

COMPONENTS FOR COOLING WATER PUMPS

MORE THAN JUST A DRIVE

In order to protect combustion or electric engines, as well as other power units, in vehicles and to power them efficiently, they have to be cooled effectively while preserving energy. The demands on electrical efficiency, smooth running characteristics and noise levels in vehicles keep increasing. In addition, durability in different fluids and at various temperatures and pressures is another requirement. Rotor solutions that meet these high standards can be developed using FEM-supported magnetic field calculations as well as the optimisation of geometries and wall thicknesses through filling simulations. We achieve a continuously high quality thanks to a linked production process of multi-component injection moulding technology with assembly units. An efficient production process for series production and a magnetic compound optimised for specific applications serve as the basis for the use of the “drive rotor with impeller” system solution from MS-Schramberg.

Advantages/Benefits

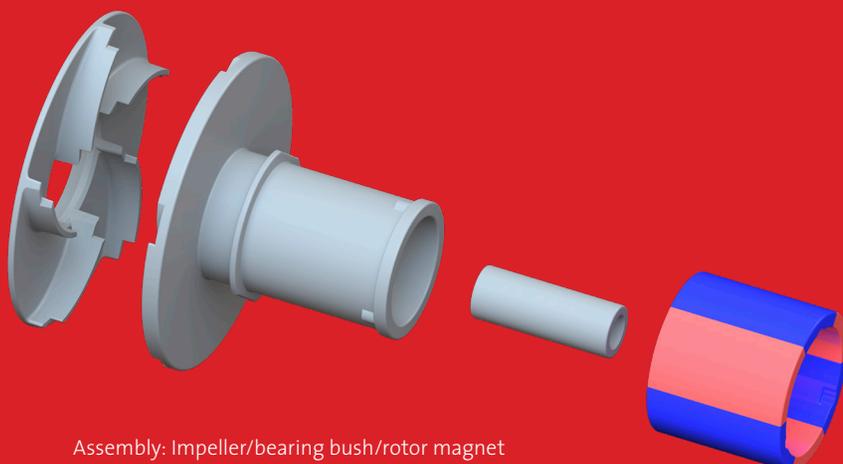
- Magnetic rotor with impeller ready for installation
- Integration of the bearing
- Magnetisation can be adapted to the motor conditions with regard to the number and type of poles
- In-house compound production ensures that the product requirements can be optimally met
- High output due to production in an injection moulding tool with multiple cavities
- An additional active balancing is possible during series production if necessary
- High temperature shock resistance

Applications in vehicles

- Engine and battery cooling
- Heating circuit
- Cooling of charging devices and fuel cell stacks

Industrial and building technology applications

- Water cooling of electronic devices
- Small pumps in general
- Heating and cooling technology in buildings



Assembly: Impeller/bearing bush/rotor magnet

Technical data

- Material designation
HF 14/22 p (type Br 275 mT), anisotropic
NdFeB 43/80 p (type Br 515 mT), isotropic
- Typical magnetisation: multipolar at the perimeter
- Binding agent: Polyphenylene sulphide (PPS)
- Impeller: Example PPS 40% GF
- Operating temperature -40 to +150°C

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. Thanks to our expertise from design to production, which has always distinguished us, we provide top-quality processes from a single source – either as a specialist or an all-rounder. 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.