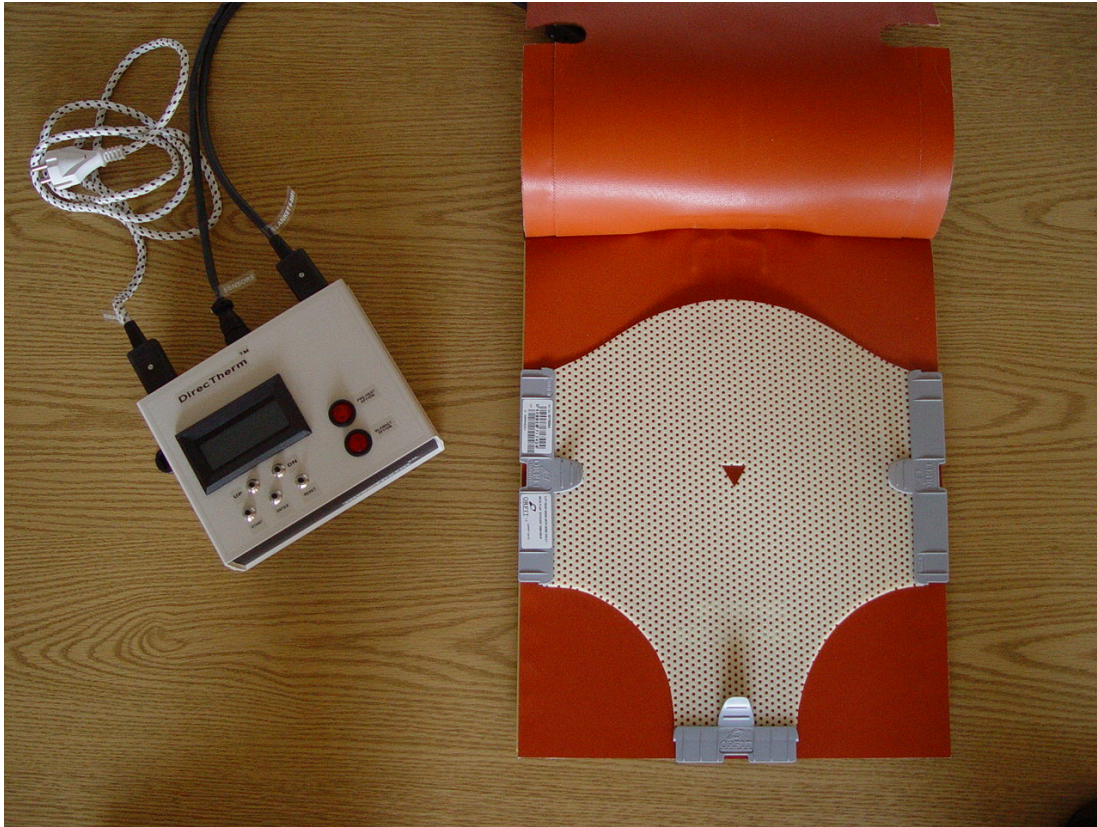


## **PCK DirecTherm™ Thermoplastic Heating System**



PCK Technology's new DirecTherm™ Thermoplastic Heating System was developed for orthopedic medical professionals. It is used to prepare thermoplastic sheets for moulds and splints commonly used for post procedure stabilization, diagnostic testing stabilization, and rehabilitative stabilization. The system consists of a Heating Module, Microprocessor Controlled Module with LCD digital display, Power Cabling and Control Cabling. The system is light weight at less than 2.5 kilograms and very portable due to small size and mating components. The system requires access to a mains power source of 220 Volts. The control system consists of a digital display instructing the technician through the operating cycle.

The thermoplastic sheet is placed between two heating blankets (Heating Module) that are bound in a clam shell configuration. The blankets are manufactured using PCK's patented Embedded Wire Technology. With this technology the heating element has been precisely and uniformly embedded onto the blanket core with heater wire spacing as close as 0.76 mm. With this unique technology the blanket temperature will rise uniformly across both sides of the thermoplastic sheet to 65° C within 2-3 minutes. Embedded in the Heating Module are three control sensors. If for any reason system control power is lost, the emergency relay will shut down all power to the system. A reset button is provided to restart the system once the Heater Module has cooled sufficiently.

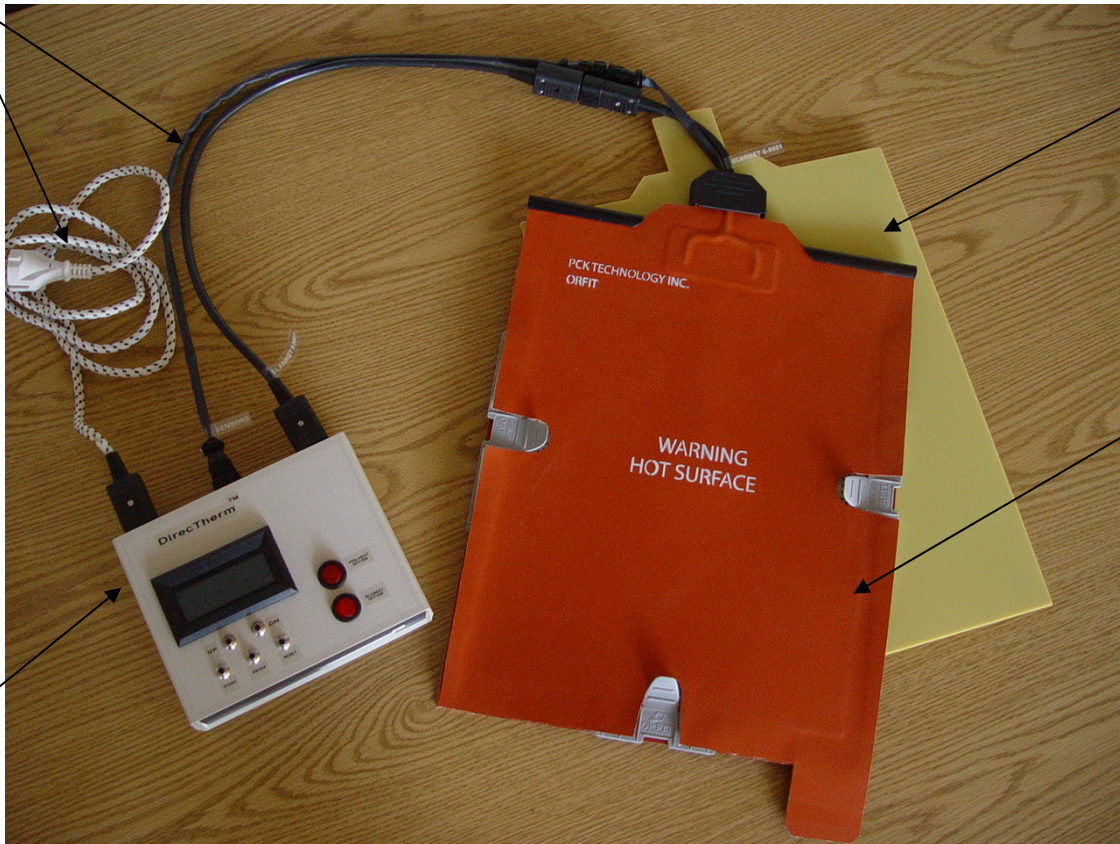
The system also provides pre-heating capability, allowing the operator to keep the Heating Module at 40°C at all times. The heating cycle count down timing is constantly displayed on the graphics display informing the technician of the lapsed time. The timer is set in minute intervals from 1 to 10 minutes. In addition to the visual time display the system provides an audible alarm to tell the operator that the cycle is complete.

The Heating Module Temperature can be set anywhere between 65 and 125° C.

# **DirecTherm™ Thermoplastic Heating System**

## **Specifications**

Power, control Cables



Heating Module base

Heating Module (Heating Blankets)

Control Module

### **Control Module**

- Power Supply: 220 V
- Temperature range: 65-125°C
- Dimensions: 203.2X165.1X69.85mm
- Weight: ~1.13 Kg

### **Cabling**

- Blanket cable
- Sensors cable
- Mains cable
- Weight: ~0.34Kg

### **Heating Module (silicone rubber heat blankets)**

- Dimensions: 302.2X315.3mm
- Voltage: 220V
- Resistance: < 5W per Square Inch
- Embedded thermistors and solid state RTD in bottom heat blanket
- Weight: ~1.13 Kg

### **Heating Module Base**

- FR4 base material
- Weight: ~1.13Kg

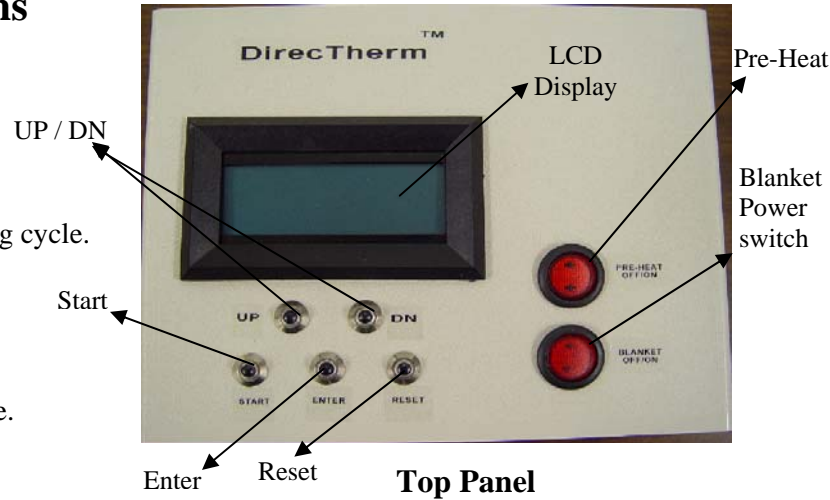


## DirecTherm™ Thermoplastic Heating System Description and Operating Instructions

### Controller Box

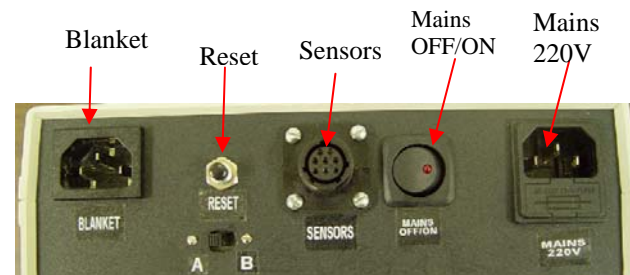
**Top panel** consists of the following:

- Digital display: Guides the technician through the melting cycle.
- Pre-Heat Off/On: By turning pre-heat to on position, the Heating Module temperature will be kept at 40°C.
- Blanket Off/On: Sends power to the Heater Module.
- UP Button: Increments values for timer and temperature.
- DN Button: Decrements values for timer and temperature.
- Start Button: Starts a command.
- Enter Button: inputs values.
- Reset Button: Resets the system



**Back panel** consists of the following:

- Blanket connector: Connects controller power to blanket
- Reset button: Resets the controller circuitry.
- Sensors connector: Connects controller circuit to the sensors in blanket.
- Mains Power Switch: Turns on power to controller from power source.
- Mains power connector: Connects the controller to power source.



**Back Panel**

### Instructions in Using DirecTherm™ Thermoplastic heating System

Place blanket and controller box next to one another (approximately 0.5 meters apart). Make sure the MAINS and the BLANKET switches are in OFF position. Connect the blanket power cable to the controller box (labeled BLANKET 6-9801) and the blanket connector. Connect the sensor cable to the controller box (labeled SENSORS) and the blanket sensor connector. Connect the power cable to the controller box (labeled MAINS 220V) and to the power source.

1. Turn MAINS switch to ON position (on the back panel). The Company information is displayed on the screen.
2. Turn Blanket switch to ON position (on top panel).
3. Turn pre-Heat switch to ON position (optional). The pre-heat feature is used to continuously keep the blankets temperature at 40° C.
4. Place the mask between blankets.
5. Follow the instructions on the screen and press START.
6. Select temperature using UP / DN button and then press ENTER
7. Select time using UP / DN button and then press ENTER
8. Press ENTER to start cycle.

Once the cycle is completed the alarm will go off. To stop alarm follow the instructions on the screen and press START.

**WARNING** Never connect Blanket unit directly into a power source.  
Always use the controller box to power the Blanket unit.