



Protecting VFD-Driven Motors from Bearing Damage

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Electro Static Technology

AEGIS™ Shaft Grounding Rings Keep Food Processing Plants Up and Running

AEGIS™ Rings Installed Inside Washdown Motors at National Meat & Poultry Processor Could Prevent Bearing Damage Shutdowns

By allowing engineers to precisely control the speeds of motors that run conveyors, pumps, mixers, and other meat and poultry processing equipment, variable frequency drives (VFDs) enable the fine tuning of food preparation, transfer, and packaging processes. They also reduce energy costs by 20-30% or more.

But VFDs are not without their problems. They induce currents on the shafts of the motors they control — currents that discharge through the bearings causing pitting, fluting, and catastrophic motor failure.

Because meat and poultry processors face staggering losses due to spoilage if their equipment goes down, many processors are looking for ways to prevent motor failures by protecting bearings from such VFD-induced electrical damage.

AEGIS™ Bearing Protection Rings provide this proven, long-term protection. In fact, several major meat and poultry processors have installed AEGIS™ Rings on VFD-controlled motors throughout their plants, dramatically extending the lives of motors and bearings and improving their reliability.

For more information, [click here](#).



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AEGIS™ Rings Keep Commercial Bakery Rolling in Dough

Variable frequency drives provide the high level of process control commercial bakeries need to ensure the quality of their products. Since most large commercial bakeries produce a variety of products, VFDs also provide these bakeries with the flexibility to run several different products (at different times) on a given production line.

But like most food processing plants, commercial bakeries must be concerned about uptime and reliability, as well as quality and flexibility. Despite their benefits, VFDs also have the potential to bring





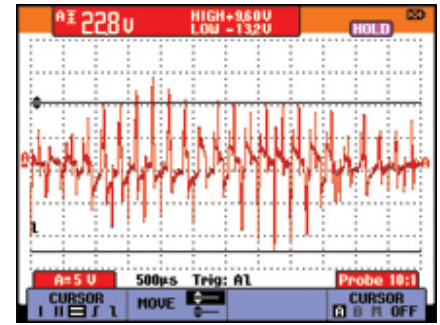
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production lines to a halt. Currents induced on the shafts of VFD-controlled motors discharge through the path of least resistance — typically motor bearings, often crippling the motors and shutting down production. In many cases, the cost of this unplanned downtime exceeds any savings from use of VFDs. And in addition to the cost of repairing or replacing damaged motors, food processors must often incur the costs of purging equipment and washing down machinery before resuming production.

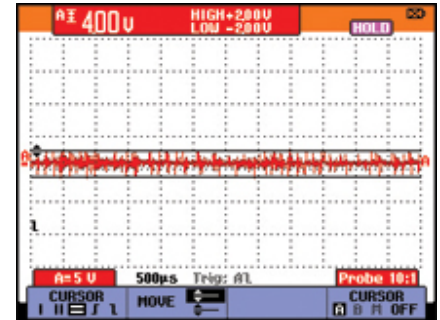
By protecting motor bearings from VFD-induced electrical damage, AEGIS™ Shaft Grounding Rings allow commercial food processors to enjoy the obvious benefits of variable frequency drives — without the less obvious, yet expensive, drawbacks.

Recent readings taken from the shafts of VFD motors at a commercial bakery that supplies breads, hotdog and hamburger buns, and rolls to national supermarket chains showed shaft voltages as high as 22.8V peak-to-peak — high enough to produce bearing damage. Similar readings taken after AEGIS™ Rings were installed showed that the rings had reduced shaft voltages by 83% — to well below damaging levels.

For more information, [click here](#).



Without AEGIS™ SGR: 22.8V peak-peak



With AEGIS™ SGR: 4.0V peak-peak



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Specify AEGIS™ Installed Inside Your Washdown Motors

AEGIS™ Bearing Protection Rings can be factory installed inside washdown-duty motors. Internal installation not only protects motors from electrical bearing damage, but also protects the AEGIS™ Ring from high-pressure spray, dirt, debris, and other contaminants.

Several motor manufacturers currently offer internal installation through their modification programs, and most EASA shops can easily retrofit existing motors with internally-installed rings.

To protect your washdown-duty motors from electrical bearing damage, specify AEGIS™ Installed Internally.

For more information, [click here](#).



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