

## RAPID HEAT 35 - WELD PREHEATING AND STRESS RELIEVING

## PRODUCTS/ACCESSORIES



**Cable identification system** knows the type of cable attached and limits output to protect cables and blankets.

**Operator tutoring system** provides helpful information to optimise coil arrangements for maximum performance.

**Multiple output** provides two insulated connectors for air-cooled blankets or liquid-cooled cables.

**Multiple control thermocouple inputs** are available to control on the hottest TC during heating and coolest TC during cooling for uniform heating quality.

**Low consumable costs.** No fuel costs and minimal insulation costs.

**Insulation** is reusable and may be used 50 times or more, reducing cost of disposal.

**Easy to install** through cable connection panel that does not require removal of sheet metal.

**Isolation fault protection** provides automatic system shut down should power source output short to ground. A sense lead provides direct feedback to the power source to initiate fault condition.

**Easy set-up** is achieved using preheat blankets or flexible heating cables combined with user-friendly insulation blankets.

**On-board temperature control** provides for manual- or temperature-based programming in a simple-to-learn operator interface.

**Open output detection** prevents system operation without a covered output receptacle (cable for protective plug).

**Uniform heating** is maintained along and through the heat zone by using induction to heat within the material. The surface of the part is not marred by localised conducted heat at higher than specified temperatures.

**Time-to-temperature** is faster than conventional processes due to the method of applying the heat, reducing heating cycle time.

**High energy-efficient systems** (more than 90% efficient) transfers more energy to the part, decreasing heating times and improving power efficiency (less than 60-amp current draw).

**Improved working environment** is created during welding. Welders are not exposed to open flame, explosive gases and hot elements associated with fuel gas heating and resistance heating.

### QUICK SPECS

#### APPLICATIONS

Pipe Fabrication Shops  
Power Piping - Construction/ Repair  
Transmission Pipeline - Construction/Repair  
Petrochemical - Construction/ Repair  
Shipbuilding  
Mining Equipment Maintenance  
Drill Pipe Manufacturing

#### PROCESS

Induction Heating

#### HEATING RANGE OF MACHINE

Ambient to 788°C (1450°F)

#### MACHINE OPERATING TEMPERATURE RANGE

From -30°C to 50°C

#### RATED OUTPUT

35kw at 100% Duty Cycle 5 - 30 KHz

#### INPUT AMPERERES AT RAPID OUTPUT

400 V: 60 Amps, 460 V: 50 Amps,  
Dimensions: H: 25" (635 mm),  
W: 213/4" (552 mm), D: 363/4"  
(933 mm)  
Weight: Net: 227 lb (103 kg),  
Ship: 265 lb (120 kg)



**RAPID HEAT 35 - LIQUID-COOLED PREHEAT AND STRESS RELIEVING SYSTEMS**

The Liquid-Cooled Induction Heating System is designed for preheating, hydrogen bake-out and stress relieving applications up to 1450°F (788°C). The system can be operated in the Manual Programming mode where a power output is applied to a part for a specified time or in the Temperature Based Programming mode where part temperature is used to control power output. Liquid-cooled heating cables provide a highly versatile tool for preheating a variety of pipe diameters and even flat plate. In general, shorter cables are used for smaller diameter pipe and are easier to handle and set-up. Longer cables are used for larger diameter pipe or small pressure vessels and tanks.



**PIPE FABRICATION SHOPS**

- Provides uniform heating around the circumference of higher strength pipe.
- Reduces set-up time and time-to-temperature in preheat applications.
- Significantly reduces consumable costs.
- Eliminates propane costs.

**FIELD CONSTRUCTION OF POWER AND PROCESS PIPING**

- Provides uniform heating around the circumference of higher strength pipe.
- Provides rapid time-to-temperature, reducing total weld cycle time.
- Easy to set up and operate in preheat applications – welder friendly.
- Reduces consumable costs.

**SHIPBUILDING – PROP SHAFTS, PIPING SYSTEMS, PLATE (HIGH DUTY CYCLE/ HIGH TEMP)**

- Provides uniform rapid heating in plate and pipe applications.
- Adaptable to heavy plate applications.
- Provides a safer, friendlier work environment for welders and operators. Personnel are not exposed to open flame, explosive gases or hot heating elements.
- Power efficient compared to resistance heating.

**MINING**

- Provides uniform heating on high hardness material to prevent cracking.
- More flexible than air-cooled systems for complex shapes.
- Enables higher preheat temperatures than air-cooled systems.
- Eliminated propane costs.

The heavy-duty induction cooler is designed with an efficient fin and tube heat exchanger, 2-1/2 gallon rustproof polyethylene tank, high-pressure pump and lower to yield a high cooling capacity. The cooler is equipped with a flow sensor/indicator and temperature sensor to provide system reliability. Heavy-duty induction cooler with optional running gear shown attached to bottom of RapidHeat 35. External input and output filters are used to remove contaminants from the cooler and cable. Filters are easily accessible for cleaning. Cooler is attached to power source and available separately. The cooler can be added to power source at a later date to upgrade from air-cooled to liquid-cooled systems. Running gear can be attached to power source or cooler. Dimensions: Shipping Weight H: 12-3/4in (324mm) 122lb (55kg), W: 21-1/4in (540mm), D: 30in (762mm)