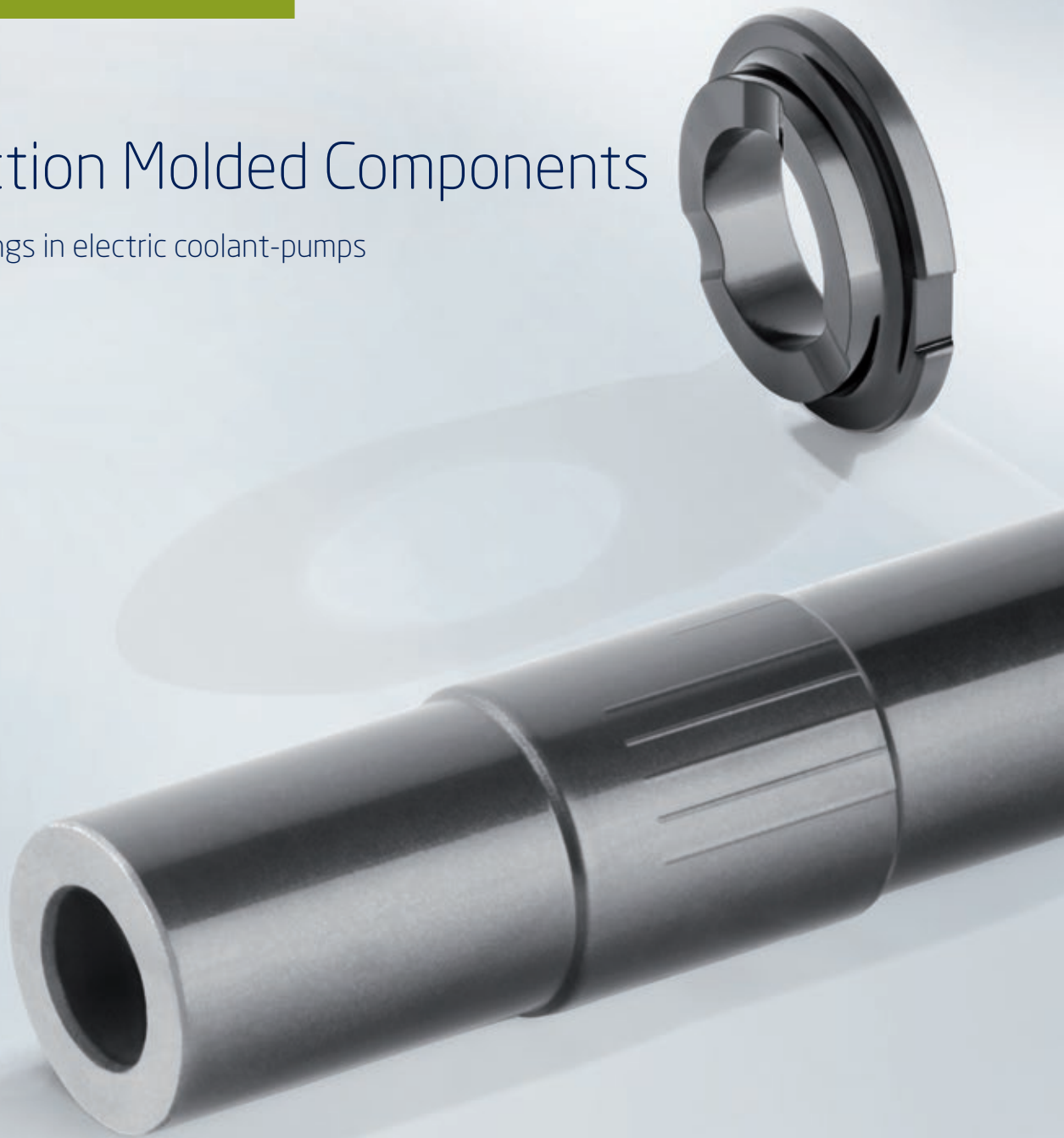




Mobility

# Injection Molded Components

As bearings in electric coolant-pumps



# Injection Molded Components

Our special grades combine the possibilities of the injection molding process with the benefits of carbon material as a friction partner.

Injection molding processes allow high production volumes of parts with various exclusive design features. Our FF521 Grade is a thermoset material, highly filled with graphite to improve its sliding abilities. Our injection molded bearings thus can withstand higher tribological loads than any other polymer matrix parts even in aggressive or abrasive media. If the requirements of the application are higher, the material can be carbonized to become FC941 which improves its strength and temperature stability even further. Both materials have proven their benefits in many years of use in different demanding pump applications.

## Typical characteristics - FF521:

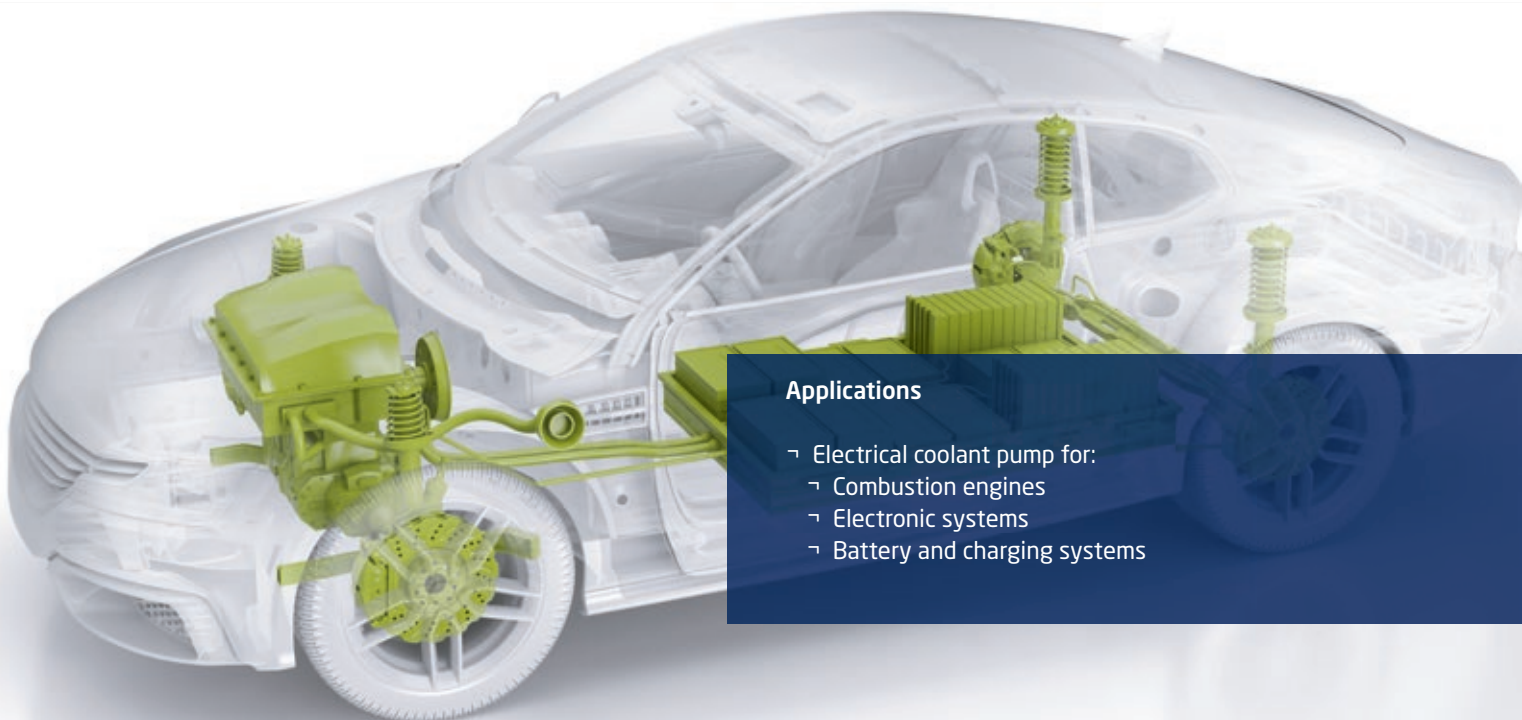
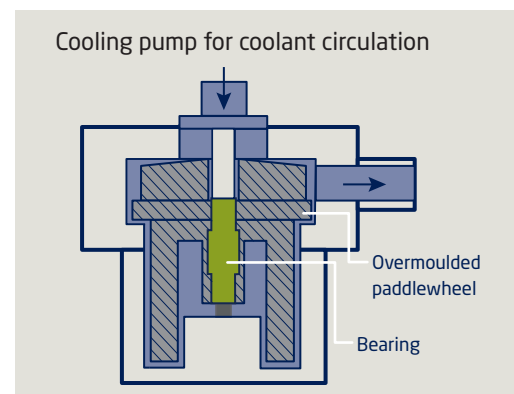
- Material: Resin Bonded Graphite
- Max Temp: 180 °C
- Bending Strength: 60 MPa
- CTE:  $23 \times 10^{-6}/K$

## Typical characteristics - FC941:

- Material: Carbonized Resin Bonded Graphite
- Max Temp: 350 °C
- Bending Strength: 90 MPa
- CTE:  $4 \times 10^{-6}/K$

## Your most important benefits:

- Meet increasing durability requirements for complex systems
- Economical
- High production volume
- Improved frictional properties
- High resistance to aggressive substances



## Applications

- Electrical coolant pump for:
  - Combustion engines
  - Electronic systems
  - Battery and charging systems

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14.10e/2021