WE DRIVE INNOVATION

SMARTER SOLUTIONS FOR E-MOBILITY, HMI AND CONNECTIVITY AROUND THE GLOBE.
A company which is one of the top global automotive suppliers must constantly reinvent itself.

This is exactly what we have been doing since our founding in 1919. At the beginning of the last century, for example, Jakob Preh was one of the pioneers who produced components for the first radio receivers. However, his ability to look beyond the horizon enabled him to supply products to the contemporary automobile industry: indicators to show a change of direction.

And nowadays? After an entire century, a lot has changed, but at least two things have remained constant until today: the family atmosphere and our spirit of innovation.
The Joyson Group is headquartered in Ningbo, China. It is one of the world’s 30 largest automotive suppliers. Within the Joyson Group, Preh, together with Preh Car Connect makes up the Automotive Electronics Division.

Ever since the founding of our company, the name Preh has stood for technical innovation and the flexibility of a medium-sized company. After having started as an equipment and component manufacturer in the broadcasting industry, the company has developed into an automotive supplier. Nowadays, the company concentrates on the development and manufacturing of HMI systems, ECUs for e-mobility applications, navigation systems and infotainment as well as connectivity solutions. With more than 7,000 employees, Preh’s turnover well exceeds 1 billion euros.

The recent past was dominated by acquisitions which took the Preh Group to a higher level. The integration of Preh Car Connect has opened new dimensions in terms of sales, locations and competences and with Preh Sweden AB we have fostered our know-how for power electronics solutions.

We appreciate all the more the amount of passion our Preh team has put into our joint success and how it has always gone the famous “extra mile”.

As a significantly larger group of companies, Preh will continue to grow even closer and write a new chapter in the company’s 100-year success story.

We will develop and produce smarter solutions for e-mobility, human machine interfaces and connectivity worldwide in line with our motto: “We drive innovation!”
THE PREH PRODUCT PORTFOLIO

IN-VEHICLE SYSTEMS

HMI AND CONNECTIVITY SOLUTIONS

COMMERCIAL VEHICLE HMI

CONTROL CENTERS FOR COMMERCIAL VEHICLES

Controls in commercial vehicles have to be extremely reliable and durable under tough operating conditions on roads and fields. The product range of the Preh commercial vehicle specialists runs from particularly robust instrument clusters to high-tech control systems and fully integrated control panels.

CAR CONNECT

CAR INFOTAINMENT, VEHICLE NETWORKING AND TELEMATICS

Preh Car Connect develops complete head units, as well as software solutions for infotainment without limits. The car thus becomes a mobile control center which can provide the driver with personalized live routes with real-time information.

E-MOBILITY

TECHNOLOGY WITH A VISION

EFFICIENCY AND LONG LIFE SPAN

Battery systems in electric and hybrid vehicles need intelligent battery management to achieve a longer range and lifetime. In addition to control units for 48V applications and power electronics, Preh develops other solutions, such as inductive charging.

CAR HMI

INTUITIVE STEERING INCLUSIVE

Preh demonstrates special know-how and innovative power again and again in new HMI concepts. The aim is to make the selection and display of functions similar to intuitive smart phones and tablets while minimizing distractions.
Human Machine Interfaces (HMI) in the vehicle interior are only as good as their intuitive usability. That is why we pay particular attention to a user-friendly design and layout in our conceptual designs. Well-known automotive manufacturers put their trust in us, as we are one of the global technology leaders in this sector.

In the field of multifunctional steering wheel switches, so-called touch control buttons belong to the latest series developments. This innovation, developed in close collaboration with our customer, allows the driver to effortlessly select the various functions in the central display and the instrument cluster with his thumb without having to take his hands off the wheel.

Preh also has a particularly strong competence in the field of air conditioning control. We do not only produce control systems for the air conditioning functions, but also develop the climate control software. However, different automotive manufacturers have very different requirements. Some manufacturers work with very exact system needs, while others ask us to propose a new solution. As a result, we retain different degrees of freedom in order to achieve an excellent climate comfort with the appropriate approach. More than 30 years of experience make us very adaptable.
EXEMPLARY SUSTAINABILITY

PRE(H)MIUM QUALITY FIRST

We spell “premium” with an “h” to symbolize our quest for perfect quality. To this end, Preh has also been investing in state-of-the-art laboratory technology for many years. Recently, we even acquired a CT scanner to advance our measurement technology to see right into products using computer tomography without the need to take them apart.

But sustainable quality alone is not enough for us. We also want to improve across the board and use resources efficiently. Some examples:

- 30% less power consumption during injection molding at our plants in Mexico and Romania
- 30% less nitrogen usage by optimizing the nitrogen content
- 80% less water used during painting at our plants in Germany, Mexico, Romania, Portugal, and China
In the Commercial Vehicle HMI Division, we combine the latest technological developments from CAR HMI with the requirements from our commercial vehicle customers regarding cost and robustness. The product range for harsh road and field conditions runs from particularly robust instrument clusters to high-tech control systems and fully integrated control panels.

One-off project costs make up a decisive proportion of the overall expenditure in the commercial vehicle sector, while cost pressure is high at the same time. Being an automotive supplier with a global footprint Preh can offer smart solutions. One example are tools that can be produced at very competitive costs, and existing concepts are used several times in order to reduce the development outlay. Thus, Preh is also ideally placed with regard to cross-interface system approaches, which, in addition to the individual components, includes their integration into electronics.
PREH CAR CONNECT

Preh Car Connect develops complete head units, as well as software solutions for infotainment without limits. Car-2-X will revolutionize traffic in the upcoming years. Among other things, the exchange of data on ABS, steering angle, position, direction and speed will increase road safety significantly. One example is the Connectivity Box developed by Preh Car Connect that can extend the driver’s visibility electronically by enabling dynamic adaptation to changing traffic conditions, distance control, communication with construction sites, traffic guidance systems and traffic lights, as well as traffic jam and collision warnings.

In the commercial vehicle sector, this means, among other things, that this technology can be linked by data networking. That is, within a line of vehicles, the Connectivity Box enables control to be transferred to a vehicle connected to the line, while others follow under controlled distance and speed control.
Battery systems in electric and hybrid vehicles need intelligent battery management to achieve a longer range and lifetime. In addition to control units for 48V applications and power electronics, Preh develops other solutions, such as inductive charging. Our battery management control units are used, for example, in the BMW i3, i8 and ActiveHybrid models. ECUs for 48V applications are in mass production for all Mercedes-Benz Cars with a 6-cylinder engine. On-Board-chargers are supplied for Volvo buses and various car models of the OEMs.

Battery management ECUs ensure that all cells are charged and discharged evenly to ensure optimal battery performance. The high-voltage accumulator is in permanent use due to energy consumption during the electric driving phase and to energy recovery during braking and charging. In addition, the battery cells typically show different charge levels, depending on their age and the manufacturing tolerances. Preh ECUs therefore constantly monitor the voltage and temperature of each individual battery cell. The data is processed in the Battery Management Unit in order to balance the different charging levels and thus ensures an optimal battery performance.

**BATTERY MANAGEMENT BY PREH**

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**E-MOBILITY**
PREH’S IN-HOUSE POLICY

IN-HOUSE PRODUCTION MAKES SENSE

Developing the technology of the future requires superior know-how about the entire product engineering process. At Preh, we consistently foster a high in-house production depth - at all of our sites. It is all connected. Not only is this extremely cost-efficient, it also means that we can respond to our customers’ wishes with great flexibility and speed.

Thanks to Preh’s in-house policy, the share of our products produced within the company is consistently very high - even as much as 90% for some products.

UP TO 90% PRODUCTION IN-HOUSE

DEVELOPMENT
System design | Advanced development | Design
Hardware/Software

PRE-PRODUCTION
Tooling | Plastics injection molding
Painting | Electronics manufacturing | Lasering

PRODUCTION
Assembly | Final inspection

WELL-KNOWN AUTOMOTIVE MANUFACTURERS RELY ON PREH

OUR REFERENCES
AMG, AUDI, BENTLEY, BMW, CLAAS, DAIMLER, DAF, FENDT, FORD, FREIGHTLINER, GENERAL MOTORS, JOHN DEERE, LAMBORGHINI, MAN, OPEL, PORSCHE, ROLLS-ROYCE, SAME DEUTZ-FAHR, SEAT, SKODA, TESLA, AND VOLKSWAGEN
Preh center console concepts are proven to be an excellent way of presenting the latest technologies from advanced development to the automotive manufacturers. Today, more than a decade after the first Preh center console concept has been presented at the IAA in Frankfurt, Preh's HMI know-how is complemented with navigation and connectivity solutions from its subsidiary Preh Car Connect.

Preh represents the Automotive Electronics Division of the Joyson Group. Joyson's know-how pool also comprises the capabilities for air vents and interior trims in its Automotive Components Division as well as steering wheel expertise in its Automotive Safety Division.

Next generation HMIs will offer a smarter integration of functions. Preh's technology can turn so far purely decorative wooden surfaces into fully functional controls. A decorative part's functional properties become visible only when a hand or finger reaches out to the surface. The now visible (illuminated) function icons can be selected. After the function selection has been made, the illumination of the icons disappears and visible remains merely the decorative wood surface. Of course, this is not only limited to wood. A variety of surfaces can be made fully functional.

**WE DRIVE INNOVATION**

Preh has an impressive performance history of creating truly innovative technologies that have made their way into series production. A few examples:

- Touch Control Buttons for Mercedes-Benz (various models)
- Real glass surfaces for the entire center console for Porsche 918 Spyder
- Touch surfaces with active haptic feedback for Audi (various models)
PREH'S GLOBAL NETWORK

Preh products originate in Germany and are manufactured in three continents. The product engineering process is organized globally according to standardized process steps. This is how we ensure ideal cooperation between our plants. Everything we do is underpinned by our motto: “Innovation and Pre(h)mium Quality first!”

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GERMANY
PREH CAR CONNECT GMBH DRESDEN

PREH CAR CONNECT THÜRINGEN GMBH, DIPPACH

PREH CAR CONNECT POLSKA SP. Z O.O., PL, OBORNKI