

30 - 3500 CFM



**People.  
Passion.  
Performance.**



# Chicago Pneumatic

# For Improved Business Productivity, Quality and Efficiency.



Quality air solutions allow you to prevent corrosion, leakages, pollution and rust. Compressors take humidity and contamination from the intake air during the compression process. These particles combine with the oil used in the compressor. All these impurities can cause wear and corrosion to downstream equipments. This in turn may cause potential costly interruption to production and reduction in the efficiency and service life of the equipment used. To reduce this negative impact, a whole range of Quality Air Solution products have been developed to ensure air quality, increased efficiency & productivity and to lengthen the life span of your equipment and tools. With our wide range of products from dryers to filters, you can tackle several air quality problems at once, making them highly recommended components for every successful business.



Moisture



Particles



Oil



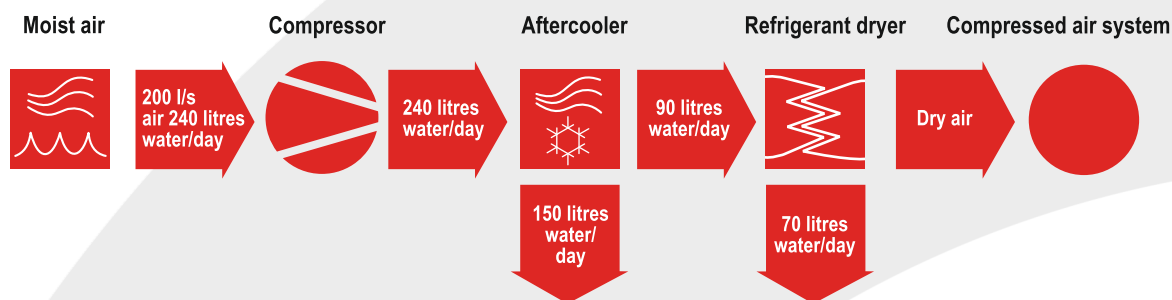
Hydrocarbons



Viruses



Bacteria



A compressor that delivers 200 litres of air per second, also supplies approximately 240 litres of water per day if working with air at 20°C. To avoid problems and disturbances due to water precipitation in the pipes and connected equipment, the compressed air must be dried. This drying can be achieved by using a reliable Chicago Pneumatic CPZ Refrigerant Dryer.

# CPZ Refrigerant Dryers 30 - 3500

## Professional Air Quality for Protection of Equipment & Processes

The CPZ Refrigerant Dryers guarantee dry and qualitative compressed air which prolongs the lifetime of your equipment and ensures superior production quality. Water vapour is eliminated, avoiding corrosion in your compressed air network and tools. All in all, this lowers your maintenance cost and improves your overall production process for complete peace of mind.

### Pressure Dew Point 3° - 7° PDP

- High efficiency plate-fin heat exchanger
- Professional water removing function
- Low relative humidity in outlet air

### Professional Energy

- 50% less energy consumption compared to shell and tube type dryers
- Optimized refrigeration system

### Environment Safety

- Environment friendly gases R-134 A, R-410 A
- Low (GWP) global warming potential
- Low (ODP) ozone depletion potential
- Energy saving

### Reliable

- Industrial grade refrigeration compressor
- Digital controller & PDP display
- Optimised piping with 3 stage leak test



#### Robust Structure

Reliable structure due to a robust canopy ensuring safe installation independent of the environment.



#### Electronic Controller

Monitor the operations and dew point of your CPZ dryer with the electronic controller.



#### Capacitive Drain CPZ 850-3500

This capacitive drain will allow you to save money by discharging only water.



#### Highly Efficient Heat Exchanger

The highly efficient heat exchanger safeguards your optimized cooling power and lowers pressure drops.



#### Timer Drain CPZ30-CPZ700

Reliable timer drain with adjustable drain interval and discharge time.

# How Does CPZ Dryer Work?

## Refrigerant circuit

The refrigerant circuit compresses and expands the refrigerant medium in a circular system in order to efficiently transfer heat from the wet compressed air to the atmosphere. The CPZ dryer refrigerant circuit is designed as a whole and only uses components of high and reliable quality, supplied by globally recognized manufacturers.

## Air circuit

Wet compressed air flows directly through the CPZ dryer's internal 3-in-1 heat exchanger, wherein the 3 key dryer functions are combined. Firstly, the wet compressed air is cooled down to condensate the moisture. In the second stage this condensed moisture will be collected and drained out. Finally, the dried compressed air is re-heated before it enters the main compressed airline.

**Air-To-Air Heat Exchanger**  
Cools down the air inlet whilst re-heating the outlet air.

**Air Outlet**  
Reheats the outgoing air to prevent condensation on the main compressed airline.

**Air Inlet**  
Hot saturated air enters the dryer.

**Automatic Drain**  
Removes the free water collected in the water separator.

**Refrigerant Separator**  
Ensures that only refrigerant gas can enter the compressor, as liquid would cause damage.

**Refrigerant Compressor**  
Brings the gaseous refrigerant to a high pressure and a high temperature.

**Max. Pressure Switch**  
Protects by ensuring that the refrigerant gas never exceeds the maximum pressure.

**Fan Control Pressure Switch**  
Saves energy by temporarily turning off the condenser fan when the load on the dryer is low.

**Air-To-Refrigerant Heat Exchanger**  
Transfers heat from the compressed air to the cold refrigerant, forcing water vapor in the compressed air to condense.

**Water Separator**  
Collects and drains out condensate from the cooled air flow. 3-in-1 aluminium heat exchangers combine above points 11, 12 and 13 making them highly efficient and reliable.

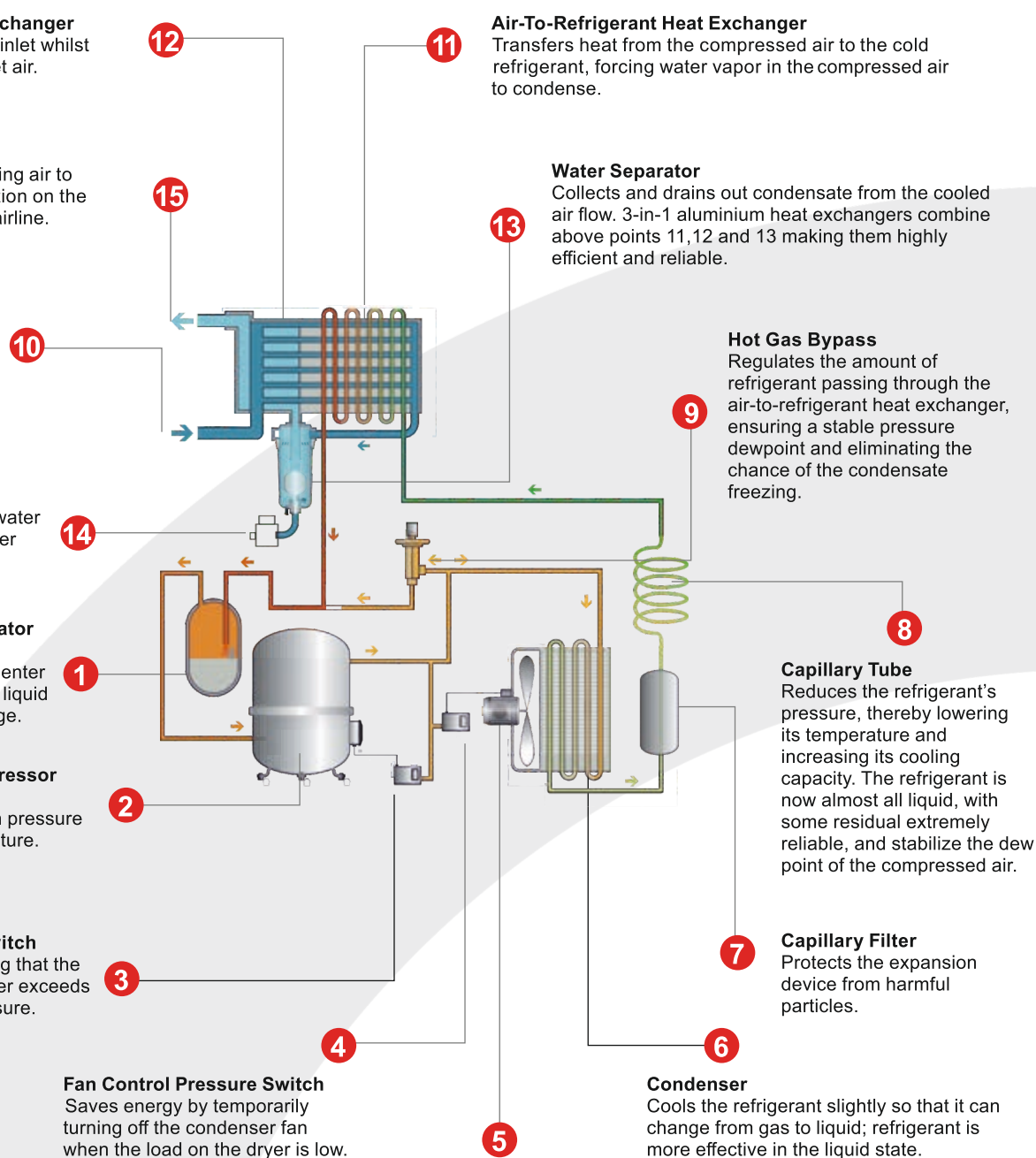
**Hot Gas Bypass**  
Regulates the amount of refrigerant passing through the air-to-refrigerant heat exchanger, ensuring a stable pressure dewpoint and eliminating the chance of the condensate freezing.

**Capillary Tube**  
Reduces the refrigerant's pressure, thereby lowering its temperature and increasing its cooling capacity. The refrigerant is now almost all liquid, with some residual extremely reliable, and stabilize the dew point of the compressed air.

**Capillary Filter**  
Protects the expansion device from harmful particles.

**Condenser**  
Cools the refrigerant slightly so that it can change from gas to liquid; refrigerant is more effective in the liquid state.

**Condenser Fan**  
Efficiently provides constant flow of ambient air to the air condenser (only for air cooled).





# Professional Air Quality for Protection of Equipment & Processes

Whatever is your compressed air need, Chicago Pneumatic can successfully help you to achieve the proper air quality class.

## Compressed Air According to ISO 8573-1:2010

Purity Class	Solid Particles			Water	Total Oil*
	Number of Particles per m <sup>3</sup>			Pressure Dewpoint	Concentration
	0,1 - 0,5 µm	0,5 -1,0 µm	1,0 - 5,0 µm	°C	mg/m <sup>3</sup>
0	As specified by the equipment user or supplier and more stringent than Class 1				
1	≤ 20.000	≤ 400	≤ 10	≤ -70	≤ 0,01
2	≤ 400.000	≤ 6.000	≤ 100	≤ -40	≤ 0,1
3	-	≤ 90.000	≤ 1000	≤ -20	≤ 1
4	-	-	≤ 10.000	≤ 3	≤ 5
5	-	-	≤ 100.000	≤ 7	-
6		≤ 5 µm/m		≤ 10	-

\* Liquid, aerosol and vapour.

## Technical Table

Dryer	Max. Operating Pressure	Capacity	Nominal Electrical Power	Voltage	Refrigerant Gas Type	Inlet / Outlet Connection	Dimensions L x W x H			Weight
	Bar G	CFM	Kw	V / Ph / Hz			mm			KG
CPZ										
30	13	34	0.22	230 / 1 / 50	R134a	¾"	355	430	445	30
50	13	53	0.36	230 / 1 / 50	R134a	¾"	550	370	800	32
75	13	74	0.45	230 / 1 / 50	R134a	¾"	550	370	800	36
115	13	117	0.95	230 / 1 / 50	R410A	1"	520	500	800	60
160	13	159	0.98	230 / 1 / 50	R410A	1 ½"	550	600	980	68
200	13	201	1.00	230 / 1 / 50	R410A	1 ½"	550	600	980	75
250	13	254	1.13	230 / 1 / 50	R410A	2"	550	600	980	85
300	13	297	1.67	230 / 1 / 50	R410A	2"	900	750	1000	120
380	13	381	1.70	230 / 1 / 50	R410A	2 ½"	1025	660	1120	138
480	13	487	1.90	230 / 1 / 50	R410A	2 ½"	1025	660	1120	156
600	13	604	2.22	230 / 1 / 50	R410A	2 ½"	1025	660	1120	168
700	13	710	2.61	230 / 1 / 50	R410A	2 ½"	1025	660	1120	175
850	13	848	3.90	400 / 3 / 50	R404A	3"	1085	1020	1560	325
1000	13	1060	4.46	400 / 3 / 50	R404A	3"	1085	1020	1560	335
1200	13	1236	5.55	400 / 3 / 50	R404A	3"	1085	1020	1560	350
1700	13	1766	6.80	400 / 3 / 50	R404A	DN 125	2100	1020	1560	550
2500	13	2473	10.20	400 / 3 / 50	R404A	DN 125	2100	1020	1560	650
2700	13	2650	14.5	400 / 3 / 50	R410A	DN 150	1644	1000	1883	600
3500	13	3530	17.8	400 / 3 / 50	R407C	DN 150	2100	1150	1900	700

## Notes

Reference Conditions	CPZ30-CPZ700	CPZ 850-3500
Operating Pressure	7 bar (100psi)	7 bar (100psi)
Operating Temperature	40°C	35 °C
Room Temperature	30°C	25 °C

Limit Conditions	CPZ 850-3500
Max Operating Pressure	13 bar (188psi)
Max Operating Temperature	55°C
Min/Max Room Temperature	5°C / 45°C

- Unit performance measured according to ISO 1217 Ed 4 2009.
- Noise level measured according to ISO 2151 / Pneurop / CAGIPN8NTC2

# CP Filters 25 -1430 CFM



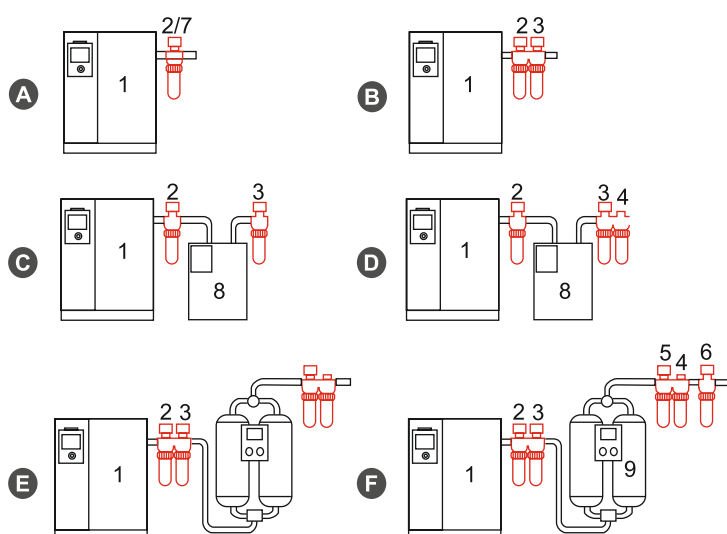
## Thorough filtration for complete peace of mind

A unique combination of robustness and efficiency allows our high performance filters to purify your compressed air and gives you complete peace of mind. Whatever might be your required purity, CP filters come in 6 variants offering a tailor-made solution for every situation.



CP FILTERS

## Typical Installations



- |                                |                      |
|--------------------------------|----------------------|
| 1. Compressor with aftercooler | 5. S filter          |
| 2. G filter                    | 6. D filter          |
| 3. C filter                    | 7. P filter          |
| 4. V filter                    | 8. Refrigerant dryer |
|                                | 9. Adsorption dryer  |

- A. General purpose protection**  
(air purity to ISO 8573-1: G filter class 2:-:3 & P filter class 4:-:3)
- B. General purpose protection and reduced oil concentration**  
(air purity to ISO 8573-1: class 1:-:2)
- C. High quality air with reduced dew point**  
(air purity to ISO 8573-1: class 1:4:2)
- D. High quality air with reduced dew point and oil concentration**  
(air purity to ISO 8573-1: class 1:4:1)
- E. High quality air with extremely low dew point**  
(air purity to ISO 8573-1: class 2:2:1)
- F. High quality air with extremely low dew point**  
(air purity to ISO 8573-1: class 1:2:1)

## Six Filter Types to Cover All Purity Requirements

**G** Coalescing filters for general purpose protection, removing solid particles, liquid water and oil aerosol. Total Mass Efficiency: 99%.

**S** Particulate filters for dust protection. Count Efficiency: 99,81% at Most Penetrating Particle Size (MPPS = 0,1 micron).

**C** High-efficiency coalescing filters, removing solid particles, liquid water and oil aerosol. Total Mass Efficiency: 99,9%.

**D** High-efficiency particulate filters for dust protection. Count Efficiency: 99,97 % at Most Penetrating Particle Size (MPPS = 0,06 micron).

**V** Activated carbon filter for removal of oil vapour and hydrocarbon odors with a maximum remaining oil content of 0,003 mg/m<sup>3</sup> (0,003 ppm). 1000 hour lifetime.

**P** Coalescing and particulate general purpose pre filter. Removes solid particles, dust, liquid and oil aerosol. Total Mass Efficiency: 90%.

## Several Options to Tailor the Filtration As Per Your Needs



- Pressure gauge
- Dry contact mounted on the differential pressure gauge to give remote indication of the cartridge replacement



- Pressure indicator
- Serial Connection Kit allows easy mounting on filters in series
- Wall mounting kit to simplify the installation



- Quick coupling for easy connection to fix an intelligent drain with no loss of compressed air

Filter Type	Nominal Capacity*	Maximum Pressure	Connections/ Port Thread	Dimensions			Free Space for Cartridge Replacement	Weight
	CFM			A	B	C		
		bar	G	mm	mm	mm	D	kg
FILTER 45	25	16	3/8"	90	21	228	75	1
FILTER 90	53	16	1/2"	90	21	228	75	1,1
FILTER 125	74	16	1/2"	90	21	283	75	1,3
FILTER 180	106	16	3/4"	110	27,5	303	75	1,9
FILTER 180	106	16	1"	110	27,5	303	75	1,9
FILTER 290	170	16	1"	110	27,5	343	75	2,1
FILTER 505	297	16	1 1/2"	140	34	449	100	4,2
FILTER 685	403	16	1 1/2"	140	34	532	100	4,5
FILTER 935	551	16	1 1/2"	140	34	532	100	4,6
FILTER 1295	763	16	2"	179	50	618	150	6,9
FILTER 1295	763	16	2 1/2"	179	50	618	150	6,9
FILTER 1890	1112	16	3"	210	57	720	200	11,0
FILTER 2430	1430	16	3"	210	57	890	200	12,6



\* Reference condition: Pressure 7 bar (102 psi). Maximum operating temperature of 66°C, and 35°C, only for V series. Minimum operating temperature of 1°C. For part numbers, please contact your local customer center.



Since 1901, the Chicago Pneumatic name has represented reliability and attention to customer needs, with tools and compressors designed for specific industrial applications. Today, Chicago Pneumatic has a global reach, with local distributors around the world.

Our people start every single day with a passion to research, develop, manufacture and deliver new products that are meant to meet your needs not only today, but tomorrow as well.

To learn more, visit [www.cp.com](http://www.cp.com).

## Chicago Pneumatic : Full Offer, Global Presence



TMD



CPVS



WIS AIR



Spiral AIR



PPNGs



TAS



CPV

Chicago Pneumatic Compressors  
Sveanagar, Mumbai-Pune Highway, Dapodi,  
Pune - 411012, Maharashtra, India.



Design  
Manufacturing, Sales and  
Service of Air Compressors,  
Air Dryers and Air Filters



ISO 9001. ISO 14001  
OHSAS 18001  
Forms an integral part of each business  
process of Chicago Pneumatic Compressors

Dealer Network

100+

Distributors  
present across India

Chicago Pneumatic compressors have a strong distribution network throughout India. Operating from almost every state ensures effective reach of products and services to end users across the country. Around 75% of these distributors have been associated with us for more than 15 years.

To find your nearest distributor please visit [www.cp.com](http://www.cp.com)

Regional Customer Centers

West	Mumbai
North	Gurgaon
East	Kolkata
Central	Hyderabad
South	Bengaluru

Area offices: Ahmedabad, Baroda, Chandigarh, Chennai, Pune  
Resident offices: Coimbatore, Erode, Kochi, Jaipur, Raipur, Vizag

Powered by a strong  
aftermarket support  
at your doorstep

24 7

Service  
ahead of time.

Dealer Stamp

**Toll Free No.: 1800 120 110040 | Email : [customer.care@cp.com](mailto:customer.care@cp.com)**

© 2010, Chicago Pneumatic. All rights reserved. All mentioned, product names, company names, trademarks and service marks are the properties of their respective owners. Our products are constantly being developed and improved. We thus reserve the right to modify product specifications without prior notice.