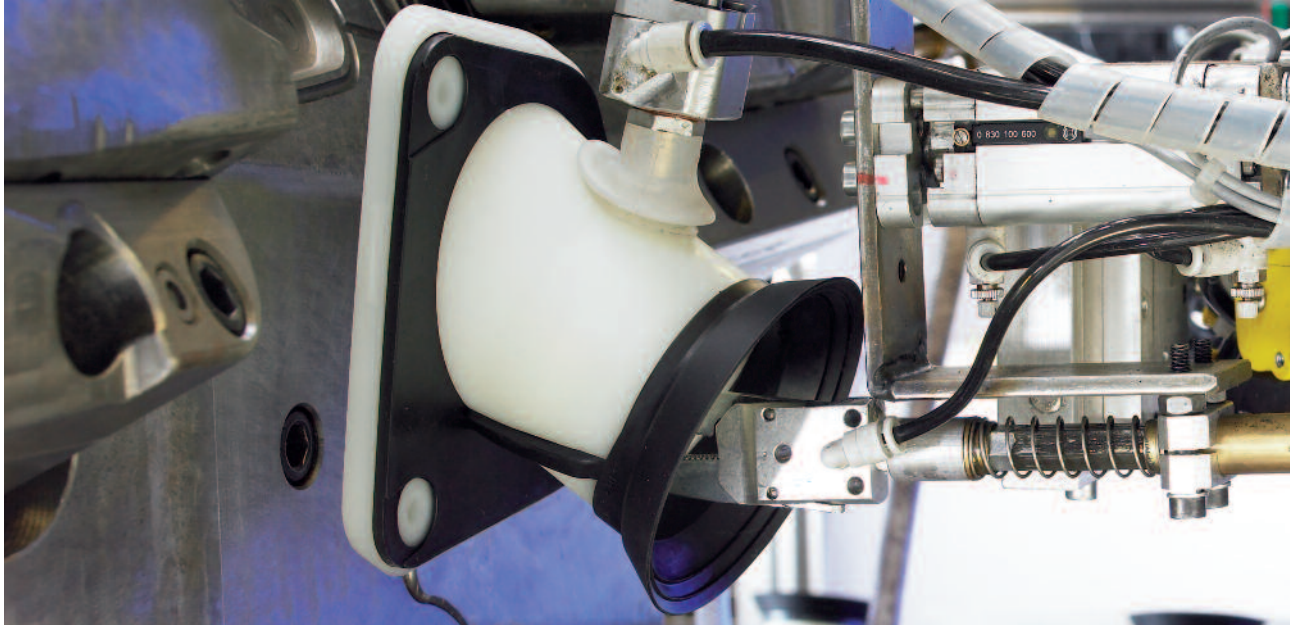


Plastics Expertise Applied: **Two-Component Injection Moulding.** Progress for Your Success – Pöppelmann K-TECH®.



Installation-ready Multi-functional Components: **Two-component Injection Moulding** to Combine Different Polymers.

Two-component (2C) injection moulding enables manufacturers to produce demanding multi-functional parts meeting different – and often contradictory – requirements, at a particularly low cost. When it comes to 2C moulding applications, Pöppelmann K-TECH® covers the entire process chain, from part development to toolmaking through to manufacturing.

Two-component injection mouldings combine the material properties of two different polymers – hard and soft, or reinforced and lubricated grades, for instance. It is possible to produce multicoloured mouldings, or even to join two non-adhesive plastics in one assembly by perfect form-fit engagement. A single

moulded product can thus meet numerous requirements in terms of functionality and design. The economic and logistical benefits are substantial, too: each part is made in a single production process, eliminating the cost and effort associated with assembly and finishing. At Pöppelmann K-TECH®, all steps of the process chain come together – from development of the 2C moulding down to its production. This holistic approach ensures that every 2C part made by Pöppelmann K-TECH® will distinguish itself with high quality and low cost. Pöppelmann offers two methods for the production of 2C mouldings. In the transfer process, the 2C part is made using two conventional injection moulding machines. The first of these produces a pre-moulding, consisting of the first

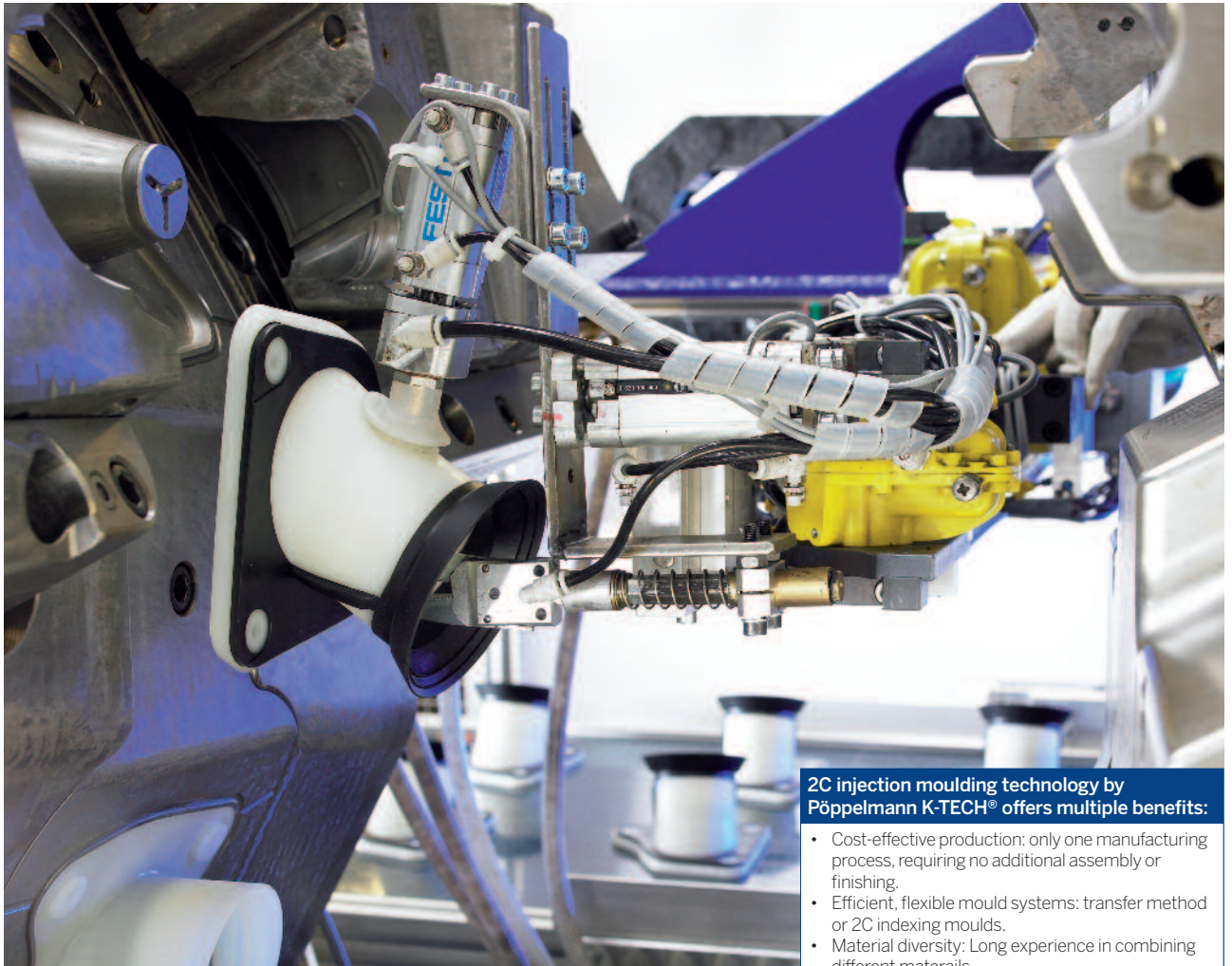
polymer. This pre-moulded part is then transferred, either manually or via a handling system to the second mould mounted in a second machine. Here, an appropriately enlarged cavity accommodates the pre-moulding plus the second polymer. For larger production runs, multi-cavity moulds can be employed. Further cost rationalisation is achievable through the use of a 2C indexing mould and a 2C injection moulding machine equipped with two injection units for the two materials. The pre-moulding is made at a first mould station. Next, the mould opens and rotates on an indexing plate, so that the pre-moulded part can be placed in the second, larger cavity. The mould then closes and the second polymer is injected. The finished 2C part is removed after cooling.



These 2C lead-through bushings are built around a stiff, geometrically stable polypropylene support plate. Moulded onto this plate are peripheral elastic sealing lips and an elastic bushing for the cable strand, made from a polyolefin-based thermoplastic elastomer.



2C moulding technology yields high-quality lettering as in the case for power chainsaws. The letters, made of unreinforced polyamide, are injection-moulded into a reinforced polyamide base panel. Their captive and durable integration is ensured by form-fit engagement of the two materials.



2C injection moulding technology by Pöppelmann K-TECH® offers multiple benefits:

- Cost-effective production: only one manufacturing process, requiring no additional assembly or finishing.
- Efficient, flexible mould systems: transfer method or 2C indexing moulds.
- Material diversity: Long experience in combining different materials.
- One-stop expertise: from part development to mould making right through to volume production.

Two-component housing for a steering column bulkhead bearing with additional sealing elements.



This 2C bearing insert provides additional support for the steering column while also holding back noise and acting as a seal against splash water and dirt. The ball bearing is held securely in the soft TPE component in a positive fit. The hard component snaps into a bearing housing upon assembly and remains inseparably joined to it.



Dowel-type 2C floor trim retainers serve to hold down the lining on automotive longitudinal chassis beams. The actual fastener consists of polyamide. The non-hardening sealing ring moulded on to it is made of a styrene ethylene butadiene styrene (SEBS) and prevents an ingress of water and moisture.

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 plastic processing industry. In more than 70 countries the quality “made by Pöppelmann” is appreciated. More than 1,600 highly qualified employees stand for our success.

Our Pöppelmann K-TECH® business division develops and manufactures technical injection mouldings to the highest quality standards for the automotive and electrical appliances industry, mechanical engineering, and equipment manufacturers.

Our manufacturing operations are ISO/TS 16949:2009 and DIN EN ISO 9001:2008 certified.



More than 1,600 Pöppelmann employees stand for productivity, quality and service



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