Chicago Pneumatic

CPP condensate separator range

High-performance products. Designed for you!

Condensate separator range CPP

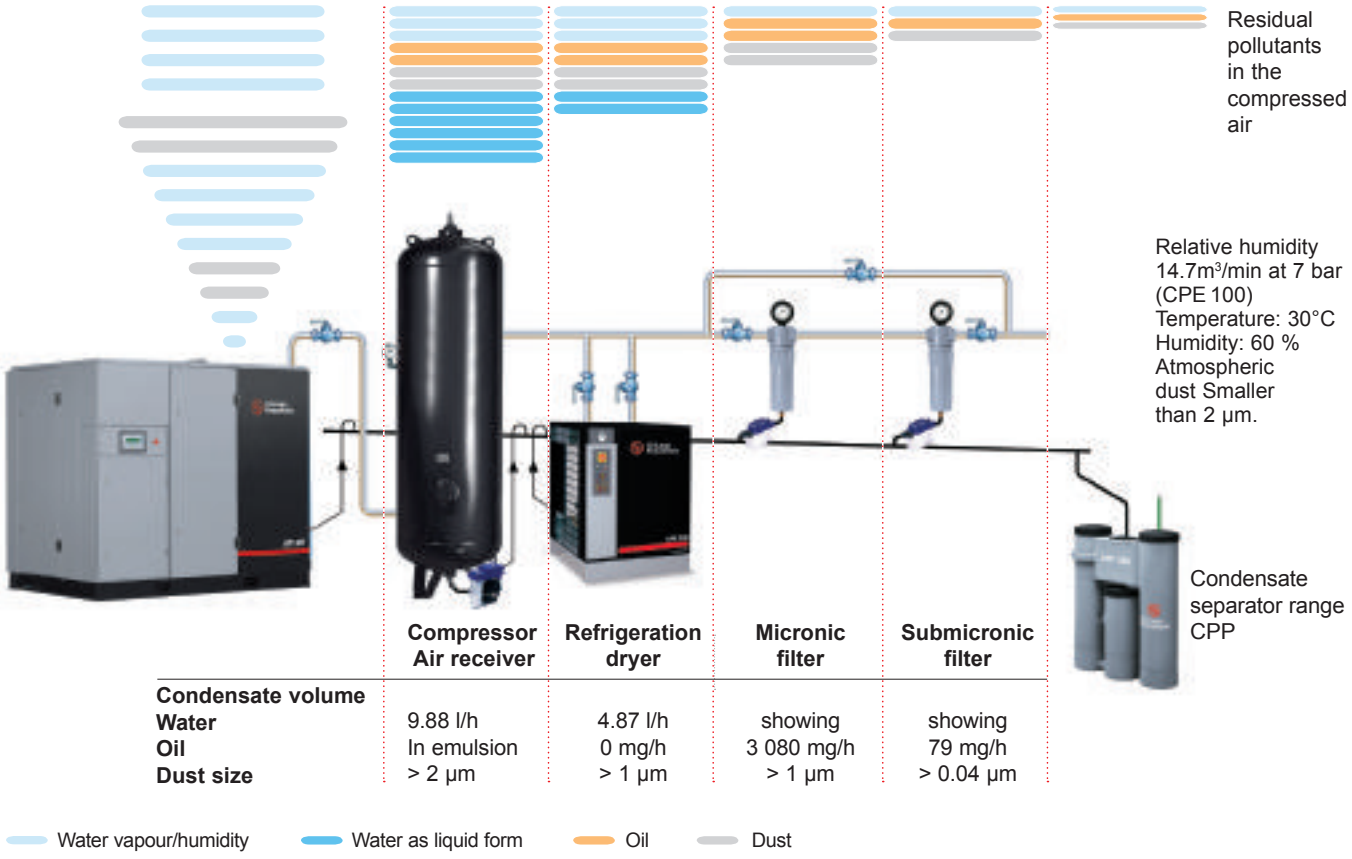
Removal of contaminants in compressed air condensate

Compressed air contains dust particles and humidity from the environment, as well as compressor oil.
At the end of the compression process, when the air is cooled down, contaminated condensate is generated.
Current legislation requires condensate treatment before disposal.

During the compression process, contaminants such as dust particles and water vapour from the atmospheric air are mixed with the hot oil.
The Chicago Pneumatic OWS range enables the separation and removal of this contamination, so the water can be simply discharged on site into the wastepipe.

The Chicago Pneumatic OWS solution allows you to minimize your compressed air waste treatment costs and care for the environment at once: be fully compliant now with the most stringent environmental regulations at minimal operation costs with our easy to install solution.

Condensate volume in compressed air



	Compressor Air receiver	Refrigeration dryer	Micronic filter	Submicronic filter
Condensate volume				
Water	9.88 l/h	4.87 l/h	showing	showing
Oil	In emulsion	0 mg/h	3 080 mg/h	79 mg/h
Dust size	> 2 µm	> 1 µm	> 1 µm	> 0.04 µm

This drawing illustrates that during the air treatment process, 15.47 litres of water per hour, plus dust, and 3159 mg/hr of oil are produced.

The CPP Condensate Separator will reduce this oil content to 15 mg/litre, almost 14 times less.

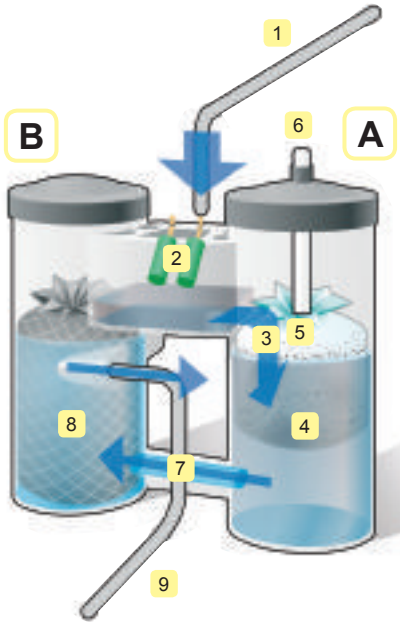
With such a small residual amount, it is possible to discharge the condensate into the foul drain, with no risk to the environment.

Simple concept
Compact and easy to use

The patented Chicago Pneumatic CPP condensate separator technolgy minimises the collection and treatment cost of compressed air waste products.

Compatible with all compressed air condensate, this universal system can easily be integrated into any compressed air installation.

Two filtration stages (oleophilic filtration and activated carbon filtration) give a guarantee of minimum oil content in the condensate before disposal.



Universal system that controls residual oil level

The Chicago Pneumatic CPP range of separators eliminates oil through multi stage filtration rather than the conventional gravity systems which have limitations on the type of condensate that can be treated.

As a result the CPP separator capacity is not linked to the type of emulsion collected, since it can treat the same volume of condensate whether saturated with mineral oil, semi synthetic oil or polyglycol.

1- Collection of any type of condensate including a mix of different oils.

2- Condensates are collected though mufflers located in an expansion chamber where first stage separation takes place by depressurization.

3- Water/oil emulsion enters column A and passes though an oleophilic media, made of oil absorbing fibres which allow water to pass through.

4- The oleophilic filter floats in column A.
This is advantageous for absorbing residual oil floating on the surface.

5- The weight of the filter increases as oil saturation increases. Oil progressively begins to reach the service indicator. Part of the filter that is not saturated keeps in contact with the water surface.

6- When the filter is totally saturated, there is indication that the filter needs to be changed.

7- Only cleaned condensate from the bottom of column A flows to column B.

8- Column B contains activated carbon, and absorbs the remaining oil in the condensate.
The large capacity of the system prevents any risk of spillage in case of blockage of the system or if the system produces excessive quantities of condensate.

9- Oil content is approximately 15mg/l, at reference conditions, at the outlet, a level that allows disposal of the condensate into the foul drain without risk to the environment.

A clean way to eliminate condensate

- **An universal system**

  By using oleophilic oil filtration, the system is able to deal with an extensive range of condensates, and pre analysis of the condensate is unnecessary.

  Oleophilic filtration captures the oil even in an unstable emulsion, which cannot normally be separated using gravity separation.

- **Easy to use**

  CPP condensate separators are resistant to vibration, shock and splashes that might occur during condensate injection.

  This treatment system is therefore compatible will all types of drains (timer, level detection…).

- ***Reliable design***

  Large volume of the expansion chamber ensures reduced emulsion of condensate.

  Oil is captured in the oleophilic filter. An oil can is therefore not required: oil collection is safe and reliable.

- **Condensate disposal of controlled quality**

  Residual oil is captured in the filter which is a guarantee of constant quality of the condensate even in the case of an unstable system (condensate emulsion).

  Life time of the cartridges is known.

- **Economic and simple maintenance**

  A service indicator is available for filter change before saturation.

Cartridge exchange can be done quickly by removing the separator cap

Technical data

Treatment capacity in an installation **with dryer**
Condensates are collected from compressor(s), air receiver(s), dryer(s), filter(s) for a daily operation of 12 hours.

	Cold climate			Temperate climate			Hot climate	
Ambient temperature (°C)	5	10	15	20	25	30	35	40
Relative humidity	60 %			60%			70 %	
	in m^3/h							
CPP 40	494	336	237	171	126	95	62	48
CPP 100	1341	913	643	465	342	257	169	131
CPP 150	2046	1394	981	710	522	392	257	200
CPP 360	5010	3412	2403	1738	1278	959	630	489
CPP 615	8538	5815	4095	2962	2178	1634	1074	833
CPP 850	11642	7930	5584	4039	2970	2228	1464	1136
CPP 1200	16652	11342	7986	5777	4248	3186	2094	1625
CPP 2430	33304	22684	15972	11555	8496	6372	4189	3250

Treatment capacity in an installation **without dryer**.
Condensates are collected from compressor(s), air receiver(s), filter(s) for a daily operation of 12 hours.

	Cold climate			Temperate climate			Hot climate	
Ambient temperature (°C)	5	10	15	20	25	30	35	40
Relative humidity	60 %			60%			70 %	
	in m^3/h							
CPP 40	635	433	305	220	162	122	80	62
CPP 100	1665	1134	799	578	425	319	209	162
CPP 150	2470	1682	1184	857	630	473	311	241
CPP 360	6139	4181	2944	2130	1566	1175	772	599
CPP 615	10725	7305	5144	3721	2736	2052	1349	1047
CPP 850	14394	9804	6903	4994	3672	2754	1810	1405
CPP 1200	20533	13985	9847	7124	5238	3929	2582	2004
CPP 2430	41066	27971	19695	14247	10476	7857	5165	4007

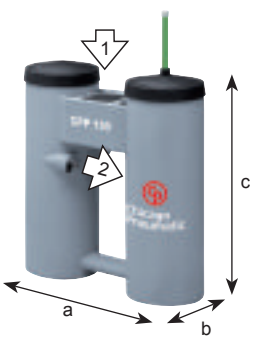
Capacity based on a residual oil content of 15 mg/l.

Service hours	8	10	12	14	16	18	20	22	24
rate	1.50	1.20	1.00	0.86	0.75	0.67	0.60	0.55	0.50

Relative humidity %	20	30	40	50	60	70	80	90
Corrective factor	3.38	2.12	1.54	1.21	1.00	0.85	0.74	0.66
Oil content of 10 mg/l	Multiply below capacity by 2/3							
Condensate made of poly-glycol	Capacity is half							

	Dimensions (mm)			Weight	Connections (G/NPT)	
	a	b	c	kg	Intel	Outlet
					1	2
CPP 40	470	165	600	4	1 x ½	1 x ½
CPP 100	680	255	750	13	2 x ½	1 x ½
CPP 150	680	255	750	15	2 x ½	1 x ¾
CPP 360	750	546	900	25	2 x ¾	1 x ¾
CPP 615	750	546	1030	26	2 x ¾	1 x ¾
CPP 850	945	650	1100	28	2 x ¾	1 x ¾
CPP 1200	945	695	1100	30	2 x ¾	1 x ¾
CPP 2430	945	1185	1100	60	2 x ¾	1 x ¾

Dimensions



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 tools and air compressors 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.

Chicago Pneumatic

ORIGINAL PART

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 and are approved for use on the specified 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 your quality assurance.

LLOYD'S REGISTER QUALITY ASSURANCE · ISO9001

LLOYD'S REGISTER QUALITY ASSURANCE · ISO14001

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