

Proven Performance

**GPI**

With over 4000 rotary cathode systems in the field, SCI cathodes are the proven solution for demanding architectural and solar applications.

Most Reliable, Cost Effective Vacuum Seal

**GPI**

Since 1990, SCI engineers have been building, operating and maintaining rotary cathodes. While early use of Ferro fluidic seals proved adequate for low power, DC operation, today, experienced users of rotary cathodes have switch away from Ferro fluidic seals due to several inherent disadvantages. First, the Ferro fluidic seal is expensive to buy (up to \$4,000) and maintain (up to \$3,000). Seals are sent back to the manufacturer for repair, causing delays and downtime. Also, the Ferro fluidic is mechanically sensitive. The seal is maintained by a magnetic fluid between tightly spaced teeth, making it susceptible to damage through any lateral force to the target. Finally, magnetic components in this type of seal are sensitive to heating caused by AC induction, arcing or general process heat. This causes the fluid to boil away, forcing an expensive rebuild.

The SCI lip seal design is mechanically tolerant to lateral forces. In conjunction with SCI's patented power-delivery technology, no inductive heating of the seal cartridge takes place. When needed (roughly every 2 years), seals can be rebuilt by the customer in less than 30 minutes and for under \$150.

Most Reliable, Cost Effective Water Seal

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The SCI water seal design has several advantages over the ceramic water seal design used by GPI. Of primary concern, the ceramic face seal is sensitive to heat. Without constant cooling, the ceramic face overheats and cracks, causing an expensive rebuild (if discovered) or water leak into the end block and a damaging short circuit. The SCI end block has a primary seal and a back-up, so that no damage is done to the end block. This seal can be rebuilt by the customer in less than 30 minutes and for under \$150.

Highest Power Rating

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If you need to run long targets at high power, then SCI is the obvious choice. We have the highest power rating available and we publish it. Carbon brushes generate dust, which coats insulators and fouls bearings and bushings. Brushes also generate substantial heat as they make contact with a rotating shaft, limiting their ability to transfer power effectively, a problem made worse inside of vacuum. SCI's patented power-delivery method eliminates both inductive heating issues and problems associated with carbon brush water.

Our debris-free electrical contact will give over three years of consecutive, maintenance-free operation.