DP&A Sales
Exclusive Distributors of SGS™ Products
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SGS Shaft Grounding Systems

FAQs

shaft grounding systems, inc.

1) What separates SGS™ from our competitors?

To our knowledge, SGS™ shaft grounding systems were the first patented shaft grounding systems available on the market to address the issue of electrical bearing damage on VFD motors. Beginning out of the Pulp & Paper industry over 20 years ago, we have developed an extensive knowledge base that is field tested on shaft grounding system applications over many other industries.

2) What is one significant difference between SGS™ and other leading shaft grounding competitors?

Our patented brush systems are designed to withstand severe industrial environments as well as environments sensitive to emissions. Our competitors use much of the same technology as office printers use for grounding static electricity from printer paper. Longitudinal trials of this "fiber-to-shaft" design is only effective for vastly shorter times at controlling shaft voltages than when compared to SGS™ products.

3) How long can SGS™ systems run prior to maintenance?

Our CR series line of products have proven to run for over 10 years or 100,000 hours of continuous operation (1800rpm) prior to needing an inexpensive brush replacement. Maintenance can usually be done on the fly.

4) Is there potential for shaft damage while running SGS™ grounding systems?

Shaftwear is certainly a valid concern with most shaft grounding systems, however, the SGS™ patented brush designs do not cause shaft wear. This has been determined by 10 year running trials.

5) Competitors state that spring loaded brush designs apply too much pressure and therefore wear out quickly. True?

While this can be true, our patented SGS™ brush and rotor designs have proven to run as long as 100,000 hours at 1800 rpm prior to needing brush replacement. In addition, lab and field studies have shown that the brush effectiveness lasts for the entire wear rate life of the brush. That is to say, voltages were maintained well below the threshold leading to capacitive discharge through the bearing for the entire life of the brush.

6) Do oils and other contaminants negatively affect how well our SGS™ shaft grounding kits perform?

No. We have developed a line of products for use in the clean room industry. Extensive customer studies have proven that our patented sealed SGS™ grounding systems can operate in a clean room environment and continue to be effective at shaft grounding while not emitting significant contaminants into the environment at continuous operation at 1800 rpm.

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FAQs (continued)
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7) When using SGS™ kits, do brush particulates affect the ability of our shaft grounding systems to properly ground?

No. Our patented designs ensure a clean running surface at all times for the brush to run on.

8) Can our SGS™ systems operate over a shaft keyway?

Yes. If an end of shaft SGS™ system will not serve your needs, then our split ring systems will operate over a shaft keyway without the time consuming process of filling the shaft keyway with epoxy, etc. If the key is part of the system SGS™ will accomodate the key.

9) When might 2 shaft grounding systems be needed for a single application?

If circulating or eddy currents are present and no motor bearing is insulated, then two shaft grounding systems should be installed to pass the eddy current around both motor bearings while also controlling the capacitive discharge. In our experience, eddy currents might become a problem with larger AC motors of 250hp or more. If the ODE motor bearing is insulated to control eddy current, then one shaft grounding system should be used at the DE bearing to control the shaft-to-frame capacitive discharge. A single insulated bearing will not control capacitive discharge through the non-insulated bearings.

10) What is the most common type of electrical bearing damage found on VFD controlled motors?

Most often, electical fluting is the type of bearing damage seen on VFD controlled motors. Under special conditions a frosted pattern is observed See pictures below:

Electrical Fluting

Electical Frosting