

Protect Your Motor from Electrical Bearing Damage

PROBLEM:

VFD Induced Shaft Voltages Damage Bearings



Variable frequency drives (VFD) on AC and DC motors induce harmful electrical voltages on the motor shaft. Once these voltages exceed the resistance of the bearing lubricant, they discharge through the motor's bearings causing

fusion craters, severe pitting, fluting damage, excessive bearing noise and eventually bearing failure.

SOLUTION:

AEGIS[™] SGR - Electrical Bearing Damage Protection



The new AEGIS[™] SGR Bearing Protection Ring prevents electrical bearing damage by safely channeling harmful shaft voltages away from the bearings to ground. Using proprietary Electron Transport Technology[™], the conductive micro fibers

inside the AEGIS $^{\rm TM}$ SGR provide the path of least resistance and dramatically extend motor life.



Features and Benefits

- **Protects** both motor bearings and the bearings in attached equipment
- Channels harmful currents to ground
- Maintenance free bearing protection for life-will last for the service life of the motor
- Effective in grease, oil, dirt or dust-conductive micro fibers "sweep" away contaminants from the shaft surface
- **Improves** system reliability and production with zero maintenance and lifetime bearing protection

F Wilson Electric

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Conductive Epoxy Mounting

Shaft diameters: 0.311" to 6.02" Solid and Split Ring / Conductive Epoxy Included Quick and easy installation to metal motor frame



Standard Mounting Brackets

Shaft diameters: 0.311" to 6.02" Ships with mounting brackets, screws and washers Quick and easy installation to most surfaces



Split Ring



Bolt Through Mounting Shaft diameters: 0.311" to 6.02"

M3 x 14 socket head cap screws and lock washers 2 mounting holes up to shaft size 3.895" 4 mounting holes for larger sizes



Press Fit Mounting

Shaft diameters: 0.311" to 6.02" Clean dry 0.004" press fit Custom sizes available

NEMA-IEC Motor SGR Kits Solid and Split Ring Design

Custom kits available for other shaft diameters

SELECTING THE RIGHT SIZE SGR FOR YOUR MOTOR

- Measure shaft diameter at a point 0.125" (3mm) from motor end bell.
- To select the correct SGR part number, refer to the SGR size chart.
- Note: If you have a slinger or a shaft shoulder that is less than 0.375" (9.5mm), you will need the NEMA kit.
- See catalog or website for more information



Motors up to 100 HP (75 kW)

Install one AEGIS[™] SGR Bearing Protection Ring on either the drive end or the non-drive end of the motor The simplest installation is to slide the AEGIS[™] SGR over the drive end and fasten it to the motor end bell with the easy to install mounting hardware included with each AFGIS[™] SGR



★ Recommend Colloidal Silver Shaft Coating PN CS015

Motors 100 HP to 1000 HP (75 kW to 750 kW)

- Motor frame must be well arounded
- Non-Drive End: Bearing journal should be insulated or Insulated/Ceramic Bearing installed to disrupt circulating currents
- Install AEGIS[™] SGR on opposite end of insulation and Insulated/Ceramic Bearing (usually DE)
- ★ Recommend Colloidal Silver Shaft Coating PN CS015

Critical Applications: Insulate both ends and add AEGIS™ SGR on one end

- Motor frame must be well grounded
- Bearing journals should be insulated or Insulated/ Ceramic Bearing installed to disrupt circulating currents
- Install AEGIS[™] SGR on drive or non-drive end to provide path of least resistance for shaft voltages and to channel VFD induced currents to ground.



★ Coat shaft with Colloidal Silver Shaft Coating PN CS015

★ COLLOIDAL SILVER SHAFT COATING: PN CS015 NEW TECHNOLOGY

Improving the conductivity of the steel shaft surface enhances the shaft voltage discharge capability in AEGIS[™] shaft grounding applications. Maintaining a highly conductive shaft surface is especially important in critical applications or in applications where the conductive shaft surface of steel could become compromised.



★ Recommended for all AEGIS[™] SGR installations.

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Drive and Non-Drive end: