

Large Diameter Slip Rings

Large Slip Ring Assemblies

Description

Large bore slip rings represent the union of manufacturing processes and technologies that enable us to offer large, high volume slip rings with advanced features that are cost effective. The manufacturing processes allow the slip ring to be built in an assembly-line fashion, significantly reducing delivery time and price.

The design features traditional sliding contact technology for the transfer of power and control signals utilizing fiber brush technology. The fiber brush technology's low contact force provides extremely long life while producing minimal wear debris, compared to composite-type graphite brushes. Lower brush forces also make the system quieter.

Large slip rings also feature optical channels for high-speed data communications, up to 1.32 Gb/s per optical signal. This patented technology also has the capability to transfer multiple optical signals per optical channel, resulting in data rate capacities in excess of five gigabits per channel. The technology is also scalable to accommodate various data handling requirements and is capable of communicating in both directions across a rotary interface. These last two features greatly increase design flexibility and capability.

Features

- Long maintenance-free life. The fiber brush block with its very low contact force provides for long life with minimal debris, unlike the composite-type graphite brushes often used in high surface speed applications. Our fiber brush technology provides many benefits including low contact wear rates and increased power and signal transfer capabilities.
- Quieter mechanical system operation.
- High data rates. High frequency design provides excellent digital data transfer. The electrical fiber brush design is usable to 50 Mb/s and the optical design is capable of 1.32 Gb/s per optical signal with the capability for multiple signals. The optical technology is capable of transferring data in both directions across a rotary interface.
- Large sizes. We offer slip rings with an inside diameter up to 50 inches and length up to 18 inches. Rotation speeds depend upon the diameter of the unit. The number of circuits is length and power dependent.
- Quieter Mechanical System Operation. A fiber brush design produces virtually no audible noise, which reduces machine noise and patient stress.
- Chances are, if you are using a slip ring in your system, you'll also require a motor to produce rotary motion. We offer a full line of fractional horsepower DC motors including brush, brushless, and torque designs.



Typical Applications

- Medical CT scanners
- Luggage scanners
- Amusement rides
- Cranes
- Offshore mooring

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Specifications*		Options
Size Range	ID to 50 inches; Length to 18 inches	Apart from CT scanning solutions we also provide large diameter slip rings for industrial and military applications. These are custom designed against your specific requirements. An example is shown below. Contact us to have your specific needs quoted.
Rotational Speed	Dependent upon the diameter	
Signal Data Rate Electrical Optical	DC to 50 Mb/s NRZ 50 Mb/s to 1.32 Gb/s per optical channel	
Number of Circuits	Application and space dependent	
Power	To 480 V; hundreds of amps	

*Designed to customer specifications.

Note: Slip ring designs within these general specifications may be for either military or commercial applications. Military slip ring designs require specific licensing for export.

Large Slip Ring Dimensions

