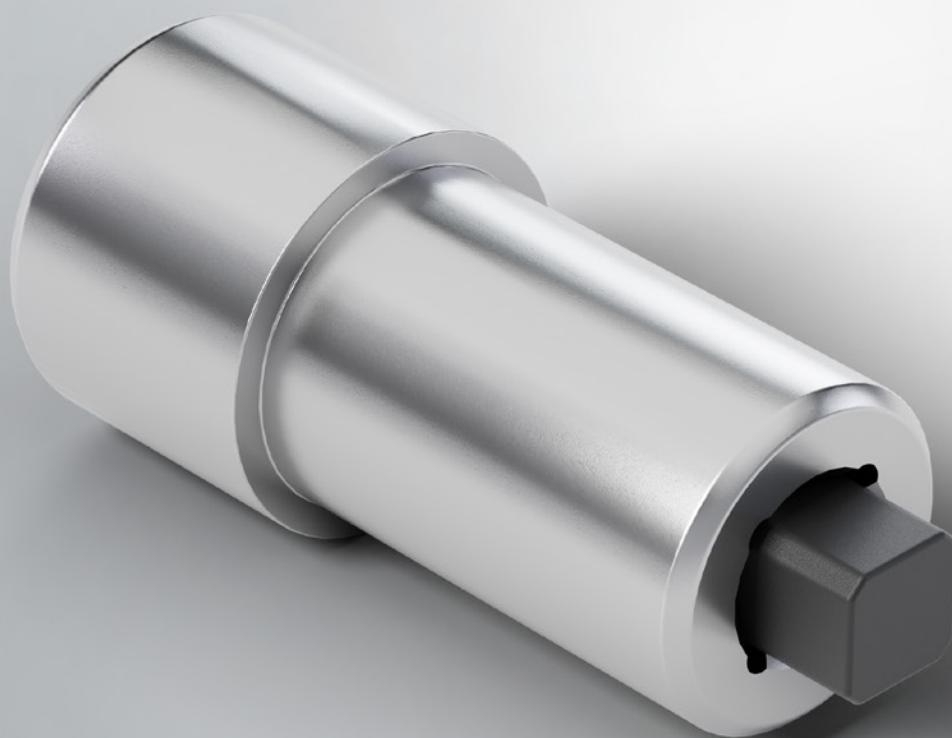




Mobility Carbon

# SHAFT GROUNDING CONTACTS

Innovative solutions to safeguard electric powertrains



# AXIAL SHAFT GROUNDING CONTACTS

The axial grounding contact has been designed for oil-based (wet run) applications. This brand-new product achieves the best suppression rates in combination with an extraordinarily low wear rate under all possible oil conditions (oil type, temperature). This product is also available for dry running applications.

## Axial Grounding Contact (AGC)

### DESIGN PROPERTIES

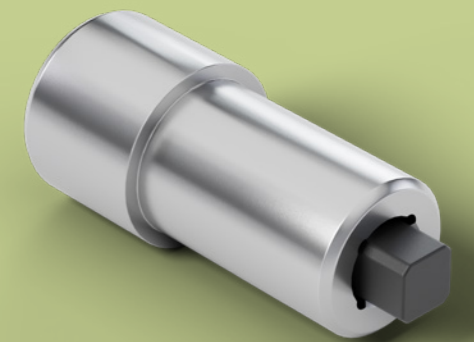
- Standard & customized solutions
- Designed for dry & wet (heavy oil load) run

### RESIDUAL SHAFT VOLTAGE

- Maximal: < 1.0 VDC\*
- Typical: ~ 0.25 VDC
- Impedance: ~ 0.5  $\Omega$  at 1 MHz

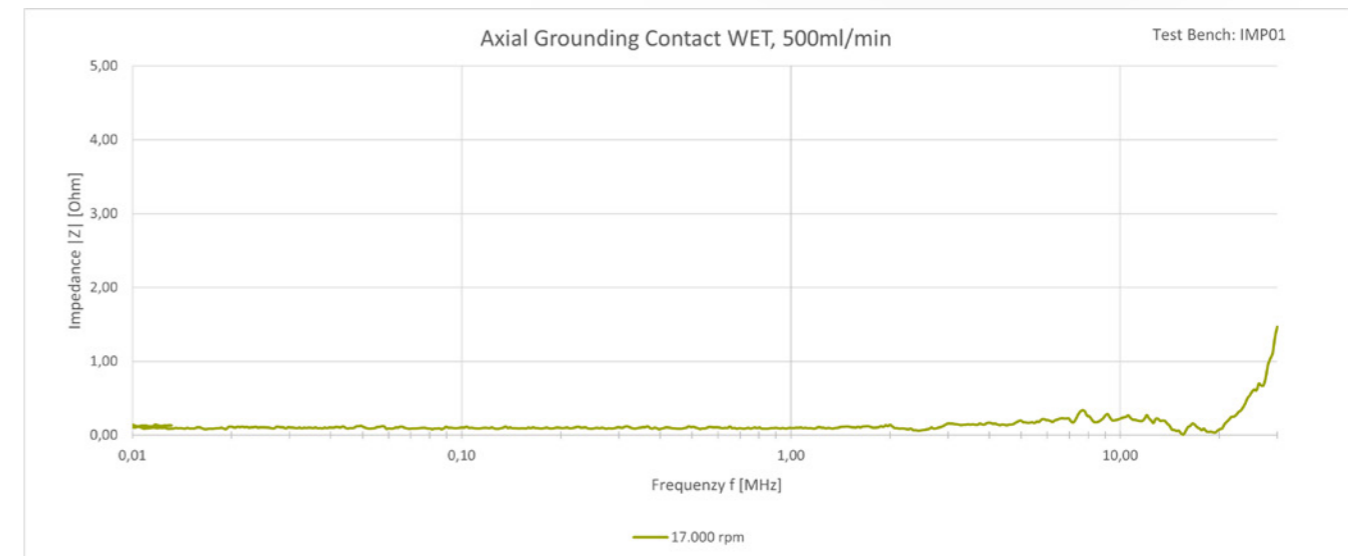
### WEAR BEHAVIOR

- 1.6  $\mu\text{m}$  resp. 0.1 mg debris per 1,000,000 rotations of shaft (at center of shaft)
- Rated wear: 1 mm | 70 mg | 16 mm<sup>3</sup> \*\*



\* for all climate conditions    \*\* measured at shaft  $\varnothing 40$  mm, 1.5 billion rotations

### Impedance characteristic:



# RADIAL SHAFT GROUNDING CONTACTS

Our Standard Grounding Contacts (SGC) are designed as a standard application for all typical shaft diameters to safeguard the rotor shaft bearings against parasitic shaft currents and efficiently suppress EMI. The SGC is available dry as well as for wet running applications. Thanks to this standardization, our customers benefit from low pro rata investment costs.

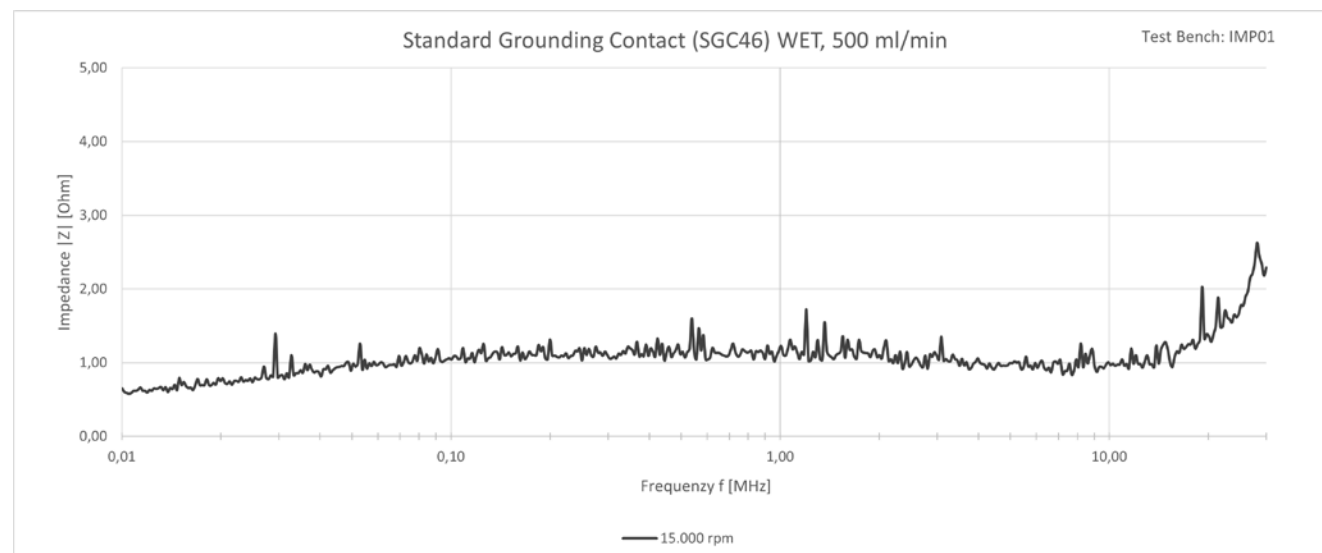
## Standard Radial Grounding Contact (SGC34 / SGC18)

- DESIGN PROPERTIES**
  - ↪ Standard solution for different shaft diameters
  - ↪ Designed for dry run
- RESIDUAL SHAFT VOLTAGE**
  - ↪ Maximal: < 3.5 VDC\*
  - ↪ Typical: ~ 1.5 VDC
- WEAR BEHAVIOR**
  - ↪ 4.5 µm resp. 0.3 mg debris per 1,000,000 rotations of shaft (Ø35 mm)
  - ↪ Rated wear: 6 mm | 400 mg | 150 mm<sup>3</sup> \*\*

\* for all climate conditions    \*\* measured at shaft Ø40 mm, 1.5 billion rotations



### Impedance characteristic:



# RADIAL SHAFT GROUNDING CONTACTS

The radial grounding contact (RGC) is a customized product for individual motor designs. While the first generation of these grounding rings were designed for dry run, we are proud to present the new 2nd Generation of RGC for wet applications. In addition, this type come without transportation dummy which allows an easy installation of the ring without having to consider the installation sequence.

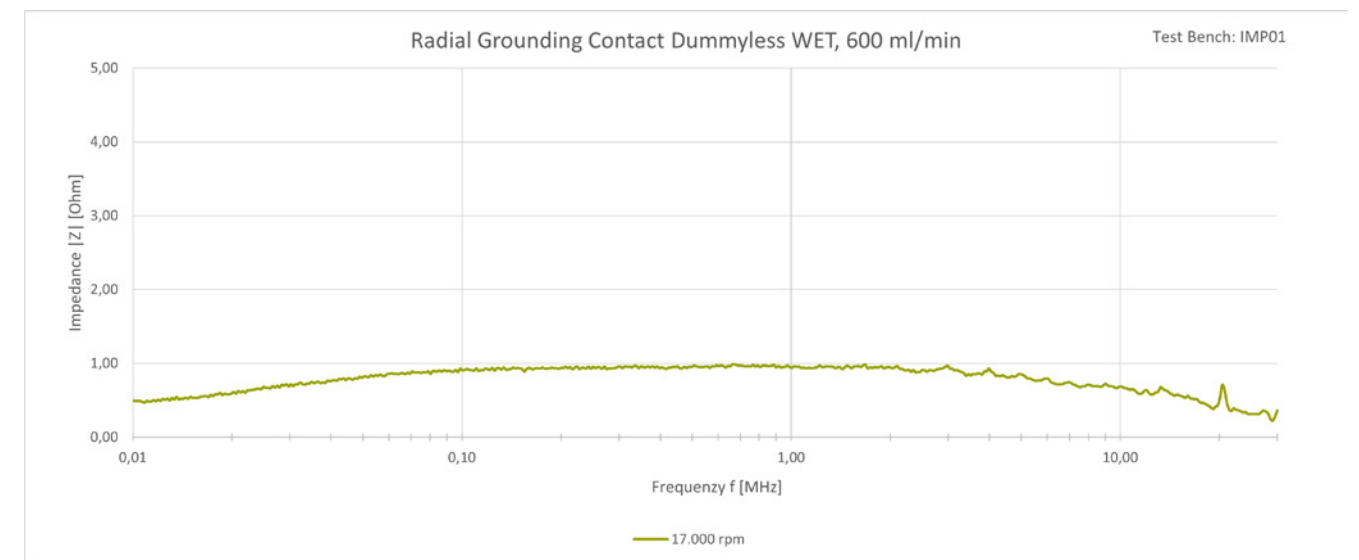
## Radial Grounding Contact (RGC)

- DESIGN PROPERTIES**
  - ↪ Designed for dry run
  - ↪ Customized solution according to shaft diameter
- RESIDUAL SHAFT VOLTAGE**
  - ↪ Maximal: < 3.0 VDC\*
  - ↪ Typical: ~ 1.5 VDC
- WEAR BEHAVIOR**
  - ↪ 0,9 µm resp. 0,3 mg/1.000.000 turns of shaft (Ø 28mm)
  - ↪ Rated wear\*\*: 1,9mm (per each brush) / 395 mg / 96 mm<sup>3</sup> (module)

\* for all climate conditions    \*\* measured at shaft Ø40 mm, 1.5 billion rotations



### Impedance characteristic:



# AXIAL SHAFT GROUNDING CONTACTS

The axial grounding ring (AGR) stands out with its excellent suppression rates and wear behavior. With its 0.1 mm of rated wear (at 40mm shaft diameter and assumed motor life of 1.5 billion rotations) it is virtually predestined for extremely high service life requirements.

## Axial Grounding Ring (AGR)

### DESIGN PROPERTIES

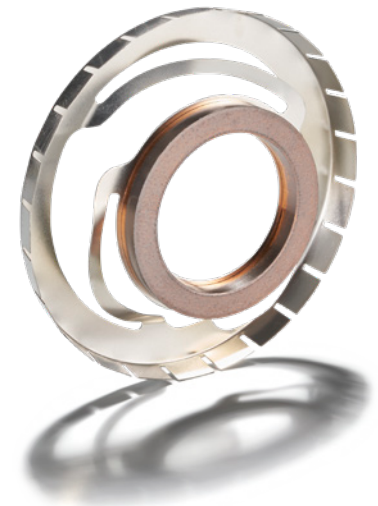
- Customized solution according to shaft diameter
- Designed for dry run
- Max. speed 10,000 rpm

### RESIDUAL SHAFT VOLTAGE

- Maximal: < 2.0 VDC\*
- Typical: ~ 1.5 VDC

### WEAR BEHAVIOR

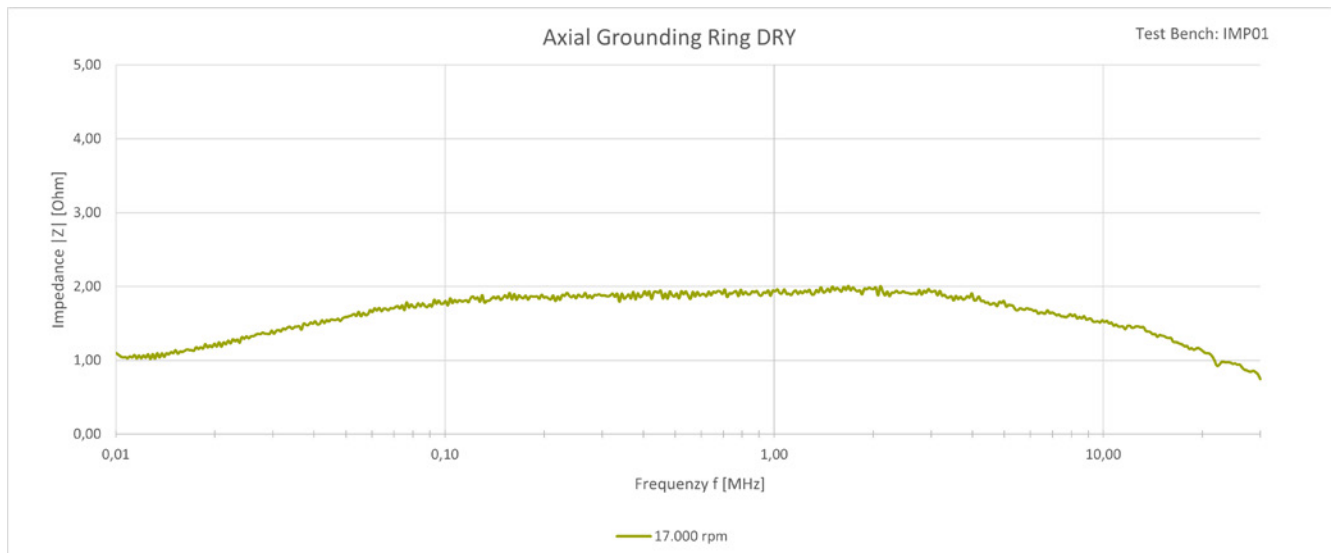
- 0.25  $\mu\text{m}$  resp. 0.3 mg debris per 1,000,000 rotations of shaft ( $\varnothing 29$  mm)
- Rated wear: 0.1 mm | 30 mg | 11  $\text{mm}^3$  \*\*



\* for all climate conditions

\*\* measured at shaft  $\varnothing 40$  mm, 1.5 billion rotations

## Impedance characteristic:



# SCHUNK GROUP - ENGINEERING COMPETENCE IN MATERIALS TECHNOLOGY AND MECHANICAL ENGINEERING

The Schunk Group is a global technology group. The company is a leading supplier of products made of high-tech materials - such as carbon, technical ceramics and sintered metal - as well as machines and systems - from environmental simulation to air conditioning technology and ultrasonic welding to optics machines.

The Schunk Group has around 10,000 employees in 26 countries and generated a turnover of 1.6 billion euros in 2023. The company is divided into ten different business units.

In the fast lane with innovative strength - as a component and development partner to the automotive industry, we provide mobility with components for power transmission and with tribologically highly resilient slide bearing and sealing elements made of carbon graphite, graphite and silicon carbide. With several hundred million carbon brushes per year in electric motors for starters, fans, petrol pumps and window regulators, we are the global leader.

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