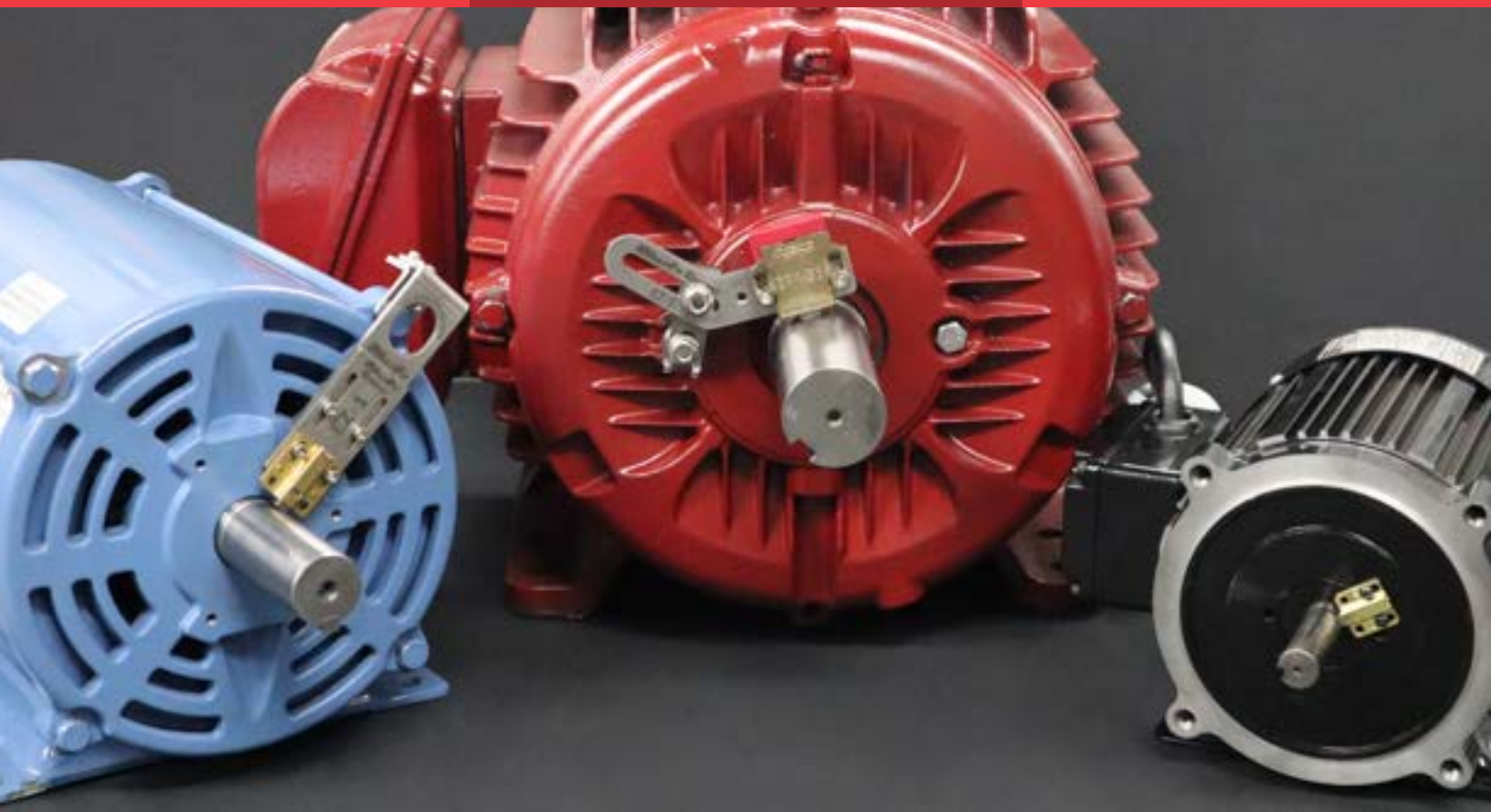
THE INDUSTRY'S BEST SHAFT GROUNDING SOLUTION

BEARING PROTECTION KITS™

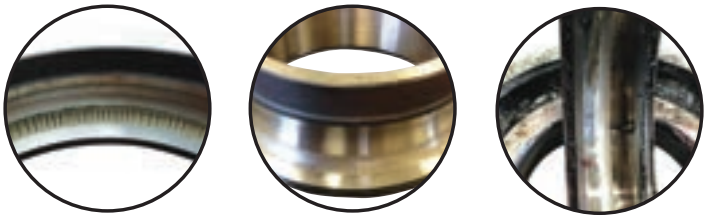
HELWIG® CARBON PRODUCTS, INC.

helwigcarbon.com/shaft-grounding



Stop Bearing Failure Caused by VFD Currents

With Helwig's Bearing Protection Kit-BPK™ Shaft Grounding Solution



Say Goodbye to Arcing, Fluting, Burnt Grease, and Bearing Failure

With the Helwig BPK - The Industry's Best Shaft Grounding

Motors driven from Variable Frequency Drives (VFDs) are susceptible to damaging electrical discharges that seek the path of least resistance to ground, which is typically through the motor bearings. When these currents pass through the bearings, electrical arcing takes place leading to fluting, pitting, burnt grease, noise, vibration, and eventual bearing failure.

BPKs Mitigate & Provide Long-Lasting Protection

Against Damaging Electrical Discharge

BPKs Feature:

- Highly Conductive Proprietary Silver Graphite Brush (not a carbon brush) provides the lowest resistance path to ground
- Superior Current Mitigation - typically reduces shaft voltage to less than 1V at frequencies greater than 1 MHz
- Maintenance Free
- Average Lifespan of 10+ Years
- Easy to Install with EZ MultiFit® Brackets
- Effective at High Frequencies
- Stock Kits Fit Most Motors and Multiple Shaft Sizes, reducing overall inventory
- **Custom Internal Mount Options Available** - avoids exposure to outside contaminated environments

MADE IN USA

Protects:

HVAC UNITS
PUMP MOTORS
FANS/AIR HANDLING
WIND MAIN SHAFTS
WIND PITCH MOTORS
PROPULSION SYSTEMS
COMPRESSORS
ELEVATORS
DATA CENTERS
CHILLERS
CONVEYORS

OR ANY MOTOR DRIVEN BY VFDs!

c UL us
UL APPROVED

HELWIG CARBON Advantages

- The Industry's Best Shaft Grounding Solution
- Extensive experience with field service and support
- Custom engineered solutions for superior BPK™ performance
- Expert problem diagnosis and technical recommendations

BPK Product Line

Featuring EZ MultiFit® Brackets - Install in Minutes

MultiFit Brackets Use Motor Bolts - No Drilling and Tapping Required!

SB *Sealed Brass*
0.45 x 1.59 x 1.52 inch
(11.4 x 41.3 x 38.1mm)

IM5
0.325 x 1.0 x 1.0 inch
(8.26 x 25.4 x 25.4mm)

AXIALLY MOUNTED
For Non-Drive End

BPK-IM5 & BPK-SB Fit a Majority of Shaft Sizes

Additional Options Available - Contact Us!

Shaft Diameter	0.0in 0mm	0.5in 13mm	1.0in 25mm	1.5in 38mm	2.0in 50mm	2.5in 64mm	3.0in 75mm	3.5in 89mm	4.0in 101mm	4.5in 114mm	5.0in 127mm	5.5in 140mm	6.0in 152mm
BPK-IM5	■	■	■	■									
BPK- SB				■	■	■	■	■	■				
BPK-AM									■	■	■	■	■

For shaft diameters >6 in (152mm) or for high vibration/extremely rough applications contact us for assistance: 414-354-2411

Find the Right MultiFit Bracket with Selection Tool

Scan QR Code
or visit
helwigcarbon.com/
shaft-grounding/multifit-ez-brackets/

Protect Multiple Motors with the BPK-Field Pack

Measure Shaft Voltage with the BPK-Probe™

Remote Monitoring Options Also Available

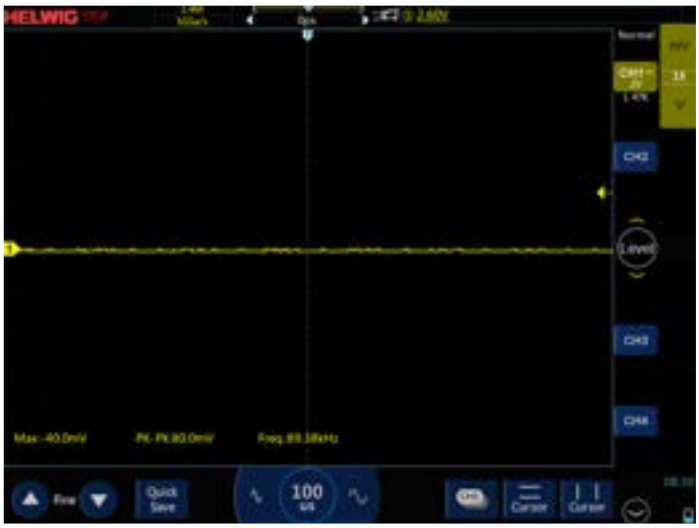
- Dedicated & knowledgeable Customer Service team
- On-time delivery averaged better than 98%
- ISO 9001 Certified for accuracy and consistency
- Made in the USA

Helwig Protects Motors Better

UNPROTECTED MOTOR SHAFT (13.5V)

CARBON-FIBER RING (2.76V)

Bearing Protection Kits (BPKs)™ effectively mitigate electrical discharge. The following oscilloscope screenshots compare induced shaft voltage with our BPK-SB vs. a carbon fiber ring.



HELWIG BPK-SB (0.08V)

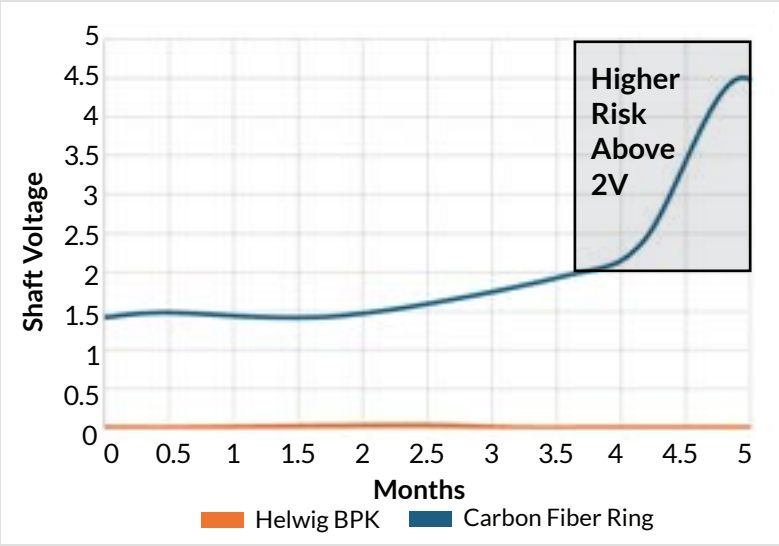
Oscilloscope screenshots were taken in a controlled testing environment, using a Patented BPK-Probe™. The test was conducted on a 10HP Nidec motor with the following specifications: 460VAC, 1765RPM, and driven by an Emerson VFD at 52Hz

The silver graphite used in Helwig BPKs is more than 5X lower in resistance than carbon fiber.
BPKs provide optimal grounding for the long haul.

Data Confirms: BPKs Protect While Rings Fail

Helwig BPKs offer superior, long-lasting protection while Carbon Fiber Rings quickly lose effectiveness and fail to protect the motor bearings from harmful electrical discharge.

This test was performed on a Greenheck unit with a WEG 1HP, 230/460VAC, 1760RPM, 143/5T frame motor driven from a Mitsubishi 3-Phase 460VAC motor drive.



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