

# B-Heat 40/80/120

Induction  
Heating System



## Quick Specs

### Applications

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

### Processes

Induction Heating

### Input Power

380 V, 3-Phase

**Rated Output:** 40: 40 kW at 100% Duty Cycle

80: 80 kW at 100% Duty Cycle

120: 120 kW at 100% Duty Cycle

**Weight:** 40: 115 kg

80: 200 kg

120: 200 kg

## The Spirit of Bendis.®



**Versatile mobility:** running gear easy to be installed or detached.

**On-board temperature control:** provides programming in a simple-to-learn operator interface.

**Multiple thermocouple inputs control:** to control on the hottest TC during heating and coolest TC during cooling.

**Open-circuit output control.** Prevent system operation without a output circuit (not connected with output cable or output open-circuit).

**Short-circuit output control.** Automatically shut down system in case of short-circuit output.



**Uniform heating** is maintained along and through the heat zone by using induction to heat within the material .

**Time-to-temperature** is faster than conventional processes.

**Improved working environment.** Welders are not exposed to open flame, explosive gases and hot elements.

**High power to heat transfer efficiency.** Transfer more energy to workpiece, reduce heating time, improve energy transfer efficiency (more than 90%).

**Low consumable costs.** Insulation blanket is reusable and may be used 50 times or more, reducing cost of disposal and replacement.

**The B-Heat series induction heating system is designed for preheating, annealing and post weld heat treatment up to 788°C.**

Shorter cables are used for smaller diameter pipe and are easier to handle and set-up. Longer cables are used for larger diameter pipe.

## Specifications (Subject to change without notice.)

Model	Input Power Voltage/Hertz/Ampere	Output	Inductance Range	Dimension (without digital recorder)	Weight Kg
B-Heat 40	Three phase 380-460 V 50/60 Hz 50-61 A	Power: 40 kW Frequency: 3-35 KHz	2.2-300uH	H: 762 mm W: 548 mm L: 852 mm	115
B-Heat 80	Three phase 380-460 V 50/60 Hz 100-121 A	Power: 80 kW Frequency: 2.5-35 KHz	3.0-400uH	H: 801 mm W: 663 mm L: 835 mm	200
B-Heat 120	Three phase 380-460 V 50/60 Hz 150-181 A	Power: 120 kW Frequency: 2.5-35 KHz	3.0-400uH	H: 801 mm W: 663 mm L: 835 mm	200

## System configurations:

### Built-in Temperature Controller

The B-Heat Induction Power Source is **equipped with a built-in temperature controller**.

The controller provides for **Manual Programming or Temperature Based Programming**.

**Manual programming** provides for a setting a power level and a time duration. This is beneficial in preheat applications where a part heated to temperature and the heating device removed.

**Temperature based programming** provides for setting temperature/time curve for preheat, annealing or post weld heat treatment 6 thermocouple inputs are provided for heating .

The control thermocouples are read by the controller which regulate the heat rise based on set thermocouple.



### On-board Diagnostics

The B-Heat series induction heating system can store 10 latest parameters for fault analysis, and get maintenance information by parameters for easy operations and system protection.

### User Password

The B-Heat series induction heating system has password function, to prevent non professionals form operating which can protect the system.

## Output connectors



The B-Heat series induction heating system is designed with two output connectors, can plug into output connectors of the same sizes, which can improve efficiency.

Temperature resistance 200°C silicone rubber induction cable, mainly applied in preheating before welding and post welding hydrogen eliminating process.



Temperature resistance 400°C glass fiber induction cable, mainly applied in sorts of carbon steels and stainless steel post welding heat treatment.

## Output Extension Cables



Output Extension Cables are used to insulate working place and power supply for a maximum distance 100m.

Connectors are used to connect the cable to power supply and insulate output connectors.

Cable is flexible for easy usage.

## Insulation Blanket



The insulation is designed to insulate the work for process efficiency, maintain the optimum induction distance between the coil and the work and protect the induction cable from high temperatures.

## Remote Switch



Remote Switch is a simple lightweight control for manually and remotely turning the power source output on and off.

## TC Extension Cable



The durable TC extension cable eliminates the cluttered stringing of individual wires to the work.

Terminal connection enables six thermocouples to be used with the system.

## Digital Recorder with Protective Enclosure (optional)



Digital recorder

Size:

H 150mm

W 185mm

L 135mm

Six temperature inputs provide temperature data in the heating cycle. The digital recorder has thermocouple input, 0-10V input, 0mA(4mA)-20mA input available, easy to be programmed.

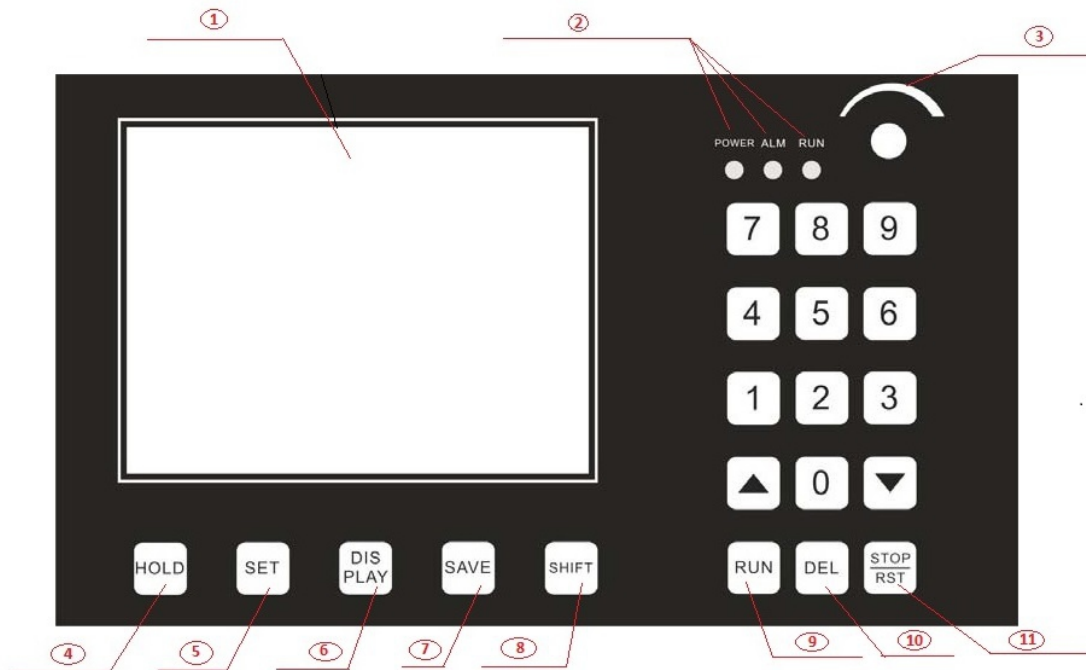
The digital recorder can display temperature as real-time temperature, or temperature to time curve. Data can be transferred from internal memory to USB memory disk or directly to a PC via a network cable for printing, storage or further analysis.

The digital recorder is commonly used in stress relieving and critical preheat applications. The recorder stores temperature data based on time. It is not necessary in the successful heating applications.

The recorder is attached to power source top panel or can be removed for office downloads, storage or protection when not in use.



## Control Panel



1. Display panel
2. Power light, Alarm/Fault light, Run/Stop,
3. Encoder
4. Hold button
5. Control mode parameter setting button
6. Control mode running status display button

7. Parameter save button
8. Shift button
9. Run
10. Delete button
11. Stop/Reset button

## PWHT Process Record

