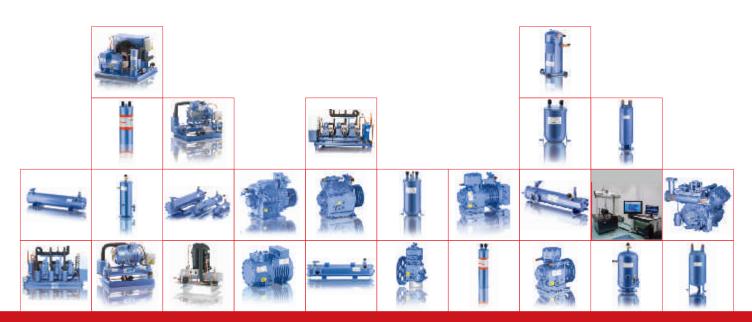
AN OVERVIEW

An ISO 9001:2008 Organization Ref. & A/C



SEA-BIRD®





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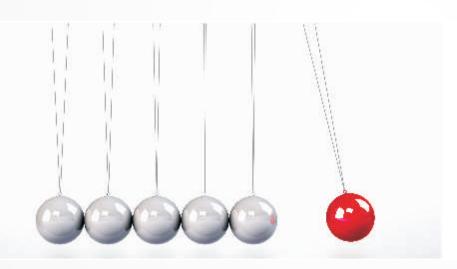


www.amoking.com

email:info@amoking.com

WELCOME TO THE WORLD OF REFRIGERATION TECHNOLOGIES







OUR VISION

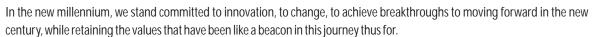
To become the recognized **INDUSTRY LEADER** by all our customers in all the businesses in which we compete.

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CHAIRMAN'S MESSAGE

We had a dream. The dream of changing lives of customers by giving them environment friendly products and add up to better quality of life.

Our company's contribution, needless to say, so far encompasses Refrigeration, Air Compressor Division, Casting, Automobile and InfoTech. In order to accomplish the objective with new thrust, the new management with Mr. Rahul Maini as CEO and me as the chairman is moving ahead to mark the advent of a new era in the history of our company. Behind the success of SEA BIRD, is the saga of team-work. We would like to acknowledge the role played by our partners and all our business associates and employees.





Mr. Vijay Maini

SEA-BIRD VISION

"Our vision is to become the recognized industry leader by all our customers in all the businesses in which we compete."

SFA-BIRD MISSION

SEA BIRD's mission is to become a market leader by consistently exceeding our customer's expectations, providing them with best of refrigeration technology solutions, we will continually communicate with, and learn from our customers of all division, in order to improve our products and services. And, we will keep on top of today's and tomorrow's technology, no matter how fast it moves, to ensure our customers always have the best products available to them.

OUR CORE VALUES

uality is the primary determinant of customer satisfaction and loyalty, and it requires employees to continuously provide internal and external customers with the right product or service, done right, the first time. In today's increasingly competitive business environment, better quality translates into better value for our customers and subsequently, better value for their customers and this is the very essence of competitive differentiation.

rust is the mutual respect for and confidence in people. Trust recognizes the importance of individuals and appreciates their diverse opinions. Trust compels us to share information and encourage new ideas.

afety serves as a barometer of our company's overall success and is a specific measure of our operating excellence.

eamwork is personal involvement and collaboration in a team environment. It includes setting a common goal in support of business objectives, making an individual commitment to the team's success and recognizing the success of the team.







PRESTIGIOUS NATIONAL AWARD WINNER

BHARAT GAURAV AWARD WINNER

GEM OF INDIA AWARD WINNER

NATIONAL CORPORATE EXCELLENCE AWARD WINNER



THE SEA BIRD GROUP

The SEABIRD Group is today diversified into different industries, also at the forefront of Asian Compressors production. Since 1983 SEABIRD has enjoyed continuous growth, and has invested heavily in highly advanced computerised production machinery, to ensure that quality and reliability of our products remain the foundation of our success. SEABIRD has production facilities in different parts of India and four service centres abroad,

from where we service customers around the globe.

SEABIRD is now market leader in the segment of high quality Compressors,

Condensing Units, Pressure Vessels, which has always been

the core business of the company's activities.

SEABIRD is also ventured into Plastic industry, Automobile industry,

Automation industry and software industry.

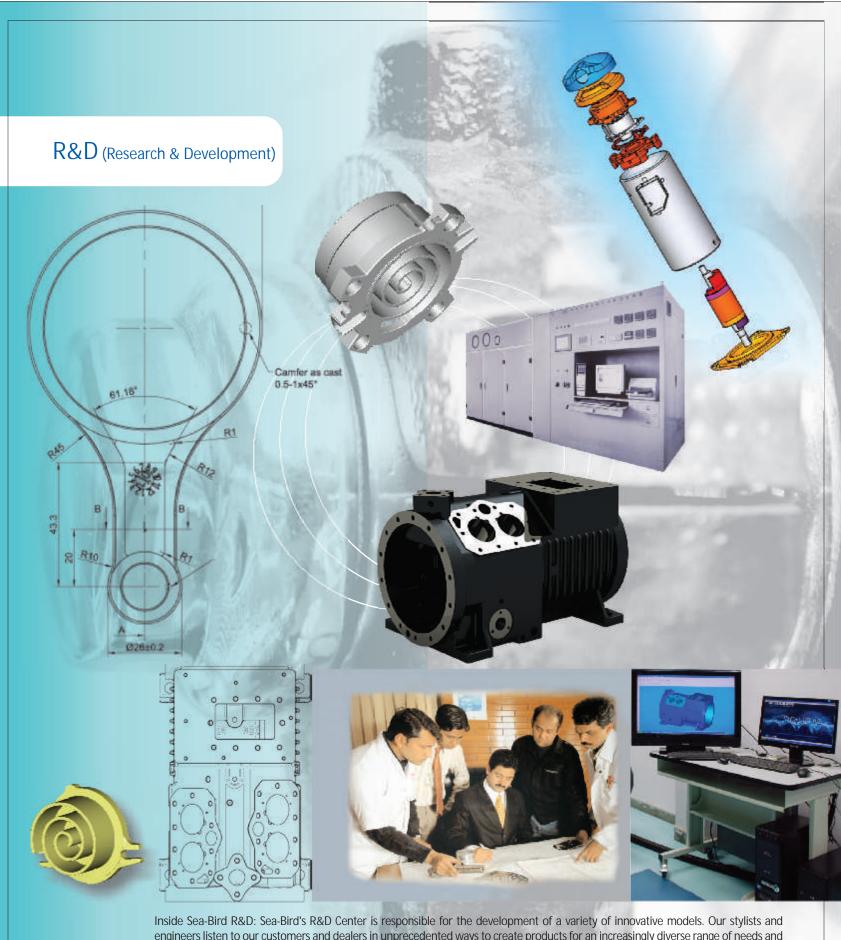
Continuing investments for research and development into new products, together with the design of ultramodern plant, options and design.

This is a success that has been consolidated over the years by the work of a flexible, dynamic and enthusiastic organization, in which the company culture is very much oriented towards quality, customer care and efficiency.



FXPORTING TO 23 COUNTRIES

WORLD CLASS PRODUCTION TECHNOLOGY



engineers listen to our customers and dealers in unprecedented ways to create products for an increasingly diverse range of needs and interests.

As long as there is a need for innovation in the areas of environmental protection, performance and safety, Sea-Bird will actively and tirelessly push research and development to the foreground.

We believe in better people through technology, and better technology through people.

Environment R&D: When we say that Sea-Bird takes a "blue sky" approach to research and development, it means more than just dreaming of futuristic concepts. Some of our most important R&Defforts are made to ensure bluerskies, cleaner air and clearer water forgenerations to come.

Through our Green Factory program, every Sea-Bird facility is working to REDUCE emissions and energy use, REUSE more raw materials and RECYCLE manufacturing materials, paper and plastic. All major Sea-Bird plants already meet the toughest international environmental management standards (ISO 14001), covering a host of environmental areas such as waste disposal, water treatment and energy use.

And yet, Sea-Bird is going even further. As part of our Green Factory program, teams of Sea-Bird associates are setting energy-reduction targets for every area of our operations. Sea-Bird's Green Factory Initiatives have established our manufacturing operations as industry leaders in the efficient use of natural resources with minimal environmental impact.

INFRASTRUCTURE







CNC High Speed A
Machining Centre



Quality Control ▶



Automatic Compressor Testing Machine





CNC High Precision 3D Coordinating Measuring Machine



CNC Turning Centre



Roundness Tester



Surface Finish



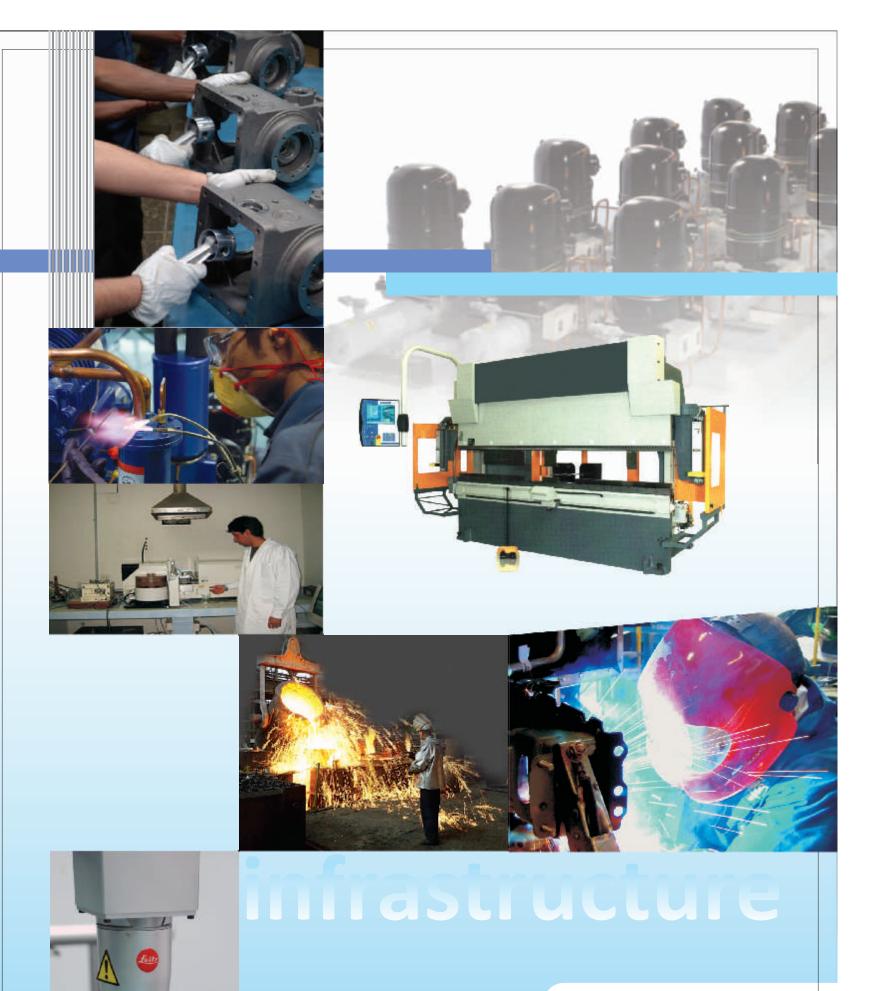
Calorimeter



Helium & Hydrogen Testing



*Conditions apply



INFRASTRUCTURE



SEMI-HERMETIC RECIPROCATING COMPRESSORS





Electricity Saving



Noise level reduction



Serviceable



High COP/ EER

High Ambient Design

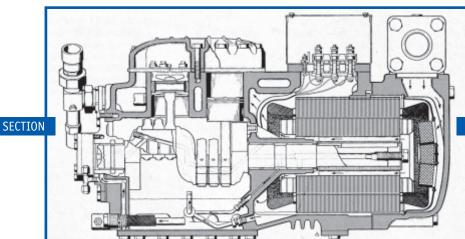




- 2, 4 and 6 cylinder series the leading technology with displacement from 4 to 151.6 m³/h (50Hz) Universal
 - -R22
 - One Compressor version
 - For all refrigerants
 - For air-conditioning or
 - For medium and low temperature
- Large application range
 - Low temperature R404A/R507A possible over a wide application range without additional cooling
- High cooling capacity and minimum energy requirements
 - Highly efficient working valves
 - Minimum dead space
 - Efficient, large volume motor
 - Universally suitable motor insulation
- Water resistant drive gear
 - Surface hardened eccentrics and crank shafts
 - Sealed main bearing and generously sized oil pump
 - Low friction bearing and aluminium pistons
 - Hard chrome plated piston rings
 - Special piston pin bearings
- *please consult technical department
- Solid valve plate design
 - Valve reeds of impact resistant spring steel especially resistant to hammering



- Efficient capacity control
 - 4 cylinder: 50% (Optional)
 - 6 cylinder: 33% / 66% (Optional)
- Minimum space requirements
- Very compact dimensions
- Quiet and low vibration
 - 2, 4 and 6 cylinder design with optimized mass balance
- Electronic motor protection
 - Thermal monitoring with PTC sensors
 - Discharge gas-temp. Sensor (Optional)
- Crankcase heater (Optional)
 - Insertion Type with sleeve
- Wound with ISR™ (Inverter Spike Resistant) Magnet wire



VIEW









OPEN TYPE RECIPROCATING COMPRESSORS

High-Speed & Slow-speed

Open Type Reciprocating Compressors AK-2N, AK-4N, WAK-2N, WAK-4N, AK-1, AK-2, AK-3

R22

- This model series has been further developed from the proven two, four and six cylinder series after extensive research.
- By a number of ways it has been possible to improve again refrigerating performance, efficiency and operating reliability and to conceive once again a further - oriented new compressor generation.
- Displacement from 4.7 m³/hr to 151.6 m³/hr
- Crankshaft with special surface finish. Optimized Aluminum piston shape and Chromium- plate piston rings guarantee low frictional losses and long service life.
- High efficient, extremely robust valve plate design as the result of newly developed valve plate from Germany.
- Pressure Oil lubrication by means of reversible gear pump.
- Shaft seal cooled by a pressurized oil stream and also by the suction gas flow resulting in excellent stability and insignificant thermal load, replaceable without dismounting the compressor.

Optional extras:

- Water-cooled cylinder heads
- Additional fan
- Crankcase heaters
- Adaptor for oil and gas equalization



Electricity Saving



Noise level reduction



Serviceable



High COP/ EER

High Ambient Design







AIR-COOLED **CONDENSING UNITS**

With Semi-Hermetic Reciprocating Compressors

• Compressor for three phase current : Compressor for single phase 230 V/1/50Hz with fitted starting device and run capacitor:

Condenser with grooved copper tubes and Aluminium Fins, Generously sized liquid receiver

High & Low pressure cut-out including mounting brackets, wired to terminal strip, Electrical wiring to the connection box IP65

Operating pressure up to 28 bar

High cooling capacity with reduced power consumption Full exploitation of the finned package due to the careful matching of the high capacity external rotors fans Fans with especially efficient low noise external rotor Motors single phase

Precharged with ester oil for R134a and R404A/R507A Designed for extremely high ambient condition upto 65°C/75°C

Oil Separator, Non-return valve, Safety Valve, Crankcase Heater, Pressure Gauges, Filter Drier, Solenoids Valve, Suction Accumulator Moisture Indicator, Fan Speed Controller and 3 Phase Fan





Electricity Saving



Noise level reduction



Serviceable



High COP/ EER

ISR™ (Inverter Spike Resistant)



WATER-COOLED CONDENSING UNITS

With Semi-Hermetic Compressors

R22

An optimum matching unit programme with the efficient and robust compressor as well as highly efficient shell and tube condensers.

The deciding features of SEA-BIRD Condensing Unit :

- Especially high refrigerant capacity
- Lower energy costs
- Extensive use and performance range
- Universal suitability with different refrigerants
- Robust construction and compact dimensions
- One design for the refrigerants R134a, R404A, R407C and R22 other refrigerants upon request
- Operating pressure up to 28 bar

Options:

Crankcase Heater, Start Unloading, Capacity Control, Additional Fans, Water Cooled Cylinders Heads, Seawater-Resistant Condensers Oil Separator, Non-return Valve, Safety Valve, Pressure Gauges Filter Drier, Solenoids Valve, Suction Accumulator

Filter Drier, Solenoids Valve, Suction Accumulator and Moisture Indicator.





RACK UNITS

STANDARD INCLUSIONS

- Sea Bird Semi Hermetic Reciprocation Compressors
- Low noise and vibration
- Suction gas distribution with liquid protection
- Oil separator with level sight glasses
- Return sight glass and filter
- Mechanical or electronic oil management system with oil injection, safety cut out and alarm
- Motor Protection Device
- Liquid receiver with level sight glasses
- Inlet and outlet isolation valves
- Provision for electrical board
- Solid Metal frame
- Discharge line protection
- Raised compressor mounts for service
- High Pressure switch safety per compressor
- Low Pressure switch common per system
- ISO9001 & better Control assembly

OPTIONAL COMPONENTS: available on request

- Additional pressure controls
- Suction and /or liquid isolation valves
- Liquid filled pressure gauges with isolation valves
- Compressor crankcase heater
- Liquid receiver level alarm
- Cylinder head unloading
- Discharge vibration eliminators (Recommended)

ELECTRICAL COMPONENTS

- Separate Contractor for LP and HP Cutout
- Electrical board with contractors, overloads Pressure controlled
- Electronic compressor/condenser management
- Remote system monitoring
- Phase failure/ Phase reversal/Voltage and Current unbalance protection devices

CONDENSERS















ISR™ (Inverter Spike Resistant

BENEFITS

Sea Bird Rack SMK Series are equipped with latest Sea bird Semi Hermetic Compressor with Highest possible refrigeration efficiency with flexibility, High energy efficiency, return on investment and Durability have been all considered and perfectly balanced during design and with lowest operation cost for all food retailer, cold room and Blast Freezer.

With different compressor combination Sea Bird rack Product are perfect solution to his customer with best economical cost. With well trained staff, Sea Bird is able to provide innovation, reliability and extended operating life through use of each individual component of a best quality and total engineered package for customers.

COMMON APPLICATION FOR SEA BIRD RACK UNIT:

- Food retailers
- Convenience stores
- Process cooling and food processing
- Cold Storage distribution centres
- Blast Freezers
- Cold Rooms
- Cold Storage warehouses
- Connection to Ice machines
- Marine on board freezers and cold rooms
- Large scale plant and flower sheds



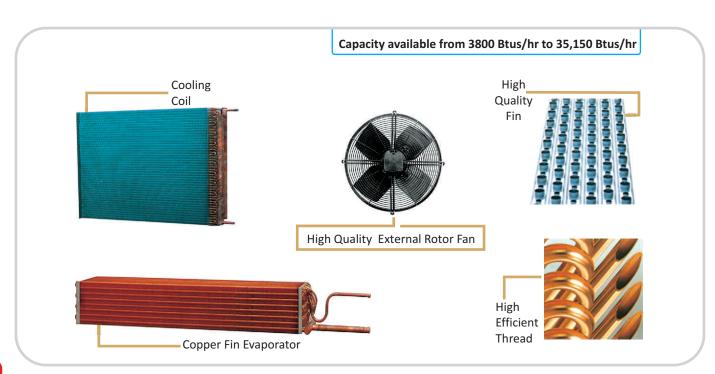
APPLICATION

S type serial Air cooler is classified in accordance with the cold storage temperature. SJ type of high temperature, is applicable for cold storage above 0°C, keeping fresh food such as vegetables, fruits and eggs. SP type of medium temperature, for cold storage around - 18°C, Keeping food such as meat and aquatic products. SL type of low temperature, for -25° cold storage, used for freezing fresh meat, fish products and other fast frozen items.



STRUCTURE FEATURES

- 1. Coil: use new high efficient aluminum wave fin, high heat conductivity, fast water discharge; use high efficient copper pipe, high heat transfer, use new liquid distributor, uniform frost.
- $2. \ \ Fan: low cost, high \ reliability, lower temperature-resistant \ and \ low \ noise \ external \ Rotor \ fans.$
- 3. Defrost: use electric heating stainless steel pipe, high leak-proofness at the end, anti-electric leakage and long life.
- 4. Casing: use aluminum plate and stainless steel or cold plastic spraying plate, nice appearance and durable.
- 5. Maintenance: flexible to disassemble and lean.



R22

- Capacity from 1.3 tons to 221 tons in two pass and 1.1 tons to 176 tons in four pass condenser
- Heat-exchanger tubes: made of copper or coppernickel (seawater-resistant design) with newly developed tube geometry and low- fouling profile on the coolant side.
- Shell and punched plates are made of boiler plate
- Suitable for (H) CFC/HFC refrigerants
- Maximum allowable pressure / allowable temperature Refrigerant side: 33 bar / -10°C to 120° C
 Coolant side: 10 bar / -10°C (anti-freezing point) to 95
- Detachable, permits mechanical cleaning of the pipes connecting and baffle side are interchangeably
- Drain plugs
- Seawater resistant design (optional):
 Copper-Nickel Tube, Plastic Coated End Cover
- Options:
 Sight glass
 Pressure Relief Valve
 Inlet Rotolock Valve

SHELL & TUBE CONDENSERS



SUCTION LINE ACCUMULATORS

With or Without Heat Exchanger

R22

Suction line accumulators are installed on refrigeration system to prevent refrigerant liquid return to suction line to idled compressors.

These systems include the following:

- System with high temperature differences (discontinuous operation),
- Remote systems with long lines,
- Systems with low evaporator load, reversing cycle systems: heat pump and defrost applications.
- Recommended for low superheat applications such as liquid chillers, low temp. Display cases, truck units, and so on...

Complete separation of the vapour phase and the refrigerant fluid's liquid phase.

Complete vaporization of the refrigerant liquid when the liquid leaves the Accumulators.

Cooling of the vapour returning to compressor, thus reducing motor warm up.

Pressure equalization at the Accumulators inlet and outlet, even in off cycle periods.

Minimum pressure drop.

Reduced noise on the low pressure side of the system.

because it is supplied with subcooled liquid.

Enhanced evaporator performance.

Special low temperature welding.



OIL SEPARATORS

R22

Sea-Bird is manufacturing oil separators in

- Accessible (flange) Type &
- Hermetic (Sealed) Type

The advantages of the oil separator on the discharge line of a compressor in a refrigeration system are confirmed by many years of experience. The oil separator intercepts the oil mixed with compressed gas and returns it to the crankcase of the compressor thus assuring an efficient lubrication of its moving parts. Furthermore the oil separator maintains a high coefficient of condenser and evaporator Performance by almost completely removing oil deposits from their exchange surfaces & limit accumulates of oil at sensitive system components. When a very high temperature at the end of the compression stage leads to the formation of oil vapours, a separator with a capacity should be used. Moreover, the oil separator, damping the valves pulsations, reduces system noise with an open or semi-hermetic compressor.

Sizes from ½" ODS to 2 1/8" ODS available in accessible impingement and Hermetic impingement.







LIQUID RECEIVERS

R22

Suitable for all(H) CFC/HFC - Refrigerants .

Maximum permissible working over pressure: 28 bar

Maximum permissible operating temperature 120°C.

Capacity available from 6.8 ltr. to 320 ltr. in Horizontal
and 3ltr. to 550 ltr. in Vertical Receivers.

Standard outlet Rotolock Valve Connection and
Inlet Brazed Connection



Options:

Sight Glass, Pressure Relief Valves, Inlet Rotolock Valve Connection and Liquid Sensor











HEAVY DUTY RECIPROCATING REFRIGERATION COMPRESSORS

The compressors are available in two different series

Single Stage	Double Stage
Sea-Bird-2	Sea-Bird-21
Sea-Bird-3	Sea-Bird-31
Sea-Bird-4	Sea-Bird-42
Sea-Bird-6	Sea-Bird-51
Sea-Bird-9	Sea-Bird-63
Sea-Bird-12	Sea-Bird-72
	Sea-Bird-93
	Sea-Bird-102



- 2, 3, 4, 6, 9 and 12 Cylinder Series the leading technology with displacement from 106.16 to 1592.4 m³/h
- Universal R22





Cast Steel Weild-in-line Valves

Sea-Bird Series Industrial Compressor

Sea-Bird-Series heavy duty compressors are most suitable for industrial refrigeration and low Temperature Applications such as Cold Storage, Ice Plants, Fisheries Plants, Ice Cream Plants, Dairy Plants, Chemical Plants, Pharmaceutical Plants, Vanaspati Plant & Air Conditioning Plants, Sea-Bird range of open type compressors are available in single as well in double stage versions with use on Ammonia (NH₃) and R-22 Refrigerant etc. They are well-designed and robust machines capable of running continuously, for prolonged period with minimum attention. These compressors by virtue of their high speed and multiplicity of cylinder exceptionally compact and economical of space. They are also designed to accommodate varying refrigeration demands with maximum economy in power and are well suited to automatic installations.

SEA-BIRD PRODUCT APPLICATIONS



Our customers are the most important people. We do our best to see that their needs are handled in a professional, efficient & cordial manner. Our careful planning, skilled engineering & precise detail coordination ensures long lasting efficiency. Our after sales services & supplying of original spare parts ensure that your equipment will continue to run at its best for many years to come thus your investment really pays off. New Developments, New Products and New Ideas are used to benefit the customers. New equipment can often be integrated in existing unit to protect your investment and meet new requirements.

We are having a well connected network of our branch offices, Distributors and Dealers for Sales and Services throughout India and even abroad.

Sea-Bird specialised into Chillers upto -80°C





17

SEA-BIRD CORPORATE SOCIAL RESPONSIBILITY (CSR)



Sea-Bird Group of Companies Chairman, Mr. Vijay Maini's dream to support the cause of right to education and saving our girl child has manifested in various activities throughout country by continuous help and support to the society.

SEA-BIRD PROUD MOMENTS...



Seabird Team at ACREX, New Delhi



Inauguration of New Factory by Chairman Mr. Vijay Maini



Holi Celebration by Sea-Bird family



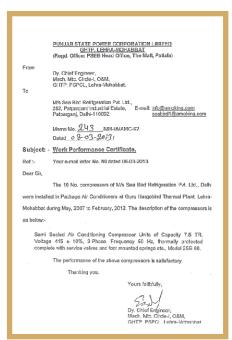
Sea-Bird Corporate Training Session

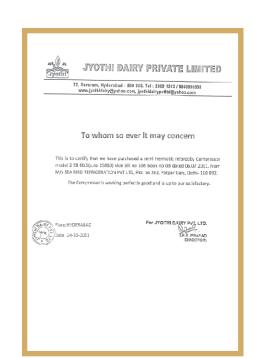


Launching of Seabird products in UAE in 2012

SEA-BIRD TESTIMONIALS













ESTEEMED CLIENTELE











































































AND MANY MORE











PROVIDING BEST OF PRODUCTS & SERVICES

W O R L D W I D E

Designed hv. Sparsh Communications



SEA-BIRD REFRIGERATION PVT. LTD.

An ISO 9001:2008 Organisation

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