PRESS KIT 2025

Founded in 1926 in Mindelheim, near Munich, Germany, GROB is a global leader in the production of machine tools and automation systems. The company operates several manufacturing plants worldwide, including the one opened in Italy in 2020, just outside Turin. GROB Italy represents the core of specialization in technologies for modern electric motors, serving the industrial, automotive, and light mobility sectors.

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GROB: GERMAN RELIABILITY, ITALIAN HEART

Founded in 1926 in Mindelheim, GROB is a leader in the production of machine tools and automation systems. Since 2017, with the acquisition of DMG Meccanica, the company has strengthened and consolidated its technological offerings for electric mobility. Today, GROB Italy provides solutions for electric motor manufacturing, generating a turnover of 28 million euros.

Among the global leaders in the production of machine tools and automation systems, GROB was founded in 1926 in Mindelheim, Bavaria, by Ernst Grob. Over the years, the company has grown by developing innovative solutions for various industrial sectors, from mechanical engineering to aerospace, automotive, and medical devices. GROB operates manufacturing sites in Germany, Brazil, China, the USA, Italy, and India, supported by a widespread sales and service network serving international clients.
With the acquisition of DMG Meccanica, located near Turin, GROB specialized in the production of machines and systems for manufacturing stators and rotors for electric motors, alternators, and generators.

Today, GROB Italy is the center of expertise for some of the key technologies dedicated to the future of electric mobility, with a particular focus on Light E-Mobility solutions for lightweight electric vehicles. It is the only Italian company—and one of the few worldwide—to provide turnkey plants for the production of electric motors for light electric mobility.
The Italian facility currently employs 130 people and achieves an annual turnover of 28 million euros..

At the heart of GROB's industrial philosophy lies the concept of simultaneous engineering: the ability to support clients from feasibility studies and custom solution design through to the realization and testing of production lines.

GROB ITALY: THE ORIGINS OF EXCELLENCE

1992 In Turin, a group of engineers who left Pavesi—then one of Italy's main suppliers of winding machines for electric motors—founded DMG Meccanica.

2008 The company grew and moved to a new facility, doubling its production area. Along with increased production, the number of employees also doubled, while revenue tripled.

2016 DMG Meccanica's technological offering expanded and focused on high-efficiency motors and alternators.

2017 GROB acquired DMG Meccanica, bringing Made-in-Italy technologies for electric motor manufacturing into the Group's portfolio. This marked the beginning of a new growth phase for the company in international markets.

2018 DMG Meccanica became GROB Italy S.r.l. One year later, construction began on the new plant in Pianezza.

2020 The Pianezza plant was inaugurated, covering an area of 24,000 square meters, of which 4,800 are dedicated to electric motor production lines.

THE BIRTHPLACE OF TOMORROW'S ELECTRIC MOTORS

Today, GROB is one of the few international players—and the only one in Italy—capable of providing technologies that cover the entire production process of an electric motor. From feasibility studies to project development in all its phases, GROB experts support companies in creating tailored projects across all areas of green mobility: from Light E-Mobility to more complex projects in the automotive sector.
The expertise developed by GROB Italy, near Turin, forms the foundation of production lines dedicated to light electric mobility. These include powertrains ranging from 4 to 40 kW for two- and three-wheeled vehicles such as electric scooters and motorcycles, as well as electric microcars, agricultural vehicles, e-boats, and so-called "for fun" vehicles like golf carts, karts, and jet skis.

The company's catalog covers solutions for heavy industry as well as the manufacturing of small electric motors for home automation and domestic use, from tubular motors for shutters to those for automatic gate and door openers.

GROB's technologies focus particularly on the production of stators with distributed or linear winding, permanent magnet rotors, and wound rotors, and may include impregnation and final assembly phases.

Not Just Motors

GROB also experiments with innovative procedures, technologies, and materials for the production and assembly of battery packs, fuel cells, and other energy storage systems—a strategic sector for the development of the automotive industry.

In all areas of application, the adoption of GROB technologies can start with a standalone machine and evolve into the development of a fully automated turnkey production line for electric motors or batteries.

The company's solutions cater both to established manufacturers in sustainable mobility looking to activate new production lines, and to newcomers entering the electric mobility market who need a reliable partner for innovation.

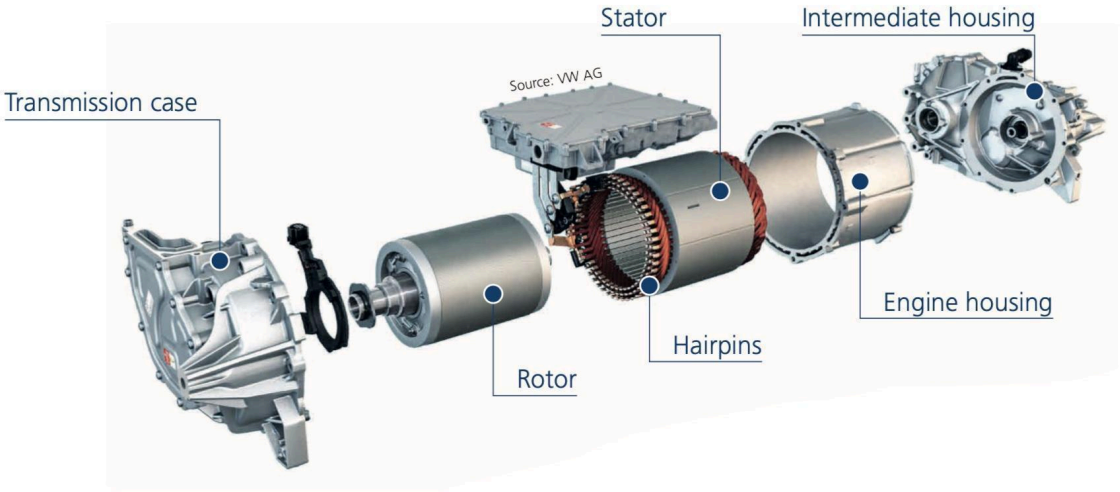
ELECTRIC MOTORS: AT THE CORE OF SUSTAINABLE MOBILITY

An electric motor is a machine that converts electrical energy into mechanical energy through rotational motion, based on the principle of electromagnetism and without directly using fossil energy sources. Essentially, when electricity flows through the motor, it creates a magnetic field that interacts with the wire coils inside, causing the central shaft to rotate.

An electric motor is generally composed of two main parts:

– **Rotor:** the moving part of the motor, which can generate a magnetic field using permanent magnets or electrical windings.

– **Stator:** the stationary part of the motor. The magnetic field rotates inside it.



Today, the most demanded electric motor for light mobility vehicles is the one with permanent magnets in the rotor and a stator featuring distributed winding with round copper wire. This technological solution offers the best power-to-weight ratio at a reasonable cost, built using a relatively simple manufacturing system capable of ensuring high production volumes.

There are many types of electric motors. The primary distinction is based on the type of current used, which can be either **direct current** (DC) or **alternating current** (AC). This division is fundamental because it determines the design, complexity, and consequently the manufacturing method of an electric motor.

DC motors are powered by a constant voltage source and produce continuous rotation of the rotor. They are commonly used in applications requiring speed and torque control, such as electric vehicles, as well as tools and portable devices.
DC motors are further divided into **brushed motors**, which use graphite brushes to transfer current to the rotor, and **brushless motors**. The former are simpler and less expensive but require more maintenance due to brush wear. The latter are more efficient, have longer lifespans, and require less maintenance, though they are also more costly.

AC motors, on the other hand, are powered by a voltage source that varies cyclically. They can be further divided into **synchronous** and **asynchronous motors**.
Synchronous motors rotate at exactly the same speed as the supplied AC frequency, while asynchronous motors rotate at a slightly lower speed.

The future? **Axial-flux electric motors**, where the magnetic flux runs parallel to the axis of rotation, unlike radial-flux motors where the flux is perpendicular. This configuration makes them more compact, lightweight, and efficient, particularly suited for applications requiring high performance and small dimensions.

Compared to a radial-flux motor of the same power, axial-flux motors have a larger diameter and lower height, which often simplifies installation and offers advantages in terms of the geometric footprint of the drive unit.

For the production of these motors, Grob Italy has developed two different technologies: one for manufacturing **flat-wire air coils** and a special **round-wire** machine capable of winding both axial-flux and radial-flux motors.

A HOLISTIC APPROACH

Grob stands out from most companies in the light e-mobility market for its ability to **cover the entire production process of an electric motor**, delivering turnkey plants for each of the four lines that make up the motor manufacturing process:

1. Stator winding
2. Rotor
3. Impregnation
4. Final assembly

Each production line operates independently, without being physically connected to the other three, but follows a common logical scheme. This way, a potential stoppage on one line does not affect the others.

Grob's solution layout is **scalable**, composed of stand-alone machines (capable of operating autonomously) that can be integrated into a highly automated line over time, in line with the growth of production volumes.
This approach allows the company to become a true innovation partner for many businesses experimenting with the introduction of the latest electric motor technologies. The industrial impact of this transition is multifaceted, and the consultancy combined with the flexibility of Grob's production lines offered to entrepreneurs becomes a winning factor for both parties.
Grob has consolidated significant expertise in this field, supporting leading companies in the sustainable mobility sector.

Grob has developed particularly reliable **technologies for rotor production**.
Whether in the permanent magnet version — the most widely used in light mobility — or in the wound rotor version, the Grob system guarantees perfect reproducibility of industrial processes to achieve the highest quality standards.

GROB WINDING TECHNOLOGIES

While Grob in Germany has developed production lines for motors with rectangular conductors, that is, hairpin stators, which have become the standard in the automotive world, Grob Italy's solutions for producing **motors with round wire inserted into stator slots** represent the standard for light mobility, using drives from 4 to 40 kW of power. This is an excellent compromise between motor performance and the investment required to produce it.

In this regard, the expertise acquired by Grob Italy over more than 30 years in winding technologies is fundamental. The company has developed a unique ability to optimize the filling of rotor and stator slots—i.e., the housings where the electrical windings that create the magnetic field necessary for the motor's operation are inserted.

AUTOMOTIVE

Stators with Continuous Hairpin Technology
This technology allows the creation of a high number of slots with a large internal diameter, optimizing production costs.
A prefabricated coil of wire is inserted into the stator.
The winding is distributed evenly and flat along the stator, thus maximizing motor efficiency and reducing power losses at low speeds.

Stators with Hairpin Technology
An innovative bending technique allows for very high flexibility and variety. Thanks to the use of preformed, open coil segments made of rectangular-section conductors (so-called hairpins) and a high degree of automation, this technology makes it possible to produce high-quality stators with maximum slot fill levels.

LIGHT MOBILITY

Stators with Insertion Technology

Insertion technology is a well-established method used in electric motors of all sizes and power classes, from consumer goods to the automotive industry. In the production of this type of stator, Grob uses flyer winding or needle winding technologies.

Rotors with Needle Winding

Needle winding technology is a complex method for applying round-section wire, typically used for separately excited rotors. This method allows the copper wire to be inserted into the rotor slots with high precision. The high quality of the winding ensures that the rotor maintains optimal performance throughout its entire service life.

In this type of rotor, magnetization occurs by passing current through the rotor windings. The ability to control the current—and therefore the magnetization—allows for higher levels of efficiency. This type of rotor does not require the use of rare earth materials.

5 ADVANTAGES OF GROB TECHNOLOGY

1. **High-Efficiency Stator**
   Thanks to the patented antitwist technology developed by Grob Italy, it is possible to insert a higher percentage of copper into the stator slot—while maintaining the winding speed of the flyer process. This increases the stator's performance and achieves the highest efficiency level attainable with this technology.

2. **Low Magnet Assembly Costs**
   The fixation of the permanent magnets inside the rotor is achieved using a smaller amount of adhesive compared to other solutions on the market.
   This results in two key advantages: a cost-saving benefit, as it reduces the final product's cost, and greater flexibility, as the line can be easily adapted to manufacture different types of rotors.

3. **Clean Rotor Manufacturing Process**
   In the system developed by Grob Italy, the magnetizer is positioned toward the end of the process, just before inserting the magnets into the rotor. This means that non-magnetized magnets are handled throughout the line, ensuring a cleaner and safer production process.

4. **Optimized Impregnation**
   Impregnation is carried out using the trickling process, in which the resin penetrates the components by capillarity—ensuring the most effective possible coverage.

5. **Flexibility**
   Grob Italy's solution is modular and can be customized in terms of both the number of machines per line and the level of automation. This allows manufacturers to flexibly meet production needs, whether in terms of volume or varying degrees of automation.

BETWEEN SUSTAINABILITY AND INNOVATION: THE GREEN REVOLUTION ACCORDING TO GROB

Interview with Klaus Eberts, Head of Sales, Grob Italy

What role does Grob play in the energy transition, one of the key challenges for the industrial sector with decarbonization as a crucial goal?

The electric mobility sector is developing increasingly efficient and sustainable solutions, from axial-flux motors to hydrogen fuel cells. These innovations represent a significant step toward a greener and more technologically advanced future. Grob's goal is to be one of the leading players in this green revolution, supporting not only automotive manufacturers but also companies developing light mobility projects along this path.

How important is light mobility in Grob's growth strategy?

The shift toward electric light mobility is accelerating, and the most promising technological solutions that major industry players are investing in are becoming clearer. At Grob, we have worked in recent years to expand our portfolio of solutions for this sector, such as systems for building axial-flux motors and fuel cells—and the results are proving us right. We will certainly continue to invest in this direction, while also strengthening our efforts in a more established area for us: insertion technologies. We have also recently developed two new production lines: one dedicated to permanent magnet rotors and the other to stators for light electric vehicles, particularly two- and three-wheelers.

What are the strengths of Grob's technologies?

Grob's solutions are valued by customers for their compact design, reliability, and efficiency. But there is another aspect we consider strategically important: our ability to team up with clients and work together as a single unit to solve problems. More and more, companies are looking not just for suppliers, but for partners who can support them at every stage of their projects—including the operational phase of their systems—to continuously optimize processes.

How green is your company?

Implementing sustainability criteria—namely ESG (Environmental, Social, Governance) parameters—is one of our current priorities, because refining these factors deeply influences company management models. Our goal is to achieve ISO 14001 environmental certification and begin collecting the data needed to eventually obtain a Carbon Footprint certification.

F.A.Q. FREQUENTLY ASKED QUESTIONS

What types of electric motors does Grob produce?

Grob does not manufacture electric motors. The company designs and produces machines for the manufacturing and assembly of the various components of an electric powertrain—but not the motor itself.

It's a bit like the difference between a major pasta brand and the company that builds the production lines on which that pasta is made.

Can Grob's technology also be used to produce motors for household appliances?

Many of Grob's manufacturing technologies are compatible with the motors used in household appliances, particularly high-end ones.

A large share of the motors used in the HVAC sector, for example, still rely on stators produced through coil winding.

Even in the so-called white goods sector (refrigerators, washing machines, dryers, ovens, and dishwashers), there is a clear shift away from less efficient, noisier, and shorter-lifespan solutions in favor of brushless motors, which are more efficient and electronically controlled via inverters.

Which types of electric motors are most promising for the home appliance industry?

Among the motor types that are likely to gain more ground in the household appliance sector are segmented stator motors.

These offer higher efficiency than conventional brushless motors produced through needle winding, thanks to the higher slot fill factor in the stator.

GROB IN FIGURES

Founded:	1926
Headquarters:	Industriestr. 4, 87719 Mindelheim, Germania
Grob Italy:	Via Sergio Marchionne, 3 10044 – Pianezza (TO) Italy
Production:	Machine tools, automation systems, 4- and 5-axis machining centers, machines and systems for the production of stators for electric motors, alternators, and generators
Chairman:	Christian Grob
CEO:	German Wankmiller
CEO Grob Italy:	Pier Paolo Villois
Employees (global):	8.800
Employees (Grob Italy):	130
Revenue 2023:	€1.8 billion
Revenue Grob Italy:	€28 million
Production sites:	Germany (Mindelheim), Brazil (São Paulo), USA (Bluffton), China (Dalian), India (Bangalore), Italy (Pianezza)