

MAGNETS AND PLASTIC GEARING

COMPETENCIES THAT INTERLOCK

As a result of technical progress and technological change, especially in the automotive industry, there are now applications that integrate gearing and magnetic components into the same assembly or in one single component. In order to meet these requirements, we are now offering the optimal combination solution comprising magnets and plastic gearing. In particular, you will benefit from our many years of experience in 2-component injection molding.

Competencies

- Design, simulation and optimization of gear parts in conjunction with injection molding
- Tool development/construction, automation technology and series production from a single source
- Multiple-component injection molding
- From the individual part to the functional assembly
- Tactile and visual gearing measurement as well as CT analysis
- Magnetizing and measuring technology

Applications

Actuator systems

- Actuators for air conditioning
- Actuators for thermal management
- Actuators for exhaust gas recirculation

Sensor systems

- Steering angle detection
- Steering locks
- Door closing systems
- Throttle valve control

Benefits/Advantages

- Functional integration
- Optimization of the installation space for the required functions
- Functional improvements through 2-component injection molding (e.g. concentricity and balance quality)
- Competitive manufacturing costs



Technical data

- Single and multiple-component technology
- Straight and helical gearing
- Up to a quality class of 9 in accordance with DIN ISO 1328
- Typical module 0.2 - 1.0 mm
- Typical number of teeth 8 - 60
- Typical pitch circle diameter 1.5 mm - 70 mm
- Magnetic materials: HF, NdFeB, SmFeN
- Typical plastics (filled and unfilled): PA12, PA46, PA66, POM, PPA, PPS

Actuator with injection-molded 2K drive rotor (magnet/plastic), external and internal gearing | Wolfrom gear principle

BECAUSE OUR AREAS OF EXPERTISE ARE INTERLINKED

IDEAS TRANSFORM INTO A SUCCESS STORY FOR YOU

The requirements expected of permanent magnets and magnet assemblies are becoming ever more individual and, at the same time, ever more complex. We therefore take pleasure in casting light on the entire value-added chain: We are there beside you as a dependable partner, all the way from shared product development to on-schedule delivery. With our unique linked chain of areas of expertise, we can act as a specialist and as an all-rounder, depending on what is required, as a one-stop shop for high-quality processes. Together, we can transform a good idea into a genuine competitive advantage. After all, for you, the perfect amalgam of experience, expertise and technical implementation means, above all, one thing – efficiency. This creates results that firmly embed success in your products.

SOLUTION EXPERTISE

PROCESSING COMPETENCE

IMPLEMENTATION EXPERTISE

THE POWER OF THE WHOLE

MS-Schramberg has stood for solution expertise and quality for more than half a century. We are one of Europe's leading manufacturers of permanent magnets and assemblies. With around 550 employees, we develop and produce customer-specific articles in three plants in the Black Forest, which are used successfully by companies from a wide range of industries worldwide.