

Variable Frequency Solid State Induction System

Through years of research and development, Mannings USA has made Induction heating an Integral part of an outage. Since the introduction of the induction heating process to the Power Generation Industry, the primary use had been the removal of turbine generator retaining rings.



By working with customers' requirements, Mannings has refined such processes as brazing and thermal expansion of shrunk fit components and the heat treatment of weld repairs on turbine rotors in their natural position, a process that only several years ago was unimaginable.

Mannings' Induction Equipment has proven itself reliable on projects demanding heat uniformity, accurate control, dependability and safety. It is designed to operate either manually or with programmable automatic control. This system is economical to use, simple to operate, and robust in construction – everything needed to provide excellent results.

Design Features

- Complete Solid State System – Reliable, high power factor, thyristor based inverter, fully tested and 100% duty cycle rated.
- Automatic Frequency Matching – The inverter frequency will automatically match to the load resonant frequency.
- Electronic Circuit Protection – Automatic fast action transistor shutdown for system protection. No special fuses required.
- Soft Start Front End – No excessive power surge when the primary power is applied.
- Electronic Control – A single electronic circuit board, common to all power levels and frequencies, controls the inverter functions.
- Regulated Power Output – Constant power regulation within $\pm 5\%$ at a $\pm 10\%$ input line voltage.
- Conservative Power Rating – Component specifications exceed power requirements. Full power rating output at 100% duty cycle.
- Automatic Limiting – Out of range tuning limits automatically hold the system within safe power ranges.
- Operator Control – System controls include on switch, off switch, emergency stop switch, and power level control.
- Remote Control – Optically isolated full function interface circuit board provided.
- Operator Interface – Front panel LED indicators for limit, fault, and heat on. LCD screen message display for operating condition. Analog meters display power level and load resonant frequency.
- Access Safety Switches – Safety switches on all access doors to prevent or cease operation if doors are not closed.
- Isolated Short/Grounding Detector – For additional safety.
- Optional Features – Temperature Profilers and Brazing Attachments.

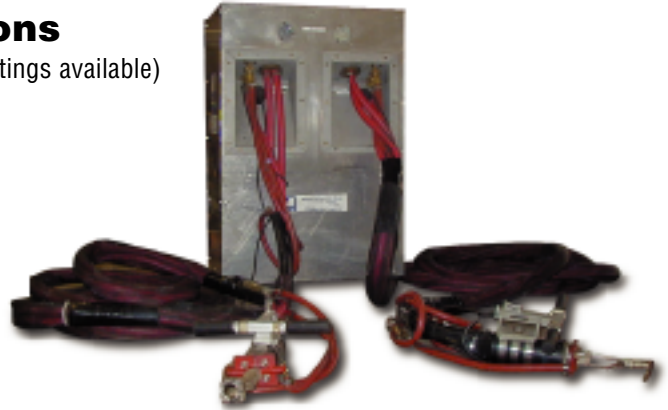
System Benefits

- Water Cooled System – no open flames or exposed heating elements.
- Fast & Efficient.
- Highly Portable – can be used virtually everywhere.
- Easily Adaptable for a variety of applications.
- Equipment & Technology are proven and reliable.



Product Specifications

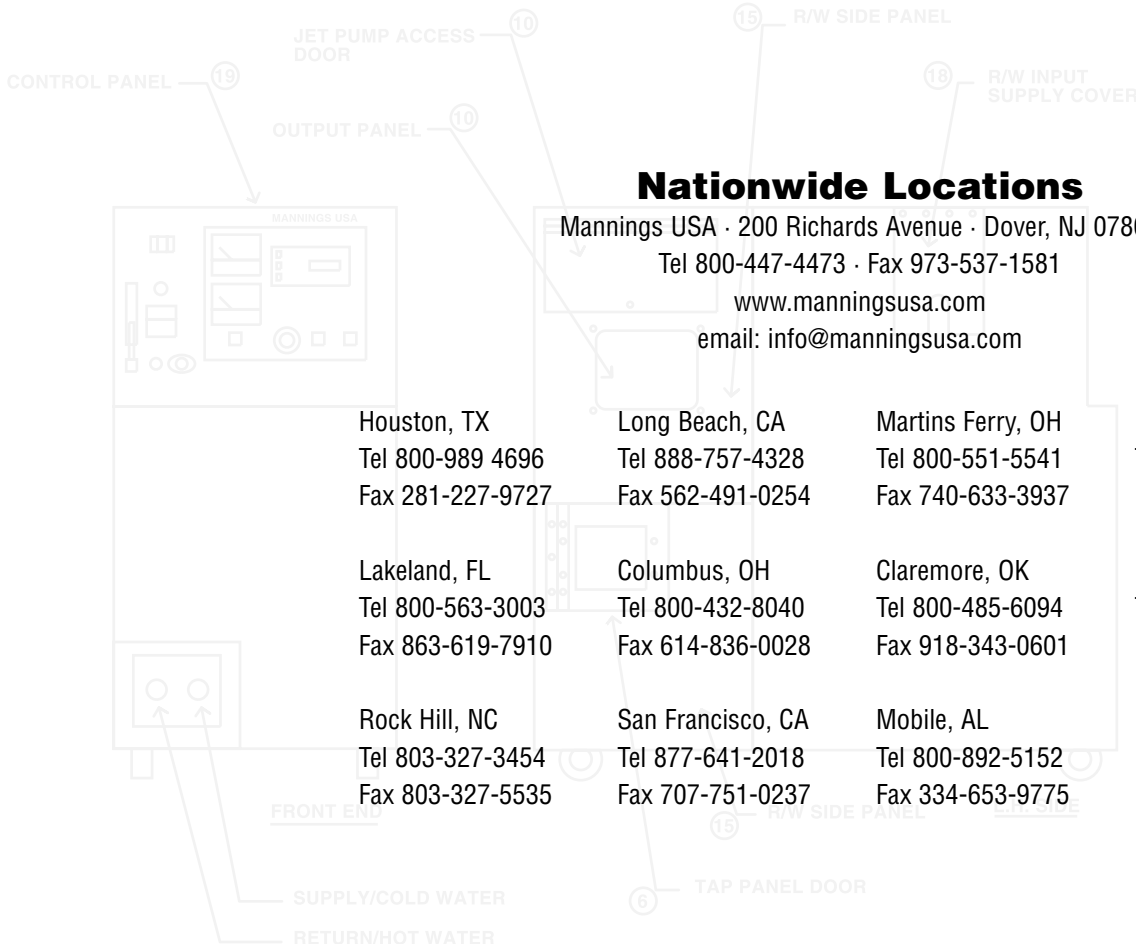
- Output KW Rating: 100 (other KW ratings available)
- Input KVA: 115
- Cooling GPM: 12
- Input Voltage: 480 VAC
- Standard Enclosure Size:
height 54" x width 28" x depth 55"



Mannings USA

Since 1989, Mannings USA has established an international reputation for manufacturing well-designed, functional and reliable products. Along with our field services division, Mannings USA has become a leader in the power generation industries by providing quality products and services worldwide. Mannings' integrity coupled with customer satisfaction is the cornerstone upon which this successful business has been built.

For more information on our Variable Frequency Solid State Induction System or other Mannings products and services, please give us a call today.



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