

WEIGHT & LOAD BEARING SLIP RINGS

Integrated Load Support for Rotating Systems



Some equipment needs more from a slip ring than electrical continuity. They need a part that can hold weight.

A load-bearing slip ring from United Equipment Accessories does both jobs at once. It passes power, control signals, and high-speed data across a rotating interface while carrying the axial, radial, and moment loads that the machine puts on it. In practice, it works as a structural member of your assembly rather than a component that has to be protected by one.

UEA weight and load-bearing slip rings are designed to support the mechanical forces placed on equipment. Traditional slip rings transfer power and signals but are not normally designed to support the weight or forces placed on the rotating equipment. A load-bearing slip ring features a housing that helps support those forces. This reduces the amount of stress placed on the bearing and creates a stable, durable assembly.

In a conventional design, much of the mechanical load may be concentrated on the bearing. UEA designed the base plate, top cover, and housing to become part of the load path. This allows the slip ring housing and bearing to work together to support the equipment.

By spreading the load through the housing, the slip ring can better resist downward force, side-to-side force, and forces that may cause the assembly to tilt or overturn. This can reduce movement and housing deflection while helping internal electrical components stay properly aligned during operation.

- Independently pressure compensated for depths up to 750 ft, with custom configurations available for greater depths in deep-sea exploration
- Designed to reduce subsea mooring power and data cables from premature failure from twisting in tidal currents
- Sharing load through the housing lowers peak stress on the bearing elements, which stretches the interval between maintenance shutdowns
- Reinforced geometry and welded interfaces carry force well past the bearing alone
- Brush blocks, contact rings, and wiring harnesses can be inspected or replaced in the field without scrapping the whole unit
- Can be customized to fit directly into existing equipment and systems

Cost Savings

- Cost of chartering a vessel and captain, including fuel
- Cost of crew time from mobilization to demobilization
- Cost of replacing damaged cables

