

AEGIS® uKIT Shaft Grounding Ring with Universal Mounting Brackets for NEMA Motors



AEGIS® Electrical Bearing Damage Protection

AEGIS® uKITs combine an AEGIS® Shaft Grounding Ring and universal mounting brackets, allowing external mounting of the ring on any motor — even those with shaft shoulders, slingers, seals, or other end bell protrusions.

Problem

Without AEGIS® bearing protection, induced shaft voltages can cause bearing pitting, frosting, and fluting, dramatically reduce the effectiveness of lubrication, and lead to catastrophic bearing failure.

Solution

AEGIS® uKITs protect motors by channeling harmful VFD-induced shaft voltages away from bearings and safely to ground, preventing bearing failure and costly unplanned downtime.

AEGIS® uKITs includes:

- AEGIS® Rings sized for NEMA frame motor shaft diameters (NEMA “u” dimension) from 56 to 449T with solid and split ring designs
- Mounting brackets and hardware for installation of the AEGIS® Ring on virtually any end bell



Bearing without protection:
severe fluting damage or severe electrical damage

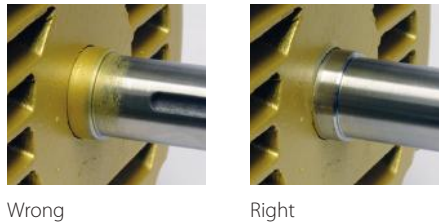


Bearing with protection:
no fluting or electrical damage

Installing AEGIS® uKITS

Preparation

- Shaft must be clean and free of any paint, coatings, or other nonconductive material.
- AEGIS® Rings should not operate over a keyway. Fill keyway with a fast-curing epoxy putty (such as Devcon epoxy putty) in the area of contact.
- Select bracket size based on the clearance needed from the end bell/slinger/shaft shoulder. For solid ring, use either a 3-hole or 4-hole bracket pattern. For split ring use 4 brackets. Attach brackets to the AEGIS® ring using the 5-40 x 3/8" lat head screws.
- To increase the conductivity of the shaft, apply a light coat of the AEGIS® Colloidal Silver Shaft Coating PN CS015 to the circumference of the shaft where the AEGIS® microfibers will contact it. Apply evenly all around the shaft.
- Install the AEGIS® uKIT so that the aluminum ring maintains an even clearance around the shaft. Conductive microfibers should be in contact with the conductive metal surface of the shaft. Mark bracket locations.



Installation using Conductive Epoxy (EP2400)

- Remove paint on the motor end bell where the AEGIS® uKIT brackets will be attached. These areas must be clean and free of any coatings, paint, or other nonconductive material.
- Prepare conductive epoxy per package directions
- Apply the epoxy to the mounting brackets
- Install the uKIT. Hold the uKIT in place until epoxy is firmly holding. Allow epoxy to cur for 4 hours at or above 75°F. For quickest curing time, use a heat gun to heat epoxy to 150-250°F for 10 minutes, then allow to cool.

Installation using screws

- Drill (3 or 4) holes using a #36 drill. Avoid drilling into bearing.
- Depth of hole should be 1/4"
- Tap each hole with a #6-32 tap
- Install the uKIT and secure to the motor with the hardware provided. The bolts provide the path to ground. Do not use Loctite® or any other non-conductive material to secure the screws.



Technical Data for Solid and Split Ring AEGIS® uKITS

AEGIS® uKITS for IEC motors include:

- AEGIS® Shaft Grounding Ring (1)
- Brackets (4) each of 4 styles –16 brackets total
- 5-40 x 3/8" flat head screws (4)
- 6-32 x 3/8" socket head cap screws (4)
- #6 split lock washers (4)
- #6 flat washers (4)
- 5/64" and 7/64" allen wrench

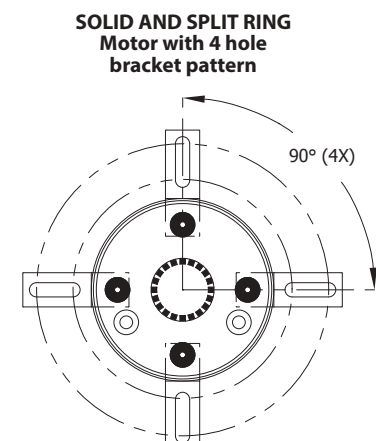
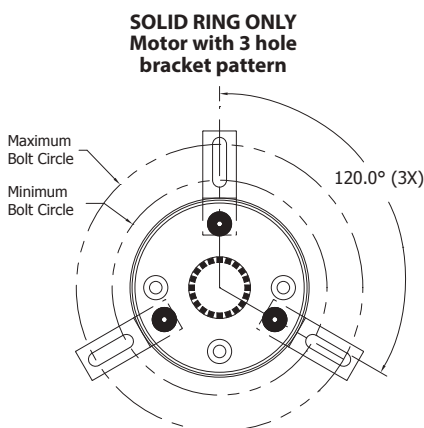
Tools for Conductive Epoxy installation

- EP2400 AEGIS® Conductive Epoxy
- Dremel tool to remove paint from motor end bell
- Heat gun to speed curing of conductive epoxy



Tools for screw installation

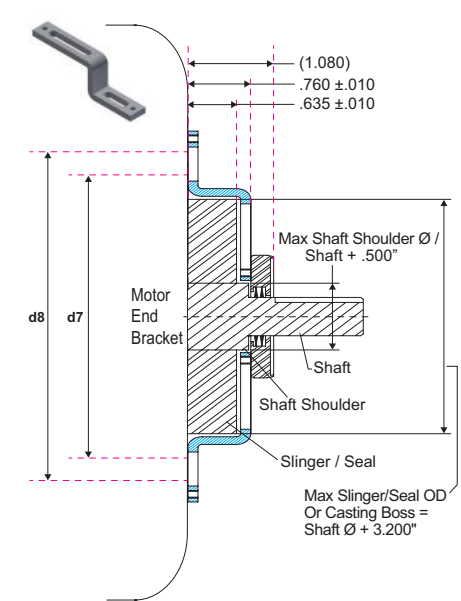
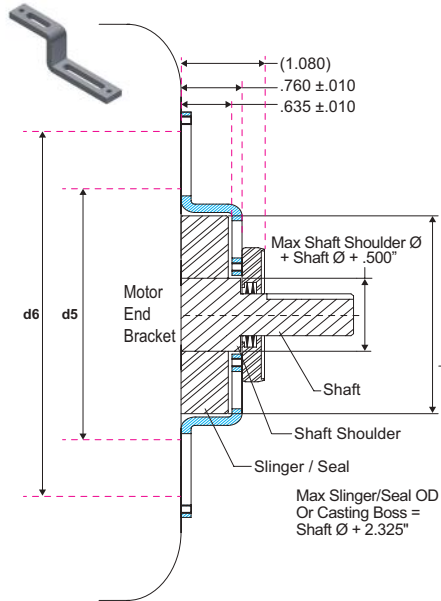
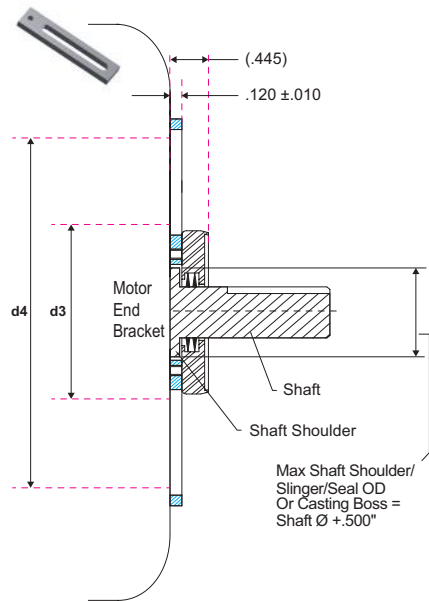
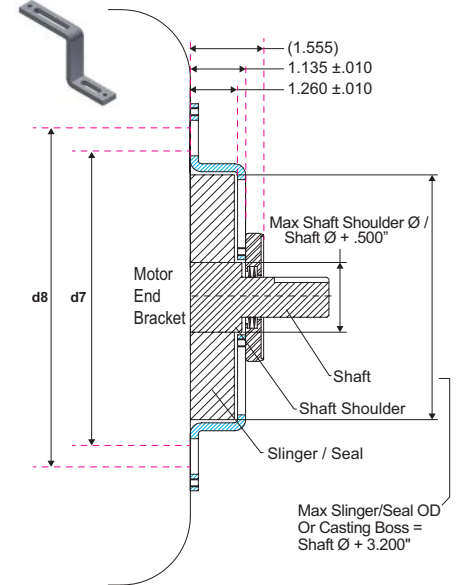
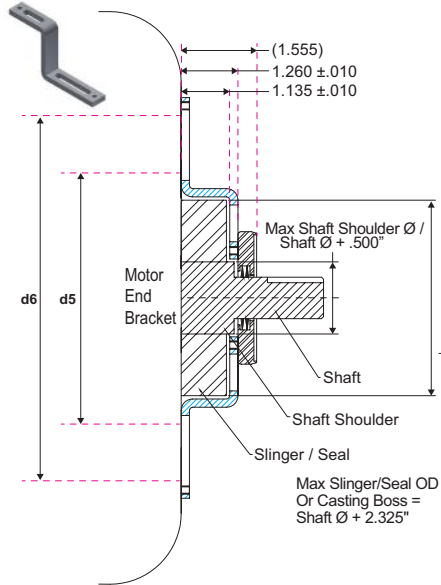
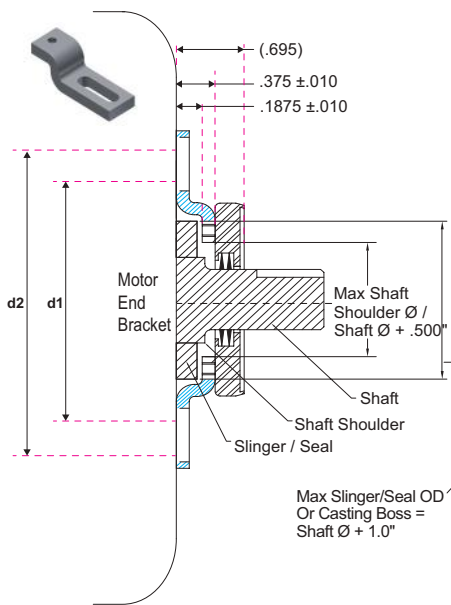
- #36 drill and #6-32 tap
- Fine grit emery cloth/sand paper
- CS015 AEGIS® Colloidal Silver Shaft Coating (recommended)



**AEGIS® uKIT Shaft Grounding Ring with
Universal Mounting Brackets for NEMA Motors**



AEGIS® uKIT Brackets



| Ø Shaft | min / max. Bolt Circle of the holder | | | | | | | | |
|---------|--------------------------------------|--------|--------|--------|--------|--------|--------|--------|--|
| | d1 | d2 | d3 | d4 | d5 | d6 | d7 | d8 | |
| 0.625" | 2.400" | 3.200" | 2.450" | 4.325" | 3.700" | 5.375" | 4.575" | 5.375" | |
| 0.875" | 2.650" | 3.450" | 2.700" | 4.575" | 3.950" | 5.625" | 4.825" | 5.625" | |
| 1.125" | 2.900" | 3.700" | 2.950" | 4.825" | 4.200" | 5.875" | 5.075" | 5.875" | |
| 1.375" | 3.150" | 3.950" | 3.200" | 5.075" | 4.450" | 6.125" | 5.325" | 6.125" | |
| 1.625" | 3.400" | 4.200" | 3.450" | 5.325" | 4.700" | 6.375" | 5.575" | 6.375" | |
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| 2.125" | 3.900" | 4.700" | 3.950" | 5.825" | 5.200" | 6.875" | 6.075" | 6.875" | |
| 2.375" | 4.150" | 4.950" | 4.200" | 6.075" | 5.450" | 7.125" | 6.325" | 7.125" | |
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| 4.375" | 6.150" | 6.950" | 6.200" | 8.075" | 7.450" | 9.125" | 8.325" | 9.125" | |
| 4.875" | 6.650" | 7.450" | 6.700" | 8.575" | 7.950" | 9.625" | 8.825" | 9.625" | |

AEGIS® uKIT Ordering

| Solid uKITs) | Split Ring uKITS | Motor Shaft Diameter | NEMA Frame Sizes |
|----------------|--------------------|----------------------|--|
| SGR-0.625-UKIT | SGR-0.625-UKIT-1A4 | 0.625" | 56 |
| SGR-0.875-UKIT | SGR-0.875-UKIT-1A4 | 0.875" | 56HZ, 143T, 145T |
| SGR-1.125-UKIT | SGR-1.125-UKIT-1A4 | 1.125" | 182T, 184T |
| SGR-1.375-UKIT | SGR-1.375-UKIT-1A4 | 1.375" | 213T, 215T |
| SGR-1.625-UKIT | SGR-1.625-UKIT-1A4 | 1.625" | 254T, 256T, 284TS, 286TS |
| SGR-1.875-UKIT | SGR-1.875-UKIT-1A4 | 1.875" | 284T, 286T, 324TS, 326TS, 364TS, 365TS |
| SGR-2.125-UKIT | SGR-2.125-UKIT-1A4 | 2.125" | 324T, 326T, 404TS, 405TS |
| SGR-2.375-UKIT | SGR-2.375-UKIT-1A4 | 2.375" | 364T, 365T, 444TS, 445TS, 447TS, 449TS |
| SGR-2.875-UKIT | SGR-2.875-UKIT-1A4 | 2.875" | 404T, 405T |
| SGR-3.375-UKIT | SGR-3.375-UKIT-1A4 | 3.375" | 444T, 445T, 447T, 449T |
| SGR-3.625-UKIT | SGR-3.625-UKIT-1A4 | 3.625" | |
| SGR-3.875-UKIT | SGR-3.875-UKIT-1A4 | 3.875" | |
| SGR-4.375-UKIT | SGR-4.375-UKIT-1A4 | 4.375" | |
| SGR-4.875-UKIT | SGR-4.875-UKIT-1A4 | 4.875" | |



uKITs include four mounting bracket styles and hardware for fast, easy installation of the AEGIS® Ring on virtually any end bell.

Related AEGIS® Products

AEGIS® Conductive Epoxy (EP2400)

Used to install AEGIS® uKITs without drilling and tapping into the motor end bell (2 – 3 applications).



AEGIS® Colloidal Silver Shaft Coating (CS015)

Used to improve the conductivity of the steel shaft surface. Apply to any VFD-driven motor shaft prior to installing AEGIS® uKITs. (20 – 25 applications based on a 75mm shaft diameter).

