



**WORLDWIDE
AUTOMOTIVE EXCELLENCE**



PEPPERL+FUCHS

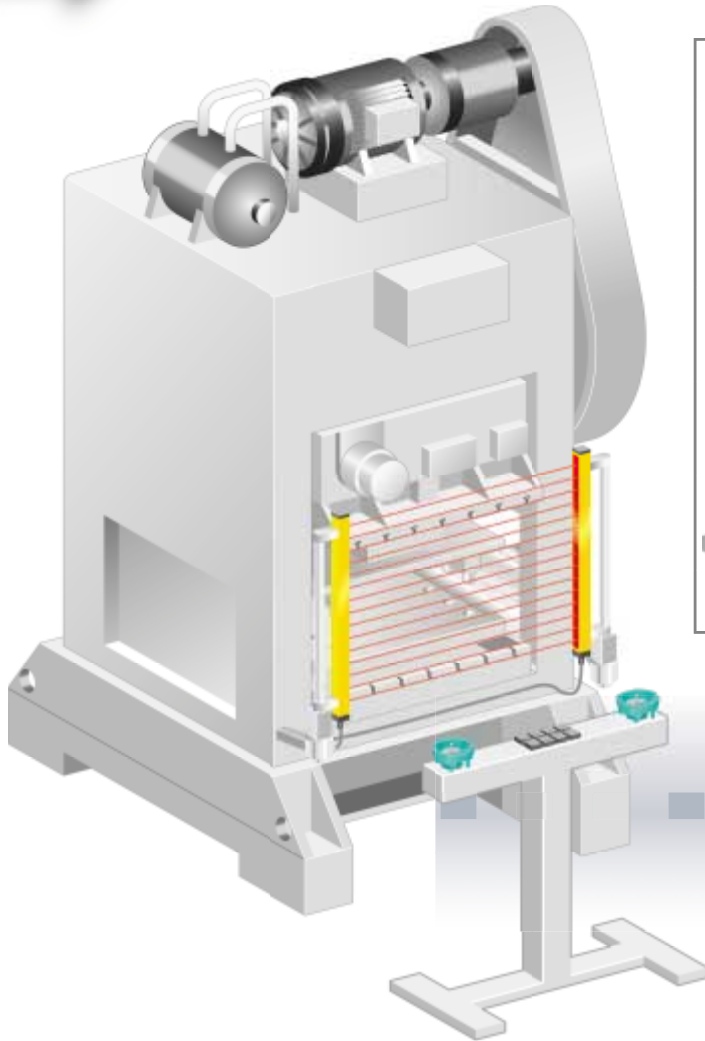
AUTOMOTIVE NETWORK

Pepperl+Fuchs develops, manufactures, and distributes a product range of sensors and sensor systems that is unparalleled in the world. Industry leaders rely on our unique solutions to meet their automation needs. Our proven ability to collaborate with automotive manufacturers makes us the ideal partner in creating solutions requiring dynamic and innovative technologies.

START

CONVEYOR

PRESS SHOP



Safety protection with palm button

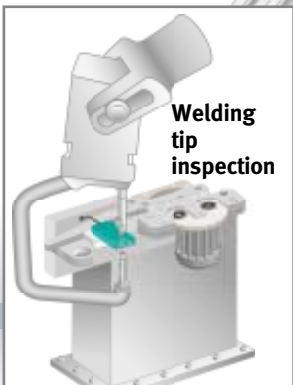
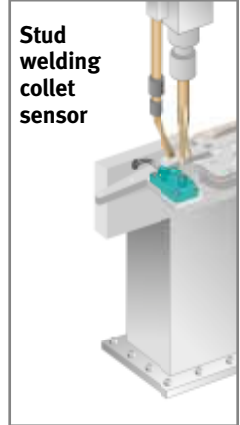
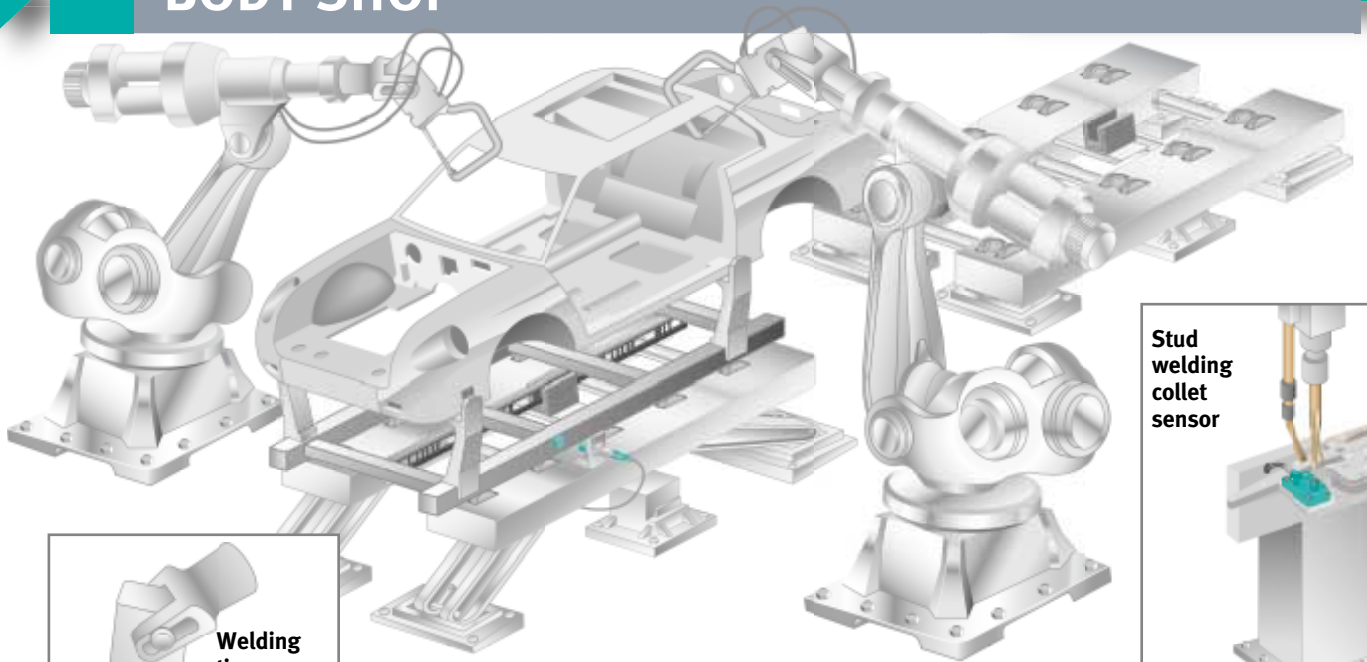
CONVEYOR

FOUNDRY

▶ PURCHASING/LOGISTICS

CONVEYOR

BODY SHOP

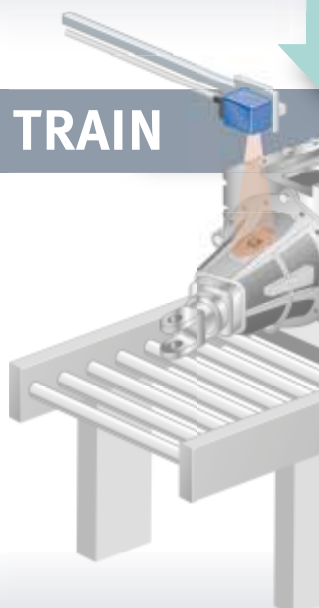


CONVEYOR

ENGINE PLANT/POWER TRAIN

MACHINING PROCESS

ASSEMBLY SYSTEMS

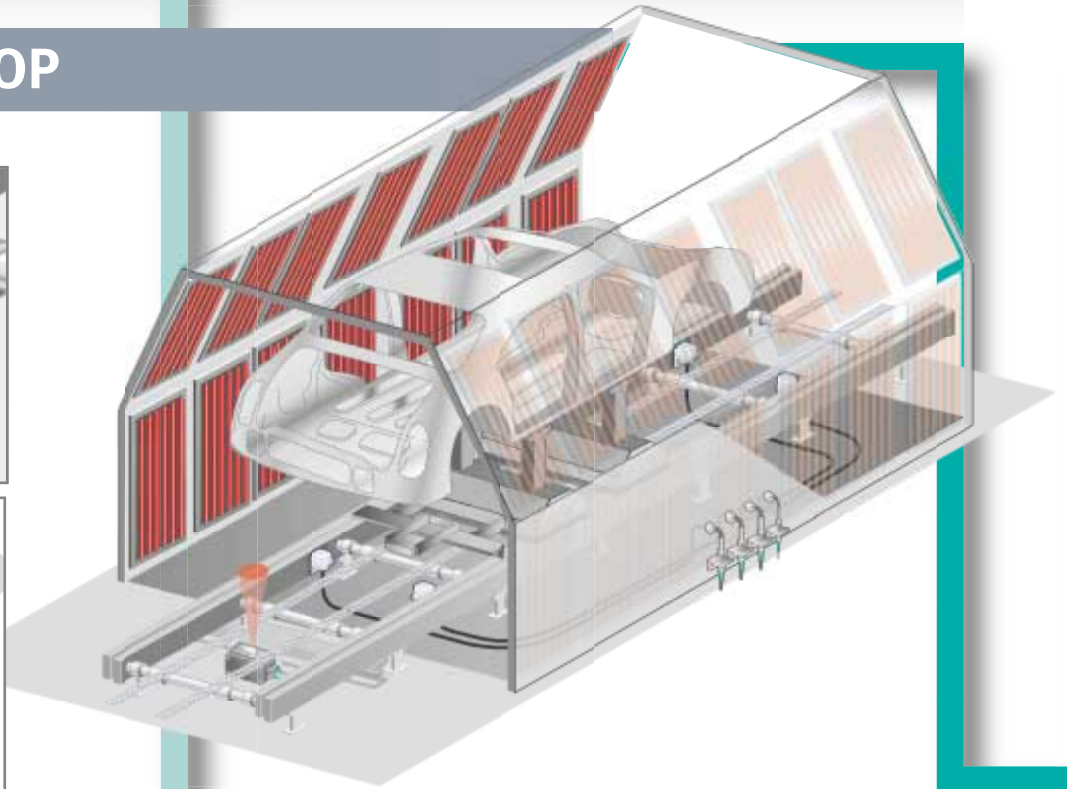
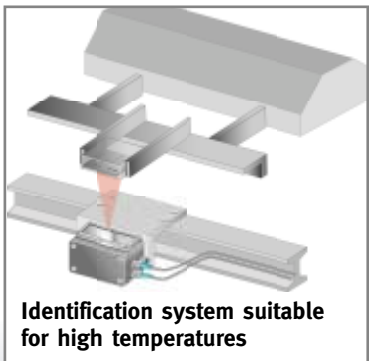
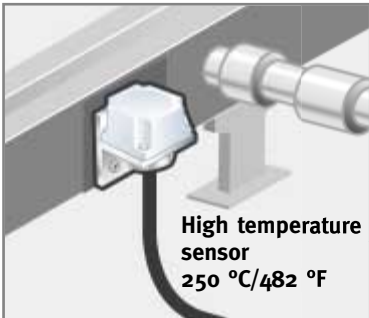


PURCHASING/LOGISTICS

... BARCODE ...

CONVEYOR

PAINT SHOP



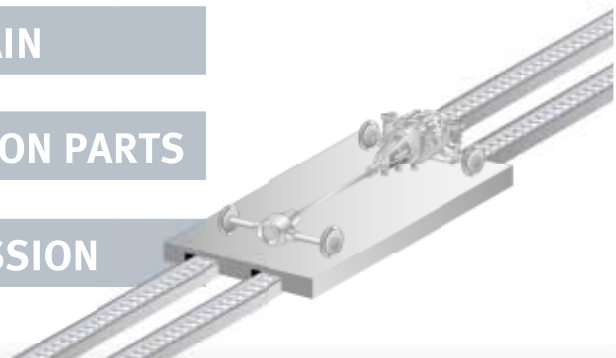
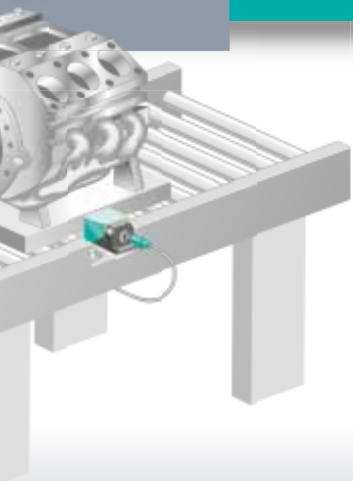
CONVEYOR

CHASSIS ASSEMBLY

DRIVE TRAIN

SUSPENSION PARTS

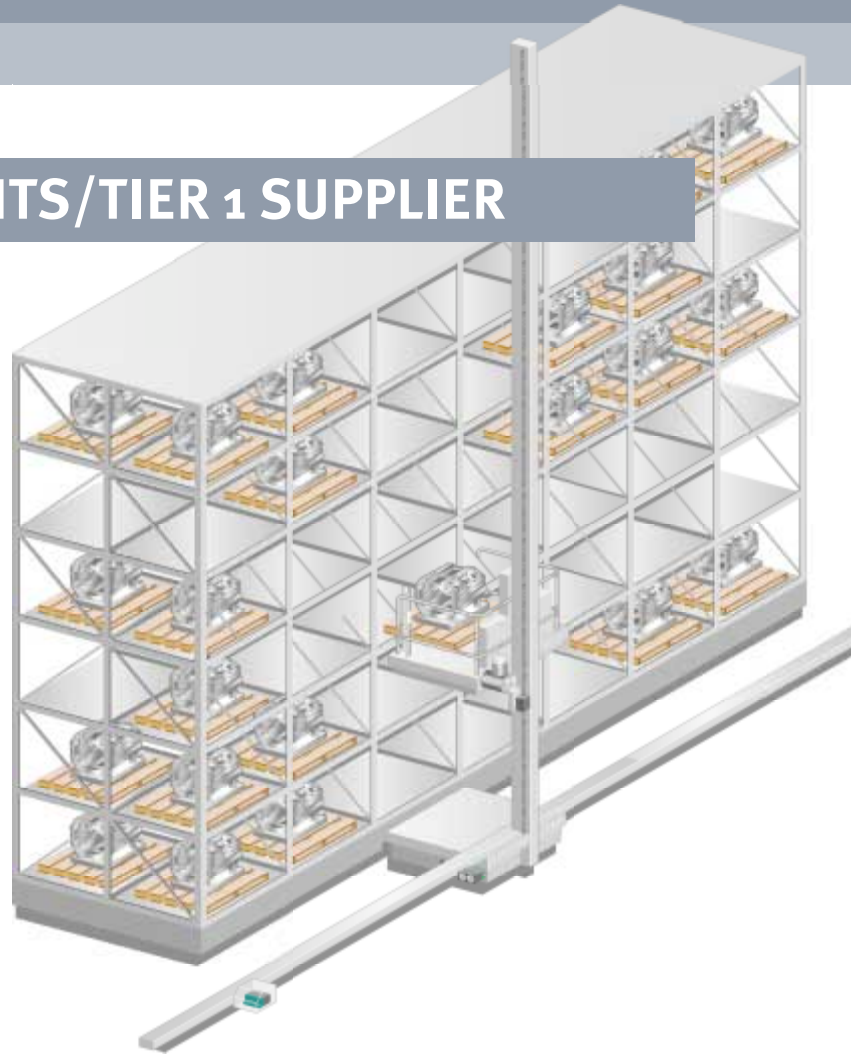
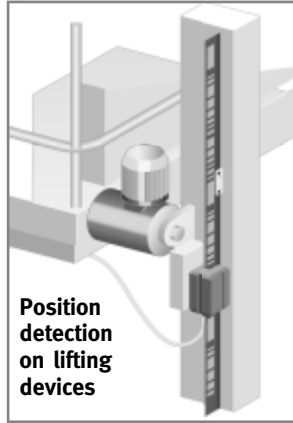
TRANSMISSION



... DATA MATRIX ...

PURCHASING/LOG

COMPONENTS/TIER 1 SUPPLIER



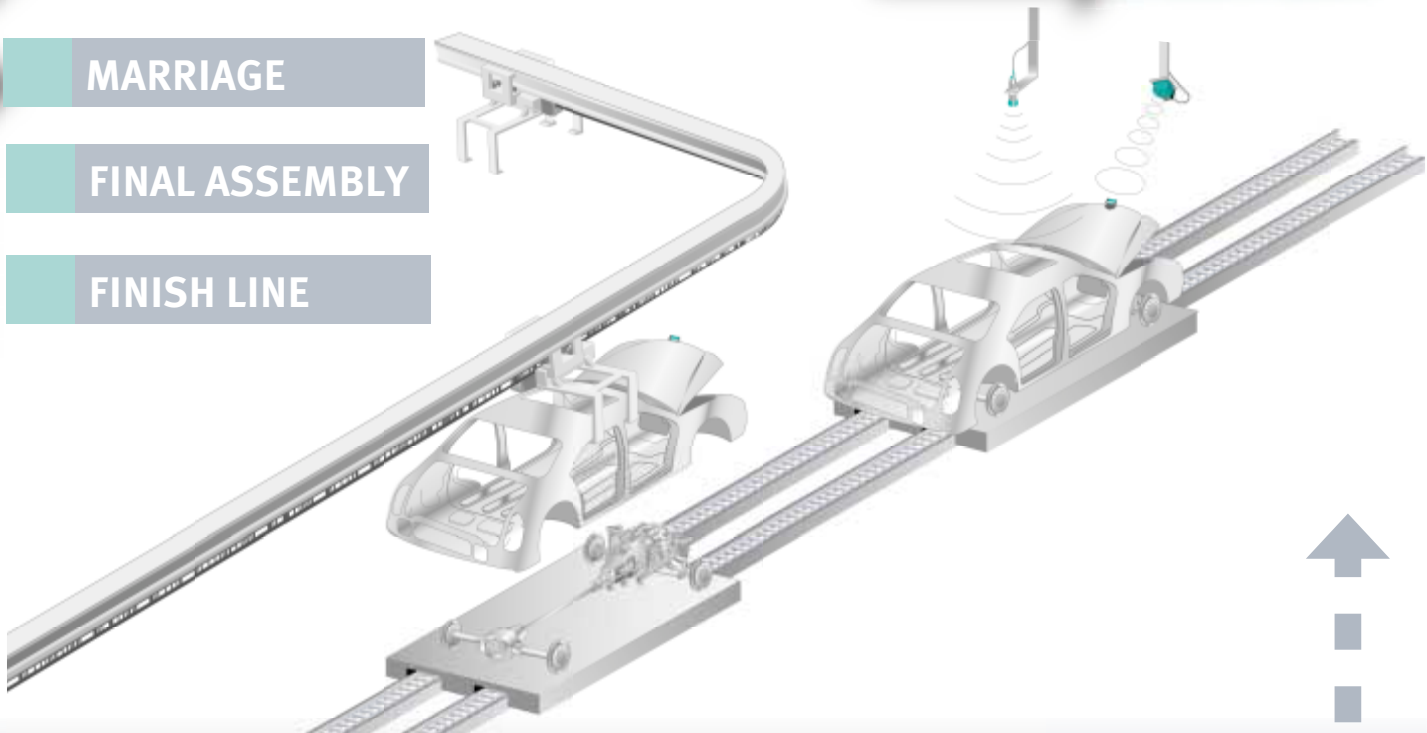
ASSEMBLY

DELIVERY

MARRIAGE

FINAL ASSEMBLY

FINISH LINE



LOGISTICS

... RFID ...

PURCHASING/LOGISTIC

Purchasing and logistics are sectors in which economic interests and technology typically meet and connect. Pepperl+Fuchs speaks both languages.

PRESS SHOP

Vehicle manufacturing begins when sheets of steel and aluminum weighing several tons are shaped by heavy duty presses. Pepperl+Fuchs ergonomic two-hand control stations, together with light curtain technology ensure operator safety and prevent machine damage.

BODY SHOP

Robots produce bodies from the shaped metal. A great deal of precision and control is required to ensure fast and accurate welding and assembly. Pepperl+Fuchs manufactures robust inductive and photoelectric sensors as well as high reliable identification systems to increase productivity significantly.

PAINT SHOP

Several layers of paint are applied in the paint shop to protect vehicles from damage and give them a permanent and brilliant gloss. High temperature sensors and identification systems are designed to withstand the extreme temperatures reached in the paint shop.

ASSEMBLY

Pepperl+Fuchs offers a wide variety of products for each specific application:

- **Marriage:**
Body and chassis are united with absolute precision. Both automation and human effort are needed to complete the process.
- **Final assembly:**
Vehicles come to final assembly with their wheels in place. Tires are installed; hoses are connected; fluids are topped off, and the engine is started for the first time.
- **Finish line:**
Numerous checks and tests make sure that the vehicle is in perfect working order.

FOUNDRY

Landmark casting technology is in use.

ENGINE PLANT/POWER TRAIN

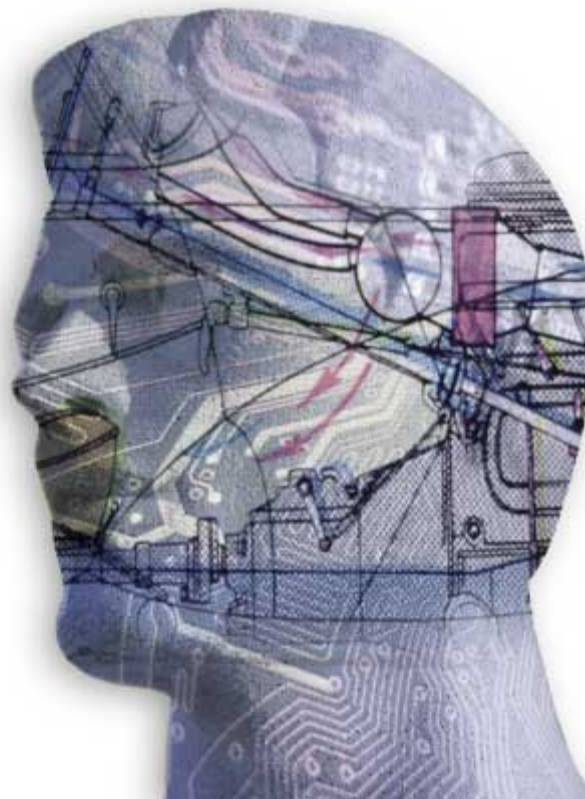
Engines and transmissions are joined together. They are fully dressed, wired, and oil is added. Identification systems are used for error proofing in engine assembly, while barcodes and Data Matrix codes permanently link the engine with the vehicle.

CHASSIS ASSEMBLY

Chassis assembly is one of the most complex systems in the car plant. Drive train, suspension parts, and transmission are combined. Workers install hundreds of components to the underside of the vehicle. Sensors verify proper placement and orientation, monitor end-of-stroke on robotic arms, and provide accurate conveyor position feedback.

COMPONENTS/TIER 1 SUPPLIER

Customer-specific components such as seats, dashboards, bumpers, lights, and wheels are manufactured by suppliers and added in the assembly sequence. The components are produced by the vehicle manufacturer or by a tier supplier.



SENSOR TECHNOLOGY FOR YOUR AUTOMOTIVE APPLICATION

INDUCTIVE SENSORS



WELD IMMUNE SENSORS



PHOTOELECTRIC SENSORS



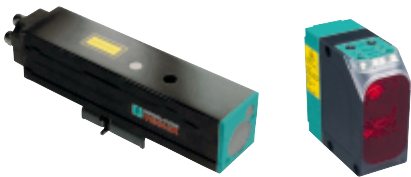
ULTRASONIC SENSORS



DATA TRANSMISSION



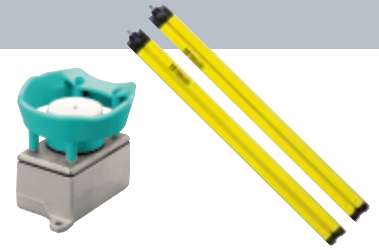
DISTANCE MEASUREMENT



DeviceNet™



SAFETY



ENCODERS



POSITION TRACKING SYSTEM



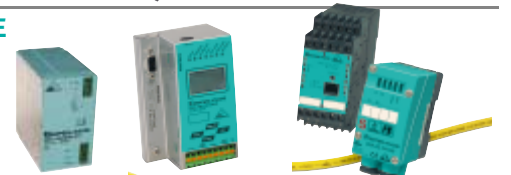
IDENTIFICATION SYSTEMS: RFID, BARCODE, DATA MATRIX, CAMERAS



VISION SENSORS



AS-INTERFACE



CORDSETS & ACCESSORIES



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 **PEPPERL+FUCHS**
SENSING YOUR NEEDS