



**Mr. Anil Kumar**  
(MD & President India)

**SEG Automotives India Pvt Ltd**

# Leading the journey towards clean mobility:

## SEG Automotives India Pvt Ltd

Words By: Executives India

SEG Automotives is a pioneer in the automotive industry, known for its innovative solutions and continuous advancement in technological processes.

Professional background leading up to and including current role

Mr. Anil Kumar began his career with Bosch limited in 1990, known as "MICO" during that time, as a Technical Graduate Trainee, after completing the Bachelors of Engineering in Electronics and Communication, which was later followed by a MBA in Marketing. During the three decades of his professional career, he has held several responsibilities in MICO, Bosch and currently leading the SEG Automotive business in India as its President and Managing Director.

The first decade was focused on acquiring deep technical know-how and applying theory to practice on content driven topics in Machine design, Plant engineering, and Maintenance of PLC and CNC machines which were in great demand by the Indian industry. The early phase of his career instilled in him a solution-oriented problem solving mindset and a can do spirit.

The second decade was focused towards acquiring a breadth of experience. He led the Technical Engineering function of Bosch diesel systems in Jaipur-India, steered the manufacturing of Bosch Starter Motors and Generator (SG) division in Bangalore-India, and was responsible as Director of global

commercial vehicle sales, SG division in Bosch Germany-Europe. These substantive roles in various functions helped him to broaden his internal and external perspectives on business. With the depth and breadth of business knowledge and experience in key functions, the third decade turned out to be a phase where he focused both on the 'joy of leading' and transforming the business.

At the beginning of third decade, he took over as the Regional President for Starter Motors and Generators division of Bosch in India. Since then, together with his management Team and ably supported by leadership coach Mr. R R Nair, he made significant contributions in restructuring, transforming, and diversifying the business towards securing market leadership position in India.

In the restructuring phase, the focus was towards operational excellence with lean management, which was achieved through redefining the business strategy with unique approaches and efficiency drives. The transforming phase witnessed introduction of a slew of new competitive products with the help of our engineering and

design group. He chartered yet another transition when the business was carved out from the Bosch group to form a new company, operating today as "SEG Automotive India Private Limited". This phase also witnessed sustained business growth, with diversification into new products like light electric mobility and customers besides introduction of new business verticals and seizing new growth opportunities in services and electrification, thereby creating a new identity for the new entity.

What have been some of the significant highlights of SEG Automotive history?

SEG Automotive is closely linked to the history of the automobile. Building its own identity after emerging from the BOSCH Starter Motors & Generators division in January 2018, the company stands for more than a century of innovations in its product sector right from the invention of the starter motor and generator to start/stop and hybridization. SEG Automotive makes a significant contribution to climate protection by reducing emissions across powertrain technologies: Fueled by its passion for innovation, the global supplier is driving the transition towards more efficient combustion engines, 48V hybrids and electrification. Almost all

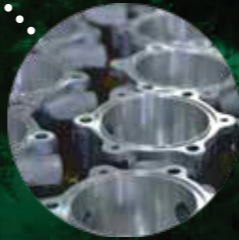


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Our Sincere Thanks to SEG for their Support

### EXECUTIVES IN FOCUS

automotive OEMs worldwide rely on SEG Automotive's global production network, which delivers high-performance, and durable and competitive products with uniform quality standards.

In India, the company started its operations in 1989, and since then the company has launched a series of new competitive products, upgrading the automotive electrical components landscape and supporting global and local manufacturers in meeting critical legislations or the benchmark targets. The company with in-depth understanding of the local market has been catering to its various needs and its customer base. The innovations like start-stop motors, high efficiency and durable high performance generators, thermally and water protected starter motors and integrated earth return products have enhanced the customer trust on SEG Automotive and its capabilities. The company is also catering to various needs of electrification, e.g. efficient e-motors for e-rickshaws and e-autos, currently with the locally developed products and solutions to support OEMs in meeting the upcoming regulatory requirement

At SEG Automotive, the focus has always been in improving the customer experience, through the product and/or



our employees and the environment. We are committed to being a reliable, long-term business partner with sustainable economic success. We create opportunities for personal development and international career advancement for our associates.

At the very heart of SEG Automotive's success is the dedication of each individual working passionately for a sustainable future. With Trust, Transparency and Teamwork as foundation, we approach every task with a spirit of ownership. With our customer centric culture, we keep our promises to the customers in development, and launch and time to market of new product applications. We keep improving our business processes with an aim to serve our customers in a more efficient way. Customers are the

the processes. On the processes side, the company has come up with benchmark business models with lean principles catering closer to the customer locations in a competitive manner. These new business models have also provided new avenues of growth for our business partners within the product sector.

### WHAT ARE SOME OF SEG AUTOMOTIVE'S KEY VALUES AND BELIEFS? HOW IMPORTANT IS CUSTOMER SATISFACTION?

Reduction of CO2 emissions as company mission

SEG Automotive has a clear path to achieve sustainable and profitable growth: contribute to climate protection by significantly reducing emissions from passenger cars and commercial vehicles – globally and across all powertrain technologies. Our recent developments are tackling CO2 reduction from several angles; by introducing start-stop technology into smaller cars and emerging countries with the ultra-compact SC60; by developing a best in-class efficiency and robust e-drive solution for light electric mobility; by releasing the new, highly-efficient Heavy Duty generator platform for commercial vehicles; and by making significant investments into further expanding the product portfolio



focal point in all our actions. With our agile response, we win our customer's trust and continue to remain as their preferred partners, thereby retaining our position as a pace setter in the market.

### WHAT DO YOU THINK THAT SETS YOUR BUSINESS APART FROM ITS COMPETITORS?

**Leading player – we provide more than 100 years of experience:**

SEG Automotive is closely linked to the history of the automobile. Emerged from the BOSCH Starter Motors & Generators division in January 2018, the company has been driving innovation as the technology leader in its industry for more than a century: from the very first generators and starter motors to Start/

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for 48V mild-hybridization. In addition, SEG Automotive's Boost Recuperation Machine for 48V mild-hybridization, is recognized as an eco-innovation by the European Union, which enables carmakers to gain CO2 credits for applying the product.

### Our Guiding Principles:

**Passion for Innovation:** We delight our customers with our product development competence as well as our ability to innovate. We are driving innovation as the technology leader in our industry for more than a century. Our solutions accelerate the transition towards more efficient combustion engines, 48V hybrids and electrification.

**Operational Excellence:** We deliver high-performance, durable and competitive products and solutions with robust processes and uniform global quality standards.

**Global Strength:** The foundation of our success are our diverse, cross-cultural and international teams. We have an efficient global network throughout the value chain – with close proximity to our customers across the world.

**Commitment to our Responsibility:** We care for our customers and suppliers,



Stop, mild hybridization and components for electrification. We actively support our customers in clean and green mobility by providing efficient CO2 reduction solutions for ICE, and also shape the transition towards electrification.

### India – Three decades of expertise on leading through Innovation and Customer focus

In India with three decades of expertise in the local market, and in-depth localization, we offer competitive innovative solutions for our customers across all automotive segments. With the state of art, 'glocal' engineering centre, we are fully equipped to simulate the real field conditions/customer desired applications. In addition, we continuously upgrade our portfolio with reliable

solutions for the local market. For example: To prevent accidently abuse during inching of vehicles, the thermal switch was developed as a local innovation, to prevent the burning of starter motors.

With our Innovative approach, new product development, application engineering and operational excellence, we continuously and successfully deliver to meet our customers' requirement. This, we believe is the source for earning the customers' trust. Customers are the focal point in all our actions and transactions. Over the years, we are happy that we have built a strong partnership with our customers making SEG Automotive a preferred partner.

**HOW HAVE YOU FOUND THE AUTOMOTIVE INDUSTRY IN INDIA?**

India is a very important automotive market in global context; India is the 5th largest producer of light vehicles, 4th largest producer of commercial vehicles and a major market for 2-wheelers, 3-wheelers and the agricultural tractors. The Indian automotive market also contributes significantly to the country's GDP at ~7% and employs over 3.5 crore people directly and indirectly. The auto component sector also contributes ~2.3% to the nations GDP and over 4% in the total exports.

Being one of the major automotive markets, globally, the penetration of cars in India is very low compared to major economies around the world; it's at ~22cars per 1000 people. Yet the congestion levels are very high already as we see in major cities. The other challenges faced by the Indian automotive industry are the pollution and the huge import bill on crude oils. On the pollution front, 7 Indian cities are in the top 10 most polluted cities in the world.

The opportunities for the Indian automotive market, considering these challenges are 1) Shared mobility with focus on digital and connected infrastructure, and 2) Electric mobility of light vehicles, namely two wheelers and three wheelers.

Considering the challenges like pollution, congestion and high import bill of crude oil, the segments of two wheelers and three wheelers provide an immediate opportunity for electrification without any additional burden on the end user or the government when compared to other automotive segments like passenger car or the commercial vehicles. On the electric vehicle, two wheelers and three wheelers have an advantage over its ICE counterparts, with total cost of ownership being very low and the returns expected within 1-2 years or

even earlier in case of shared mobility. Also the need for a public charging infrastructure is minimal.

The Indian automotive market has always been demanding in terms of requirements and timeline. In the new age, the need for safer, connected and smart vehicles are on the rise inching closer to the global standards. This offers new opportunity for the Indian players not just in the domestic market, but also in the global markets.

We strongly believe in the long-term potential of the Indian automotive industry and have significantly invested on our R&D, manufacturing facilities in spite of the downturn. Our manufacturing quality and capabilities are comparable to the best in the world backed by a highly skilled and engaged workforce. We stand to benefit from this strategy now and are able to not only grow very rapidly in the domestic market but also play a key role as an 'Export hub' within SEG Automotive world. A true example of 'Make in India' and 'Go Global'.

**HOW IMPORTANT IS CULTURE TO THE BUSINESS? HOW DO YOU INSTILL THIS IN YOUR EMPLOYEES?**

I strongly believe that culture is the foundation for any business. At SEG Automotive, the **customer centric culture** based on trust, transparency and teamwork as values forms the foundation. And with the guiding principles like *Passion for innovation, Operational excellence, Global strength* and the *sense of responsibility* towards our customers, business partners, employees and the planet we achieve our vision **"contributing to climate protection by significantly reducing emissions across powertrain technologies"**.

We have processes to continuously dialogue with our employees, understand the challenges and derive solutions to co-create the future. With true empowerment we create 'Leadership at all levels' and drive the culture of entrepreneurship, with Customers being the focal point.

**SEG Automotive - Efficient solutions for CO2 reduction**

The transition from internal combustion engines to electric vehicles plays an important role on a global scale in mitigating man-made climate change. However, this transformation will not take place suddenly, but gradually. According to the current forecasts, in India, more than 90% of newly registered passenger cars will still have an internal combustion engine in 2025. The

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OUR PRODUCTS AIM TO REDUCE CO<sub>2</sub>**



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# HOW IMPORTANT IS CULTURE TO THE BUSINESS? HOW DO YOU INSTILL THIS IN YOUR EMPLOYEES?

goal for these ICE vehicles must be to keep CO2 emissions as low as possible.

SEG Automotive is actively shaping the automobile industry's journey from the combustion engine to electrification by delivering efficient solutions for CO2 reduction – regardless of the powertrain technology. We continuously evaluate the product gaps and manage our portfolio by investing on new technology for the future. One such technology recently has been the highly efficient electric mobility solutions towards electrification of two wheelers and three wheelers. We have already started on this journey and would bring in new technologies for further CO2 reduction in ICE vehicles, while upgrading the electrification portfolio.

## **SEG Automotive - Solutions for internal combustion engines**

While electric mobility is gaining popularity and proving beneficial in the light mobility space, the internal combustion engine will continue to play a significant role on the passenger car applications in the years to come. For this segment, SEG Automotive's efficient solutions like the start stop motors, high efficiency generators and the 48V hybrid solutions, offers improved fuel economy and CO2 reduction.

## **SEG Automotive – Solutions for Electrification**

Light electric mobility in India is gaining pace, considering the drive and usage pattern, the total cost of ownership is already positive for electric two-wheelers and three-wheelers. SEG Automotive India has co-developed together with the German counterpart, the efficient solutions for the light electric mobility. The locally

manufactured, EM series of machines starting with 2kw peak power and ranging up to 8 kw offers efficient, reliable solutions for the entire EV system of light electric vehicles, thus increasing range and further reducing the total cost of ownership. The systems high power density combines compact packaging with a great responsiveness, offering fun driving experience. The drive control system ensures functional safety according to global standards, and provides safe operation at all times. Specific protection features and increased robustness enable these machines to easily withstand the tough operating conditions on Indian roads.

Overall, the need of an automobile in this time and age is to be efficient and reduce pollution in addition to being a safe means of transportation. Light electric mobility provides an immediate opportunity for complete electrification due to relatively lesser investments and the lower total cost of ownership. In addition, for other segments of automobiles based on internal combustion engine, the transition to electrification will happen through introduction of hybrids. At SEG Automotive, we offer mild hybrid portfolio making the ICE much more efficient and reducing CO2 up to 26% compared to conventional cars. And the requirement of strong hybrid and HV for electrification is being investigated for future readiness.

## **SEG Automotive –Global hub for engineering software and solutions**

With the expertise in the Indian automotive market for close to three decades, SEG Automotive is focusing on scaling up our competence for the global automotive needs on mechanical design with rapid prototyping, system solutions with CAE application,

embedded solutions for hybrid and electric control systems.

## **WHAT STRATEGIES DOES SEG AUTOMOTIVE INDIA HAVE IN PLACE TO IMPROVE YOUR SUPPLY CHAIN AND BUILD LONG-TERM RELATIONSHIPS WITH KEY PARTNERS?**

**SEG Automotive India – Make in India** SEG Automotive, a leading player in the Indian Auto electrical segment has three decades of expertise in the local market. With well-established domestic supply chain and in-depth localization of components, SEG Automotive India delivers 'Make in India' products and services to its customer base across the globe.

SEG Automotive India plays a prominent role as export hub for the global business of our company, and to cater to this requirement, we continuously evaluate and develop the competence of our business partners with our strong processes and systems. We qualify our business partners to meet the global standards required for our operations and by our customers globally. With robust business strategies, we enable our business partners for backward integration and enhance their portfolio. We have also developed flexible business models making SEG Automotive lean and competitive. We create a win-win situation for our partners across the value chain. Business partners are our integral part of the growth story. We constantly engage with them in a transparent way – building trust and collaboration.

## **WHAT ARE SOME OF THE KEY GOALS MR. ANIL KUMAR AND**

## **EXECUTIVES IN FOCUS SEG AUTOMOTIVE INDIA HAVE ACHIEVED SINCE THEY'VE BEGUN THEIR ROLE AS THE MD & PRESIDENT?**

**SEG Automotive India - Our Journey towards excellence** Starters motors and generators business division was established in 1989 as part of Bosch group. With the transition and formation of SEG Automotive, beginning 2018, the company was able to successfully retain and build on the customer trust, thereby further improving its market position together with the launch of innovative products and diversifying into new regions and business areas. The company with the foundation of Trust, Transparency and Teamwork, was successful in retaining and growing the talents, to co-create the future.

The passionate and committed leadership team did a great job in leading their respective teams in the Journey to excellence, Mr. Natarajan who is also a director in the SEG Automotive India's board focused on all the commercial activities to secure a strong financial position while driving Lean IT processes and people excellence.

Mr. Veerabasappa and Mr. Mouli drove business excellence in operations and supported establishment of new business models. Mr. Sudhir with his team was not only able to retain and improve customer trust but also gain new customers and new business, while Mr. Krishna who took over from Mr. Narayan as head of development was able to continue the innovation drive, creating a flexible range of new products in our conventional and electrification portfolio. Mr. Raghavendra was able to efficiently transition the supply chain and create new opportunities for the business partners at a Global level.

Our Journey of transformation at SEG automotive India is driven by 3Ps, resulting in achieving technological leadership and establishing as leading player in Starter motor and Generator space of the Indian Automotive market,

- Product transformation
- Process transformation
- People transformation

### **Product transformation**

At SEG Automotive, we continuously evaluate the product gaps and invest in our portfolio offering efficient product and solutions for our customers. Product excellence is the key ingredient to our success story. In the past, we have introduced a range of competitive products for passenger cars, commercial vehicle and the light electric mobility segments of the domestic market. The new base line generators first introduced over a decade for the passenger car application is been upgraded with newer generations to

meet the new requirements in terms of load and efficiency from time to time. The compact starter developed on C6 platform is the smallest of its kind in the segment, yet robust and powerful, capable of cranking engines up to 2.0l Gasoline and 1.5l Diesel. These globally developed, highly localized and cost competitive compact generators and starters were a game changer in the domestic and export passenger car market. The heavy-duty generators and starters developed locally for the domestic market and the commercial vehicle segment, offers robust performance and reliability in stringent operating conditions. While the range of conventional products offers higher efficiency in the conventional ICE vehicles and reducing CO2 emissions, the portfolio for light electric mobility like 2-wheelers and 3-wheelers are developed offering best in class efficiency and reliable performance.

SEG Automotive is actively shaping the automobile industry's journey from the combustion engine to electrification by delivering efficient solutions for

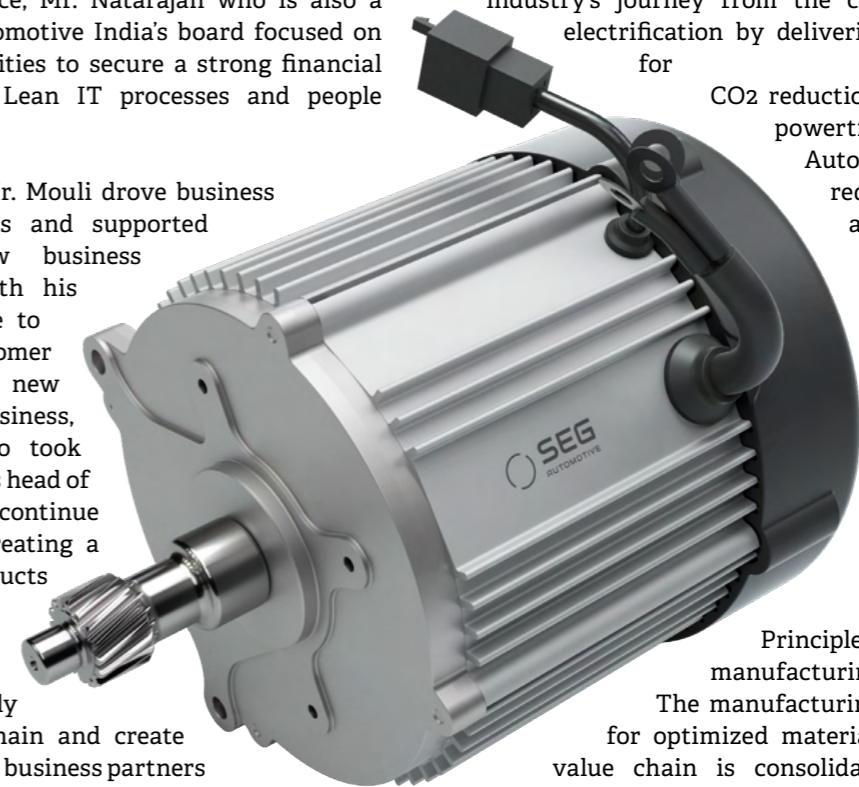
CO2 reduction – regardless of the powertrain technology. SEG Automotive products reduce fuel consumption and CO2 emissions under real-world conditions every day, enabling the transformation towards greener mobility.

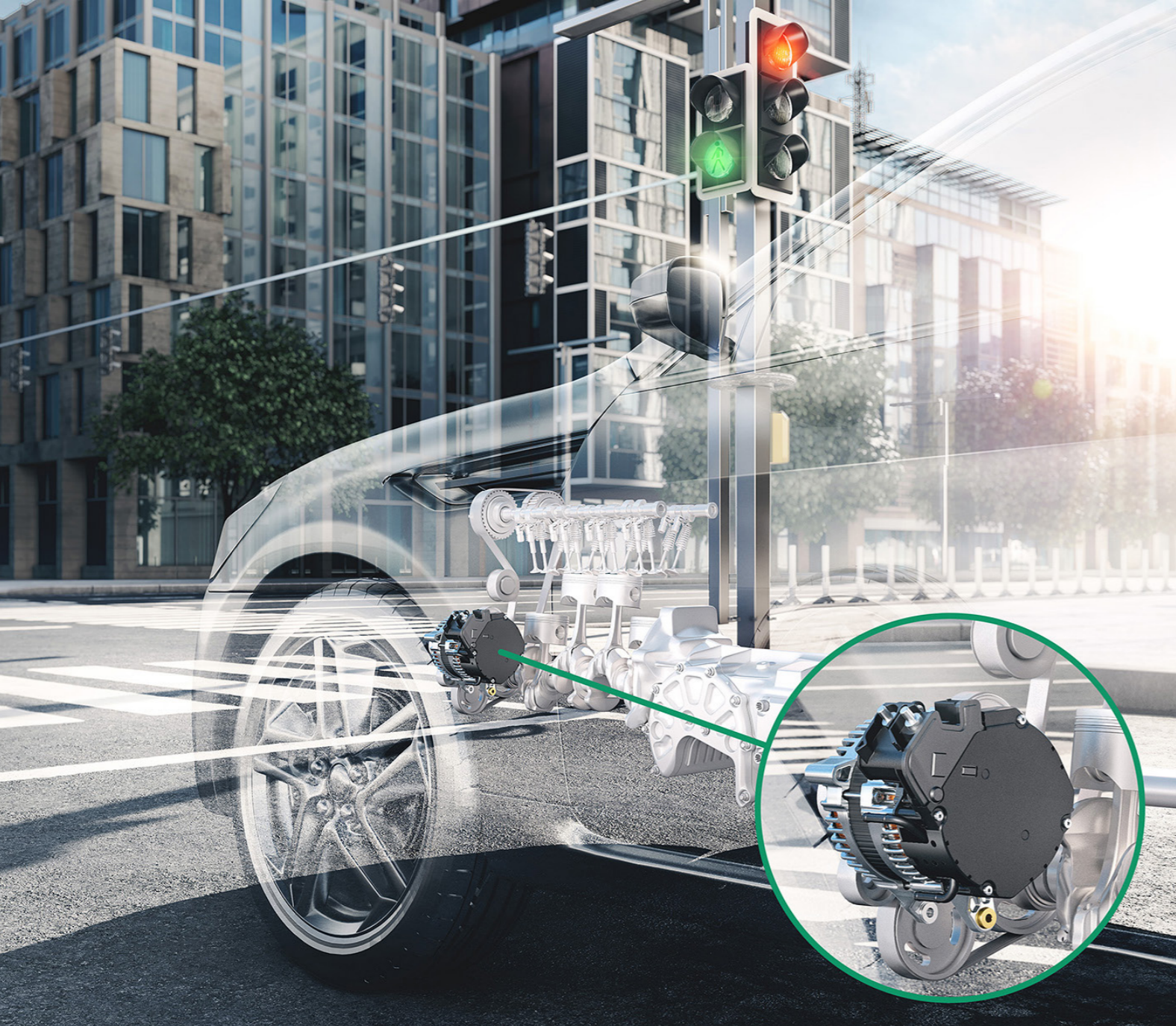
### **Process transformation Manufacturing facilities**

Principles of lean drive manufacturing at SEG Automotive. The manufacturing facility is designed for optimized material flow, as the entire value chain is consolidated under one roof, starting from inbound logistics, value addition, testing and outbound logistics. The lean line designs at SEG Automotive also ensures and prioritizes operator safety and ergonomics. The 'lean line design principles' are used in manufacturing lines which are globally standardized and the processes are released globally by lead plants within the international production network, enabling quality excellence and robust processes, to become an export hub.

### **Research and development**

The research and development team with its 30 years of experience in Indian market is capable of adopting global platforms for local needs, while developing innovative solutions for specific local requirements (e.g., protecting the starter motor against field abuse by innovative thermal protection feature). The customer dedicated application teams ensures launch of robust products with rapid time to market. The state-of-the-art research and development center is globally integrated to meet local and global requirements.





# Rotating Auto Electricals

## Late Mr. Joginder Jeet Singh

Founded the company as a small unit producing commutators. The legend that started then has today evolved into one of the most well known manufacturers & exporters of Auto Electrical Components in India.

### PRODUCT RANGE:

BESOTO has gained a strong foothold in the Export market and is supplying to more than 135 customers across the globe. It's domestic & export product range includes:

- |                     |                   |
|---------------------|-------------------|
| STARTER MOTORS      | SOLENOID SWITCHES |
| ALTERNATORS         | FIELD COILS       |
| DYNAMO, DYNA MOTORS | ROTORS            |
| ARMATURES           | STATORS           |
| DRIVE ASSEMBLY      |                   |



BESOTO – ever since its inception in the year 1963 has pioneered the concept of quality & commitment translating to long-standing benefits for its customers. It is the culmination of one man's dream for excellence through relentless pursuit of latest technology and a passion to be the best.

### Innovative Business models – making SEG Automotive fit for the future

We developed flexible business models with our business partners enabling backward integration and consolidation. We create a win-win situation for our partners across the value chain. Business partners are our integral part of our growth story.

### People transformation

### Trust – Transparency – Team (TTT) work as foundation of Success

At the very heart of SEG Automotive's success is the dedication of each individual working passionately for a sustainable future. With Trust, Transparency and Teamwork as foundation, we approach every task with a spirit of ownership.

### Leading the transition

I am very glad that the team here at

SEG Automotive is highly motivated and enthusiastic to lead the change and co-create a bright future. We express this as "Joy of leading". We provide an 'inspiring working culture and environment'.

We continuously build future competence within our organization coupled with focus on leadership development to be future ready. As we successfully navigate the current challenges of the Automotive industry, our goal is firmly set on a future where mobility is electrified and connected.

### GLOBAL VIEW:

SEG Automotive is a global automotive supplier headquartered in Stuttgart, Germany, which delivers to almost all automotive manufacturers across the globe. Dr. Peter Sokol, CEO of SEG Automotive, explains the significance

of the Indian market and local team: "SEG Automotive India plays an important role in our global business – India is a crucial market in the automotive industry and its importance will continue to grow. To be strong on a worldwide scale and maintain our role as a leading global supplier, we have to be a leading player in India. The leadership of our Indian region and their team are also internal leaders for driving new technologies, innovating in close cooperation with our headquarters in Stuttgart on such central topics as electrification. The spirit of Co-Creation is visible throughout the work of our colleagues and managers in India, which admirably combine global teamwork with local expertise and ideal answers for the requirements of their customer base."

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