



## BPK Specification

### 1.1 Motors

#### A. General Requirements-Shaft Grounding

1. Electric Motors, primarily when operated on variable frequency drives (VFDs) and motors driven by Pulse Width Modulation (PWM) controllers, shall be protected from bearing damage due to induced electrical currents. They shall be equipped with a bearing protection kit utilizing a high conductivity and low contact resistance silver graphite brush and must have a spring and holder system to support it. This assembly will include a holder system/mounting device that will position the silver graphite brush so that optimum contact with the motor shaft during operation is maintained. This installation will create the least resistance path to the ground and cause the induced electrical currents to discharge to ground through the bearing protection device vs. through the bearings.
2. Depending on the motor shaft size, multiple kits are recommended for optimal bearing protection.
  - a. Consult manufacturers selection chart and installation guide for specific recommendations.
3. For large motors above 100 HP if the insulated bearing is installed on Non-Drive End (NDE), then the bearing protection kit must be installed on the Drive End (DE) of the shaft. The motor shall be adequately grounded to system ground through the motor mounting device to the frame.

#### Recommended parts:

Helwig Carbon Products, Inc. – Bearing Protection Kits (BPKs)

#### Recommended source:

Helwig Carbon Products, Inc.

Milwaukee WI, USA

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