ward wizard
Innovations & Mobility Limited

Date: 19th May, 2023 **REF: WIML/BSE/IP /MAY-2023**

To,
Corporate Relations Department
BSE Limited
Phiroze Jeejeebhoy Towers,
Dalal Street, Mumbai-400 001

BSE Scrip Code: 538970
Script ID: WARDINMOBI

Ref: Wardwizard Innovations & Mobility Limited ("Company")

Sub: Investor Presentation

Dear Sir/Madam,

We hereby enclose an Investor Presentation "Q-4 of F.Y. 22-23 – Quarterly Presentation – March 2023."

We request you to take the same on your record.

Thanking you,
For Wardwizard Innovations & Mobility Limited

Bhardwaj Jaya

Digitally signed by Bhardwaj Jaya
DN: c=IN, st=Gujarat, 2.5.4.20=b10e9db179566fb0dd8f475e63d0d87cd40bfe0daa549efce735e4e8d0bb2f00, postalCode=390009, street=Near ST Mary High School , Sussen Tarsali Ring Road , Vadodara , Vadodara, pseudonym=3ff4249215b446c7904c35a1d87b022d, serialNumber=4bf2a3ee350939eaf31017ec102f27a25165b1624618b378fdaa2c56f65318ea8, o=Personal, cn=Bhardwaj Jaya
Date: 2023.05.19 18:20:45 +05'30'

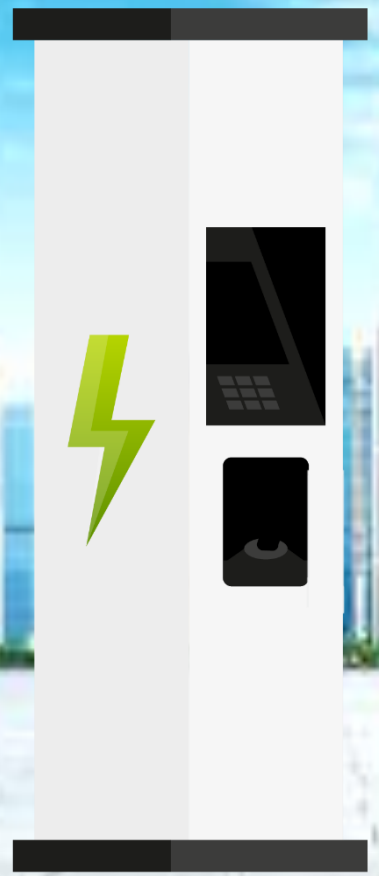
Jaya Ashok Bhardwaj
Company Secretary and Compliance officer

ward wizard
Innovations & Mobility Limited

Joy e-bike | Joy e-rik

Wardwizard Innovations & Mobility Limited

Investor Presentation Q4 FY23



Safe Harbour Statement

This presentation and the accompanying slides (the “Presentation”), which have been prepared by Wardwizard Innovations & Mobility Limited (Wardwizard, The Company) solely for information purposes and do not constitute any offer, recommendation or invitation to purchase or subscribe for any securities, and shall not form the basis or be relied on in connection with any contract or binding commitment what so ever. No offering of securities of the Company will be made except by means of a statutory offering document containing detailed information about the Company.

This Presentation has been prepared by the Company based on information and data which the Company considers reliable, but the Company makes no representation or warranty, express or implied, whatsoever, and no reliance shall be placed on, the truth, accuracy, completeness, fairness and reasonableness of the contents of this Presentation. This Presentation may not be all inclusive and may not contain all of the information that you may consider material. Any liability in respect of the contents of, or any omission from, this Presentation is expressly excluded.

Certain matters discussed in this Presentation may contain statements regarding the Company’s market opportunity and business prospects that are individually and collectively forward-looking statements. Such forward-looking statements are not guarantee of future performance and are subject to known and unknown risks, uncertainties and assumptions that are difficult to predict.

These risks and uncertainties include, but are not limited to, the performance of the Indian economy and of the economies of various international markets, the performance of the industry in India and world-wide, competition, the company’s ability to successfully implement its strategy, the Company’s future levels of growth and expansion, technological implementation, changes and advancements, changes in revenue, income or cash flows, the Company’s market preferences and its exposure to market risks, as well as other risks.

The Company’s actual results, levels of activity, performance or achievements could differ materially and adversely from results expressed in or implied by this Presentation. The Company assumes no obligation to update any forward-looking information contained in this Presentation. Any forward-looking statements and projections made by third parties included in this Presentation are not adopted by the Company and the Company is not responsible for such third party statements and projections.

ward wizard
Innovations & Mobility Limited

Joy e-bike | Joy e-rik

Company Overview

Wardwizard @ Glance

Wardwizard Innovations & Mobility Limited (Wardwizard, The Company) is a prominent manufacturer of Electric Two-wheeler Vehicles in India, operating under the brand name Joy e-bike. The Company has one of the broadest product lines of any EVscooters and motorcycle company

With a focus on sustainable and eco-friendly transportation solutions, The Company is dedicated to producing high-quality electric vehicles that are both affordable and efficient.

Wardwizard is also India's first Electric Vehicle Manufacturer to be listed on the Bombay Stock Exchange (BSE) with the core business of EV Manufacturing.

Through its dedication to sustainable transportation and innovation, Wardwizard is helping to pave the way for a cleaner, greener future in India and beyond.

10+
Models under JOY e-bike

750+
Dealers

25+
Company Owned Retail Outlets

700+
Employees

70,000 Sq Ft
Manufacturing Facility

2 wheeler : Capacity of 1,20,000 units with 1 shift annually
3 wheeler : 2 Conveyer Belt for 1,20,000 units annually

36,500
EV Units Sold in FY23

FY23
Revenue - ₹ 239.29 Cr
EBITDA - ₹ 19.57 Cr
PAT - ₹ 9.47 Cr

Vision

To Empower 55,000 Enterprises For Prosperity

Our Values

Teamwork
Empowerment
Customer Satisfaction
Growth

Our Journey

March 2016 – Inception of EV operations

October 2018 – Joy e bike butterfly, honeybee low speed electric scooter launched

October 2019 – Acquisition of a listed entity

October 2019 – Launched 3 electric scooters

January to October 2019 – New plant with a capacity of 1 Lakh + units per annum (in single shift) inaugurated by Hon'ble Home Minister, Govt of India

October 2019 – Launched Monster Bike

December 2019 – Object and name change procedure of the company done and company renamed as Wardwizard Innovations & Mobility Ltd

January 2021 – Launch of 4 high-performance bike variants of - Joy E Bike

June 2020 – Launched e Monster Bike

November 2021 – New plant introduced automation and increased the production capacity to 2 lakhs per annum in a single shift

Wardwizard as acquired 4 million sqft land along with its Promoters & Promoters' Group for development of an EV ancillary project in Vadodara.

February 2022 – 1st Keynote Event Wardwizard Onlook 2022 we launched virtually, our products Delgo, Wolf+ and Gen Next Nanu+

January 2023 – The company has introduced its presence in new segment i.e. 3 wheelers market with its product Joy E-RIK

Launched 1 more robust high speed electric vehicle named as Mihos and 1 more robust high speed electric bike named as Rockefeller

February 2023 – Joy E-Bike associated with the Dadasaheb Phalke International Film Festival (DPIFF) Awards 2023 as the 'Powered By Partner'.

Organized a Media Test Ride. This one of its kind event was organized at Traction Motodrome, Vadodara

Joy E-Bike was the official EV Partner of the 7th edition of the Global Business Summit (GBS), the flagship event of the Times Group.

March 2023 – Wardwizard commences operations of its in-house Battery Assembly Line, with a capacity of 1 GWh per year

State of the Art Manufacturing Facility



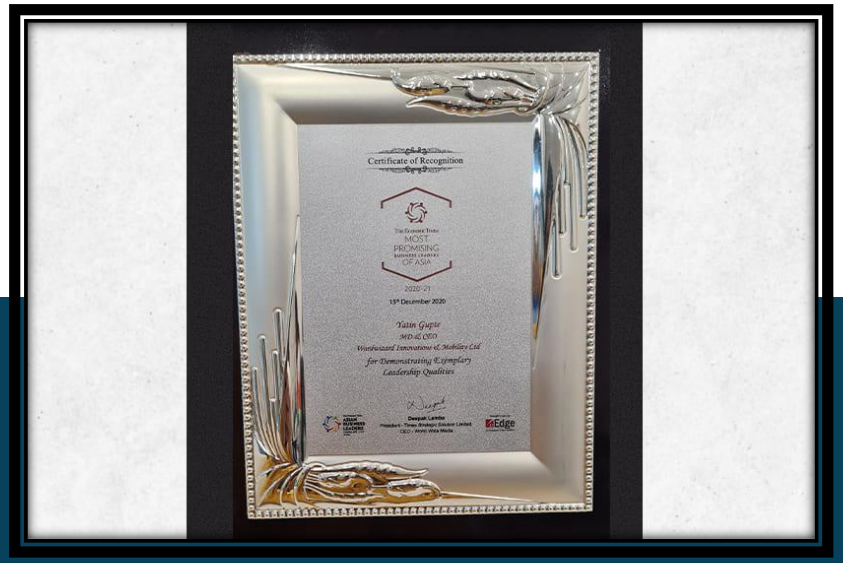





- Located **Vadodara Gujrat**
- Close Proximity To The **Vendors**
- Spread Across **70,000 Sq Ft** for 2 Wheeler
  Spread Across **20,000 Sq Ft** for 3 Wheeler
- **1** Semi-automatic Assembly Lines
- Annual Capacity Single Shift **1,20,000** Units PA for 2 wheeler and 3 wheeler
- A **2** wheeler Is Produced Every **150** Seconds After First Vehicle Is Completed

Awards & Accolades

Best Electric Vehicle Manufacturing CEO - Mr. Yatin Gupte by M & A Global Awards



The Economic Times Most Promising Business Leader Of Asia 2020 -2021

ward wizard
Innovations & Mobility Limited

Joy e-bike | Joy e-rik

Management Overview

Management Team

Yatin Sanjay Gupte
Chairman &
Managing Director

- Mr. Gupte currently serves as Chairman and Managing Director for Wardwizard, and founded and Wardwizard Group in 2016
- He has 15 years of experience working in sales & marketing, business development, client servicing, renewals, and operations (including 11 years of work experience in insurance)
- He has an Honorary Doctorate in Social Service and earned his Master's in Business Administration (M.B.A Exe.) in Insurance & Risk Management from Bhartyiya Shiksha Parisha, Uttar Pradesh

Deepak Doshi
Chief Financial Officer

- Mr. Doshi currently serves as Chief Financial Officer for Wardwizard
- Prior to becoming Chief Financial Officer for Wardwizard, he was the Chief Financial Officer of Mangalam Industrial Finance Limited
- He is Chartered Accountant (CA) and completed his Graduation in Commerce (B.Com)

Ravidran Nambiar
President of
International Business

- Mr. Nambiar currently serves as the President of International Business for Wardwizard
- He is responsible for international business strategy and development for the two flagship brands; Joy ebike and VYOM
- He received his Bachelor of Science (B.Sc) from The Maharaja Sayajirao University of Baroda

Jaya Ashok Bhardwaj
Company Secretary
Compliance Officer

- Ms. Bhardwaj currently serves as Company Secretary and Compliance Officer for Wardwizard
- She is Company Secretary (CS) and completed her Graduation in Commerce (B.Com)
- She has more than 7 years of experience as Company Secretary for listed companies in the field of Company Law, secretarial matters, security law, legal matters and compliances.

Management Team

Vineet Akre
Sr. Vice President of R&D & Production

- Mr. Akre currently serves as Senior Vice President of R&D and Production for Wardwizard
- Prior to joining Wardwizard, he worked as an Assistant Vice President of Production for Hivoltrans Electricals Pvt. Ltd.
- He completed his Bachelor of Engineering (BE) from Shri Sant Gajanan Maharaj College of Engineering, Shegaon

Alok Jamdar
Vice President Operations (Production)

- Mr. Jamdar currently serves as Vice President of Production Operations for Wardwizard
- He has more than 30 years of experience in developing critical machined components & assemblies while being cost effective
- He graduated with a Diploma in Mechanical Engineering from the Institute of Mechanical Engineers Baroda, India

VILAS PATURKAR
3 Wheeler head

- Mr. Vilas is a competent professional with an experience of over 34 years in the areas of R & D /Inspection, Testing , Electrical Maintenance and Quality Management
- Experienced in Electronics & Electrical components (Motor, Controller, charger & Harness) Designed of Main wiring harness for Electrical two & three wheelers for production

Board of Directors

Yatin Sanjay Gupte
Chairman & Managing Director

- Mr. Gupte currently serves as Chairman and Managing Director for Wardwizard, and founded and WardwizardGroup in 2016
- He has 15 years of experience working in sales & marketing, business development, client servicing, renewals, and operations (including 11 years of work experience in insurance)
- He has an Honorary Doctorate in Social Service and earned his Master's in Business Administration (M.B.A Exe.) in Insurance & Risk Management from Bhartyiya Shiksha Parisha, Uttar Pradesh

Avishek Kumar
Non Executive – Independent Director

- Mr. Kumar currently serves as Non Executive Independent Director
- He also currently serves as a Director of Datakrew, CEO and Founder and Director of Sunkonnect
- He obtained his Bachelor of Engineering from R.V. College Microelectronics from Nanyang Technological University, and Doctor Computer Engineering from the National University of Singapore

Sheetal Mandar Bhalerao
Non-Executive – Non-Independent Director

- Mrs. Bhalerao currently serves as Non-Executive, Non-Independent Director for Wardwizard
- She also currently serves as a Managing Director of Wardwizard Food and Beverages Limited
- She was previously the CEO of Yeppy Foods and the Account and Finance Director of JZ Hospitality
- She obtained her Master's in Business Administration (M.B.A) in Human Resources and Services from the University of South Australia

Sanjay Mahadev Gupte
Executive – Non Independent Director

- Mr. Gupte currently serves as Executive Director for Wardwizard
- He previously worked as a General Manager of Marketing with Poggen-AMP Nagar Sheth Powertronics Ltd.
- He is a National Apprenticeship Certificate course holder in the Trade of Machinist IN Mumbai G.K.W Ltd.

Board of Directors

Bhargav Govindprasad Pandya
Non Executive – Independent Director

- Mr. Pandya currently serves as Non-Executive Independent Director for Wardwizard
- He previously worked 11 years as an Officer and Sr. Manager in the Foreign Exchange department Baroda Main branch, the Alkapuri branch, the International Business branch of Baroda, and the Anand Main
- He received a Bachelor of Commerce (B.Com), Bachelor of Laws (LLB.), Inter CWA., and CAIIB(I)

Mukeshkumar Bapulal Kaka
Non Executive – Independent Director

- Mr. Kaka currently serves as Non-Executive Independent Director for Wardwizard
- He previously served as the Senior Chief General Manager (F&A) (CFO) with Gujarat State Electricity Corporation Ltd., Baroda and also as the Executive Director (Finance) of Mahaguj Coliers Ltd.
- He received a Bachelor of Commerce (B.Com Hons.), Master of Commerce (M.Com), and Bachelor of Laws (LLB.) from the Maharaja Sayajirao University Baroda, and also obtained his Inter ICWA and Final.ICWA from the Institute of Cost & Works Accountants of India and his Ph.D from The M.S. University of Baroda

Neelambari Harshal Bhujbal
Non Executive – Independent Director

- Ms. Bhujbal currently serves as Non-Executive Independent Director for Wardwizard
- She has more than 10 years of experience in human resource management, providing recruitment services for IT and non-IT organizations in PAN India
- She possess a Masters of Personnel Management (MPM) and Bachelor of Home Science (B.H.Sc.)

ward wizard
Innovations & Mobility Limited

Joy e-bike | Joy e-rik

Company Overview

Product Portfolio

Low-Speed E-Scooters

GEN NEXT

GLOB

WOLF

High-Speed E-Scooters

GEN NEXT NANU+

WOLF+

WOLF ECO

GEN NEXT NANU ECO

DELGO

Electric Motorcycles

MONSTER

HURRICANE

THUNDERBOLT

BEAST

E-MONSTER

Newly Launched

MIHOS

E-RIK

Having Presence Across the EV Two Wheeler Value Chain

Product Portfolio Presence Across The Value Chain

Segment	Models	Performance	Registration	Market Segmentation
Low-Speed Electric Scooters	Wolf Gen Next Nanu Glob	Low Speed	Not Required	Rural and Semi-Urban Terrains 16 – 25 years old
High-Speed Electric Motorcycles	E-Monster Beast Thunderbolt Hurricane	High Performance	Required	Hilly Terrains Ages vary
High-Speed Electric Scooters	Wolf+ Gen Next Nanu+ Wolf ECO GenNext ECO	High Speed	Required	Urban, Hilly, and Rural Terrains 18 – 60 years old
Electric Three-Wheeler	E-Rik	High Speed	Required	High Speed Commercial Vehicle

Ex Showroom Price Range

Two wheeler ex showroom price
₹ 77,400 – ₹ 2,42,000

Three wheeler ex showroom price
₹ 3,40,000

New Launches At Auto Expo 2023 - MIHOS

Jet Black Glossy

Matt White

Satin Blue

Sparkle Black

Matt Gold

MIHOS: It is designed and developed with Poly DiCycloPentadiene (PDCPD) for additional durability and flexibility to absorb maximum impact on the road.

The new-age-high-speed electric scooter further comes with smart and Intelligent features to bring maximum convenience of the rider while riding.

Range
***130Km**

Battery Capacity
74 V

IP6
Waterproof

Motor Power
1,500 W

Charging Time
***5Hrs**

For More Details

*Under controlled conditions

New Launches At Auto Expo 2023 - E-RIK

Available colours

- Yellow
- Blue
- White
- Green

Joy E-Rik falls under L5 passenger category. The three wheeler is designed and developed by the R&D team with prime focus on promoting localization and “Make In India” initiative.

The vehicle is much more spacious and stable while driving.

For More Details

Range
80-85 Km
(Without Load)

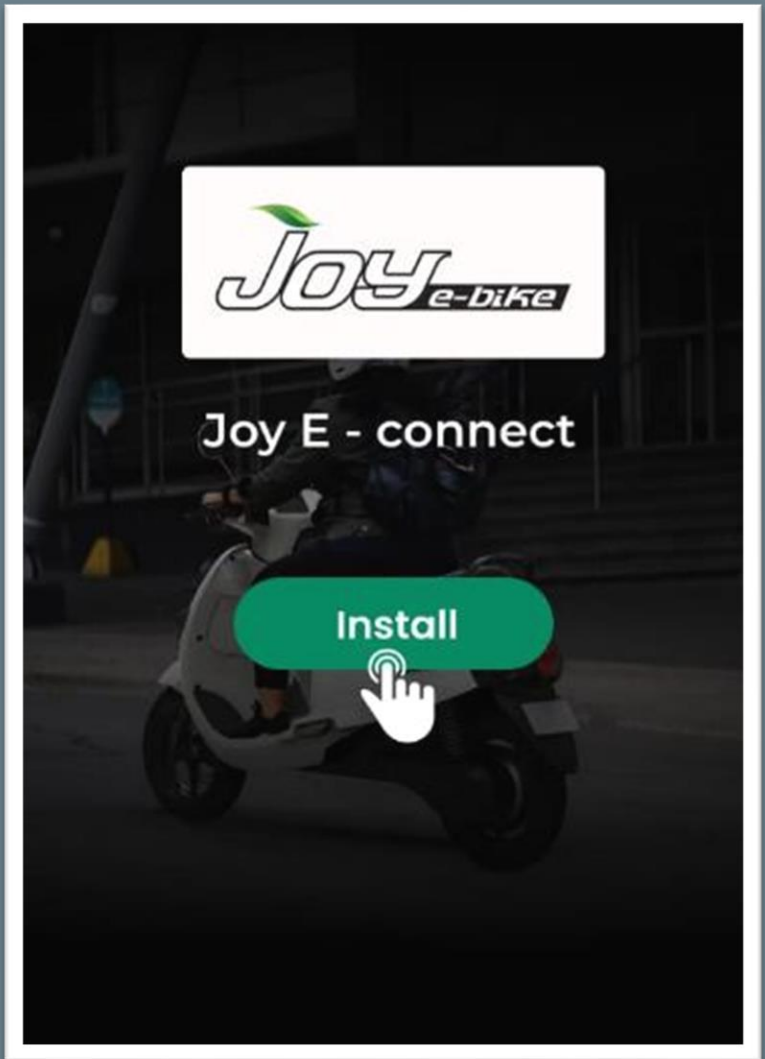
Max Speed
50 -55 Kmph

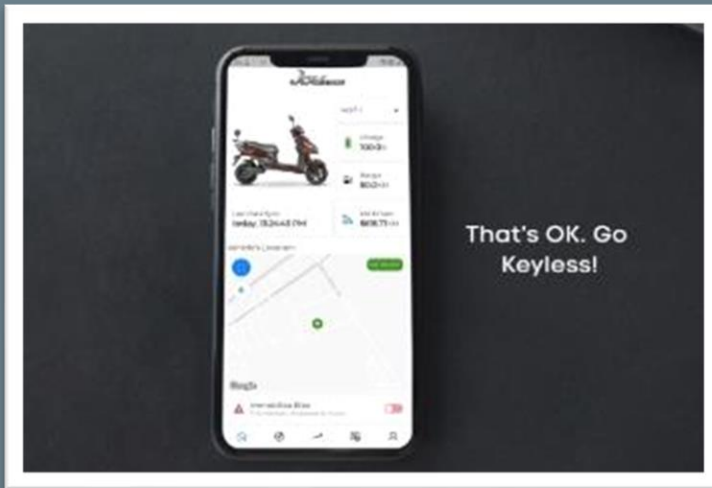
Battery
Capacity
65 V

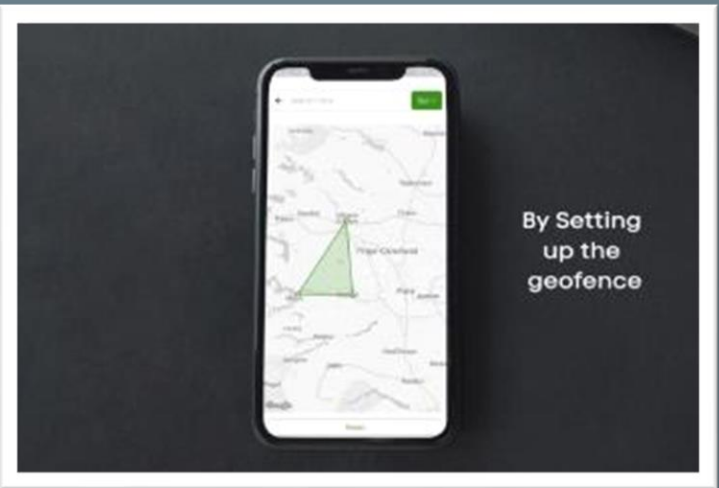
IP67 rated
battery pack

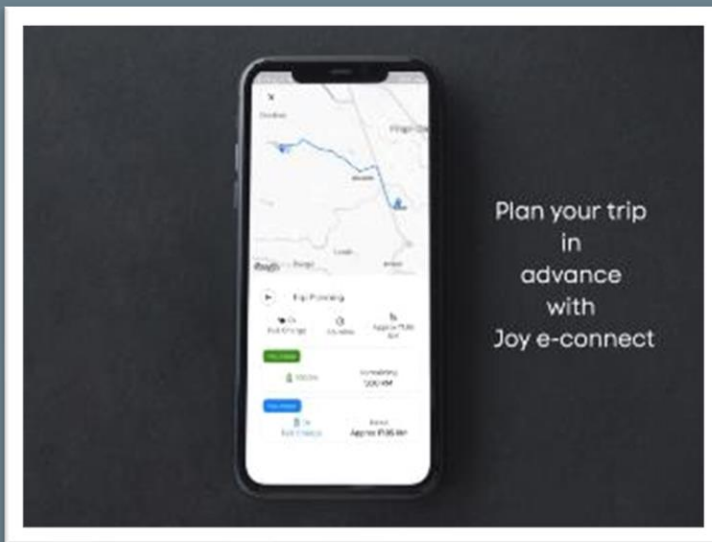
Standard Charging Time
3.5 - 4Hours @30 Amp
Fast Charging Time
2.5 Hours @ 40 Amp

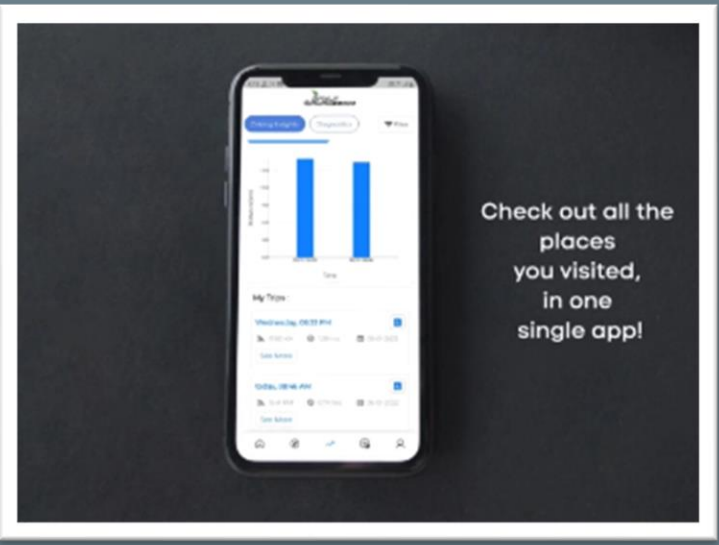
Revolutionize Your Ride with Joy E – Connect











Take Control of Your Ride with Joy E-Connect: Smart, Secure, and Connected!

Increasing Dealer Network

State	Urban Area	Rural Area	Total
Gujarat	44	137	181
Maharashtra	48	78	126
Rajasthan	37	47	84
Madhya Pradesh	23	57	80
Chhattisgarh	9	10	19
Delhi/Haryana	47	29	76
Uttar Pradesh	50	39	89
Bihar/Jharkhand	23	28	51
Odisha	3	16	19
West Bengal	15	12	27
Karnataka	3	4	7
Grand Total	**302**	**457**	**759**

State	No. of Dealers
J&K	6
Punjab	13
Uttar Pradesh	89
Rajasthan	84
Gujarat	181
Maharashtra	126
Kerala	1
Karnataka	7
Goa	2
Himachal Pradesh	2
Chandigarh	2
Delhi/ Haryana	76

State	No. of Dealers
Uttarakhand	14
Bihar/ Jharkhand	51
Assam	1
Chhattisgarh	19
Odisha	19
West Bengal	27
Madhya Pradesh	80

International	No. of Dealers
Nepal	1

750+
Dealers

Presence In **50 +** Cities In **19** States & Union Territories

55,000 +
Satisfied Customers

4 Zonal Office
1 Branch Office

Company Owned Retail Outlets

Joy e-bike Exclusive Showroom are present

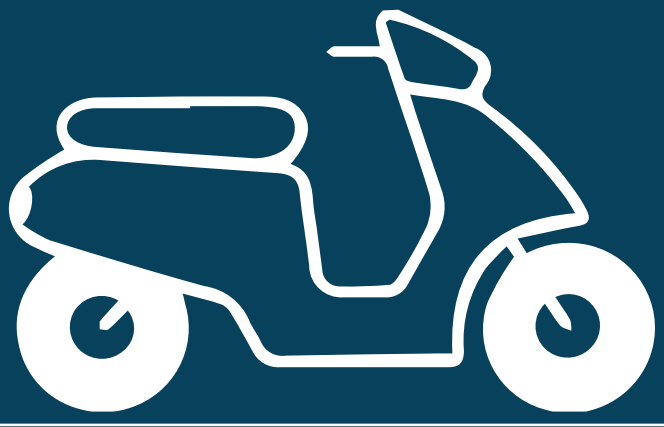
25+ different locations

Expo 2022 - 2023

NUMBER OF CITIES - 7

Reach
15,90,000

Lead
3,352



Highlights Of All The Event

MCCIA – Pune

April 02nd to 05th, 2022

Business Jatra

Nov 11th & 12th, 2022

EV Expo - Kolkata

April 20th to 24th, 2022

EV Expo BIEC – Bangalore

May 06th to 08th, 2022

Bombay Exhibition Centre - Mumbai

May 26th to 28th, 2022

Auto Expo – Noida

Nov 11th & 12th, 2022

Shri Chhatrapati Shivaji Art Festival

Nov 11th & 12th, 2022

Advantage Maharashtra Expo Aurangbad

Jan 05th to 8th, 2022

VCCI Expo – Vadodara

Jan 27th to 30th, 2023

Engaging Marketing Techniques To Create Brand Awareness

At Auto Expo 2023

Engaging Marketing Techniques To Create Brand Awareness

ward wizard
Innovations & Mobility Limited

Marketing in Indian Railways

Stadium Branding

Approx Reach | **3Cr+**

TV Plan

Approx Reach

37.2 Cr+

Festive Season

Approx Reach | **1 Cr+**

Sponsorship

1 Fitisan , Vadodara
August 15,2022

APPX. Reach : 70,000 +

2 Real Kabaddi League, Jaipur
September 21 to 30,2022

APPX. Reach : 3L +

3 Thomso, IIT Roorkee, Uttarakhand
October 15, 16 and 17,2022

APPX. Reach : 30,000 +

4 Vadodadra Marathon, Vadodara
January 8,2023

APPX. Reach : 1.2L +

5 LVP Heritage Garba, Vadodara
September 26 to October 5,2022

APPX. Reach : 70,000 +

Film Festival (DPIFF) Awards 2023

ward wizard
Innovations & Mobility Limited

February 20, 2023

SWOT Analysis

Strength

- Wardwizard is a leading player in the Indian electric vehicle market, thanks to its established brand, strong distribution network, diverse product portfolio, focus on innovation, and competitive pricing strategy
- The company's efforts contribute to the development of high-quality and affordable electric vehicles, promoting the adoption of electric mobility in India

Opportunities

- Wardwizard can leverage the growing trend of sustainability and eco-friendliness to increase the demand for its electric vehicles
- The company can explore new markets such as Southeast Asia and Africa where the demand for electric vehicles is also on the rise
- Partnering with charging infrastructure providers or battery manufacturers can enhance Wardwizard's electric vehicle ecosystem and improve customer experience

Weakness

- Dependence on Indian market exposes to market risks in the country
- Limited global presence limits growth opportunities

Threats

- Wardwizard faces competition from established players in the electric vehicle market, which may impact its market share
- Changes in government regulations related to electric vehicles can impact the demand for the company's products
- The company may face supply chain disruptions due to factors such as raw material shortages, transportation issues, or other unforeseen circumstances

ward wizard
Innovations & Mobility Limited

Joy e-bike | Joy e-rik

Industry Overview

EV Mobility Market Overview & Government Initiative In India

The Indian government has planned US$ 3.5 billion in incentives over a five-year period until 2026 under a revamped scheme to encourage production and export of clean technology vehicles.

Investment flow into EV start-ups in 2021 touched an all-time high, increasing nearly 255% to reach Rs. 3,307 crore (US$ 444 million).

The EV market in India is estimated to reach Rs. 50,000 crore (US$ 7.09 billion) by 2025.

The Indian automotive electric two-wheeler industry grew by more than 300% in 2022 and is expected to cross 50% market share by 2023, with connected two-wheelers and high-speed electric vehicles driving the growth.

In 2022, EV sales reached a new high of 10,54,938 units surpassing 1 Mn mark for the first time with 4.7% market share in overall automobile sales.

A report by India Energy Storage Alliance estimated that the EV market in India is likely to increase at a CAGR of 36% until 2026. The projection for the EV battery market is forecast to expand at a CAGR of 30% during the same period.

Source: IBEF, Vahan Dashboard

EV Mobility Market Overview & Government Initiative In India

The Indian government is working to create an integrated EV mobility ecosystem with a low carbon footprint and high passenger density with an emphasis on urban transportation reform.

Mahindra & Mahindra has tied up with three electric vehicle infrastructure partners to offer charging solutions for its range of passenger electric vehicles.

There is a need to set up proper charging infrastructure for EVs in India, and various public sector firms, ministries and railways have come together to create infrastructure and to manufacture components.

The Government approved FAME and plans to cover all vehicle segments and all forms of hybrid & pure EVs. FAME-I was extended until March 31, 2019. In February 2019, the Government of India approved FAME-II scheme with a fund requirement of Rs. 10,000 crore (US$ 1.39 billion) for FY20-22.

In the year 2021, India's spending on electrical architecture development, such as battery development, electrification, e-motors and power electronics, came up to Rs. 48,215 crores (US$ 6.39 billion).

Source: IBEF, Vahan Dashboard

Multi-Dimensional Growth Opportunity

Macro Level

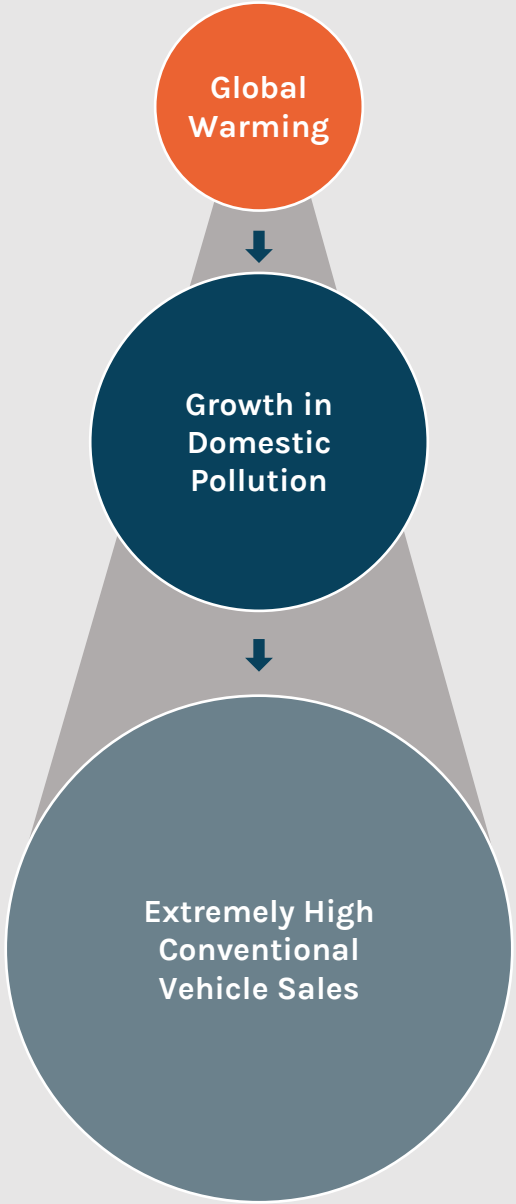
- Secular global shift towards electric vehicles

- India currently ranks among the smallest electric vehicle markets, but is also one of the fastest growing

Micro Level

- Differentiated product portfolio with unparalleled distribution capabilities in rural territories

India's Electric Vehicle Market: Small but Mighty in Growth!

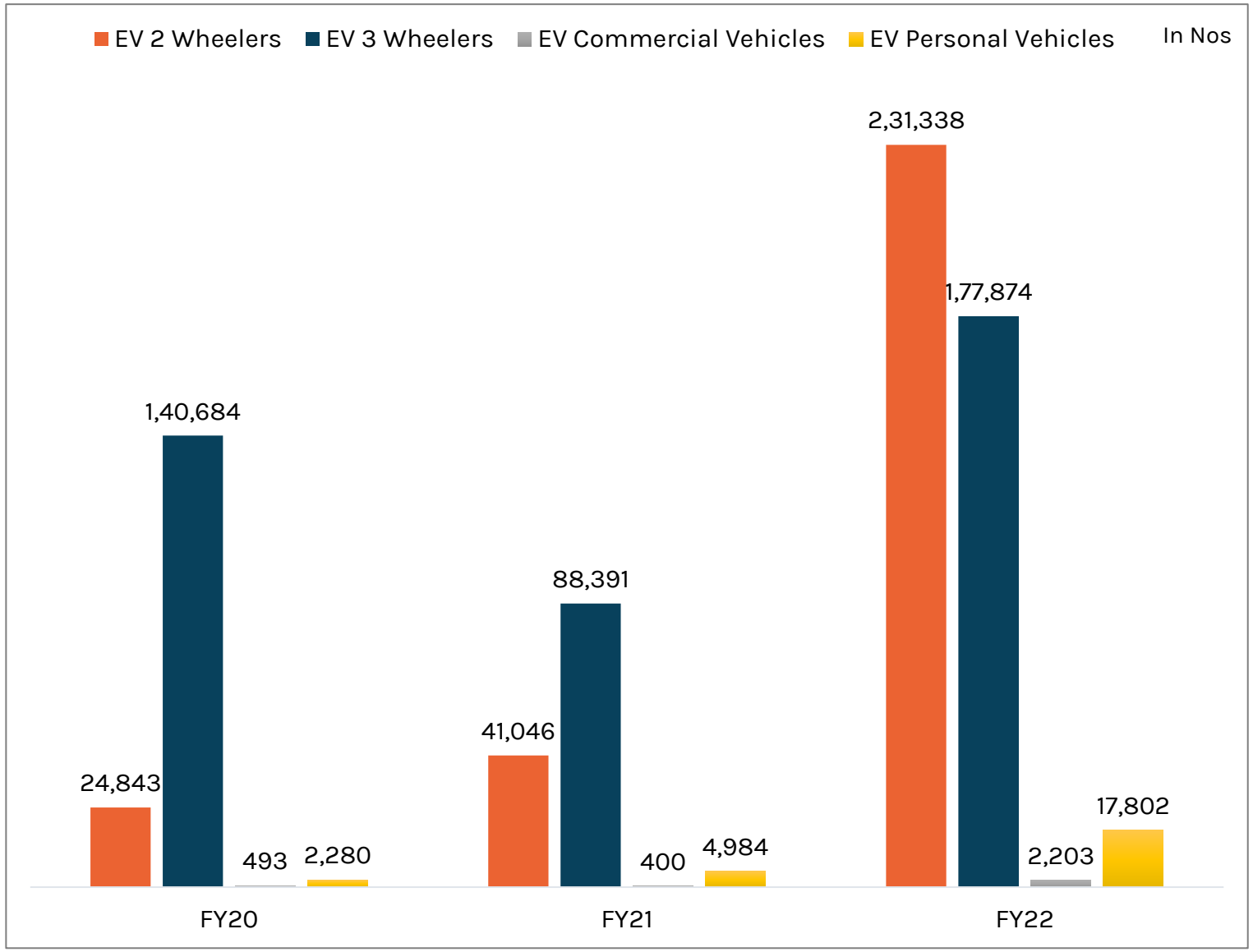


State Government Incentives To Promote EV Addoption

State	 Gujarat and Assam	 Delhi	 Kerala	 Maharashtra	 Manipur	 Odisha
2 Wheeler	₹ 10,000/kWh	Demand Generation Incentive: Up to ₹ 30,000 Purchase Incentive: ₹ 5,000/kWh up to ₹ 30,000	--	₹ 5,000/kWh up to ₹ 10,000 for the first 100,000 electric 2-wheelers	₹ 10,000/kWh up to ₹ 1,50,000 for the first 3,500 electric 2-wheelers	15% up to ₹ 5,000
3 Wheeler	₹ 10,000 /kWh	Purchase Incentive of ₹ ₹ 30,000 Interest subvention of 5% on loans and/or hire purchase scheme for the purchase	25% of the EV up to ₹ 30,000	₹ 5,000/kWh up to ₹ 30,000 for the first 15,000 electric 3-wheelers autos ₹ 5,000/kWh up to ₹ 30,000 for the first 10,000 electric 3-wheelers goods carrier	₹ 4,000/kWh up to ₹ 5,00,000 for the first 200 electric 3-wheelers	15% up to ₹ 12,000
4 Wheeler	₹ 10,000 /kWh	Purchase Incentive of ₹ 10,000 /kWh up to ₹ 1,50,000 for the first 1000 e-cars	--	₹ 5,000/kWh up to ₹ 1,50,000 for the first 10,000 electric 4-wheelers cars ₹ 5,000/kWh up to ₹ 1,00,000 for the first 10,000 electric 4-wheelers goods carrier	₹ 4,000/kWh up to ₹ 15,00,000 for the first 2,500 electric 4-wheelers	15% up to ₹ 1,00,000

Source: https://e-amrit.niti.gov.in/state-level-policies

Growing Electric Vehicle Sales In India



FY20 – FY22 CAGR by Segment

Electric 2 Wheelers 205%
Electric 3 Wheelers 12%
Electric Commercial Vehicles 111%
Electric Personal Vehicles 179%

2-wheeled electric vehicles are the fastest growing segment within India's dynamic electric vehicle market

Source: Fada.org Note: Data excludes e-bikes that do not require registration (less than 40cc)

Electric Vehicles Are Becoming More Compelling

Electric Vehicles vs. Internal Combustion Engines (ICE)

EVs Are Simpler:
EVs have fewer components and live 3.5 times longer than ICE vehicles

EVs Are More Powerful:
EVs can offer full torque at zero RPM, whereas ICE vehicles can only operate in a certain RPM range. Thus, at lower speeds, EVs are more powerful

EVs Have Begun to Make Economic Sense:
Electric vehicles have a significantly higher upfront cost, as compared to ICE vehicles, largely on account of battery costs. On the other hand, the operating costs for an EV are much lower. Thus, Total Cost of Ownership (TCO) is an important economic comparison between ICE vehicles and EVs

Moving Parts	
ICE 150	150
EV 24	24

Wearing Parts	
ICE	24
EV	11

	Electric Vehicle	ICE
Cost of Purchase (₹)	1,04,167	91,500
Operating Cost	₹ 0.15/km	₹ 1.97/km
Maintenance Cost	No Maintenance cost	--
Downtime	No Downtime	--
Impact on Environment	Eco friendly	--

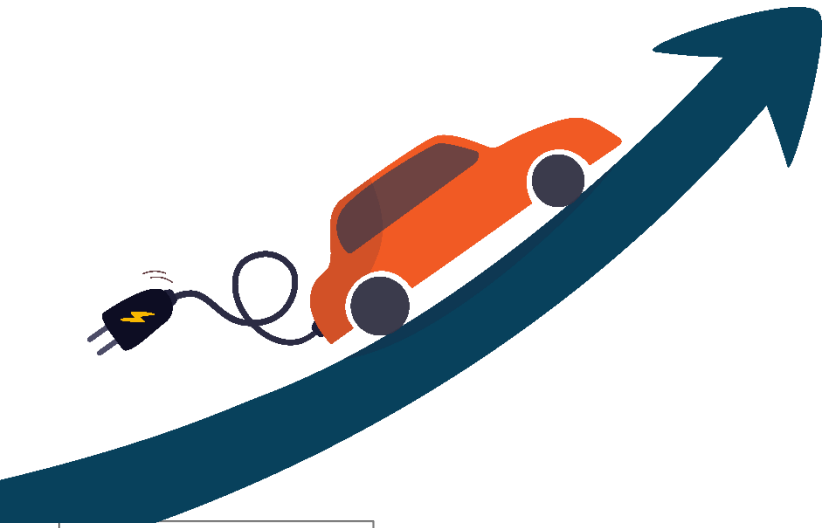
ward wizard
Innovations & Mobility Limited

Joy e-bike | Joy e-rik

The Way Forward

Future Growth Drivers

- To Have PAN India Presence
- Enhance Distribution Channel Strategy
- Strengthening Position In Key Markets
- Double Dealership Network
- New Product Launches
- Develop India's First EV Cluster
- Capacity Expansion
- Improve Margins
- Exploring Export Opportunities



Expanding Presence

- Wardwizard Innovations and Mobility Ltd. will restructure its distribution-dealer model. They will establish 150 'Distributor Showrooms' at the district level to strengthen relationships with Taluka-level Dealers.

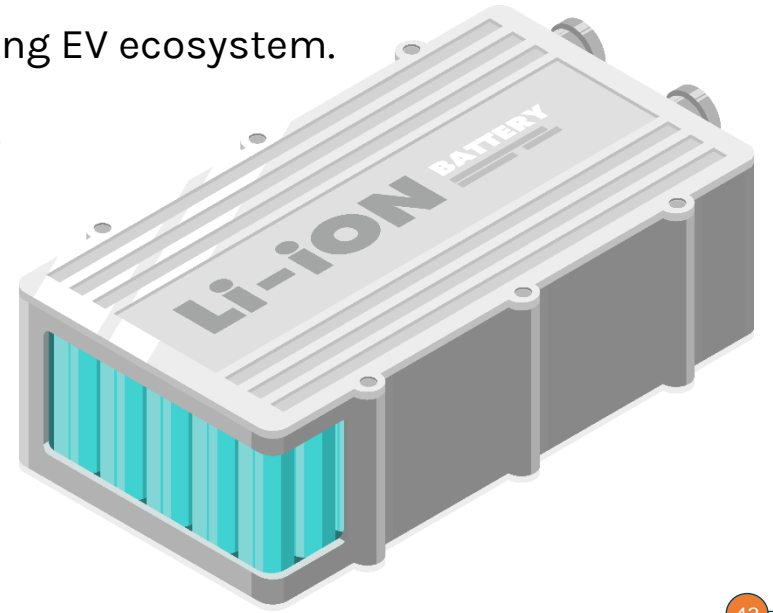
- The company plans to promote high-performing taluka dealers to District Distributors through new distribution models, adding to its 600+ touch-points nationwide.

- Due to the high demand of the vehicles, the company has decided to pre-schedule the advancement of the distribution model. This will bridge the demand and supply gap and enhance the customer experience.

- With over 10+ models in its portfolio spanning high and low-speed categories, the company has established a robust presence in 55+ major Indian cities and aims to expand its reach across the nation.

In-house Battery Assembly Line

- Wardwizard has commenced the operations of a lithium-ion battery assembly line.
- This assembly line has a capacity of 1 GWh/year and is part of Wardwizard's Phase 1 development under the 'Make in India' initiative.
- Under the phased development plan of the EV ancillary cluster, the battery assembly line is a strategic move on the part of the company.
- The company's vision is to ensure the highest quality standards where they can have direct control on the quality and standards of their battery packs.
- Furthermore, the company has taken a step to solidify its contribution to the existing EV ecosystem.
- The company further envisages scaling the capacity of their battery assembly, R&D operations and production of electronic components in the EV Ancillary Cluster



Steps taken to Improve Battery Safety

- **Stringent Quality Control**

Assigning a company representative at the manufacturing site to establish rigorous quality control measures, ensuring early detection and resolution of any potential defects or issues throughout the process.

- **Data Collection and Monitoring**

Our AI technology diligently monitors battery parameters like voltage, current, temperature, state of health, state of charge , Current limits , Protection Status, error codes, and protection status. Users receive immediate SMS or email alerts for any irregularities.

- **Higher Grade Material**

Certified cells (IS 16893-Part 2 and Part 3) with enhanced thermal stability and puncture resistance. 99.5% pure nickel and fire-resistant, mechanically strong cell holders.

- **Effective Thermal Management**

Implementing efficient thermal management systems within batteries ensures temperature regulation, prevents overheating, and dissipates excess heat. This is achieved through the utilization of thermal pads or potting material.

- **Comprehensive Testing Protocols**
- All Batteries go through rigorous testing protocols to check performance, safety, and reliability tests, to identify and address any potentialissues.

Steps taken to Improve Battery Safety

- **Mechanical Integrity**

The battery pack is built with utmost structural integrity, guaranteeing a secure assembly. This encompasses meticulous design and construction of the pack enclosure, frame, and mounting components, ensuring precise alignment and secure attachment of battery cells and other essential components.

- **Smart Battery Management Systems (BMS)**

Smart CAN-based Battery Management System (BMS) incorporates several crucial safety features to ensure the optimal performance and protection of the battery system

a) Over-voltage protection: Safeguards the battery pack by monitoring and preventing voltage levels from exceeding safe limits, minimizing the risk of damage or failure.
b) Over-charge protection: Monitors the charging process to prevent excessive charging, which can lead to battery degradation or hazardous conditions.
c) Over-discharge protection: Monitors the battery's discharge levels to prevent it from reaching critically low levels, protecting against potential damage and prolonging battery lifespan.
d) Over-temperature protection: Continuously monitors the battery's temperature and activates safeguards if it exceeds safe thresholds, preventing overheating and potential thermal runaway.
e) Overcurrent protection: Detects and limits excessive current flow, protecting the battery cells and electrical components from damage caused by high current conditions.
f) Short circuit protection: Rapidly detects and responds to short circuits, ensuring immediate disconnection of the circuit to prevent damage or safety hazards.
These safety features collectively work to enhance the reliability, longevity, and safety of the battery system, reducing the risk of critical failures or accidents.

Steps taken to Improve Battery Safety

- **Protection and Safety Features**

Our Battery packs incorporates appropriate safety features, such as fuses to prevent overcurrent and short circuits, Pressure Vents, silicone insulated cables to help safeguard the battery cells and the overall pack from potentially hazardous conditions. rephrase this

- **Enclosure and Sealing**

The battery pack enclosure is thoughtfully designed to safeguard against environmental factors and impacts. Through the implementation of effective sealing techniques, such as gaskets or adhesives, a secure seal is achieved, preventing the entry of contaminants and maintaining the integrity of the battery pack.

- **Continuous Research and Development**

Our research aims to comprehend battery aging, reduce degradation, and enhance lifespan. We explore CAN communication protocols for improved BMS connectivity, data logging, and remote monitoring. Advanced data analytics and machine learning are employed to optimize battery performance through analysis of battery data.

- **Improved Battery Life**

We have developed diverse charging profiles that allow users to select their preferred charging speeds. Improvements in Depth of Discharge (DOD) have been made to enhance cycle life, battery efficiency, health, and aging. Peak and continuous discharging currents are limited to 1C and 0.7C respectively. By implementing these current limits, we effectively mitigate temperature rise, reducing the risk of thermal runaway and significantly enhancing battery safety and longevity.

Quality Assurance Activities

Quality Controls of New Product Development

Process Mapping is done for Design and Development phase to control the and monitor the product requirements .

Procedure is made of new part development to improve the consistency, easy to keep up-to-date, and standardize the process.

Quality Controls of Incoming Quality

Incoming Inspection Procedure

Incoming Inspection Standard

Visual Standard.

Limit Sample.

List of Instruments and their calibration plan

Quality Controls of Supplier / Vendor Management

Supplier Quality Manual Prepared for the monitoring the supplier management to control the process and performance of the supplier.

Some Key Points of Supplier Management

- PPAP Audit.
- Retro PPAP.
- Supplier System Audit.
- Supplier Process Audit.
- Supplier PDI report.
- Supplier Inspector Certificate.
- Supplier Performance Monitoring (Quality Rating)

Quality Controls of Process Quality

Process Flow Diagram

Quality Control Process

Process wise SOP made for Operator clarification.

Separate History

Process Audit

Torque Audit.

MSN/PSN Monitoring.

ECR/ECN, FTR .

Multiskilling 1m3s (1 man 3 stage).

Quality Controls Final Inspection & PDI

Procedure for Final inspection

Final Inspection Check sheet.

History card Traceability of vehicle.

Defect PDCA (Plan Do Check Act)

Master Audit / Stock Audit

Product Audit

Control of non- confirming product procedure

Quality Alert for any customer complaint.

Quality Management System.

Formatting of all Documents.

Procedure of all process.

5 level of documents

Manuals.

Risk Assessment.

Training Needs Identification.

EV – Ancillary Cluster

Acquired a 4 million sq. ft property for the cluster

The cluster will consist of a R&D center and a production center for the manufacturing of electric two wheelers & three wheelers

Signed MoU with Gujarat Government for the investment of ₹ 500 Cr for research and development of electric vehicles in Gujarat

The cluster will generate employment of about 6,000 jobs

Manufacturing partners will be invited to co-locate their production units and utilize state-of-the-art facilities, resources, and labor to manufacture essential components

WardWizard's Singapore R&D Powerhouse for EV Innovation

- WardWizard Innovations and Mobility Ltd plans to set up its first Global R&D headquarters in Singapore.
- The company will establish a global sales office and center in Singapore under its subsidiary, Ward Wizard Global Pte Ltd.
- The decision to establish the center and global sales office in Singapore is driven by the increasing demand for electric mobility and the company's commitment to developing products that prioritize holistic safety.
- The state-of-art facility will holistically focus on research and development of two, three, and four-wheelers along with the development of technologically advanced EV products.
- The company will expand its research focus to include cell chemistry, pack assembly, battery management systems, motors, and other components of electric vehicles (EVs).
- In addition, the company will prioritize the enhancement of safety measures by collaborating with leading certification agencies to develop new battery standards.
- Singapore-based Sunkonnect will be the technical knowledge partner at the centre.
- The R&D headquarters will employ a talent pool of over 30 scientists and engineers to design and develop global standard products in the EV sector.
- The Centre of Excellence will be headed by Mr. Lakshman Gurazada as the Director of Operations.
- WardWizard will collaborate with leading global research institutions and companies in battery technology across Southeast Asia.

Opportunities in EV Motor Manufacturing

Wardwizard is now looking to backward integrate into the manufacturing of EV scooter/bike motors, which presents several exciting opportunities for the company.

- **Cost efficiency:** By manufacturing its own motors, the company can reduce its dependence on third-party suppliers, resulting in lower production costs and more affordable electric vehicles for consumers.
- **Competitive advantage:** Wardwizard's in-house manufactured motors can enhance the performance of their electric vehicles, setting them apart from competitors and attracting customers seeking higher quality and reliability.
- **Customization:** In-house motor manufacturing enables the company to customize EV motors for enhanced efficiency, range, and performance, setting it apart from competitors and giving it a market edge.
- **Entry into new markets:** Company can enter new markets, including the global market, by offering its in-house manufactured motors, which can meet the rising demand for electric vehicles and provide a unique selling proposition.
- **New revenue streams:** Backward integration into motor manufacturing can provide Wardwizard with new revenue streams, the company can sell them to other EV manufacturers, creating new sources of revenue and strengthening its market position.

Wardwizard is set to capitalize on these opportunities. The company plans to build a manufacturing plant with a production capacity of 600 units per day, operating in two shifts and employing approximately 150 people. Equipped with state-of-the-art manufacturing machines, including automatic hub motor winding machines and modern testing facilities, the plant will ensure consistent quality and high productivity. The manufacturing plant will feature advanced testing facilities to conduct in-process and end-of-line testing of motors. Additionally, it will be equipped with a tool room facility that includes CNC laser cutting machines, CNC turning centers, and other state-of-the-art machinery to support efficient production processes.

Brushless Direct Current Motors (BLDC)

The manufacturing plant will produce Brushless DC Motors to meet Joy E-bike's own captive requirements and to supply Original Equipment Manufacturers (OEMs) in the electric vehicle industry throughout India.

- BLDC motors are highly efficient and offer excellent controllability, making them a popular choice for EVs.
- One of the significant advantages of BLDC motors over other motor types is their power-saving efficiency.
- The main parts of a BLDC Hub Motor for EVs are the stator, rotor, Hall sensors, motor controller, gearbox (if used), and rim
- The stator is the stationary part of the motor, while the rotor is the rotating part that interacts with the stator's magnetic field to produce torque and rotation
- Hall sensors are electronic devices that detect the rotor's position and provide feedback to the motor controller to synchronize the motor's operation
- The motor controller regulates the voltage and current delivered to the motor, controlling its speed and torque output
- In some cases, a gearbox is used to increase the torque output of the motor while reducing its speed
- The hub motor is mounted in the wheel rim of the EV, directly driving the wheel to provide propulsion
- The motor controller receives signals from the accelerator pedal and battery management system and sends power to the motor to achieve the desired speed and torque output
- BLDC Hub motors for EVs typically range in voltage from 48 volts to 72 volts, with power ratings ranging from 250 watts for low-speed e-bikes to 5000 watts for high-speed e-bikes.

ward wizard
Innovations & Mobility Limited

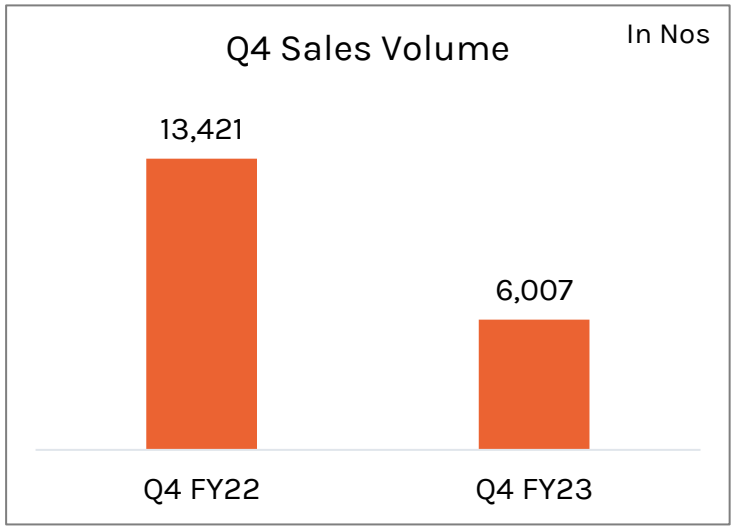
Joy e-bike | Joy e-rik

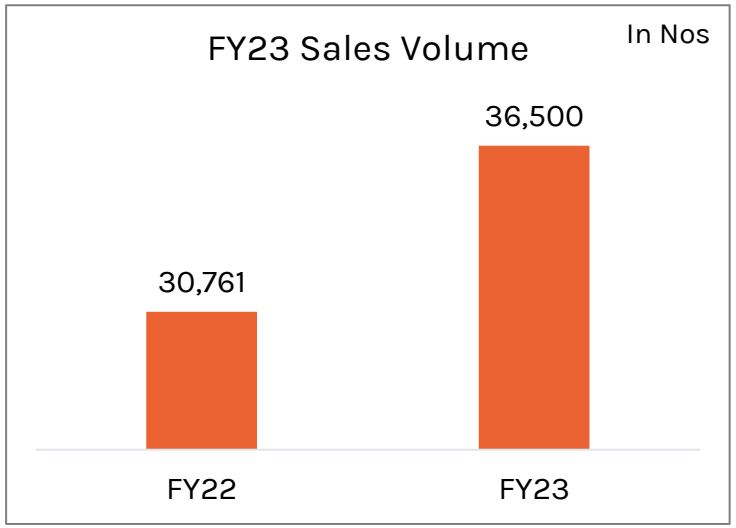
Financial Overview

Q4 & FY23 Result Highlights

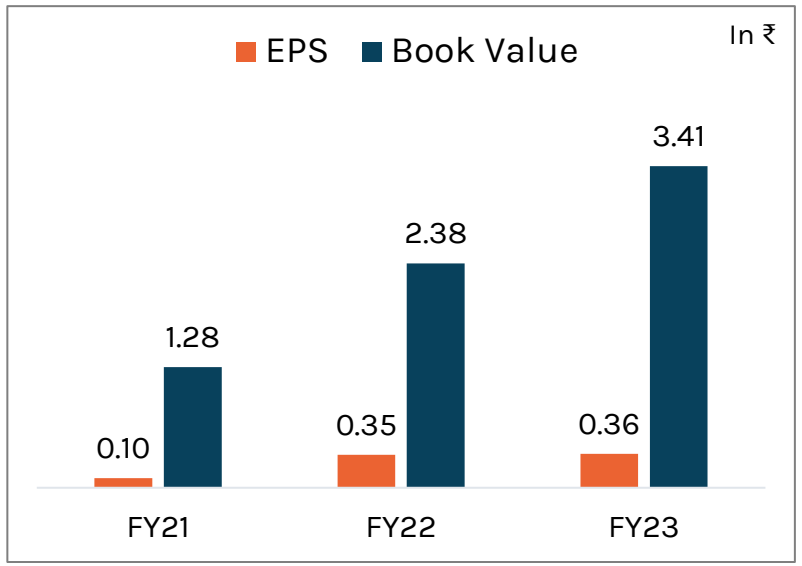
In ₹ Cr

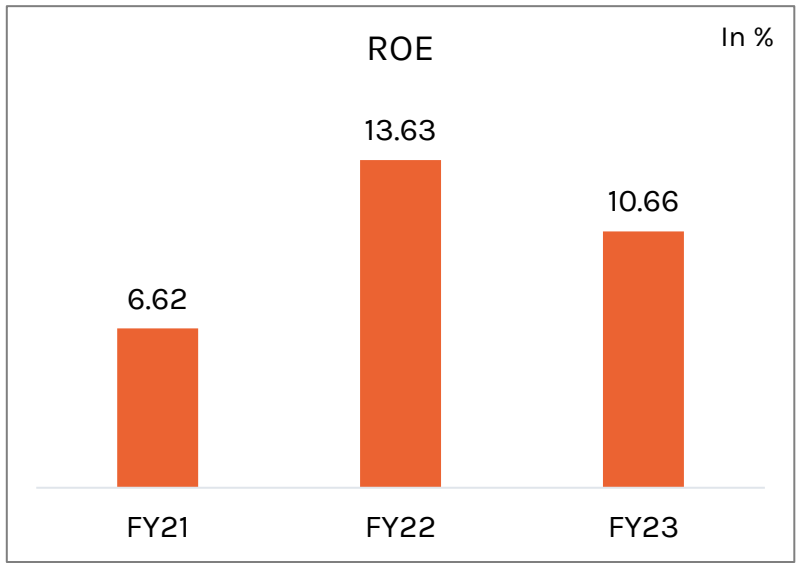
Particulars	Q4 FY23	Q4 FY22	FY23	FY22	Y-O-Y%
Net Sales	50.55	81.49	238.93	184.56	
Other Income	0.21	0.30	0.36	0.58	
Total Income	**50.76**	**81.79**	**239.29**	**185.14**	**29.25%**
Expenses					
Raw Material costs	36.65	71.64	192.01	158.54	
Employee Benefit Expenses	2.16	1.94	8.44	6.13	
Other Expenses	7.12	2.14	19.27	5.99	
Total Expenditure	45.93	75.72	219.72	170.66	
EBIDTA	**4.83**	**6.07**	**19.57**	**14.48**	
EBIDTA (%)	**9.52%**	**7.42%**	**8.18%**	**7.82%**	**35.15%**
Interest	0.11	0.00	0.77	0.00	
Depreciation	1.80	0.86	4.95	2.33	
PBT	**2.92**	**5.21**	**13.85**	**12.15**	
TAX Expense (Including Deferred Tax)	1.48	1.93	4.40	3.67	
PAT	1.44	3.28	9.45	8.48	
Other Comprehensive Income	-0.13	0.00	0.02	0.00	
Reported Net Profit	**1.31**	**3.28**	**9.47**	**8.48**	**11.67%**
NPM (%)	**2.84%**	**4.01%**	**3.95%**	**4.58%**	

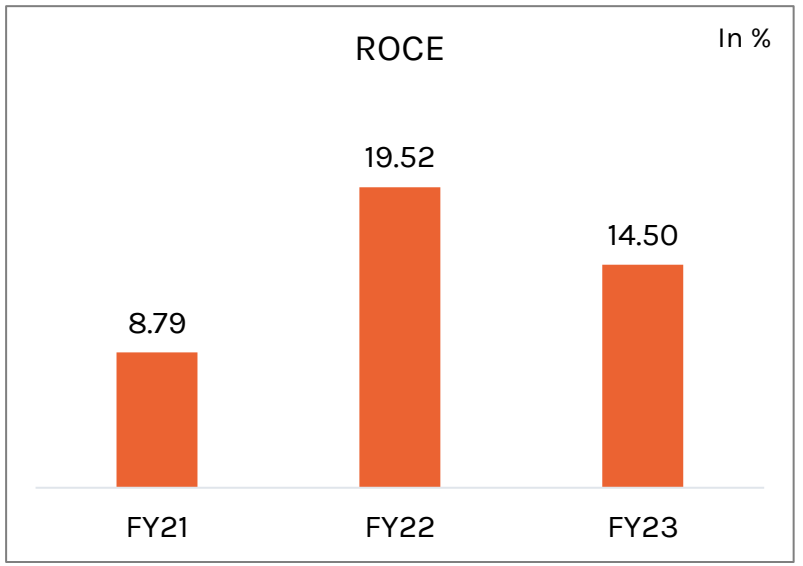


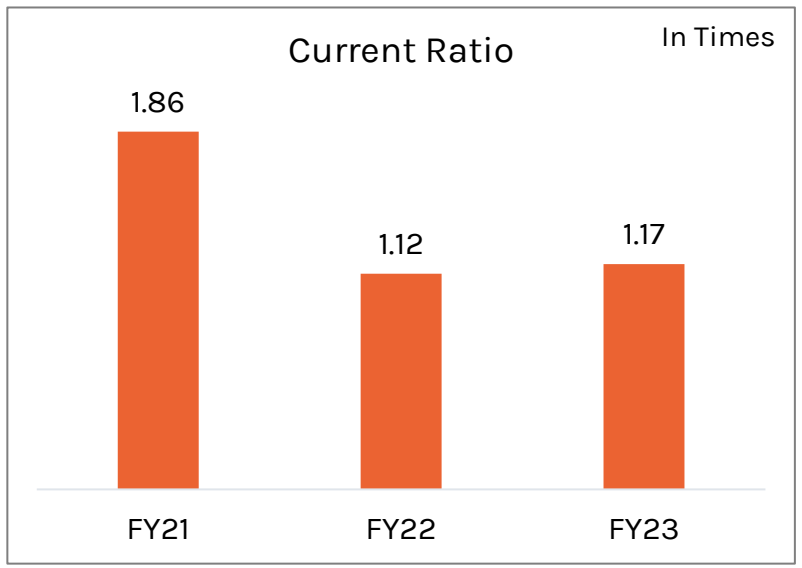


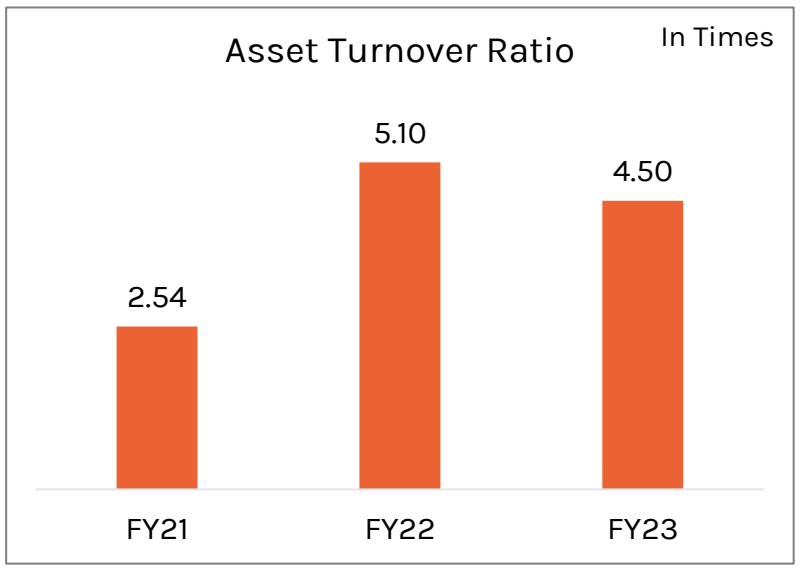
Key Financial Highlights

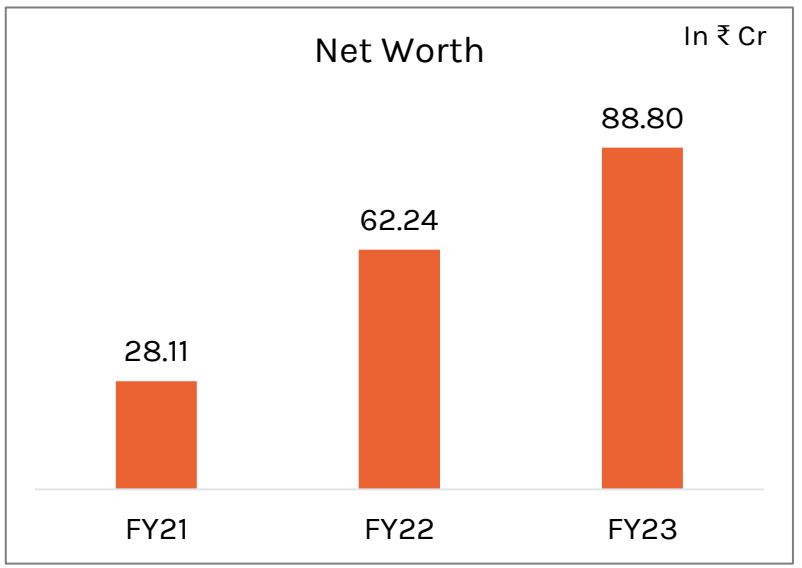








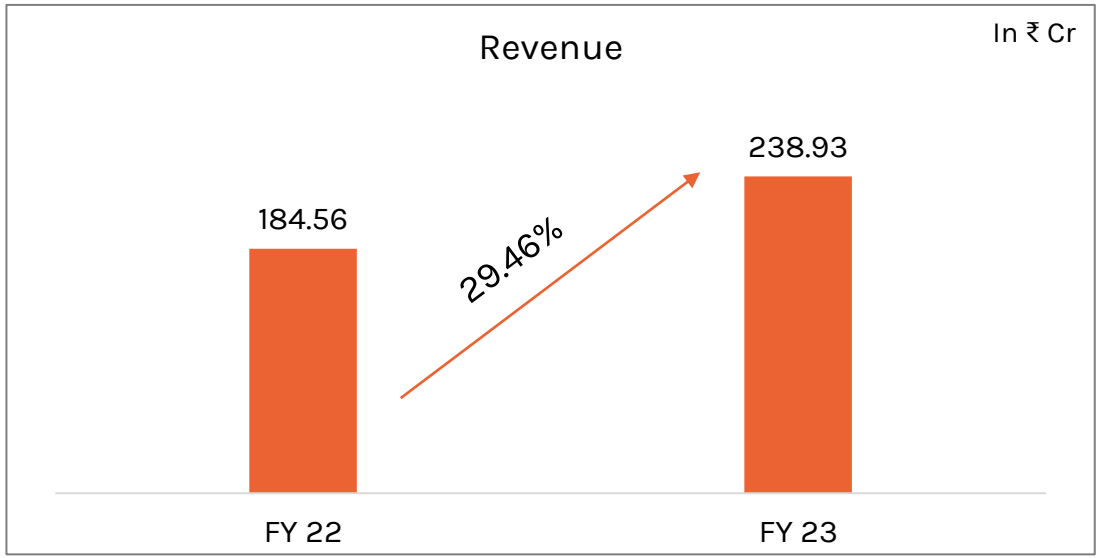


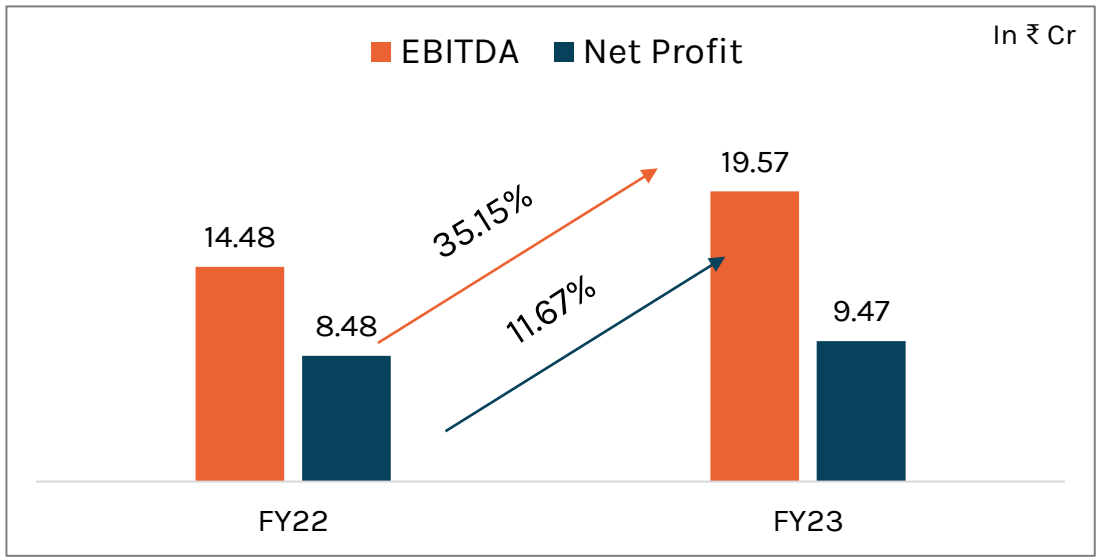


Profit & Loss Statement

In ₹ Cr

Particulars	FY21	FY22	FY23
Revenues	39.32	184.56	238.93
Other Income	0.05	0.58	0.36
Total Income	**39.36**	**185.14**	**239.29**
Raw Material Costs	31.83	158.54	192.01
Employee Costs	3.02	6.13	8.44
Other Expenses	1.41	5.99	19.27
Total Expenditure	36.26	170.66	219.72
EBITDA	**3.10**	**14.48**	**19.57**
EBITDA Margin	**7.83%**	**7.82%**	**8.18%**
Finance Costs	0.00	0.00	0.77
Depreciation	0.63	2.33	4.95
PBT	**2.47**	**12.15**	**13.85**
Tax	0.61	3.66	4.40
PAT	1.87	8.48	9.45
Comprehensive Income	0.00	0.00	0.02
Reported Net Profit	**1.87**	**8.49**	**9.46**
Reported Net Profit Margin	**4.58%**	**4.58%**	**3.96%**





Balance Sheet

In ₹ Cr

Equities & Liabilities	FY21	FY22	FY23
Equity	23.31	25.92	26.07
Reserves	4.80	36.32	62.73
Net Worth	**28.11**	**62.24**	**88.80**
Non Current Liabilities			
Long Term Borrowing	0.00	0.00	12.00
Other Long Term Liabilities	0.00	0.00	2.33
Long Term Provision	0.07	0.21	0.30
Total Non Current Liabilities	**0.07**	**0.21**	**14.63**
Current Liabilities			
Short Term Borrowings	0.00	0.00	0.00
Trade Payables	9.28	70.31	45.80
Other Current Liabilities	0.15	45.18	71.18
Short Term Provision	0.45	1.35	3.23
Total Current Liabilities	**9.88**	**116.84**	**120.21**
Total Liabilities	**38.06**	**179.29**	**223.64**

Assets	FY21	FY22	FY23
Non Current Assets			
Fixed Assets	15.46	36.18	53.10
Other Non Current Financial Assets	3.82	2.96	0.14
Other Non Current Assets (Including DTA)	-0.03	9.75	30.34
Total Non Current Assets	**19.24**	**48.88**	**83.58**
Current Assets			
Inventories	7.32	71.58	68.79
Trade Receivables	2.89	5.86	16.16
Cash & Bank Balance	2.28	17.08	11.04
Other Current Financial Assets	2.64	15.10	44.07
Current Tax Assets (Net)	0.02	-1.37	0.00
Other Current Assets	3.67	22.16	0.00
Total Current Assets	**18.83**	**130.41**	**140.06**
Total Assets	**38.06**	**179.29**	**223.64**

Annexures

Stock Information

As on 17-05-2023

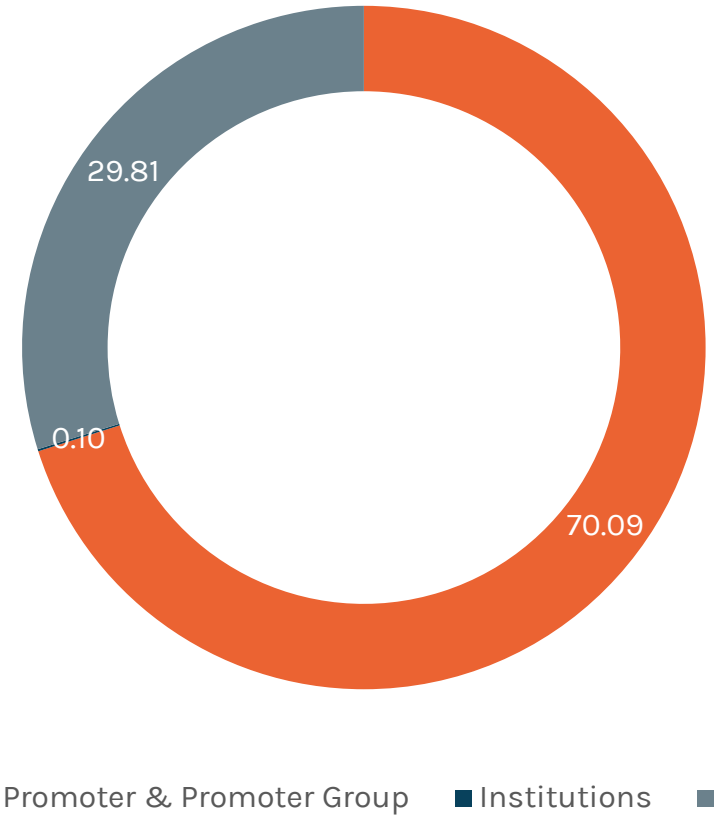
BSE Code	538970
ISIN	INE945P01024
Share Price (₹)	49.55
Market Capitalization (₹ Cr)	1,286.26
No. of Shares Outstanding	26,20,52,303
Face Value (₹)	1.00
52 Week High (₹)	78.00
52 Week Low (₹)	47.00

Corporate Actions

Corporate Action	Ex Date
Dividend ₹ 0.075	22-08-2022
Rights Issue	20-01-2022
Dividend ₹ 0.050	17-08-2021
Stock Split From ₹ 10/- to ₹ 1/-	17-03-2021
Bonus Issue 1:1	08-07-2015

Shareholding Pattern

As on 31-03-2023



Thank You

Mr. Deepak Doshi
Chief Financial Officer

Survey No. 26/2, Opp. Pooja Farm,
Sigma College Road, Hanumanpura,
Ajwa Road, Vadodara – 390019 (Gujarat)
Email: cfo@Wardwizard.in
Website: www.Wardwizard.in

Kirin Advisors

713-B, Lodha Supremus II, Wagle Estate,
Thane West – 400 604.
Email: info@kirinadvisors.com
Phone: 022 4100 2455
Website: www.kirinadvisors.com