COMCHI

Your Partner in Industrial Solutions

Company Highlights

Comchi Engineers is led by a team of multidisciplinary professionals with the vision to establish the company as one of the leading business groups in Screw Air Compressors, Industrial Chillers, Dehumidifiers, Reciprocating Air Compressors, Refrigerated Air Dryers, Air Receiver Tanks, and related compressor accessories.

We are strongly supported by a team of techno-functional professionals dedicated to meeting industry standards and exceeding customer expectations. As part of our commitment to quality and customer satisfaction, we are ISO 9001:2008 certified, ensuring a hassle-free customer experience.

Our Team

We are a young and dynamic team, committed to transforming the industry by solving real-world

Community

Our global community including our staff, board, and advisors is integral to the success of our team.

Quality

Our machines are regularly maintained by trained professionals to ensure hassle free and long-lasting performance.

Our Services

- Screw Air Compressors
- Reciprocating Air Compressor
- Industrial water Chiller
- Refrigerated Air Dryer

Dehumidifies and Pressure Vassal for today's industrial requirements.

We offer an extensive range of air compressors and accessories from sophisticated compressed air solutions.

About Company

Comchi Engineers Private Limited, established in 1995, is dedicated to serving various industries by delivering high-quality products through technical expertise and industry experience. The company specializes in manufacturing and supplying compressed air solutions, including industrial screw air compressors, refrigerated air dryers, chillers, air receiver tanks, dehumidifiers, and a wide range of utility project work. With a strong emphasis on growth and customer satisfaction, Comchi continuously strives to improve product quality and invest in research and development, resulting in significant growth and the ability to offer internationally standardized products at competitive prices.

Comchi is supported by a team of excellent mechanical engineering designers, experienced technical staff, and a professional management team. The company's production philosophy revolves around energy-saving, focusing on refining its technological processes to achieve core capabilities in super frequency energy-saving. This results in products known for their quiet operation, durability, power efficiency, and safety.

With eight product series and multiple models, Comchi's offerings include fixed-speed air compressors, PM VSD air compressors, two-stage PM VSD compressors, reciprocating compressors, refrigerated air dryers, air receiver tanks, industrial chillers, dehumidifiers, and their matching spare parts. Adhering to a business philosophy based on cooperation and mutual benefit, Comchi aims to provide a seamless one-stop service to every customer, building lasting partnerships through reliable performance and superior service.

Manufacturing & Service Capability

Comchi has a skilled production team with years of hands-on experience in air compressor manufacturing.The sales team brings over 30 years of industry expertise, supported by a strong after-sales engineering team specializing in compressor maintenance.

Industry Applications

Screw air compressor technology is now highly advanced, offering high performance, efficiency, reliability, low maintenance, and intelligent control. It meets diverse air demand requirements across industries. These compressors are widely used in heavy and light industries, mining, hydro power, seaports, construction, oil and gas, railways, transportation, shipbuilding, energy, defense, aerospace, and more.

Why Choose Screw Air Compressors ?

- ❖ Efficiency
- ❖ Continues Operation.
- ❖ Low Noise and Vibration
- ❖ Low Maintenance
- ❖ Compact Design.
- ❖ Versatility.
- ❖ Reliability.
- ❖ Specific Application

Fixed Speed & Variable Speed Screw Air Compressors

Advanced High-Efficiency Air End
Features a third-generation screw rotor with advanced design, ensuring high efficiency, low speed, energy savings, and long service life.

Flexible Coupling Direct Drive
Direct drive ensures 100% transmission efficiency with low maintenance. Air end and motor can be serviced separately, reducing downtime.

Intelligent Microcomputer Control System
Automated system monitors real-time data and maintains stable output pressure through precise intake valve control.

Safe, Reliable, and Efficient Motor
Low-speed motor with IP55 protection and F-class insulation ensures smooth, stable performance in tough conditions.

Unique Heat Removal & Cooling System
Advanced harmonica radiator boosts heat dissipation by 30%, ensuring smooth, reliable operation even in high-temperature, high-humidity environments.

PM VSD

Intelligent Control System
Provides direct display of discharge temperature, pressure, operating frequency, current, and power. Enables real-time monitoring of temperature, pressure, current, and frequency fluctuations.

High-Efficiency Permanent Magnet Motor
IP55-rated, F-class insulated motor with direct drive for high transmission efficiency. Offers 3%–5% higher efficiency than standard motors, even at low speeds.

Super-Stable Inverter
Delivers constant pressure (±0.01 MPa) and temperature (85°C) for optimal performance. Reduces energy use by up to 45% with zero unloaded running. Vector control ensures precise air supply matching system demand.

Small Start-up Impact
Soft start with frequency conversion motor reduces current surge, protects the power grid, minimizes wear, and extends compressor life.

Low Noise
Soft start and PM VSD technology reduce startup and operating noise compared to fixed-speed compressors.

Comchi Industrial Chillers

Comchi Engineers Pvt. Ltd. offers water chillers in a wide range from 1 TR to 200 TR. Each system includes a hot water tank from which water is pumped through the evaporator, cooled to the desired temperature, and then delivered to the user department. A temperature-indicating controller regulates the chilled water temperature by maintaining it at a predefined set point, ensuring stable and accurate cooling.

These systems operate in a closed-loop circuit, making the cooling process consistent and efficient. Unlike systems that use fresh water freely, Comchi chillers provide controlled cooling, which is essential for modern production processes that require precise temperature tolerances. As a result, the water used in production remains reliable, constant, and well-defined.

Features & Benefits of Comchi Industrial Water Chiller

Precise Temperature Control and Robust Construction for Reliable Operation Comchi Engineers designs industrial water chillers for a wide range of applications, offering precise temperature control, energy efficiency, long equipment life, and advanced control systems. Key components include the compressor, condenser, evaporator, and expansion valve, with options available for both air-cooled and water-cooled systems.

Additional Features of Comchi Chillers

Customization : Comchi chillers can be customized to meet specific project requirements, including size, capacity, and control features.

Easy Maintenance : Features like stainless-steel pumps and easily accessible components simplify maintenance and cleaning.

Environmentally Friendly Options : Comchi chillers are available with eco-friendly refrigerants, helping to minimize environmental impact.

Technical Specification of Water chiller

Model	Type	Capacity	Voltage	Pump/Flow	Connections
CCAC-1Tr	Air Cooled	12000 BTU/hr.	230/1/50hz	1 hp/30 psi	1" Bsp in/out
CCAC-1.5Tr	Air Cooled	18000 BTU/hr.	230/1/50hz	1 hp/30 psi	1" Bsp in/out
CCAC-2Tr	Air Cooled	24000 BTU/hr.	230/1/50hz	1 hp/30 psi	1" Bsp in/out
CCAC-3Tr	Air Cooled	36000 BTU/hr.	440/3/50hz	1 hp/30 psi	1" Bsp in/out
CCAC-5Tr	Air Cooled	60000 BTU/hr.	440/3/50hz	1 hp/30 psi	1" Bsp in/out
CCAR-7.5 Tr	Air Cooled	90000 BTU/hr.	440/3/50hz	1 hp/30 psi	1" Bsp in/out
CCAC-10Tr	Air Cooled	120000 BTU/hr.	440/3/50hz	1.5 hp/30 psi	11/4" Bsp in/out
CCAC-12.5Tr	Air Cooled	150000 BTU/hr.	440/3/50hz	2 hp/30 psi	2" Bsp in/out
CCAC-15Tr	Air Cooled	180000 BTU/hr.	440/3/50hz	2 hp/30 psi	2" Bsp in/out
CCAC-20Tr	Air Cooled	240000 BTU/hr.	440/3/50hz	3 hp/30 psi	2" Bsp in/out
CCAC-25Tr	Air Cooled	300000 BTU/hr.	440/3/50hz	3 hp/30 psi	2" Bsp in/out
CCAC-30Tr	Air Cooled	360000 BTU/hr.	440/3/50hz	3 hp/30 psi	2" Bsp in/out
CCAC-40Tr	Air Cooled	480000 BTU/hr.	440/3/50hz	3 hp/30 psi	2" Bsp in/out
CCAC-50Tr	Air Cooled	600000 BTU/hr.	440/3/50hz	5 hp/30 psi	3" NB in/out
CCAR-60 Tr	Air Cooled	720000 BTU/hr.	440/3/50hz	7.5 hp/30 psi	3" NB in/out
CCAC-70Tr	Air Cooled	840000 BTU/hr.	440/3/50hz	7.5 hp/30 psi	4" NB in/out
CCAC-80Tr	Air Cooled	960000 BTU/hr.	440/3/50hz	7.5 hp/30 psi	4" NB in/out
CCAC-90Tr	Air Cooled	1080000 BTU/hr.	440/3/50hz	7.5 hp/30 psi	4" NB in/out
CCAC-100Tr	Air Cooled	1200000 BTU/hr.	440/3/50hz	7.5 hp/30 psi	4" NB in/out

Comchi Engineers Private Limited offers a comprehensive range of industrial water chillers designed to maintain a temperature range from 5°C to 30°C ±1°C, with capacities ranging from 450 Kcal/hr to 150,000 Kcal/hr and flow rates from 3 LPM to 650 LPM, tailored to suit diverse industrial applications.

The chilled water or cooling liquid from the system is circulated through process equipment to regulate temperatures effectively. This is especially critical in the plastics industry, where process chillers help reduce cycle times in injection molding and blow molding by maintaining consistent mold temperatures.

In laser welding, a process commonly used to permanently fuse metal components, precise heat management is crucial. To maintain the structural integrity of welded parts, heat must be efficiently removed. Comchi's portable chiller series is ideal for such applications, providing high-flow cooling and accurate thermal control even under high heat loads. While TIG or MIG welders consume only 2–3 kW and do not require precise temperature control, effective heat dissipation remains important for equipment longevity.

For plastic injection molding and metal cutting operations, friction causes the cutting oil to heat up. By cooling this fluid, thermal expansion and contraction of the material are minimized, resulting in improved accuracy and better machining quality. It is recommended to use a liquid heat exchanger, where one circuit carries the cutting oil and the other the chiller fluid, to achieve optimal results.

Comchi chillers are ideally suited for a wide range of applications, including :

Plastic Injection Molding & Extrusion

PET Blowing & Film Blowing (HDPE, LDPE)

Pouch Sealing & Lamination Machines

Aluminum Die Casting

Laser Welding & Cutting

Ultrasonic Welding

Induction Hardening Machines

Designed with next-generation aesthetics and built for precision, durability, and energy efficiency, Comchi chillers help improve product quality, increase productivity, and reduce cycle times across industries.

Reciprocating Air Compressor

"A reciprocating compressor works by converting power into potential energy stored in pressurized air. It achieves this through a piston driven by a crankshaft. The piston moves down to draw air into the cylinder, then moves up to compress it. This simple yet effective mechanism is why reciprocating compressors are favored for many applications. Available in a range from 1 HP to 40 HP."

Key Advantages

❖ High Pressure & Efficiency ❖ Durability & Longevity ❖ Versatility

❖ Low Initial Cost – Heading

Comchi Compressor Variants

Comchi Single-Stage Air Compressor

These compressors compress air in a single stroke, making them suitable for low-pressure applications.

Comchi Two-Stage Compressor

These compressors use two compression stages with an intercooler between them to reduce air temperature and improve efficiency. They are ideal for high-pressure applications.

Comchi Multi-Stage Air Compressor

These compressors have three or more compression stages, allowing for very high-pressure output. They are commonly used in specialized applications such as PET bottle blowing and breathing air systems.

Technical Specification of Reciprocating Air Compressor

	Model	Fad (cfm)	W.p (kg/Mm2)	Motor Power	Compressor (RPM)	No of Cylinder	Receiver Tank
Single-Stage	CC03SS	9.0	8	3	550	2	200
	CC05SS	16.5	8	5	960	2	250
	CC06SS	25.0	8	7.5	690	2	275
	CC10SS	33.0	8	10	920	2	350
	CC15SS	49.1	8	15	925	3	500
Two-Stage	CC03TS	8.9	12	3	925	2	220
	CC05TS	14	12	5	750	2	250
	CC06TS	21	12	7.5	925	2	275
	CC10TS	30	12	10	950	3	500
	CC15TS	42	12	15	925	3	500
Multi-Stage	CC03HP	4.8	35	3	660	2	200
	CC05HP	4.31	70	5	800	2	220
	CC10HP	18	35	10	800	2	300
	CC15 HP	31.41	35	15	750	3	500
	CC20HP	37.7	35	20	900	3	500
	CC20HP	54(T)	25	20	800	3	500
	CC25HP	74	25	25	900	3	500

Key Features of Comchi Air Compressor

❖ High Pressure & Efficiency ❖ Durability & Longevity ❖ Versatility

❖ Low Initial Cost – Heading

Refrigerated Air Dryer

Refrigerated Air Dryers are general-purpose dryers and are the most economical due to their low running cost. The Comchi brand refrigerant system is environmentally friendly. Refrigerated dryers remove moisture from compressed air by cooling it to the desired dew point temperature. The dryer consists of two separate circuits: a compressed air circuit and a refrigeration circuit.

Technical Specification of Refrigerated Air Dryer

Model	Capacity (M3/Min)	Inlet (Kg)	Inlet (T.Deg)	Voltage	Power Kw	Ref.	Cooling	In/Out	Dimension
CC 30	1.0	10	40	220/50	0.4	R134a	Air	DN 25	750x450x700
CC 50	1.5	10	40	220/50	0.5	R134a	Air	DN 25	750x450x700
CC 60	2.0	10	40	220/50	0.55	R134a	Air	DN 25	750x450x700
CC 80	2.6	10	40	220/50	0.9	R134a	Air	DN 25	800x500x800
CC 100	3.0	10	40	220/50	0.96	R134a	Air	DN 25	800x500x800
CC125	3.8	10	40	220/50	1.1	R134a	Air	DN 40	900x500x900
CC 150	5.2	10	40	220/50	1.2	R134a	Air	DN 40	900x500x900
CC 200	6.9	10	40	220/50	1.4	R134a	Air	DN 40	950x600x950
CC 250	8.2	10	40	440/50	1.5	R22	Air	DN 40	950x600x950
CC 350	10.0	10	40	440/50	2.1	R22	Air	DN 50	1100x600x1100
CC 500	13.9	10	40	440/50	3.2	R22	Air	DN 50	1200x600x1100
CC 600	18.0	10	40	440/50	3.2	R22	Air	DN 65	1050x800x1400
CC 800	23.0	10	40	440/50	4.3	R22	Air	DN 80	1550x800x1400
CC 1000	28.0	10	40	440/50	4.8	R22	Air	DN 80	1550x800x1400
CC 1150	33.0	10	40	440/50	5.7	R22	Air	DN 80	1700x1150x1500
CC 1250	36.0	10	40	440/50	6.2	R22	Air	DN 80	1700x1150x1500
CC 1400	40.0	10	40	440/50	10.10	R22	Air	DN 80	1900x1200x1600

Working Principle of Comchi Refrigerated Air Dryer

The saturated compressed air first enters the air-to-air heat exchanger (precooler/preheater), where the incoming hot air is cooled by the outgoing cold air. This energy-saving process reduces the thermal load on the refrigeration system.

The precooled incoming air then enters the air-to-refrigerant heat exchanger, where it is further cooled to the specified dew point of 2°C to 4°C.

The chilled air exits the evaporator and passes through cyclone separators, where moisture in the form of liquid droplets is automatically removed by the Comchi automatic drain valve.

A hot gas bypass valve is used to maintain a consistent load on the refrigeration system, ensuring stable operation and preventing freeze-up.

Air Receiver Tank

Comchi Air Receiver Tank is an integral and essential component of any compressed air system. It helps remove moisture from the system by allowing the compressed air to cool, enabling condensation to occur.

The receiver tank also minimizes pressure pulsations caused by reciprocating compressors or cyclic downstream processes, ensuring a more stable airflow.

We offer a wide range of air receivers across India. These storage tanks are suitable for various applications that require compressed air or gases to be stored for a period of time.

Comchi manufactures tanks in a broad range of pressure capacities. Available in both vertical and horizontal configurations, they are suitable for low- and high-pressure applications, with options in various materials of construction and compliance with different manufacturing codes.

Key Features of Comchi Air Receiver Tanks

- Design Range : 0.2 cu.m to 50 cu.m
- Working Pressure : 1 kg/cm² to 70 kg/cm²
- Design Standards : ASME Section VIII Div. 1 / IS 2825
- Material of Construction : Commercial quality and boiler quality plates
- Orientation : Available in both horizontal and vertical configurations
- Application : Suitable for high-pressure storage of air or gas

Technical Specification of Refrigerated Air Dryer

Model	WP (Kg/cm²)	Dimension (MM²)	In/Out (Size)	TK (MM)	Moc	Orientation
CC250	10	450/1250	DN20	4	IS2062	Vertical/Horizonal
CC500	10	600/1500	DN40	5	IS2062	Vertical/Horizonal
CC750	10	750/1500	DN40	6	IS2062	Vertical/Horizonal
CC1000	10	850/1500	DN40	6	IS2062	Vertical/Horizonal
CC1500	10	1000/1500	DN50	6	IS2062	Vertical
CC2000	10	1000/2000	DN50	6	IS2062	Vertical
CC3000	8	1300/2000	DN80	8	IS2062	Vertical
CC5000	8	1400/3000	DN80	8	IS2062	Vertical
CC7500	8	1600/3000	DN80	8	IS2062	Vertical
CC10000	8	1750/3500	DN100	10	IS2062	Vertical
CC15000	8	2000/4000	DN150	10	IS2062	Vertical
Cc20000	8	2250/4000	Dn150	12	Is2062	Vertical

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Comchi Engineers Private Limited

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