

# Carbon Fiber Brushes



**“Generating electricity from renewable sources is becoming as easy as putting a Mill-Rose brush in a tub of wastewater.”**



## **Generates electricity from a renewable resource**

Mill-Rose is a leading manufacturer of scientific-grade carbon fiber brushes used in a variety of applications. Mill-Rose carbon fiber brushes can be used as non-corrosive anodes in standard microbial fuel cells and benthic microbial fuel cells. With Mill-Rose brushes, the anode is no longer a limiting factor in power production for microbial fuel cells.

Microbial fuel cells work through a bacterial process that passes electrons to an anode of a fuel cell. The electrons flow from the anode through a wire to a cathode, producing an electric current. Universities and testing facilities around the world have used the bacteria that naturally occurs in waste-water, requiring no special bacterial strains or unusual environmental demands.

## **Cleans waster-water that normally requires energy consumption**

In the process, the bacteria consume organic matter in the waste-water and actually clean the water. The process is good for the environment as the bacteria consumes organic matter in waste-water that actually cleans the water, something that usually requires the consumption of energy. Now that microbial fuel cells have been tested and proven, commercial applications are the next step.

Mill-Rose carbon fiber brushes are non-corrosive and offer a high surface area for bacterial growth and high power densities in microbial fuel cells (MFCs) for large-scale electricity production. In fact, our carbon fiber brushes have 300 to 1,500 times more surface area than previously used carbon paper anodes. Mill-Rose carbon fiber brushes are highly conductive and have an open structure that avoids biofouling.

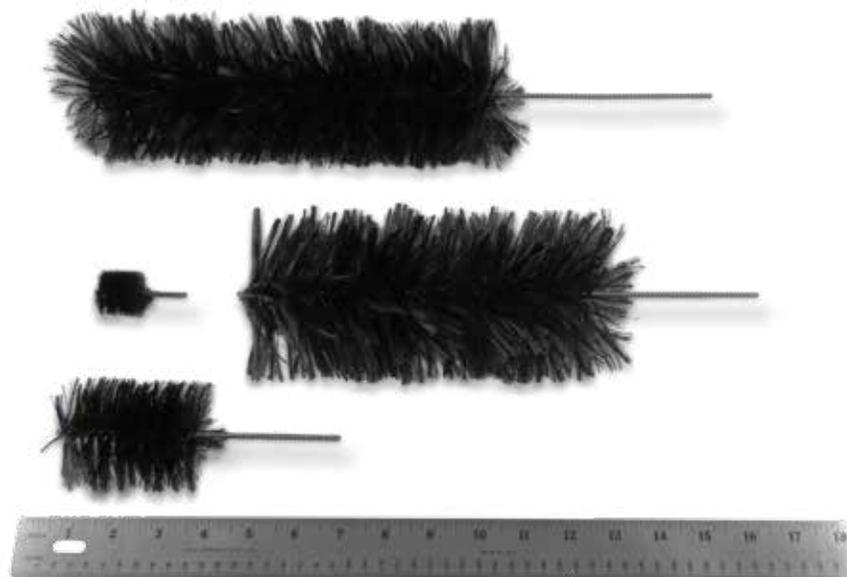


# Carbon Fiber Brushes



- **Generate electricity from a renewable resource**
- **Clean waster-water that normally requires energy consumption**

Mill-Rose carbon fiber brushes have been tried and tested as anodes for microbial fuel cells for years. Choose from a complete selection of anode brushes manufactured in sizes ranging from 1-inch to 144-inches in length. Special dimensions are available upon request.



Mill-Rose has supplied carbon fiber brushes used as anodes to virtually every major university and testing facilities throughout the United States as well as England, Germany, Ireland, Scotland, Spain, Italy, France, Israel and Japan. As microbial fuel cells become commercially viable, The Mill-Rose Company is prepared to provide the finest carbon fiber brush anodes, and manufacturing experience, to this growing industry. Contact Mill-Rose for your research or commercial application.

