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 foundation 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 almost a century, much has changed, but at least two things have remained constant until today: the family atmosphere and our spirit of innovation.
AUTOMOTIVE SAFETY

AUTOMOTIVE COMPONENTS

AUTOMOTIVE ELECTRONICS AND AUTOMATION

PREH IN THE JOYSON GROUP

The Joyson Group is headquartered in Ningbo in China. It is one of the world’s 100 largest automotive suppliers. Within the Joyson Group, Preh, together with Preh Car Connect and Preh IMA Automation (PIA), makes up the Automotive Electronics & Automation Division.

Ever since its foundation, the name Preh has stood for technical innovation and the flexibility of a medium-sized company. Starting as an equipment and component manufacturer in the broadcasting industry, the company has developed over the years into an automotive supplier and automation specialist. Nowadays, the company concentrates on the development and manufacture of HMI systems, ECUs for e-mobility applications, navigation systems, and infotainment and connectivity solutions, as well as assembly and automation systems. With around 7,000 employees in Germany, China, Poland, Portugal, Romania, the USA and Mexico, Preh’s sales exceed 1 billion euros.

AUTOMOTIVE ELECTRONICS AND AUTOMATION

FROM VISIONS THROUGH CHALLENGES TO SUCCESS

ON A GROWTH PATH

The recent past was dominated by two acquisitions which took the Preh Group to a higher level. With Preh Car Connect and PIA Evansville, we have opened a new dimension in terms of sales, locations and competences.

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“.

CHRISTOPH HUMMEL
President
CEO

RUI MARQUES DIAS
Managing Director
CFO

CHARLIE CAI
Managing Director
Purchasing, supply chain management, commercial vehicles
CSO

JOCHEN EHRENBERG
Managing Director
Product development and plants
CTO

STAVROS MITRAKIS
Managing Director
Preh Car Connect

As a newly formed and significantly larger group of companies, Preh will continue to grow even more closely and write a new chapter in the company’s nearly 100-year-old 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

Battery systems in electric and hybrid vehicles need smart battery management for a longer range and lifetime. In addition to control units for high-voltage and 48-volt applications, Preh develops further solutions, such as wireless charging.

ASSEMBLY SYSTEMS AND PRODUCTION LINES

Technology with a Vision

The Preh automation division is on the way to Industry 4.0: we adapt existing basic technologies and experience to the specifics of production technology and develop innovative solutions for the new requirements and markets.

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.

E-MOBILITY

Body systems in electric and hybrid vehicles need smart battery management for a longer range and lifetime. In addition to control units for high-voltage and 48-volt applications, Preh develops further solutions, such as wireless charging.

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.

COMMERCIAL VEHICLE HMI

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.

PREH IMA AUTOMATION

Assembly Systems and Production Lines

Preh IMA Automation is on the way to Industry 4.0: we adapt existing basic technologies and experience to the specifics of production technology and develop innovative solutions for the new requirements and markets.
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 arrangement and layout in our conceptual designs. Well-known automotive manufacturers put their trust in us as one of the global technology leaders in this sector.

In the field of multifunctional steering wheel switches, for example, so-called touch control buttons belong to the latest series developments. This innovation, developed in close collaboration with our customer, allows the driver to select effortlessly 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 particularly strong competence in the field of air conditioning control. We not only produce control systems for the air conditioning functions, but also develop the climate control software. Different automotive manufacturers, however, have very different requirements. Some manufacturers work with very exact system needs, while others give us almost a free hand. As a result, we retain different degrees of freedom in order to achieve an excellent climate comfort by the appropriate approach. More than 25 years of experience make us very flexible.
EXEMPLARY SUSTAINABILITY

PRE(H)MIUM QUALITY FIRST

We write „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 and 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 consumption by optimizing the nitrogen content
- 80% less water use during painting at our plants in Germany, Mexico, Romania, Portugal and China
THE BEST OF TWO WORLDS

In the Commercial Vehicle HMI Division, we combine the latest technological developments at CAR HMI with the requirements of 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 for it. Tools, for example, can be produced at very competitive costs, and existing concepts 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.

COMMERCIAL VEHICLE HMI

COMPETENCIES

- Modules & systems incl. display
- Combined instruments for agricultural vehicles
- Switches & control systems, selector levers and ECU’s

INSTRUMENT CLUSTER, CLAAS
C-MOTION CONTROLLER, CLAAS
MEGAPOD, JOHN DEERE
Preh Car Connect develops complete head units, as well as software solutions for infotainment without limits. Car-2-X will revolutionize traffic in the coming years. Among other things, the exchange of data on ABS, steering angle, position, direction and speed will increase road safety significantly. The Connectivity Box developed by Preh Car Connect, for example, 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.

PRODUCT RANGES

- Software Defined Radio (SDR)
- Telematics and data service
- Navigation and driver assistance
- Connectivity
**E-MOBILITY**

Battery systems in electric and hybrid vehicles need intelligent battery management to achieve a longer range and lifetime. In addition to control units for high-voltage and 48V applications, Preh develops other solutions, such as wireless charging. Our control units are used, for example, in the BMW i3, i8 and ActiveHybrid models.

**BATTERY MANAGEMENT BY PREH**

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. These data are processed in the Battery Management Unit in order to balance the different charging levels and thus ensure an optimal battery performance.
Production? We produce that too! The assembly technology used for our products is also made by Preh. Preh IMA Automation (PIA) develops and produces complete automation solutions – from the manual workstation to the fully automated production line. Examples of particularly demanding applications include the processing of pyrotechnics in the automotive industry, assembly solutions in cleanrooms for medical applications and cable processing in the consumer goods industry. Here, duration and precision are proverbial.

Preh IMA Automation (PIA) is the specialist for innovative assembly systems and production lines in the Preh group.

THE SMART FACTORY OF TOMORROW
FOURTH INDUSTRIAL REVOLUTION

The path to “Industry 4.0” is an evolutionary process. Existing basic technologies and experiences must be adapted to the features of production engineering. Innovative solutions must be developed for new demands and new markets simultaneously. With “Industry 4.0”, PIA will further expand its competitiveness and contribute to the resource-conserving production of goods.

PRODUCTS & SERVICES

- Fully-automatic assembly systems
- Robot cells
- Wire processing
- Cam control
- Lean production systems
- Measuring and testing facilities
- Welding plants
**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's 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% PREH IN-HOUSE**

- **Development**
  - System design
  - Advance development
  - Design
  - Hardware/Software

- **Pre-production**
  - Tooling
  - Plastics injection molding
  - Painting
  - Electronics manufacturing
  - Lasering

- **Production**
  - Assembly
  - Final inspection
  - Automation for complex assembly

**FAMOUS AUTOMOBILE MANUFACTURERS RELY ON PREH**

**OUR REFERENCES**

- Audi,
- Bentley,
- BMW,
- Claas,
- Daimler,
- DAF,
- Ford,
- Freightliner,
- General Motors,
- John Deere,
- Lamborghini,
- MAN,
- Opel,
- Porsche,
- Rolls-Royce,
- Same Deutz-Fahr,
- Seat,
- Skoda,
- Tesla
- und
- Volkswagen
Preh products originate in Germany and are manufactured on five continents. The product engineering process is organized globally according to standardized process steps. This is how we ensure optimal cooperation between our plants. Everything we do is underpinned by our motto: “Innovation and Pre(h)mium Quality first!”