

Brass Slip Ring

- Objective:** To heat 1 3/4", 3" and 6" diameter brass slip rings and a sheathed copper wire assembly to 360° F for soldering within three (3) to six (6) seconds. Currently production is accomplished by using a soldering iron and stick feeding rosin cored solder. This process leaves unwanted solder on the side of the slip ring where the soldering iron makes contact. The customer would like to see an increase in joint quality without sacrificing time.
- Material:** 303 Brass Slip Rings of 1 3/4", 3" and 6" diameters.
Sheathed Copper Wire Assembly.
Resin Core Solder, 37% Pb, 63% Sn.
- Temperature:** 375° F
- Application:** Through laboratory testing, the Ameritherm Nova 3, 3kW output solid state induction power supply along with a unique four (4) turn "ear muff" type coil produced the following results:
- Times to reach 375° F are as listed below:
 - 1 3/4" in 3 seconds
 - 3" in 3-4 seconds
 - 6" in 5 seconds
 - Adequate solder flow was observed producing a clean joint.
 - Solder preforms are recommended to speed up production.
 - Side loading was facilitated by the unique four (4) turn "ear muff" style coil.
- Equipment:** Ameritherm Nova 3, 3kW output solid state induction power supply including one (1) remote heat station containing one (1) 1.0 μF capacitor, a 4-20mA input for fast ramp simulation, and a unique four (4) turn "ear muff" style coil.
- Frequency:** 265 kHz

*Application Illustration Located on Reverse

Induction Heating Application Notes

