

120
YEARS

Screw Compressors

CPE 150 - CPF 480 and
CPVS 150 - CPVS 420



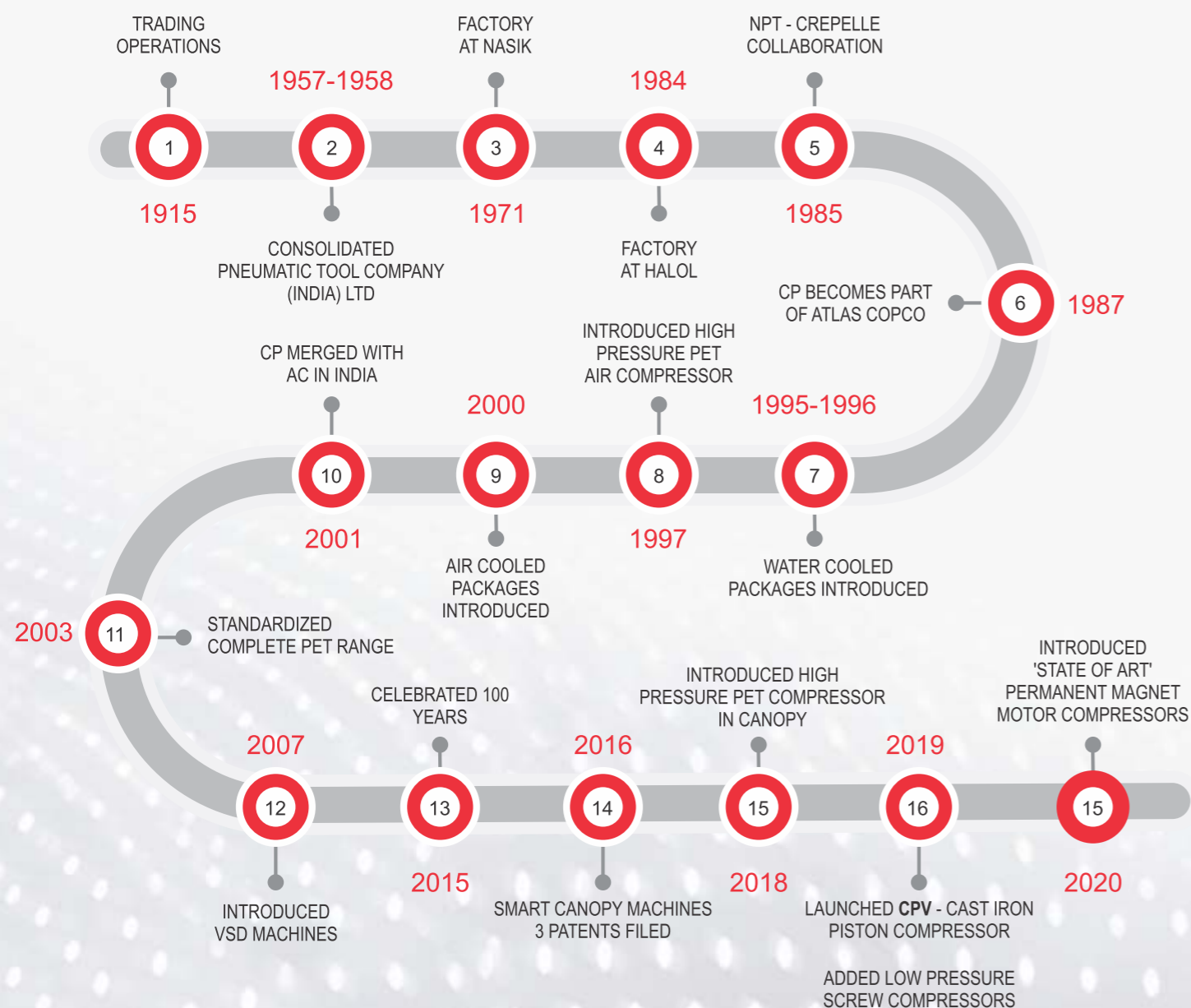
People. Passion. Performance.

 **Chicago
Pneumatic**

Over a 100 Years of Industrial Excellence in India

Chicago Pneumatic (CP) is a global leader in the design, manufacture and distribution of high-performance compressors. In addition to pioneering design, high impact technology and durability, Chicago Pneumatic means Customer Value. Our goal is to deliver best-in-class global service and local support to our customers through a dedicated product portfolio and a strong network of authorized distributors. We generate added value by delivering the best solution to meet your needs based on our decades of experience.

Today, CP is a global brand that offers products for countless applications and almost every industry. We are also proud to say that after all these years, CP still stands for reliability, durability and customer value.



Gearbox Driven

“Maximized productivity”



User benefits

- Time-proven design with highest reliability
- Robust, built-to-last compressor
- High performances and reduced energy consumption
- In house designed screw compression element for maximum uptime and efficiency
- Low maintenance and installation costs

Noise level



72 - 80 dB (A)

FAD



719 - 2137 CFM

Power



150 – 480 HP

Pressure



7 - 13 bar

Inverter Driven

“Top value through energy efficiency”



User benefits

- Cut your energy bill by 30%
- Optimal efficiency perfectly matching the air flow
- Quick return on investment
- Additional savings thanks to the advanced functionalities of the controller
- Energy recovery option that allows you to recuperate 75% of energy

Noise level



74 -80 dB (A)

FAD



191 - 1847 CFM

Power



150 - 420 HP

Pressure



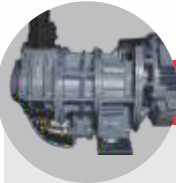
5 - 13 Bar

Energy efficient air solution for varying load demands.

The variable speed compressor series allows you to find the perfect match between air demand and air supply. Thanks to the inverter driven technology, the energy cost can be reduced upto 30%. Due to the robust design of the gear driven transmission, you can rely on high quality compressed air in the most demanding applications.



Inverter compressors reduce power consumption by 30%



Air End

- The unique in-house air end designed with 4/6 screw profile results in:
- Optimum energy efficiency over the entire speed range
 - No internal leakages in the compression chambers
 - Unique screw profile ensuring premium efficiency



Motor

- Superior quality and efficiency are guaranteed thanks to:
- Smart transmission engineering to minimize the internal loads resulting in longer bearing lifetime -
 - A perfect match between screw technology and gear box resulting in no long term losses
 - Robust design using casted, heavy duty components



Inverter

- Thanks to the inverter driven technology you can save up to 30% on energy cost because of:
- A perfect match of air demand and air supply
 - Eliminates unload cycles above 20% load
 - No peak currents thanks to soft start up



Controller

- The full colour graphic controller brings intelligent saving features thanks to:
- Optimum zone control
 - Integrated sequencer for 4 up to 6 compressors
 - Web visualization
 - No pressure fluctuation thanks to instant pressure logging and communication with compressor drive
 - Dual pressure band operation

Energy audit:

An IVR compressor potentially offers upto 30% energy savings ,with an ROI less than 18 months.

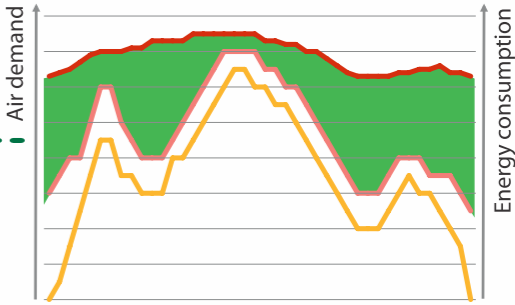
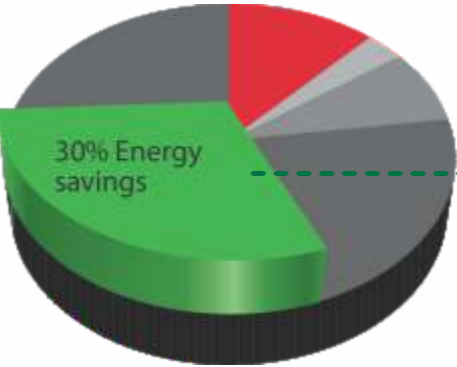
Chicago Pneumatic has developed the Energy cutter, a tool that calculates yearly savings from an IVR compressor.

We offer energy audits, specialized advice to make sure you make the right decision when buying your compressor.



We protect your efficiency

Energy costs represent about 77% of the total operating cost of your compressor over a 5 year period. That's why reducing the operating cost of a compressed air solution is a major focus. Variable frequency driven compressors can cut the energy bill of your compressor by up to 30%.



- 12% investment
- 3% installation
- 8% Service
- 77% Energy consumption

- Air demand
- Variable frequency driven costs
- Load Unload costs
- Savings



Lower running cost
Only uses energy for air production; no wastage of energy on partial unload



Electromagnetic compatibility
No interference to near by equipments



Frequency converter
Built in frequency converter to perfectly match the varying air demand and supply



Smart controller
Advanced controller with fully loaded features



Pressure band
Regulates pressure within 0.1 bar



No unloading power
Eliminates unloading power to almost 0% ensuring energy savings



Constant power factor
Machine maintains high power factor even with reduced loads



Profitable investment
Saves upto 30% power ensuring early payback and (long run power saving)



Environment friendly
Reduced carbon-di-oxide emissions in turn saving environment



Silent running
Very low noise level ensuring machine can be kept close to the point of use



100% factory tested
Factory tested machines at critical speed to minimize vibration / resonance risk



Soft startup
Ensures no current peaks extending life of parts

Component overview

Screw Element

- Patented asymmetric Profile
- Premium Performance
- Highest efficiency
- In-house design
- Cold oil injection
- Multiple injection point
- Unique 4/6 Profile
- Suitable for optimum zone
- Highest reliability

Intelligent Controller

- 3.5" full Colour screen
- User Friendly interface
- Running Parameters
- Intelligent unload cycle control
- Graphical indication service plan
- Additional communication possibilities

Optimized Cooling System

- Separate oil and air cooler
- Optimized for lower operating temperature
- High reliability
- Longer life

Control Panel

- Reliable electrical components
- High Operator safety
- Optional efficiency
- Maximum reliability

Integrated Water Separator

- Efficient separation of bulk moisture
- Low pressure drop
- Automatic Drain
- Standard for CPF Range

Unloader

- Convenient and reliable design
- Vacuum assisted unloader
- One moving part
- Minimum wear and tear
- Highly reliable

Electric Motor

- IE3 Premium efficiency motor
- IP 55, Insulation Class F
- Designed for continuous operation
- Suitable for Indian conditions and temperatures up to 46° C
- Premium Efficiency motors

Drive Train

- Gear box design
- Innovative design resulting smaller foot print
- Outstanding efficiency
- Increased reliability
- Robust design
- Heavy duty components

Air/Oil Separator

- Optimum oil separation in 3 stages
- Optimized for low operating temperature
- Oil carry over < 3 PPM
- Lowest pressure drop



Pressurized acoustic canopy

- Natural ventilation passage
- Smooth and consistent flow of cool ambient air
- Improved compression ratio
- Avoids suction pressure drop
- Protection to internal components from foreign particles

Pre Filtration Baffle

- Restriction to dust entry
- Cleaner compressor components
- Enhanced life of air filter

Efficient Air Filtration

- High quality filtration to maximize oil quality
- Protection to compressor element
- Long service life

Cooling Fan

- Optimal cooling flow
- Quite operation
- Lower operating temperature

Smart touch Controller



Next generation controllers for easy access.

Advanced new generation controller with latest features to suit all your needs.

Chicago Pneumatic offers range of control and monitoring systems for all compressed air products. The next generation ES 4000 swipe and touch controllers system offers a great variety of control & monitoring features that allow you to increase your compressor's efficiency and reliability.

To maximize energy efficiency the controller has following features:

- Latest icon based controller
- Ideal for load / unload compressors
- Improved controller algorithm
- Continuous pressure follow up algorithm
- Auto restart after voltage failure
- Always restart (when activated)
- Loaded with communication ports
- Ethernet connection
- CAN connection
- I/O expansion connection

Dual pressure band

Multiple pressure bands can be switched using either of the following:

- Manually
- By timer
- By external DCS systems

By reducing the system pressure energy is instantly saved, a drop of 1 bar or 14.5 psi saves a total of 7% when leakage losses are taken into account.



Optional DCS connectivity



Connect & monitor the compressor from your control centre. Inbuilt RS 485 port facilitates DCS connectivity to your control centre.

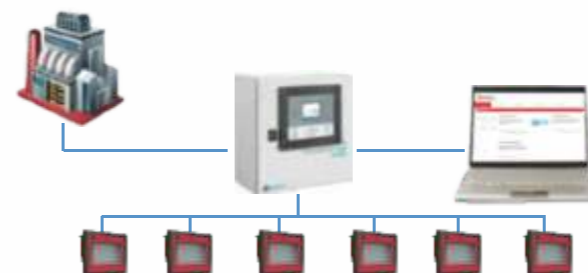


Online Monitoring

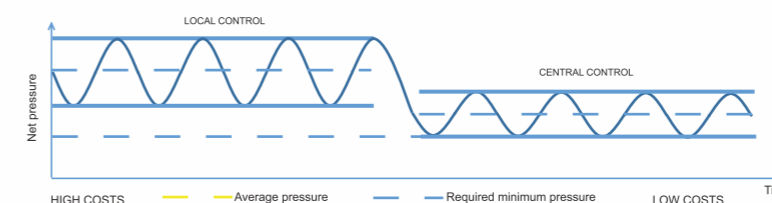
Monitor your compressor over ethernet with the new controller. Monitoring features include warning indication, compressor shutdown & many more...



E Control 6 – central compressor control

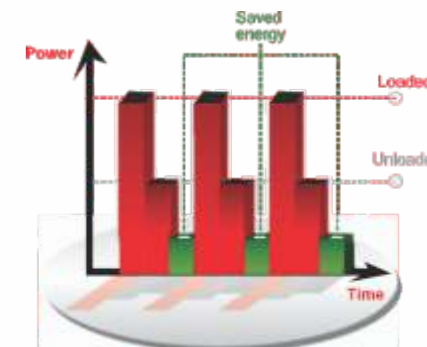
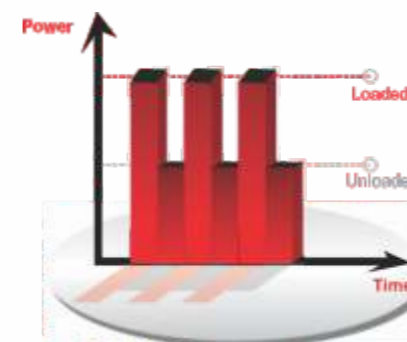


Centralised Control System capable to control up to 6 compressors with 2 Inverter Compressors, Connectable with Internet with the modern IoT Internet of Things technology.



Delayed Second Stop

- Most production processes create fluctuating levels of demand which, in turn, can create energy waste in low use periods.
- New Controller is more efficient, it keeps track of the time since the last stop occurred (Intelligent Unload Cycles)
- The result is that the machine can simply stop rather than unload, eliminating several minutes of unloaded running.
- Controller unloads rather than stops the machine if the pressure is dropping fast.
- Controller can predict the time until the minimum pressure limit is reached once the machine has stopped.
- Compressor restarts soon enough to ensure that the system pressure never drops below the desired minimum.



ICONS - Intelligent Connectivity System

With ICONS, there is no need for service logbooks or even regular visits to the compressor room.

A mouse click is all it takes to consult the service status of your compressor online.

A link takes you directly to your compressor supplier for a service quote request.

It's fast and easy, and it's always there when you need it.





Eliminate water, oil & dirt from your air system for efficient productivity

Today, process equipments are extremely sophisticated which require compressed air free from impurities like moisture, dust etc.

Thanks to the reliable and efficient quality air solution products from Chicago Pneumatic, customers are rest assured about the quality of air delivered at the point of application.



Online filters

Reliable filtration for superior system protection from dirt, oil and moisture.

G Series - Pre filter with micron rating 0.1, maximum oil carry over 0.1

C Series - After filter with micron rating 0.01, maximum oil carry over 0.008

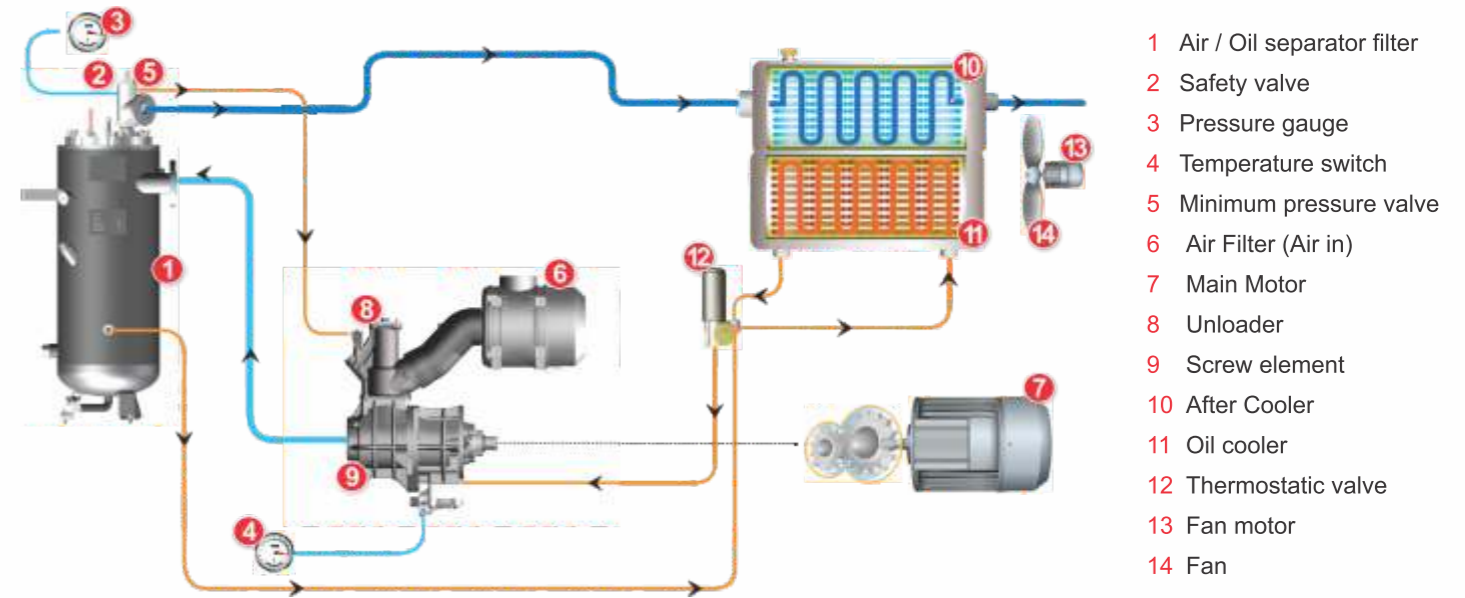
V Series - Carbon activated filter with micron rating 0.005

Refrigerated dryer

- 1.Environment friendly gases R513A , R410A, R452A
- 2.quality dry air for cost effective compressed air system
- 3.Guaranteed constant PDP of +3°
- 4.Wide range from 10 CFM- 3500 CFM



Flow Diagram



Energy Box (11-180 KW)



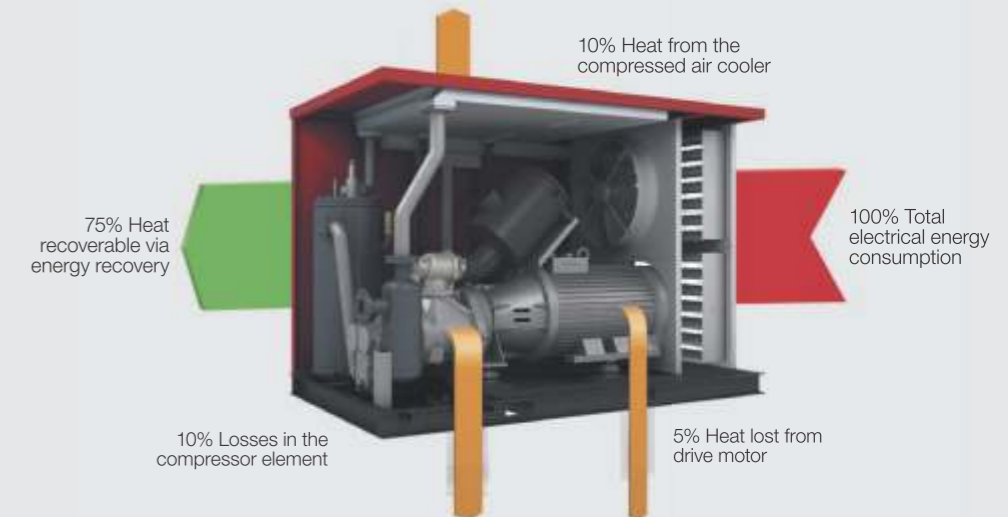
Ultimate solution for energy recovery

When air is compressed, heat is formed. The excess heat can be captured with an energy recovery option - Energy Box and can be channelled, allowing you to save energy and cut costs.

Extensive applications include textile, dairy, pharmaceutical, paper, food and beverage, process industry and many more.

We recover your energy

When air is compressed, heat is formed. The excess heat can be captured with an energy recovery option and channelled to other applications allowing you to save energy and cut costs.









Heat recovery - Recover 75% of your energy









In the case of water-cooled or air-cooled compressors, the oil circuit is pre-cooled with an oil/water heat exchanger. Water then becomes the fluid transport media to recover the oil temperature. The hot water resulting from this process can be used to heat radiators or water boilers, pre-heat supply water or hot tap water, and other industrial applications. The energy recovery option integrates a heat exchanger on the oil circuit, which heats up the continuously pressurized water flow. The system is regulated automatically, and in case of limited water cooling capacity, the standard cooling system of the compressor will operate and backup the energy recovery device. The energy recovery option is a simple mechanical system that requires no maintenance or electricity consumption, but offers you significant reductions in your energy costs.

Fixed Speed

Model											
	HP	Capacity CFM				dB(A)	End Connection	Weight (KG)	L	W	H
		7 Bar	8 Bar	10 Bar	13 Bar					MM	
CPE 150	150	719	676	575	475	74	2"	1870	2210	1200	1600
CPF 150	150	750	710	630	522	77	DN 80	3580	2845	1750	1930
CPE 180	180	810	793	689	558	79	DN 80	1920	2255	1600	1230
CPF 180	180	912	869	770	640	73	DN 80	3300	2855	1755	1930
CPF 220	220	1043	992	905	774	73	DN 80	3350	2855	1755	1960
CPF 221	220	1210	1169	1069	951	79	DN 100	3850	3500	1750	1985
CPF 270	270	1211	1170	1071	952	79	DN 100	3950	3525	1755	2005
CPF 271	270	1384	1297	1177	-	77	DN 125	5200	4800	2155	2275
CPF 340	340	1467	1389	1325	1158	80	DN 100	4170	3525	1755	2005
CPF 341	340	1628	1495	1391	-	77	DN 125	5350	4800	2155	2275
CPF 420	420	1849	1847	1704	-	78	DN 125	6350	5100	2150	2250
CPF 480	480	2137	2135	1887	-	79	DN 125	6380	5100	2150	2250

Inverter Driven

Model															
	HP	Capacity CFM								dB(A)	End Connection	Weight (KG)	L	W	H
		7 Bar		8 Bar		10 Bar		13 Bar					MM		
		Min	Max	Min	Max	Min	Max	Min	Max						
CPVS 150	150	191	693	178	653	148	562	119	475	78	2"	2070	2450	1230	1600
CPVS 151	150	225	750	214	710	189	630	157	522	77	DN 80	3580	2845	1750	1960
CPVS 180	180	227	810	220	793	187	689	144	558	79	2"	2330	2450	1230	1600
CPVS 181	180	267	893	252	840	223	742	193	640	77	DN 80	3580	2845	1750	1960
CPVS 220	220	301	1000	290	971	267	888	233	774	78	DN 80	3630	2845	1750	1960
CPVS 221	220	363	1210	351	1169	321	1069	285	951	79	DN 100	3850	3500	1750	1985
CPVS 270	270	363	1211	352	1170	322	1071	286	952	79	DN 100	4160	3600	2100	2025
CPVS 340	340	441	1467	418	1389	399	1325	354	1158	80	DN 100	4390	3600	2100	2025
CPVS 420	120	555	1847	554	1846	511	1702	-	-	79	DN 125	6900	5100	2155	2275

Note : 1. Unit performance measured as per ISO 1217: Ann E- Ed.4 2009
2. Noise level measured according to ISO2151 / Pneurop / CAGI PN8NTC2.
3. Dimensions in mm (L x W x H).

Maintenance and installation guidelines

Dimensions in mm (L x W x H).



- 1 Compressor
- 2 Earthing
- 3 SFU (Switch Fusing Unit)
- 4 Copper cable
- 5 Exhaust dust
- 6 Floor leveling
- 7 Moisture separator
- 8 Exhaust fan
- 9 Air receiver
- 10 Safety valve
- 11 Pressure gauge
- 12 Pre-filter
- 13 Dryer
- 14 After Filter
- 15 By pass valve
- 16 AIR net piping

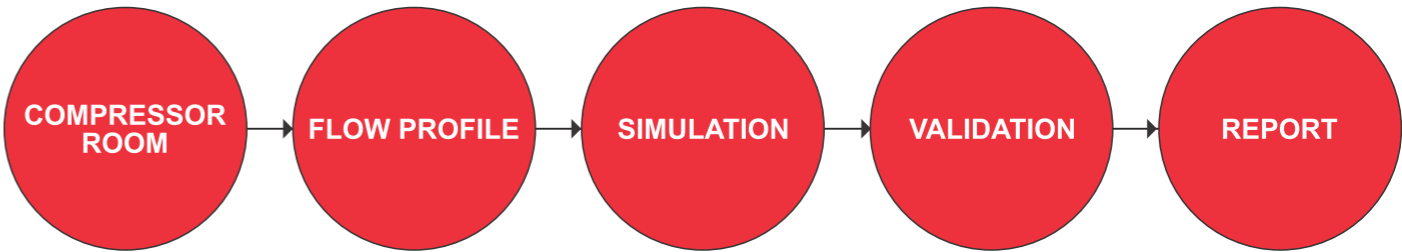


Calculate your savings and show them the way up to your bank!

Introducing the Future of Air Audits – “Airchitect”

Why Airchitect?

- Up to 35% energy losses due to unload
- Every 1 bar drop in pressure output results in around 7% energy savings
- Older installation have leakages up to 20%



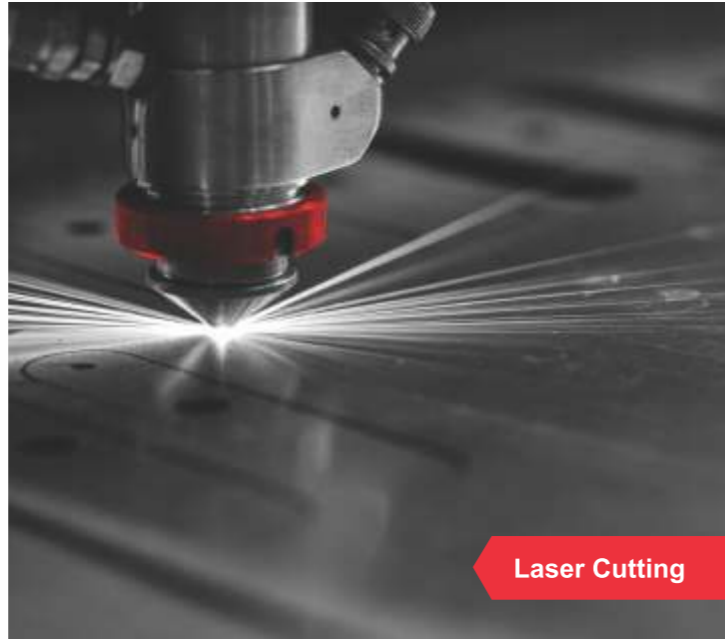
We value your feedbacks and endeavour to continuously improve our products and services.

Service ahead of time.
Original parts, Your quality assurance.

We serve many industries...



Machining



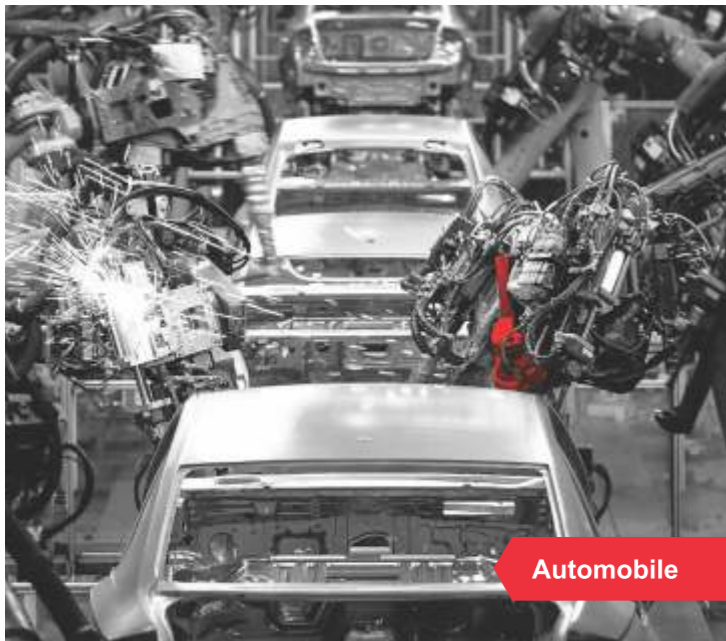
Laser Cutting



Metal Working



Wood Working



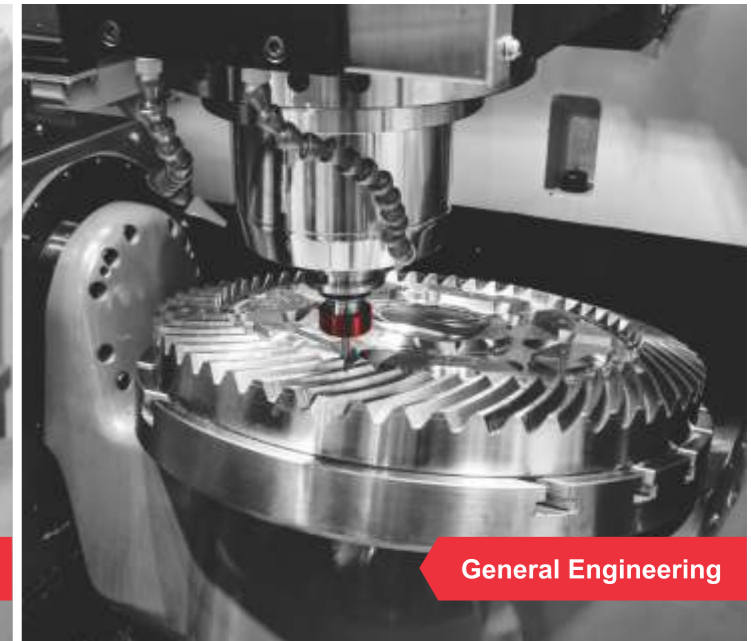
Automobile



Oil and Gas



Paper and Printing



General Engineering



Colour Sorter



Aerospace



Pharmaceutical



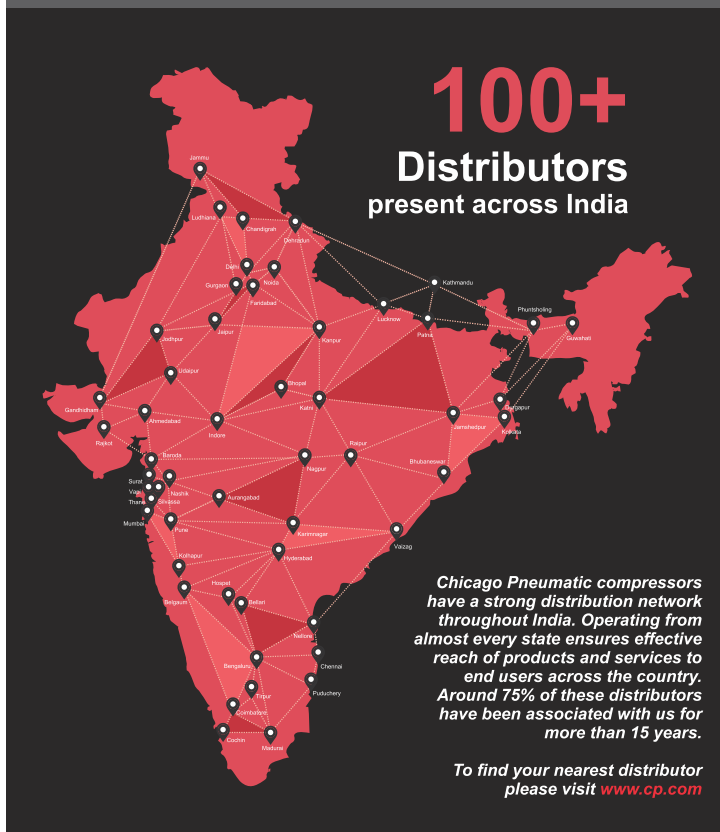
Spinning (Textile)



People. Passion. Performance.

For more information, please contact your CP partner

Dealer Network



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East	Kolkata
Central	Hyderabad
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Dealer Stamp

