

Installed outside... or inside...



AEGIS® Rings protect GE motors from VFD-induced bearing damage



Proven in hundreds of thousands of installations, the AEGIS® SGR protects motor bearings from damaging VFD-induced currents and extends motor life. It also dramatically reduces downtime and improves the reliability of motor-driven equipment and systems.

- Safely channels harmful currents away from bearings to ground
- Patented time-tested design
- Maintenance-free, easy to install, lasts for life of motor
- Standard sizes for any motor



To download a free technical paper on bearing protection technologies, visit our website:

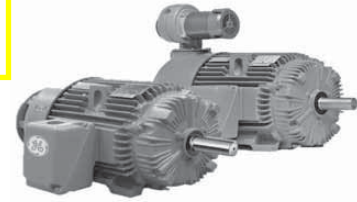
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**Electro
Static
Technology™**
An ITW Company

Adjustable Speed Drive—A\$D Ultra®

Standard Features

AEGIS® Installed Inside the Motor



HP Range	1.5-300
Poles	4 and 6
Voltage	230/460, 460
Agency Approvals	UL - Component and Insulation System Recognition, CSA - Motors
Altitude	3300 feet
Ambient	40°C
Balance/Vibration	0.040 in/sec (P) @ 60 Hz 0.055 in/sec (P) at others frequency
Bearing Housing Rise	65°C
Bearing Caps	Both ends. 143-286: ODE is gasketed, 324-449: both ends are gasketed
Bearing Protection	Aegis shaft ground ring installed inside the motor in DE bearing cap 140-449 frame. Recessed Slinger. Inpro seal kit available
Bearing Type	Ball, roller bearing available as an option 360 frame and higher. Insulated Opposite Drive End Bearing 444- 449 Frame.
Centered Core	Allows F1-F2 field conversion
Conduit Box	Gasketed and rotatable, Fabricated Steel above 250 Amps, All other: Cast iron
Cooling	143-182: Non-Vent, 184-449: Totally Enclosed Fan Cooled, 364-449: Blower Cooled also available.
DE Mounting	143-286: NEMA C-face mount
Drains	Stainless Steel T-drains
End Shield	Cast Iron—C-face std through 286 frame
Fan	Non-Sparking Plastic or Bronze
Fan Cover	Cast Iron
Fasteners	SAE, Grade 5
Foot Draft Angle	+/- 1.5 degrees
Foot Flatness	0.005 inches
Frame Material	Cast Iron
Frame Size	143-449
Frequency	60 Hz
Grease	Polyurea
Ground	Ground lug in Conduit Box
Insulation Class	H
Insulation System	GEGUARD2400 Non-Hygroscopic, AntiFungus, 2800Volt @ .1microsecond rise time. Exceeds NEMA MG1-31
Inverter Capabilities	Variable Torque inf:1, Constant Torque inf:1, Constant Horsepower to 1.5 times base speed.
L10 Bearing Life	Direct Coupled: 130,000 hrs, Belted: 26,280 hrs, Belted L10a 50,000
Lifting Means	4 Lugs cast into frame
Mounting	F1 as Standard and Modifiable to F2
Mounting Holes	1 per foot (324 frame), 2 per foot (all other frames)
Nameplate	Stainless Steel includes Weight, Vibration Limit, Service Factor, Speed Range, Constant Torque, and Constant HP
NEMA Design	NEMA A
Paint	Buff, Epoxy ester
Relubrication	Both ends, extended through the fan cover
Rotor	Cast Aluminum
Service Factor	1.0 SF for PWM operation
Shaft TIR	Meets IEEE 841, .001 in. for shaft diameter 1.625 in and smaller, .0015 in for shaft diameter greater than 1.625 in.
Tach Mounting	ODE C-face provision for tach mounting. 143-184: 4.5" rabbet, 213-449: 8.5" rabbet
Temperature Rise	80°C by resistance TEBC & TENV: 105°C by resistance TEFC
Tests	NEMA Routine Report including Vibration supplied with motor, IEEE 112. 100% CIV tested.
Thermal Protection	140-280, 2 NC Thermostats; 320-449, 3 NC Thermostats
Time Rating	Continuous
Vibration Pads	Cast in vibration pads for repeatable measurements
Warranty	60 months from date of installation or 66 months from date of manufacture, whichever occurs first Electro Static Technology guarantees against bearing failure due to fluting damage for the life of the motor.

Energy Saver®-SGR

ODP and TEFC with Externally Mounted Shaft Grounding Ring

Features

GE is now offering Energy Saver ODP and TEFC enclosures in frames 143T-326T with externally mounted AEGIS® Shaft Grounding Rings (SGR). The premium efficiency motors are now available from stock in a range of sizes for variable drive applications.

- 1-50 Hp
- 1800 RPM
- ODP and TEFC Enclosures
- 143T-326T Frame Stocked Motors
- Class F Insulation
- GEGARD 1800 Insulation System
- Cast Iron Construction
- Inverter Duty Capabilities
 - ODP: Variable Torque 20:1, Constant Torque 4:1
 - TEFC: Variable Torque 10:1, Constant Torque 4:1
- 1.15 Service Factor
- Extended Electro Static Technology Bearing Guarantee*
- Three year warranty

SGR Benefits

Motors using variable frequency drives (VFD) demonstrate advantages in energy savings, performance, and lower operating costs. In order to take full advantage of these benefits, shaft grounding rings are being used to provide a more sustainable and reliable Energy Saver motor for inverter duty applications such as fans, blowers, and pumps. AEGIS® shaft grounding rings prevent bearing fluting damage by diverting shaft voltages and bearing currents to ground instead of the motor bearings.

GEGARD 1800 Insulation System

This system exceeds NEMA MG1-31 for motors operating on inverters. The insulation system is comprised of class F materials with a non-hygroscopic, anti-fungus varnish.



Built to the Highest Standards and Certifications

The Energy Saver-SGR design meets EISA efficiency levels (based on NEMA Premium MG1 table 12-12). Other standards and certifications include CSA-Motors and C-390, UL-Component & Insulation System Recognition and CE mark for 320 frames and below.



60/50 Hz Operation

Alternate operation on and below, allow greater flexibility in customer applications.

- Usable @ 200V w/ 1.0 S.F.
- 200/400V @ 50 Hz w/ 1.0 S.F.

*Warranty

The Energy Saver-SGR comes with a standard warranty of 36 months from the date of purchase or 42 months from the date of shipment, whichever occurs first. Extended Electro Static Technology guarantees against bearing failure due to fluting damage for the life of the motor.



GE Motors FastTrack Motor Modification Shop (MOD Shop)

GE Motors FastTrack Motor Modification Shop modifies stock GE Energy \$aver®, X\$D Ultra®, X\$D Ultra® 841, A\$D Ultra, Kinamatic™ DC, and Quantum™ LMV motors to meet your specific requirements. Most modifications can be completed in 1 to 2 weeks.

Available modifications include:

- AEGIS SGR External Mounting (Energy \$aver motors)
- AEGIS SGR Internal Mounting (X\$D Ultra motors)
- C-Face Mounting
- CSA-Division 2
- D-Flange Mounting
- Drip Covers
- Encoder Mounting (A\$D motors)
- F2 Conversions
- Load Test - Witnessed and Un-witnessed
- Rerate - Voltage, ambient, altitude
- Round Frame Conversion
- Space Heaters - Standard and Thermostatically Controlled
- Special Grease
- Steady Bushings (Value Line - VHS motors)
- Thermistors
- Thermostats
- Surface Mount Winding RTD
- UL Division 2



For more information on these and other motor modifications, please contact your GE sales representative or call us at 1 (800) 541-7191.