LED sequence indicators in accordance with options selected
- Plan maintenance during cycle intervals
- Enhance Cycle Knight with optional dew point demand system

Cycle Knight Indicates

- Actual sequence time
- Left and right tower drying
- Left and right tower regenerating
- CPAD dryer operation



Compressed Air Water Contamination

Atmospheric air contains water in vapor form in different volumes according to the ambient conditions. Under compression, this water is drawn in along with the air. After compression, the air and water are then discharged to the distribution system, with some of the water content normally being removed by a compressed air after-cooler and then discharged.

However, a large proportion of the water vapor content remains in the compressed air, moving in the pipe distribution system as the air is consumed.

Compressed air may undergo further cooling in the piping, as a result of ambient temperature and/or due to expansion, resulting in liquid water lying in the pipe distribution system, receivers and pneumatic equipment.



As time passes, the condensate can cause serious damage to pipes and applications, resulting in production downtime and higher maintenance costs. During processes, where compressed air comes into contact with the final product, it can even damage the product itself.

CPX dryers are machines designed for treating compressed air. By using the refrigerant characteristics of certain fluid, these dryers lower the temperature of the compressed air, causing water vapor to condense and discharge prior to it entering any distribution system.



Water Contamination Risks

- **Corrosion in the network:**
Increasing pressure drop due to deterioration of the air network with increasing pipe scale and rust. Damage to joints will cause air leaks, significantly increasing the cost of plant production.
- **Malfunction of the pneumatic equipment:**
Excess water will lead to malfunctioning of equipment and instrumentation, a reduction of component life and an increase in production losses and manufacturing costs.
- **Product contamination:**
The efficiency of the production process can reduce product spoilage caused by product contamination; fitting moisture separators improves air quality. During painting, condensate causes imperfections on the finished product creating future corrosion areas. In pharmaceutical and electronic applications, condensate product contamination can be harmful and/or extremely expensive.

CPX Series Refrigerated Air Dryers

Model	cfm @ 100 psig	Max. psig	Electrics* V/Hz/Ph	Weight (lbs.)	L (in.)	W (in.)	H (in.)	Refrig.	Noise dBA
CPX-10	12	240	115/60/1	42	13.8	19.6	17.7	R-134a	50
CPX-20	21	240	115/60/1	42	13.8	19.6	17.7	R-134a	50
CPX-30	30	240	115/60/1	44	13.8	19.6	17.7	R-134a	47
CPX-40	42	240	115/60/1	55	13.8	19.6	17.7	R-134a	53
CPX-60	65	240	115/60/1	59	13.8	19.6	17.7	R-134a	53
CPX-80	83	240	115/60/1	97	14.6	19.6	30.1	R-404A	57
CPX-100	106	195	115/60/1	97	14.6	19.6	30.1	R-404A	57
CPX-125	127	195	115/60/1	117	18.1	22	31.1	R-404A	58
CPX-150	145	195	115/60/1	132	18.1	22	31.1	R-404A	58
CPX-180	184	195	115/60/1	145	18.1	22	31.1	R-404A	58
CPX-225	200	195	230/60/1	176	22.8	23.2	35.4	R-404A	59
CPX-270	230	195	230/60/1	176	22.8	23.2	35.4	R-404A	59
CPX-350	270	195	460/60/3	282	28.9	35.4	37.9	R-404A	60
CPX-425	360	195	460/60/3	321	28.9	35.4	37.9	R-404A	67
CPX-530	500	195	460/60/3	348	28.9	35.4	37.9	R-404A	67
CPX-700	600	195	460/60/3	363	28.9	35.4	37.9	R-404A	68
CPX-850	860	195	460/60/3	737	40.2	42.6	60.4	R-404A	70
CPX-1000	1000	195	460/60/3	759	40.2	42.6	60.4	R-404A	71
CPX-1200	1216	195	460/60/3	777	40.2	42.6	60.4	R-404A	71
CPX-1500	1398	195	460/60/3	836	40.2	44.2	60	R-404A	71
CPX-1700	1760	195	460/60/3	880	40.2	82.6	60.4	R-404A	74
CPX-2500	2400	195	460/60/3	891	40.2	82.6	60.4	R-404A	74

* CPX-10 through CPX-180 available in 230/60/1
 Reference conditions CPX10-CPX180: 77°F ambient, 100° inlet, 100 psig, 38°F pressure dewpoint
 Reference conditions CPX225-CPX2500: 100°F ambient, 100° inlet, 100 psig, 38°F pressure dewpoint



Standard Features:

- Eliminates water, oil and dirt from air systems
- Prevents damage to tools and cylinders, adding to their longevity
- Fewer finished product defects
- Prevents "fisheye" paint splatches
- Reduces operational downtime
- Increases profitability and productivity
- Eliminates air line purging
- Compact design for small footprint
- Quality components for efficient cooling
- Internal layout and enclosure allow for quiet operation

CPXHT Series High Temp Dryers

Model	50°F PDP cfm @ 100 psig	Use with	Electrics V/Hz/Ph	Ref. HP	Heat Exchanger	Max. psig	Refrig.	Weight (lbs.)	L (in.)	W (in.)	H (in.)	Conn. (NPT)
CPXHT-25	25	5 HP	115/1/60	1/4	SS/Copper	232	R-134a	85	20	14	18	1/2"
CPXHT-50	50	10 HP	115/1/60	1/4	SS/Copper	232	R-404A	128	23	18	31	1"
CPXHT-75	75	15 HP	115/1/60	1/2	SS/Copper	232	R-404A	183	23	18	31	3/4"
CPXHT-100	100	20 HP	115/1/60	3/4	SS/Copper	232	R-404A	194	23	18	41	3/4"
CPXHT-125	125	25 HP	115/1/60	3/4	SS/Copper	232	R-404A	200	23	18	41	3/4"

Maximum Ambient 95°F
 Minimum Ambient 34°F
 Dew Point Temp 50°F +/- 2°F
 Maximum Inlet Temp 180°F

Coalescing Filter: CPFM

- The standard coalescing filter uses the Green M element and provides a reliable filter for overall filtration
- More effective than a particulate filter because it also removes lubricant and liquids in suspension
- Ideal as a pre-filter for removing bulk solids and liquids before



Fine Coalescing Filter: CPFS

- The fine coalescing filter uses the Red S element and provides a high level of particulate and coalescing filtration
- Maximum coalescing efficiency available
- Excellent prevention of oil and fluid carryover into the system

Coalescer Filter Media (Oil Removal)					
Grade	Description	Coalescing Efficiency	Maximum Oil Carryover	Micron Rating	Pressure Drop (PSID) @ Rated Flow
M	Coalescing filter capable of separating emulsion and particles down to 1.0 micron, liquid and oil included. Maximum contents of residual oil 0.1 mg/m3.	98.5%	0.1	1.0	0.43
S	Coalescing filter capable of separating residual oil and extremely small particles down to 0.01 micron. It produces air technically free from oil.	99.981%	.008	.01	1.3

Adsorber: CPFA

- The adsorbing filter uses the Silver A element and represents the filter that is not able to remove particulates, but is able to remove vapor and odors
- Activated carbon media provides sustained protection from harmful vapors and prevents them from moving downstream in the compressed air
- Should always be mounted after a CPFS or CPFM
- Used for sensitive applications where the highest air purities are desirable: medical, electronics, pharmaceutical, etc.



Adsorber Filter Media (Vapor Removal)			
Grade	Description	Maximum Oil Carryover	Pressure Drop (PSID) @ Rated Flow
A	Activated carbon filter for the elimination of hydrocarbon vapor and odor. When installed after a CPFM or CPFS grade filter, it lowers the maximum contents of residual oil to 0.005 mg/m3.	.005	1.01

Dust Filter: CPFD

Particulate Filter: CFPF

- The particulate filter uses the Yellow P element to filter large particulates that originate in the ambient environment
- Often used before the compressor and other large machinery where large quantities of air are ingested
- The dust filter uses the Green D element to act as a particulate that removes 1 micron particulates
- A finer grade particulate filter for dust, this filter is often used as a pre-filter for coalescing filters
- Ideal for use throughout the compressed air circuit to remove pipe scale and debris that accumulate over time



Particulate Filter Media (Particulate Removal)			
Grade	Description	Micron Rating	Pressure Drop (PSID) @ Rated Flow
P	Particulate filter capable of separating particles down to 3 micron.	3.0	0.29
D	Particulate filter capable of separating particles down to 1 micron.	1.0	1.0

Standard Features:

- Pressure indicator for 200 cfm and below
- Push-to-fit element installation up to 471 cfm
- Max. operating pressure = 230 psi
- Mounted pressure gauge above 200 cfm
- 1 year warranty on filter housing
- Installed Float Drain Valve (except CPFA)

Correction Factor (cf) For Operating Pressure Changes																
psig	14.5	29.0	43.5	58.0	72.5	87.0	101.5	116.0	130.5	145.0	159.5	147.1	188.6	203.1	217.6	232.1
CF	0.25	0.38	0.50	0.65	0.75	.088	1.00	1.13	1.25	1.38	1.50	1.63	1.75	1.88	2.00	2.13

Filter Size = Flow Rate divided by CF

Flow Rate of Filter = Filter Size x CF