

BD ARCTIC SUN 5000



ABOUT

The **BD Arctic Sun 5000** Hyper/Hypothermia System is designed to help clinicians precisely manage a patient's body temperature during critical care. Using temperature-controlled water circulating through adhesive cooling pads, the system provides efficient heat transfer directly at the patient's skin surface. This conductive approach allows caregivers to cool or warm patients within a controlled therapeutic range while continuously monitoring temperature. The unit is commonly used in hospitals for targeted temperature management following cardiac events, neurological injury, or other conditions where strict thermal control is required. Built with automated controls and monitoring features, the Arctic Sun 5000 helps clinical teams maintain stable patient temperatures throughout treatment.

FEATURES

- **Targeted Temperature Management:** Monitors and regulates patient temperature within a therapeutic range of approximately 32°C to 38.5°C (89.6°F to 101.3°F).
- **Conductive Cooling and Warming:** Circulates temperature-controlled water through ArcticGel pads adhered to the patient, allowing efficient heat exchange directly through the skin.
- **Wide Water Temperature Range:** Delivers circulating water between 4°C and 42°C (39.2°F to 107.6°F) to support both cooling and warming therapies.
- **Leak Prevention Design:** Uses a negative pressure flow system that helps reduce the risk of water leaks during operation.



SPECIFICATIONS



DIMENSIONS

Height: 35 in (89 cm)

Width: 14 in (36 cm)

Depth: 18.5 in (47 cm)

Weight:

- Empty: 95 lbs (43 kg)
- Filled: 103 lbs (47 kg)

THERAPY MODES

Normothermia: Control Patient, Rewarm Patient

Hypothermia: Cool Patient, Rewarm Patient

PATIENT TEMPERATURE

Control Range: 32°C to 38.5°C (89.6°F to 101.3°F)

Display Range: 10°C to 44°C (50°F to 111.2°F)

Resolution: 0.1°C / °F increments

Measurement Accuracy:

- $\pm 0.4^{\circ}\text{C}$ (10°C to 32°C)
- $\pm 0.2^{\circ}\text{C}$ (32°C to 38°C)
- $\pm 0.4^{\circ}\text{C}$ (38°C to 44°C)

Probe Type: YSI 400 Series compatible

Temperature Inputs:

- Patient Temp 1: Control, Monitor, Alarm
- Patient Temp 2: Monitor, Alarm

HEATER

Heater Capacity: 2500 BTU/hr (750 Watts)

WATER TEMPERATURE

Display Range: 3°C to 45°C (37.4°F to 113°F)

Control Range (Manual): 4°C to 42°C (39.2°F to 107.6°F)

High Water Temperature Limit: 36°C to 42°C (96.8°F to 107.6°F)

Low Water Temperature Limit: 4°C to 25°C (39.2°F to 77°F)

Resolution: 1°C / °F increments

WATER SYSTEM

Circulating Fluid: Sterile Water

Reservoir Capacity: 3.5 liters

Water Flow Rate: 5 liters per minute

Time to Heat Water (20°C to 37°C): Approximately 8 minutes

SYSTEM PERFORMANCE

Settling Time: ~4.5 hours

Relative Overshoot: $< 0.5^{\circ}\text{C}$

Command Overshoot: $< 0.5^{\circ}\text{C}$

Response Time:

- Warming (33°C to 37°C): ~6 hours
- Cooling (37°C to 33°C): ~2 hours

Steady State Deviation: 0

Tracking Error: 0