

High-precision engineered injection-moulded parts.
From development to serial production. **For highest demands.** Realised safely and quickly.



PROJECT MANAGEMENT

DEVELOPMENT

MOULD MAKING

SERIAL PRODUCTION

There are many reasons for **high customer satisfaction**. We will tell you every single one of them.

If you want to be best-in-class you will need to partner with the best. With someone you can rely on 100% – and who meets the highest demands at any time. This is exact what Pöppelmann K-TECH® stands for.

Pöppelmann K-TECH® produces high-precision and powerful plastic components for numerous companies who are industry leaders in their fields, such as renewable energies, mobility as well as mechanical and apparatus engineering.

As diverse as these industries are, they have one thing in common: What they expect from functional parts and complex plastic components. They need innovative, economical, high-quality injection-moulded parts, combined with reliable, on-schedule delivery.

Pöppelmann K-TECH® meets all these requirements. In every sense: From development to serial production, Pöppelmann K-TECH® is your professional partner for all stages of your projects,

providing you with economical and perfectly functioning solutions.

This will apply, even if the project is particularly complex or ambitious: You need to coordinate a variety of components? Your schedule is extremely challenging? You need to use new materials or production processes? Then Pöppelmann K-TECH® is the right partner to choose for your company. Welcome on board!



Short development times

Many years of experience ensure optimum results

- ✓ Perfectly planned processes
- ✓ Shorter time-to-market
- ✓ Economical solutions
- ✓ On-schedule realisation



Highest demands

First-class solutions for ambitious projects

- ✓ Fulfilled requirements
- ✓ Improved operation
- ✓ Ensured functionality
- ✓ Adapted to the available space



Everything from one source

From development to serial production

- ✓ One-stop contact
- ✓ Fewer interfaces
- ✓ Process reliability
- ✓ Visibility

Renewable energies.

In an industry as innovative and young as the solar industry, for example, only one thing is permanent: its steady progress. Pöppelmann K-TECH® is your reliable partner for utilising new materials, developing new functionalities, or changing installation techniques.



Mobility.

When the automotive industry, for example, has to develop advanced solutions for the future, you can see clearly the benefits of collaborating closely with Pöppelmann K-TECH®.

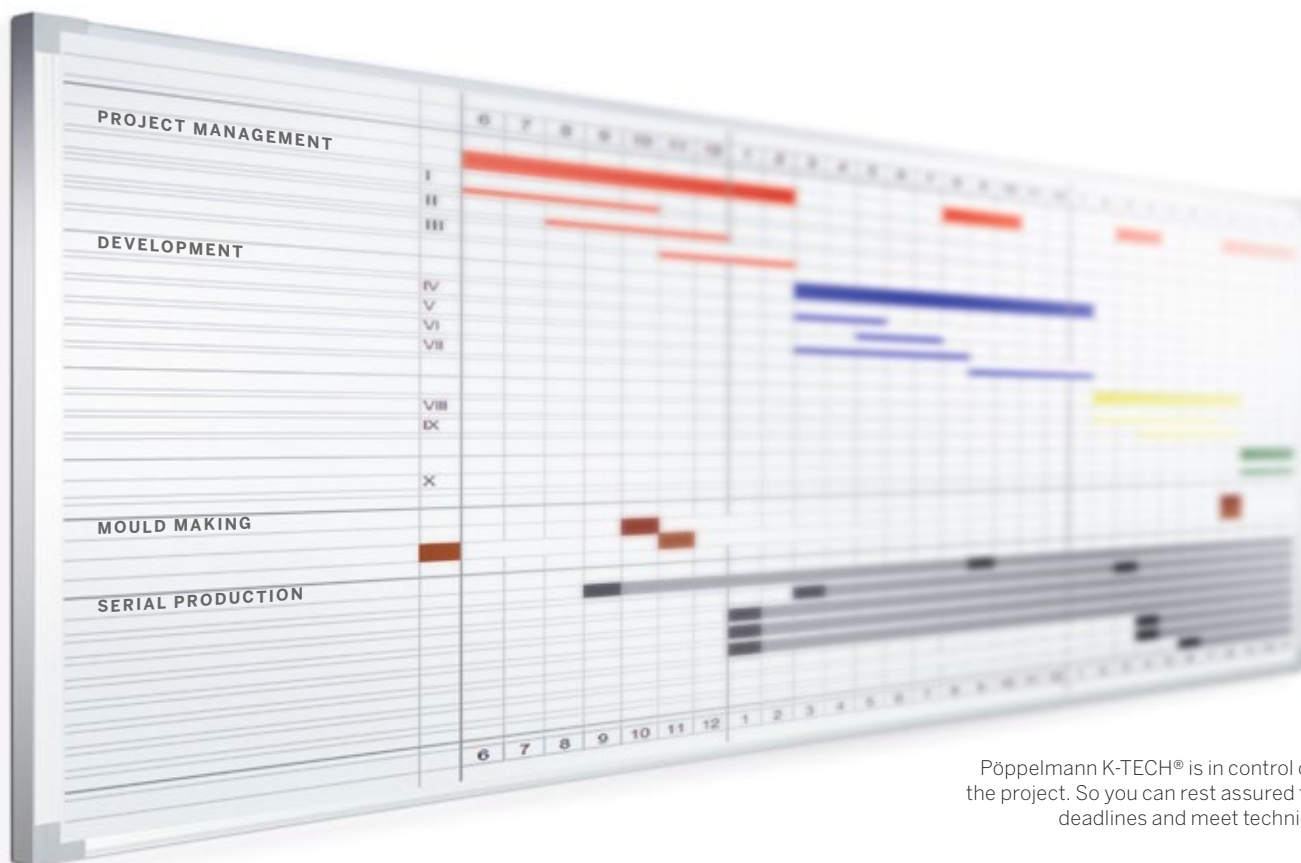
Mechanical and apparatus engineering.

In our globalised world, economics and functionality are increasingly important for companies to remain competitive.

Pöppelmann K-TECH® uses innovative workflows to provide you with effective and targeted support.



In order to give good advice, it's essential to be a **good listener.**



Pöppelmann K-TECH® is in control of every stage of the project. So you can rest assured that we will keep deadlines and meet technical agreements.

Our project manager for your interests.



From dealing with external suppliers to ensuring smooth internal production processes, our project manager will look after your interests and will ensure that our entire project team **keeps the burden off your shoulders**. This allows you to concentrate fully on your core business.

Proven, transparent workflows.

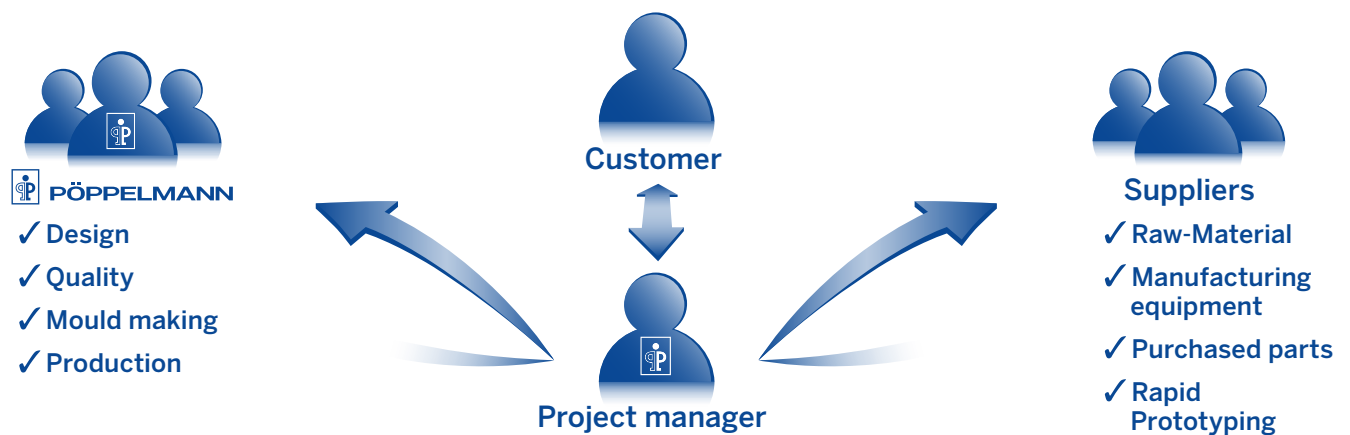


We always maintain an **open partnership**: honest, visible and customer-focussed. You can gain an insight into the complete project and you are always up to date.



Our **stress-free package** for you: we undertake all those numerous little jobs which a project involves. As our customer, you will therefore save a lot of time and the costly doubling up of work, for example, with external development agents and mould constructors.

Our project manager is your interface to the Pöppelmann network.



Our project managers know, on the basis of **long experience**, which partners are best suited to which tasks. In addition, as a member of the Pöppelmann group, they can rely on all the resources, contacts and over 60 years of experience of the group. In this way, all parties necessary to the success of your project can be **gathered together quickly**. The result: the **optimally economic solution** for you.

What is the result of **good planning**?

Better solutions – in less time.



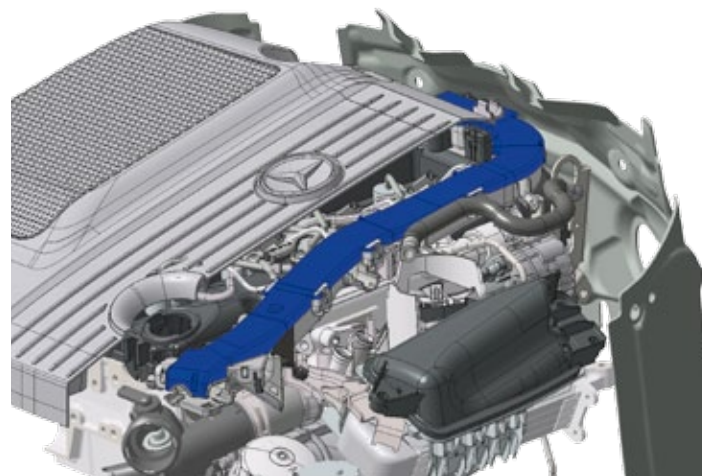
Step by step towards serial production:
Economical solutions are one of the trademarks
of Pöppelmann K-TECH®.

Real design power.

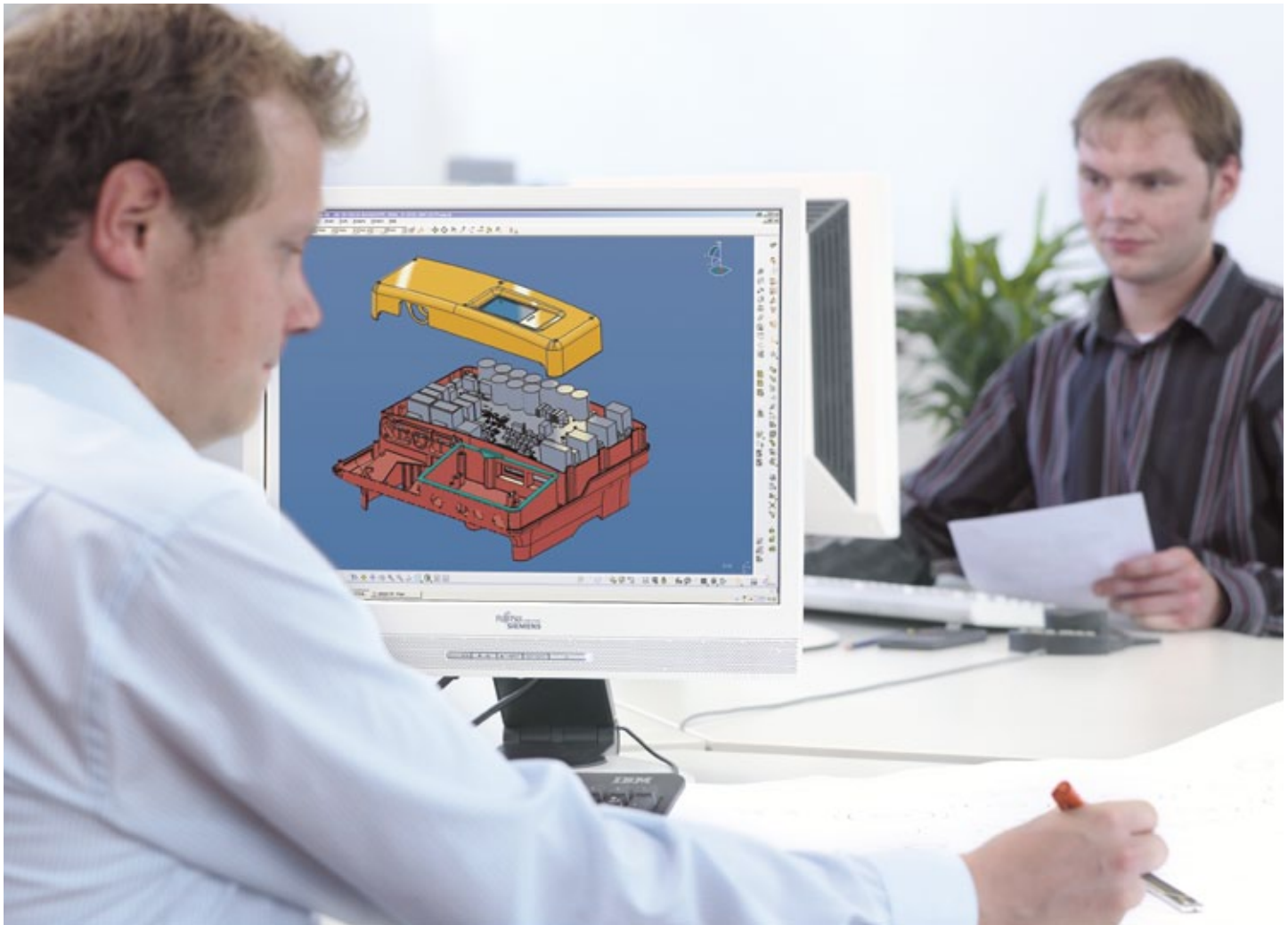


Developing new parts is one of the particular strengths of Pöppelmann K-TECH®. You, our customer, will define the requirements – and we will develop the right solution! **Tip:** The earlier we are involved in the design process the sooner we can achieve successful serial production for the requested components.

Integrated thinking.



At Pöppelmann K-TECH® we do not focus only on a single component but on the function of the entire assembly. System-integrated thinking makes all the difference and will result in **perfectly functioning solutions**.



We can reduce significantly development times through **the use of the most modern technologies** and computer controlled development tools. During the virtual project development and optimization stage, we use CATIA V5, structural analysis (FEM), filling analysis, 3D simulations and DMU visualisations. With rapid prototyping [stereo lithography (SLA), selective laser sintering (SLS), 3D printing] evaluation and construction models are available in the early development phases. In this way, ideas and developments are quickly and cost effectively realizable. **The swift data exchange** in the CAD/CAM environment allows us to use existing 3D customer data.

Ambitious projects.

Your development partner for technical components.



One select example: cover for **photovoltaics inverter**. Made from a specially formulated material, this component contains a formed in-place PUR foam gasket, an insert moulded display screen, and captive, post-installed fixing screws.



Pöppelmann K-TECH® possesses special experience with components that have to meet **high requirements**. This includes compliance with tolerances or with specific requirements for leak tightness and cleanliness. Coordinating a variety of components (as for the control unit box pictured above) is a standard task for Pöppelmann K-TECH®.

You can rely on our **mould making department**.
In particular when you are in a rush.

Our mould making department:
A decisive advantage for our
customers. Particularly, when
a project needs to be realized
within a tight time frame.



From the idea to the injection mould.

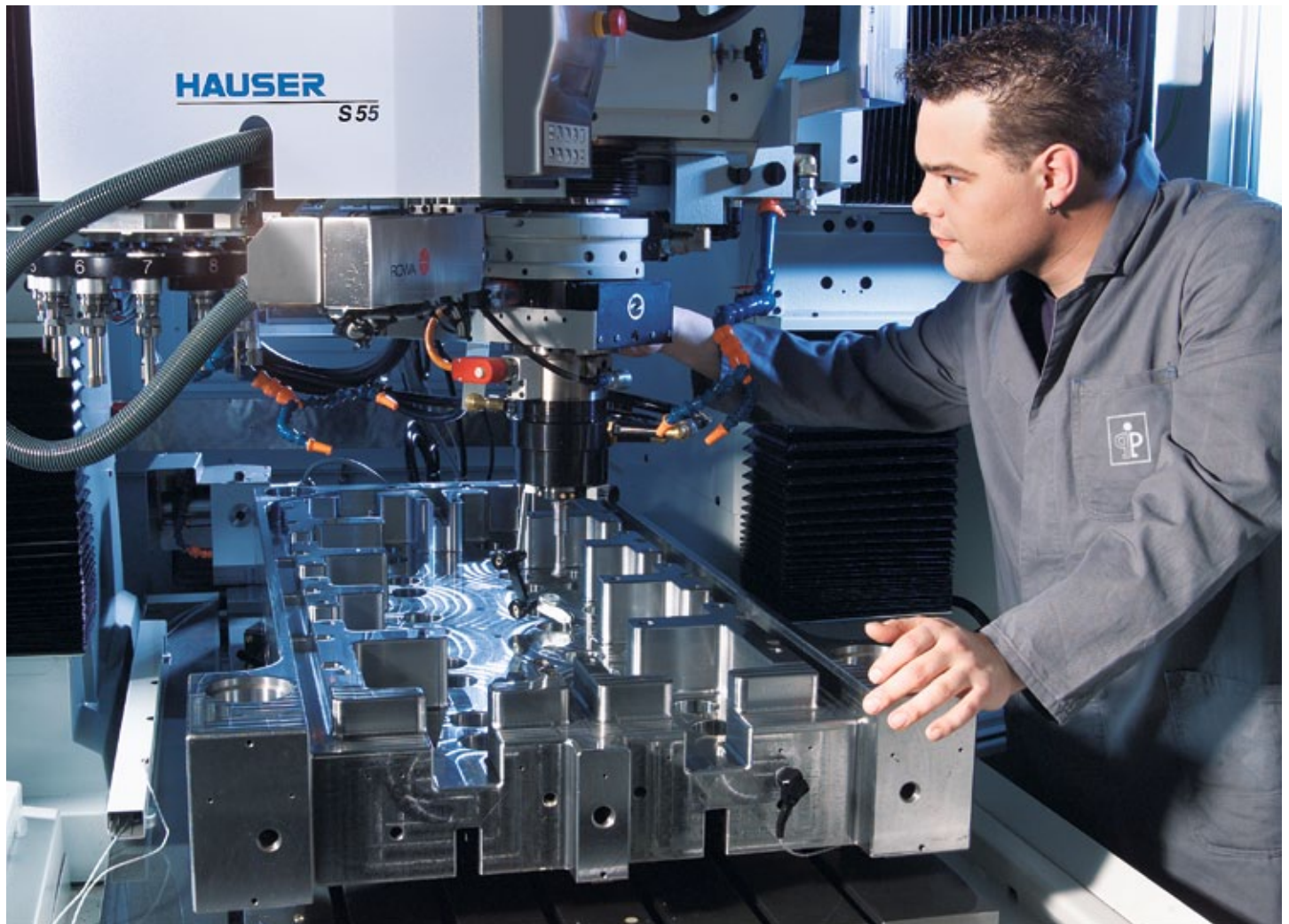


The development requirements of more **complex geometries** take shape in injection moulds.

Experience makes all the difference.



Qualified **employees** – interacting with the latest **technology**: This combination allows the highest level of precision, even when realising extremely complicated moulded parts.



Highly qualified employees working together with the latest technology: This combination allows the highest levels of precision, even with the most complicated forms. Our team of over **100 mould makers and designers** is the basis of efficient and high quality workmanship.

Precision and perfection.



Precision of up to 0.001 mm: This type of precision is the basis of ambitious plastic parts and trouble-free **high performance production**.

Short reaction times.



Whether it is the **making, changing, or repairing of moulds**: Pöppelmann K-TECH® customers can rely on short reaction times.

Produced in series with the highest quality and delivered on schedule: **our high-tech serial production.**



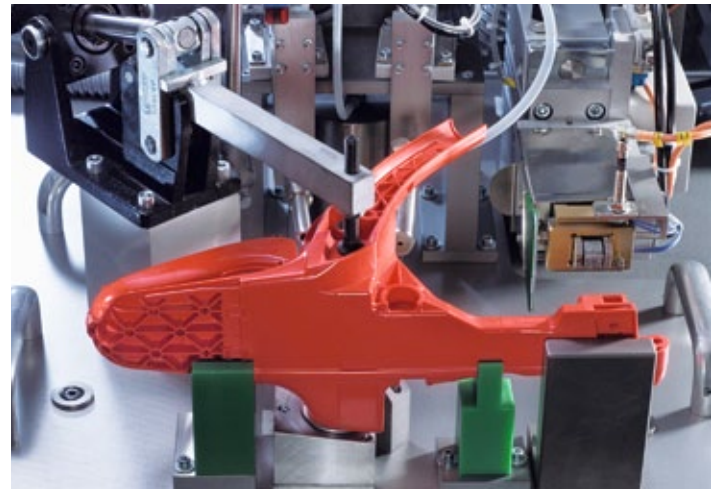
High-tech at maximum speed: 400 state-of-the-art injection moulding machines with high-performance moulds ensure premium quality for small and large series.

Perfection in every detail.



The use of **handling and assembly technology**, for instance, enables automatic insert moulding of screws or sockets.

Continuous quality controls.



Benefit from our **certified quality management system** with consistently high quality standards. We always work to your requirements: If necessary, we can provide constant 100% quality controls, for example leak testing with marking of the components. You can rely on us meeting all agreed quality targets and deadlines.



The best basis for successful collaboration: **Consistence in quality, high production performance and exemplary cleanliness** characterize Pöppelmann's K-TECH® production.

Automatic quality checks.



We check the **agreed quality characteristics** in the continuous production process and capture them with a CAQ system for analysis.

Serial support included.



For us, a series means more than just production. For you, it means you will benefit from our **full-service support**. This includes perfect organization as well as availability – and worldwide ability to deliver!

Just knowing new **technologies** is not enough.
You also need to master them.

High-precision injection-moulded plastic parts – from 1 to 3,500 g.



Multifunctional and powerful: Our modern machinery consists of machines for automatic injection moulding with closing forces of 25 t to 1,300 t. This enables us to respond quickly and flexibly to the most diverse of requirements.



Brackets for automotive cables with an elastic bearing surface



Standardized module housings for electronic boards



Chainsaw starter housing



Airguide for photovoltaic inverter

Two-component injection moulding.



Plastics expertise applied: **Two-Component Injection Moulding**. Progress for your success – Pöppelmann KTECH®.



- ✓ Economical production: Having just one production sequence eliminates the need for additional assembly or rework.
- ✓ Flexible and efficient mould designs, e.g., transfer processes or 2C rotary moulds.
- ✓ One-stop expertise – from component development to serial production.
- ✓ We have had many years of experience in combining a variety of materials.



Effective moisture protection: 2C floor sockets for attaching side member panelling in cars

**Order our competence folder
or talk to us directly:
+49 4442 982-6010**

Formed in place foam gaskets (FIPFG).



Plastics expertise applied: **Formed In Place Foam Gaskets**. Progress for your success – Pöppelmann KTECH®.



- ✓ Reliable, long-term sealing effect.
- ✓ Highly accurate fit inside the component.
- ✓ Seamless joints at the gasket edges.
- ✓ No need to produce separate gaskets.
- ✓ No need to store different types of gaskets.
- ✓ No risk of confusing gaskets featuring similar geometries.

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Cover for control unit boxes with a PUR gasket applied directly into the component

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In-house leakage tests (DIN 40050).



Plastics expertise applied: **In-house Leakage Tests (DIN 40050)**. Progress for your success – Pöppelmann KTECH®.



- ✓ In-house testing of leak tightness requirements to reduce developing times and costs.
- ✓ Immediate result checking and PC-controlled results documentation.
- ✓ Checking of components featuring a variety of geometries.
- ✓ Quality checks throughout the serial production enhance the manufacturing quality.

PÖPPELMANN

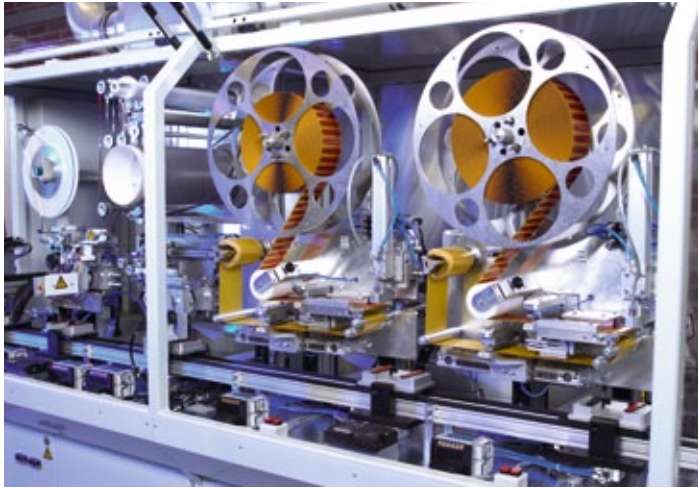
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2C sleeves fitted precisely to the overall leak tightness requirements of the respective control unit boxes

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Fully-automatic assembly and converting solutions.

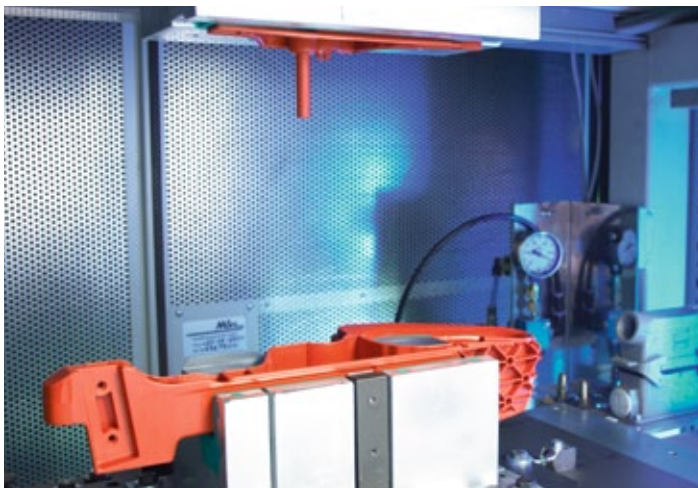


Cover for rear view camera

- ✓ In-house controlled integration of additional functions (e.g., adhesive foils, fixings, gaskets/washers) for component optimization.
- ✓ Lean processes for effective cost savings – only one contact, fewer external suppliers, shorter manufacturing paths.
- ✓ In-house control and monitoring of the different process steps.
Benefits: higher level of production quality, shorter cycles.

Individual advice:
+49 4442 982-6010

Vibration welding.



Motor chain saw handle unit with integrated vibration-welded tank

- ✓ Reliable and clean procedure for joining two plastic halves.
- ✓ Smooth and even weld collar also for complex geometries.
- ✓ Short welding cycles.
- ✓ Particularly suited for glass fibre reinforced polyamides.

Individual advice:
+49 4442 982-6010

We are prepared for the **future**. Because we deal with it every day.

New materials, new manufacturing processes – today's plastics engineering creates tomorrow's technologies. And we will find them for you.

Our goals are clear: We will do everything to develop new solutions for our customers' products and to manufacture them even more efficiently and cost-effectively. To achieve this, we regularly strike out in new directions together with our customers, meeting any challenges along the way. In terms of new materials, for example, we are exploring the possibilities of biodegradable plastics. Welcome to the future – welcome to Pöppelmann!



New process engineering.



At Pöppelmann K-TECH® our staff researches and assesses every day whether a technique or material is **ready for marketing and serial production** and fits a customer requirement.

Sustainable production.



From utilising recycled materials to saving energy and resources to **certified environmental management** complying with ISO 14001:2005 and EMAS: Sustainability plays an important role everywhere at Pöppelmann.

For more than 30 years we have been accommodating economic acting to **ecological thinking**.



PÖPPELMANN

K-TECH

A successful family-owned company: Focusing on people.

Pöppelmann – a strong and reliable partner. Since 1949 the family-owned company Pöppelmann with 5 production sites and 450 injection moulding, thermoforming machines and extruders has proved itself to be a leading manufacturer in the plastics processing industry. In more than 70 countries the quality “made by Pöppelmann” is appreciated. More than 1,650 highly qualified employees stand for our success.

Our Pöppelmann K-TECH® business division develops and manufactures high-precision plastic injection-moulded parts to the highest quality standards in, e.g., renewable energies, mobility as well as mechanical engineering and manufacturing.

Our manufacturing is certified in accordance with ISO/TS 16949:2009 and DIN EN ISO 9001:2008.



More than 1,650 Pöppelmann employees stand for productivity, quality and service.



Germany, Plant 2 (K-TECH®): Pöppelmann Kunststoff-Technik GmbH & Co. KG, Lohne.



Germany, Plant 1: Pöppelmann GmbH & Co. KG, Kunststoffwerk-Werkzeugbau, Lohne.

K-TECH® GB/03-2013