

SLIP RINGS

FOR AEROSPACE AND DEFENSE
APPLICATIONS

PROVEN SLIP RINGS

A slip ring is an electromechanical device that allows the transmission of power and data signals from a stationary to a rotating structure. Also called a rotary electrical joint, collector or electric swivel, a slip ring can be used in any electromechanical system that requires unrestrained, intermittent or continuous rotation while transmitting power and / or data. It can improve mechanical performance, simplify system operation and eliminate damage-prone wires dangling from movable joints.

Moog is a worldwide designer, manufacturer, and systems integrator of high-performance precision motion and fluid controls and control systems. Moog's high-performance systems control military and commercial aircraft, satellites, and space vehicles, launch vehicles, defense systems, missiles, automated industrial machinery, marine, and medical equipment.

Additional information about the company's broad range of slip rings and motion solutions can be found at www.moog.com.

PRODUCT RANGE

As the world's leading slip ring manufacturer, Moog offers thousands of slip ring designs that are used in tank turrets, manned / unmanned aircraft, helicopter de-ice systems and remote weapon stations. Specific applications include:

- EO / IR Sensors
- Fixed and Rotary Wing Aircraft
- Armored Vehicles
- Radar Systems
- Remote Weapons Systems
- SATCOM
- Unmanned Vehicles / Remotely Operated Vehicles



VEHICULAR



HELICOPTER



PROPELLER



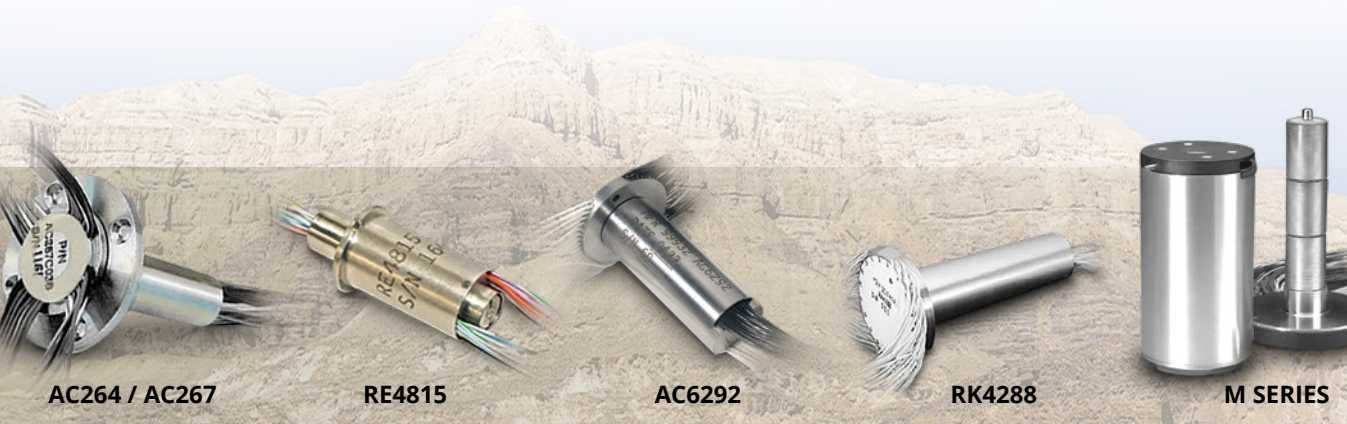
TWIST CAPSULES

SLIP RING OVERVIEW

Moog slip rings have been successfully performing in aerospace and defense applications for over 70 years. These products are developed for rugged environments and demanding requirements.

AEROSPACE AND DEFENSE SLIP RINGS	
Type	Description
Vehicular Slip Rings	The increasing complexity of modern military vehicles demands slip rings that provide reliable electrical interfaces between the stationary and rotating parts of these vehicles. Moog slip rings have been chosen to operate on numerous vehicular programs to meet these challenges.
Helicopter Slip Rings	Today's rotorcraft applications place unique demands on slip ring technology because of equipment requirements and environmental conditions. From de-ice applications (with their need for high rotational speed, exposure to weather conditions and high vibration) to weapon stations and electro-optic sensor systems (with high bandwidth signal transmission), helicopter slip rings must perform in a highly reliable mode with the latest product advancements.
Propeller Slip Rings	Fixed wing propeller aircraft use specialist de-icing slip rings to pass electrical power from the airframe generators to the rotating propellers. These propellers are heated to avoid the build up of ice either in flight or on the ground in difficult weather conditions.
Twist Capsules	The dramatic increase of sophisticated gimballed electro-optic sensor systems that provide battlefield information has led to major developments in supporting hardware. These EO systems require an enormous amount of data to be transmitted across the rotating axis as well as power and other signals. Moog has always been one step ahead of these requirements with the development of high bandwidth slip rings, twist capsules, fiber optic rotary joints and media conversion.
Miniature Slip Ring Capsules	Miniature slip ring capsule assemblies economically address both critical space and weight limitations. Each assembly includes the rotor, brush blocks, frame, ball bearings and dust cover.

Moog high-performance rotary joint solutions provide reliable transmission of high-speed data and power between stationary and rotating parts of the military vehicle. The offering includes a slip ring, integrated motion control (high-performance motors and position sensors), as well as end-to-end signal management and media conversion. Integrated solutions are available in a custom gimbal assembly that allows a single-source supplier for battlefield-ready rotating systems.



MOOG | Shaping the way our world moves™

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Moog Space and Defense



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