



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 IEC frame motor shaft diameters (IEC “D” dimension) 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

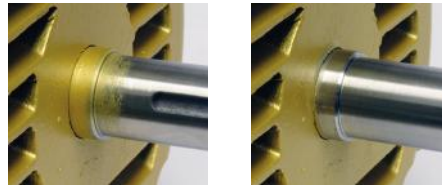


Bearing with protection:
no fluting or electrical damage

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.



Wrong

Right

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 cure for 4 hours at or 24°C above. For quickest curing time, use a heat gun to heat epoxy for 10 minutes, then allow to cool.

Installation using screws

- Drill (3 or 4) holes using a 3.3 mm drill. Avoid drilling into bearing.
- Depth of hole should be 6 mm
- Tap each hole with a M4 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" lat head screws (4)
- M4 x 10 mm socket head cap screws (4)
- M4 split lock washers (4)
- M4 lat washers (4)
- 5/64" allen wrench
- 3 mm allen wrench

Tools for Conductive Epoxy installation

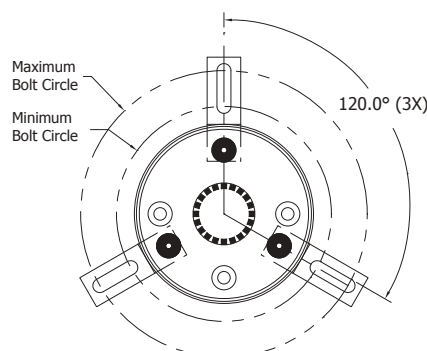
- EP2400 AEGIS® Conductive Epoxy
- Dremel tool to remove paint from motor end bell
- Heat gun to speed curing of conductive epoxy



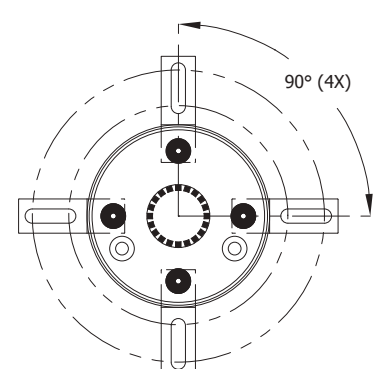
Tools for screw installation

- 3.3 mm drill (#30 drill in inches)
- M4 tap
- Fine grit emery cloth/sand paper
- CS015 AEGIS® Colloidal Silver Shaft Coating (recommended)

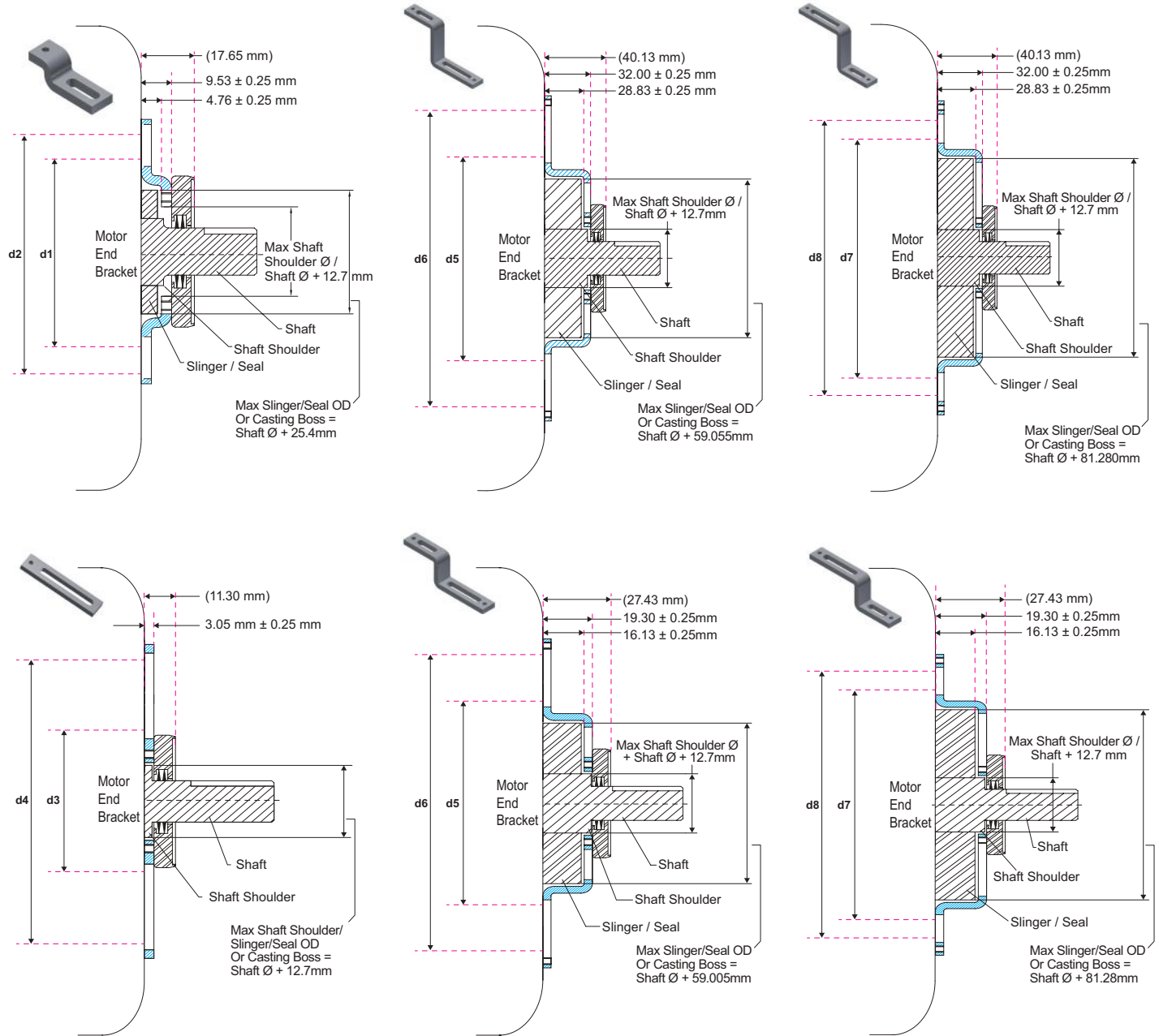
SOLID RING ONLY Motor with 3 hole bracket pattern



SOLID AND SPLIT RING Motor with 4 hole bracket pattern



AEGIS® uKIT Brackets



Ø Shaft	min / max. Bolt Circle of the holder							
	d1	d2	d3	d4	d5	d6	d7	d8
28 mm	74 mm	93 mm	75 mm	121 mm	107 mm	148 mm	129 mm	148 mm
38 mm	84 mm	103 mm	85 mm	131 mm	117 mm	158 mm	139 mm	158 mm
42 mm	88 mm	107 mm	89 mm	135 mm	121 mm	162 mm	143 mm	162 mm
48 mm	94 mm	113 mm	95 mm	141 mm	127 mm	168 mm	149 mm	168 mm
55 mm	101 mm	120 mm	102 mm	148 mm	134 mm	175 mm	156 mm	175 mm
60 mm	106 mm	125 mm	107 mm	153 mm	139 mm	180 mm	161 mm	180 mm
65 mm	111 mm	130 mm	112 mm	158 mm	144 mm	185 mm	166 mm	185 mm
70 mm	116 mm	135 mm	117 mm	163 mm	149 mm	190 mm	171 mm	190 mm
75 mm	121 mm	140 mm	122 mm	168 mm	154 mm	195 mm	176 mm	195 mm
80 mm	126 mm	145 mm	127 mm	173 mm	159 mm	200 mm	181 mm	200 mm
85 mm	131 mm	150 mm	132 mm	178 mm	164 mm	205 mm	186 mm	205 mm
90 mm	136 mm	155 mm	137 mm	183 mm	169 mm	210 mm	191 mm	210 mm
95 mm	141 mm	160 mm	142 mm	188 mm	174 mm	215 mm	196 mm	215 mm
100 mm	146 mm	165 mm	147 mm	193 mm	179 mm	220 mm	201 mm	220 mm
110 mm	156 mm	175 mm	157 mm	203 mm	189 mm	230 mm	211 mm	230 mm

AEGIS® uKIT Ordering

Solid uKITs)	Split Ring uKITS	Motor Shaft Diameter	IEC Frame Sizes
SGR-28-UKIT	SGR-28-UKIT-2A4	28mm	100L, 112M (2, 4, 6, 8 pole)
SGR-38-UKIT	SGR-38-UKIT-2A4	38mm	132S, 132 M (2, 4, 6, 8 pole)
SGR-42-UKIT	SGR-42-UKIT-2A4	42mm	160M, 160L (2, 4, 6, 8 pole)
SGR-48-UKIT	SGR-48-UKIT-2A4	48mm	180M, 180 L (2, 4, 6, 8 pole)
SGR-55-UKIT	SGR-55-UKIT-2A4	55mm	200L (2, 4, 6, 8 pole); 225S, 225M (2 pole)
SGR-60-UKIT	SGR-60-UKIT-2A4	60mm	225S, 225M (4, 6, 8 pole); 250M (2 pole)
SGR-65-UKIT	SGR-65-UKIT-2A4	65mm	250M (4, 6, 8 pole); 280M, 280S, 315S, 315M, 315L (2 pole)
SGR-70-UKIT	SGR-70-UKIT-2A4	70mm	
SGR-75-UKIT	SGR-75-UKIT-2A4	75mm	280S, 280M (4, 6, 8 pole); 355M, 355L (2 pole)
SGR-80-UKIT	SGR-80-UKIT-2A4	80mm	315S, 315M, 315L (4, 6, 8 pole)
SGR-85-UKIT	SGR-85-UKIT-2A4	85mm	
SGR-90-UKIT	SGR-90-UKIT-2A4	90mm	
SGR-95-UKIT	SGR-95-UKIT-2A4	95mm	335L, 335M, 355L, 355M (4, 6, 8, 10 pole)
SGR-100-UKIT	SGR-100-UKIT-2A4	100mm	
SGR-110-UKIT	SGR-110-UKIT-2A4	110mm	



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).

