



MM FORGINGS LIMITED

Corporate Office: SVK Towers, 8th Floor,
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Chennai

MM Forgings Limited secures significant majority stake in EV Powertrain startup Abhinava Rizel as part of its transformation strategy

As part of its transformation strategy to become a leading player in the growing electric vehicle (EV) segment, MM Forgings Limited (MMF) has made an investment to secure an 88% equity shareholding in Abhinava Rizel Private Limited (Abhinava Rizel) (www.abhinavarizel.com) on a fully diluted basis. Further, MMF will provide the necessary financing to establish the manufacturing facility and other product development initiatives. On an aggregate basis, MMF expects to invest Rs.200 crores (~US\$25mn) in this initiative. More importantly, MMF's involvement will also provide significant technical and managerial expertise to accelerate Abhinava Rizel in its growth path.

The founders of Abhinava Rizel, BVN Madhu, Karthik Donthula and Shivam Bhatia (alumni of SRM Institute of Science and Technology), have been jointly developing EV motor and powertrain technologies since 2017. As a result of the team's work, Abhinava Rizel has 8 patents filed and an additional 10 patents under filing in respect of EV motor and powertrain technologies.

Abhinava Rizel's motors are based on proprietary hybrid topology radial flux architecture between SynRM (Synchronous Reluctance Motors) and PMSM (Permanent Magnet Synchronous Motors), combining the best of both technologies. Together with this combined capability, and well-developed thermal management techniques, thermal efficiencies achieved are around 25% higher over conventional traction motors. This enables significantly reduced use of magnets, copper, aluminum, steel, etc., with zero compromises in performance.

Abhinava Rizel has multiple patented innovations whose incorporation in design yields around **15% improved overall drive cycle efficiency** over conventional traction motors. This means that a typical EV user can travel 15% more distance on every charge, or EV OEMs can use around 15% smaller battery pack for a given range, making EVs affordable to a wider market. Abhinava Rizel is also developing gearboxes and innovative controllers using Gallium Nitride (GaN) and Silicon Carbide (SiC) technologies to soon provide integrated (3-in-1) "Controller+Motor+Gearbox" solutions to their customers across all segments of automotive and off-highway spaces.

Abhinava Rizel is currently partnering with automotive manufacturers in India and the investment by MMF will be utilized to establish its initial manufacturing facility in Oragadam, Tamil Nadu. More importantly, MMF's significant technical and managerial expertise will launch Abhinava Rizel in its path of accelerated growth.

Commenting on the investment, Mr. Vidyashankar Krishnan (Vice Chairman and MD of MM Forgings Ltd) said, "MMF is the supplier of choice for leading global automotive companies across the spectrum of vehicle configurations, especially in the passenger and commercial



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transportation automotive segments. These relationships have grown over time and MMF has secured the preferred supplier status through a combination of innovation, joint development, cost competitiveness, and above all high integrity in delivery and service. Given the growing presence of EVs across the overall automotive market, MMF is seeking attractive investment and partnering opportunities to pivot itself and become a significant industry participant in this emerging sector.

We are excited about the capabilities developed by Abhinava Rizel and believe MMF can accelerate its progress significantly. We expect the market for EV powertrains in India to gradually grow to ₹ 100,000 crores over the medium term. Through this investment, MMF expects Abhinava Rizel to acquire a reasonably attractive share of the marketplace in step with the acceptance of its capabilities.

According to Mr. Krishnakumar Raman, President - Operations, MMF, "Abhinava Rizel has the complete capability to rapidly customize and tailor its motors for a wide spectrum of customer requirements ranging from 48V to 800V and 2kW to 250kW+ of power. This capability covers the requirements of two wheeler, three wheeler, four wheeler and commercial vehicle market segment. The motors are currently under intensive testing at external test centres. That initial results have demonstrated a deviance of less than 3% from their digital designs, is a strong testament to the product capability and design skills of the team at Abhinava Rizel. The current set of motors are currently under trials at multiple customers. We expect to convert these into significant supply volumes in the near future."

According to BVN Madhu, Co-founder, Abhinava Rizel, "The current scenario is an opportunity for India to play a bigger role in the global EV transition. We believe in making India known for great engineering and technology by providing leading-edge EV Powertrain solutions across the world. We deeply care about this, and we are happy to join hands with MM Forgings which shares this very same zeal. Together, we intend to have the "spirit, speed and agility" of a startup with the "reliability and pedigree" which comes with MMF's 75 years of autocomp manufacturing to deliver optimum powertrain solutions to the global EV space. Exciting times ahead."

Karthik Donathula, the other Co-founder, Abhinava Rizel commented, "At Abhinava Rizel, we are greatly focused on building products with an innovation-driven approach and a strong scalable product portfolio, which specially caters to the challenging Indian conditions."

Shivam Bhatia, the third Co-founder, Abhinava Rizel, is of the view, "We are a bunch of technology enthusiasts with a single-minded vision of making the world a better consumer of energy. We are delighted and grateful to partner with MMF who shares our vision and believes in focused innovation. As a team, which has the perfect blend of both worlds, we together will strive to bring India to the forefront of EV technology and develop great products for the whole world."

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