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RS/290

Nov 22, 2022

## **GNE Lifesciences**

Puhana Road  
Roorkee-247667 UK

**Kind Attn.: Mr. Banmeet makkar Ji**

Dear Sir

### **Sub: Offer for Air Compressors**

With reference to your above-mentioned enquiry for your requirement of Air Compressor we are pleased to submit our offer as per enclosed annexures.

**Chicago Pneumatic (Indigenous) Stationary, Electric Motor driven, silenced package screw air compressor model: Chicago Pneumatic Model CPB 30 TMD, Screw, Single Stage, Lubricated, Air Cooled air compressor having capacity 129 CFM at 8 bar working pressure with 22 KW motor.**

We understand the importance of reliability, as well as performance. This is assured through our groundbreaking integrated compressed air technology, quality air accessories and a wide range of service options.

Our mission is to continue to bring sustainable productivity through safer, cleaner, more energy-efficient, cost-effective compressed air technology, as a result, every compressed air solution we create helps customers operate with greater efficiency, economy, and productivity.

Chicago Pneumatic has been in the Indian market for more than 100 years, with the headquarters located In Pune, Maharashtra.

We hope you will find our above offer in line with your requirement and look for your further valued instructions in the matter.

Yours truly,

**For ATCORP**

Rahul Singh  
8448293751

**Scope of Supply of Silenced Screw Air Compressor**

**Specifications of Rotary Air-Cooled Electric Motor Driven  
Silenced Screw Compressor With Air Dryer and Receiver Tank**

**Technical Data: - CPB 30TMD- 8 BAR**

<b>Model</b>	<b>Motor (HP)</b>	<b>Pressure (Bar)</b>	<b>Capacity (CFM)</b>	<b>dB (A)</b>	<b>End Connection</b>	<b>Weight (KG)</b>
CPB30	30	8	129	69	1"	370

Dimensions (L W H) In mm: **(800 X 800 X 1245)**

**Compressor:**

- One Single Stage, Rotary Screw Element Complete With,
- Dry Paper Type Suction Air Filter With Silencer
- Conveniently Located For Easy Replacement Of Filter Element
- Unloader With Integrated Regulating Valve For Load/Unload Control System
- Simple Design With Only One Moving Part, Needs No Regular Adjustments
- Three-Way Solenoid Valve Required For Load/Unload Regulation Of The Compressor
- Air / Oil Temperature Switch / Gauge.
- Air Oil Temperature At Element Outlet And To Shut Down The Compressor In Case Of Too High Element Outlet Air Temperature.
- Air Check Valve At The Element Discharge End.

**Air Oil Receiver Tank:**

- Sight Glass For Oil Level Indication And Oil Filling Arrangement
- Minimum Pressure Valve To Close Off The Compressor From The Air Net When The Unit Is Stopped Or Running Unloaded And To Maintain Required Air Pressure In The System For Proper Oil Lubrication.
- Safety Valve
- Gauge For Air Oil Receiver Pressure
- Oil Draining Arrangement
- Three Stage Air Oil Separation System
- First By Cyclonic Action (Centrifugal), Second By Gravitational (Heavier Particles Separate Down), Third By Passing Through Coalescent Filter

**Air & Oil Cooler Assembly:**

- Air & Oil Cooler Are Compact Block Coolers Of Aluminum For Optimum Heat Transfer. Lower Pressure Drop And Lower Weight. After Cooler Reduces The Temperature Of Outlet Air To Approximately 8 To 10° C Above Ambient Temperature.
- Oil Filter Mounted On Air Oil Cooler For Filtration Of Lubricating Oil
- Thermostatic Valve To Regulate Oil Temperature Within The System.

**Motor:**

2 Pole, Squirrel Cage Induction Motor With TEFC IP 55 Enclosure, Class F Insulation, Suitable For 45° C Ambient Temperature And 400 +/- 10% Volts, 3ph., 50 +/- 3% Hz Supply. Bearings are greased for life.

**Power And Control Panel:**

- Power Panel Incorporating;
- Suitable Star-Delta Starter With Contactors, Relays Etc.
- Single Phasing Preventor Ensures Safety Of Compressor By Tripping In Case Of Single Phasing
- Emergency Stop Button

**Control Panel:**

- **ES 3000 "Energy Saving" Electronic** Regulation And Monitoring System Which Permits Following Control & Monitoring Functions:
- **Start Stop And Reset Push Buttons (Feather Touch Contacts)**  
For Starting, Stopping And Resetting The Fault After Necessary Rectifications.
- After Pressing Stop Button Compressor Runs Idle For 30 Seconds Before Stopping Ensuring That Compressor Never Stops In "Load" Condition And Reduces System Temperature Gradually.
- **Digital Indication (LCD Display)**
- Working Hours Indication For Load & Total Working Hours.
- Temperature Indication.
- Display Of Load & Unload Pressure Setting.
- Working Pressure.
- **Compressor Status Indications.**
- Voltage On (LCD Indication).
- Compressor On (Stand-By, Start-Up & Shut Down Mode).
- Compressor In "Un-Load" Condition.
- Compressor In "Load" Condition.
- **Compressor Maintenance Program (For Warning At Preset Hours)**
- General Check Up.
- Lubricating Oil Change Indication.
- Suction Filter Element Change Indication.
- Separator Element Change Indication.
- Oil Filter Element Change Indication.

- **Compressor Warning & Shutdown Indications (LED Indications)**
- General Alarm Indication In Progress For Fault In Pressure And Temperature Probes (Alarm)
- Motor Overload (Alarm & Trip)
- Element Outlet Air Temperature High (Alarm & Trip)
- **Compressor Working Parameters Input For ES 3000**
- Selection Of Load & Unload Settings For Air Pressure
- Maximum Operating Temperature
- Number Of Starts For Motor Per Hour
- Selection Of Unit Of Measurement For Temperature In Deg C Or Deg F
- Selection Of Unit Of Measurement For Pressure In Bar Or PSI
- **Automatic Operation With Energy Saving ES 3000**
- The **ES 3000** Compressor Management Software Allows Considerable Reduction In Electricity Consumption
- Regulation With Es 3000 Controller Allows The User To Considerably Reduce Electrical Energy Consumption In The
- No - Load Condition, Through The " Intelligent Shut Down" Feature, By Automatically Calculating, Cycle - By - Cycle, The Minimum No-Load Functioning Time, Based On Air Consumption And The Maximum Number Of Start-Ups Per Hour Programmed.
- Once Maximum Pressure Has Reached, In The Absence Of Demand For Air, The Compressor Switches To No-Load.
- Energy Saving Is Obtained By Stopping The Compressor, Following Shortest Possible No-Load.
- This Ensures; That Maximum Number Of Start-Ups Per Hour Programmed Is Not Exceeded, Immediate Re-Starting In Order To Satisfy A Subsequent Requirement Of Air.

#### **Acoustic Canopy & Drive Arrangement:**

- Compressor Package Is Enclosed In A Powder Coated Acoustic Canopy With Sound Absorbing Material For Limiting The Noise Level.
- Canopy Is Pressurised Ensuring No Pressure Drop At Suction Filter And Avoids Entry For Dust Particles In The Element
- Anti-Vibration Mounts Support Electric Motor And Compressor Unit And Isolate The Moving Components From Rest Of The Structure, Thereby Reduces Sound Level And Avoids Need For Anchoring The Machine On Floor.
- Cogged Belts And Pulley Drive Arrangement For Efficient Power Transmission, With Ease Of Belts Removal & Tensioning.
- Paper Flyer With "Ok" Indicating Sign Stuck At The Top Panel Air Exhaust To Indicate Correct Rotational Direction Of Motor.

#### **Prefilter Panel:**

- Suitably Sized Prefiltering Arrangement For The Air Entering The Canopy Of Compressor Unit. Easily Removable For Cleaning Purpose.

**Receiver:**

Entire CPB Compressor Is Mounted On 500 Liters Nominal Volume Air Receiver Complete With,

- Suitably Sized Safety Valve And Discharge Valve
- Receiver Is Horizontally Mounted With Sturdy Supports At Bottom

Supports Are Specially Designed To Allow The Unit To Be Lifted From Any Of Its 4 Sides With Forklift / Transpallet.

**Refrigerated Dryer:**

- Powerful Refrigerated Dryer Mounted Besides The Compressor On The Receiver Tank
- Pressure Dew Point Of  $+3^{\circ}\text{C}$  At Reference Ambient Temperature Of  $20^{\circ}\text{C}$
- Environment Friendly Refrigerant R 134 A
- Dew Point Indicator
- Compressed Air From CPA Compressor Unit Enters The Receiver Tank Before Entering The Refrigerated Dryer Unit Ensures That Adequate Cooling Of Compressed Air In The Receiver Tank Before Entering The Refrigerated Dryer,
- Reduces The Load On The Refrigerated Dryer And Considerably Reduces The Input Power To Refrigerant Compressor / Dryer;
- Enhanced Performance Of Refrigerant Dryer To Achieve Better Relative Pressure Dew Point For The System.

**Filter Assembly (Pre Filter: 1 PPM & Post Filter: 0.01 PPM):**



- Pre - Filter Is Mounted In The Air Passage Between Receiver And Dryer
- Post - Filter Is Mounted In The Compressed Air Passage Between Air Dryer And Air Discharge Valve

- **Dryer & Filters Assembly Are Factory Installed, To Ensure;**
- Cleaner Compressed Air For Usage Resulting In
- Lower Maintenance Costs For Distribution Net Work, Machinery And Pneumatic Tools
- Energy Savings Through Reduced In - Line Pressure Drops,
- Improved Productivity Due To Fewer Down Time Of The System
- Better Final Product Quality

**Ready To Commission Compressor Unit:**

- Air Compressor Unit Can Be Put Directly On The Industrial Floor And Is Provided With First Fill Of Oil.

## Fixed Speed Compressor

### Range CPB

#### Description

High performance, silent running, simple installation and maintenance, makes the CPB compressor belong to the top-class models currently available in the market. The use of highly reliable components and the high productive efficiency of our renewed assembly lines, result in an even more reliable product.

The belt-driven range of oil-injected screw compressors is the true standard in the industry. The components have been carefully selected to assure optimal quality and reliability. While the footprint is reduced thanks to the smart transmission system and component arrangement, performance is guaranteed thanks to the in-house designed air end. Base mounted or tank mounted with dryer, the CPB is a complete solution for your business.



Paint Booth



Maintenance Shop



Food & Beverages



Packaging



Brewery



Injection Molding



Colour Sortex

**Technical Specification: CPB 30TMD – 8 BAR**

<b>Reference Conditions – Metric</b>		
Absolute Inlet Pressure	BAR / PSI	1 / 14,5
Relative Humidity	%	70
Air Inlet Temperature	°C / F	20 / 68
<b>Limitations</b>		
Maximum Effective Working Pressure	BAR	7
Minimum Effective Working Pressure	BAR	4
Reference Pressure	BAR	7
Maximum Ambient Temperature	°C	46
Minimum Ambient Temperature	°C	0
<b>Performance Data</b>		
FAD At Effective Working Pressures Stated:	CFM	129
<b>General Data</b>		
Installed Power	HP – kW	<b>22</b>
Electrical Connection	V/ph/Hz	400/3/50
Type of Cooling		Air
Sound Pressure Level	dB(A)	69
Fuse Size	A	See instruction manual
Oil Capacity	Liters	8
<b>Installation</b>		
Tank	Liters	500
Length	MM	
Width	MM	
Height	MM	1810
Weight	KG	n.a.
Weight with Dryer	KG	
<b>Connections</b>		
Air outlet	G	1"



### Describing the system:

We identify two main types of compressors: reciprocating compressors and screw compressors. A comprehensive compressed air system, which meets modern budgetary, accessibility and environmental demands, consists of the following units.

### The following factors are essential when designing a compressor system:

- What amount of compressed air is needed to perform the proposed job ?
- What quality of water, oil and particulate content of the compressed air is required for the supporting equipment ?
- During which operational cycle is the compressed air used ?
- Which operating pressure does the supporting equipment require ?

#### DUST OR COALESCENCE FILTER

(0.1 micron / 0.1 mg/mc) filters with the ability to intercept solid / liquid particles. Suitable as a pre-filter to avoid premature clogging of the oil separator filter.

#### FINE COALESCENCE FILTER

(0.01 micron / 0.01 mg/mc) suitable for use in installations where purity of air is a must.



#### ACTIVATED CARBON FILTER

(0.005 ppm / 0.005 mg/mc) to remove oil (odours & vapors) for applications where very low oil content is required.

#### RECEIVER

Storage and handling of high air consumption, for pressure stabilization and condensate separation

#### REFRIGERATION

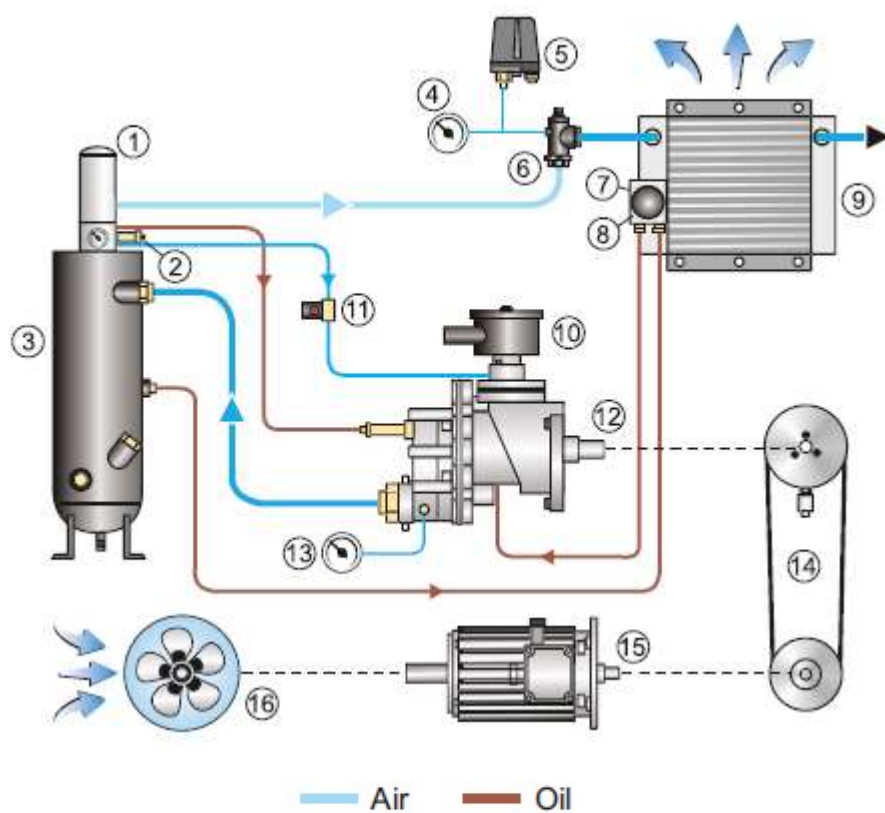
Eliminates water down to a pressure dew point of 37.4°F. ( at reference conditions ) with a water content of 6 gr/m<sup>3</sup>.

#### OIL WATER SEPARATOR

Separating both substances (water & oil) resulting in rinsed water which can be discharged easily.

### Flow Diagram Screw Compressor

A compressor with screw technology compresses the air via two interlocked rotors, a male and female rotor. These rotate in opposite directions, reducing the volume of air between them and their housing. To avoid air leaking between the rotors, the rotating elements are sealed by oil, which also prevents overheating. A screw compressor typically will have less moving parts. This allows the element to run at a high speed, producing high volumes of air relative to its small dimensions, making it ideal for applications where continuous air flow is needed. It also enhances longer life time.



1. Air / Oil Separator Filter
2. Safety Valve
3. Oil Tank
4. ES 3000
5. Pressure Transducer
6. Minimum Pressure Valve
7. Thermostatic Valve
8. Oil Filter

9. Air / Oil Cooler
10. Air Intake Filter
11. Solenoid Valve
12. Screw Compressor Unit
13. Temperature Transducer
14. Transmission Unit
15. Electric Motor
16. Cooling Fan

#### General Comparison Between Screw & Tank Mounted Piston Compressors



#### Energy Savings with Inverter Driven Screw Air Compressors

##### Brief Description of the Equipment:

Chicago Pneumatic Screw type Air Cooled Air Compressor with Variable Speed Drive having a variable capacity between 40% to 100% at max working pressure from 4 Bar to 13 Bar and fitted with TEFC, F Class motor which is specially designed for operation at variable speeds.

The unique feature of these machines is that *there is no unnecessary waste of power owing to unload operation of compressor.* The motor speed in this compressor will vary according to your air demand and the *consumption of energy will match exactly the demand pattern.*

The advantages of Variable Speed Drive compressor are as follows:

- Cuts energy cost to up to 35% by avoiding unloaded power consumption completely.
- Pressure band is within 0.1 bar resulting in further 6% saving compared to conventional compressors using electro pneumatic controls.
- Outstanding electrical characteristics of *High Power Factor and starting current always less than full load current.*
- Low maintenance cost because of less stresses and wear on all mechanical components.

**Air-cooled Compressor** – Hence no cooling tower required / no additional pumping cost / no maintenance of water pumps / no descaling of heat exchangers / no softening plant required.

**ES 3000 Controller** - with all **service indications** available on ES 3000 panel which helps in preventive maintenance and **highest availability** of the machine.



**No foundation** required - a very compact machine.

**No Vibration** – Can be installed anywhere near work place / Terrace.

Chicago Pneumatic makes screw compressors are built not only to last, but also to operate cost-effectively. Running costs are kept low through the lifetime of the compressor, maintenance is simple and straightforward, and energy saving devices are built-in.

## GENERAL TERMS & CONDITIONS GOVERNING OUR OFFER

Model	QTY	List Price/Unit (Rs)	Discounted Total
CPB 30 TMD 500 LTR– 8 KG 129 CFM	1	11,50,000.00	5,95,000.00
CPB30 TMD 500 LTR – 13 Kg 96 CFM	1	11,50,000.00	5,95,000.00
<b>Total Price</b>		<b>23,00,000.00</b>	<b>11,90,000.00</b>

**Total Final Price Rs. 11,90,000.00**

GST, Freight Extra

Prices quoted are Ex-Works Basis. Packing and Forwarding charges will be charged on total ordered material value.

### TAXES & DUTIES:

**GST @ 18 % shall be charged extra**

### OTHER LEVIES:

Octroi and / or any other Government Levies after dispatch wherever applicable will be to your account.

### FREIGHT & TRANSIT INSURANCE:

Freight will be charged extra on **“TO PAY”** basis. Please indicate the name the person and his contact address/ telephone number at site who will be taking delivery and paying for the Freight charges prior to delivery at site.

Prices quoted are exclusive of Transit Insurance. In case we have to organize for Transit Insurance additional charges of 0.23% on the total value will be charged. Please note that your claim for any loss for damage in transit will be accepted only if L. R. is endorsed with a remark “received in damaged condition” and it is submitted in writing within 7 days of receipt of consignment at destination duly supported by a certificate of such losses/damages from the carriers.

### DELIVERY:

As mentioned in our quotation, please note that the delivery is to be counted from the date of receipt of technically and commercially clear order by us along with advance payment.

Delivery is given in good faith and every endeavor will be made to maintain it. However if there are delays due to factors beyond our control, we are not agreeable to pay any such penalty or liquidated damages or cancellation of the order and purchase of equipment at our risk and cost elsewhere.

All Deliveries are subject to FORCE MAJEURE conditions.

**TERMS OF PAYMENT:**

30% Advance against PO / LOI and balance 70% of material value along with 100% taxes and duties will be paid against Proforma Invoice prior to dispatch of the equipment.

**WARRANTY:**

CP warrants that the equipment supplied shall be free from functional defects in materials and / or workmanship for a period of **12 months from the date of commissioning / 4000 working hours / 15 months from date of dispatch, whichever is earlier**. Our liability under this warranty is expressly limited to repairing / replacing at our option, any components / parts, which upon our inspection are found to be defective. This warranty does not cover normal wear and tear and / or any damage that may be caused due to misuse or mishandling and / or negligence in operation and / or maintenance.

**SPARE PARTS:**

We keep sufficient stock of spare parts and therefore, you shall not experience any difficulty in procuring the same when required.

**INSPECTION AND TESTING EQUIPMENTS:**

Each compressor is tested in the plant.

However **if customer wishes to witness for final Mechanical Run Test and Performance test at our works prior to dispatch then a separate work order to be issued along with full payment along with the equipment PO**, Our charges for the same are Rs. NIL per machine, and Test Sheet records for above performance tests shall be furnished.

In case the dispatch clearance is not available within a period of maximum 10 days from the date of customer inspection then CP reserves the right to divert the machine to any other customer, if required, and all the test reports submitted would automatically become null and void. Stage Inspection cannot be offered.

**AFTER -SALES -SERVICE (COMMISSIONING):**

The Compressors offered by us are easy to operate. Maintenance and detailed instructions for this purpose shall be sent to you with every machine. Our products are backed-up by well organized and efficient after-sales-service set up.

Our service personnel's are trained to--

- Have effective solutions, to improve your machine availability
- Effectively reduce your Inventory of spares and maintenance cost
- Give total solutions



Our Service Personnel, during commissioning at your site shall train your personnel on operation and maintenance of compressors.

We also conduct periodically training programs on chargeable basis on compressor operation and maintenance. You are welcome to depute your service personnel for these programs.

Please note that at the time of commissioning all utilities like electricity, water, oil, etc. shall be arranged by you.

**SCOPE OF OUR OFFER:**

The scope of supply and specifications will be strictly as per details given in our tender offer. In case any additional item/accessories are required to be quoted, please advise us accordingly. Our offer is based on the data considered by us in selecting the offer for compressors / other equipment. In case of any variation in the same our offer may change accordingly.

Chicago Pneumatic Sales A Div of Atlas Copco (India) Ltd will not be responsible nor will it be held liable for any loss or damages arising to the buyer, as a result of delay, if any, in delivery / commissioning of the machine/s and /or the products of the Company due to site in availability or reasons beyond the control of CPS/ ACIL or for any product deficiency arising by reason of improper or wrongful use by the buyers of the machinery and/ or the products of the Company.

**PART DESPATCHES:**

Part dispatches will be permissible. We reserve the option to dispatch bought-in items directly from our sub-vendors' works directly to your project site.

**SAFETY, HEALTH & ENVIORNMENT:**

Please attach safety health & environment requirement along with your Purchase Order for our records & reference.

**VALIDITY:**

We are pleased to keep our offer open for your acceptance for a period of 30 days from the date of this offer.