



Key Highlights

First
Indian Company approved for Hydrocarbon Refrigeration Systems

First
Supplier of Traction Gears to Indian Railways

70%
India market share for Ammonia Refrigeration Compressors

1,000+
Packages installed at CNG Stations across India

3
State-of-the-Art Manufacturing Facilities

80+
Dealers

900+
Employee Strength

Kincentric Best Employer Award 2023

Our Presence

3 Manufacturing Plants
Hadapsar, Pune (Head Office)
Saswad
Nashik

10 regional offices

North region
New Delhi Lucknow

West region
Mumbai
Ahmedabad
Vadodra

East region
Kolkata

South region
Chennai
Hydrabad
Visakhapatnam

International Partners

KDMCC
Kirloskar Direct Multi Commodities Centre, Dubai

Kirloskar Trading SA Pty Ltd
(Simerly known as JITSPL), South Africa

KSEACL
Kirloskar South East Asia Co. Ltd.

Manufacturing Capabilities

Foundry, Heat Treatment, NABL Accredited Metallurgy & Metrology Lab, Machine Shop, Assembly Shop, Paint Booth, Testing Facility, Fabrication Shop, Packaging Facility, Tool Room, Pattern Shop, Energy Management System

>98% on-time delivery index

<24 Hrs MTTR

Lowest cost of ownership

Foundry Capability deliver 8 tones / day Casting

3MW capacity for building and testing packages at Saswad

Manufacturing Capabilities Smart Factory

IIoT Enabled Manufacturing (OEE > 90%, PPM < 500, FTA > 98%)

Adapted to cloud hosting & the new-age PLM (Product Life Cycle Management) framework

Digitalized Stores for efficient Inventory Management

Digitalized Audit Management to improve overall efficiency

Digitalized Activity Tracker and Reports to get real time insights

Automated Testing Beds

KRMS (Kirloskar Remote Monitoring System)
Seamlessly Monitoring KCX Series Refrigeration Compressor Performance at Your Convenience

R&D Center

200+
Product Design & Engineering experts

30+
Publications in reputed journals & conferences

25+
IPs Granted

R & D Connect
Collaboration with reputed premier institutes for Research

Advanced Design Capabilities

- Mechanical & Thermal Design
- 1 D Simulation
- 3D Modeling, FE, AI Assisted Design Tools
- Static & Dynamic Structural Analysis
- Aero Design
- Rotor Profiling
- Torsional Vibration Analysis (TVA)
- Experimental Validation with Test Rigs

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BEST PAPER AWARDS
in International Compressor Engineering Conference, UK

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Our Journey

Acquired KG Khosla Compressor Company

1997
Entry into the Hydro-Carbon Refrigeration

1998
Air compressors with Broom & Wade UK

1962
Gresco Refrigeration Compressors

1963
Transmission with Westinghouse

1968
Marine Gearbox with MAAG Technology

Process Gas SBU

Developed 1 MW Wind Gearbox

90s – 2000

2010
IMS Certification from TÜV Nord

2014
First Vapour Absorption Chiller Installed

1984
Sawmill Plant

1985
New Foundry

Brand Changeover
Commenced indigenous manufacturing of centrifugal compressors

Established dedicated R&D Center
NABL accredited Metrology Lab

2020
Launch of CHG Hydraulic Booster 'Galena'

2023
Launch of screw compressor 'Khione' for refrigeration application

New Forging & Fabrication business unit in Nashik

Listed in National Stock Exchange

Collaboration with 'ATMOS' for screw air compressor 'ARUK'

60s & BEFORE

70s & 80s
License by Howden
Railway Business with Westinghouse Brake

1984
Sawmill Plant

1985
New Foundry

8

Air Conditioning & Refrigeration
Cooling our way into the future

Air Conditioning and Refrigeration Equipment

Refrigeration Systems

Vapour Absorption Chillers

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OFFERINGS
ACR EQUIPMENT BUSINESS

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COMPRESSORS AT THE HEART OF INDUSTRIAL REFRIGERATION
RECIPROCATING REFRIGERATION COMPRESSORS & PACKAGES

PCX
Small Yet Powerful Refrigeration Compressors

KCX
Single Stage & Double Stage Reciprocating Compressors

ENGINEERED SET
Factory Assembled Reciprocating Refrigeration Package

KZX
High Speed Refrigeration Compressors

Kirloskar's reciprocating range of refrigeration compressors heralds the start of a completely new era for the industrial refrigeration market. From the inception of concept to the final delivery of this series, we continually puts ourselves in the position of our Customers. Every component was assessed for the most important elements that contribute to a low Total Cost of Ownership like energy, maintenance and reliability with minimum downtime.

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RECIPROCATING REFRIGERATION COMPRESSORS
PCX – REFRIGERATION COMPRESSOR FOR SMALL CAPACITIES

10% Higher COP

Small Yet Powerful Refrigeration Compressors

Offering

Temperature Range: -15°C to 5°C

Capacity: 5 to 55 TR

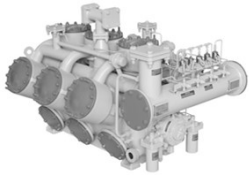
- Compact Design
- Best In Class COP
- High Efficiency Suction & Delivery Valve
- Power Saving
- Compact Design - Less Footprint
- Easy to Package and to Install
- Drive Arrangement - Direct & Belt Driven

Air Cooled Refrigeration Compressor

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RECIPROCATING REFRIGERATION COMPRESSORS KCX – AIR COOLED REFRIGERATION COMPRESSORS

kirloskar
Pneumatic



Heavy Duty Refrigeration Compressors

Offering

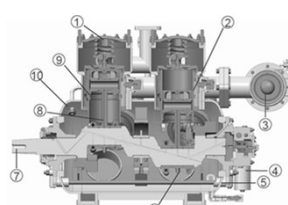
- Temperature Range Capacity (-) 45°C to 5°C 20 to 500 TR
- Fabricated Modular Rugged Construction
- Superior COP Values at Full & Part Load Operation
- Lowest Cost of Ownership
- Smart Monitoring & Control - KRMS
- Low Vibration & Noise Level

Single & Double Stage Refrigeration Compressor For Industrial Low Temperature & Large-Scale Deep Freezing Applications

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RECIPROCATING REFRIGERATION COMPRESSORS INSIDE KCX COMPRESSORS

kirloskar
Pneumatic



1. Safety is ensured by built-in arrangement of buffer spring which protects compressor from incidental liquid hammer.



2. Quality adaptable to varying operating conditions Each cylinder is equipped with a hydraulically operated valve lifting mechanism giving absolutely reliable capacity control and 100% unloaded starting.

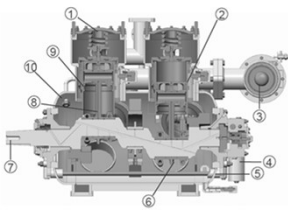


3. Easy cleaning of the suction gas strainer is another example of easy maintenance philosophy behind KCX series compressors. Inside gauze strainer element can be easily removed.

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REFRIGERATION EQUIPMENT & REFRIGERATION SYSTEMS INSIDE KCX COMPRESSORS

kirloskar
Pneumatic



4. Trouble-free long running life due to highly effective oil purification by two filters.



5. Extra safety is ensured by built-in sight glass, making oil return flow visible.



6. Quick maintenance Parts subjected to wear are easily accessible through large service doors with minimum special tools.

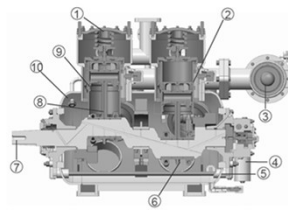


7. Quick operation is guaranteed by the use of dynamically balanced crankshaft, resulting in smooth, vibration-free running.

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RECIPROCATING REFRIGERATION COMPRESSORS INSIDE KCX COMPRESSORS

kirloskar
Pneumatic



8. Easy maintenance as piston/connecting rod assembly can be removed without removing the cylinder liner.



9. Minimum oil consumption is ensured by providing 3 compression rings & 2 oil scraper rings per piston - thus minimizing oil through discharge gas line.



10. Quick maintenance Parts subjected to wear are easily accessible through large service doors with minimum special tools.



11. Breather to equalize suction and crankcase pressure.

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RECIPROCATING REFRIGERATION COMPRESSORS SALIENT FEATURES OF CONSTRUCTION

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Discharge Valve Assembly

- Three concentric discharge valve rings ensure ample gas passage at low lifting height.
- The use of sinusoidal springs together with precision machined and lagged surface results in a trouble-free operation for a remarkably long time.
- Minimum inventory for spares since most parts are identical throughout the KCX series compressors.

Cylinder Liner and Suction Valve

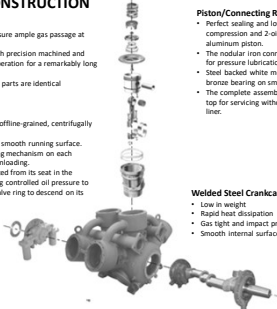
- Interchangeable cylinder liners are made of fine-grained, centrifugally cast, alloy iron.
- Fine boring and honing results in a mirror smooth running surface.
- A hydraulic mechanical suction valve lifting mechanism on each individual cylinder achieves loading and unloading.
- For unloading, the suction valve ring is lifted from its seat in the cylinder collar by spring tension. Admitting controlled oil pressure to the control piston, allowing the suction valve ring to descend on its seat effects loading or cylinder.

Piston/Connecting Rod Assembly

- Perfect sealing and low oil consumption due to 3 compression and 2-oil scraper rings on each aluminum piston.
- The nodular iron connecting rod is drilled through for pressure lubrication of the piston pin.
- Steel backed white metal shells on big end and bronze bearing on small end of connecting rod.
- The complete assembly can be removed from the top for servicing without withdrawing the cylinder liner.

Welded Steel Crankcase

- Low in weight
- Rapid heat dissipation
- Gas tight and impact proof
- Smooth internal surfaces guarantee good oil condition.



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RECIPROCATING REFRIGERATION COMPRESSORS SALIENT FEATURES OF CONSTRUCTION

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Lubrication System and Oil Filter

- Forced Lubrication by an Internal Gear pump directly driven by the Crankshaft
- The Pump incorporates two differential pressure regulators to provide separate pressures for two oil systems: Lubrication system and control oil system for operating cylinder loading/unloading mechanism.
- Automatically operating solenoid valve ensures complete unloading start of compressor.
- A Metal gauze suction filter element and a throwaway discharge paper filter cartridges are provided for excellent filtering capacity of the lubricating oil.

Welded Steel Crankcase

- Low in weight
- Rapid heat dissipation
- Gas tight and impact proof
- Smooth internal surfaces guarantee good oil condition.

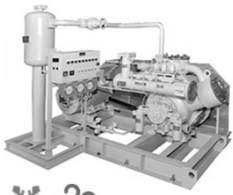


Crankshaft and Main Bearings

- Bearing surfaces of the high quality nodular
- cast iron crankshaft are ground to fine tolerances.
- Main bearings are white metal lined steel backed bushes, pressed into the cast iron bearing covers. Intermediate bearing blocks are provided with split type bearing shell of the same type.
- Each crankshaft is dynamically balanced together with the counter weights.

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RECIPROCATING REFRIGERATION COMPRESSORS
ENGINEERED SET – DELIVERING RELIABLE REFRIGERATION



Efficient And Robust Refrigeration Set

Offering
Temperature Range Capacity
-45°C to 5°C 20 to 500 TR

- Assembled skid
- Plug & play package – Easy installation
- Custom designed for each application
- Integrated automation
- Oil return line with check valve and filter
- Skid-mounted control and monitoring system



Air Cooled Refrigeration Compressor Set

Single & Double Stage Refrigeration Compressor For Industrial Low Temperature & Large-Scale Deep Freezing Applications

RECIPROCATING REFRIGERATION COMPRESSORS
KZX – HIGH SPEED REFRIGERATION RECIPROCATING COMPRESSOR



Compact and Powerful Refrigeration Compressors

Offering
Temperature Range Capacity
-45°C to 5°C 10 to 100 TR

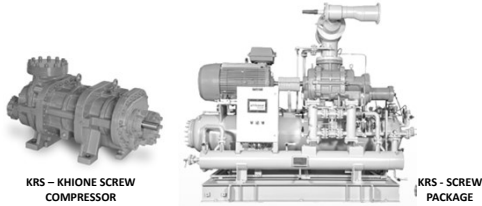
- High Coefficient of Performance
- The Robust Crankcase Design Ensures Low Noise and Vibration
- Large Suction Chamber for the Reduction in Pressure Drop
- Capacity Control for Each Cylinder
- Externally Mounted Suction Gas Strainer Makes Service and Maintenance Easy
- KRMS Integration with VFD Offers Step-less Capacity Control
- Max: 1500 RPM



Air Cooled Refrigeration Compressor

High Speed High Efficiency Open Type Reciprocating Refrigeration Compressor

COMPRESSORS AT THE HEART OF INDUSTRIAL REFRIGERATION
SCREW REFRIGERATION COMPRESSORS & PACKAGES



KRS – KHIONE SCREW COMPRESSOR

KRS - SCREW PACKAGE

Kirloskar Pneumatic Company is India's first and only commercial developer and manufacturer of rotary twin screw refrigeration compressors, and remains at the forefront of the technology. We can provide oil injected units as stand-alone ('bare shaft') compressors or as packaged systems. Superior COP (Coefficient of Performance) values at full and part-load operation, modest capital investment, and low maintenance costs are some of the key benefits of KPCL's refrigeration packages.

REFRIGERATION EQUIPMENT & REFRIGERATION SYSTEMS
KRS – KHIONE REFRIGERATION COMPRESSOR

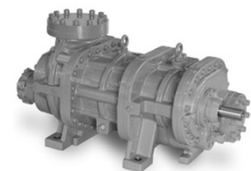


Khione



- KHIONE is primarily a name of Greek origin that means Snow
- 1st Indigenously Designed & Manufactured Screw Compressor for Industrial Refrigeration.
- Screw Compressor package Conductive to all refrigerants (NH3, R-22, R-134a, R-404A, R-407C, R507 etc.

REFRIGERATION EQUIPMENT & REFRIGERATION SYSTEMS
KRS – KHIONE REFRIGERATION COMPRESSOR



Khione

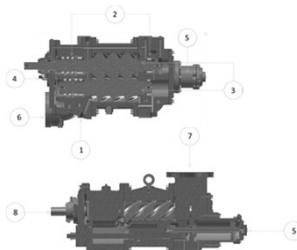
Robust & Reliable Refrigeration Compressors

Offering
Temperature Range Capacity
-45°C to 5°C 50 to 900 TR

- Unique screw profile for superior performance
- Variable Volume Ratio "VR"
- Economizer port for higher COP
- Optimum lubrication
- Special bearings to enhance efficiency
- Stepless capacity control using slide valve: 10-100%
- RPM Range: 1450 to 3600
- High efficiency, Low Vibration and Noise
- Suitable to operate with all the refrigerants*

Reliable Compressors for Low Temperature Applications with High - Stage Booster combination delivering efficient refrigeration

REFRIGERATION EQUIPMENT & REFRIGERATION SYSTEMS
INSIDE KHIONE REFRIGERATION COMPRESSOR



1. Economizer Port for Higher COP
2. Anti-Friction Bearings
3. Rotors – In House Manufactured Screw Rotors
4. Variable Volume Ratio "VR"
5. Stepless Capacity Control using Slide Valve: 10-100 %
6. Discharge Port
7. Suction Port
8. Shaft

REFRIGERATION EQUIPMENT & REFRIGERATION SYSTEMS
SALIENT FEATURE – KHIONE REFRIGERATION COMPRESSOR

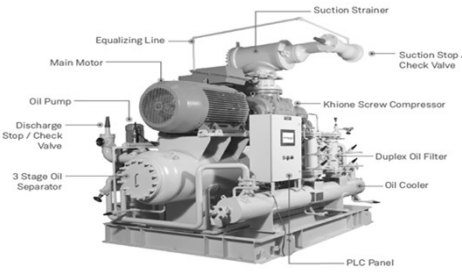


- Anti-Friction Bearings For Maximum Life**
- Low Cost of Ownership**
- Economizer Port For Higher COP**
- V1- Variable Volume Ratio**
- Optimized Oil Injection**
- Min/Max Operating Speed 1450/3600 rpm**
- Discharge Port Convenient For Packaging**
- +5 To (+) 45°C Evaporating Temperature Range**
- Step Less Capacity Control Slide Valve : 10 To 100%**
- Robust & Reliable Design**

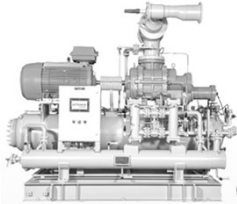


Khione

REFRIGERATION EQUIPMENT & REFRIGERATION SYSTEMS
KIRLOSKAR SCREW COMPRESSOR PACKAGE



REFRIGERATION EQUIPMENT & REFRIGERATION SYSTEMS
KIRLOSKAR SCREW COMPRESSOR PACKAGE



- Compact Package design
- Comprehensive refrigeration capacity range
- with booster & high stage models
- Economizer - Shell & tube type/PHE or
- Open flash
- Oil separator with 3-stage of oil separation
- up to 5 ppm
- Oil cooling - Thermo-siphon / Water cooled
- Duplex oil filter with 6-way valve and lever
- Skid mounted, pre-assembled with PLC-based control panel
- Variable speed drive improves part load efficiency

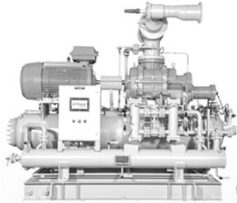
Khione

REFRIGERATION EQUIPMENT & REFRIGERATION SYSTEMS
KIRLOSKAR SCREW COMPRESSOR PACKAGE



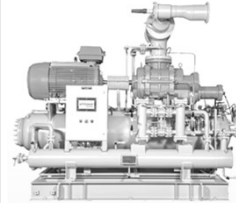
- Oil Tank Separator (OTS)**
 - Three-stage oil separation with gravity, Demister pad and Coalescer element
 - Oil level switch
 - Electrical heater with thermostat
 - 3 bull's eye/sight glass
 - Dual PSV with a two-position changeover valve is provided.
- Oil cooler**
 - Shell and tube type construction
 - PHE-type oil cooler
- Economizer**
 - Open Flash, Shell and Tube Type Construction
 - Improves the COP of the screw compressor package

REFRIGERATION EQUIPMENT & REFRIGERATION SYSTEMS
KIRLOSKAR SCREW COMPRESSOR PACKAGE



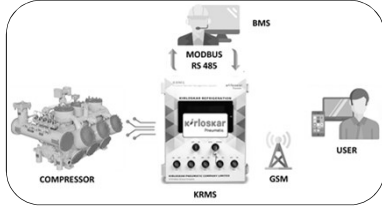
- Duplex oil filter**
 - It is provided with a changeover lever, which enables servicing of the filter element without interruption of compressor operation.
 - Oil filter elements are replaceable.
 - Nominal rating of 15 microns.
- PLC-Based Control Panel**
 - 10" touch-screen interactive HMI
 - RMS Compatibility with MODBUS RTU RS 485 Compatible
 - Parameters Settable at Site
 - Password Protection Enabled
 - Data Logging
 - Features to Monitor, Regulate, and Protect Compressor Operation
 - Safety Trips and Alarms on Display

REFRIGERATION EQUIPMENT & REFRIGERATION SYSTEMS
KIRLOSKAR SCREW COMPRESSOR PACKAGE



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REFRIGERATION EQUIPMENT & REFRIGERATION SYSTEMS
VALUE ADDED PRODUCT
KRMS – KIRLOSKAR REMOTE MANAGEMENT SYSTEM DELIVERING EXCELLENCE THROUGH INNOVATION



- Enhanced Safety & Protection
- Compressor Controller
- Remote Monitoring of Compressor at Fingertips
- Maintenance Monitor
- Smart Diagnostics

REFRIGERATION EQUIPMENT & REFRIGERATION SYSTEMS
ADVANTAGE OIL



Premium Lubricant for Ammonia Refrigeration Compressors

- Advantage oil ensures long service life of compressor moving parts due to its excellent chemical and thermal stability.
- Maintains efficient lubrication and correct viscosity up to -25°C.
- Reduced foaming tendency
- Low cost of maintenance
- Easily soluble with ammonia
- Good fluidity at low temperature

OIL CHARGING PUMP

- By using an oil-charging hand pump, the pump-down process is eliminated
- Eliminates the need to keep the suction pressure switch in bypass mode
- Excess oil charging into the compressor can be avoided
- Easy to operate, and requires no electrical power
- Wear and tear of internal parts can be avoided
- Single oil pump can be used for multiple compressors



Kirloskar Care
 Delivering Superior After Market Support



Widest Service Network | **200+** Service Engineers | **24X7** Nationwide Coverage



- Genuine Spares & Kits**
 Specifically designed and engineered to deliver performance, cost efficiency and longevity of their objects.
- Value-Added Offerings**
 Large offering monitoring, control and diagnostics capabilities.
- Services**
- Warranty Service
 - Retrofit / Finetune
 - Wide Dealer Network
 - Customer Trainings
 - Major Overhaul
 - Installation & Commissioning Support
 - Annual / Comprehensive Operations & Maintenance Contracts
 - Refurbishing and Reconditioning Services

Industries Served



- Pharmaceuticals & Chemicals**
- Automotive Engineering**
- Power Generation**
 Wind, Thermal, Hydro, Solar
- Oil & Gas**
- Food & Beverage Processing**
 Dairy, Meat, Fisheries, Fruits & Vegetables, Breweries
- Steel & Aluminium**
- General Engineering**
 Sugar, Textile, Cement, Paper

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