

Quality Carbon  
Brushes and Holders  
for Wind Energy

Improved Performance | Reduced Maintenance | Extended Brush Life | Fastest Turnaround

CUSTOM MADE,  
ENGINEERED PRODUCTS  
FOR EVERY APPLICATION



American Owned and Made

**eCarbon** Partner

ISO 9001:2008 Certified



# Quality Carbon Brushes and Holders for Wind Energy

## About Us

Helwig Carbon Products, Inc. was founded in 1928 by Walter Helwig to provide top quality carbon brushes at competitive prices. Today, the company produces a full line of precision machined carbon brushes, brush holders and mechanical carbons for thousands of customers worldwide. Headquartered in Milwaukee, Wisconsin, it is one of the last major American-owned carbon companies.

## Industry Leader in Products and Services

Some of the company's original products are still widely used, including the Red Top Pad Brush, an industry standard that was originally patented by Walter Helwig. Other innovative product enhancements pioneered over the years include the Multiflex Brush, the transert brush, brush holders using constant force springs and the Helwig Quick Disconnect. New product developments continually focus on extended life and reduced cost. Capabilities include monitoring and detection devices with performance and feedback sensors. Helwig specializes in providing effective solutions for critical applications.

## The Red Top Pad Advantage

- Absorbs excess vibration and reduces interference and arcing
- Insulates spring from undesired current conduction
- Reduces maintenance by providing consistent brush and spring performance
- Extends brush life and holds multiple brush sections together
- Patented by Helwig and now an industry standard



## Wind Turbine Applications

Helwig produces high quality carbon brushes for all types of applications, from small residential units to expansive wind farm operations.



## Engineering Expertise

Expert engineers will consult with you about your application to select the right grade of material for the job. They routinely solve problems related to carbon brushes and rings to maximize product performance and prolong brush life.



## Research and Development

Capabilities include application review and material analysis. In-house grade development is targeted specifically to your application.

## Technical Support

A knowledgeable technical support staff is at your service for troubleshooting and advice to help solve brush performance issues if they occur.

## Customer Service

Friendly and helpful customer service representatives are available to answer questions, expedite rush orders, and ensure on time deliveries.



## Manufacturing Excellence

Quality and consistency in the production process is critical. A highly skilled work force is in place to manufacture parts with the utmost care and precision.

Design and manufacturing processes are done at the same location. This integrated system ensures optimal performance of the brush and holder.

All manufacturing is done in Milwaukee, WI, USA and is backed by ISO 9001:2008 certification.

## Products and Applications

### Generator Brushes

- Built to last
- Improves on OEM installed brush by virtually eliminating dusting and ring groove problems
- Approved for use on Winery, Hitachi, ABB, Marathon and other generators



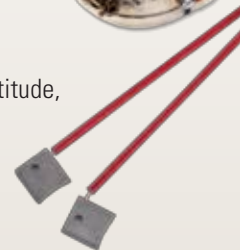
### Slip Ring and Pitch Motor Brushes

- Reduces ring wear by utilizing appropriate grades based upon ring material
- Grade suitable for extreme environments, including high altitude, low humidity or high humidity
- OEM approved



### Lightning Protection and Grounding Brushes

- Durable grades, not prone to wear ensures longer brush life
- Low contact drop ensures superior performance and protection against high surge occurrences



### Bearing Protection

Shaft Grounding Holder and Brush Assembly

- Stops major causes of bearing failure
- Easy to install and maintain
- Stock kits fit most motors
- Custom kits available



[www.helwigcarbon.com](http://www.helwigcarbon.com)

800.962.4851

## Additional Products

### Constant Force Brush Holder

- Eliminates the need for repeated brush adjustments
- Custom designed and engineered with exclusive features for all turbine applications



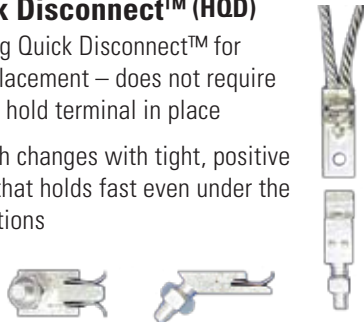
### Constant Force Spring

- Allows for direct replacement of original spring
- Optional wear indicator device lets you see at a glance that it's time to replace the brush
- Improved design extends brush life by applying consistent pressure at the brush face



### Helwig Quick Disconnect™ (HQD)

- Features Helwig Quick Disconnect™ for quick, easy replacement – does not require nuts or bolts to hold terminal in place
- Fast, easy brush changes with tight, positive locking action that holds fast even under the roughest conditions



## Characteristics of Brush Grade

| GRADE | RESISTIVITY Ω-IN. | HARDNESS SHORE | GRADE TYPE |
|-------|-------------------|----------------|------------|
| X076M | 0.000022          | 10             | MG         |
| RC53  | 0.000045          | 20             | MG         |
| H57   | 0.0023            | 55             | EG         |
| K176  | 0.000033          | 25             | MG         |
| K216  | 0.000010          | 20             | MG         |
| H3    | 0.000350          | 35             | EG         |
| K254  | 0.0009            | 35             | G          |

## Helwig Carbon Services

- Over 2,000 stock brush designs available for same day shipping
- Many custom manufactured items can ship within 24 hours
- Extensive field representative network
- On-Site field consultations
- Problem diagnosis and recommendations
- Performance guarantee

## A Major Player

- Manufacturing is done entirely in Milwaukee, Wisconsin – USA
- ISO 9001:2008-certified for design and manufacturing
- Supporting customers worldwide as a member of the E-Carbon Network
- Supplying parts to the Wind Energy Industry for over 10 years

## Member:

- Great Lakes Wind Network
- Wisconsin Wind Works
- EASA



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Helwig Carbon Products, Inc. – USA | 8900 West Tower Avenue | Milwaukee, WI 53224-2849  
Toll Free Phone: 800.962.4851 | Toll Free Fax: 800.365.3113