Feasibility and Project Viability Report

Of

***M/s.* KRN HVAC Products Private Limited**

For

New HVAC Plant At

Plot No. F-50, G-51, EPIP, RIICO Industrial Area, Neemrana, Rajasthan, 301705 (Project – 1)

&

SP1-24 KOLILA JOGA, Neemrana, Rajasthan (Project -2)

By

303, Shitiratna Complex, B/s Radisson Blu Hotel,

Nr. Panchwati Circle, Ambawadi, Ahmedabad, - 380006

Contact No. +91 79 4899 9595/ E-mail: qservconsultants@gmail.com

Confidential
August 22nd,' 24
M/s. KRN HVAC Products Private Limited,
Plot No. A-60, Green Acre,
Neemrana, Alwa,
Neemrana RJ 301705

Dear Sir,

Feasibility and Project Viability Report for M/s. KRN HVAC Product Private Limited

Please refer to your mandate letter dated 31st July, '24 regarding the above mentioned assignment. With reference to above mandate, we hereby forward the Signed Copy of Feasibility and Project Viability for **M/s. KRN HVAC Products Private Limited.**

Kindly acknowledge the receipt.
Thanking you.

Yours faithfully,
Reviewed and Verified By:
For Q-Serv Consultants Private Limited,

For, Q-SERV CONSULTANTS PRIVATE LIMITED
DIRECTOR

Harshit Shah
Director
Enclosure: As Above.

305, Shitiratna, B/s. Radisson Blu Hotel, Nr. Panchvati Circle, Ambawadi, Ahmedabad-380006. Gujarat, INDIA.
Ph. : +91 79 33904444, 33907777 | M. : +91 999 8484 564 • Website : www.fincapconsultants.com
E-mail : qserv@fincapconsultants.com, qservconsultants@gmail.com

DISCLAIMER

This report is prepared by Q-Serv Consultants Pvt Ltd. (Q-Serv). Q-Serv hastaken utmost care to ensure accuracy and objectivity while developing this Report based on the information provided by **M/s. KRN HVAC Products Private Limited** and information obtained from sources believed by it to be accurate and reliable. The views expressed herein do not constitute the opinion of Q-Serv to buy or invest in the **M/s. KRN HVAC Products Private Limited** and are also not a recommendation to enter into any transaction with the Company in any manner whatsoever.

The report has to be seen in its completeness; the selective review of portions of the report may lead to deviated assessments. For the purpose of this report, Q-Serv has relied upon the information provided by the officials/ consultants of the **M/s. KRN HVAC Products Private Limited.** The Project cost estimates and Financial Projections presented in this report have been reviewed and analysed for the limited purpose of circulation to the potential investors of the **M/s. KRN HVAC Products Private Limited** and presented based on the best of Q-Serv's knowledge and belief. All Projections and forecasts in this report are based on assumptions provided by the officials/ Consultant of **M/s. KRN HVAC Products Private Limited** and considered to be reasonable by Q-Serv; however, the actual outcome may be materially affected by changes in the industry and economic circumstances, which could be different from the Projections. Q-Serv recommends that the user of the report seeks a review if the **M/s. KRN HVAC Products Private Limited** experiences material changes in the Project and/or operations which could have an impact on the performance of the **M/s. KRN HVAC Products Private Limited**.

Q-serv has compiled this report using information from various sources, though In preparing this report, Q-Serv have meticulously gathered and analysed pertinent information from various sources we have ensured the accuracy and reliability of the content presented herein. Although every effort has been made in checking the information given in this report, the accuracy and completeness of the same cannot be guaranteed. Q-serv will not be responsible for the continued relevance of the information or for any errors, negligence or otherwise or for any consequence arising from the use of the report.

Q-SERV CONSULTANTS PVT. LTD. AHMEDABAD U74999GJ2016PTC094249

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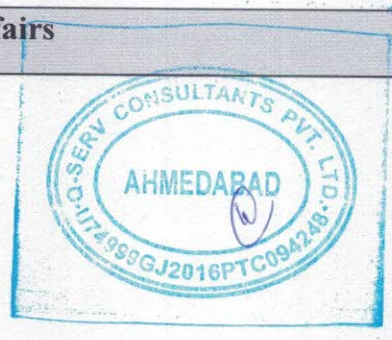
List of Abbreviations:

Abbreviations	Full Form
AoA/MoA	Articles of Association/Memorandum of Association
CAGR	Compounded Annual Growth Rate
CIN	Corporate Identification Number
CDSL/NSDL	Central Depository Services Limited/ National Securities Depository Limited
CY/FY	Calendar Year/Financial Year
DIST	District
DPR	Detailed Project Report
DRHP	Draft Red Herring Prospectus
DSCR	Debt-Service Coverage Ratio
EBT/PBT	Earnings Before Tax/ Profit Before Tax
EBIT/PBIT	Earnings before Interest & Tax/ Profit before Interest & Tax
EAT/PAT	Earnings after Tax/ Profit after Tax
FDI	Foreign Direct Investment
HVAC	Heating, Ventilation And Air Conditioning
FMCG	Fast Moving Consumer Goods
INR/Rs.	The Indian Rupee
IPO	Initial Public Offering
IRR	Internal Rate of Return
Kg/KL	Kilo-gram/Kilo-litre
Sqm	Square Meter
Q-Serv	Q-Serv Consultants Private Limited
MCA	Ministry of Corporate Affairs



MTS/ MTPA/ MTSPA	**Metric Tonnes/Metric Tonnes per Annum**
Sq. Ft./psf	**Square Feet/ per square feet**
TL	**Term Loan**
$/US$	**United States Dollar**
w.r.t.	**With Respect to**
YoY	**Year on Year**
Company / KHPPL	**KRN HVAC Products Private Limited**
Holding Company / KHERL	**KRN Heat Exchanger And Refrigeration Limited**
Group	**KRN HVAC Products Private Limited & KRN Heat Exchanger And Refrigeration Limited**
Associate Concern	**Krncoils Private Limited**
Project – 1 / Phase – 1/ Proposal -1 (Address)	**Plot No. F-50, G-51, EPIP, RIICO Industrial Area Neemrana Neemrana Rajasthan 301705**
Project – 2/ Phase – 2/ Proposal – 2 (Address)	**SP1-24 Kolila Joga,Neemrana, Rajasthan**

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Scope of Work

KRN HVAC Products Private Limited has appointed Q-Serv Consultants Private Limited, for conducting a Feasibility and Project Viability Analysis of New manufacturing unit Plot No. F-50, G-51, EPIP, RIICO Industrial Area, Neemrana, Rajasthan, 301705 (Project – 1) and located at SP1-24 Kolila Joga,Neemrana, Rajasthan (Project -2)

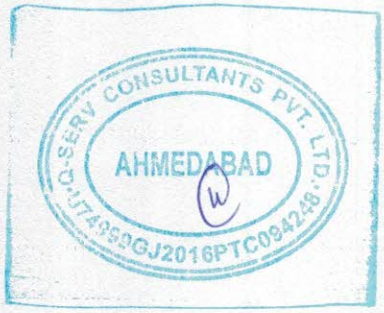
The scope of work was finalized as under:

- Q-Serv shall physically visit the proposed location.
- Q-Serv shall validate the cost of the proposed project, given the specifications on civil works and building.
- Q-Serv shall validate the cost and revenue assumptions related to the project.
- Q-Serv shall analyse the project by using various tools, financially as well as geographically to arrive at a conclusion on whether the project(s) is and/or are feasible and viable.

Methodology

The techno-economic viability study assigned to Q-Serv Consultants Private Limited was carried out in the following sequence:

- Verification of the documents provided by the client, identification of missing information and sending the revised list of documents required from the client.
- Visit to the proposed location.
- Assessment of the project cost reasonableness of the proposed project.
- Assessment of the revenue and cost estimates for the project.
- Assessing the project viability with financial analysis techniques like DSCR, IRR, Financial Ratio etc.
- Arriving at a conclusion on the project viability.



COMPANY BACKGROUND
OVERVIEW

INCORPORATION AND LOCATION

M/s. KRN HVAC Products Private Limited was incorporated on April 7, 2023. The company's registered office is located at Plot No. A-60, Green Acre, Neemrana, Alwar, Rajasthan-301705. M/s. KRN HVAC Products Private Limited specializes in manufacturing and exporting aluminium/ copper fins and copper tubes heat exchangers, water coils, condenser and evaporator coils, bar and plate heat exchangers, and oil cooling units.

GROUP STRUCTURE

KRN Heat Exchanger and Refrigeration Limited holds a 99.99% stake in KRN HVAC Products Private Limited. Together, they are referred to as the "Group."

HOLDING COMPANY

M/s. KRN Heat Exchanger And Refrigeration Limited, the holding company, was incorporated on August 25, 2017, as M/s. KRN Heat Exchanger And Refrigeration Private Limited. It was converted into a public limited company on April 3, 2023. The registered office is located at Plot No. F-46, 47, 48, 49 EPIP, RIICO Industrial Area, Neemrana, Rajasthan, India - 301705.

CERTIFICATIONS AND ACCREDITATIONS

KRN Heat Exchanger And Refrigeration Limited holds several certifications, including:

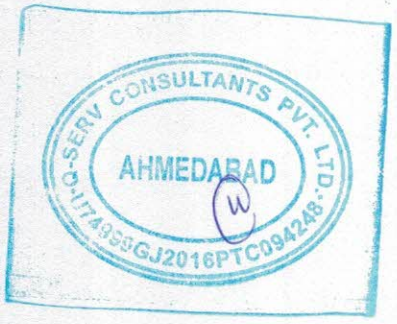
- ISO 9001:2015 for Quality Management System
- ISO 14001:2015 for Environment Management System
- ISO 45001:2018 for Health and Safety Management System
- IS 11329:2018 for finned type heat exchangers for room air conditioners from the Bureau of Indian Standards
- BS EN ISO 13134 for approved brazing procedures from Brazing Procedure Specification
- BS EN ISO 13585 for approved brazer qualification tests
- CE 2215001 conformity certificate issued by SZUTEST, Turkey for quality assurance

PUBLIC LISTING

KRN Heat Exchanger and Refrigeration Limited – the flagship company of the KRN Group, is planning to raise funds from the public and list its equity on the main board platform of recognized stock exchanges.

PRODUCT RANGE

The Group manufactures fin and tube type heat exchangers for the HVAC and refrigeration industry using non-ferrous metals, primarily copper and aluminium. The heat exchanger tubes range in size from 5 mm to 15.88 mm. The product range includes condenser coils, evaporator units, evaporator coils, header/copper parts, fluid and steam coils, and sheet metal parts. These products are customized to meet customer requirements and market demand.



NEW PRODUCT LINES

The Company plans to manufacture bar and plate heat exchangers, oil cooling units with blowers and motors, and roll bond evaporators. These products will also be customized to meet customer needs and market demand.

CLIENTELE

The Group's prestigious clientele includes Daikin Air-conditioning India Pvt Ltd, Schneider Electric IT Business (I) Pvt Ltd India, Voltas Limited, Carrier Air Conditioning & Refrigeration Ltd., Eberspacher Suetrak Bus Climate Control System India Pvt. Ltd., Eberspacher Sutrak GmbH & Co. Germany, Kirloskar Chillers Pvt. Ltd, Swegon Blue Box Pvt. Ltd., Swegon Operations S.R.L., Italy, and Knorr-Bresme India Pvt Ltd, among others. This attests to the Group's commitment to delivering top-notch products and outstanding service.

BUSINESS MODEL

The Group's business model allows for monitoring and controlling product quality on the supply side while providing the ability to respond quickly to customer needs and preferences on the demand side. The Group adheres to some of the industry's best quality product accreditations.

PROPOSED PROJECT

Proposed Project -1

The Company has proposed unit in Neemrana, situated on a 4,036 sqm plot of land. The acquisition of this land has been completed: one dated July 20, 2023, for Plot F-50, and another dated July 17, 2023, for Plot G-51,

At present this project has already constructed and production is already started.

Infrastructure and Utilities at this facility

Water Supply

- A water supply line is available around the factory boundary plot, and it can be accessed easily once the water connection is updated.
- The water requirement for the plant is approximately 600 liters per day, which will be supplied by the Rajasthan State Industrial Development and Investment Corporation (RIICO). The company will have underground storage tanks to meet the water needs for manpower, plantation, and the manufacturing process.

Power Supply

- An 11KV power supply line is available around the factory plot boundary, and it can be accessed once the electricity connection is updated.
- The company proposes to acquire power via an 11 KV HT connection from Jaipur Vidyut Vitran Nigam Limited. The proposed connected load for the project is around 10 KVA. For critical power backup, the company plans to install a 500 KVA diesel generator.

Proposed Project -2

Project Overview

The Company has proposed to expand its business by setting up a new unit at SP1-24, Kolila Joga, Neemrana, Rajasthan, on a land area of 71,924 sqm. The total project cost is estimated at Rs. 27,890.57 lakhs, and the funding details are as follows:

Particulars	Amount (in Lakhs)
Shareholder's Fund	24,246.10
Unsecured Loan from Holding Company	3,644.47
Total	**27,890.57**

The capital expenditure requirement of Rs. 27,890.57 lakhs will be met by raising investments from the parent/holding company. The parent company may increase its stake in M/s. KRN HVAC Products Private Limited by funding the project through a combination of the following sources:

- Internal accruals
- Funds raised from private lenders, investors, or institutions
- Public funding by way of an Initial Public Offering (IPO) .

The funding strategy will be tailored to the suitability and feasibility of each option, or a combination thereof, to ensure the successful execution of the proposed project.

Land Acquisition

The proposed expansion project at Kolila Joga is on 71,924 sqm of land. This land was secured by the company through an allotment letter dated August 23, 2023, from the Rajasthan State Industrial Development & Investment Corporation Ltd (RIICO). A standard allotment letter was received on September 20, 2023. Of the total land cost, 25% was paid at the time of allotment, and the remaining 75% (Rs. 2,999.23 lakhs) will be paid in 11 quarterly instalments, each consisting of an equal principal amount of Rs. 272.66 lakhs, with an interest rate of 8.50%. Repayments commenced on January 18, 2024.

Technical Consultant

For the proposed expansion of Project-2, the Company has identified M/s. Rajiv Associates as their technical consultant. They will oversee design, drawing, construction, supervision, and other ancillary activities. The company has submitted quotations from various suppliers to Q-serv.

Project Cost

The company has submitted quotations for the machinery involved in production. After negotiations, the cost of the project is estimated to be Rs. 27,890.57 lakhs (Project 2), as per the quotations received from the suppliers.

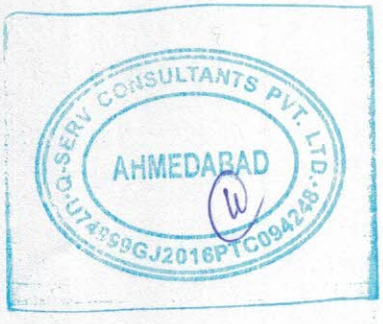
Infrastructure and Utilities Construction for the proposed project has not yet fully started, but the company has already obtained utilities such as borewell for water supply and electricity connection.

Water Supply

- A water supply line is available around the factory plot boundary and can be accessed once the water connection is updated.
- The water requirement for the plant is estimated to be around 16,000 liters per day, which will be supplied by RIICO. The company will install underground storage tanks to meet the water needs for manpower, plantation, and the manufacturing process.

Power Supply

- An 11KV power supply line is available around the factory plot boundary and can be accessed once the electricity connection is updated.
- The company proposes to acquire power via an 11 KV HT connection from Jaipur Vidyut Vitran Nigam Limited. The proposed connected load for the project is around 2,000 KVA, with an operating load of 2,000 KVA. For critical power backup, the company plans to install a 1,000 KVA diesel generator (CPCB IV).



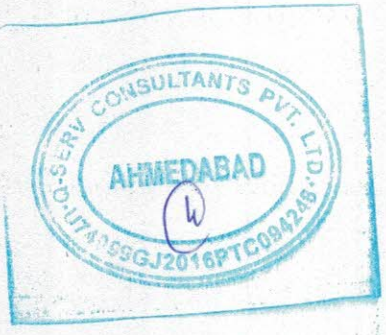
Raw Materials

The basic raw materials for manufacturing HVAC products include aluminium foil, copper foil, copper tube, galvanized sheet, brass sheet, copper sheet, aluminium sheet, and stainless steel. These materials are readily available indigenously in abundance, and there is no scarcity. These materials can also be imported freely, as they are not under the negative list in the Import-Export Policy of India 2019-2024.

Supply Chain and Approvals

The Group purchases raw materials from various vendors, including TATA Steel, India, and has a strong clientele based on its business relationships. The company holds the necessary statutory and regulatory approvals for the existing facility. For the proposed plant, the company is in the process of obtaining the required statutory and regulatory approvals.

In view of the anticipated demand, the experience of the promoters and Board of Directors in the similar industry, the strategic location of the project, favourable debt-service indicators, operational aspects, and risk mitigation suggestions detailed in the report, it may be concluded that the proposed units of M/s. KRN HVAC Products Private Limited are economically and technically viable. This conclusion is subject to the achievement of projected goals, fundings and the receipt of all necessary regulatory and statutory approvals required for the project.



CHAPTER 2
MANAGEMENT ASSESSMENT OF THE COMPANY

BRIEF PROFILE OF GROUP:

Company Name	Structure of Company
KRN HVAC Products Private Limited	Wholly Owned Subsidiary of KRN Heat Exchanger and Refrigeration Limited
KRN Heat Exchanger and Refrigeration Limited	Holding/ Parent Company
KRN Coils Private Limited	Sister Concern

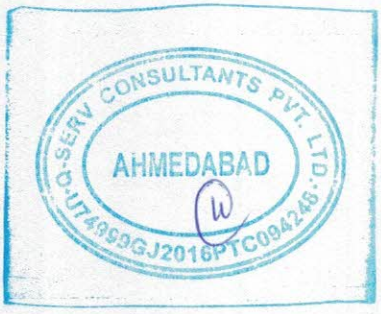
HOLDING COMPANY PROFILE:

Name of Company	M/s. KRN Heat Exchanger And Refrigeration Limited (Erstwhile M/s. KRN Heat Exchanger And Refrigeration Private Limited)
Year of Incorporation	**25th August 2017**
Registered office	**Plot No. F-46,47,48,49 EPIP, RIICO Industrial Area, Neemrana, Rajasthan-301705**
CIN	**U29309RJ2017PLC058905**
ROC Code	**RoC-Jaipur**
Registration Number	**058905**
Project Location	**RIICO Industrial Area, Neemrana, Neemrana.**
Nature of Business	**Heating, Ventilation And Air Conditioning**
Company Category	**Company limited by Shares**

Company Sub-Category	**Non-govt company**
Class of Company	**Public**
Authorised Share Capital	**Rs. 72,00,00,000/-** **(Rupees Seventy Two Crores Only)**
Paid Up Share Capital	**Rs. 46,13,66,000/-** **(Rupees Forty Six Crores Thirteen Lakhs and Sixty Six Thousands Only)**

BRIEF PROFILE OF THE COMPANY:

Name of the Company	**M/s. KRN HVAC Products Private Limited**
Year of Incorporation	**07th April, 2023**
Registered office	**A-60, Green Acre, Neemrana, Alwar, Rajasthan 301705**
ROC Code	**Roc- Jaipur**
Registration Number	**086784**
CIN	**U28191RJ2023PTC086784**
Nature of Business	**Heating, Ventilation And Air Conditioning**
Company Category	**Company limited by Shares**
Company Sub-Category	**Non-govt company**
Class of Company	**Private**
Authorised Share Capital	**Rs. 10,00,00,000/-** **(Rupees Ten Crores Only)**
Paid Up Share Capital	**Rs. 5,00,00,000/-** **(Rupees Five Crores Only)**



BRIEF PROFILE OF THE SISTER CONCERN:

Name of the Company	M/s. Krncoils Private Limited
Year of Incorporation	**23rd February, 2021**
Registered office	**Plot No F-46-47, EPIP RIICO, Industrial Area, Alwar, Neemrana, Rajasthan, India, 301705**
ROC Code	**Roc- Jaipur**
Registration Number	**073633**
CIN	**U52339RJ2021PTC073633**
Nature of Business	**Heating, Ventilation And Air Conditioning**
Company Category	**Company limited by Shares**
Company Sub-Category	**Non-govt company**
Class of Company	**Private**
Authorised Share Capital	**Rs. 10,00,000/-** **(Rupees Ten Lakhs Only)**
Paid Up Share Capital	**Rs. 1,00,000/-** **(Rupees One Lakhs Only)**

2.1 Particulars of Directors & Key Managerial Personnel of Holding Company as on 15.07.2024:

Name.	Designation
Mrs. Anju Devi	**Whole time Director**
Mr. Santosh Kumar Yadav	**Chairman and Managing Director**
Mr. Manohar Lal	**Non- Executive Director**
Mr. Deepak Batheja	**Independent Director**
Mr. Ketan Sharma	**Independent Director**

S.S.&V. CONSULTANTS PVT. LTD. AHMEDABAD U74999GJ2016PTC094248

Mr. Srinivasa Rao Anasingaraju	**Independent Director**
Mr. Praveen Kumar	**Company Secretary**
Mr Sonu Gupta	**Chief Financial Officer**

Note: - Above mentioned details are extracted from the certificate received by Q-serv dated 15.07.2024 from Company.

2.2 Particulars of Directors of the Company as on 15.07.2024:

Name	Designation
Mrs. Anju Devi	**Director**
Mr. Santosh Kumar Yadav	**Director**

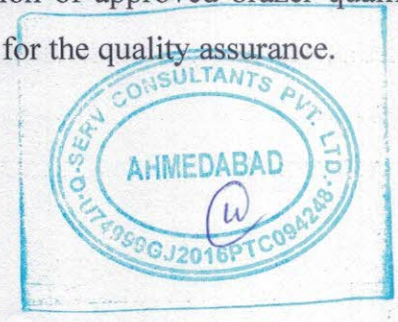
Source: As per MCA & Company data

2.3 Company Assessment:

The company was incorporated on 07th April, 2023 in the name of M/s. KRN HVAC Products Private Limited. The registered office of the company is located at Plot No. A-60, Green Acre, Neemrana, Alwar, Rajasthan-301705. M/s. KRN HVAC Products Private Limited is a manufacturer and exporter specializing in Aluminium / Copper Fins and Copper Tubes Heat Exchangers, Water Coils, Condenser and Evaporator Coils, Bar and Plate Heat Exchanger, Oil Cooling Units, Roll Bond Evaporator.

M/s KRN Heat Exchanger And Refrigeration Limited is a Holding Company as well as promoter of the company, which holds 99.99% of Company.

The Parent Company is certified by an ISO 9001:2015 in recognition of organization's Quality Management System, ISO 14001:2015 in recognition of organization's Environment Management System, ISO 45001:2018 in recognition of organization's Health and Safety Management System, IS 11329:2018 in recognition of quality of Finned type Heat Exchanger for room air conditioners from Bureau of Indian Standards, BS ENISO 13134 in recognition of approved brazing procedure from Brazing Procedure Specification, BS EN ISO 13585 in recognition of approved brazer qualification test, CE 2215001 conformity certificate Issued by Szutest, Turkey for the quality assurance.



The Group's senior management team comprising of Group's Promoters who have extensive experience and knowhow in engineering sector, including, business development, operations, administration, marketing and human resource management. They leverage the understanding and the experience of Group's senior management in successfully managing their operations and growth. Group's founder, Promoter and Director Santosh Kumar Yadav has over 20 years of experience in the business of manufacturing Heat Exchangers and Refrigeration units. His leadership and vision have helped Group to grow and manufacture winding wires. Group also benefit significantly from the qualified and experienced senior management team and workforce who have an entrepreneurial vision and the technical capability to further expand Group's business and operations. In addition, Group have a dedicated team of engineers along with other skilled and technically qualified workforce. Group continuously strengthen their engineering expertise by providing in-house training to Group's workforce, to diversify and update their skill sets and keep them updated with the latest changes in manufacturing technologies and processes. The faith of the Management in the workforce and their dedicated performance has enabled them to build a niche player in the market. The vast experience of Group's senior management team has resulted into streamlined processing, improved product quality and increased profitability which give them a competitive edge over competitors.

2.4 Directors Profile:

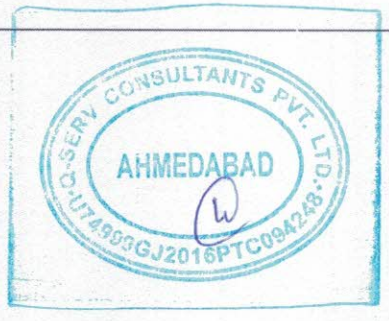
I. <u>Mr. Santosh Kumar Yadav</u>

Full Name	**Mr. Santosh Kumar Yadav**
DOB	**November 17th, 1980**
Age	**43 years**
Nationality	**Indian**
DIN	**07789940**
Designation	**Chairman And Managing Director**
Address	**B-1004, vasundhra Nagar, UIT Colony, Bhiwadi, Rajasthan-301019**
Other Directorship	**M/S. KRN Heat Exchanger And Refrigeration Ltd.** **M/S. KRN Coils Private Limited**
Qualification	**Diploma In Business Management**

	Diploma In Mechanical Engineering
Experience	• **In the field of Mechanical Engineering with more than 20 years of rich experience in Heat Exchangers and Refrigeration units manufacturing.** • **Worked as "DGM – Coli Shop Production" in Lloyd Electric & Engineering Limited w.e.f. 01-10.2010** • **Worked as "Manager - Operations" in Lloyd Electric & Engineering Limited w.e.f. 01-10.2010** • **Due to his exemplary operations skills in manufacturing, he was deputed at Luvata Czech plant in Czech Republic for around two years w.e.f. June 2008** • **Worked as "Assistant Manager - Production" in Lloyd Electric & Engineering Limited w.e.f. 01-03.2008** • **Worked as "Sr. Engineer" in Lloyd Electric & Engineering Limited w.e.f. 01-04.2007** • **Worked as "Sr. Engineer - Coil Shop" in Lloyd Electric & Engineering Limited w.e.f. 01-10.2006** • **Joined Lloyd Electric & Engineering Limited as a Trainee w.e.f. 02-04-2003** **He is also on the Board of various private limited and public companies.**

II. **Mrs. Anju Devi**

Full Name	**Mr. Anju Devi**
DOB	**April 14th 1982**
Age	**42 years**
Nationality	**Indian**
DIN	**06858442**
Designation	**Wholetime Director**
Address	**B-1004, vasundhra Nagar, UIT Colony, Bhiwadi, Rajasthan-301019**
Other Directorship	**M/S. KRN Heat Exchanger And Refrigeration Ltd.** **M/S. KRN Coils Private Limited**



Experience	• **Wide Experience in handling HVAC Coils manufacturing process and handling the coil shop.** • **Worked as a Consultant with Lloyd Electric & Engineering Limited from 01.04.2012 till 31.03.2014** • **Work as a key person to the Company and has over 10 years of industry experience in various fields across multiple industries**

III. **Mr. Deepak Batheja**

Full Name	**Mr. Deepak Batheja**
DOB	**November 05th 1982**
Age	**41 Years**
Nationality	**Indian**
DIN	**10555193**
Designation	**Independent Director**
Address	**Flat No - EG27, Ashiana Garden , Bhiwadi, Rajasthan-301019**
Term	**For a period of five (05) years w.e.f. March 20, 2024 until March 19, 2029**
Qualification	**Chartered Accountant (CA), B.Com, LLB**
Directorship	**M/S. KRN Heat Exchanger And Refrigeration Ltd.**
Experience	• **Practicing Chartered Accountant based in Bhiwadi and had over 3 decade of varied experience in the field of Auditing, Company Law Matters and Direct Taxation as well as indirect tax matters.**

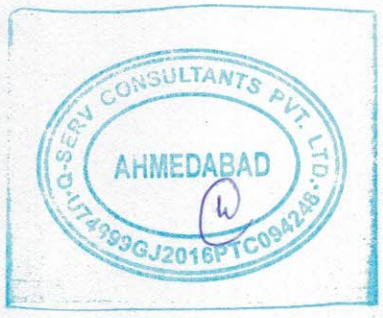
IV. **Mr. Manohar Lal**

Full Name	**Mr. Manohar Lal**
DOB	**February 28th 1977**
Age	**47 Years**
Nationality	**Indian**
DIN	**10040507**

Designation	**Non-Executive Director**
Address	**S/o Balbir Singh, H.No 136, Near Dharamshala, Heengwawahera, Alwar, Rajasthan -301411**
Qualification	**Senior Secondary**
Directorship	**M/S. KRN Heat Exchanger And Refrigeration LTD.**
Experience	• **In administrative department of KRN Heat Exchanger And Refrigeration Limited & Served Indian Army From 15.02.1999 Till 31.10.2021**

v. **Ketan Sharma**

Full Name	**Mrs. Ketan Sharma**
DOB	**September 26th 1986**
Age	**37 Years**
Nationality	**Indian**
DIN	**10541058**
Designation	**Independent Director**
Address	**19/10/2,West Moti Bagh,Street No 2,Sarai Rohilla,Delhi,110035**
Term	**For a period of five (05) years w.e.f. March 20, 2024 until March 19, 2029**
Qualification	**Fellow Chartered Accountant (FCA), Bachelor of Computer Science(BCS)**
Directorship	**M/S. KRN Heat Exchanger And Refrigeration LTD.**
Experience	• **Practicing Chartered Accountant and a working partner in a firm named Deepti & Co. having registered address at Ambala and place of business at Delhi & Bhiwadi for the last 10 years.** • **Varied experience in the field of Accounts & Audits, Direct & Indirect taxation, Project Finance and Company Law related Matters.**



VI. **Mr. Srinivasa Rao Anasingaraju**

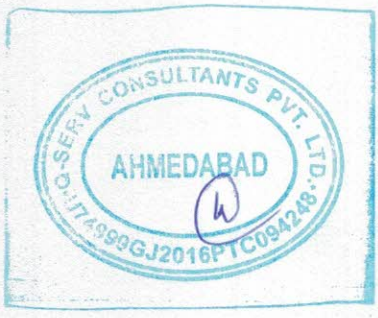
Full Name	Mr. Srinivasa Rao Anasingaraju
DOB	**June 02nd , 1972**
Age	**52 Years**
Nationality	**Indian**
DIN	**10541655**
Designation	**Independent Director**
Address	**502, Shivathirtha, Erandwane,Pune 411038**
Term	**For a period of five (05) years w.e.f. March 20, 2024 until March 19, 2029**
Qualification	**F.C.S, LL.B., ICMA, Insolvency Professional, PGD PMIR & LW, M. Com, B. Com**
Directorship	**M/S. KRN Heat Exchanger And Refrigeration LTD.**

a. Shareholding Pattern of Holding/Parent Company:

Sr. No.	Shareholders	No of Shares	% Holding
1	Santosh Kumar Yadav	2,02,99,950	44.00
2	Anju Devi	2,37,00,000	51.37
3	Others	21,36,650	4.63

Comment:

- ***Q-Serv has received the signed statement related to shareholding pattern on the letter head of the company along with duly signed and stamped.***
- ***Above shareholding pattern is as at 15th July, 2024.***



b. **Shareholding Pattern of Company:**

Sr. No.	Shareholders	No of Shares	% Holding
1	Santosh Kumar Yadav	500	0.01
2	M/s. KRN Heat Exchanger And Refrigeration LTD	49,99,500	99.99

Comment:

- *Q-Serv has received the signed statement related to shareholding pattern on the letter head of the company along with duly signed and stamped.*
- *Above shareholding pattern is as at 15th July, 2024.*

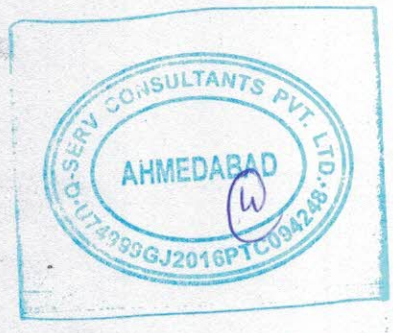
c. **Promoter's Net Worth**

Promoter	Designation	% of Holding in KRN HVAC Products Private Limited	Net worth
M/s. KRN Heat Exchanger And Refrigeration LTD	Holding Co.	99.99	Rs. 13,077.97 Lakhs

**As on 31.03.2024*

Comment:

- *Q-Serv has taken net worth certificate from audited financial of the company as at 31.03.2024*

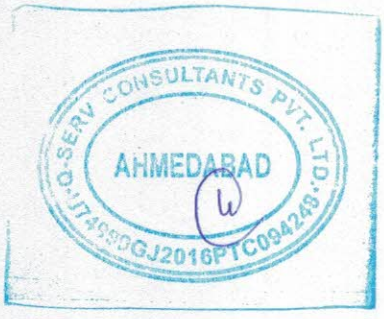


d. Overall Management Assessment

The Group is involved into running a business of manufacturing & specializing in Aluminium / Copper Fins and Copper Tubes Heat Exchangers, Water Coils, Condenser and Evaporator Coils and is currently running units located at RIICO Industrial Area, Neemrana, Rajasthan. The majority of Finished goods are purchased by vendors such as Daikin Air-conditioning India Pvt Ltd, Schneider Electric IT Business (I) Pvt Ltd India, Voltas Limited, Carrier Air Conditioning & Refrigeration Ltd., Eberspacher Suetrak Bus Climate Control System India Pvt.Ltd., Eberspacher Sutrak Gmbh & Co. Germany, Kirloskar Chillers Pvt Ltd, Swegon Blue Box Pvt. Ltd., Swegon Operations S.R.L., Italy, Knorr-Bresme India Pvt Ltd, among others. The group is also having a good client base depended on their vendor-customer relationship.

At Present, Group has plant situated at RIICO Industrial Area to produce HVAC Products. Nevertheless, with a view to driven by the demand and industry analysis of HVAC Products, The Group proposes to make a foray into the manufacturing of new product related to Heating, Ventilation and Air Conditioning (HVAC) industry by proposing Phase- 1 & Phase- 2 at a place as mentioned herein above nearby from the existing facilities with a total capital expenditure (Phase 1 & Phase 2) of Rs.29,269.07 lakhs. For which Holding Company have proposed to file DRHP with respective stock exchange and list their equity share for public funding. Please refer in the COP/MOF Table referred at chapter no. 5 "Project Proposal".

For the purpose of expansion, presently, in Phase -1, The Company has already acquired the land and started construction of the building and in Phase -2, for plot no SP 1-24, Neemrana, it has already secured the E-auction bid and received the offer for allotment letter from RIICO dated 23rd August, 2023. Later Standard Allotment letter dated 20th September, 2023 has been received.



CHAPTER 3
TECHNICAL ASSESSMENT

3.1 PROJECT RATIONALE

M/s. KRN Heat Exchanger And Refrigeration Limited (Holding Company) manufacturer and exporter specializing in Aluminium / Copper Fins and Copper Tubes, Heat Exchangers, Water Coils, Condenser and Evaporator Coils since its inception in 2017. The company had started its business at their Plant of Neemrana, Rajasthan in RIICO Industrial Area.

Based on the increase in customer base and up gradation in technology and manufacturing process, the Group will expand another unit in subsidiary company, KRN HVAC Products Private Limited at Neemrana, Rajasthan by setting up a Project 1 & Project 2 as mentioned above. The Group has active market and very high customer base, increasing demand for Heat Exchangers and increasing trend of sales, The Group Goes For Expansion in Manufacturing of Heat Exchangers, Condenser Coils, Evaporator Coils, Heating Coils, Refrigeration Equipments, Copper Fitting/Components, Copper Tubes, Cross Flow Fans/Blower, IDU units, ODU units, Air Conditioner, Chest Freezer, Deep Freezer, Water Cooler, complete HVAC units, Refrigeration Evaporators, Cold Rooms IDU and ODU sheet metal components and other HVAC Components, MCHX, Radiator, Plate & Bar Heat Exchanger. The company has proposed to setting up new plant at Phase-1 & Phase-2 for the purpose of the same to maximize the profit and reach at top in this industry.

Capex requirement of Rs. 29,269.07 Lakhs shall be meet by raising the investment from Parent / Holding Company. The parent company may raise the stake in the company by funding the same from its Internal Accruals or by raising the funds from Private Lenders / Investors / Institutions or Public by way of Initial Public Offering (IPO) respectively or in combination of any or all as per the suitability of the same.

In this project, the working capital requirements will be met through funding from the parent company by way of equity or debt as and when needed. This strategic approach ensures a stable financial foundation by utilizing the company's own resources, minimizing external dependencies and optimizing the overall financial structure for successful project execution.

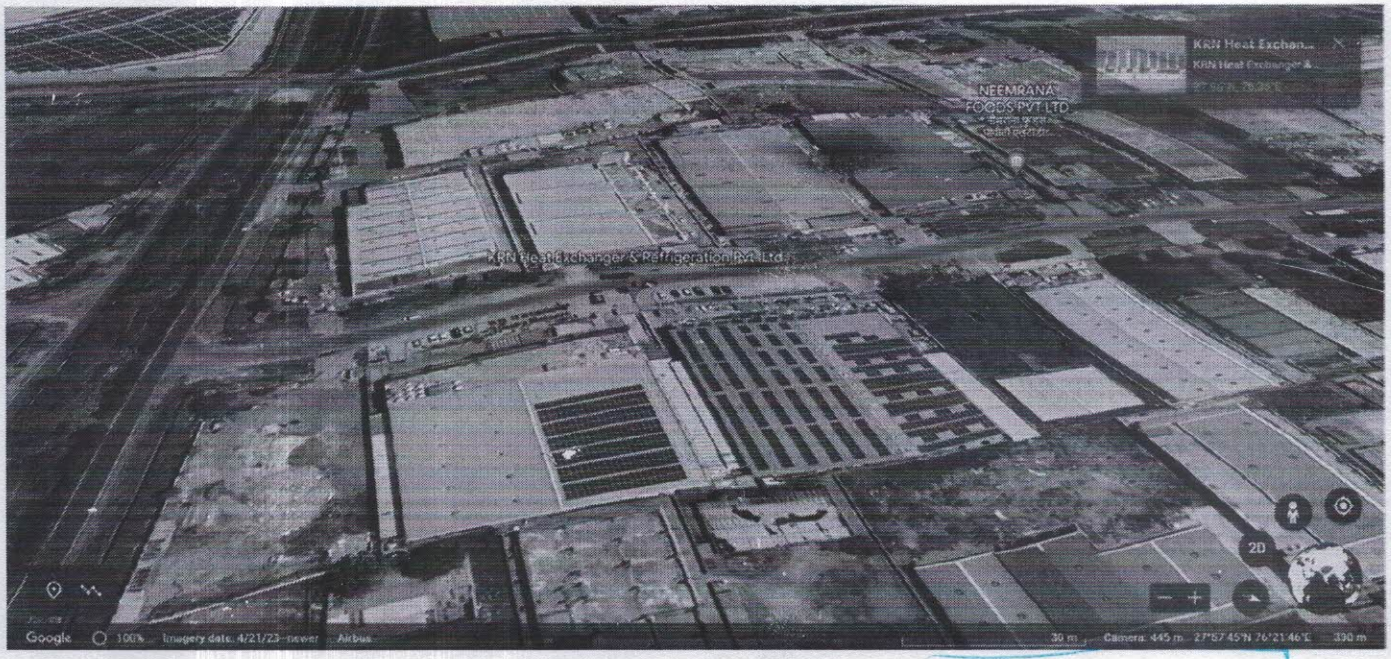
The Group is having valid regulatory/statutory approvals with respect to their existing plant. However, they need to obtain the new statutory as well regulatory approval from respective authority related to proposed plant for which company has already initiated process related to the same.

3.2 PROJECT LOCATION

The Group is having existing unit, which is located at E-46, 47, 48, 49, EPIP, RIICO Industrial Area, Neemrana Rajasthan-301705,

Plant Location:

Helicopter View

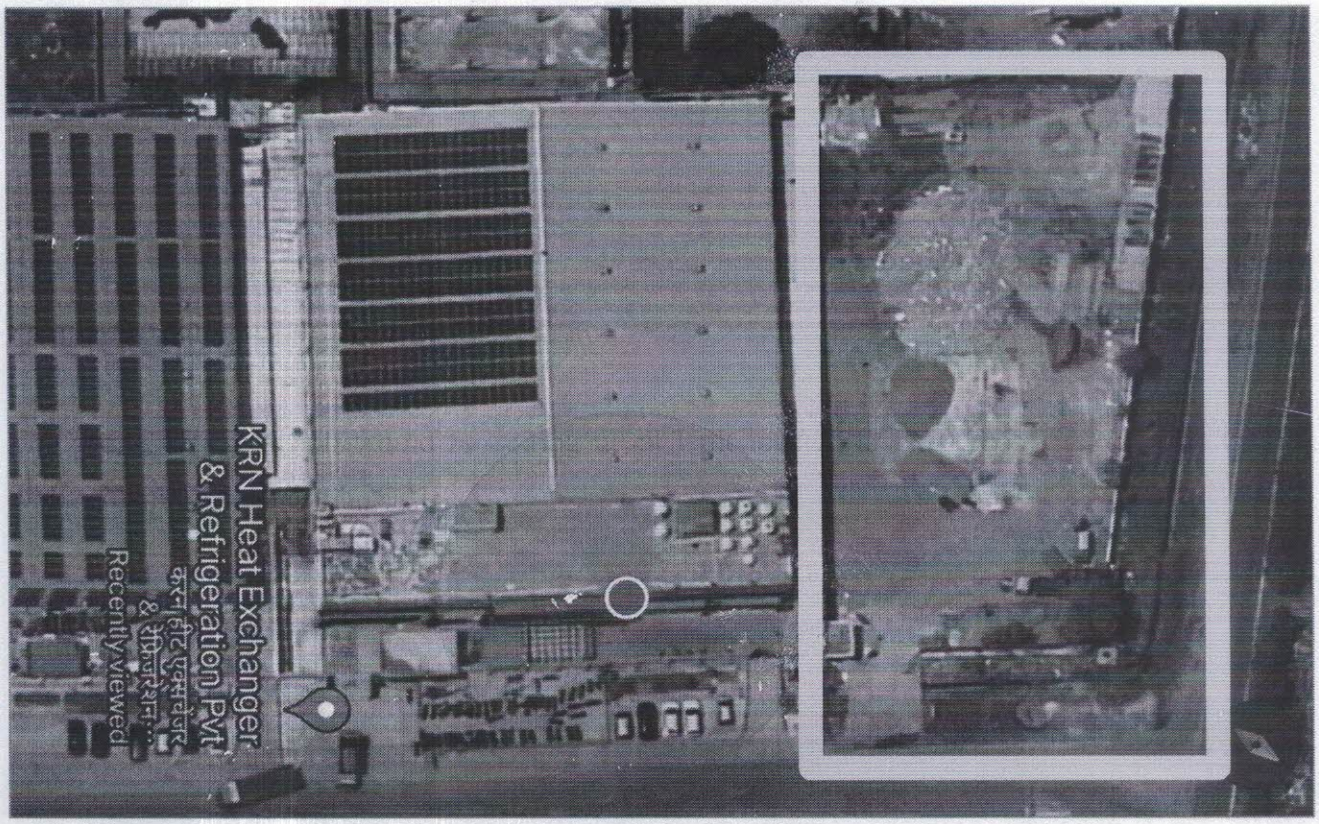


(Source: maps.google.com)

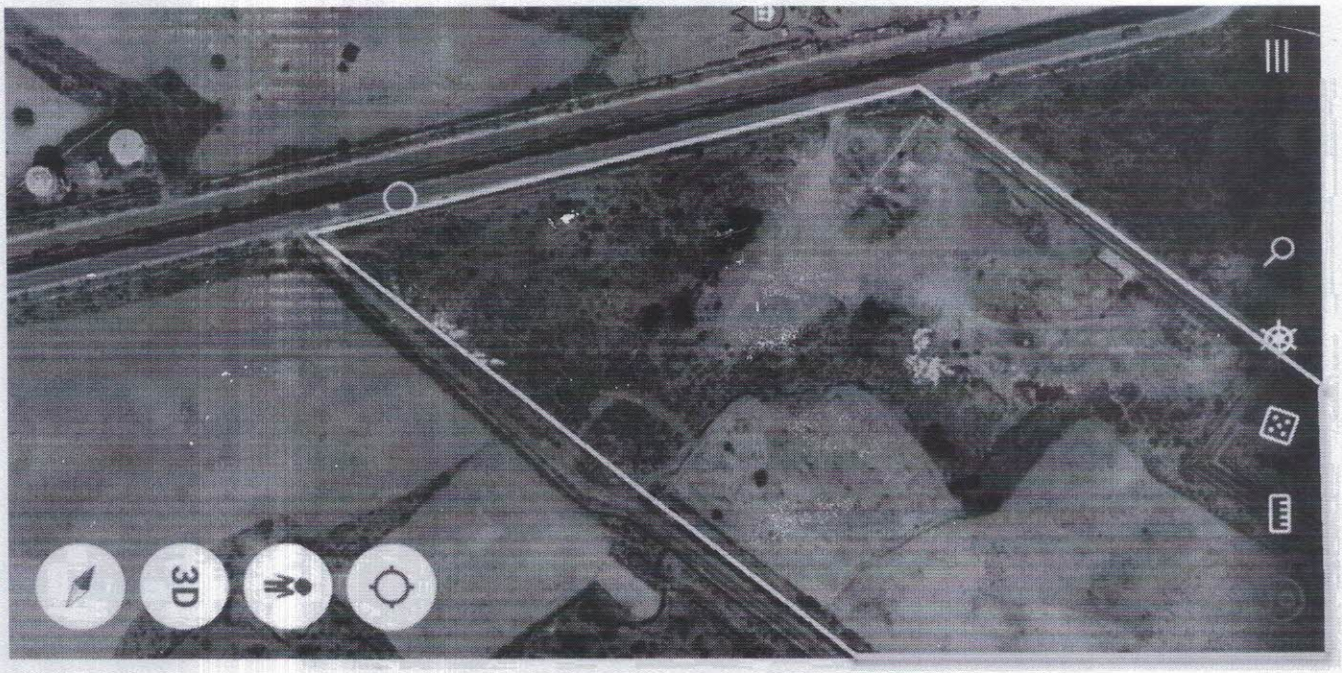
Proposed Plant Location (Project -1):

The proposed expansion would be setting up at Unit located at F-50, G-51, EPIP, RIICO Industrial Area, Neemrana, Rajasthan-301705.

Helicopter View (Project-1)



Helicopter View (Project-2)



(Source: maps.google.com)

The detail of the said location is as follows:

- RIICO Industrial Area is an area in the Tehsil of Neemrana District, Neemrana of Rajasthan.
- Neemrana is a village with a total population of 9,600 estimated.
- The nearest town to Neemrana is Alwar at a distance of approximately 66 km.

(Source: Google)

3.3 PROPOSED *EXPANSION:*

A GENERAL OVERVIEW OF THE HEATING, VENTILATION, AND AIR CONDITIONING UNITS (HVAC):

Throughout the industrial sector, Group are constantly in search of ways to maximize profits while cutting costs and conserving space. HVAC system are to help maintain good indoor air quality (IAQ) through adequate ventilation with filtration and provide thermal comfort. HVAC systems are among the largest energy consumers in schools.

The first step is to design and construct a progressive Fin Dye, which is a specialized tool used to stamp and shape the Fins. The Dye contains a series of progressively sized cavities or ridges that create the desired shape of the Fins on the Aluminium Sheets. These Fins can be straight, wavy, or other configurations based on the Heat Exchanger's requirements.

In the second step of the process, the utilization of a CNC controlled automatic hairpin bender is employed to transform Copper Tubes into the desired size and shape of large hairpins. This specialized device combines precision engineering with Computer Numerical Control (CNC) technology to achieve accurate and consistent bending results.

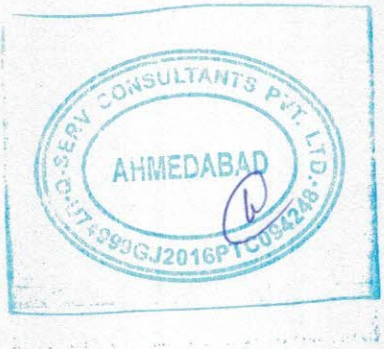
In the third phase of the process, the assembly of Fin Sheets and Copper Tubes is achieved with the help of vertical and horizontal expanders. The Fin Sheet, typically made of a durable and Heat-Conductive material, contains a series of holes pre-drilled in specific patterns to accommodate the Copper Tubes. These Tubes, also known for their excellent thermal conductivity, play a crucial role in enhancing the overall efficiency of the system.

In the design of a Heat Exchanger, the U-bend, Header, and Distributor play crucial roles in ensuring efficient refrigerant flow and Heat transfer. The Copper Tube, serving as the main conduit for the refrigerant, has openings at its ends where these components are mounted.

The initial phase of ensuring the quality of Heat Exchangers involves two vital tests: the Helium Leak Test and the Water Leak Test. Firstly, the Helium Leak Test is conducted, where high-pressure helium gas is passed through the Heat Exchanger in a specialized chamber. This process allows the detection of any potential leaks in the Heat Exchanger, as the escaping helium gas can be traced and identified.

In conclusion, the strategic bending of Heat Exchangers serves as a pivotal technique to optimize space utilization, enhance surface area, and elevate the performance and safety of the Final product.

Driven by the above the Company proposes to manufacturing of HEATING, VENTILATION, AND AIR CONDITIONING UNITS (HVAC) at a place nearby from the existing facilities with a total capital expenditure of Rs.29,269.07 lakhs, by setting up Project 1 & 2 as mentioned above.



3.4 HVAC INDUSTRY IN INDIA

India's economy is showing signs of resilience with GDP estimated to grow by approximately 7.2% in FY 2023. Although this translates into a moderation in demand (compared to FY 2022), the estimated GDP growth in FY 2023 represents a return to pre pandemic era growth path. Despite this moderation in growth, India continues to remain one of the fastest growing economies in the world.

There are quite a few factors that is aiding India's economic recovery – notably its resilience to external shocks (ongoing Russia – Ukraine conflict) and rebound in private consumption. This rebound in private consumption is bringing back the focus on improvements in domestic demand, which together with revival in export demand is a precursor to higher industrial activity. Already the capacity utilization rates in Indian manufacturing sector are recovering as industries has stepped up their production volumes. As this momentum sustains, the increasing capacity utilization would lead to fresh round of capacity expansion plan. The universal vaccination program by the Government has played a big part in reinstating confidence among the population, in turn helping to revive private consumption.

Realizing the need to impart external stimuli, the Government stepped up its spending on infrastructure Projects which in turn had a positive impact on economic growth. The capital expenditure of central government increased by nearly 64% during the first 8 months of FY 2023. This has provided the much-needed confidence to private sector, and in turn attracted private investment.

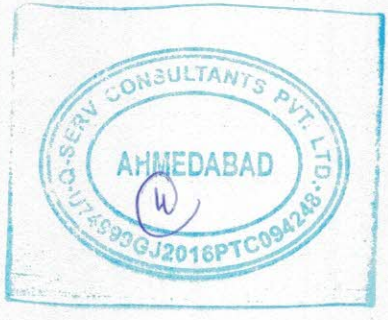
On the lending side, the Financial health of major banks have witnessed an improvement which has helped in improving the credit supply. With capacity utilization improving, there would be demand for credit from corporate sector to fund the next round of expansion plans. Banking industry is well poised to address that demand. Underlining the improving credit scenario is the credit growth to micro, small and medium enterprise (MSME) sector which increased by nearly 31% in January – November 2022 period, compared to corresponding period previous year2. The extended Emergency Credit Linked Guarantee Scheme (ECLGS) by the Union Government has played a major role in improving this credit supply.

India's GDP in FY 2023 is expected to grow by 7% compared to 9.1% in the previous fiscal on the back of slowing domestic as well as external demand owing to series of interest rate hikes globally to tackle high inflation. The year-on-year moderation in growth rate is also partly due to a fading impact of pandemic-induced base effects which had contributed towards higher growth in FY 2022. On quarterly basis, the country growth moderated in Q2 and Q3 of FY 2023 which highlights impact of slowing economy on the back of monetary tightening. During Q3 FY 2023, the country's GDP grew by 4.36% against 6.28% y-o-y increase in the corresponding quarter last fiscal.

Sectoral analysis of GVA reveals growth tapered sharply in industrial sector which is estimated to grow by just 3.6% against 11.6% in the previous fiscal. In the industrial sector, growth across major economic activity such as mining, manufacturing, construction sector slowed and it registered a growth of 3.38%, 0.56% and 9.12% in FY 2023 against a decline 7.07%, 11.05% and 14.82% in FY 2022, respectively. Utilities sector too observed a marginal moderation in y-o-y growth to 9.15% against a decline of 3.6% in the previous years.

Talking about the services sectors performance, the trade, hotel, transport, communication, and broadcasting segment continued to strengthen and grow by 14.18% in FY 2023 against 13.75% in the previous year and Financial services, real estate and professional services sector recorded 6.85% y-o-y growth against 4.73%. However, overall service sector growth was curbed by moderation in public administration and defense services sector which recorded 7.12% yearly increase against 9.7% increase in the previous year.

After experiencing three years of deteriorating industry growth, the country's Index of Industrial Production (IIP) index registered 11.3% y-o-y growth where growth was evenly spread across all sub-segments. Manufacturing index, with 77.6% weightage in overall index, registered 11.7% y-o-y growth in FY 2022 while mining sector index registered the highest growth. On use-based classification basis, infrastructure/construction goods, capital good, intermediate good and consumer durable outperformed over the other sector and registered healthy double-digit growth.



Currently, a large number of industries that are manufacturing HVAC Units:

- Voltas Limited
- Blue Star Limited
- Daikin Air-conditioning India Pvt Ltd.
- LG Electronics India Pvt Ltd.
- Carrier Air-conditioning & Refrigeration Ltd.
- Mitsubishi Electric India Pvt Ltd.
- Samsung India Electronics Pvt Ltd.
- Whirlpool of India Ltd.
- Danfoss Industries Pvt Ltd.
- Emerson Climate Technologies (India) Pvt Ltd.

Features:

- The design and type of ductwork
- Return-air considerations
- Air-filter location
- A filter dryer
- Location of the outdoor unit
- Balance dampers in the ductwork
- The refrigerant
- Location of the indoor unit
- Efficiency
- The condenser (outside) coil type

Industry view:

Indian market for Heat exchanges reached USD 625 million per annum in 2022, with annual industry turnover increasing by a CAGR of 10% between 2019 and 2022.

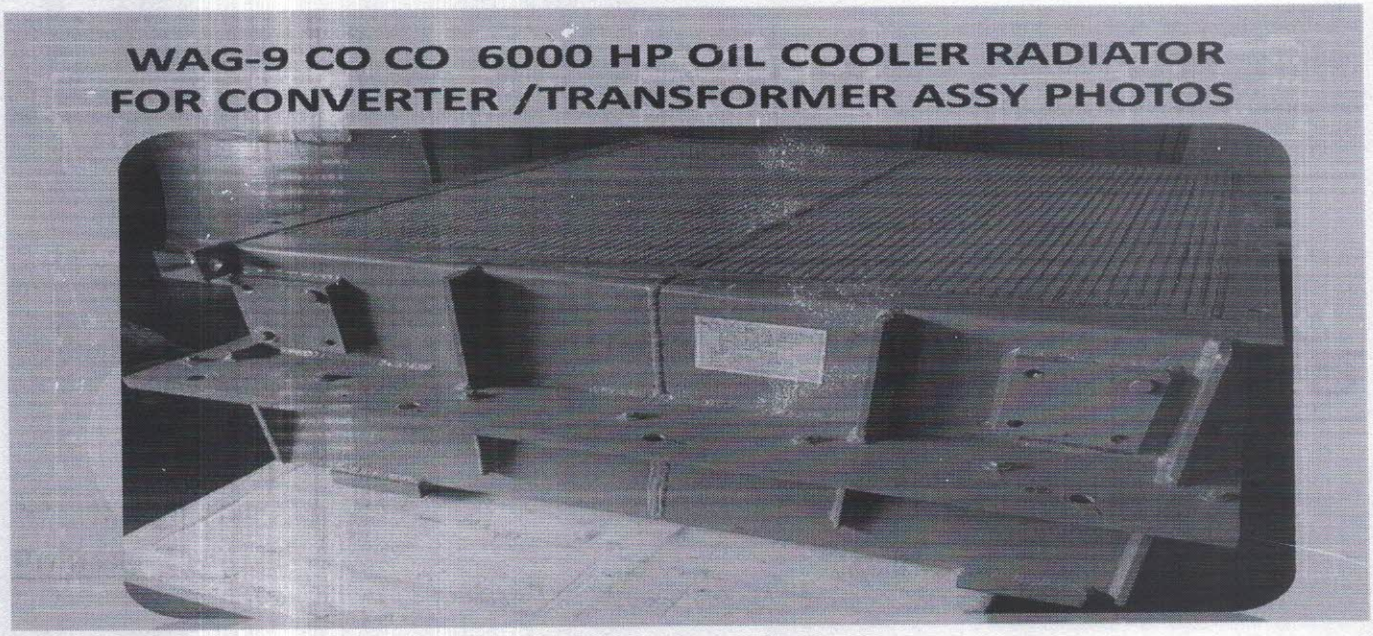
Rapid industrialization and urbanization, coupled with aggressive drive on infrastructure front have all accelerated the demand for Heat Exchangers. The strong annual growth in revenue is a result of these supporting factors. In addition, the ubiquitous nature of Heat Exchanger – which Finds application across all major industry segments – have ensured that a general growth in industrial activity and positive economic sentiment translate into demand for the product.

Apart from these direct demand drivers, the increasing focus on efficient energy usage to contain carbon emissions is shaping up as an indirect demand driver. Heat Exchangers with its ability to facilitate efficiency Heat transfer helps in optimizing energy demand. Given the dominant role played by hydrocarbon energy sources, any optimization in energy demand will directly translate into lower carbon emissions. So, Heat Exchangers is expected to play a major part in India's sustainable development journey.

3.5 GROUP'S *PRODUCT*

Proposed Product –

1) BAR & PLATE HEAT EXCHANGER:



About Bar & Plate Heat Exchanger Product:

The Bar & plate Heat Exchanger is a device that permits recovery of the Heat contained in a fluid being transferred to another fluid. Both fluids never touch each other because they are separated by metallic sheets. These sheets, which are called plates, are very Fine and grooved to enable the diffusion of the greatest amount of Heat through each surface unit. The plate Heat Exchanger has been made to guarantee a Heat interchange with the highest security.

These bar & plate Heat Exchanger are widely used in different industry such as:

- Oil And Gas Industry
- Chemical Industry
- Power Industry
- HVAC Systems
- Food And Beverage Industry
- Refrigeration

And many more.

RAW MATERIAL:

The raw materials required for making of Bar & plate Heat Exchanger are stainless steel, titanium and aluminium.

SUPPLIER OF RAW MATERIAL:

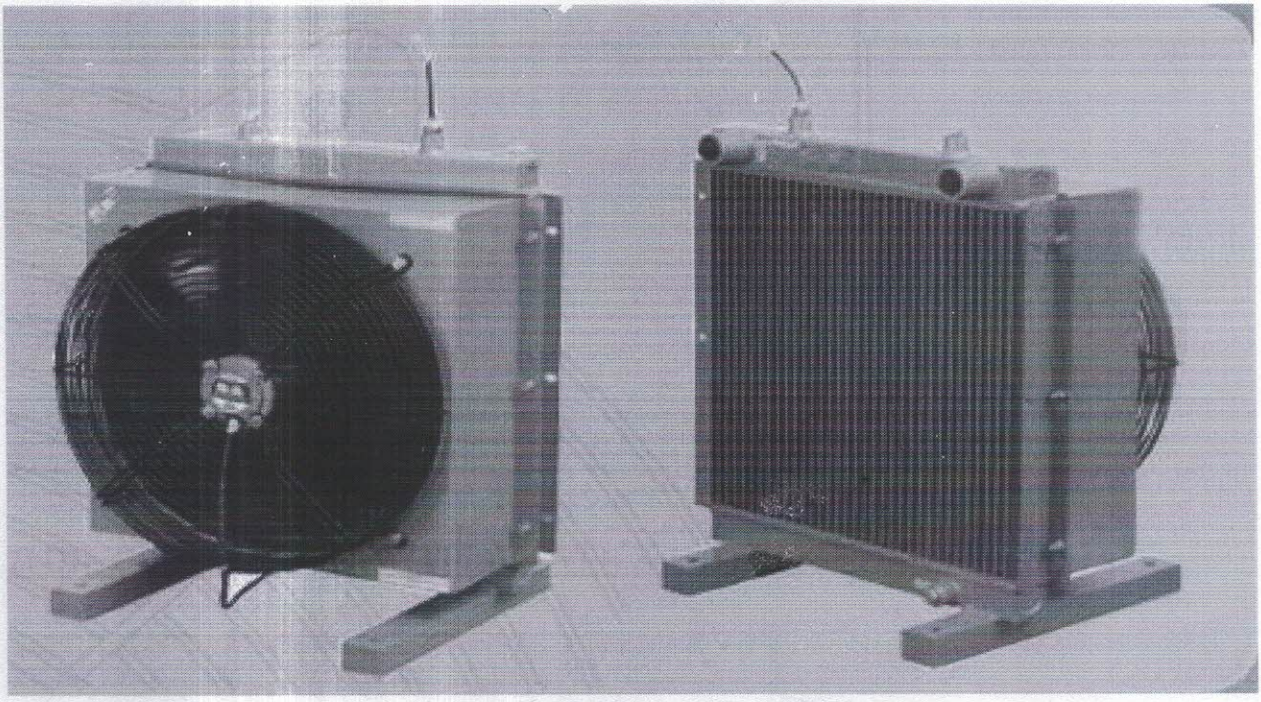
- Alcoa, China
- HD Metals, China
- Jindal, India
- Ganga Extrusions, India
- TATA Steel, India
- Sri Ram Chemicals, Delhi
- Havels, India
- Copland, Thaiwan

The materials can however be imported and there are no restriction whatsoever on these. As per the extant Import-Export Policy of India 2019-2024, these materials are not under negative list i.e. these can be imported freely.

Major Customers

- Daikin Air-conditioning India Pvt Ltd
- Schneider Electric IT Business(I)Pvt Ltd
- Voltas Limited
- Carrier Air Conditioning & Refrigeration Ltd.
- Eberspacher Suetrak Bus Climate Control System India Pvt. Ltd.
- Eberspacher Sutrak Gmbh & Co. Germany
- Kirloskar Chillers Pvt. Ltd
- Swegon Blue Box Pvt. Ltd.
- Swegon Operations S.R.L.,Italy
- Knorr-Bresme India Pvt Ltd.

2) OIL COOLING UNIT WITH BLOWER & MOTOR:



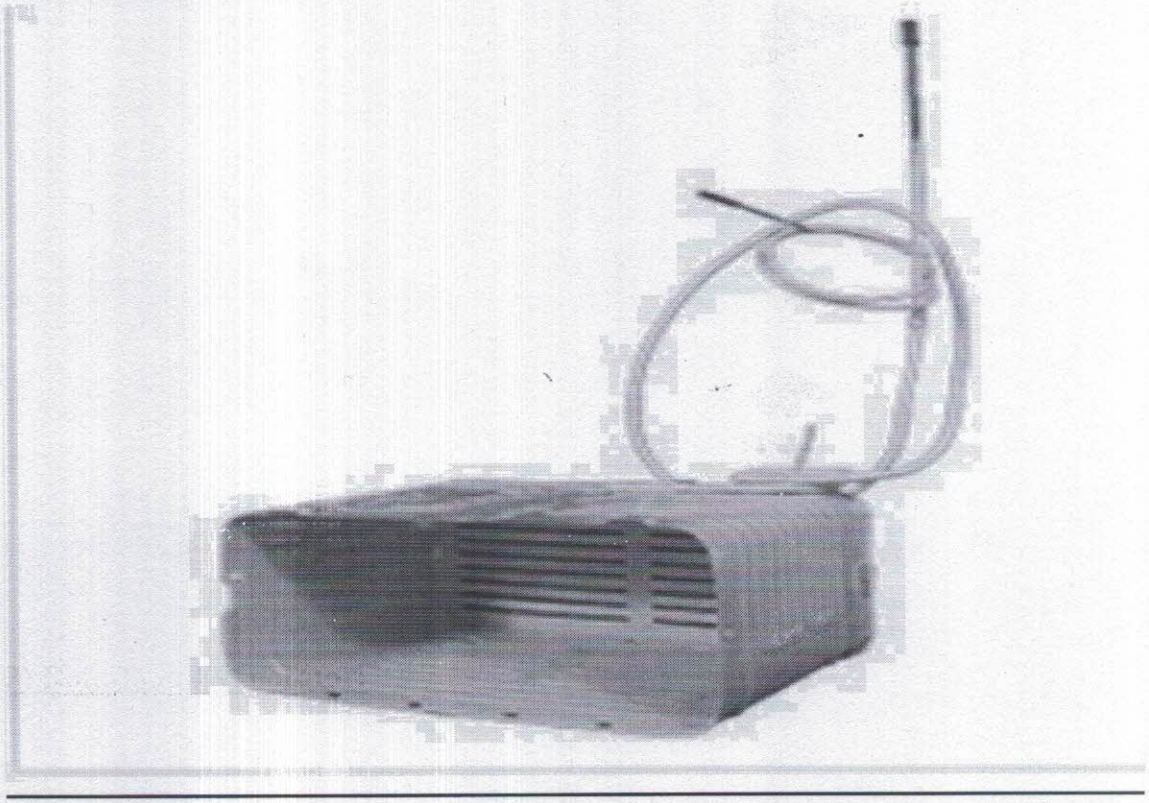
About Oil Cooling Unit with Blower & Motor

An oil cooler is a separate, smaller radiator to an engine's main radiator, which maintains an oil supply at a consistent, optimal temperature. Its purpose is to cool the oil passing through the coils, thus improving the engine and the transmission's lifetime. They are situated in front of an engine's cooling system.

RAW MATERIAL:

The raw materials required for making of Bar & plate Heat Exchanger are stainless steel, titanium and aluminium.

3) Roll Bond Evaporator:



About Roll Bond Evaporator

Roll bond evaporator panel is used as heat exchanger in production of freezers and refrigerators industry. OSF, OSEF evaporator is two-layered evaporator panel with channels on the one side. It is produced from two Al strips (layers), same or different thickness of the layers.

RAW MATERIAL:

The raw materials required for making Roll bond evaporator is aluminium sheet.

Major Customers

LG

Samsung

Whirlpool

Godrej

Videocon

Haier

3.6 MANUFACTURING *PROCESS*

(A) Existing Product

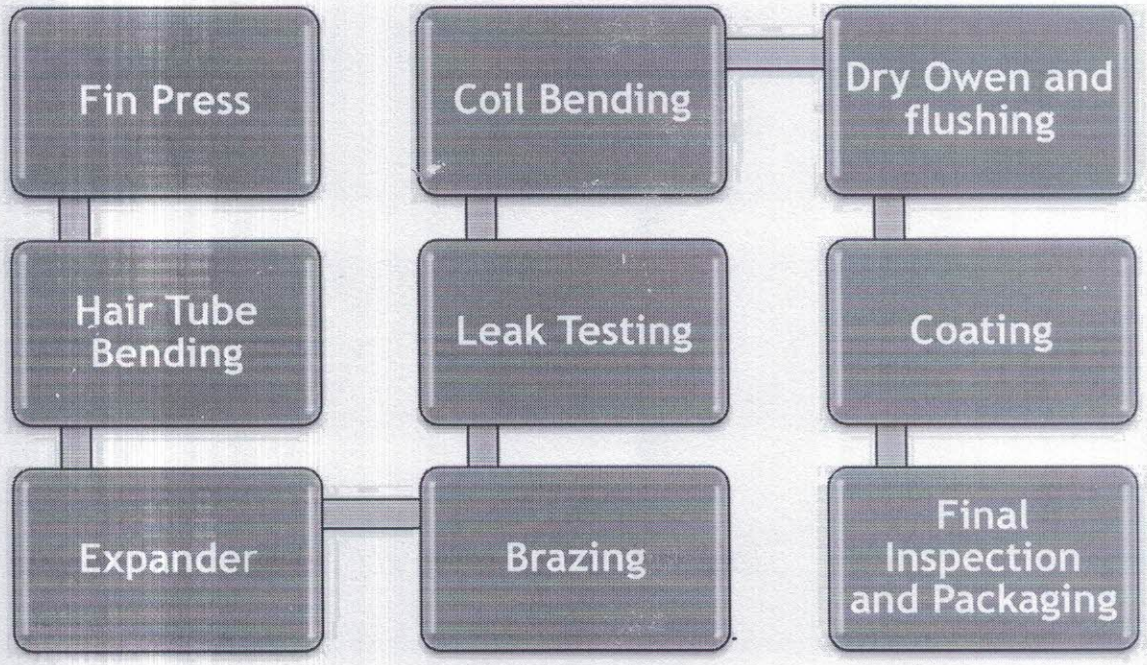
Manufacturing of HVAC Products involves various types of key steps along with skill operations performs. The Aluminium and Copper Fin – Copper Tube condenser and evaporator coils which are the basic raw materials converted into HVAC Products in various lines of process. The total process involves of 09 steps. The step wise production process is explained below and a flow chart is provided for better understanding.

The manufacturing process of Heat Exchangers using the Fin press method involves several steps, starting from the initial progressive Fin dye and Aluminium metal sheets to the Final fabrication of Fin sheets tailored to specific specifications. This process plays a critical role in the efficient transfer of Heat in various industrial applications.

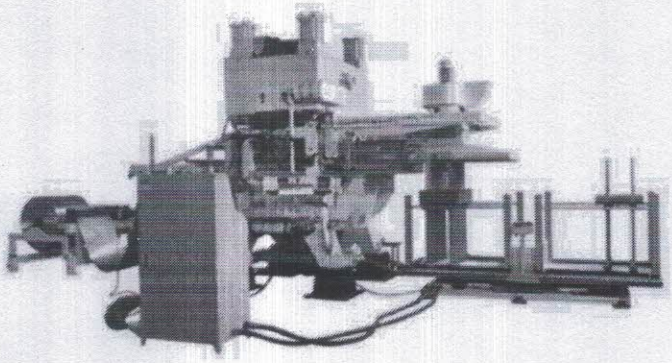
The HVAC Products manufacturing process consists of a series of steps that apply regardless of the design or customer specifications. The process of manufacturing HVAC Products can be broken down into the following steps.

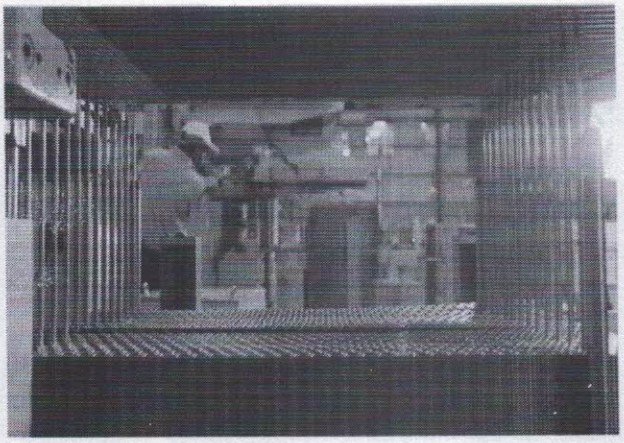
1.	**Fin Press**
2.	**Hair Tube Bending**
3.	**Expander**
4.	**Brazing**
5.	**Leak Testing**
6.	**Coil Bending**
7.	**Dry Owen and flushing**
8.	**Coating**
9.	**Final Inspection and Packaging**

Flowchart related to manufacturing process are mentioned below



1. Fin Press





The first step is to design and construct a progressive Fin dye, which is a specialized tool used to stamp and shape the Fins. The dye contains a series of progressively sized cavities or ridges that create the desired shape of the Fins on the Aluminium sheets. These Fins can be straight, wavy, or other configurations based on the Heat Exchanger's requirements.

Next, the Aluminium metal sheets are carefully selected for their thermal conductivity and durability. The sheets are then fed into the Fin press machine, which operates using hydraulic or mechanical force. The progressive Fin dye is placed on top of the metal sheet, and the machine applies pressure to stamp the Fins into the sheet. This process is repeated for multiple sheets, allowing for mass production of Fin sheets.

After the Fin pressing, the sheets are subjected to quality control measures to ensure the accurate dimensions and proper formation of the Fins. Any defective sheets are discarded to maintain high-quality standards.

Finally, the fabricated Fin sheets are assembled into the complete Heat Exchanger unit, which typically consists of alternating layers of Finned and unFinned sheets to maximize Heat transfer efficiency. The assembly process may include welding, brazing, or other methods to secure the components together.

2. Hair Tube Bending

In the second step of the process, the utilization of a CNC controlled automatic hairpin bender is employed to transform Copper Tubes into the desired size and shape of large hairpins. This

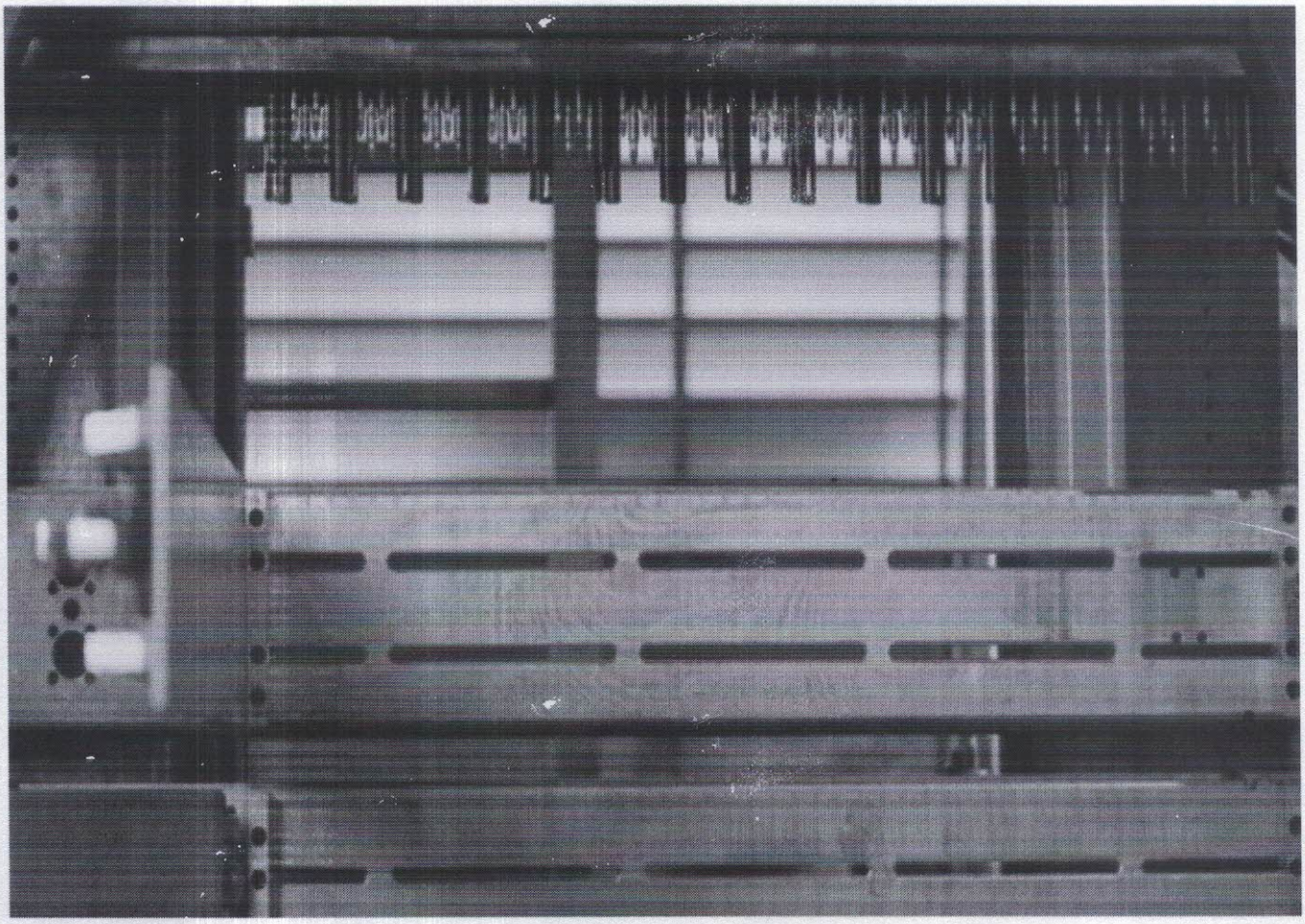
specialized device combines precision engineering with computer numerical control (CNC) technology to achieve accurate and consistent bending results.

The process begins with loading the Copper Tubes into the bender, where they are securely held in place to prevent any shifting during the bending procedure. The operator inputs the required specifications, such as hairpin length, angle, and curvature, into the computer system controlling the bender.

Once the setup is complete, the bender's computerized system takes charge, orchestrating the bending process with remarkable precision. The Copper Tubes are gradually fed into the machine, and the bending head smoothly maneuvers along predetermined paths based on the input data.

The NC controlled automatic hairpin bender skillfully manipulates the Copper Tubes, executing uniform and flawless bends, resulting in hairpins that perfectly match the desired size and shape. The automated nature of the machine ensures rapid production rates while upholding consistency and quality in each hairpin produced, making it an indispensable tool in the manufacturing of various Heat Exchangers, Refrigeration coils, and other applications that rely on hairpin-shaped Copper Tubes.

3. Expander



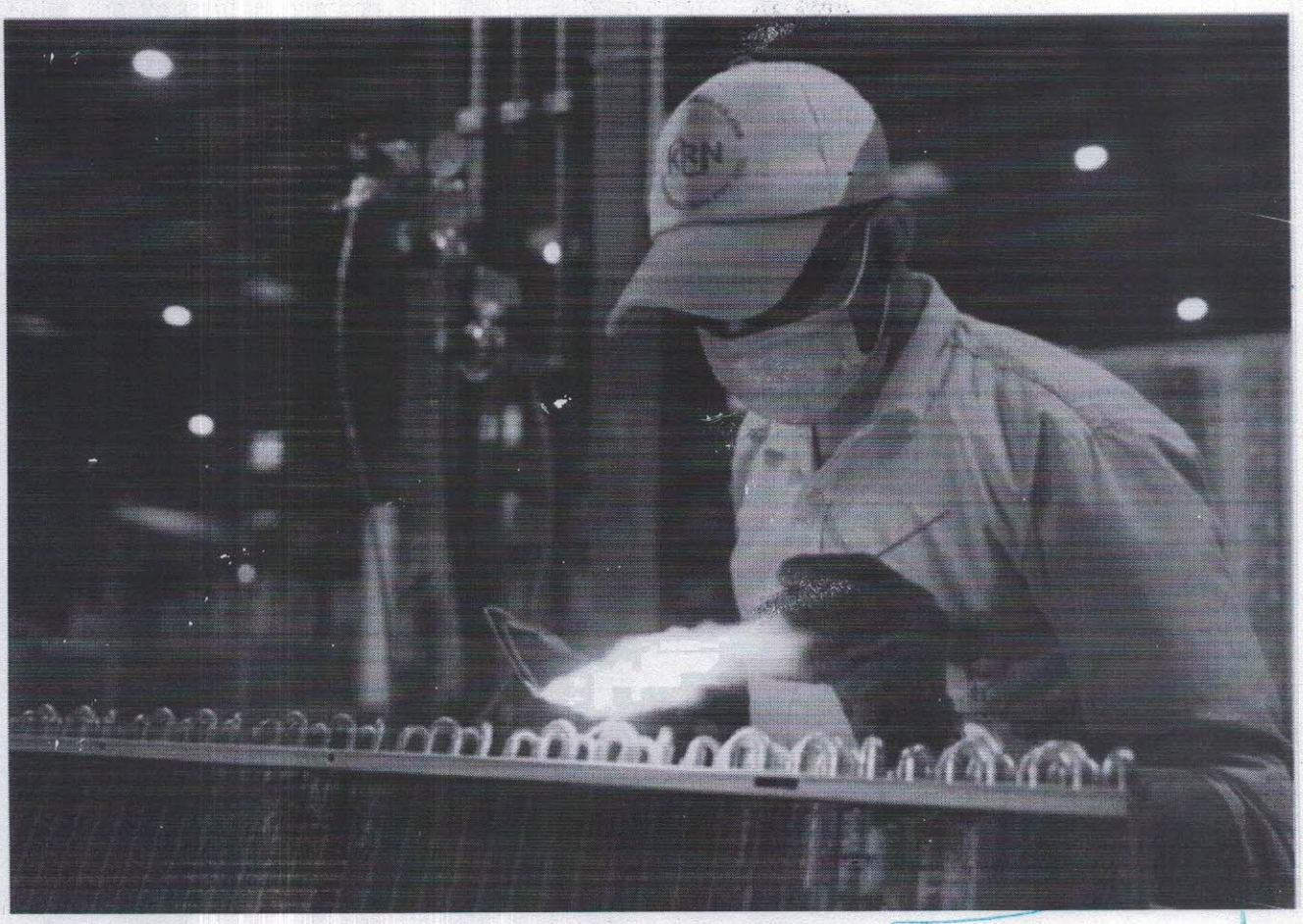
In the third phase of the process, the assembly of Fin sheets and Copper Tubes is achieved with the help of vertical and horizontal expanders. The Fin sheet, typically made of a durable and Heat-conductive material, contains a series of holes pre-drilled in specific patterns to accommodate the Copper Tubes. These Tubes, also known for their excellent thermal conductivity, play a crucial role in enhancing the overall efficiency of the system.

To begin the assembly, the Copper Tubes are inserted meticulously through the corresponding holes in the Fin sheet. The vertical expander is then employed to firmly secure the Copper Tubes in their designated positions. This expander exerts force in a vertical direction, tightly gripping the Tubes and preventing any unwanted movement or misalignment.

After the vertical expansion is complete, the assembly undergoes the horizontal expansion process. This involves applying lateral force to the assembly, further enhancing the bond between the Fin sheet and the Copper Tubes. The horizontal expander ensures a robust connection, creating a durable and thermally efficient unit.

By combining both Fin sheets and Copper Tubes with the aid of vertical and horizontal expanders, the Heat transfer capability of the system is significantly improved. This assembly process is vital in various applications like Heat Exchangers, air conditioning systems, and radiators, where efficient thermal management is crucial for optimal performance.

4. Brazing



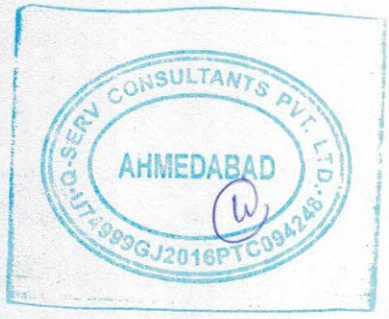
In the design of a Heat Exchanger, the U-bend, Header, and Distributor play crucial roles in ensuring efficient refrigerant flow and Heat transfer. The Copper Tube, serving as the main conduit for the refrigerant, has openings at its ends where these components are mounted.

The U-bend serves as a significant turning point in the refrigerant's path, allowing it to reverse direction smoothly without any abrupt changes that could disrupt the flow. This ensures a continuous and uniform distribution of the refrigerant throughout the Heat Exchanger.

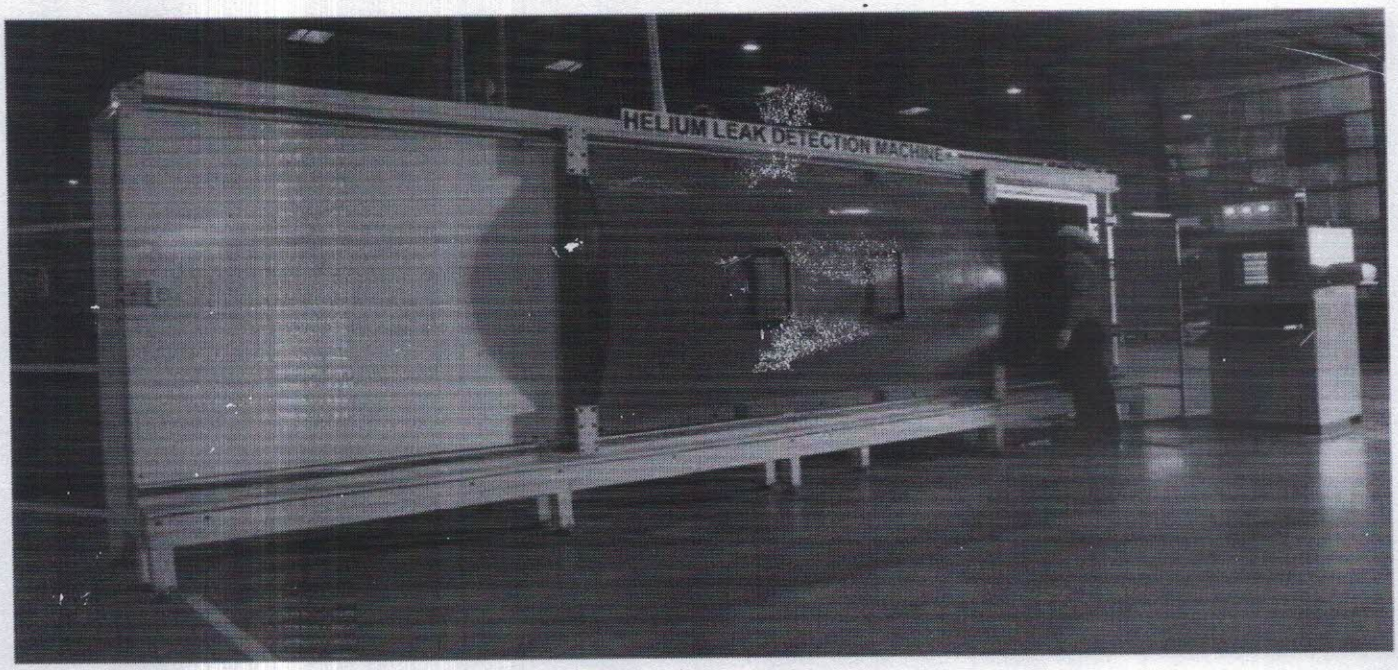
Connected to the U-bend, the Header acts as a manifold, collecting and distributing the refrigerant evenly to the various channels or Tubes within the Heat Exchanger. By maintaining equal flow distribution, it enables all parts of the Heat Exchanger to effectively participate in Heat exchange, maximizing its overall efficiency.

The Distributor further enhances this process by controlling the flow rate and directing the refrigerant to the appropriate channels or passages. It ensures that each part of the Heat Exchanger receives an adequate amount of refrigerant, preventing hotspots and ensuring optimal Heat transfer across the entire system.

In conclusion, the U-bend, Header, and Distributor are integral components that facilitate smooth and efficient refrigerant flow, optimizing the Heat Exchanger's performance and contributing to effective Heat transfer in various cooling and heating applications.



5. Leak Testing



The initial phase of ensuring the quality of Heat Exchangers involves two vital tests: the Helium Leak Test and the Water Leak Test. Firstly, the Helium Leak Test is conducted, where high-pressure helium gas is passed through the Heat Exchanger in a specialized chamber. This process allows the detection of any potential leaks in the Heat Exchanger, as the escaping helium gas can be traced and identified.

Next, the Water Leak Test is performed concurrently with the Helium Leak Test. Here, high-pressure dry air is pumped through the Heat Exchanger while it is submerged in water. Should any leaks be present in the Heat Exchanger, the air escaping through them causes bubbles to surface in the water, providing a visual indication of the leak's location and severity.

Both these tests are crucial for ensuring the integrity and efficiency of the Heat Exchanger. The Helium Leak Test is highly sensitive and precise in detecting even minute leaks, while the Water Leak Test complements it by offering a simple yet effective means of spotting leaks and verifying the results. By combining these two tests, manufacturers can identify and rectify any issues early in the production process, ensuring that only top-quality Heat Exchangers reach the market.

6. Coil Bending

Heat Exchangers are crucial components in various industries, designed to efficiently transfer Heat between two fluids. To optimize their functionality, engineers bend these Exchangers into specific shapes suited to their application. By customizing the form, Heat Exchangers can occupy minimal space while maximizing surface area, ensuring optimum Heat transfer.

The increased surface area results in improved Heat transfer rates, enhancing the overall performance of the product. This efficiency is particularly critical in applications where space is limited, and Heat exchange is a vital part of the process, such as in Refrigeration systems, HVAC units, and power plants.

Moreover, the bent shapes allow for a more compact design, making them easier to integrate into complex systems. Furthermore, by passing rigorous leak tests, these Heat Exchangers guarantee the safety and reliability of the entire system, preventing any potential mishaps that could arise from fluid leaks.

In conclusion, the strategic bending of Heat Exchangers serves as a pivotal technique to optimize space utilization, enhance surface area, and elevate the performance and safety of the Final product.

7. Dry Owen and flushing

In a Heat Exchanger, metal Tubes are utilized to facilitate the efficient transfer of Heat from one fluid to another. However, the presence of moisture, lubricating oils, and other contaminants in the Tubes can lead to corrosion and impose restrictions on the passage of refrigerant flowing through the capillary. To combat this, a crucial step in the manufacturing process involves passing the Heat Exchanger through a dry oven.

The dry oven serves as a decontamination chamber, where the Heat Exchanger is subjected to controlled temperatures to remove any moisture and contaminants present on the metal surfaces. This drying process ensures that the Tubes are free from any unwanted substances that could promote corrosion or hinder the smooth flow of refrigerant. By eliminating moisture and contaminants, the Heat Exchanger's lifespan is prolonged, and its performance is optimized, leading to enhanced overall system efficiency.

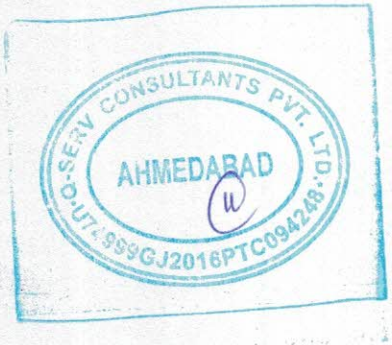
Overall, the dry oven treatment is a preventive measure that significantly contributes to the reliability and longevity of the Heat Exchanger, thereby ensuring the continued effectiveness of the Refrigeration system it is a part of.

8. Coating

To enhance the longevity and corrosion resistance of Heat Exchangers and their components, various types of coatings, such as nano-coatings and powder coatings, are applied to the surfaces of Copper Tubes, brazing joints, and Fin sheets.

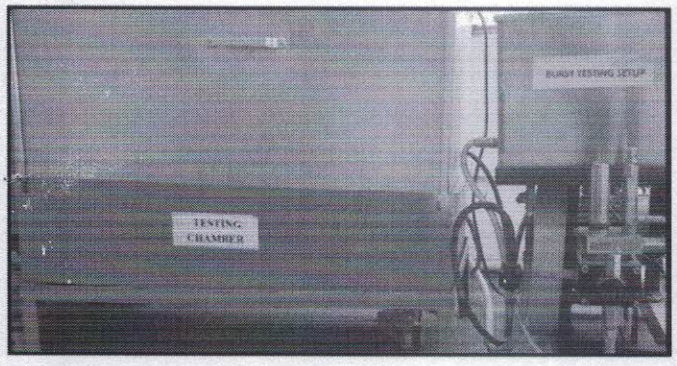
Nano-coatings consist of nanoscale particles that form a thin protective layer on the metal surfaces. These coatings offer superior corrosion resistance due to their ability to fill in micro-level imperfections and create a barrier against moisture and contaminants. Additionally, their small particle size ensures even coverage and adherence to the surface, providing long-lasting protection.

Powder coatings, on the other hand, involve electrostatically applying dry powder to the metal surfaces and then curing them under Heat. This process results in a durable and uniform coating that shields the components from environmental factors, such as humidity, chemicals, and UV exposure, preventing corrosion and extending their lifespan.



By applying these advanced coatings to Heat Exchangers and their components, manufacturers ensure that the system operates efficiently over an extended period, reducing maintenance costs and enhancing overall performance. The protective barrier provided by these coatings ensures that the Heat Exchanger can withstand harsh conditions and maintain its optimal functionality throughout its service life.

9. Final Inspection and Packaging



After the thorough application of nano-coatings or powder coatings and ensuring the components' corrosion resistance, the Heat Exchangers undergo a critical step to maintain their internal dryness and verify leak-proof integrity. Positive pressure of nitrogen charge is infused into the Heat Exchangers.

By introducing a controlled flow of nitrogen, any remaining moisture or contaminants are purged from the interior of the Heat Exchanger, ensuring that it remains dry throughout its transportation and usage. This step is crucial as even small traces of moisture can lead to corrosion and compromise the performance of the Heat Exchanger.

Furthermore, pressurizing the Heat Exchangers with nitrogen allows for leak testing. If there are any undetected leaks in the brazing joints or other areas, the pressurized nitrogen will escape, alerting manufacturers to any potential defects. This process provides the ultimate assurance that the Heat Exchanger is free from leaks and fully functional.

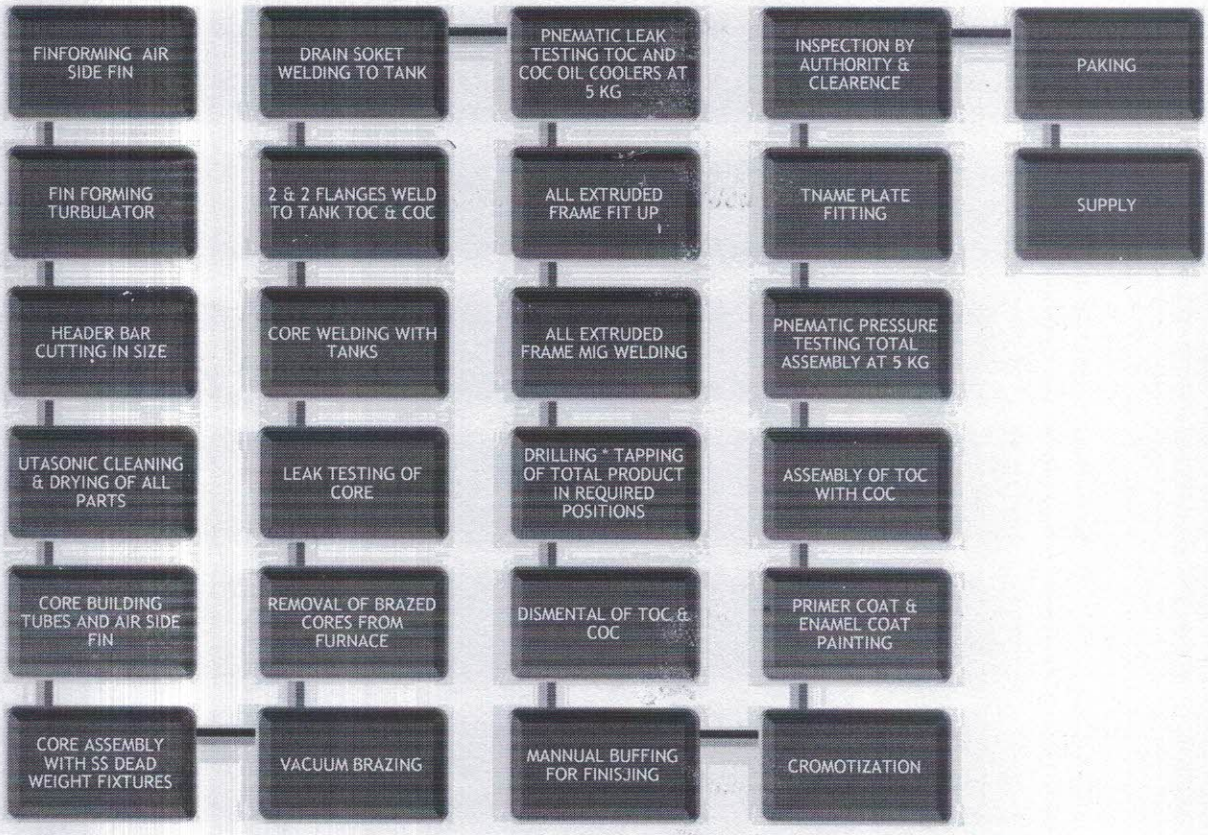
Finally, the Exchangers are carefully packed in shipping boxes to protect them from external damage during transportation. Once properly packaged, the Heat Exchangers are dispatched to consumers, ensuring that they arrive in excellent condition and ready to deliver efficient Heat transfer and optimal performance in their designated applications.

Comment:

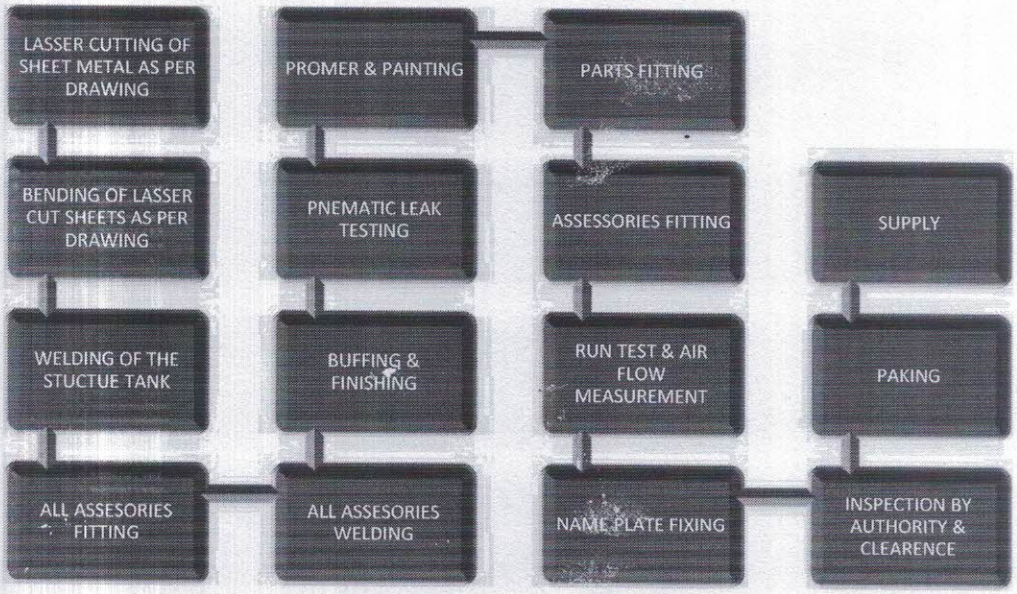
- ***Manufacturing Process Documents has been provided by the company's official, has been reviewed and relied upon by Q-serv.***

(B) Proposed Product's Manufacturing Process:

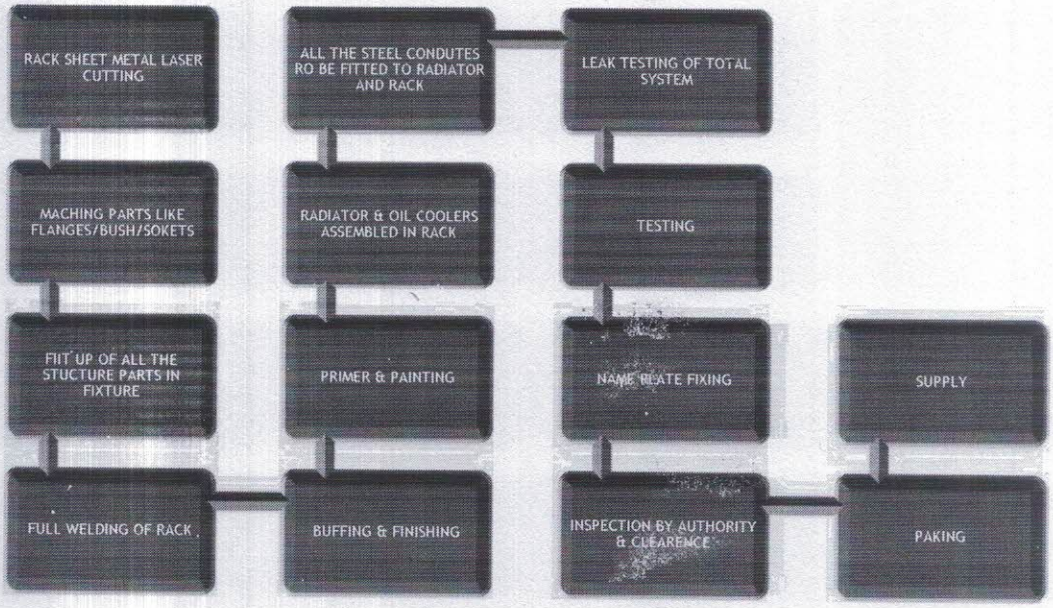
(1) Bar & Plate Oil Cooler



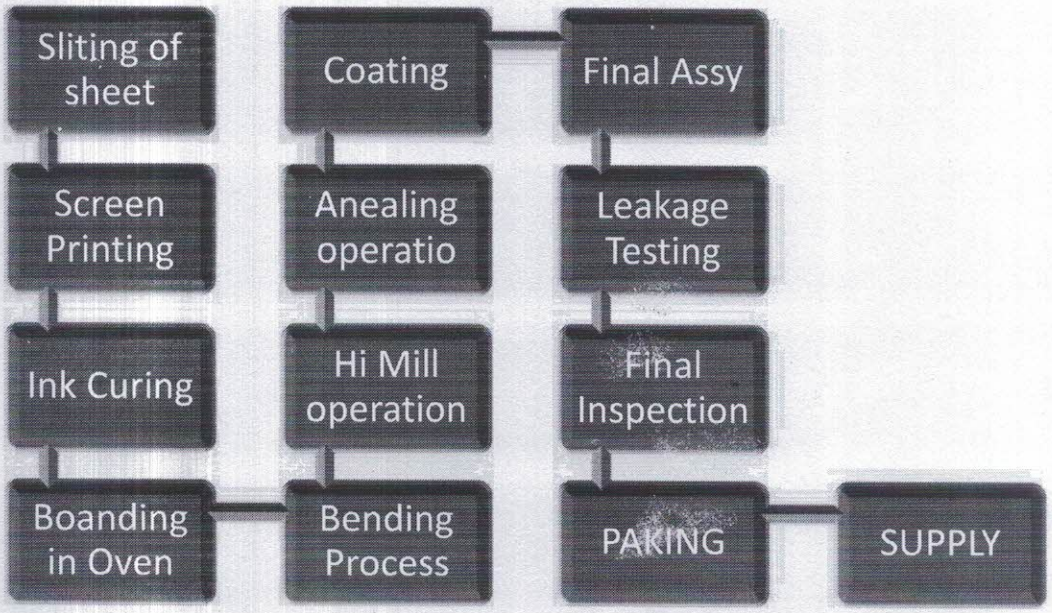
(2) Cooling Unit with Blower & Motor



(3) Rack with Radiator & Oil Cooler



(4) Roll Bond Evaporator



Comment:

- ***Manufacturing Process attached herewith is provided by the company's official to Q-serv and Q-serv has placed reliance onto the same after verification.***

3.7 MARKETING STRATEGY

Marketing is an important function of any organization and this company is no exception to it. Group have deployed a team of efficient marketing professionals for the marketing and promotion of Group's products. Companies' success lies in the strength of their relationship with their clients who have been associated with the company since a long period of time.

Product will be sold directly to the OEMs like Air compressor manufacturers.

Looking into this aspect, Group's marketing strategy is framed in the following way:

- To authorized dealers for sale of Air compressors, Diesel Generators and Heavy Infrastructure equipment's by channel partners.
- To service center of authorized OEM's of Air compressor, Diesel Generator and Heavy equipment's manufacturers.
- To Loco Manufacturers of Indian Railways to Chittranjan Loco works, Banaras Loco works, Patiala Loco works and for spares to all the LOCO sheds. The product is used for Transformer and convertor of Loco oil cooling. Each loco requires two no's and there will be potential of 4500 locos Indian railways manufactures in year and as sparer for loco shed all over Inia. These are sold through the online Tender participation in IRPS system.
- Roll Bond Evaporator to OEM of refrigerators and freezers

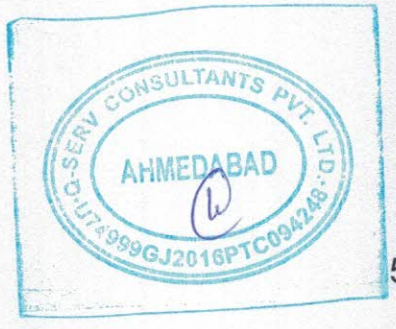
Marketing is an important function of any organization, and the company is no exception to it. Group has earned reputation over the years by delivering the quality and safe products. Company's success lies in the strength of Group's relationship with Group's customers who have been associated with Group for a long period. Group's promoter Mr. Santosh Kumar Yadav, along with their team through his vast experience and good connections with the clients and owing to timely delivery of quality and safe products plays an instrumental role in creating and expanding the work platform for Group.

To retain customers, team regularly interacts with them and focuses on gaining an insight into the additional needs of such customers. Group has spread their presence to domestic markets with large sales potential, low infrastructure costs and the availability of professional expertise. Group has experienced and skill management team to motivate the sub-ordinates and staff to step towards their achievements and organizational goals. With their efficient management skills and co-ordination with sub-ordinate, they are always working as a catalyst to encourage the entire team for the development and nourishment of the organization.

Regular interaction is ensured not only to maintain the client base but also to gain insight into the design and specification needs of diverse clientele. With large sales potential, year-round production, high demand of Group's products, streamlined manufacturing process, raw material proximity, some extent of backward integration and availability of professional and technical expertise of promoters, company plan to grow geographically in the foreseeable period.

Looking into this aspect, Company's marketing strategy is framed in the following way:

- focusing on the customers
- making the effort to become a preferred supplier early in the process.
- interacting with customers at multiple levels.
- extending the product offering by adding services.
- Focusing on the development of "adjacent" products, markets, and applications.



3.8 LAND DETAILS

1. The **Proposed Project 1** unit is located on F-50, G-51, EPIP, RIICO Industrial Area Neemrana on an area of 4036 Sqm of Non-Agricultural land.

Address	Area (Sqm)	Leasehold/ Owned	Purpose
F-50, G-51, EPIP, RIICO Industrial Area Neemrana, Rajasthan-301705	4036	Leasehold Land from Rajasthan State Industrial Development & Investment Corporation Limited	Manufacturing facility

2. The **Proposed Project 2** unit is located on SP1-24, Kolila Joga, Neemrana, Rajasthan an area of 71,924 Sqm of Non-Agricultural land.

Address	Area (Sqm)	Leasehold/ Owned	Purpose
SP1-24, Kolila Joga, Neemrana, Rajasthan*	71,924	Leasehold Land from Rajasthan State Industrial Development & Investment Corporation Limited	Manufacturing facility

*For This Land Standard Allotment Letter dated 20th September, 2023 Received by Q-Serv

For the proposed Project-1 Group has already acquired a land from their own contribution at Plot No. F-50, G-51, EPIP, RIICO Industrial Area, Neemrana, Rajasthan dated 24th August,2023 And For the proposed Project -2 at SP1-24, Kolila Joga, Neemrana, Rajasthan it has already secured the E-auction bid and received the offer for allotment letter from RIICO dated 23rd August, 2023, and later Standard Allotment letter dated 20th September, 2023 has been received. Out of total amount of land, 25% is paid on date of allotment and balance 75% (Rs. 2,999.23 Lakhs) of amount will be paid in 11 quarterly instalments, each consisting of an equal principal amount of ₹272.66 lakhs, along with an interest rate of 8.5%. Repayments for the same has been commenced from January 18, 2024.

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3. The land area break-up is given in the table below:

Sr. No.	Plot No.	Land Area (Sqm)
1	F-50	**2,361**
2	G-51	**1,675**
3	SP 1-24	**71,924**
	Total	**75,960**

Land related document is attached as Annexure A.

3.9 TECHNICAL CONSULTANT

For the Proposed expansion Project -1 at Neermana, The Company has allotted construction work to **Taj Builders** for construction of structure vis development of Building of Proposed Project. As per current scenario, the construction of the building has been completed and production has commened.

For the Proposed expansion of Project-2, the company has identified **M/s. Rajiv Associates** as their Technical Consultant who is looking after Design, Drawing, Construction, Supervision and other ancillary activity, the company has submitted the quotation from various suppliers.

Comment:

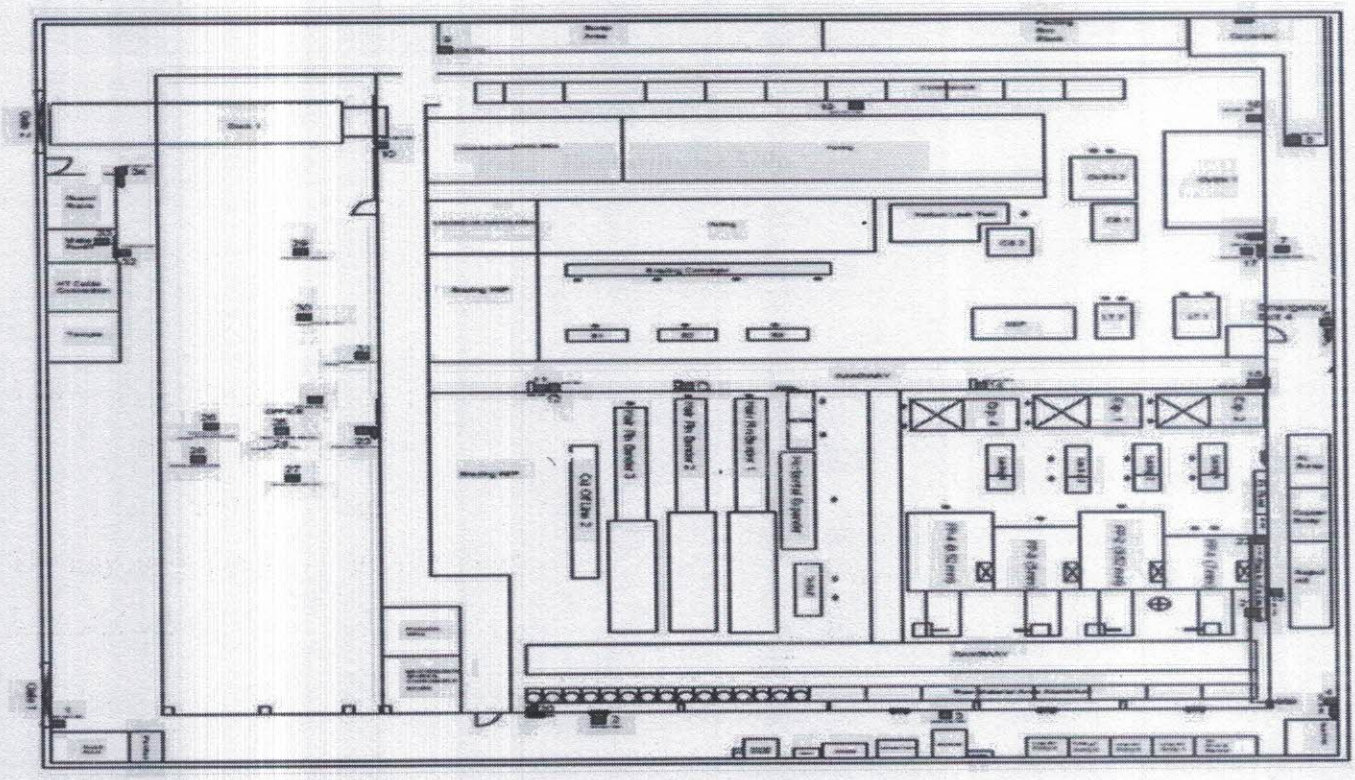
- ***The company has executed a written contract with the Technical Consultant, and Q-Serv has received a copy of this agreement.***

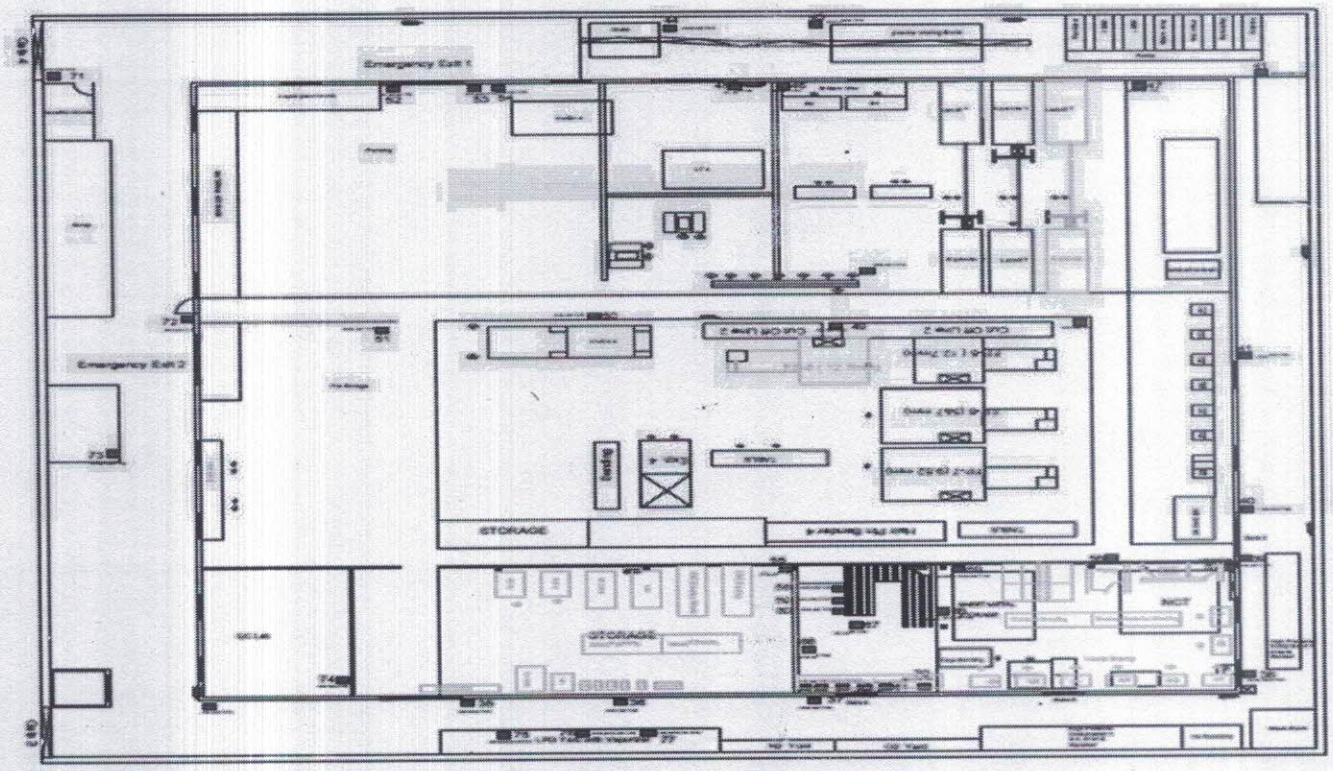
3.10 BUILDING/*FACTORY PLAN*

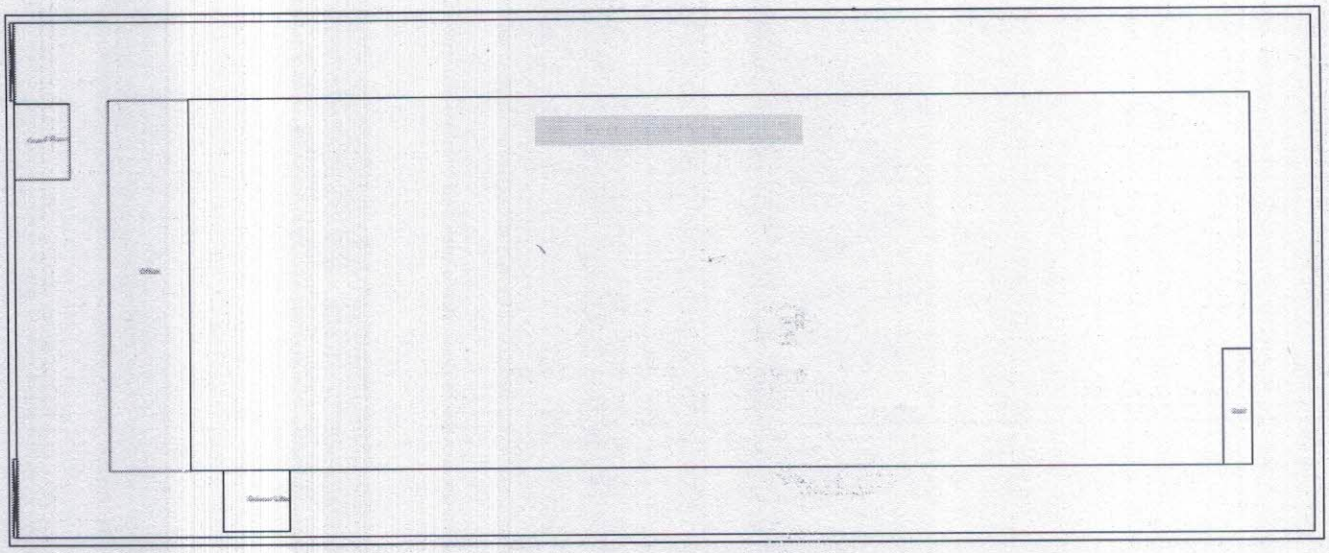
- **Existing Plan**
- **Neemrana (Existing Unit of Holding Company):**

The Layout of the plan is given below:

Layout Plan







***Comment:-**

- **This layout plan is provided by the company and Q-serv has placed reliance on it.**

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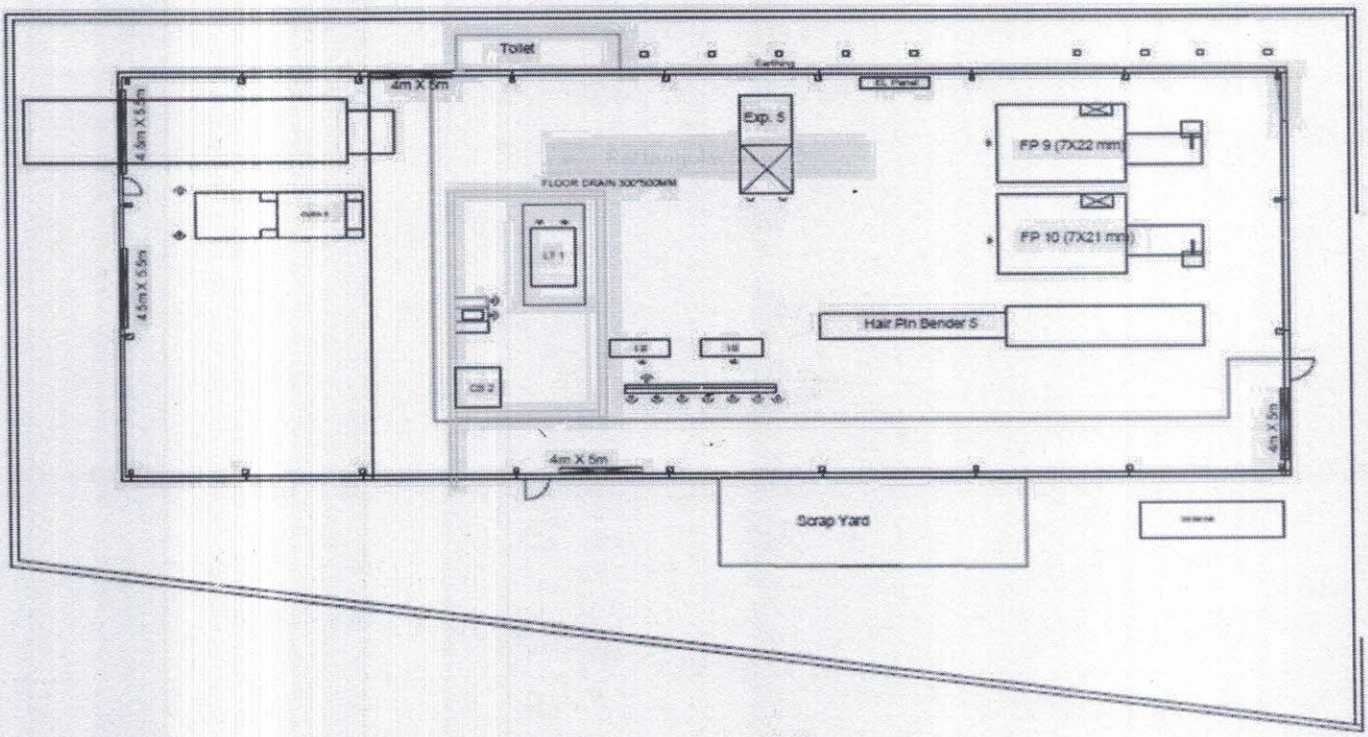
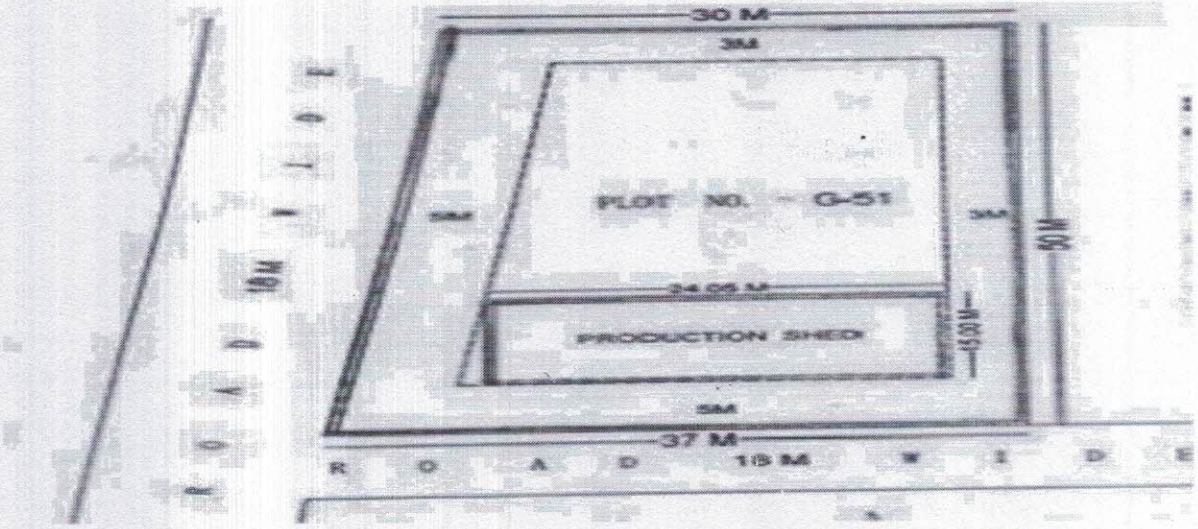
3.11 NEW PLANT

- **Proposed Unit (Project – 1)**

Proposed unit at Neemrana is built on a land area of 4,036 Sqm the Model Layout of the plan is given below:

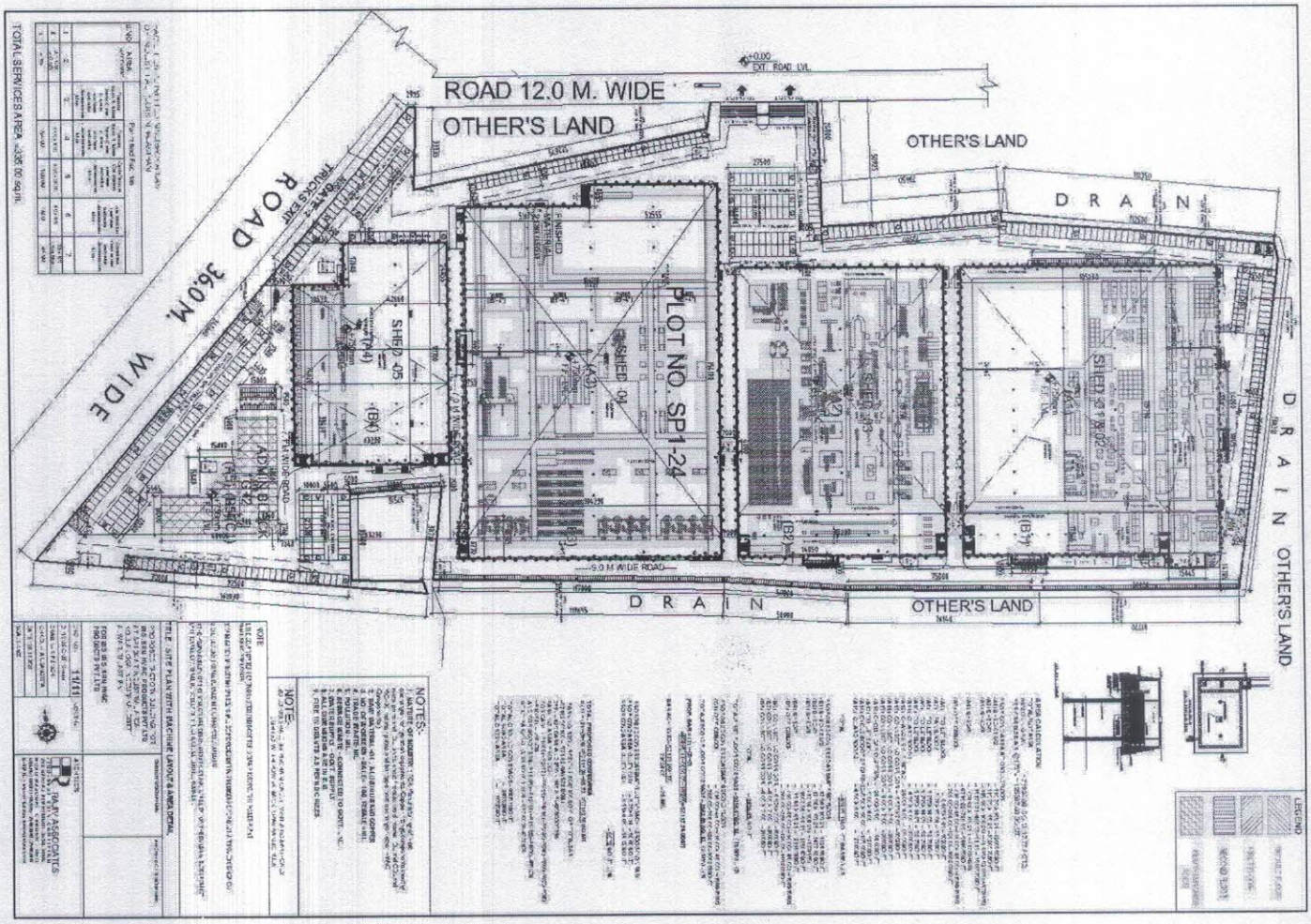




***Layout for Project - 1**

- **Proposed Unit (Project – 2)**

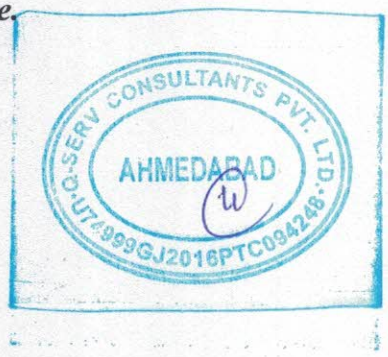
Proposed unit at KOLILA JOGA, Neemrana, Rajasthan is built on a land area of 71,924 Sqm The Model Layout of the plan is given below:



***Layout for Project - 2**

Comment:

- ***Q-Serv has received the existing as well Proposed Plan Layout From Company and Drawing of the same is also provided by company as mentioned above.***



3.12 CONSTRUCTION *COST*

The construction cost estimated by the consultant is given in the table below:

Phase - 1 **(Amount in Lakhs)**

Sr. No.	Item	Amount (INR)
1	Building Works	**137.03**
	Total	**137.03**
	GST @ 18%	**24.66**
	Total	**161.69**

Phase - 2 **(Amount in Lakhs)**

Sr. No.	Particulars	Amount (INR)
1	Building, Civil & Other Works*	**9,702.50**
2	Architect Fees (2.10%)	**203.75**
3	GST @ 18%	**1,783.13**
	Total	**11,689.38**

3.13 MISCELLANEOUS DEPOSITS

In proposed expansion of Project-II, some Miscellaneous Deposits are included. Summary of the same are as below: (Please refer Cost of Project)

(Amount in Lakhs)

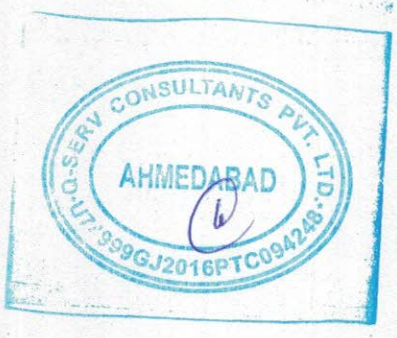
Particulars	Amount
Security deposit to Land Authority (RIICO)	39.99
Security deposit to Electricity Department	20.97
Security deposit to other Govt. Regulatory Authority	47.68
Total	**108.64**

3.14 UTILITY

To run the plant efficiently, the Neemrana (Phase - 1) will require the following utility services:

- **Water**
  - Water supply line available around factory boundary plot and it can be easily accessible after water connection update.
  - Water requirement for this plant would be around 600 litres per day and the same shall be fulfilled from RIICO water supply. Water collected will be stored in underground tanks and will be used for water requirement of manpower, plantation and process.

- **Power**
  - 11KV power supply line available around factory plot boundary and it can be easily accessible after electricity connection update.
  - The company proposes to acquire power via 11 KV HT from Jaipur Vidyut Vitran Nigam Limited. The proposed connected load for the Project would be around 10 KVA and, for the critical power back up company plans to install 500 KVA diesel Generator.



- **Raw Materials**
  - The basic raw materials to manufacture HVAC Products are Aluminium Foil, Copper Foil, Copper Tube, Galvanise Sheet, Brass Sheet, Copper Sheet, Aluminium Sheet, Stainless Steel etc. These materials are easily available indigenously in abundance and there is no scarcity of the materials. The materials can however be imported and there are no restrictions whatsoever on these. As per the extant Import-Export Policy of India 2019-2024, these materials are not under negative list i.e. these can be imported freely.

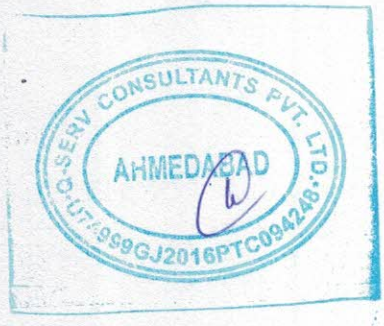
Comment:

- ***Q-serv has relied on the details provided by the company w.r.t arrangements of Utilities.***

To run the plant efficiently at Plot No., SP 1-24, Kolila Joga, Neemrana, Rajasthan (Phase - 2) will require the following utility services:

- **Water**
  - Water supply line available around factory boundary plot and it can be easily accessible after water connection update.
  - Water requirement for this plant would be around 16000 litres per day and the same shall be fulfilled from RIICO water supply. Water collected will be stored in underground tanks and will be used for water requirement of manpower, plantation and process.

- **Power**
  - 11KV power supply line available around factory plot boundary and it can be easily accessible after electricity connection update.
  - The company proposes to acquire power via 11 KV HT from Jaipur Vidyut Vitran Nigam Limited. The proposed connected load for the Project would be around 2000 KVA and the operating load would be 2000 KVA, For the critical power back up company plans to install 1000 KVA diesel Generator (CPCB IV).



- **Raw Materials**
  - The basic raw materials to manufacture HVAC Products are Aluminium Foil, Copper Foil, Copper Tube, Galvanise Sheet, Brass Sheet, Copper Sheet, Aluminium Sheet, Stainless Steel etc. These materials are easily available indigenously in abundance and there is no scarcity of the materials. The materials can however be imported and there are no restrictions whatsoever on these. As per the extant Import-Export Policy of India 2019-2024, these materials are not under negative list i.e. these can be imported freely.

Comment:

- ***Q-serv has relied on the details provided by the company w.r.t arrangements of Utilities.***

3.15 REGULATORY APPROVALS

Following are the status of Statutory and Regulatory Approvals in the Proposed Plant:

Sr. No.	Document	Description	Status
1.	PAN	AAKCK1357R	Received
2.	TAN	JPRK07758C	Received
3.	GST	08AAKCK1357R1ZT	Received
4.	Labour Identification Certificate	Certificate No.: 1-3157-0234-9, Dated:10/04/2023	Received
5.	Udyam	Reg.No.UDYAM-RJ-02-0058312, Dated: 31/05/2023	Received
6.	Importer-Exporter Code	IEC No. AAKCK1357R, Dated: 30/05/2023	Received
7.	SAN	Reg. No. 0718800000000042, Dated: 01/03/2024	Received
8.	EPFO	EPFO Certificate no.: RJRAJ2894493000, Dated: 10/04/2023	Received
9.	ESIC	ESIC Certificate no.:15000951350000999, Dated: 10/04/2023	Received
10.	RCMC	Reg. No. RCMC/EEPCINDIA/02115/2023-24, Dated: 03/06/2024	Received
11.	Approval of Building Plan	Letter No : 3287, Dated: 04.01.2024	Received
12.	Sanction of electrical load (Primary connection)	Letter No : L2117130000673, Dated: 05.01.2024	Received
13.	Consent To Establish (Phase -1)	Order No : 2023-2024/Alwar/12565, Dated: 08.01.2024	Received

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14.	Consent to Operate (Phase -2)	Order No : 2023-2024/Alwar/12739, Deated: 19.03.2024	Received
15.	Consent To Establish (Phase -1)	Order No : 2023-2024/Alwar/12458, Dated: 18.04.2024	Received
16.	Factory License(Phase -1)	Reg. No. RJ/35788, Dated: 04.01.2024	Received
17.	Factory License (Phase -2)	Reg. No. RJ/35989, Dated: 24.04.2024	Received
18.	Contract Labour License	Reg. No. CLPE/2024/2/132645, Dated: 11.06.2024	Received
19.	Fire NOC	Reg. No. LSG/NEEMRANA/FIRENOC/2023-24/24609, Dated: 29.12.2023	Received
20.	Permission to Abstract Ground Water for Industrial Use (SP 1-24)	Reg. No.: CGWA/NOC/IND/ORIG/2024/20649, Dated: 07.08.2024. The NOC is Received.	Received
21.	Lease Deed	Registered Lease Deed of Factory Land (SP 1-24) under the Proposed Project	Executed as on 24th March, 2024

Comment:

- ***The Company is in the process of obtaining Lease Deed & Other Certificate related to Operating Factory which is necessary to obtain.***
- ***Regulatory approvals are attached as Annexure C.***

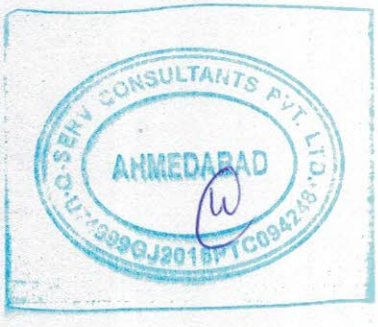
3.16 PROJECT IMPLEMENTATION SCHEDULE:

The Project implementation schedule of the proposed Project –1 expansion is given below:

Particulars	Commencement	Completion
Acquisition of Land		**Already acquired**
Building		
• Factory	**Mar, 2023**	**Dec, 2023**
• Ancillary	**Mar, 2023**	**Dec, 2023**
Plant & Machinery		
- Placement of orders	**June, 2023**	**Nov, 2023**
- Arrival of machinery	**Nov, 2023**	**Nov, 2023**
- Erection and installation	**Nov, 2023**	**Nov, 2023**
Power connection	**Oct, 2023**	**Nov, 2023**
Water connection	**Oct, 2023**	**Oct, 2023**
Trial Production	**Jan,2024**	**Jan,2024**
Commencement of commercial Production	**Feb,2024**	**Feb,2024**

Comment:

- ***The Project Implementation Schedule is completely based on the funding arrangement from The Holding/Parent Company. The Project – 1 has been commenced from February, '24.***

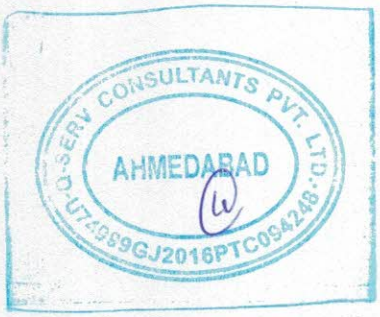


The Project implementation schedule of the proposed Project –2 expansion is given below:

Particulars	Commencement	Completion
Acquisition of Land	**August, 2023**	**Alloted in September 2023 & Lease deed executed in March 2024**
Building		
• Factory	**January, 2024**	**March, 2025**
• Office and store room	**January, 2024**	**March, 2025**
• Ancillary	**January, 2024**	**March, 2025**
Plant & Machinery		
• Placement of orders	**May, 2023**	**November, 2024**
• Arrival of machinery	**July, 2024**	**December, 2024**
• Erection and installation	**September, 2024**	**January, 2025**
Miscellaneous Fixed Assets		
• Placement of orders	**April, 2024**	**November, 2024**
• Arrival of machinery	**July, 2024**	**December, 2024**
• Installation	**September, 2024**	**January, 2025**
Power connection	**November, 2024**	**January, 2025**
Water connection (Tubewell)	**February, 2024**	**March, 2024**
Trial Production	**February, 2025**	**April, 2025**
Commencement of commercial production	**April, 2025**	**April, 2025**

Comment:

- ***The Project Implementation Schedule is completely based on the funding arrangement from The Holding/Parent Company***



Roll bond evaporator

The Project implementation schedule of the proposed expansion is given below:

Particulars	Commencement	Completion
Acquisition of Land	**August, 2023**	**Alloted in September 2023 & Lease deed executed in March 2024**
Building		
• Factory	**January, 2024**	**March, 2025**
• Office and store room	**January, 2024**	**March, 2025**
• Ancillary	**January, 2024**	**March, 2025**
Plant & Machinery		
• Placement of orders	**May, 2023**	**November, 2024**
• Arrival of machinery	**July, 2024**	**December, 2024**
• Erection and installation	**September, 2024**	**January, 2025**
Miscellaneous Fixed Assets		
• Placement of orders	**April, 2024**	**November, 2024**
• Arrival of machinery	**July, 2024**	**December, 2024**
• Installation	**September, 2024**	**January, 2025**
Power connection	**November, 2024**	**January, 2025**
Water connection (Tubewell)	**February, 2024**	**June, 2024**
Trial Production	**February, 2025**	**April,2025**
Commencement of commercial production	**April,2025**	**April,2025**

Comment:

- ***The Project Implementation Schedule is completely based on the funding arrangement from The Holding/Parent Company***

3.17 SITE VISIT & SITE COMPARISON

We have visited initially both the existing as well as proposed plant of the Group on 28/08/2023 and undertaken physical verification of all significant Machineries used in the process of production and for other assets we have placed reliance on the details / information's provided to us by the management of the company of ongoing activities carried out / being carried out, and the same has been incorporated as hereunder. Situation of the site comparison with respect to current report date are shown from below mentioned pictures: -

Plot No. F-50, G-51, EPIP, RIICO Industrial Area, Neemrana, Rajasthan

(Proposed Project-1)

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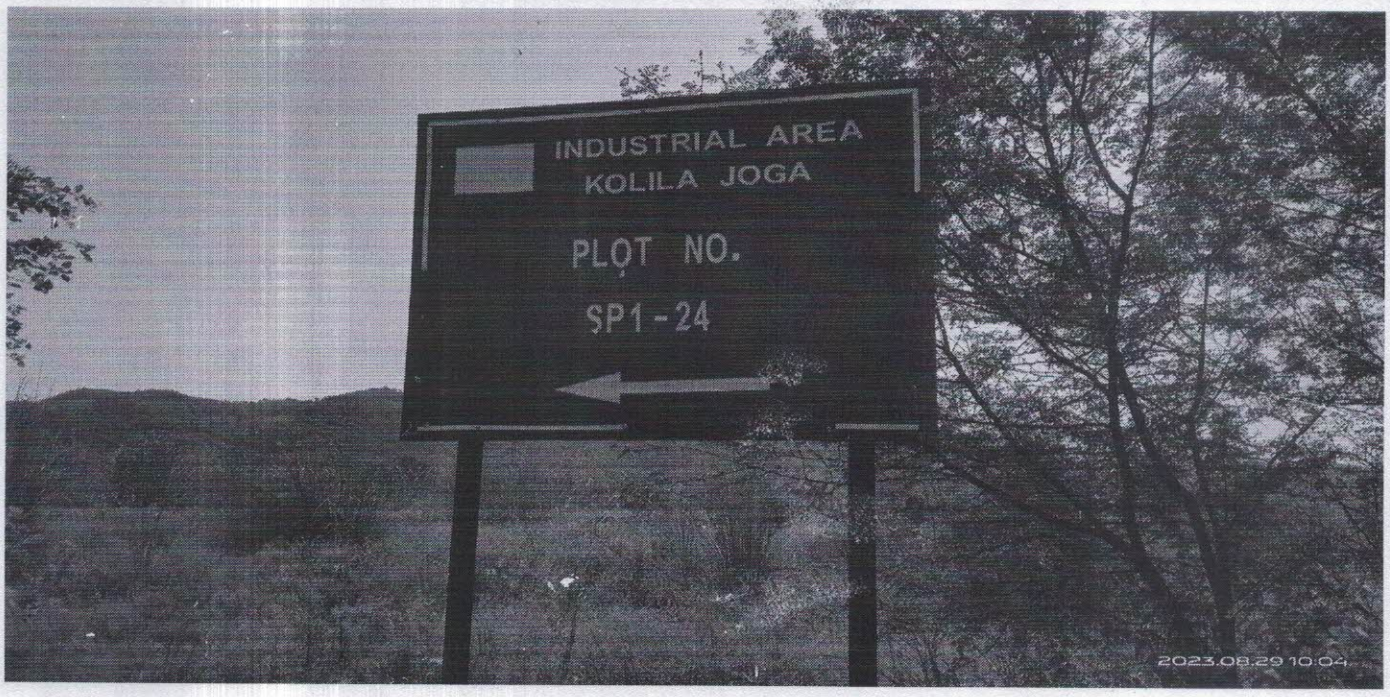
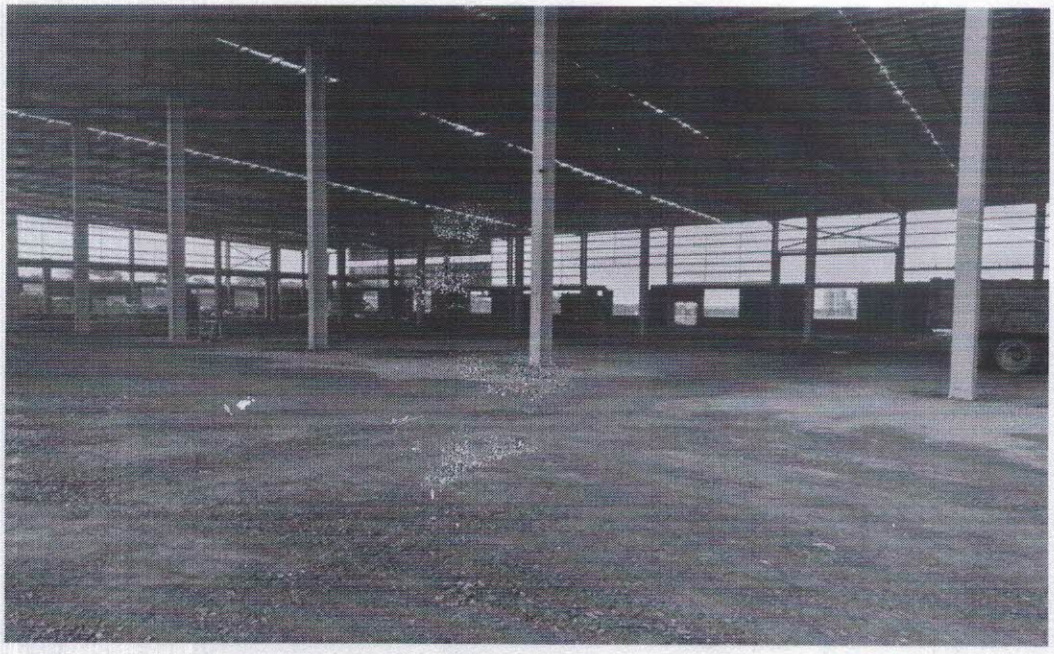
Plot No. SP 1 24, Kolila Joga, Neemrana, Rajasthan

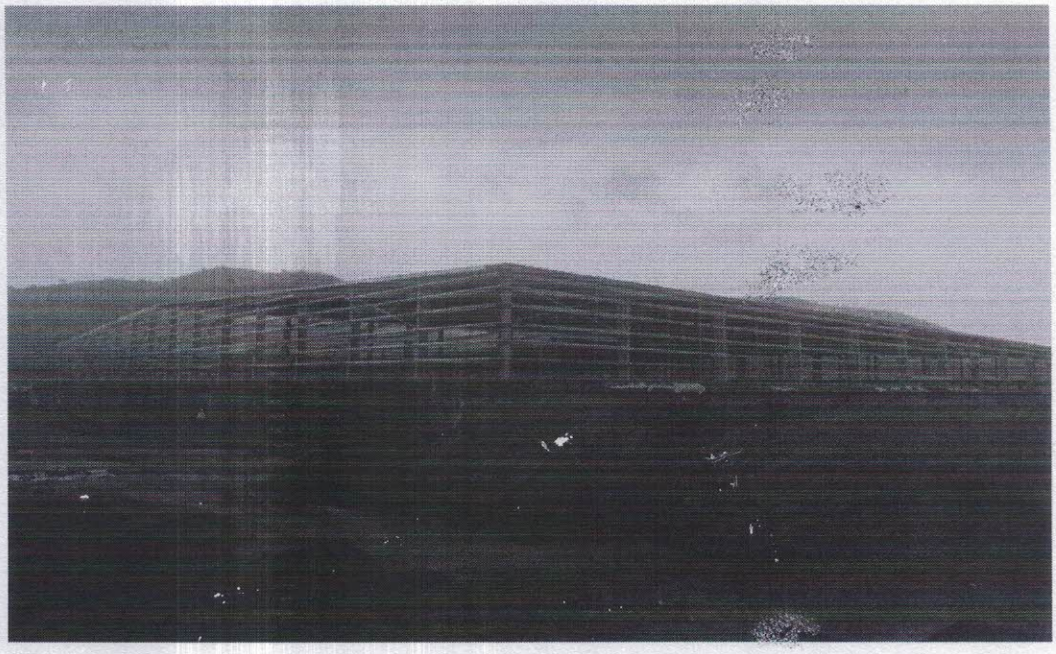
(Proposed Project-2)

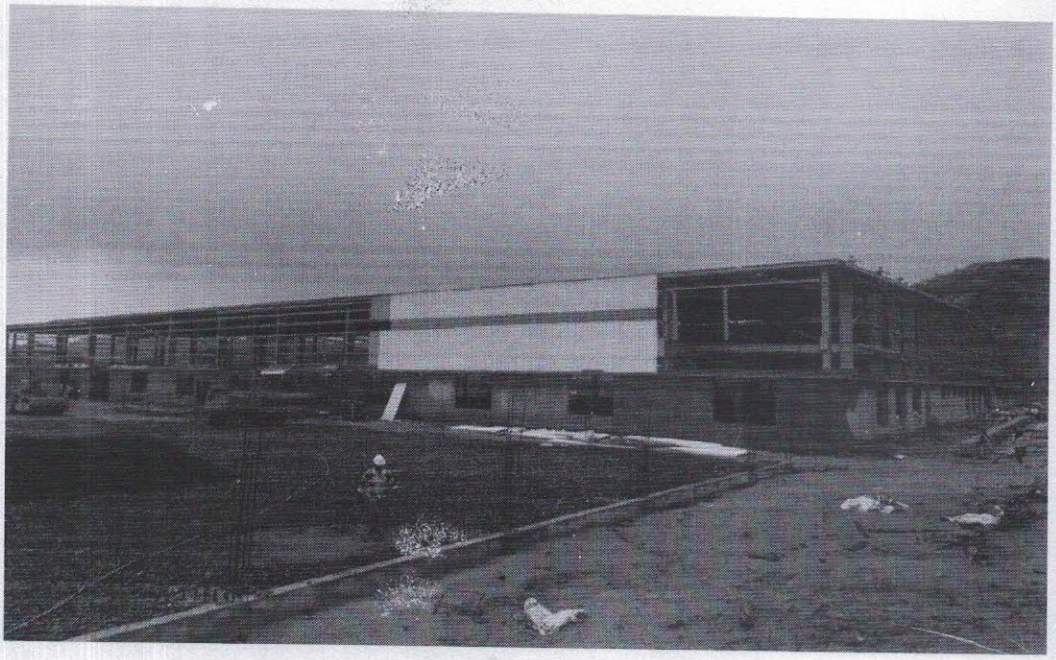


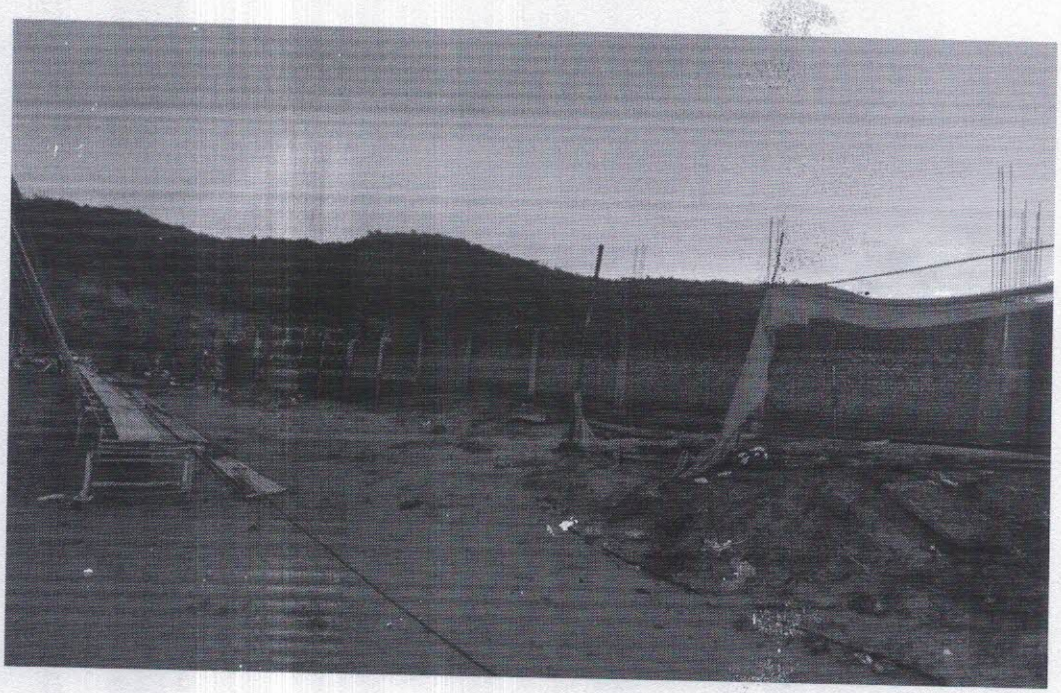
Plot No. SP 1-24, Kolila Joga, Neemrana, Rajasthan

(Proposed Project-2) – Current Scenario









Comment:

- ***The Pictures of Current Scenario of Site are provided by the Company and relied upon by Q-Serv. The pictures where taken as on 10th August,'24 (Approx. Time 2:00PM).***

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SITE COMPARISON AND JUSTIFICATION

Site Acquisition and Current Status

Initially, the company secured the land for the proposed project at SP1-24, Kolila Joga, Neemrana, Rajasthan, through an allotment letter dated August 23, 2023, and a standard allotment letter dated September 20, 2023. At the time of purchase, only the land was secured. Since then, significant progress has been made, and construction is currently in process. The proposed site now demonstrates a well-organized and advancing construction phase, indicating the project's momentum and feasibility.

Advantages of the Kolila Joga, Neemrana Site

The chosen site at Kolila Joga, Neemrana, Rajasthan, offers several advantages that make it superior to other potential locations in India for the heat exchanger and HVAC industry:

1. **Strategic Location**

- Neemrana is part of the Delhi-Mumbai Industrial Corridor (DMIC), providing excellent connectivity to major industrial hubs and ports.
- Proximity to major cities like Delhi, Jaipur, and Gurgaon ensures easy access to markets and suppliers.

2. **Industrial Ecosystem**

- Neemrana is a well-established industrial area with a robust infrastructure that supports heavy industries, particularly the HVAC and heat exchanger sectors.
- The presence of other industrial units in the region fosters a conducive environment for business growth, collaboration, and supply chain efficiency.

3. **Logistics and Transportation**

- The site benefits from well-developed road, rail, and air connectivity, facilitating smooth transportation of raw materials and finished goods.
- The upcoming Western Dedicated Freight Corridor (WDFC) will further enhance logistics efficiency.

4. **Availability of Utilities**

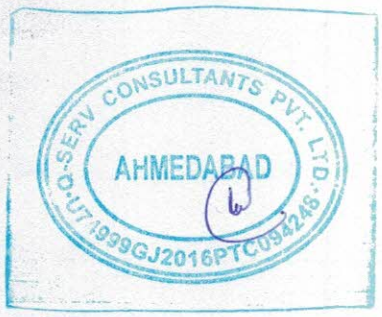
- A Power Supply line and a water supply line are available around the factory plot boundary, ensuring a reliable supply of essential utilities.
- The company has already obtained necessary utilities such as a borewell for water supply and an electricity connection.

5. **Labor and Talent Pool**

- The region has a skilled and semi-skilled labor pool, experienced in industrial operations, which is crucial for the HVAC and heat exchanger industry.
- Proximity to technical institutes and training centers ensures a continuous supply of trained professionals.

6. **Government Support and Incentives**

- The Rajasthan government offers various incentives and support for industrial development, including subsidies, tax benefits, and ease of doing business initiatives.
- RIICO (Rajasthan State Industrial Development and Investment Corporation) provides substantial support for industrial projects, ensuring smooth project execution.

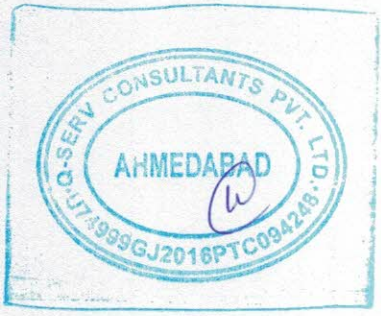


7. **Environmental and Regulatory Compliance**

- The site is conducive to meeting environmental and regulatory compliance requirements, which is critical for the sustainable operation of the HVAC and heat exchanger industry.
- The company is in the process of obtaining the necessary statutory and regulatory approvals for the proposed plant.

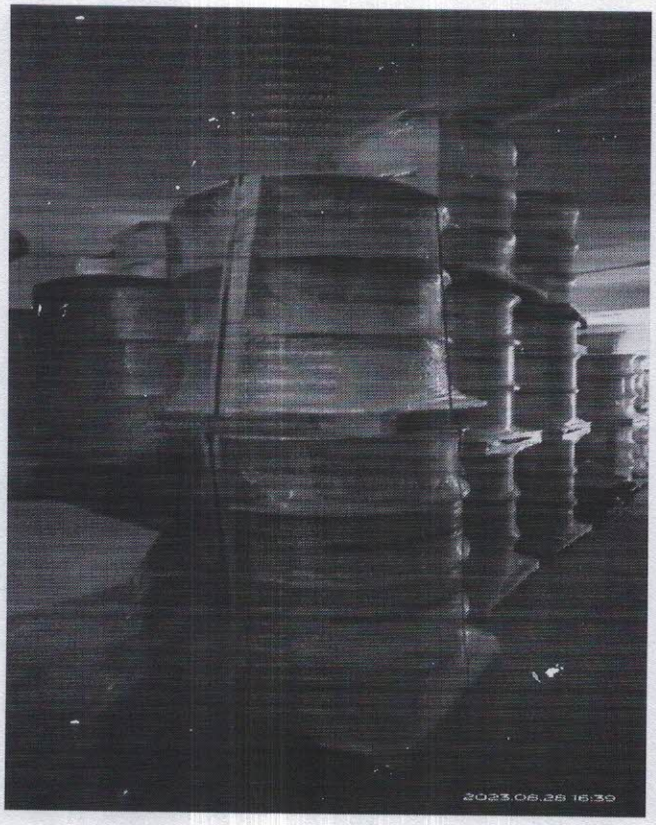
Conclusion

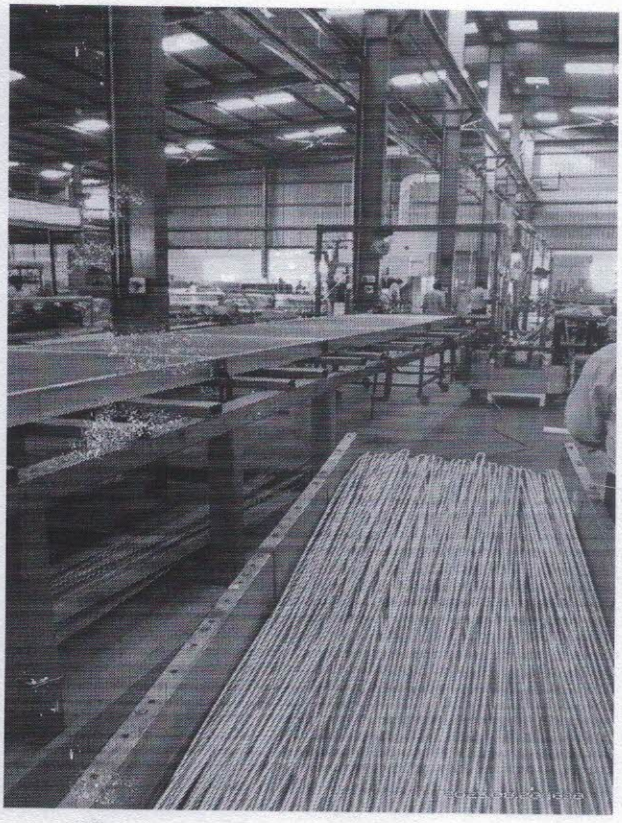
The site at Kolila Joga, Neemrana, Rajasthan, is strategically positioned to leverage industrial infrastructure, logistic advantages, skilled labor availability, and government incentives, making it an ideal location for the expansion of M/s. KRN HVAC Products Private Limited. The ongoing construction and the proactive steps taken to secure utilities and regulatory approvals further reinforce the site's suitability and potential for success in the heat exchanger and HVAC industry.

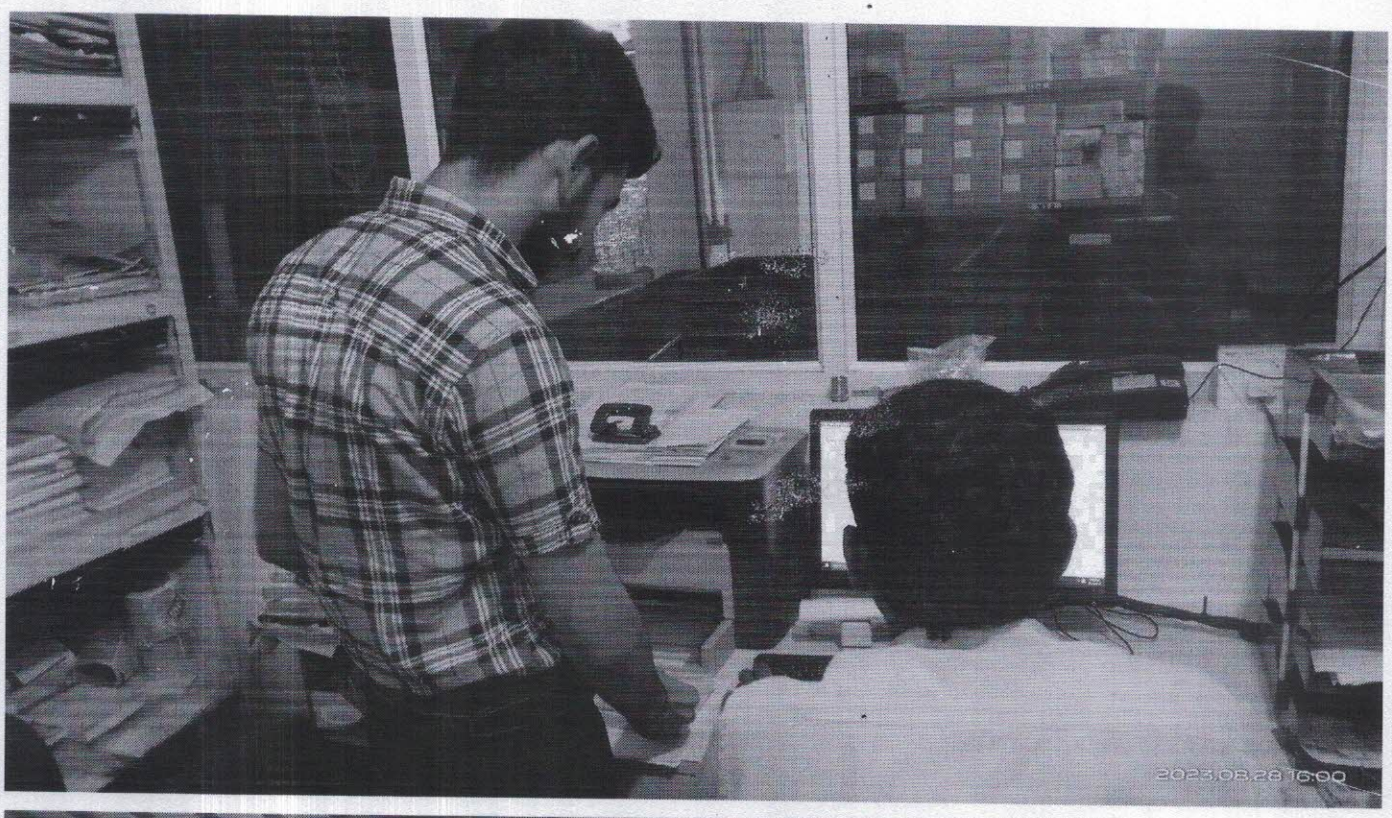


Plot No. F-46,47,48,49,EPIP, RIICO Industrial Area, Neemrana, Rajasthan

(Existing Unit)







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3.18 MANPOWER:

In order to operate and maintain the plant facilities, including it's technical, general administration needs, the estimated manpower requirement are mentioned below:

The details of cost of manpower required for the proposed Project (Project -1) have been estimated as under:

(Amounts in Lakhs)

Particulars	Number of Persons	Cost (Per Year)	Total Salary
A. WAGES:			
Supervisor- Prodn.	2.00	6.00	**12.00**
Plant Operators (All Prodn.)	5.00	10.00	**50.00**
Quality Supervisor	2.00	6.00	**12.00**
Quality Inspector	2.00	4.00	**8.00**
Security Supervisor	1.00	3.60	**3.60**
Security Guard	2.00	3.00	**6.00**
Asst. Manager - HR/Admin	1.00	6.00	**6.00**
Stores Exe.	1.00	3.00	**3.00**
Loading Labour	2.00	3.00	**6.00**
Peons	2.00	1.20	**2.40**
Sweeper/ Cleaner	4.00	3.00	**12.00**
Electrician	1.00	3.00	**3.00**
Maintenance Eng.	2.00	3.60	**7.20**
Manager- PE & Maint	1.00	7.00	**7.00**
Manager- Prodn.	1.00	7.00	**7.00**
Manager- Quality	1.00	7.00	**7.00**
Manager- HR/Admin	1.00	7.00	**7.00**
Dy Manager -Accounts	1.00	7.00	**7.00**

Sr.Engineer - Purchase	1.00	6.00	**6.00**
Driver	2.00	3.00	**6.00**
Gardner	1.00	3.00	**3.00**
Canteen Staff	4.00	3.00	**12.00**
Total			**193.20**

Comment:

The Management has provided the details of manpower, based on their experience of existing plant run at its holding company (KRN Heat Exchanger and Refrigeration Limited) and their corresponding workforce, the proposed manpower seems to be sufficient to handle the plant.

The details of cost of manpower required for the proposed Project (Project -2) have been estimated as under:

(Amounts in Lakhs)

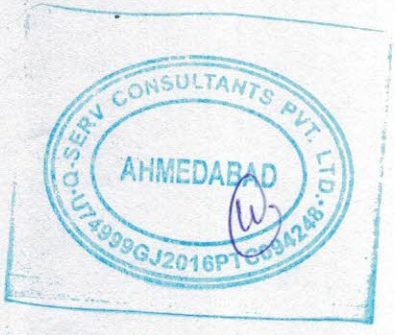
Particulars	Number of Persons	Cost (Per Year)	Total Salary
A. WAGES:			
Manager-Prodn.	10.00	12.00	**120.00**
Manager-Quality	10.00	12.00	**120.00**
Manger PE / Maint	10.00	12.00	**120.00**
Manager- Stores	10.00	7.50	**75.00**
Manager- Purchase	10.00	8.00	**80.00**
Manager- SCM	10.00	8.00	**80.00**
Manager D/D	10.00	10.50	**105.00**
Manager Accounts	5.00	9.60	**48.00**
Manager- HR/Admin/IR	5.00	10.00	**50.00**
Manager- EHS	5.00	10.00	**50.00**
Officer Safety & Welfare	10.00	6.00	**60.00**

Sr. Executive /Exe- EHS & Safety	4.00	6.80	**27.20**
Sr. Engineer/ Eng. - Prodn.	20.00	38.00	**760.00**
Sr. Engineer/Engineer - Quality	10.00	20.00	**200.00**
Sr. Engineer/ Engineer - PE/Maint.	10.00	15.00	**150.00**
Sr. Executive/Executive - Stores	3.00	7.20	**21.60**
Sr. Executive/ Exe. - Purchase	2.00	8.40	**16.80**
Sr. Executive/Exe. - SCM	2.00	8.40	**16.80**
Sr. Engineer /Eng- D/D	4.00	7.50	**30.00**
Sr. Executive /Exe. Accounts	2.00	10.40	**20.80**
Sr. Executive/ Exe.- HR/Admin	4.00	12.00	**48.00**
Security officer	2.00	4.56	**9.12**
Security Supervisor	4.00	3.60	**14.40**
Security Guard	6.00	3.00	**18.00**
Prodn. Operators	20.00	15.00	**300.00**
Quality Inspector	5.00	12.00	**60.00**
Maint. ITI , Fitter, Electrician, Tool & Helper / ETP & STP Operator	20.00	12.00	**240.00**
Loading Labour	6.00	3.00	**18.00**
Peons / Canteen Staff	6.00	3.00	**18.00**
Sweeper / Cleaner	15.00	8.00	**120.00**
Hotriculture Gardner	6.00	3.00	**18.00**
Driver	10.00	4.50	**45.00**
Rly Bus./RMPU/Cab A/c., Bus A/c & Truck A/c.			
Workman	5.00	10.00	**50.00**
Supervisor	11.00	6.00	**66.00**
Manager- Prodn.	5.00	8.00	**40.00**
Manager- QC & QA	10.00	10.00	**100.00**
Manager- Maint	8.00	10.00	**80.00**
Manager- MKT	3.00	5.00	**15.00**

Sr. Engineer/Engineer -D&D	3.00	5.30	**15.90**
Sr. Engineer/Engineer -QC & QA	2.00	5.50	**11.00**
Service Engineer	4.00	10.00	**40.00**
Executive/ Engineer - Sales	25.00	20.00	**500.00**
Manager- Testing	1.00	1.00	**1.00**
Engineer – Testing	1.00	4.80	**4.80**
Total			**3,983.42**

Comment:

- ***The Company has provided the details of manpower, based on the existing capacity and their corresponding workforce, the proposed manpower seems to be sufficient to handle the plant.***
- ***Wages Cost is increasing 5% Every Year.***



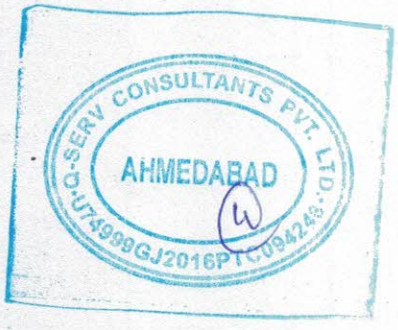
CHAPTER 4
INDUSTRY ANALYSIS

INTRODUCTION

Heating, ventilation, and air conditioning (HVAC) is the use of various technologies to control the temperature, humidity, and purity of the air in an enclosed space. Its goal is to provide thermal comfort and acceptable indoor air quality. HVAC system design is a sub discipline of mechanical engineering, based on the principles of thermodynamics, fluid mechanics, and Heat transfer. "Refrigeration" is sometimes added to the field's abbreviation as HVAC&R or HVACR, or "ventilation" is dropped, as in HACR.

HVAC is an important part of residential structures such as single family homes, apartment buildings, hotels, and senior living facilities; medium to large industrial and office buildings such as skyscrapers and hospitals; vehicles such as cars, trains, airplanes, ships and submarines; and in marine environments, where safe and healthy building conditions are regulated with respect to temperature and humidity, using fresh air from outdoors.

Ventilating or ventilation (the "V" in HVAC) is the process of exchanging or replacing air in any space to provide high indoor air quality which involves temperature control, oxygen replenishment, and removal of moisture, odours, smoke, Heat, dust, airborne bacteria, carbon dioxide, and other gases. Ventilation removes unpleasant smells and excessive moisture, introduces outside air, keeps interior building air circulating, and prevents stagnation of the interior air. Methods for ventilating a building are divided into mechanical/forced and natural types.

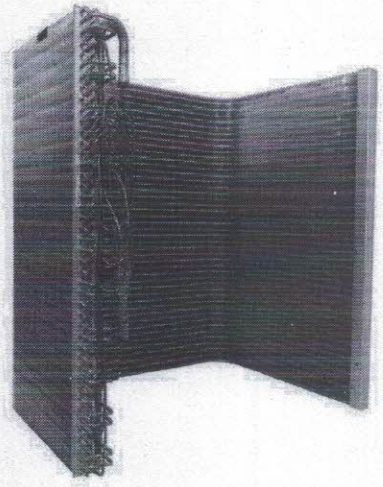


WHAT IS AN EVAPORATOR COIL AND HOW DOES IT WORKS?

An air conditioner's evaporator coil, also called the evaporator core, is the part of the system where the refrigerant absorbs Heat. It's where the cold air comes from. The evaporator coil is inside or near the air handler where the blower fan is. Evaporator coils are made from Copper, steel, or aluminium because these metals conduct Heat easily. Most residential AC evaporators consist of Tubes bent into U-shapes and set into panels. The panels are typically positioned in the form of an "A."

These panels are lined with thin pieces of metal known as Fins, which bring the passing air to be cooled closer to the coils to maximize the refrigerant's effect. As the AC runs, the compressor pulls cold, low-pressure liquid refrigerant through the tubing in the evaporator coil. Before entering the evaporator coil, the refrigerant passes through the expansion valve. This valve relieves pressure from the liquid refrigerant, which rapidly cools it.

The liquid refrigerant leaving the expansion valve is quite cold, which allows it to absorb Heat from the air. The expansion valve also controls how much refrigerant flows to the evaporator. More advanced expansion valves, such as thermostatic expansion valves (TXVs), can precisely control the flow to improve the system's overall energy efficiency. As the refrigerant flows, the blower fan draws hot room air over the evaporator coil. The refrigerant absorbs Heat from the passing air, and as it does so, it warms up and evaporates.



Evaporator Coils

When the water vapour in your warm household air hits the cold evaporator coils, the water vapor condenses into liquid and drips down into the condensate pan, which drains the water away outdoors. This is how your evaporator coil reduces the humidity of the room.

Caring for the Evaporator Coil because of how they operate, evaporator and condenser coils need to be kept clean to perform as intended and reach optimal energy efficiency. A dirty evaporator coil can experience several problems, including:

- Impaired Heat absorption and cooling capacity
- Higher energy use
- Higher pressures and temperatures
- Frost and ice build up

Even a Fine layer of dust on the evaporator coil reduces its efficiency. The dust acts as an insulator, keeping the Heat in and the air away from the cold coils. That means the coil can't absorb as much Heat as it can when clean. Your system will then have to run longer to provide the indoor temperature you want, meaning it will use more energy. Because it isn't absorbing enough Heat, the refrigerant running through a dirty evaporator coil doesn't warm up as much as it should. This cold refrigerant causes water vapour in your air to freeze rather than condense into a liquid. Eventually, the whole evaporator coil can frost over.

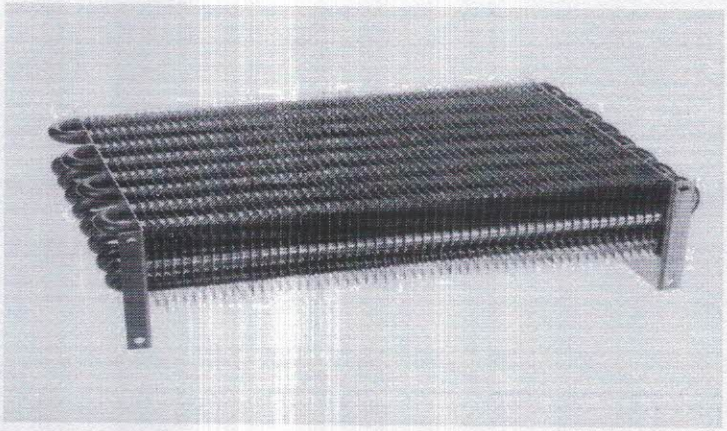
A layer of frost on your evaporator is never normal. Letting your system run with a frozen evaporator raises the temperature in the compressor and can eventually cause this component to fail. Dust on the evaporator coil, debris on the outdoor condenser unit, a dirty air filter, and a refrigerant leak can all cause the evaporator to freeze.

Evaporator coils can also develop tiny pinhole leaks due to corrosion from the mixing of moisture from condensation with chemicals commonly found in household air. Oily residue around the evaporator or in the drain pan is a sign your coil is leaky and needs replacement.

The airborne chemicals that encourage these leaks are known as volatile organic compounds (VOCs) and come from new carpeting, upholstery, pressed wood furniture, air fresheners, cleaning chemicals, and many other sources. Ensuring good home ventilation reduces the VOCs in your indoor air, protecting the evaporator coil and your health.

What is Condenser Coil and how does its Job?

A condenser plays a vital role in HVAC systems, as well as in industrial, commercial, and transportation Refrigeration systems. It serves the purpose of dissipating Heat into the environment, typically to the outdoor air.



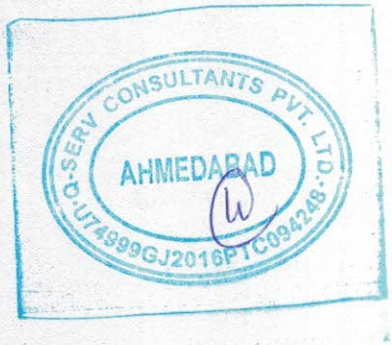
***Condenser Coil**

Condenser coils is available in three main designs: end plates only, with frames, and with casings. Condensers with casings are specifically designed for mounting fans in separate condensing units or remote condensers. The fan plate features appropriately sized holes, which can be equipped with or without diffusers to optimize air distribution from the fans. Casings can be constructed using galvanized steel, aluminium, or stainless-steel sheets of varying thickness. For coils with special applications, we can incorporate brass and Copper end plates and frames.

Evaporator and condenser coils work together to cool the room, so the evaporator coil wouldn't be much good without a condenser coil to complete the second half of the cooling cycle.

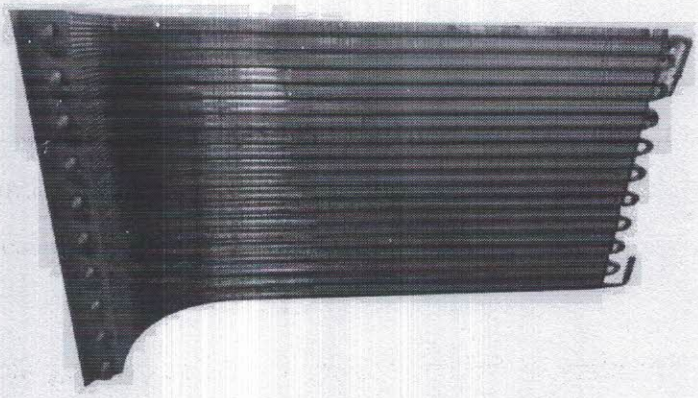
What Is An Air Conditioner Condenser?

Air conditioner's condenser is contained in the large, square unit outside your house. Although the whole unit is called the "condenser unit," it contains multiple components, including the condenser Tubes and Fins, the compressor, a fan, and Copper tubing, as well as valves and switches.



After the refrigerant absorbs Heat from room's air, it travels outside via a Copper Tube to the condenser unit. Here, the low-pressure, warm refrigerant gas enters the compressor. The compressor pressurizes the refrigerant, turning it into a hot, high-pressure gas.

This gas leaves the compressor and flows into the condenser coils, which is where the refrigerant releases much of the Heat that was absorbed from your home. The fan on top of the outdoor unit blows air over the condenser coils, so the refrigerant inside loses Heat. The condenser's many coils increase the amount of time the refrigerant is in the path of blowing air, giving it plenty of time to release the Heat that was carried out of the room.



***Air Conditioner Condensor**

As it cools, the refrigerant changes from a hot gas to a hot liquid. From there, it flows back through a Copper Tube into your home and into the expansion valve in the indoor unit near the evaporator coil. Good airflow is critical for evaporator and condenser coils. Both these components transfer Heat, and dust or debris interferes with their ability to do this. For condenser units, the most common threat is a build-up of yard debris on the Fins.

This usually takes the form of grass clippings, fallen leaves, twigs, and pet hair that make it harder for the condenser to release Heat. This reduces your AC's energy efficiency and strains the condenser and other components.

On occasion, an AC condenser can develop frost or a complete casing of ice. Assuming the condenser unit is clean, ice-ups like this usually mean there's an airflow problem elsewhere in your system. It could be a dirty air filter, dirty air registers and vents, a duct blockage, or a dirty evaporator coil. Ice on the condenser can also be caused by low refrigerant, which requires a call to a technician.

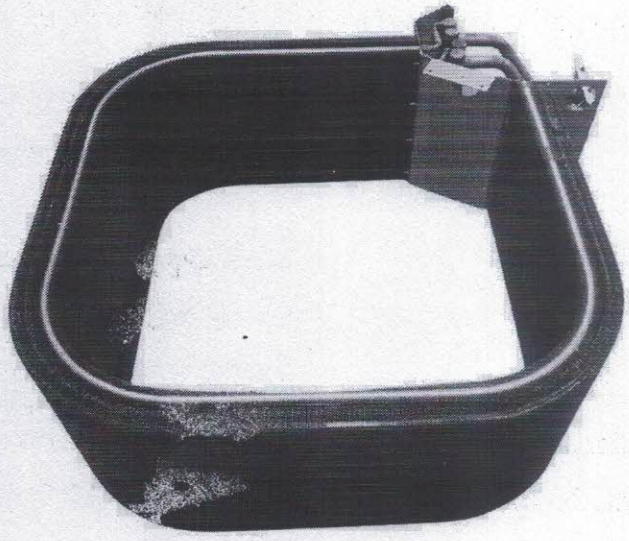
When the cooling season ends, protect the outdoor condenser from the elements by covering the top with a piece of wood held down at all four corners by bricks. This keeps snow from piling up inside.

WHAT IS A FLUID AND STEAM COILS?

Fluid coils are used to Heat or cool air within a conditioned space.

The fluid passes through Heat exchanging coil (Finned Tubes) which are blown by the air flow from the fan, as a result of which its temperature changes (decreases or increases depending on the temperatures difference air/fluid). The working fluid can be water, aqueous solutions of ethylene and propylene glycol, brine, a process product, or other viscous fluid. In fluid coils we use smooth Copper Tubes with different thickness and can use the Fins with anticorrosive coating. For cooling coils use hydrophilic coating.

Fluid Coil type Heat Exchangers can be used in Fluid coils are used to Heat or cool air within a conditioned Air Handling Units (AHU) to capture the warmth or chill in the air or water, to prevent it from being lost. It can also be used to transfer the Heat or cold in other systems such as dry-coolers, fan-coils, oil coolers etc. For cassette ceiling fan-coils we can produce bent coils of different types: L-coils, U-coils, O-coils and special form.



***Fluid and Steam Coils**

(Source: https://dataintelo.com/report/fluid-coils-market/)

The headers of fluid coils can have different connecting fitting and additional valves depend on request of the customers. To ensure the highest quality results, we manufacture headers and end plates in our own press shop.

Steam coils type of Heat Exchangers are used in industrial air Heating and processing as well as in HVAC applications. Steam coils use the Heat that is released when steam condenses (change of state from vapour to a liquid). Coils in this case must be manufactured and designed with thicker materials, keeping in mind the exposure to high temperature and pressure plus added chemicals and easy removal of condensate.

Steam coils are used in a wide range of applications in several industries like HVAC, power generation, food storage & processing, and military.

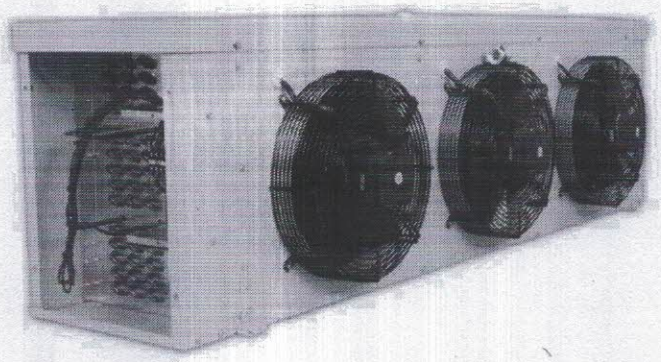
Market Scope and Structure Analysis:

The global Fluid Coils market is expected to grow at a CAGR of 5.1% from 2022 to 2030. The growth of the global fluid coils market can be attributed to the increasing demand for residential, commercial, and industrial applications across the globe. In addition, the growing awareness about energy-efficient Heating and cooling systems is also fueling the growth of the global fluid coils market. The Tubed fluid coils segment is expected to hold a major share of the global fluid coils market during the forecast period.

Growth Factors:

- Increasing demand from the end-user industries for Heat Exchangers and coils.
- The growing popularity of miniaturized Heat Exchangers and coils.
- Rising demand for energy-efficient Heating and cooling systems.
- The proliferation of smart buildings that require advanced Heating, ventilation, and air conditioning (HVAC) systems.
- Technological advancements in the design and manufacturing of Fluid Coils.

WHAT IS CONDENSING UNITS AND AIR-COOLING UNIT?



***complete Refrigeration circuit**

(Source: https://www.alliedmarketresearch.com/industrial-cooling-system-market-A12451)

A complete Refrigeration circuit includes four main elements: compressor, condenser, throttle device and evaporator. The compressor compresses the refrigerant to a high saturation pressure and feeds it to the condenser for further cooling and condensation. The excess Heat of condensation is released into the surrounding air. The liquid refrigerant leaving the condenser passes through the expansion valve and is fed into the evaporator, where it evaporates, removing Heat from the environment.

Often the main components of a Refrigeration system are manufactured as separate units: the condensing unit and the air- cooling unit (unit cooler).

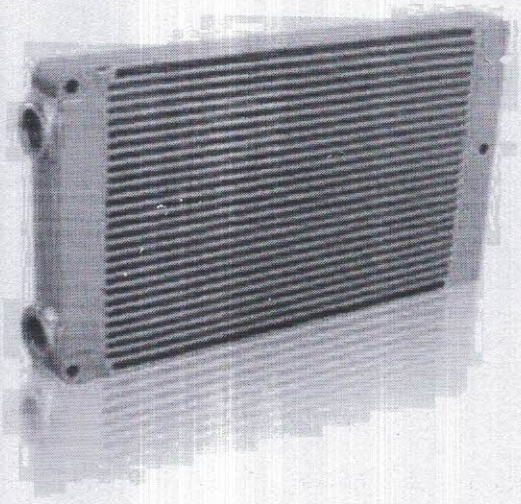
The condensing unit consists of a compressor, condenser coil and fan motor, connected by pipelines into one system on a mounting plate or in a closed casing. The operation of the condensing unit is carried out from the controls panel.

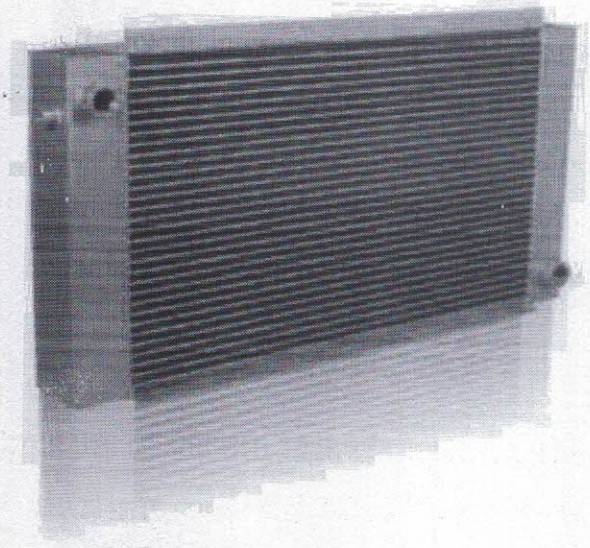
An air-cooling unit (unit cooler) consists of an evaporator coil, fan motor, electric panel, controls and optional electric Heaters for defrosting, throttle valve etc.

WHAT IS BAR AND PLATE HEAT EXCHANGER?

Bar and plate coolers feature a wide variety of thermally efficient internal and external Fin patterns. Fins are laid between aluminium braze sheets and fitted with header and face bars. The assembled unit is placed into one of our modern brazing furnaces where precise control of time and temperature produces a unified core. Manifolds designed to meet each customer's particular piping requirements are welded into place to complete the cooler. We can also supply cores when manifolds already exist or must be fitted in the field.

These rugged, compact, light-weight units are ideal for both on- and off- highway markets. The value added to the product by packaging a complete cooling system consisting of multiple coolers (e.g., radiator, charge air cooler, hydraulic oil cooler).





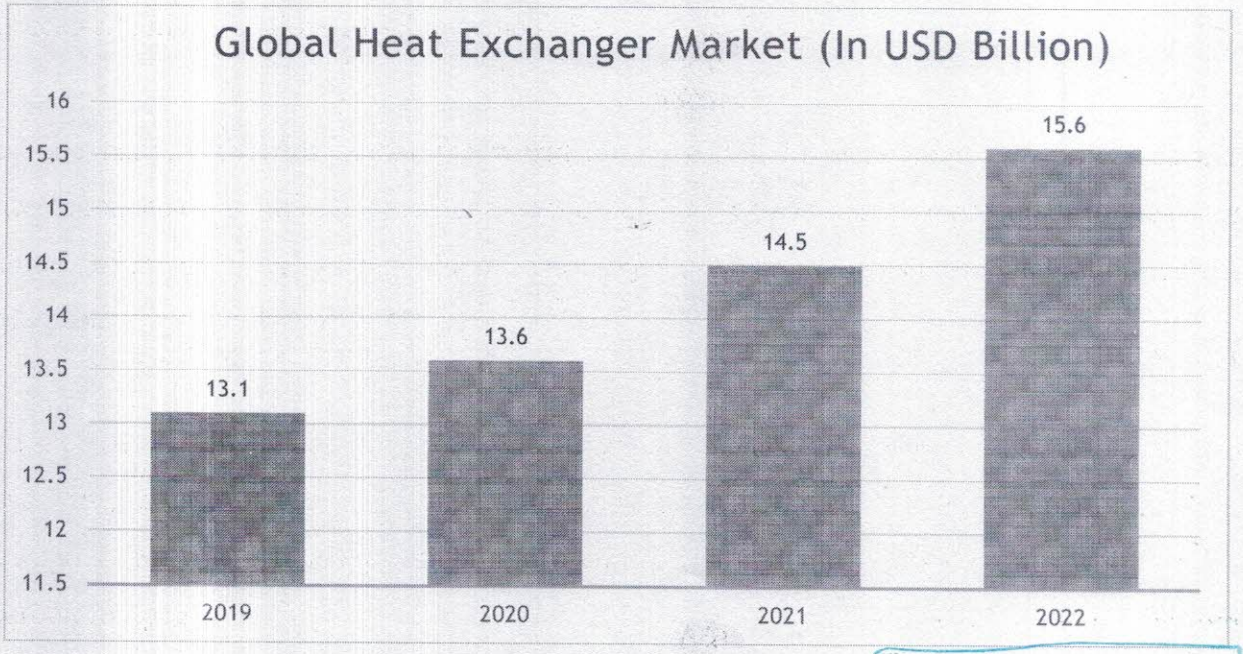
***Bar and Plate Exchanger**

Heat Exchanger Industry:

Global Heat Exchanger market is valued at USD 15.6 billion in 2022, with annual turnover in the industry increasing a CAGR of 6.2% between 2019 and 2022. Globally, the demand for Heat Exchanger is driven by two key factors – increasing demand for sustainable low energy consumption as well as cost-effective solutions to achieve the same.

On the one hand, industries across the world are investing in technologies & processes that are designed to reduce cost and improve operational efficiency. This is seen as a precursor to the next stage of evolution of the industrial sector – namely Industry 4.0 which involves close integration with digital technologies.

This development pathway has triggered innovations in products / hardware used as well as systems & processes. In the case of Heat Exchangers, the innovation is directed towards superior designs that would improve thermal efficiency which in turn will help in reducing energy cost as well as cut down their carbon footprint.



***Dun & Bradstreet Analysis Report 10th July, 2023**

Traditionally North America and Europe were the two strongest market for Heat Exchangers, partly due to their strong industrial base and the pace of innovations in manufacturing space. However, the gradual shift in manufacturing & industrial activity from developed markets to developing economies like China and India is triggering a change in global Heat Exchanger market.

Large scale industrialization in China and India has transformed APAC into a key market for Heat Exchangers. Countries like China, India and Southeast Asian nations which have led to increased demand for energy and infrastructure development, thus driving the need for Heat Exchangers in various sectors such as power generation, oil and gas, and chemical processing.

Further, the presence of a robust manufacturing base complementing expanding industrial sectors and supported by rising public and private investments in key industries have created a favorable market environment for Heat Exchangers in the Asia Pacific region This transformation has made APAC the fastest growing Heat Exchanger market. Between 2019 and 2022, the APAC Heat Exchanger market witnessed a compounded growth rate of 7%, higher than the growth that was registered in Americas and Europe.

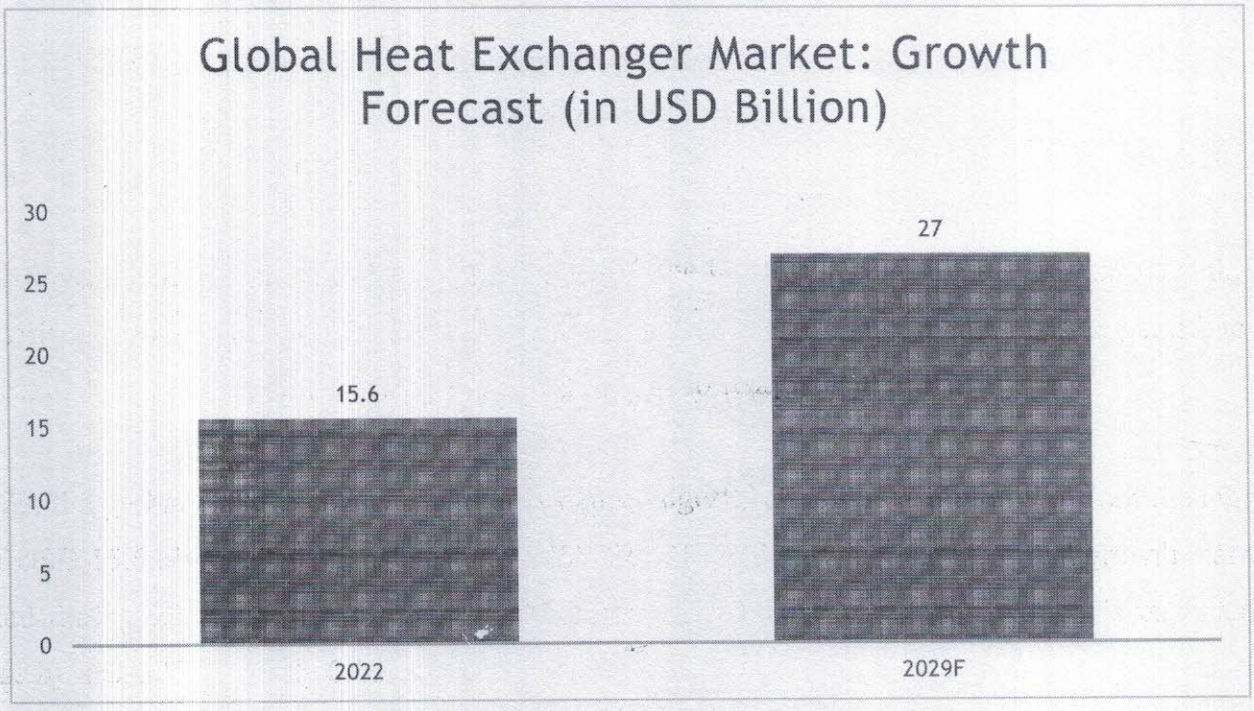
Market Scope and Growth Forecast:

Global Scenario:

At Global Level, Consolidated capital expenditure spending of S&P 500 companies grew by nearly 20% in 2022, over the previous year. For the year 2023, the capex spending by this segment is expected to be nearly 6%, with the lower growth rate attributed to the evolving uncertainties and recessionary fears across key developed economies. Despite this, the long-term outlook with respect to capital spending appears to be optimistic. Factors like transition to clean energy, increase in automation in manufacturing, and integration of digital technologies to industrial sector are all expected to favor capital spending.

Capital investment pattern in the coming years, specifically in developed markets, would be characterized by up gradation in manufacturing infrastructure. Capital spending is expected to be strongest in Asia Pacific market, led by increased spending in China and India.

By 2029, the global Heat Exchanger market is expected to reach USD 27 billion, up from the current size of USD 15.6 billion. This translates into a CAGR of 8%, higher than the historical growth that was recorded during 2017 – 2019. Growth would be strongest in APAC market, which is expected to increase by a CAGR of nearly 8.9%.



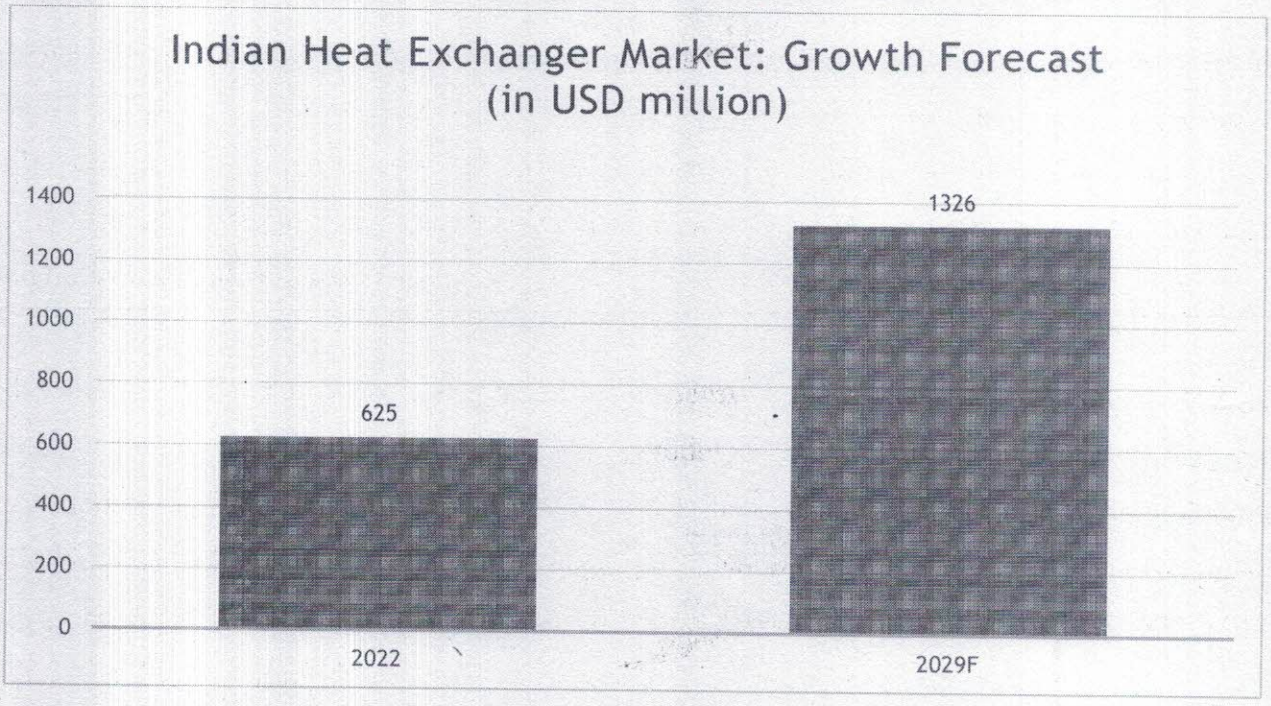
India Scenario:

Economic growth in India in the coming years would be underpinned by following factors – Government focus on improving the manufacturing infrastructure, and improvement in credit availability for the corporate sector.

Indian Government is taking steps to modernize and develop the domestic manufacturing capability, with the intention of increasing its contribution to GDP, from the current 15% to 25% by FY 2025. Flagship schemes like Make in India, Production Linked Incentive (PLI) scheme and Atmanirbhar Bharat was launched with the intention of meeting this goal.

The primary objective of these policies to import substitution (substituting imports with domestically manufactured goods), and later on become an export hub. This would involve substantial expansion in domestic manufacturing capabilities – across a wide range of industries. Schemes like Make in India and PLI is focused on multiple industries, hence the capacity expansion anticipated would be industry wide and not concentrated in select sectors.

These developments, together with improvement in capital investment scenario is expected to translate into modernization & expansion of domestic manufacturing capability. This expansionary phase would create demand for a wide range of capital goods, and Heat Exchangers – because of its ubiquitous application in process industries – is one of the major product segments to benefit. These developments would help the domestic Heat Exchanger market to increase from its current size of USD 625 million to USD 1,326 million by 2029. This would translate into a compounded growth rate of 11.3%.



*** Dun & Bradstreet Analysis Report 10th July, 2023**

- In India there is rapid market for HVAC Product because of high population, high demand of air conditioner, rapid change in technology, etc.

Top Impacting Factors:

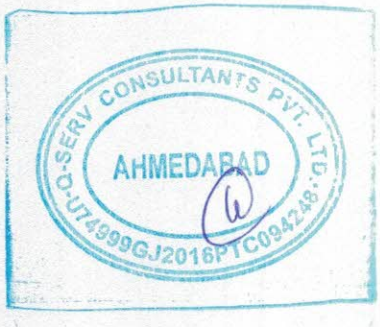
- The main factors that are responsible for elevating the slope of market growth for HVAC fan and evaporator coil market, consist of growth in modernization, the launch of energy-capable HVAC systems, rebate & incentive scheme provided by the governments, and increased expenditure in the construction sector all over the globe.
- Due to global warming, the rise in temperature has been the very cause of increased demand within the consumers for products of HVAC industry which will automatically boom the HVAC fan and evaporator coil market.
- The rise in the construction sector in areas such as the U.S. and Middle East is also the reason behind the growth.
- Along with this, the industry leaders such as Johnson Controls, Carrier Corporation, and Daikin Industries, have specifically enhanced market growth.

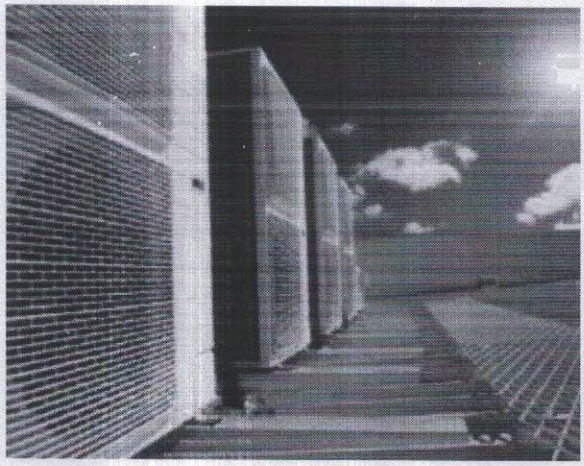
APPLICATIONS OF EVAPORATOR COILS AND CONDENSER COILS

Evaporator coils and condenser coils are well suited for a wide range of Heating, ventilation, air conditioning and Refrigeration applications.

1. **Air Conditioning**

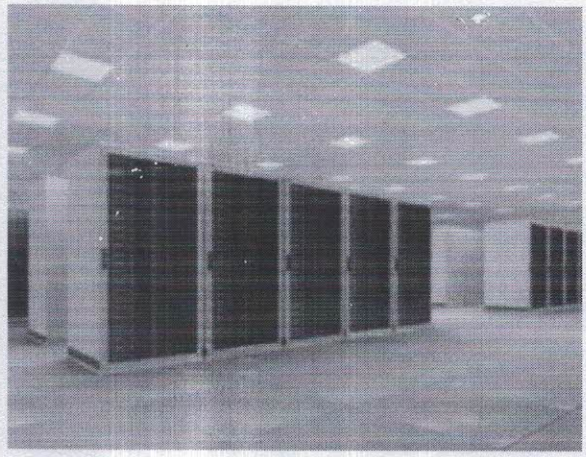
- **Commercial**: Fan coil units & cassette type HVAC for Residential, Hotels, Hospital AC, Cloth dryer/ Washing Machine, Rooftop HVAC Units
- **Industrial:** Construction and Civil e.g.: Paper & pulp mills
- **Mobile:** Automotive HVAC, Defense AC, Railway/Metro HVAC, Airport Shuttle, Transit Bus
- **Precision:** Precision Air Conditioning e.g.: Data Centre Cooling, Server Farms





*AC-11-300x236

*AC-Bus-300x236



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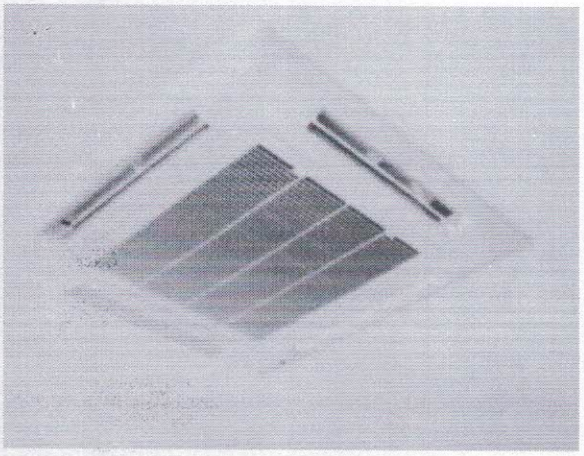
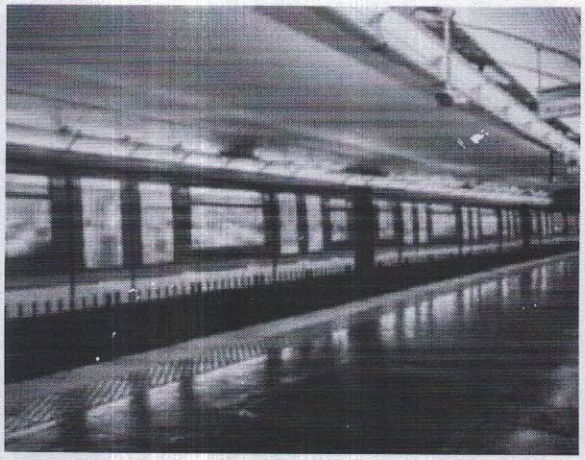
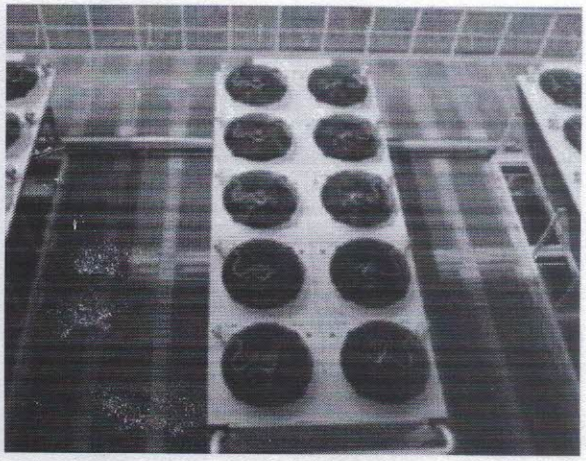


*AC-Ceiling-1-300x236



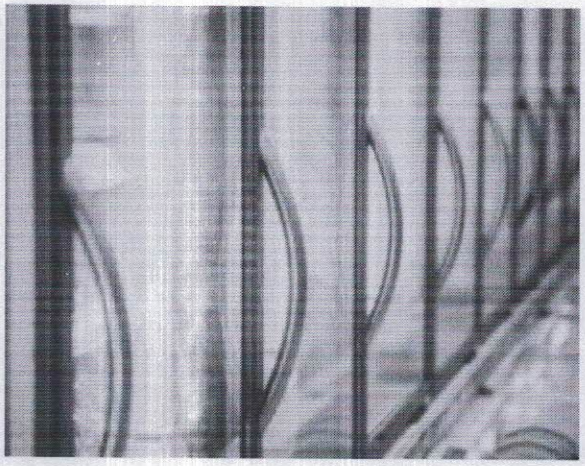
*AC-Metro-2-300x236



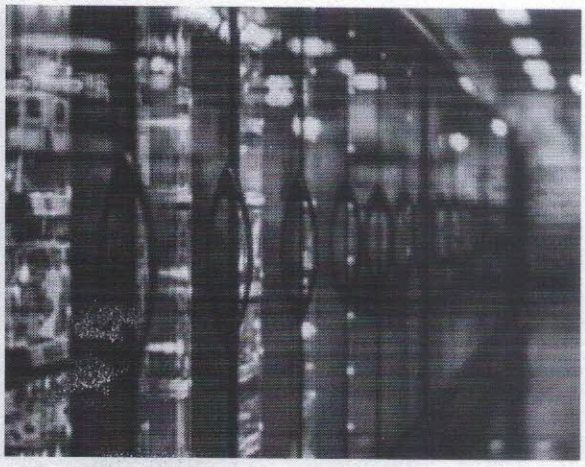
*AV-Ventilation-300x236

2. Refrigeration

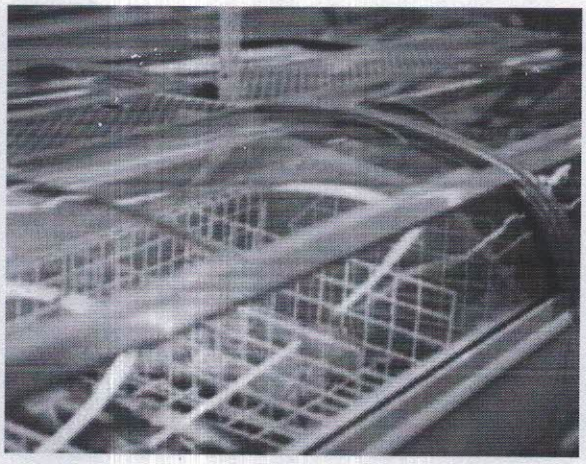
- **Commercial Refrigeration: Examples**: Frozen food Storage, Water Coolers, Vending Machines, Beverage Coolers, Truck and Container Refrigeration.



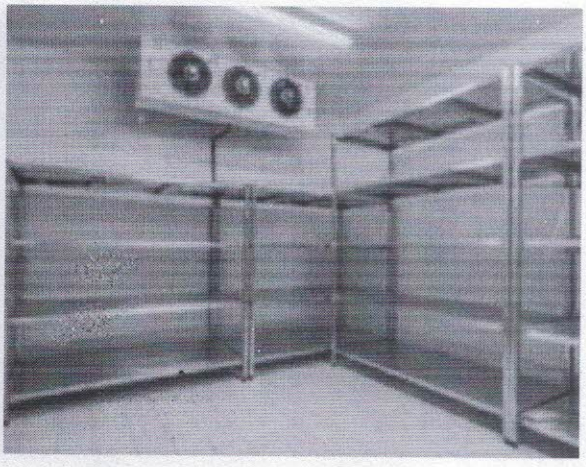
***Refrigeration-1-300x236**



***Refrigeration-2-1-300x236**



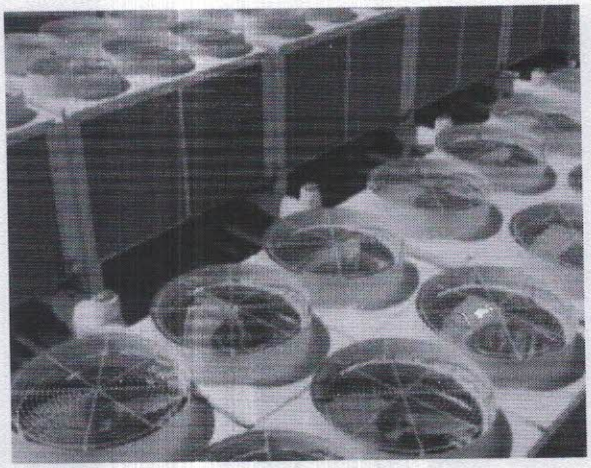
***Refrigeration-3-1-300x236**

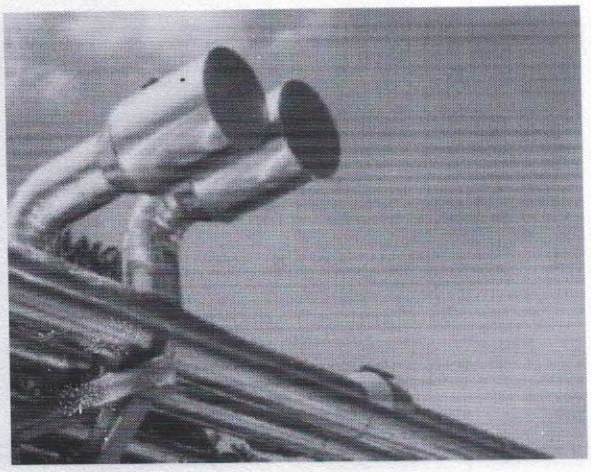


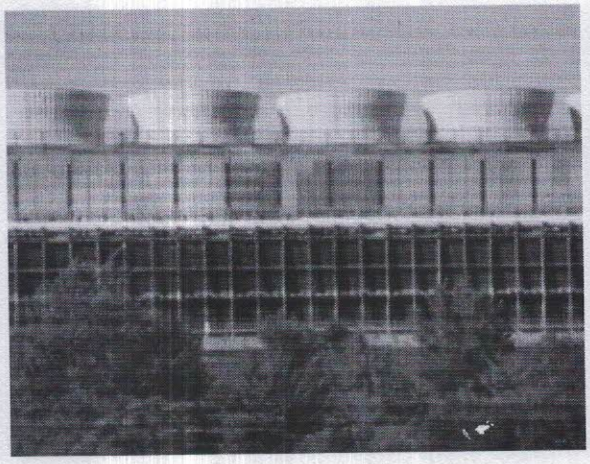
***Refrigeration-4-300x236**

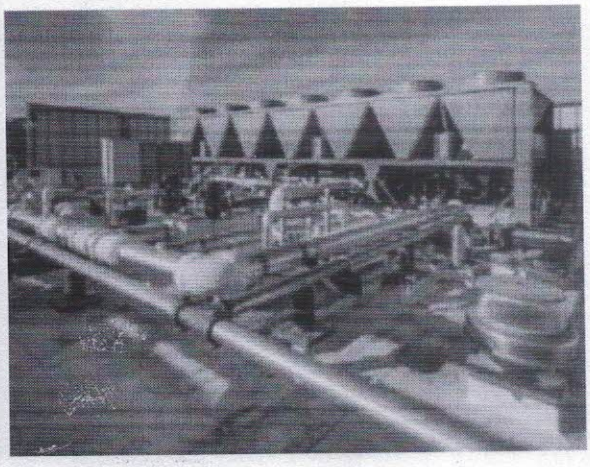
3. Process Cooling

- Oil, Gas and Chemical Plants, Power generation









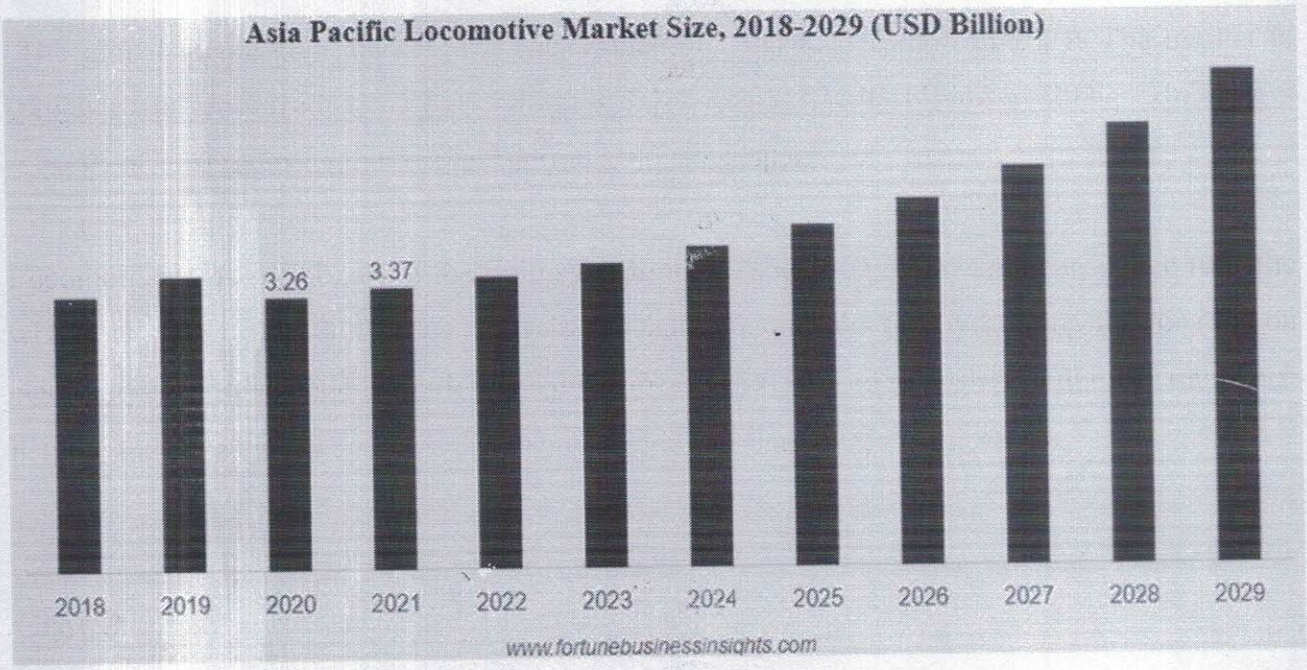
LOCO MOTIVE INDUSTRY

KEY MARKET INSIGHTS

The global locomotive market size was valued at USD 8.63 billion in 2021. The market is projected to grow from USD 8.93 billion in 2022 to USD 15.01 billion by 2029, exhibiting a CAGR of 7.70% during the forecast period.

Locomotive is a crucial part of the train system; it is a specific type of train car, which runs the whole train set. It is a self-propelled train car that generates energy by burning fuel or runs on electricity using magnetic levitation and other methods. It is used to push or pull other train cars, helping transport goods and passengers worldwide from one place to another.

Growth



DRIVING FACTORS

Increasing Freight Transportation and E-commerce Logistics to Drive Market Growth

As the population is increasing, the difficulty in transportation is rising, resulting in traffic congestion and pollution emitted by vehicles on the road. Due to this, railway transit has become a prime mode of transport to travel within or across cities on a daily basis. Moreover, mass transit of people by rail provides them with cost-efficient and time-saving traveling.

For instance, in 2021, the number of commuters traveling by train in China was recorded at around 2.61 billion. This number exceeded by 18.5% as compared to the number of commuters who traveled in 2020, which was 2.53 billion. Thus, increasing train passengers will drive the locomotive market growth during the forecast period.

The expansion of urban and metropolitan regions also creates a lucrative demand for rail network expansion. With the increasing number of routes, new locomotive requirements are generated to fulfil various transportation demands. Governments of various states and countries are also focused on expanding the railway networks and investing a huge amount of capital in developing railways that will drive the market.

Key Industry Development

- In October 2022, Union Pacific signed a partnership with ZTR to develop new hybrid-electric locomotives. Five more hybrid-electric locomotives are expected to be delivered in 2024. Union Pacific will replace one diesel locomotive with two locomotives, known as 'mother-slug' sets.

- In September 2022, Siemens Mobility extended its partnership agreement with leasing rolling stock specialist Akiem. Under this agreement, Siemens Mobility will provide a supply of 65 Vectron AC and Vectron MS locomotives to Akiem. The trains contain a maximum power of 6.4MWs and attain a maximum speed of 200km/h or 230km/h providing fast freight and passenger services across several countries in Europe.
- In July 2022, Wabtec Corp signed a contract with Union Pacific to modernize 600 locomotives. The contract was valued at USD 1 billion. The modernization of locomotives will improve fuel efficiency by up to 18%, increase reliability by more than 80%, boost haulage ability by more than 55%, and extend the life of the engines.
- In April 2022, Stadler signed a contract with Becon Rail for 30 bi-mode locomotives in the U.K. Under this contract, Stadler will deliver 30 Class 99 bi-mode Co locomotives along with its spare parts to be used for its operation in the U.K. The new locomotives are designed to be compatible with British gauge, and the specification combines 25kV A.C. electric and diesel operating modes. GB Rail freight will operate these locomotives.
- In November 2021, Wabtec Corp signed a contract with Egyptian National Railways (ENR) to supply 100 ES30ACi Evolution Series Locomotives and a multi-year service agreement to maintain the fleet. The European Bank for Reconstruction and Development funded the locomotive supply contract.

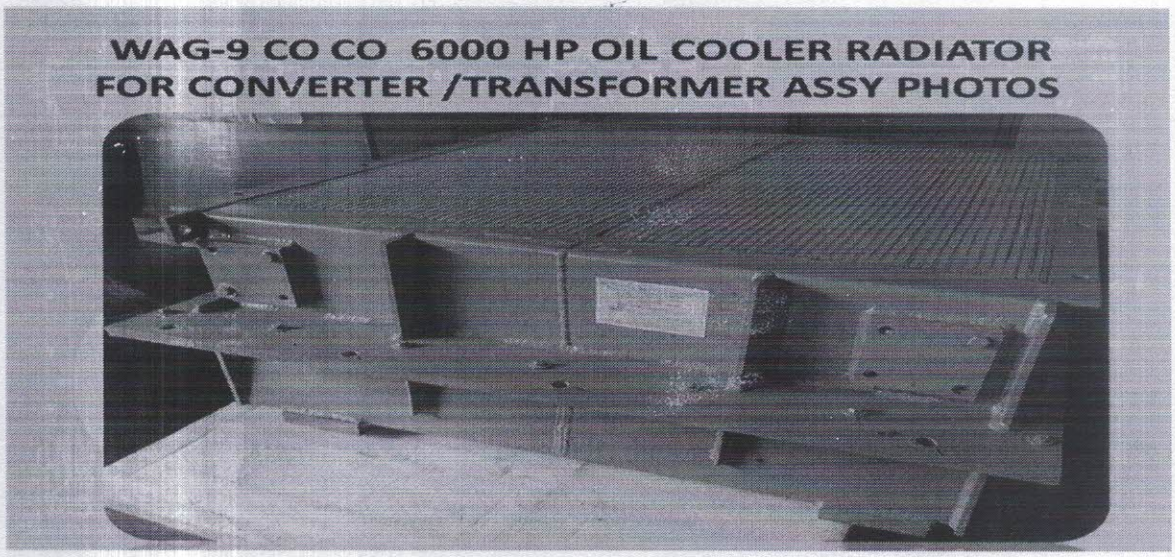
(Source: https://www.fortunebusinessinsights.com/locomotive-market-103285)

Product Related to Locomotive Industry

1. Oil cooler and Radiators

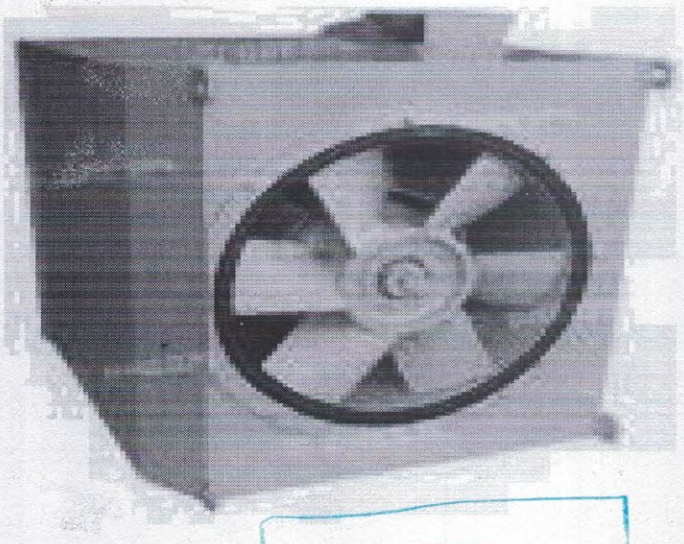
To Loco Manufacturers of Indian Railways to Chittranjan Loco works, Banaras Loco works, Patiala Loco works and for spares to all the LOCO sheds. The product is used for Transformer and convertor of Loco oil cooling. Each loco requires two no's and there will be potential of 4500 locos Indian railways manufactures in year and as sparer for loco shed all over India. These are sold through the online Tender participation in IRPS system.

It also used in Defense as Oil cooler and Radiators with complete assembly in Rack to Battle tank manufacturers – Heavy vehicle factory, AVADI, CHENNAI. This will be by online Tender through the defense portal.



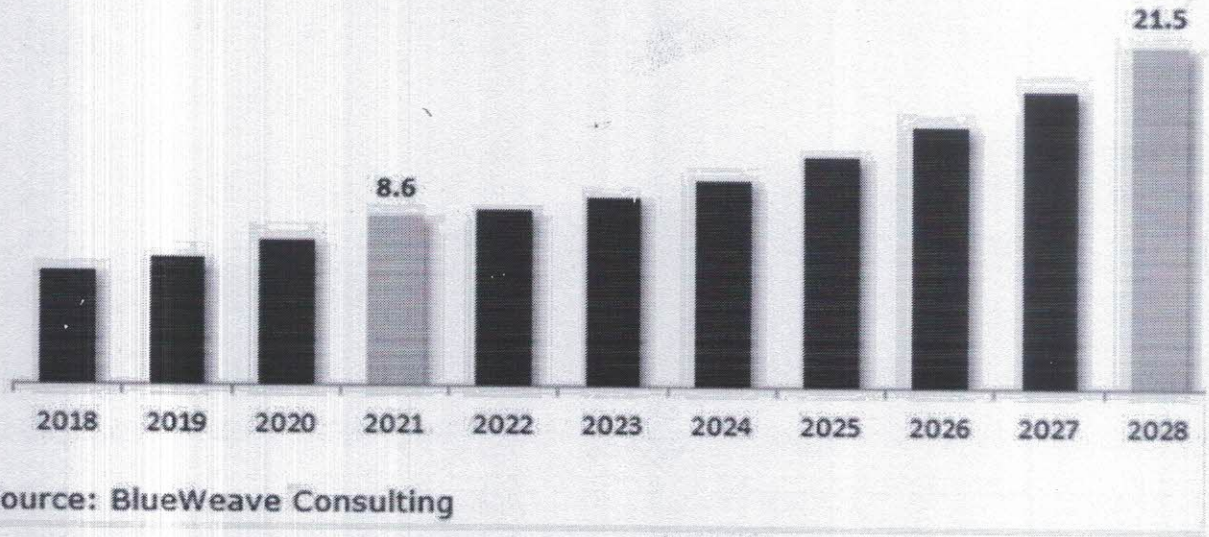
2. OIL COOLING UNIT WITH BLOWER & MOTOR:

The product is specifically used in LOCOMOTIVE. So, the LOCOMOVIVE Manufacturers – CLW, BLW, PLW and for service replacement all LOCOMOVIVE Sheds in India. It is Indian Railway's product comes in on line tender of IRPS system. The potential is 9000 to 10000 units per annum.



INDIAN HVAC INDUSTRY

India HVAC market was worth USD 8.6 billion in 2021 and is further Projected to reach USD 21.5 billion by the year 2028, growing at a CAGR of 14.80% in the forecast period. The market is growing at a high rate owing to factors such as rising disposable income and purchasing power of the consumers along with increasing investment towards infrastructural development and construction of various residential and commercial facilities. Furthermore, the integration of advanced technologies such as IoT is also offering significant growth opportunities to the India HVAC market.



Source: BlueWeave Consulting

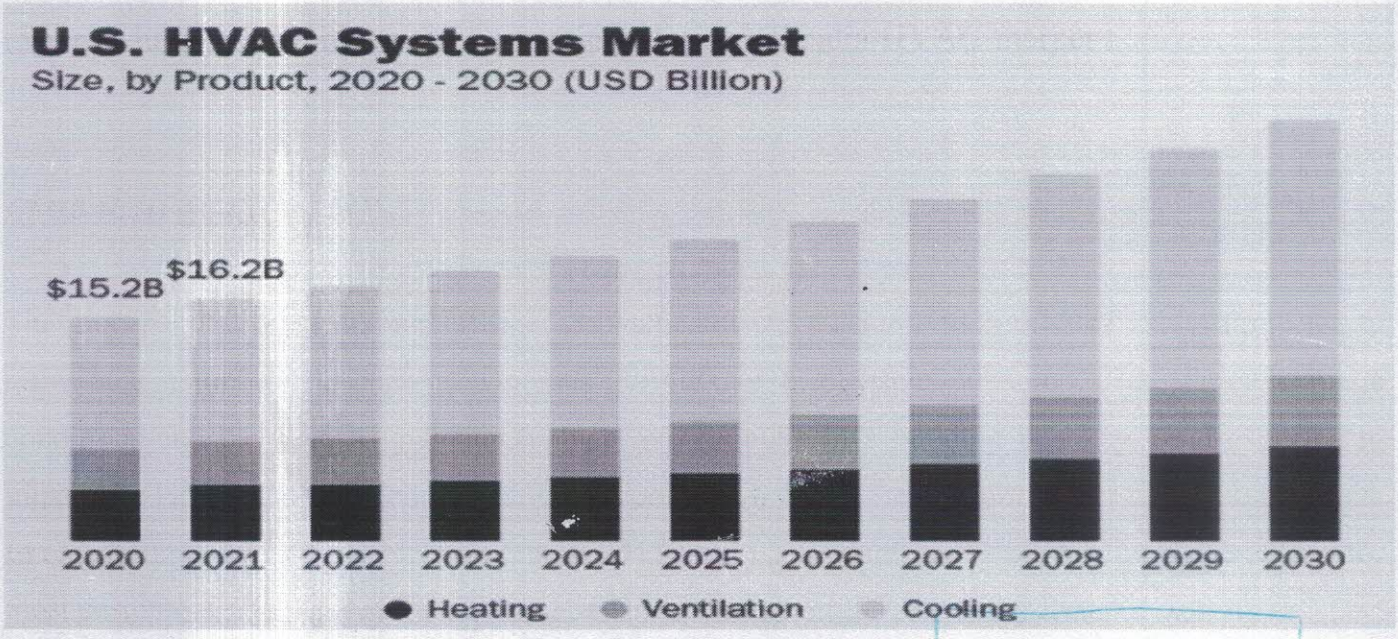
Rapid industrialization and urbanization, coupled with aggressive drive on infrastructure front have all accelerated the demand for Heat Exchangers. The strong annual growth in revenue is a result of these supporting factors. In addition, the ubiquitous nature of Heat Exchanger – which Finds application across all major industry segments – have ensured that a general growth in industrial activity and positive economic sentiment translate into demand for the product.

Apart from these direct demand drivers, the increasing focus on efficient energy usage to contain carbon emissions is shaping up as an indirect demand driver. Heat Exchangers with its ability to facilitate efficiency Heat transfer helps in optimizing energy demand. Given the dominant role played by hydrocarbon energy sources, any optimization in energy demand will directly translate into lower carbon emissions. So, Heat Exchangers is expected to play a major part in India's sustainable development journey.

(Source: https://www.blueweaveconsulting.com/report/india-HVAC-market)

GLOBAL HVAC INDUSTRY

The global HVAC systems market size was valued at USD 136.3 billion in 2022 and is Projected to grow at a compound annual growth rate (CAGR) of 6.3% from 2023 to 2030. Varied climatic conditions and the need to maintain ambient environment in a building is a key trend expected to impact the Heating, ventilation, and air conditioning (HVAC) systems market over the forecast period. In recent times, availability of smart features and energy efficiency have been key purchase criteria for most customers, and the trend is expected to gain traction over the next few years.



In the Asia Pacific, the market for HVAC systems is anticipated to witness healthy growth over the mid-term. An increase in multi-family and individual homeowners is creating avenues for future growth. The HVAC industry is gradually shifting focus on energy efficiency. Green initiatives are the focus area for several OEMs with an emphasis on saving money while reducing greenhouse emissions. Therefore, over the recent years, there has been a shift toward eco-friendly HVAC units. This includes products that consume less power and operate on renewable sources of energy thereby reducing energy costs

As such over the last few years the use of geothermal cooling and Heating equipment has been on a rise, subsequently reducing dependence on fuel-based equipment. Customer inclination towards comfort is creating avenues for growth. To meet the demand OEMs are developing products that are not just energy-efficient but also incorporate the latest technologies offering better connectivity. Today buildings constructed are "green" resulting in an increase in installations of thermostats, sensors, and smart meters that can be controlled from a smartphone or PC. The software enabled HVAC systems are also trending, and are expected to create opportunities over the forecast period. Technology is slowly making in-roads in the HVAC field, creating favourable long-term growth avenues.

On the one hand, industries across the world are investing in technologies & processes that are designed to reduce cost and improve operational efficiency. This is seen as a precursor to the next stage of evolution of the industrial sector – namely Industry 4.0 which involves close integration with digital technologies. This development pathway has triggered innovations in products / hardware used as well as systems & processes. In the case of Heat Exchangers, the innovation is directed towards superior designs that would improve thermal efficiency which in turn will help in reducing energy cost as well as cut down their carbon footprint.

(Source: https://www.grandviewresearch.com)

SCOPE OF THE INDUSTRY

The residential segment dominated the market for HVAC systems and accounted for the largest revenue share of 39.9% in 2022. An increase in multi-family and individual homeowners is creating avenues for the residential HVAC segment. As such in 2021 the segment was approximately valued at more than USD 50.0 billion. In developed parts of the world, the demand for residential HVAC (Heating, ventilation, and air conditioning) is expected to be more or less stagnant; however, the demand from newer markets particularly developing markets will be slightly on a higher end. This is primarily ascribed to the growing population in emerging markets and market maturity in developed markets.

Commercial HVAC space offers huge opportunities for growth. The segment is projected to grow at a CAGR exceeding 6.8% from 2023 to 2030. Several trends including green & smart technology to automated systems are expected to play a pivotal role in shaping the future of commercial HVAC market.

Recent development:

In May 2023, Carrier Corporation introduced i-Vu Pro v8.5 for upgrading controller firmware, improving serviceability for customers, and reducing downtime of connected HVAC equipment. The latest enhancements are expected to help customers with Internet of Things (IoT) connectivity, robust security, and leading serviceability features.

In May 2023, Toshiba Carrier Corporation (TCC) unveiled its new Digital Invertor (DI) series in China. The DI series is ductless split air-conditioning system designed for commercial uses and is easy to install and is energy efficient.

In April 2023, Toshiba Carrier Corporation expanded its Heater Air light commercial total Heat Exchanger series in Japan provide high-quality ventilation solutions and enhance indoor air quality with design flexibility and higher energy efficiency.

In February 2023, Hitachi launched air365 Max an end-to-end solution for architects, HVAC professionals, and building owners, integrated with Hitachi's original Smooth Drive 2.0 technology to reduced CO2 emissions.

In June 2021, Hitachi with Johnson Controls launched Air Cloud Home which provides comfort, price competitive, and is energy efficient. In June 2021, Hitachi introduced PRIMAIRY system in North America, a line of high-efficiency single-zone mini-split systems.

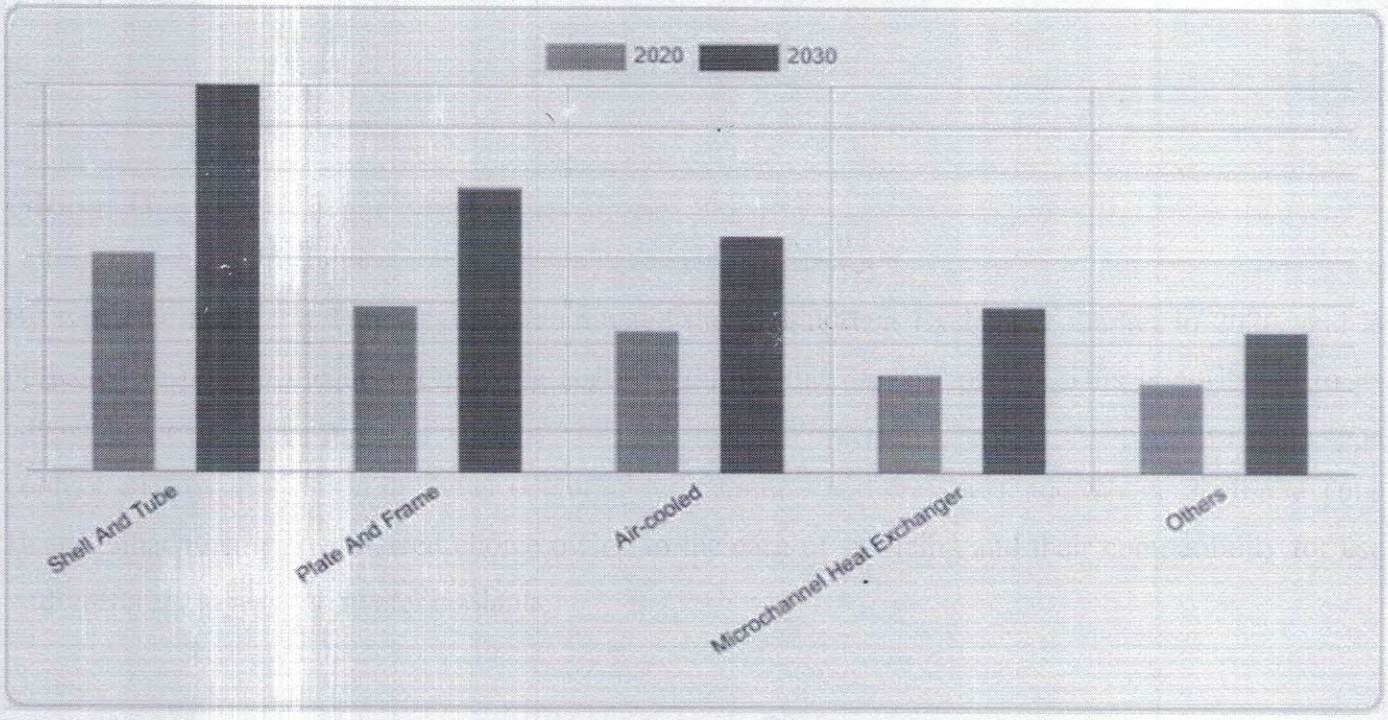
Heat Exchanger Market Outlook – 2030:

The global Heat Exchanger market size was valued at $16.7 billion in 2020, and is Projected to reach $28.3 billion by 2030, growing at a CAGR of 5.5% from 2020 to 2030. A Heat Exchanger is a device that facilitates the process of Heat exchange between two fluids that are at different temperatures. Heat Exchangers are used in many engineering applications, such as Refrigeration, Heating and air-conditioning systems, power plants, chemical processing systems, food processing systems, automobile radiators, and waste Heat recovery units.

In addition, air preHeaters, economizers, evaporators, super Heaters, condensers, and cooling towers used in a power plant are a few examples of Heat Exchangers. Moreover, Heat Exchangers are an enabling technology for efficient power generation with a closed, recuperated Brayton cycle, using supercritical carbon dioxide (CO2) as the working fluid. Heat Exchangers influence the overall system efficiency and system size. Heat Exchanger designs must balance between Heat Exchanger effectiveness and pressure drop to achieve the desired tradeoff between system efficiency and system size. This tradeoff between system efficiency and system size is expected to vary with each energy conversion system application.

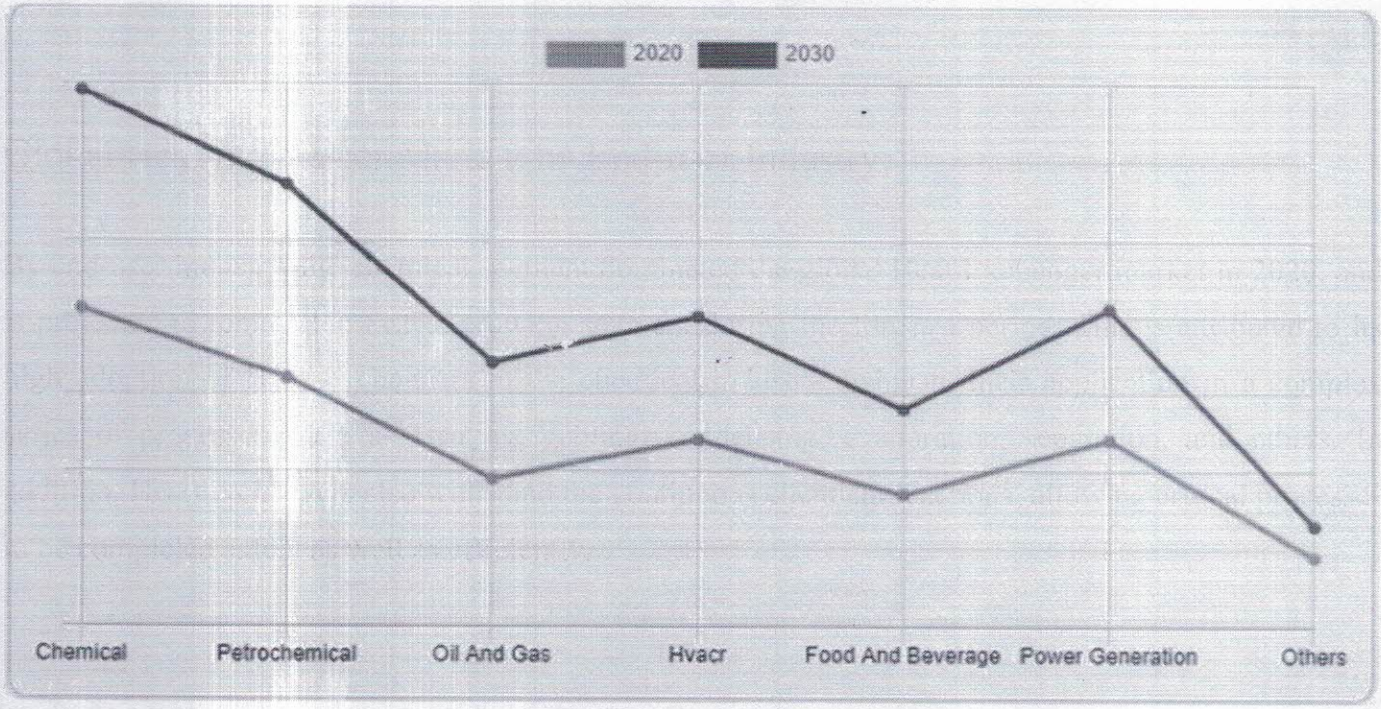
Global Heat Exchanger Market, by Type:

By type, the shell and Tube segment dominated the global Heat Exchanger market in 2020, and is projected to remain the fastest-growing segment during the forecast period. This is attributed to its advantages over other types of Heat Exchangers that include, low price as compared to plate type coolers, ease of application in higher operating temperatures and pressures, and others. Shell and Tube Heat Exchangers are a preferred choice owing to the ease of servicing and their compatibility for use with different types of seawater coolants.



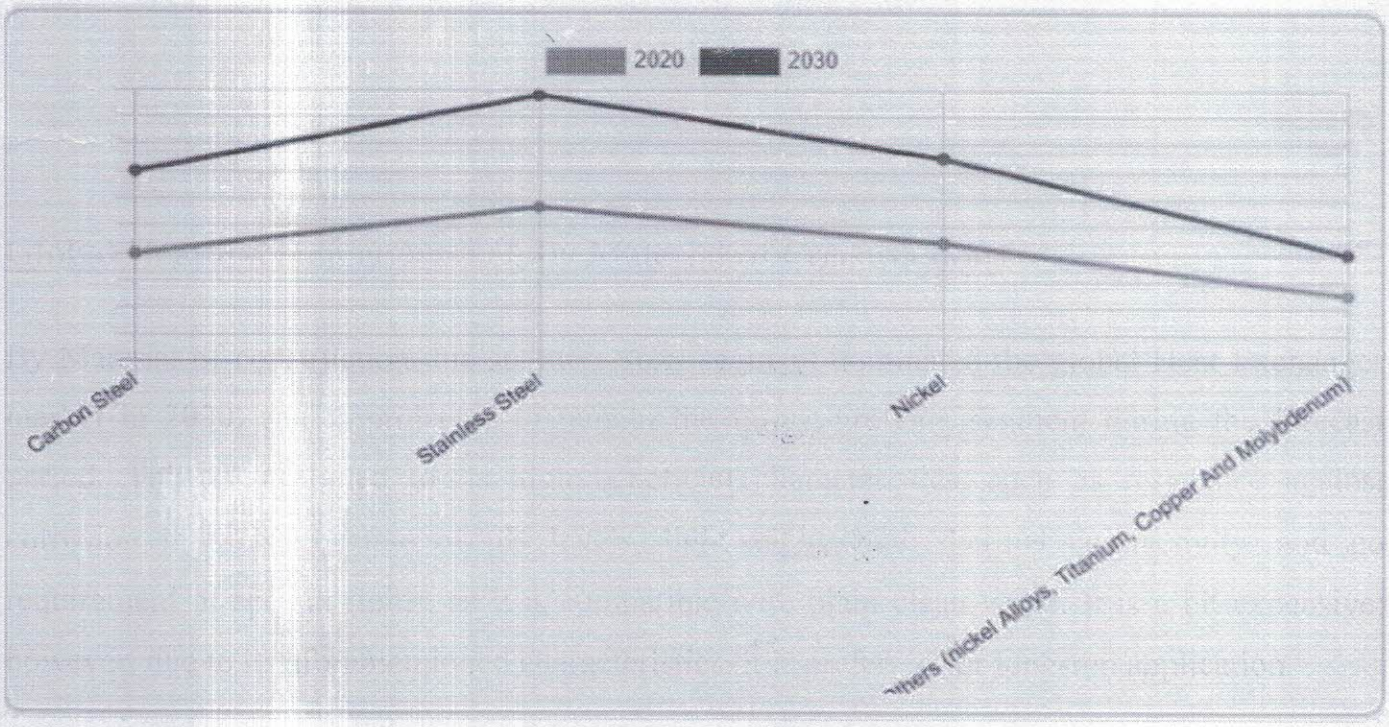
Global Heat Exchanger Market, by End-user Industry:

By end-user industry, the chemical segment dominated the global Heat Exchanger market in 2020, and is projected to remain the fastest-growing segment during the forecast period. This is attributed to its high adoption of Heat Exchangers in the chemical industry owing to their application in a complex series of processes, such as Heating, cooling, condensing, evaporation, separation, and others. In addition, Heat Exchangers also withstand the continuous chemical reactions, allowing critical processes to be completed safely as well as efficiently.



Global Heat Exchanger Market, by Material of Construction:

By Material of construction, the stainless steel segment dominated the global Heat Exchanger market in 2020, and is projected to remain the fastest-growing segment during the forecast period. This is attributed to its high beneficial characteristics, such as resistance against corrosion in a wide range of pH levels, lightweight, high thermal conductivity, and no requirement of special fluids, as it is compatible with plain clean water. It is a bit expensive; however, due to its aforementioned characteristics, it is preferred for long-run application.



COMPETITIVE LANDSCAPE:

Heat Exchanger industry is capital and technology intensive, which creates a steep entry barrier. The industrial landscape in India (and across the globe) is changing at a fast pace as digital technology are integrating into mainstream manufacturing. This has created the need for superior capital goods & industrial machinery which can fit into this evolving landscape as well as delivery superior output. In the case of Heat exchanges, the demand is for superior efficiency and Heat capture. Hence, now more than ever, the manufacturers need to invest in R&D to improve their manufacturing capability. This exercise translates into higher capex, which deters new entrants.

Even among existing players, there is a high pressure to innovate and widen their product offering. As conventional manufacturing techniques make way to newer methods, consumers are increasingly demanding better products which can deliver tangible results. To stay relevant Heat Exchanger manufacturer will have to engage with their consumers, identify the emerging trend, and devise a future growth strategy. These developments are changing the nature of the industry, making it more dynamic. Under this changing scenario, existing players have to invest in capital, skill / talent, and innovation to stay relevant and maintain / increase market share.

KEY GROWTH DETERMINANTS IN HVAC INDUSTRY: -

- The increasing adoption of smart home technology and connected devices is expected to provide further opportunities for growth in the HVAC industry in India. The rise in disposable incomes and the growth of the middle class are also expected to contribute to the market's growth.
- The rising disposable income and various government initiatives focusing on improving the energy efficiency of appliances are contributing to the market growth. Government campaigns, such as Atithi Devo Bhava and Digital India, resulting in a high inflow of tourists, thus leading to growth in hospitality and tourism-related businesses.

- The "Make in India" initiative, launched by the Indian government in 2014, aims to encourage foreign companies to invest in India and promote the country as a global manufacturing hub. The HVAC equipment manufacturing sector has the potential to benefit from this initiative significantly.
- The India Cooling Action Plan (ICAP) is a government initiative to promote sustainable cooling solutions in India and address the country's growing demand for cooling services. The plan recognizes the impact of inefficient cooling systems on energy consumption and greenhouse gas emissions and seeks to promote energy-efficient and environmentally friendly cooling technologies.

Monitoring instruments to help improve the effectiveness of HVAC systems:

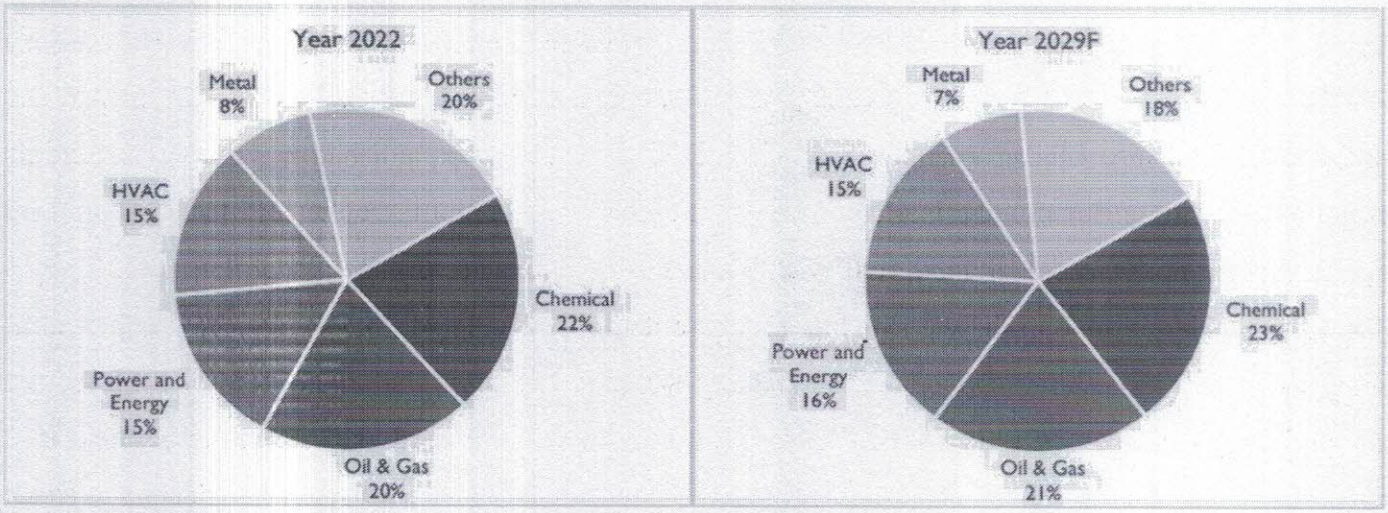
The HVAC industry is undergoing a digital transformation, and there is a growing need for advancements in monitoring instruments to help improve the efficiency and effectiveness of HVAC systems. Some of the key advances in monitoring instruments needed to digitalize the HVAC sector include:

- **Smart Thermostats**: These devices allow for remote control of temperature settings and provide real time monitoring and data analysis of energy consumption.
- **Building Automation Systems (BAS)**: BAS are networked systems allowing central control and monitoring of various building systems, including HVAC. These systems can help optimize energy usage and improve comfort levels in buildings.
- **Indoor Air Quality Monitors:** These monitors can detect and measure various indoor air quality parameters, including temperature, humidity, and levels of pollutants and allergens.
- **Remote Monitoring and Diagnostic Tools:** These tools allow for remote monitoring and diagnosis of HVAC systems, reducing the need for on-site visits and improving maintenance efficiency.
- **Energy Management Systems:** These systems can monitor energy consumption and help optimize energy usage in buildings, reducing waste and lowering costs.

USER INDUSTRY:

Chemical manufacturing is the predominance consumer of Heat Exchanger in India, followed by oil & gas industry. Chemical industry is expected to remain the largest consumer of Heat Exchangers, as the ambitious capacity expansion programs planned in chemical industry would translate into higher demand for Heat Exchangers. India already possess a strong chemical manufacturing hub – from basic chemicals to petrochemicals to specialty chemicals. The Government is focusing on strengthening India's position as a global chemical manufacturing hub and increase the country's share in global chemical trade. Multiple policies targeted various segments of the chemical industry – pharmaceuticals / specialty chemicals – has been announced and the coming years would witness strong activity in terms of capacity expansion.

Backed by these factors, the value of Heat Exchangers consumed by Indian chemical industry is expected to reach nearly USD 300 million in 2029, translating into a CAGR of 12.3%.



***Dun & Bradstreet Analysis Report 10th July, 2023**

INDUSTRY AND COMPANY RISKS:

1. **Dependence on Construction Activity:**

   Demand for HVAC and Refrigeration equipment is driven by new residential and commercial construction activity. The construction sector is cyclical and new construction can fall sharply during a weak economy. While new installations are the most sensitive to difficult economic conditions, replacement of existing systems can also decline as homeowners and commercial building owners focus on repairing, rather than replacing, older systems.

2. **Variable Material Costs:**

   HVACR equipment manufacturers purchase sheet metal, Copper tubing, other metal and plastic parts, and electronic components to produce their products. The prices of these commodities are dependent on global market conditions and can vary widely from year to year. For example, sheet metal prices can rise by over 5% in a single year. At the same time, HVACR equipment prices have risen by less than 5% per year. Companies must carefully manage raw material costs to maintain their gross margins. 5.3 Industry Risk Rating: Stable/Satisfactory

3. **Energy Efficiency:**

   Regulations HVACR equipment manufacturers are forced to keep up with evolving regulations to promote energy efficiency. The US Department of Energy (DOE) issued standards for rooftop commercial air conditioners calling for a 13% increase in energy efficiency in 2018-2022 and increases of up to 30% starting in 2023. DOE also changed the metric for measuring energy efficiency from Seasonal Energy Efficiency Ratio (SEER), which measures a machine's performance on the hottest or coldest day of the year, to Integrated Energy Efficiency Ratio (IEER), which assesses performance over an entire season. Achieving higher IEER ratings will require equipment redesign by manufacturers.

4. **Competition from Imports:**

Domestic manufacturers compete with foreign HVACR equipment manufacturers, who account for about 31% of the US market. HVAC and Refrigeration equipment imports rose 44% between 2012 and 2017 and 9.5% in 2018, fell 0.3% in 2019, then rose 2.3% in 2020. The largest import sources are China, Mexico, and Canada, followed by Thailand, Germany, and South Korea. Foreign manufacturers enjoy lower labor costs than domestic manufacturers but are vulnerable to changes in trade policies between countries.

5. **Availability of HVACR Installers:**

A shortage of skilled HVACR installers could limit growth for equipment manufacturers. Manufacturers typically rely on HVACR contractors to sell and install residential and commercial systems for new construction and building upgrades. Jobs for HVACR mechanics and installers are expected to grow 4% from 2019 to 2029 according to the Bureau of Labor Statistics, in line with the growth for all occupations. This growing demand, combined with the retirement of "baby boomer" technicians, will likely result in a shortage of qualified technicians. This potential shortage is also driven by the evolving skills required of technicians as HVAC systems use more electronic components and become more complex.

(Sources: https://raincatcher.com/images/raincatcher_images/HVAC-industryreport.pdf)

Demand Drivers for HVACR INDUSTRY:

- The rapid rise in industrialization and urbanization worldwide is one of the primary factors driving the market's growth. The significant increase in the construction of different commercial and residential buildings worldwide is creating considerable demand for HVAC equipment as a space Heating and cooling system, ventilation control, humidity control, and air filtration. For instance, as per the IEA, the global building construction sector's value increased by 5% compared to the previous year, reaching over USD 6.3 trillion.

- Rising energy costs directly impact building owners' and tenants' profit/loss statements. The invasion of Ukraine affected energy markets worldwide, particularly in Europe, which remains the primary market for Russian oil and gas due to the lack of these energy sources in European countries. However, due to Russia's invasion of Ukraine, the European Union decided to cut Russian oil imports by two-thirds, resulting in a surge in energy prices. Consequently, the demand for energy-efficient HVAC systems has recently increased significantly.

- Heating, ventilating, and air-conditioning in a commercial building usually consume more energy than any other activity in the building. According to the US Department of Energy's studies of commercial buildings, HVAC equipment usually account for over 40% of a building's energy usage. Owing to the huge amount of energy, HVAC systems use improvements in equipment efficiency translate to significant reductions in building operating costs.

- The high initial cost of HVAC equipment can be challenging for its demand because the high cost may deter some customers from purchasing or upgrading their systems. This is especially true for homeowners or small business owners who may have limited budgets and may not be able to afford the upfront costs of a new system. Secondly, the high cost of HVAC equipment can result in long payback periods for customers. This means that the cost savings resulting from the new system's improved energy efficiency may not offset the initial investment for several years.

(Source:https://www.mordorintelligence.com/industry-reports/HVAC-equipment -market)

CHAPTER 5
PROJECT PROPOSAL

1. Cost of Project

(Amount in Lakhs)

Particular	Phase - 1	Phase – 2
Land and Site Development	458.25	4,129.08
Factory Building	161.69	11,689.38
Plant & Machinery	740.01	11,001.68
Miscellaneous Deposits	-	108.64
Contingency	18.55	961.79
Total	**1,378.50**	**27,890.57**

Note: - The increase in the cost of plant and machinery for both Phase-I and Phase-II of the project has been primarily attributed to fluctuations in foreign exchange rates. As a result of these changes, the contingency has been utilized to that extent and after such adjustment contingency amount pending to be utilized remains 2.06% for Phase-I and 4.24% for Phase-II. These changes reflect the reallocation of funds to cover the increased costs associated with Building Development and acquiring plant and machineries (as the case maybe), ensuring that the project remains financially viable while accommodating these market fluctuations.

2. Components of the Project cost:

Land & Site Development, Factory Building, Plant & Machinery and Miscellaneous Deposits

The Factory Building, Plant & Machinery and Miscellaneous Deposits are covered in technical assessment chapter.

3. **Means of Finance:**

(Amount in Lakhs)

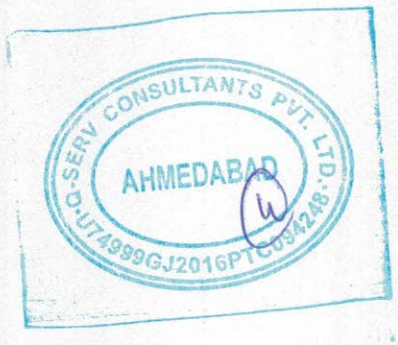
Name of the Facility	Phase – 1	Phase – 2
Share Holder's Fund	**500.00**	**24,246.10**
Unsecured Loan From Parent Company & / Or Other	**878.50**	**3,644.47**
Total	**1,378.50**	**27,890.57**

Note :- For Proposed Project it is pertinent to note that, as on date whole funding is allocated/shown in Equity Share Capital (on the basis of face value of Rs 10 each) in this projection however it may vary at the time of actual allocation due to change in issue price of shares.

Comment:

- **As per explanation and information provided by the company.**

CHAPTER 6
FINANCIAL PROJECTIONS



KRN HVAC PRODUCTS PVT LTD — **INR Lakhs**

Cost of Project

Particulars	Proposed Project I	Proposed Project II	Total Amount
Land and Site Development	458.25	4,129.08	4,587.33
Building Development	161.69	11,689.38	11,851.07
Plant & Machinery	740.01	11,001.68	11,741.69
Miscellaneous Deposits	-	108.64	108.64
Contingency	18.55	961.79	980.34
Total Cost of Project	1,378.50	27,890.57	29,269.07

Means of Finance — **INR Lakhs**

Particulars	Proposed Project I	Proposed Project II	Total Amount
Share Holder's Fund	500.00	24,246.10	24,746.10
Reserves and Surplus	-	-	-
Unsecured Loan From Parent Company & / Or Others	878.50	3,644.47	4,522.97
Total Means of Finance	1,378.50	27,890.57	29,269.07

Note :- For Proposed Project it is pertinent to note that, as on date whole funding is allocated/shown in Equity Share Capital (on the basis of face value of Rs 10 each) in this projection however it may vary at the time of actual allocation due to change in issue price of shares

Land and Site Development — **INR Lakhs**

Particulars	Proposed Project I	Proposed Project II	Total Amount
Land including conveyance charges Plot F-50 (2361sqm)	350.00	-	350.00
Registration charges Plot F-50 (2361sqm)	10.33	-	10.33
Land including conveyance charges Plot G-51 (1675sqm)	90.00	-	90.00
Registration charges Plot G-51 (1675sqm)	7.92	-	7.92
Land including conveyance charges Plot SP-124 (71924sqm)	-	3,998.97	3,998.97
Registration charges Plot SP-124 (71924sqm)	-	130.11	130.11
Total	458.25	4,129.08	4,587.34

Building Proposed Phase-I — **INR Lakhs**

Particulars	Area Mtr	Rate	Amount
Factory Shed	1.00	13,702,500.00	137.03
Total			137.03
Add:- GST @ 18%		18%	24.66
Grand Total			161.69

Building Proposed Phase-II — **INR Lakhs**

Particulars	Sq Ft	Rate	Amount
Building, Civil & other works	615,506.01	1,576.35	9,702.50
Add:- Architect Fees @		2.1%	203.75
Add:- GST @ 18%		18.0%	1,783.13
Grand Total			11,689.38

Installed Capacity

Assumptions	Proposed Project I	Proposed Project II
Capacity (in Nos.)		
Fin & Tube Type Heat Exchanger Units, Tubings & Sheet Metal Parts	106,799.00	322,810.00
HVAC Components (Piping, U bend & I-Kit) & Sheet Metal Components	-	23,817,916.00
Bar & Plate Heat Exchanger and Cooling Unit with Blower & Motor	-	3,168.00
Roll Bond Evaporator	-	2,904,000.00

Miscelleneous Deposit (Project-II) — **INR Lakhs**

Particulars	Amount
Security deposit to Land Authority (RIICO)	39.99
Security deposit to Electricity Department	20.97
Security deposit to other Govt. Regulatory Authority	47.68
Grand Total	108.64

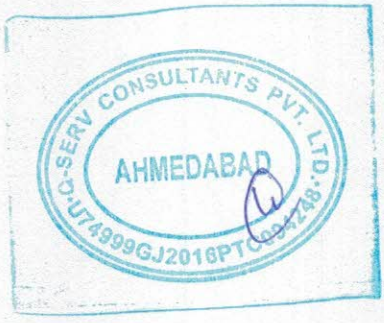
S-SERV CONSULTANTS PVT. LTD. AHMEDABAD U74999GJ2016PTC094248

KRN HVAC PRODUCTS PVT LTD

INR Lakhs

Plant & Machinery Breakup

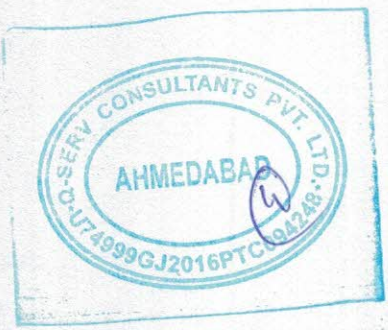
Date of Quotation/ Purchase Order	Description	Supplier Name	Proposed Project I	Proposed Project II
02 June 2023	Fin Press 60 Ton H 8462421200	JDM JIngDa Machine Co. LTD	161.38	
24 May 2023	7*28R*2P(19.05*22mm) fin die with spare parts	YHM Forgein Trade Co. LTD	64.04	
24 May 2023	7*42R*2P(12.7*21mm) fin die with spare parts	YHM Forgein Trade Co. LTD	103.01	
02 June 2023	Hairpin Bender 8462299000 UXZ3150	JDM JIngDa Machine Co. LTD	58.63	
02 June 2023	Vertical Expander Hydraulic YZL2500 8463900090	JDM JIngDa Machine Co. LTD	111.62	
17 August 2023	MNTR machine	Associated tech pvt	4.52	
18 July 2023	Copper pipe saw machine	shree ganga engineers	1.00	
23 June 2023	Dock Leveller	Industrutal equipment co.	5.90	
20 July 2023	Industrial RO 2000 LPH	Shante Engineers	3.58	
20 July 2023	DM Plant 1500 LPH	Shante Engineers	3.92	
12 July 2023	DG 500 Kva	Sudhir power limited	41.34	
11 August 2023	High Pressure Compressor	Shakti pneumatics	3.11	
10 August 2023	Vertical air receiver tank 500 ltr	sonitech india pvt ltd	1.45	
10 August 2023	High pressure heatless air dryer	sonitech india pvt ltd	2.00	
20 July 2023	Tube removing tool (O.M.T.R.)	OMTR S.R.L.	15.69	
25 August 2023	Utility pipe line, LPG, O2, N2, High Pressure	Global engineers & contractor	11.71	
18 August 2023	Utility Low pressure Air Line	indo equipment corporation	2.22	
28 June 2023	Power distribution Panel	MY Choice service & solution	3.20	
11 August 2023	3.5C X 400 sqm Aluminium armoured cable 156 meter	Yash Engineering Solution	2.12	
09 September 2023	Earthing for equipment and DG	MY Choice service & solution	2.40	
26 August 2023	Highbay LIGHT 150 W-Havells, STREET LIGHT 60W-Havells	rajasthan hardware & tools	1.61	
22 July 2023	Water Leak Test SS TANK 5650*3000*300 MM	Global engineers & contractor	1.72	
17 August 2023	Fire hydrant systerm	Brhma Fire Service	11.45	
09 September 2023	Electric work cable tray and cable laying	MY Choice service & solution	2.88	
15 September 2023	cable for equipment power connection	Yash Engineering Solution	4.44	
15 September 2023	MCB and socket for equipment power connection	JSR Enterprises	2.18	
05 July 2024	Fin Press 60 Ton	JDM JingDa Machine (Ningbo) Co., Ltd		514.77
05 July 2024	Hairpin Bender 3000 mm	JDM JingDa Machine (Ningbo) Co., Ltd		210.59
05 July 2024	Hairpin Bender 3000 mm 5 mm	JDM JingDa Machine (Ningbo) Co., Ltd		50.14
05 July 2024	Hairpin Bender 3000 mm 12.7 mm	JDM JingDa Machine (Ningbo) Co., Ltd		57.66
05 July 2024	Expander Vertical 2.5 m	JDM JingDa Machine (Ningbo) Co., Ltd		417.83
05 July 2024	Expander Vertical 2.5 m 5 mm	JDM JingDa Machine (Ningbo) Co., Ltd		112.81
21 March 2024	Fin Press Cabin	Envirotech System Ltd		137.90
22 March 2024	Fin Die 12.7 mm	YHM(Wuxi)Foreign Trade Co.,Ltd.		40.95
22 March 2024	Fin Die 6.35 mm X 25.4	YHM(Wuxi)Foreign Trade Co.,Ltd.		79.89
22 March 2024	Fin Die 6.35 mm X 19.05	YHM(Wuxi)Foreign Trade Co.,Ltd.		83.40
22 March 2024	Fin Die 5 mm	YHM(Wuxi)Foreign Trade Co.,Ltd.		96.52
22 March 2024	Fin Die 7.94 mm	YHM(Wuxi)Foreign Trade Co.,Ltd.		80.64
22 March 2024	Fin Die 9.52 mm X 25.4	YHM(Wuxi)Foreign Trade Co.,Ltd.		53.73
22 March 2024	Fin Die 9.52 mm X 25	YHM(Wuxi)Foreign Trade Co.,Ltd.		53.73
22 March 2024	Fin Die 15.88 mm	YHM(Wuxi)Foreign Trade Co.,Ltd.		65.93
22 March 2024	HORIZONTAL EXPANDER MOCA-TS-7000	CMS S.P.A.		295.73
20 March 2024	Ball Expanding machine SS 5/8"	CMS S.P.A.		68.24
22 March 2024	Coil Bending CBV	CMS S.P.A.		172.89
22 March 2024	Coil Bending O	CMS S.P.A.		150.14
22 March 2024	Cut Off Line chipless 1	Zhongshan OMS Trading Co., Ltd		22.98
22 March 2024	Cut Off Line chipless 2	Zhongshan OMS Trading Co., Ltd		14.79
22 March 2024	Cut Off Line saw type	Zhongshan OMS Trading Co., Ltd		18.55
22 March 2024	Coil Bending L	Zhongshan OMS Trading Co., Ltd		18.05
22 March 2024	U Bend machine 9.52 mm	Zhongshan OMS Trading Co., Ltd		17.47
22 March 2024	U Bend machine 5 mm	Zhongshan OMS Trading Co., Ltd		16.38
22 March 2024	U Bend machine 7 mm	Zhongshan OMS Trading Co., Ltd		17.47
22 March 2024	U Bend machine 12.7 mm	Zhongshan OMS Trading Co., Ltd		20.56
22 March 2024	U Bend machine 6.35 mm	Zhongshan OMS Trading Co., Ltd		17.47
22 March 2024	Size & Ringing machine 9.52 mm	Zhongshan OMS Trading Co., Ltd		29.42
22 March 2024	Size & Ringing machine 5 mm	Zhongshan OMS Trading Co., Ltd		21.39
22 March 2024	Size & Ringing machine 7 mm	Zhongshan OMS Trading Co., Ltd		25.40
22 March 2024	Size & Ringing machine 12.7 mm	Zhongshan OMS Trading Co., Ltd		22.65
22 March 2024	Size & Ringing machine 6.35 mm	Zhongshan OMS Trading Co., Ltd		25.40
22 March 2024	U Bend Cleaning machine	Zhongshan OMS Trading Co., Ltd		47.63
22 March 2024	Straightening and cutting machine with inserting insulation tube	Zhongshan OMS Trading Co., Ltd		25.91
22 March 2024	Flaring machine	Zhongshan OMS Trading Co., Ltd		7.52
22 March 2024	pancake machine	Zhongshan OMS Trading Co., Ltd		4.18
22 March 2024	capillary tube cutting and beading machine (Saw cutting type)	Zhongshan OMS Trading Co., Ltd		18.38
22 March 2024	T Drill machine for pipe drilling	Zhongshan OMS Trading Co., Ltd		30.84



KRN HVAC PRODUCTS PVT LTD — **INR Lakhs**

Plant & Machinery Breakup

Date of Quotation/ Purchase Order	Description	Supplier Name	Proposed Project I	Proposed Project II
22 March 2024	End forming machine	Zhongshan OMS Trading Co., Ltd		12.00
22 March 2024	End forming machine Horizontal	Zhongshan OMS Trading Co., Ltd		38.21
22 March 2024	End forming machine spinning	Zhongshan OMS Trading Co., Ltd		16.43
22 March 2024	End closing machine	Zhongshan OMS Trading Co., Ltd		15.42
22 March 2024	CNC Tube Bender big	Zhongshan OMS Trading Co., Ltd		88.50
22 March 2024	CNC Tube Bender medium	Zhongshan OMS Trading Co., Ltd		18.88
22 March 2024	CNC Tube Bender small	Zhongshan OMS Trading Co., Ltd		13.38
19 April 2024	Ultrasonic cleaning	Super Sonics		22.69
18 June 2024	T Drill BIG	Neutec Engineering & Technology		92.51
18 June 2024	T Drill MEDIUM	Neutec Engineering & Technology		20.14
22 March 2024	He Leak Testing Chamber 1	Nxtek Yantra Private Limited		108.30
22 March 2024	He Leak Testing Chamber 2	Nxtek Yantra Private Limited		137.75
22 March 2024	He Leak Testing Chamber Sniffer	Nxtek Yantra Private Limited		39.90
22 March 2024	Vacuum Leak Testing	Nxtek Yantra Private Limited		36.04
22 March 2024	Drying Oven Big size (with conveyor)	RDR Taichi Pvt Ltd		60.63
22 March 2024	Drying Oven Big size (Vertical)	RDR Taichi Pvt Ltd		50.86
22 March 2024	Drying Oven Small size (Header)	RDR Taichi Pvt Ltd		20.41
22 March 2024	Tube Removing Tool	OMTR S.R.L.		29.12
21 March 2024	Brazing Seazor Lifter	Shree Ganga Engineers		21.50
05 July 2024	Leak Test Tank Big	Global Engineers & Contractors		4.24
05 July 2024	Leak Test Tank Medium	Global Engineers & Contractors		4.20
05 July 2024	Leak Test Tank Small	Global Engineers & Contractors		1.82
03 April 2024	Assy Conveyor line (CCU IDU)	Shree Ganga Engineers		20.37
23 March 2024	Jib Crain	Industrial Equipment Company		36.81
22 March 2024	Spray Paint booth	Shree Sai Associates		15.50
05 July 2024	Rack	Industrial Equipment Company		44.25
23 March 2024	Fork Lift 3.0 Ton	Industrial Equipment Company		13.20
23 March 2024	Fork Lift 2.0 Ton	Industrial Equipment Company		12.80
23 March 2024	Articulated Forklift	Industrial Equipment Company		36.76
23 March 2024	Hand Pallet 2.5 Ton	Industrial Equipment Company		2.15
23 March 2024	Battery operated lifter	Industrial Equipment Company		1.90
23 March 2024	Dock Leveler	Industrial Equipment Company		18.30
05 July 2024	Hand Pallet 3.0 Ton 3 meter	Brightway Engineers		2.85
05 July 2024	Hand Pallet 5.0 Ton	Brightway Engineers		2.30
21 March 2024	Carpenter Saw Cutter	RTech		0.58
05 July 2024	NCT	Amada (India) Pvt Ltd		190.00
05 April 2024	Laser Cutting	Qingdao Dadong Automation Technology Co., Ltd		63.51
17 June 2024	Compressor for laser cutting	Industrial Equipment Company		8.02
05 July 2024	Press Brake small size	Hindustan Hydraulics Pvt Ltd		30.50
05 July 2024	Press Brake big size	Hindustan Hydraulics Pvt Ltd		96.00
22 March 2024	Edge Bending	Zhongshan OMS Trading Co., Ltd		27.99
21 March 2024	CLADE SHEET CUTTING Machine	Hertz Controls (India) Pvt. Ltd.		13.25
20 March 2024	Cooling Tower	Composite Aqua Systems & Equipments Pvt. Ltd.		1.64
21 March 2024	Fin Forming machine	YHM(Wuxi)Foreign Trade Co.,Ltd.		89.42
20 March 2024	Leak Detactor	A-S Marketing		1.92
21 March 2024	Vacuum Furnace	HHV Thermal Technologies Pvt. Ltd.		380.00
22 March 2024	SS Brazing Fixture	Wuxi Yongheng Aluminium Industry Co., Ltd.		6.86
21 March 2024	Ultrasonic Cleaning	Life - Care Equipments Pvt. Ltd.		21.85
23 March 2024	SCROLL CHILLER - 50 TONS	Nu-Vu Conair Private Limited		41.82
20 March 2024	3 Tig welding -Al	Rahul Enterprises		10.50
20 March 2024	2 Mig welding- AL	Rahul Enterprises		3.68
23 March 2024	Radial drilling machine	Associated Technocrats Pvt Ltd		4.30
23 March 2024	Lathe	Associated Technocrats Pvt Ltd		9.50
23 March 2024	Milling	Associated Technocrats Pvt Ltd		4.83
05 July 2024	Band saw	ITL Industries Limited		1.32
17 June 2024	Low Air Compressor Fix Speed	Industrial Equipment Company		18.52
17 June 2024	Low Air Compressor VFD	Industrial Equipment Company		21.20
21 March 2024	High Air Compressor	Shakti Pneumatics		12.88
21 March 2024	Heatless air dryer	Sonitech India Private Limited		8.80
21 March 2024	Air receiver 500 ltr	Sonitech India Private Limited		6.40
23 March 2024	RO Plant	Shante Engineers		14.63
23 March 2024	DM Plant	Shante Engineers		8.66
05 July 2024	Coil Straightning & Sliting	Global Engineers & Contractors		40.00
05 July 2024	BR Machine	Global Engineers & Contractors		25.00
21 March 2024	Oven	RDR Taichi Pvt Ltd		40.00



KRN HVAC PRODUCTS PVT LTD **INR Lakhs**

Plant & Machinery Breakup

Date of Quotation/ Purchase Order	Description	Supplier Name	Proposed Project I	Proposed Project II
05 July 2024	Hi Mill	Wuxi DLS Rolling Mill Manufacture Co., Ltd		653.94
05 July 2024	Hi CRM	Wuxi DLS Rolling Mill Manufacture Co., Ltd		348.85
05 July 2024	In Machine	Global Engineers & Contractors		45.00
21 March 2024	Powder Coating	RDR Taichi Pvt Ltd		300.00
24 March 2024	Design, Supply, Installation, testing and Commissioning of 8 MWp Solar On-grid System with Mono Cut Cells PV Modules - Rofftop Mounted as per BOM	Smart Roof Solar Solutions Pvt Ltd		2,640.00
	Total		**627.12**	**9,417.42**
	Add:- GST @ 18%		112.88	1,219.94
	*Add:- GST @ 13.80%		-	364.32
	Total		740.01	11,001.68

KRN HVAC PRODUCTS PVT LTD — INR Lakhs

Balance Sheet

Year ending 31st March -->	2023-24 Actual	2024-25 Proj	2025-26 Proj	2026-27 Proj	2027-28 Proj	2028-29 Proj
Shareholder's Fund						
Equity Share Capital	500.00	24,746.10	24,746.10	24,746.10	24,746.10	24,746.10
Reserve & Surplus	(49.51)	431.01	3,840.02	10,801.28	20,185.15	34,033.95
	450.49	**25,177.11**	**28,586.12**	**35,547.38**	**44,931.25**	**58,780.05**
Non Current / Finance Liabilities						
Total Long Term Loans						
Long Term Lease Liabilities	1,636.05	545.33	-	-	-	-
Long Term Provision	-	-	-	-	-	-
Unsecured Loans	3,659.43	4,522.97	4,522.97	3,022.97	-	-
Defferred Tax Liability	3.62	-	31.47	-	-	-
	5,299.10	**5,068.30**	**4,554.44**	**3,022.97**	**-**	**-**
Current Finance Liabilities						
Short Term Lease Liabilities	1,090.72	1,090.72	545.33			
Current Liabilities						
Sundry Creditors	97.69	904.87	6,285.50	8,066.94	8,615.20	6,550.81
Other Liabilities	19.55	292.76	512.34	563.57	619.93	681.92
	117.24	**1,197.63**	**6,797.84**	**8,630.51**	**9,235.13**	**7,232.73**
Total -->	**6,957.55**	**32,533.76**	**40,483.73**	**47,200.86**	**54,166.38**	**66,012.78**
Property Plant & Equipment	2,487.02	2,423.66	23,216.30	23,283.49	20,423.28	17,563.07
CWIP	393.85	23,652.85	-			
ROU	2,987.63	2,987.63	2,987.63	-	-	-
Non - Current Assets						
Investment	15.50	15.50	15.50	15.50	15.50	15.50
Non C.A./Deposit	62.80	108.64	108.64	108.64	108.64	108.64
Deferred Tax Assets	-	0.46	-	4.44	99.06	244.54
Current Assets, Loan & Advances						
Inventory	-	872.48	6,731.59	12,105.01	18,763.13	25,238.33
Debtors	30.82	1,235.22	7,056.75	11,053.88	13,506.45	21,504.13
Other current assets	965.18	247.04	308.81	540.41	567.43	1,163.22
Total Current Assets	996.00	2,354.74	14,097.15	23,699.30	32,837.01	47,905.68
Cash & Cash Equivalents	14.74	990.28	58.51	89.49	682.89	175.35
Total -->	**6,957.55**	**32,533.76**	**40,483.73**	**47,200.86**	**54,166.38**	**66,012.78**

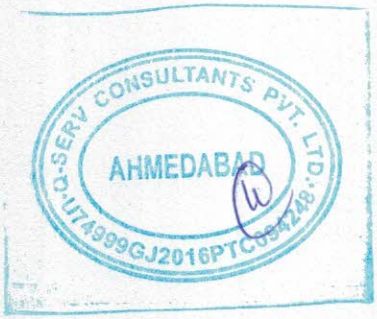
KRN HVAC PRODUCTS PVT LTD — INR Lakhs

Deferred Tax Assets / Liabilities	2023-24 Actual	2024-25 Proj	2025-26 Proj	2026-27 Proj	2027-28 Proj	2028-29 Proj
Depreciation As per Companies Act 2013	7.13	149.39	2,860.21	2,860.21	2,860.21	2,860.21
Depreciation As per Income Tax Act 1961	29.22	125.62	3,046.27	2,650.97	2,308.82	2,012.42
Other Expe	(1.00)	-	-			
Difference	21.09	(23.77)	186.06	(209.24)	(551.39)	(847.79)
Rate of Tax	17.16%	17.16%	17.16%	17.16%	17.16%	17.16%
Provision of DTL/(DTA)	**3.62**	**(4.08)**	**31.93**	**(35.91)**	**(94.62)**	**(145.48)**

KRN HVAC PRODUCTS PVT LTD INR Lakhs

Profit & Loss

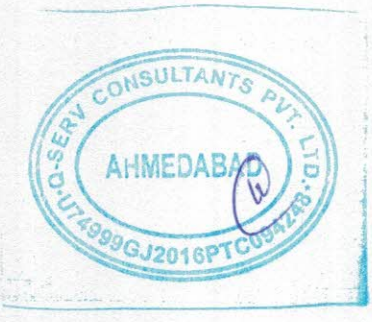
Particulars	2023-24 Actual	2024-25 Projected	2025-26 Projected	2026-27 Projected	2027-28 Projected	2028-29 Projected
Revenue From Operations						
Sales	23.62	5,929.07	42,340.53	66,323.29	81,038.72	103,219.85
Other Income	*9.39*					
Total Revenue	**33.01**	**5,929.07**	**42,340.53**	**66,323.29**	**81,038.72**	**103,219.85**
Manufacturing Expenses	49.06	5,155.98	35,504.12	54,474.80	65,809.72	82,510.59
(Increase)/Decrease in FG	-	(221.58)	(1,343.14)	(797.14)	(510.62)	(779.55)
(Increase)/Decrease in WIP	-	(123.79)	(771.37)	(1,016.01)	(835.62)	(668.03)
Depreciation /Amortisation	7.13	149.39	2,860.21	2,860.21	2,860.21	2,860.21
Total Costs	**56.19**	**4,960.00**	**36,249.82**	**55,521.86**	**67,323.69**	**83,923.22**
Gross Profit	**(23.18)**	**969.07**	**6,090.71**	**10,801.43**	**13,715.03**	**19,296.63**
% of Revenue	*-70.2%*	*16.3%*	*14.4%*	*16.3%*	*16.9%*	*18.7%*
Preliminary Exps. w/o	-	-	-	-	-	-
EBIT	**(23.18)**	**969.07**	**6,090.71**	**10,801.43**	**13,715.03**	**19,296.63**
% of Revenue	*-70.2%*	*16.3%*	*14.4%*	*16.3%*	*16.9%*	*18.7%*
Admin, Travelling, etc.	22.71	118.58	635.11	994.85	1,215.58	1,548.30
Selling & Distribution Expense	-	88.94	423.41	663.23	810.39	1,032.20
Finance Cost	-	-	814.13	724.13	362.76	-
Interest Expense (Lease Liability)	-	197.00	104.29	17.38	-	-
Total of Other Expenses	**22.71**	**404.52**	**1,976.94**	**2,399.59**	**2,388.73**	**2,580.50**
EBT - operating	**(45.89)**	**564.55**	**4,113.77**	**8,401.84**	**11,326.30**	**16,716.13**
% of Revenue	*-139.0%*	*9.5%*	*9.7%*	*12.7%*	*14.0%*	*16.2%*
Other - Non Operating Income/Expenses :-						
Interest on Investment		*1.40*	*1.40*	*1.40*	*1.40*	*1.40*
Income Tax Expenses :-						
Deferred Tax (Exp)/Income	(3.62)	4.08	(31.93)	35.91	94.62	145.48
Provision for Taxation	-	(89.52)	(674.22)	(1,477.90)	(2,038.45)	(3,014.21)
EAT	**(49.51)**	**480.51**	**3,409.02**	**6,961.25**	**9,383.87**	**13,848.80**
% of Revenue	*-150.0%*	*8.1%*	*8.1%*	*10.5%*	*11.6%*	*13.4%*
Cash Profit (Including Other Income)	**(42.38)**	**629.90**	**6,269.23**	**9,821.46**	**12,244.08**	**16,709.01**
% of Revenue	*-128.4%*	*10.6%*	*14.8%*	*14.8%*	*15.1%*	*16.2%*



KRN HVAC PRODUCTS PVT LTD INR Lakhs

Statement of Sources and Disposition of Funds

Particulars	2023-24 Actual	2024-25 Proj	2025-26 Proj	2026-27 Proj	2027-28 Proj	2028-29 Proj
Sources of Funds						
EBIT	(23.18)	969.07	6,090.71	10,801.43	13,715.03	19,296.63
Interest on Investment	-	1.40	1.40	1.40	1.40	1.40
Addition to Capital	500.00	24,246.10	-	-	-	-
Depriciation & Amortisation	7.13	149.39	2,860.21	2,860.21	2,860.21	2,860.21
Decrease in ROU		-	-	2,987.63	-	-
Increase In Long/Short Term Lease Liabilities	2,726.76	-	-	-	-	
Increase In Un-Secured Loan	3,659.43	-	-	-	-	-
Decrease in Non Current Assets	-					
Increase in Current Liabilities	117.23	1,080.42	5,600.18	1,832.69	604.62	(2,002.40)
Total Sources of Funds -->	**6,987.37**	**26,446.38**	**14,552.50**	**18,483.36**	**17,181.26**	**20,155.84**
Disposition of Funds						
Preliminary & Pre-operative Expense	-	-	-	-	-	-
Increase/(Decrease)in Capital Work In Progress	393.85	23,259.00	(23,652.85)	-	-	-
Increase in ROU	2,987.63					
Increase in Property Plant & Equipments	2,494.15	86.03	23,652.85	2,927.40	-	-
Decrease In Long/Short Term Lease Liabilities		1,090.72	1,090.72	545.33	-	-
Increase in Current Assets	995.99	1,358.74	11,742.39	9,602.16	9,137.71	15,068.67
Increase in Investment/Deposit	78.30	45.84	-	-	-	-
Decrease in Long Term Liabilities						
Decrease in Unsecured Loan	-	(863.54)	-	1,500.00	3,022.97	-
Finance, Admin and S&D Exp	22.71	404.52	1,976.94	2,399.59	2,388.73	2,580.50
Tax on Profit	-	89.52	674.22	1,477.90	2,038.45	3,014.21
Total Disposition of Funds -->	**6,972.63**	**25,470.83**	**15,484.27**	**18,452.38**	**16,587.86**	**20,663.38**
Opening Balance	-	14.74	990.28	58.51	89.49	682.89
Net Surplus/(Deficit)	14.74	975.54	(931.77)	30.98	593.40	(507.54)
Closing Balance	**14.74**	**990.28**	**58.51**	**89.49**	**682.89**	**175.35**



KRN HVAC PRODUCTS PVT LTD

General Assumptions

1	Model is based on Annual time periods	
2	Duration of the model is 6 years	
3	Currency	INR
4	Currency Scale	100,000 INR Lacs

Business Assumptions

1	**Time Line**					
	Proposed Project -II Start Month	Apr-25				
2	**Year**	**2024-25**	**2025-26**	**2026-27**	**2027-28**	**2028-29**
	Working Days	300	300	300	300	300
	Operational Hours	22	22	22	22	22
	No of Shifts Per Day	3	3	3	3	3

Financial Assumptions

1 Revenue Assumptions

Particulars	**2024-25**	**2025-26**	**2026-27**	**2027-28**	**2028-29**
Rate per (Nos/Unit)					
Fin & Tube Type Heat Exchanger Units, Tubings & Sheet Metal Parts	18,973.09	19,542.28	20,128.55	20,732.41	21,147.06
% of Change in every year	3.00%	3.00%	3.00%	3.00%	2.00%
HVAC Components (Piping, U bend & I-Kit) & Sheet Metal Components	53.19	54.78	56.43	58.12	59.28
% of Change in every year	3.00%	3.00%	3.00%	3.00%	2.00%
Bar & Plate Heat Exchanger and Cooling Unit with Blower & Motor	-	450,000	463,500	477,405	486,953
% of Change in every year	0.00%	0.00%	3.00%	3.00%	2.00%
Roll Bond Evaporator	-	485	500	515	525
% of Change in every year	0.00%	0.00%	3.00%	3.00%	2.00%

KRN HVAC PRODUCTS PVT LTD

2 Operating Expenses

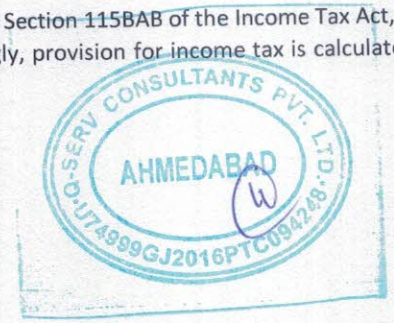
	Particulars	2024-25	2025-26	2026-27	2027-28	2028-29
A	**Manufacturing Expenses**					
	Raw Material Consumed	4,216.87	29,291.64	46,991.87	57,354.96	72,685.85
	Total Raw Material Cost	**4,216.87**	**29,291.64**	**46,991.87**	**57,354.96**	**72,685.85**
	Consumable Cost	126.51	878.75	1,409.76	1,720.65	2,180.58
	Utilities :-					
	Power (1.5% of Turnover)	93.38	700.21	1,206.50	1,621.62	2,272.01
	Employees Cost	691.13	4,604.72	4,834.96	5,076.71	5,330.54
	Factory Overhead :-					
	Repairs & Maintenace	4.50	4.61	6.92	10.38	15.57
	Insurance (0.1% of FA)	23.59	24.18	24.79	25.41	26.04
	Misc.Factory Ovehd.	-	-	-	-	-
	Total Manufacturing Expenses	**5,155.98**	**35,504.12**	**54,474.80**	**65,809.72**	**82,510.59**
B	**Depreciation as per Books**	149.39	2,860.21	2,860.21	2,860.21	2,860.21
C	**(Increase)/Decrease in WIP**					
	Opening Stock					
	WIP	-	123.79	895.17	1,911.17	2,746.80
	Less: Closing Stock					
	WIP	123.79	895.17	1,911.17	2,746.80	3,414.83
	Total	**(123.79)**	**(771.37)**	**(1,016.01)**	**(835.62)**	**(668.03)**
D	**(Increase)/Decrease in Finished Goods**					
	Opening Stock					
	Finished Goods	-	221.58	1,564.72	2,361.86	2,872.48
	Less: Closing Stock					
	Finished Goods	221.58	1,564.72	2,361.86	2,872.48	3,652.03
	Total	**(221.58)**	**(1,343.14)**	**(797.14)**	**(510.62)**	**(779.55)**
E	**Admin, Travelling, etc.**					
	Annual Exp	118.58	635.11	994.85	1215.58	1548.30
	Total	**118.58**	**635.11**	**994.85**	**1,215.58**	**1,548.30**
F	**Selling & Distribution Expense**					
	Annual Exp	88.94	423.41	663.23	810.39	1032.20
	Total	**88.94**	**423.41**	**663.23**	**810.39**	**1,032.20**

3 Income Tax rates

Basic Tax Rate	15.0%
Surcharge @10%	1.5%
Education Cess @4%	0.7%
Tax Rate	**17.16%**

Note :-

It is assumed that the Company has elected to exercise the option permitted under Section 115BAB of the Income Tax Act, 1961 as introduced by the the Taxation Laws (Amendment) Ordinance, 2019, Accordingly, provision for income tax is calculated as per section 115BAB.



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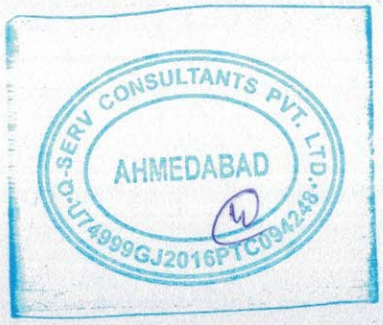
KRN HVAC PRODUCTS PVT LTD

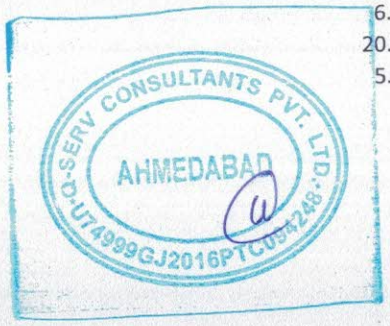
Other Cost Details

WAGES : - Proposed Phase I	No.	Cost (Per Year)	2024-25	2025-26	2026-27	2027-28	2028-29
Supervisor- Prodn.	2.00	6.00	12.60	13.23	13.89	14.59	15.32
Plant Operators (All Prodn.)	5.00	10.00	52.50	55.13	57.88	60.78	63.81
Quality Supervisor	2.00	6.00	12.60	13.23	13.89	14.59	15.32
Quality Inspector	2.00	4.00	8.40	8.82	9.26	9.72	10.21
Security Supervisor	1.00	3.60	3.78	3.97	4.17	4.38	4.59
Security Guard	2.00	3.00	6.30	6.62	6.95	7.29	7.66
Asst. Manager - HR/Admin	1.00	6.00	6.30	6.62	6.95	7.29	7.66
Stores Exe.	1.00	3.00	3.15	3.31	3.47	3.65	3.83
Loading Labour	2.00	3.00	6.30	6.62	6.95	7.29	7.66
Peons	2.00	1.20	2.52	2.65	2.78	2.92	3.06
Sweeper/ Cleaner	4.00	3.00	12.60	13.23	13.89	14.59	15.32
Electrician	1.00	3.00	3.15	3.31	3.47	3.65	3.83
Maintenance Eng.	2.00	3.60	7.56	7.94	8.33	8.75	9.19
Manager- PE & Maint	1.00	7.00	7.35	7.72	8.10	8.51	8.93
Manager- Prodn.	1.00	7.00	7.35	7.72	8.10	8.51	8.93
Manager- Quality	1.00	7.00	7.35	7.72	8.10	8.51	8.93
Manager- HR/Admin	1.00	7.00	7.35	7.72	8.10	8.51	8.93
Dy Manager -Accounts	1.00	7.00	7.35	7.72	8.10	8.51	8.93
Sr.Engineer - Purchase	1.00	6.00	6.30	6.62	6.95	7.29	7.66
Driver	2.00	3.00	6.30	6.62	6.95	7.29	7.66
Gardner	1.00	3.00	3.15	3.31	3.47	3.65	3.83
Canteen Staff	4.00	3.00	12.60	13.23	13.89	14.59	15.32
			202.86	**213.00**	**223.65**	**234.84**	**246.58**



Other Cost Details

WAGES : - Proposed Phase II	No.	Cost (Per Year)	2024-25	2025-26	2026-27	2027-28	2028-29
Manager-Prodn.	10.00	12.00	126.00	132.30	138.92	145.86	153.15
Manager-Quality	10.00	12.00	126.00	132.30	138.92	145.86	153.15
Manger PE / Maint	10.00	12.00	126.00	132.30	138.92	145.86	153.15
Manager- Stores	10.00	7.50	78.75	82.69	86.82	91.16	95.72
Manager- Purchase	10.00	8.00	84.00	88.20	92.61	97.24	102.10
Manager- SCM	10.00	8.00	84.00	88.20	92.61	97.24	102.10
Manager D/D	10.00	10.50	110.25	115.76	121.55	127.63	134.01
Manager Accounts	5.00	9.60	50.40	52.92	55.57	58.34	61.26
Manager- HR/Admin/IR	5.00	10.00	52.50	55.13	57.88	60.78	63.81
Manager- EHS	5.00	10.00	52.50	55.13	57.88	60.78	63.81
Officer Safety & Welfare	10.00	6.00	63.00	66.15	69.46	72.93	76.58
Sr. Executive /Exe- EHS & Safety	4.00	6.80	28.56	29.99	31.49	33.06	34.71
Sr. Engineer/ Eng. - Prodn.	20.00	38.00	798.00	837.90	879.80	923.78	969.97
Sr. Engineer/Engineer - Quality	10.00	20.00	210.00	220.50	231.53	243.10	255.26
Sr. Engineer/ Engineer - PE/Maint.	10.00	15.00	157.50	165.38	173.64	182.33	191.44
Sr. Executive/Executive - Stores	3.00	7.20	22.68	23.81	25.00	26.25	27.57
Sr. Executive/ Exe. - Purchase	2.00	8.40	17.64	18.52	19.45	20.42	21.44
Sr. Executive/Exe. - SCM	2.00	8.40	17.64	18.52	19.45	20.42	21.44
Sr. Engineer /Eng- D/D	4.00	7.50	31.50	33.08	34.73	36.47	38.29
Sr. Executive /Exe. Accounts	2.00	10.40	21.84	22.93	24.08	25.28	26.55
Sr. Executive/ Exe.- HR/Admin	4.00	12.00	50.40	52.92	55.57	58.34	61.26
Security officer	2.00	4.56	9.58	10.05	10.56	11.09	11.64
Security Superevisor	4.00	3.60	15.12	15.88	16.67	17.50	18.38
Security Guard	6.00	3.00	18.90	19.85	20.84	21.88	22.97
Prodn. Operators	20.00	15.00	315.00	330.75	347.29	364.65	382.88
Quality Inspector	5.00	12.00	63.00	66.15	69.46	72.93	76.58

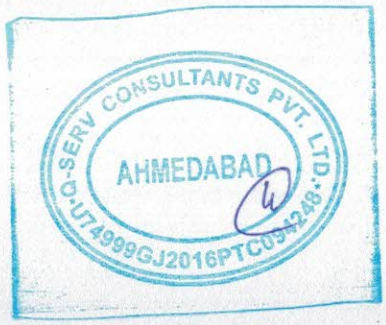


Other Cost Details

Maint. ITI , Fitter, Electrician, Tool & Helper / ETP & S	20.00	12.00	252.00	264.60	277.83	291.72	306.31
Loading Labour	6.00	3.00	18.90	19.85	20.84	21.88	22.97
Peons / Canteen Staff	6.00	3.00	18.90	19.85	20.84	21.88	22.97
Sweeper / Cleaner	15.00	8.00	126.00	132.30	138.92	145.86	153.15
Hotriculture Gardner	6.00	3.00	18.90	19.85	20.84	21.88	22.97
Driver	10.00	4.50	47.25	49.61	52.09	54.70	57.43
Workman	5.00	10.00	52.50	55.13	57.88	60.78	63.81
Supervisor	11.00	6.00	69.30	72.77	76.40	80.22	84.23
Manager- Prodn.	5.00	8.00	42.00	44.10	46.31	48.62	51.05
Manager- QC & QA	10.00	10.00	105.00	110.25	115.76	121.55	127.63
Manager- Maint	8.00	10.00	84.00	88.20	92.61	97.24	102.10
Manager- MKT	3.00	5.00	15.75	16.54	17.36	18.23	19.14
Sr. Engineer/Engineer -D&D	3.00	5.30	16.70	17.53	18.41	19.33	20.29
Sr. Engineer/Engineer -QC & QA	2.00	5.50	11.55	12.13	12.73	13.37	14.04
Service Engineer	4.00	10.00	42.00	44.10	46.31	48.62	51.05
Executive/ Engineer - Sales	25.00	20.00	525.00	551.25	578.81	607.75	638.14
Manager- Testing	1.00	1.00	1.05	1.10	1.16	1.22	1.28
Engineer - Testing	1.00	4.80	5.04	5.29	5.56	5.83	6.13
Total			**4,182.59**	**4,391.72**	**4,611.31**	**4,841.87**	**5,083.97**
Grand Total			**4,385.45**	**4,604.72**	**4,834.96**	**5,076.71**	**5,330.54**

Note :-

1. Wages cost is increasing by 5 % Every Year



KRN HVAC PRODUCTS PVT LTD

Revenue and Raw Material Cost

Particulars	2024-25 Proj	2025-26 Proj	2026-27 Proj	2027-28 Proj	2028-29 Proj
Installed Capacity (Nos. Per annum)					
Fin & Tube Type Heat Exchanger Units, Tubings & Sheet Metal Parts	106,799	429,609	429,609	429,609	429,609
HVAC Components (Piping, U bend & I-Kit) & Sheet Metal Components	-	23,817,916	23,817,916	23,817,916	23,817,916
Bar & Plate Heat Exchanger and Cooling Unit with Blower & Motor*	-	3,168	3,168	3,168	3,168
Roll Bond Evaporator*	-	2,904,000	2,904,000	2,904,000	2,904,000
Total Days of Operation	300	300	300	300	300
Number of Working Hours	22	22	22	22	22
Total Capacity Utilization (%)					
Fin & Tube Type Heat Exchanger Units, Tubings & Sheet Metal Parts	30.00%	30.00%	50.00%	60.00%	75.00%
HVAC Components (Piping, U bend & I-Kit) & Sheet Metal	0.00%	40.00%	70.00%	70.00%	75.00%
Bar & Plate Heat Exchanger and Cooling Unit with Blower & Motor*	0.00%	40.00%	40.00%	50.00%	75.00%
Roll Bond Evaporator*	0.00%	50.00%	50.00%	60.00%	75.00%
Production (in Nos.)					
Fin & Tube Type Heat Exchanger Units, Tubings & Sheet Metal Parts	32,040	128,883	214,805	257,765	322,207
HVAC Components (Piping, U bend & I-Kit) & Sheet Metal Components	-	9,527,166	16,672,541	16,672,541	17,863,437
Bar & Plate Heat Exchanger and Cooling Unit with Blower & Motor*	-	1,267	1,267	1,584	2,376
Roll Bond Evaporator*	-	1,452,000	1,452,000	1,742,400	2,178,000
Sales (in Nos.)					
Fin & Tube Type Heat Exchanger Units, Tubings & Sheet Metal Parts	30,488	124,041	210,509	255,617	318,985
HVAC Components (Piping, U bend & I-Kit) & Sheet Metal Components	-	9,050,808	16,315,272	16,672,541	17,803,892
Bar & Plate Heat Exchanger and Cooling Unit with Blower & Motor*	-	1,204	1,267	1,568	2,336
Roll Bond Evaporator*	-	1,379,400	1,452,000	1,727,880	2,156,220
Raw Material Cost (in Lacs Rs.)					
Copper Tube, Aluminiium Foils, SS & GI Sheets	4,216.87	21,899.13	38,684.03	47,014.42	58,507.98
Aluminium Sheet, Electrical items etc	-	2,709.45	3,230.41	4,117.14	6,256.37
Aluminium Sheet for Bond Roll Evaporator	-	4,683.06	5,077.43	6,223.40	7,921.50
Total Raw Material Cost	**4,216.87**	**29,291.64**	**46,991.87**	**57,354.96**	**72,685.85**

KRN HVAC PRODUCTS PVT LTD

Revenue and Raw Material Cost

Particulars	2024-25 Proj	2025-26 Proj	2026-27 Proj	2027-28 Proj	2028-29 Proj
Sales (in Lacs Rs.)					
Fin & Tube Type Heat Exchanger Units, Tubings & Sheet Metal Parts	5,784.46	24,240.39	42,372.31	52,995.65	67,455.89
HVAC Components (Piping, U bend & I-Kit) & Sheet Metal Components	-	4,958.45	9,206.40	9,690.24	10,554.75
Bar & Plate Heat Exchanger and Cooling Unit with Blower & Motor*	-	5,418.90	5,873.47	7,485.71	11,375.22
Roll Bond Evaporator*	-	6,690.09	7,253.47	8,890.57	11,316.43
Wastage Sales	144.61	1,032.70	1,617.64	1,976.55	2,517.56
Trading Sales					
Sales of Services					
Total Projected Sales	**5,929.07**	**42,340.53**	**66,323.29**	**81,038.72**	**103,219.85**
Consumable Cost (in Lacs Rs.)					
Consumables (1% of Total RM Cost)	42.17	292.92	469.92	573.55	726.86
Accessories / Fittings (2% of Total RM Cost)	84.34	585.83	939.84	1,147.10	1,453.72
Total Raw Material Cost	**126.51**	**878.75**	**1,409.76**	**1,720.65**	**2,180.58**

KRN HVAC PRODUCTS PVT LTD

Details of Closing Stock

Particulars	2024-25 Proj	2025-26 Proj	2026-27 Proj	2027-28 Proj	2028-29 Proj
Finished Goods (in Nos)					
Fin & Tube Type Heat Exchanger Units, Tubings & Sheet Metal Parts	1,602	6,444	10,740	12,888	16,110
HVAC Components (Piping, U bend & I-Kit) & Sheet Metal Components	-	476,358	833,627	833,627	893,172
Bar & Plate Heat Exchanger and Cooling Unit with Blower & Motor*	-	63	63	79	119
Roll Bond Evaporator*	-	72,600	72,600	87,120	108,900
Finished Goods (in Lacs Rs.)					
Fin & Tube Type Heat Exchanger Units, Tubings & Sheet Metal Parts	221.58	944.48	1,621.35	2,003.99	2,555.09
HVAC Components (Piping, U bend & I-Kit) & Sheet Metal Components	-	143.53	282.24	290.71	291.23
Bar & Plate Heat Exchanger and Cooling Unit with Blower & Motor*	-	212.63	204.40	264.00	405.63
Roll Bond Evaporator*	-	264.08	253.87	313.78	400.08
Total--->	**221.58**	**1,564.72**	**2,361.86**	**2,872.48**	**3,652.03**
Period of Holding in Months	**0.50**	**0.50**	**0.50**	**0.50**	**0.50**
Raw Material (In Kgs/Nos)					
Copper Tube, Aluminiium Foils, SS & GI Sheets	3,268.00	19,226.00	37,683.00	61,138.00	81,374.00
Aluminium Sheet, Electrical items etc	-	195.00	258.00	439.00	714.00
Aluminium Sheet for Bond Roll Evaporator	-	293,362.00	352,917.00	577,460.00	786,122.00
Raw Material Cost (in lacs Rs.)					
Copper Tube, Aluminiium Foils, SS & GI Sheets	527.11	3,193.62	6,447.34	10,774.14	14,627.00
Aluminium Sheet, Electrical items etc	-	395.13	538.40	943.51	1,564.09
Aluminium Sheet for Bond Roll Evaporator	-	682.95	846.24	1,426.20	1,980.38
Total--->	**527.11**	**4,271.70**	**7,831.98**	**13,143.85**	**18,171.47**
Period of Holding in Months	**1.75**	**1.75**	**2.00**	**2.75**	**3.00**
Work In Process/WIP (in lacs Rs.)					
Fin & Tube Type Heat Exchanger Units, Tubings &	123.79	716.13	1,528.93	2,197.44	2,731.87
HVAC Components (Piping, U bend & I-Kit) & Sheet Metal Components	-	67.14	143.34	206.01	256.11
Bar & Plate Heat Exchanger and Cooling Unit with Blower & Motor*	-	67.14	143.34	206.01	256.11
Roll Bond Evaporator*	-	111.90	238.90	343.35	426.85
Total--->	**123.79**	**895.17**	**1,911.17**	**2,746.80**	**3,414.83**
Period of Holding in Days	**7**	**7**	**10**	**12**	**12**

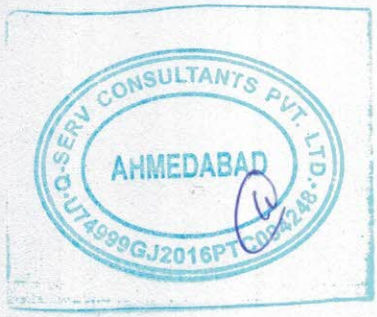
Depreciation Calculation (As per Companies Act, 2013)

2023-24										
			Gross Block			Depreciation			
Sr. No.	Descriptions Of Assets	Rate of Depre	Opening Balance	Additions	Closing Balance	Opening Balance	Current Year Depreciation	Closing Balance	Net Block As 31-Mar-24
1	Land (Leasehold)		-	1,659.93	1,659.93	-	-	-	1,659.93
2	Factory Building	4.87%	-	164.82	164.82	-	0.67	0.67	164.15
3	Plant & Machinery	18.10%	-	669.40	669.40	-	6.46	6.46	662.94
4	Misc. Fixed Assets	13.57%	-	-	-	-	-	-	-
	TOTAL		**-**	**2,494.15**	**2,494.15**	**-**	**7.13**	**7.13**	**2,487.02**

2024-25									
			Gross Block			Depreciation			
Sr. No.	Descriptions Of Assets	Rate of Depre	Opening Balance	Additions	Closing Balance	Opening Balance	Current Year Depreciation	Closing Balance	Net Block As 31-Mar-25
1	Factory Land		1,659.93	-	1,659.93	-	4.63	4.63	1,655.30
2	Factory Building	4.87%	164.82	-	164.82	0.67	8.03	8.70	156.12
3	Plant & Machinery	18.10%	669.40	86.03	755.43	6.46	136.73	143.19	612.24
4	Misc. Fixed Assets	13.57%	-	-	-	-	-	-	-
	TOTAL		**2,494.15**	**86.03**	**2,580.18**	**7.13**	**149.39**	**156.52**	**2,423.66**

2025-26									
			Gross Block			Depreciation			
Sr. No.	Descriptions Of Assets	Rate of Depre	Opening Balance	Additions	Closing Balance	Opening Balance	Current Year Depreciation	Closing Balance	Net Block As 31-Mar-26
1	Factory Land		1,659.93	-	1,659.93	4.63	46.34	50.97	1,608.96
2	Factory Building	4.87%	164.82	12,184.85	12,349.67	8.70	601.43	610.13	11,739.54
3	Plant & Machinery	18.10%	755.43	11,468.00	12,223.43	143.19	2,212.44	2,355.63	9,867.80
4	Misc. Fixed Assets	13.57%	-	-	-	-	-	-	-
	TOTAL		**2,580.18**	**23,652.85**	**26,233.03**	**156.52**	**2,860.21**	**3,016.73**	**23,216.30**

2026-27									
			Gross Block			Depreciation			
Sr. No.	Descriptions Of Assets	Rate of Depre	Opening Balance	Additions	Closing Balance	Opening Balance	Current Year Depreciation	Closing Balance	Net Block As 31-Mar-27
1	Factory Land		1,659.93	2,927.40	4,587.33	50.97	46.34	97.31	4,490.02
2	Factory Building	4.87%	12,349.67	-	12,349.67	610.13	601.43	1,211.56	11,138.11
3	Plant & Machinery	18.10%	12,223.43	-	12,223.43	2,355.63	2,212.44	4,568.07	7,655.36
4	Misc. Fixed Assets	13.57%	-	-	-	-	-	-	-
	TOTAL		**26,233.03**	**2,927.40**	**29,160.43**	**3,016.73**	**2,860.21**	**5,876.94**	**23,283.49**



Depreciation Calculation (As per Companies Act, 2013)

2027-28										
			Gross Block			Depreciation			
Sr. No.	Descriptions Of Assets	Rate of Depre	Opening Balance	Additions	Closing Balance	Opening Balance	Current Year Depreciation	Closing Balance	Net Block As 31-Mar-28
1	Factory Land		4,587.33	-	4,587.33	97.31	46.34	143.65	4,443.68
2	Factory Building	4.87%	12,349.67	-	12,349.67	1,211.56	601.43	1,812.99	10,536.68
3	Plant & Machinery	18.10%	12,223.43	-	12,223.43	4,568.07	2,212.44	6,780.51	5,442.92
4	Misc. Fixed Assets	13.57%	-	-	-	-	-	-	-
	TOTAL		**29,160.43**	**-**	**29,160.43**	**5,876.94**	**2,860.21**	**8,737.15**	**20,423.28**

2028-29									
			Gross Block			Depreciation			
Sr. No.	Descriptions Of Assets	Rate of Depre	Opening Balance	Additions	Closing Balance	Opening Balance	Current Year Depreciation	Closing Balance	Net Block As 31-Mar-29
1	Factory Land		4,587.33	-	4,587.33	143.65	46.35	190.00	4,397.34
2	Factory Building	4.87%	12,349.67	-	12,349.67	1,812.99	601.42	2,414.41	9,935.25
3	Plant & Machinery	18.10%	12,223.43	-	12,223.43	6,780.51	2,212.44	8,992.95	3,230.48
4	Misc. Fixed Assets	13.57%	-	-	-	-	-	-	-
	TOTAL		**29,160.43**	**-**	**29,160.43**	**8,737.15**	**2,860.21**	**11,597.36**	**17,563.07**

Depriciation Calculation (As per Income Tax Act, 1961)

2023-24									
Sr. No.	Descriptions Of Assets	Rate of Depre. %	Opening Balance	Additions	Total Balance	Depre.	Additional Depreciation	Total Depreciation	Net Block As
1	Factory Land	-	-	1,659.93	1,659.93	-	-	-	1,659.93
2	Factory Building	10.00%	-	164.82	164.82	4.12	-	4.12	160.70
3	Plant & Machinery	15.00%	-	669.40	669.40	25.10	-	25.10	644.30
	TOTAL		**-**	**2,494.15**	**2,494.15**	**29.22**	**-**	**29.22**	**2,464.93**

2024-25									
Sr. No.	Descriptions Of Assets	Rate of Depre. %	Opening Balance	Additions	Total Balance	Depre.	Additional Depreciation	Total Depreciation	Net Block As
1	Factory Land	-	1,659.93	-	1,659.93	-	-	-	1,659.93
2	Factory Building	10.00%	160.70	-	160.70	16.07	-	16.07	144.63
3	Plant & Machinery	15.00%	644.30	86.03	730.33	109.55	-	109.55	620.78
	TOTAL		**2,464.93**	**86.03**	**2,550.96**	**125.62**	**-**	**125.62**	**2,425.34**

2025-26									
Sr. No.	Descriptions Of Assets	Rate of Depre. %	Opening Balance	Additions	Total Balance	Depre.	Additional Depreciation	Total Depreciation	Net Block
1	Factory Land	-	1,659.93	-	1,659.93	-	-	-	1,659.93
2	Factory Building	10.00%	144.63	12,184.85	12,329.48	1,232.95	-	1,232.95	11,096.53
3	Plant & Machinery	15.00%	620.78	11,468.00	12,088.78	1,813.32	-	1,813.32	10,275.46
	TOTAL		**2,425.34**	**23,652.85**	**26,078.19**	**3,046.27**	**-**	**3,046.27**	**23,031.92**

2026-27									
Sr. No.	Descriptions Of Assets	Rate of Depre. %	Opening Balance	Additions	Total Balance	Depre.	Additional Depreciation	Total Depreciation	Net Block
1	Factory Land	-	1,659.93	2,927.40	4,587.33	-	-	-	4,587.33
2	Factory Building	10.00%	11,096.53	-	11,096.53	1,109.65	-	1,109.65	9,986.88
3	Plant & Machinery	15.00%	10,275.46	-	10,275.46	1,541.32	-	1,541.32	8,734.14
	TOTAL		**23,031.92**	**2,927.40**	**25,959.32**	**2,650.97**	**-**	**2,650.97**	**23,308.35**

2027-28									
Sr. No.	Descriptions Of Assets	Rate of Depre. %	Opening Balance	Additions	Total Balance	Depre.	Additional Depreciation	Total Depreciation	Net Block
1	Factory Land	-	4,587.33	-	4,587.33	-	-	-	4,587.33
2	Factory Building	10.00%	9,986.88	-	9,986.88	998.69	-	998.69	8,988.19
3	Plant & Machinery	15.00%	8,734.14	-	8,734.14	1,310.13	-	1,310.13	7,424.01
	TOTAL		**23,308.35**	**-**	**23,308.35**	**2,308.82**	**-**	**2,308.82**	**20,999.53**

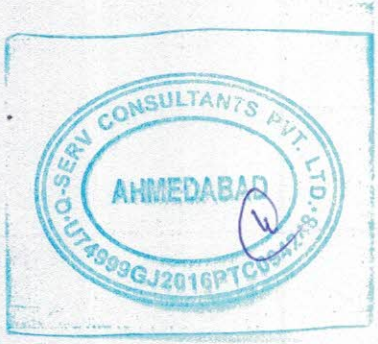
2028-29									
Sr. No.	Descriptions Of Assets	Rate of Depre. %	Opening Balance	Additions	Total Balance	Depre.	Additional Depreciation	Total Depreciation	Net Block
1	Factory Land	-	4,587.33	-	4,587.33	-	-	-	4,587.33
2	Factory Building	10.00%	8,988.19	-	8,988.19	898.82	-	898.82	8,089.37
3	Plant & Machinery	15.00%	7,424.01	-	7,424.01	1,113.60	-	1,113.60	6,310.41
	TOTAL		**20,999.53**	**-**	**20,999.53**	**2,012.42**	**-**	**2,012.42**	**18,987.11**

Calculation Of Income Tax

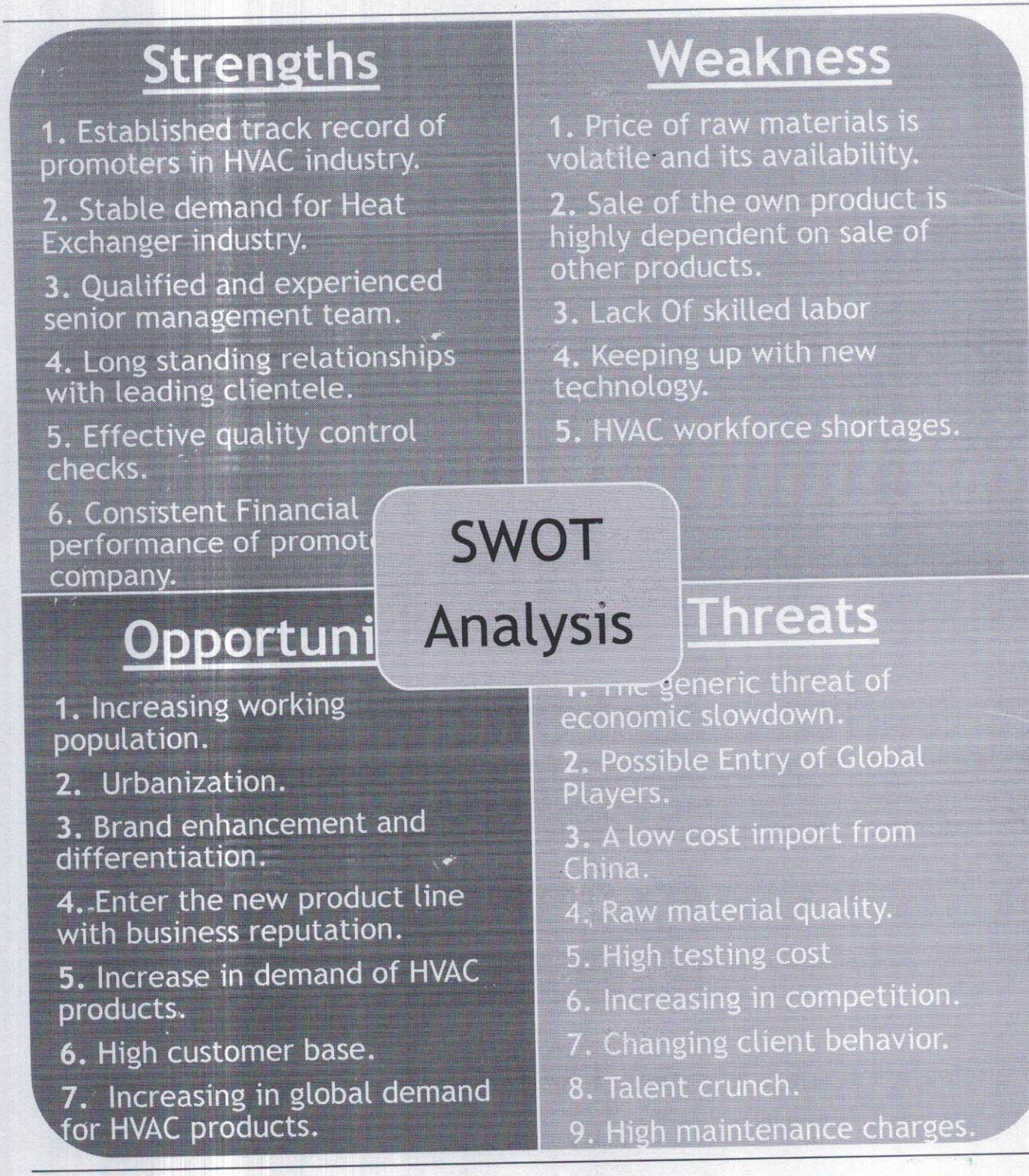
Particulars	2023-24 Actual	2024-25 Proj	2025-26 Proj	2026-27 Proj	2027-28 Proj	2028-29 Proj
Income Tax As Per Normal Provision						
EBT	(45.89)	564.55	4,113.77	8,401.84	11,326.30	16,716.13
Add:						
Interest On Investment	-	1.40	1.40	1.40	1.40	1.40
Other Income	-	-	-	-	-	-
Depriciation as Per Books	7.13	149.39	2,860.21	2,860.21	2,860.21	2,860.21
Interest Expenses on ROU		197.00	104.29	17.38	-	-
Less:						
Depriciation as Per Income Tax Act, 1961	29.22	125.62	3,046.27	2,650.97	2,308.82	2,012.42
Actual Interest Cost		197.09	104.39	17.40		
Gross Total Income	**(67.98)**	**589.63**	**3,929.01**	**8,612.47**	**11,879.09**	**17,565.32**
Set off of Losses	-	**(67.98)**	-	-	-	-
Taxable Income	-	521.65	3,929.01	8,612.47	11,879.09	17,565.32
Income Tax	-	**89.52**	**674.22**	**1,477.90**	**2,038.45**	**3,014.21**

Note :-

It is assumed that the Company has elected to exercise the option permitted under Section 115BAB of the Income Tax Act, 1961 as introduced by the the Taxation Laws (Amendment) Ordinance, 2019, Accordingly, provision for income tax is calculated as per section 115BAB.



CHAPTER 7
SWOT ANALYSIS



CHAPTER 8
RISK ANALYSIS

Q-serv has prepared risk matrix and also commented on mitigation strategy keeping in mind the probable risks that may be faced by the Project.

No.	Risk	Details	Comments	Risk Allocated
A.	**General Risk**			
1	Regulatory policy/ Licensing requirement	Changes in Government policies/ regulatory compliances	The Company shall ensure to adhere to the regulations and compliances. All regulatory requirements should be met	**Moderate**
2	Promoters'/Directors' knowledge of the market	Company is owned & Managed by its Promoters /Directors.	The directors have relevant experience and knowledge in the Manufacturing Heat Exchangers and Refrigeration units.	**Low**
3	Sponsor risk	Infusion of fund is through Promoter Company.	The promoters/Company is to bring funding for the proposed Project.	**High**

No.	Risk	Details	Comments	Risk Allocated
B.	**Risks during Establishment**			
1	Completion risk - Time and Cost Overrun.	Any delay in procurement of Machinery & Land or Construction of Plant may lead to time and cost overrun.	The plant is currently based on the funds from Holding Company. So, the commissioning of expansion is dependent on IPO Listing of holding company, Land acquisition, Machinery procurement and construction activity.	**Moderate**
2	Legal Approvals	Approvals from various government/ statutory bodies	The company has the necessary regulatory/statutory approvals of the existing plant. However, the company should adhere to the regulatory norms for the proposed expansion.	**Moderate**

No.	Risk	Details	Comments	Risk Allocated
C.	**Operational Risk**			
1	Market Risk	Ability to generate the Projected revenue.	The Group should make dynamic marketing strategy.	**Low**
2	Competitive ness	The Company should be competitive in respect of quality and price.	The company must be competitive in respect of the quality specification of the Finished Product.	**Low**
3	Natural Calamities/ Contingencies	Risk involved in loss due to natural calamities/contingencies like fire/theft	To mitigate the risk, Company has to obtain the insurance covering all the contingencies.	**Low**
4	Quality Control	Manufacturing Industry	The company should have a proper Quality checking and control system.	**Moderate**

CHAPTER 9
CONCLUSION

Based on the assumptions considered and information shared by the Company, post understanding the industrial and economic scenarios we conclude:

- The Parent Company is already engaged in the HVAC manufacturing industry, and the Directors possess extensive knowledge in this field. Mr. Santosh Kumar Yadav, the Managing Director, has significant experience in the HVAC industry. The company's established market network will be advantageous for the proposed expansion. It is recommended that the company hires a well-experienced team to ensure successful business operations.

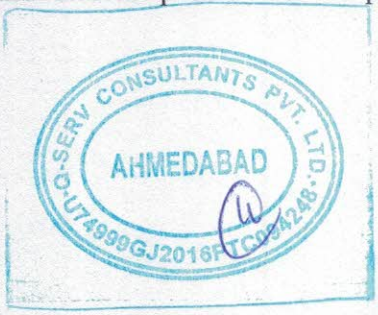
- The funding of the Project Cost (Phase-1 & Phase -2) of Rs. 29,269.77 Lakhs is as under:

(Rs. In Lakhs)

Name of the Facility	Phase - 1	Phase – 2	Total
Share Holder's Fund	**500.00**	**24,246.10**	**24,746.10**
Unsecured Loan From Parent Company & / Or Other	**878.50**	**3,644.47**	**4,522.97**
Total	**1,378.50**	**27,890.57**	**29,269.07**

As the funding of the Project Cost of Phase -2 of Rs. 27,890.57 lakhs is partially based on the IPO of the parent company which should be done as soon as possible so as to avoid any delay in the expansion of unit. However, the company is advised to go for Bank Loan or Finance in case of delay of the IPO to ensure the timely implementation of the Project.

- The company has already secured land in phase -1 and started production of product to sufficiently handle of the plant.



- The proposed expansion project at Kolila Joga involves 71,924 sqm of land, secured through an allotment letter from Rajasthan State Industrial Development & Investment Corporation Ltd (RIICO) dated August 23, 2023, and a standard allotment letter received on September 20, 2023. The total land cost includes a 25% payment made at the time of allotment, with the remaining 75% (Rs. 2,999.23 lakhs) scheduled to be paid in 11 quarterly installments. Each installment will cover an equal principal amount of Rs. 272.66 lakhs, with an interest rate of 8.50%, with repayments commencing on January 18, 2024.

- Securing the land with quarterly instalment of payment is a critical. However, the quarterly payment obligations are crucial for the company and require careful management of funding arrangements. The company must arrange for timely funding to meet these quarterly payments, which will be dependent on the investment from the holding company. Ensuring this financial support is essential for the successful continuation of the project and maintaining financial stability.

- The civil work for Project-2 has commenced and is currently in progress. The successful completion of this phase is critically dependent on timely funding. The company must ensure that adequate funds are arranged to support the ongoing construction and meet project deadlines. The project's success hinges on effective financial management and the availability of funds to sustain construction activities and complete the project as planned.

- The Major Machinery related to Phase -1 has been acquired by the Company.

- The proposed factory site is well connected to the major modes of transport.

- Company may not face any problem in sourcing of technical and non-technical manpower.

- Company would be applying for the process to secure the necessary permissions / approvals / sanctions from the respective authorities.

- Company is advised to have comprehensive insurance policy for the entire project assets under construction and of the factory building and any other assets which may deemed to be crucial / critical to cover unforeseen risks like fire, natural calamities etc.

- It is advised to Management of the company to maintain adequate cash cushion in case any adverse movement in Revenue & Raw Material Cost which may affect the profitability of the project.

- Overall scenario of HVAC industries looks good & promising, however trends that can influence overall industry and accordingly company are briefed as follows: -

  - Economic Growth
  - Change In HVAC Technology
  - Change In Consumer Taste And Preference
  - Change in the Government Policies

- Timely completion of all sanctions and approval – company should be in a position to complete all the sanctions and approvals required for the proposed project.

In view of anticipated demand, experience of directors in same line of business, geographical location of the project, expected debt-service indicators, other operational aspects and risk mitigation suggestions detailed in the report, it may be concluded that the proposed project of M/s. KRN HVAC Products Private Limited is economically and technically feasible & viable subject to achievement of projections and assumptions taken into consideration while preparing the report.

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