APN: MP-1002

Plastic Lawn Chairs

Objective: To heat internally threaded steel inserts to a temperature above 650^{0}F for insertion into plastic lawn chair assemblies. Currently, the insertion is done with a type of locktite in approximately three (3) to five (5) seconds.

Material: Steel Inserts (internally machine threaded), PET Plastic

Temperature: > 650^{0}F

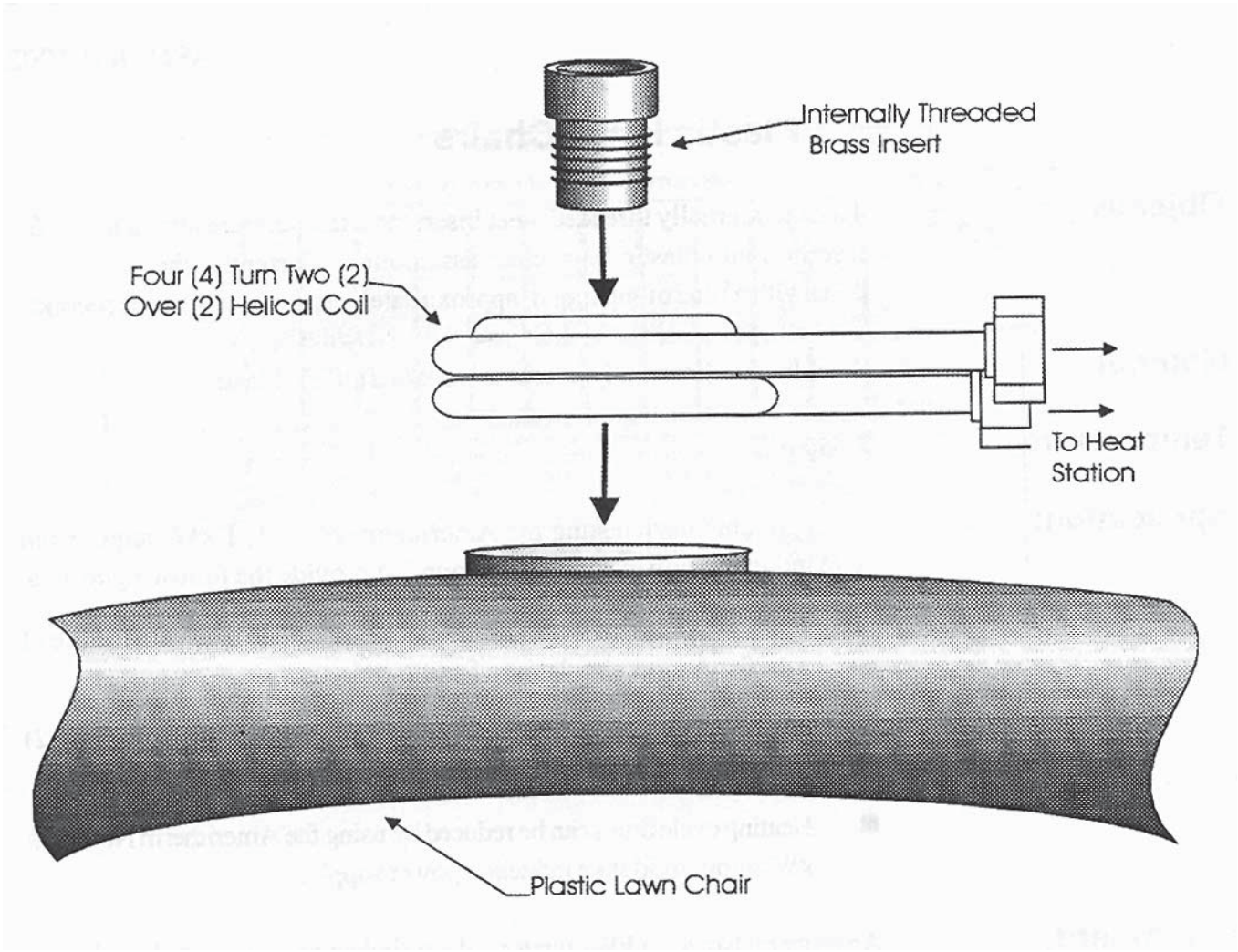
Application: Through laboratory testing the Ameritherm Nova 1, 1 kW output solid state induction power supply was found to provide the following results.

- 650^{0}F was reached with a heating cycle of 2.5 seconds with the use of a 4-20 mA input simulating a fast ramp circuit.
- Quality insertion was achieved through the use of a two (2) over two (2) double wound four (4) turn helical coil.
- Heating cycle times can be reduced by using the Ameritherm Nova 3, 3 kW output solid state induction power supply.

Equipment: Ameritherm Nova 1, 1 kW output solid state induction power supply including one (1) remote heat station containing one (1) 0.66 µF capacitor, a 4-20 mA input fast ramp simulator, and a two (2) over two (2) double wound helical coil.

Frequency: 297 kHz

*Application Illustration Located on Reverse


Internally Threaded
Brass Insert
Four (4) Turn Two (2)
Over (2) Helical Coil
To Heat
Station
Plastic Lawn Chair