

# Compact Leaf Spring Brush Design

United Equipment Accessories (UEA) has been developing and implementing two sizes of silver graphite leaf spring brushes. These brushes have been field-verified and lab-test proven to exceed 200 million revolutions. UEA can offer more compact designs with the implementation of the compact leaf spring brush design.

Through lab testing, a life value has been calculated that exceeds 200 million revolutions for the 5-amp signal brush design and an estimated life that exceeds 700 million revolutions for the 20-amp power brush design. Life expectancy varies based on rotational speed and ring surface velocity.

Test data was collected at 10 million revolution increments, up to 50 million revolutions. Data was then collected at approximately 50 million revolution increments, up to 200 million revolutions. Electrical properties and wear rate data was collected at each data collection point. This included electrical continuity and resistance, brush wear, and ring and brush conditions.



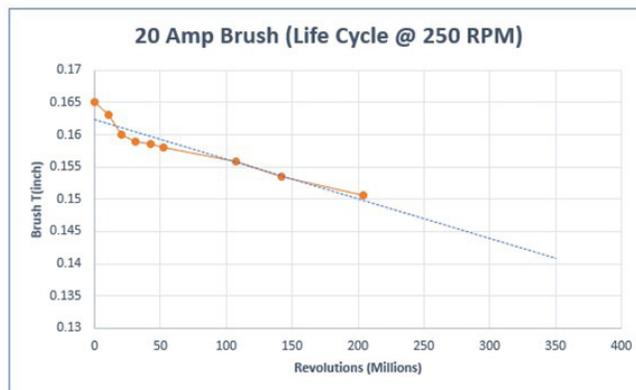
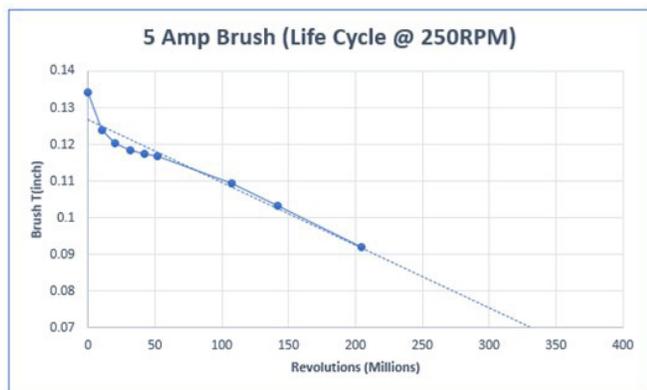
20-amp rated power brush and 5-amp rated compact signal brush

## Features:

- Increased data transfer rates
- Increased rotational speeds
- Increased versatility in small designs
- Over 200 million revolutions in lab testing
- Extensive field testing

The test assembly used two circuits rated for 5 amps with a ring OD of 1.0 in (25.4 mm) and two circuits rated for 20 amps with a ring OD of 1.5 in (38.1 mm). This four-circuit slip ring had an overall outer diameter of 3.5 in (88.9 mm) and a total length of 3.66 in (92.96 mm).

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