Intravascular Temperature Management

Thermogard XP Temperature Management System Specifications

ZOLL's Thermogard XP® (TGXP) Temperature Management System provides the power and control you need to rapidly, safely, and effectively manage the core body temperature of critically ill or surgical patients.¹⁻⁴

ZOLL combines precise temperature management with the critical care functions of a standard central venous catheter (CVC). Cool or warm saline circulates through the catheter in a closed loop, quickly cooling or warming the patient as venous blood passes over the balloons, without infusing saline into the patient.

Experience the benefits of Thermogard XP:

- Rapid and precise core body temperature management
- System automatically maintains target temperature within ±0.2°C
- Easy to use
- Multifunction catheter doubles as a central venous catheter (CVC), adding vital functionality to a line that is already placed
- Software enables real-time temperature display, data storage and download
- Reduces nursing workload by 74%⁵ no need to constantly monitor temperature, manage shivering, check pads, etc.
- Enables unhindered patient access





¹ Mayer SA, et al. Critical Care Medicine. 2004;(3)212:2508-2515.

² Diringer MN, et al. Critical Care Medicine. 2004;(32)2:559-564.

³ Hoedemaekers CW, et al. Critical Care. 2007;11:R91

⁴ Heard KJ, et al. Resuscitation. 2010;81:9-14.

⁵ ICEREA Deye N, et al. Circulation. 2015;132:182-193.



View current patient and system data on the display or synchronize with your hospital monitor.



Track patient and system data and electronically transfer to the patient's file.



Start-up Kit

Tubing set, including heat exchange coil, air trap, and roller pump tubing.

Dimensions

Height: 45 in (114 cm)
Width: 17 in (43 cm)
Depth: 30 in (76 cm)
Weight: 115 lbs (52 kg)

Electrical Configuration:

100-120 VAC, 50/60 Hz, 5A 220-240 VAC, 50/60 Hz, 2.25A

Voltage: 115 V, 230 V **Fuse Protection:**

T6.3A (slow blow) 5 x 20 mm

Environmental

Operating Temperatures: $10^{\circ}\text{C} - 27^{\circ}\text{C} (50^{\circ}\text{F} - 81^{\circ}\text{F})$

Operating Humidity: 30 to 75% noncondensing

Atmospheric Pressure:

70 kPa to 106 kPa

Chiller and Heater

Reservoir Volume:

2.0 liters (0.5 gal)

Pump Capacity:

7 lpm at 0 m head (0 ft)

Temperature Range:

 $0^{\circ}\text{C} - 42^{\circ}\text{C}$

Refrigerant: HFC 134a

Controller and Display

Screen Display:

6.4 in. (16.25 cm) LCD color VGA

Controls:

Push buttons and knob

Temperature Input:

Thermistor, YSI-400 series

Articulation:

 180° swivel, 45° tilt

Data Interface:

Serial RS-232C, 9-pin sub-D connector

Alarms:

Audible tones and displayed text messages

Displayed Temperature Range:

 $26^{\circ}\text{C} - 42^{\circ}\text{C}$

Displayed Temperature Accuracy:

 $\pm~0.2^{\circ}C$

Saline Coolant Circuit

Priming Volume: 200 ml
Heat Exchanger: Disposable

stainless steel coil

Priming Source: Sterile saline solution (hospital provided)

Patient Connection: Directional Luer connections on 72-in.

(183-cm) lines

Pump tubing: Roller pump compatible with directional fittings

Sterility: Gamma sterilized **Saline alarm:** Reservoir-level detection and alarm system

Coolant Circuit Operating Life:

Replace disposable components after seven (7) days of continuous use

Equipment Classifications

Type of Protection Against

Moisture: Ordinary

Type of Protection Against Electric Shock: Type BF for

temperature inputs

Type B for catheter connections

Protection Class: 1

Mode of Operation: Continuous

Approved Patient Temperature Probes

Temperature Probe Standard:

YSI- 400

(200818-005)

YSI-400 temperature probes verified to work with the system:

Mallinckrodt Medical Foley Probe 8F (200818-001)

Mallinckrodt Medical Foley Probe 10F (200818-002)

Mallinckrodt Medical Foley Probe 12F (200818-003)

Mallinckrodt Medical Foley Probe 14F (200818-004)

Mallinckrodt Medical Foley Probe 16F

Mallinckrodt Medical Foley Probe 18F

(200818-006)

Mallinckrodt Medical GP/Rectal Probe 9F (200820-001)

Smith Medical Foley Probe 10 FR (600244-001)

Smith Medical Foley Probe 12 FR (600224-002)

Smith Medical Foley Probe 14 FR (600224-003)

Smith Medical Foley Probe 16 FR

(600224-004)

Smith Medical Foley Probe 18 FR (600224-005)

Smith Medical GP/Rectal Probe 9 FR (600225-001)

Smith Medical GP/Rectal Probe 12 FR (600225-002)

YSI-400 Temperature probes verified to work with the system and Rüsch Patient Interconnection Cable — Rüsch P/N 179516

Rüsch Sensor Temperature Foley Catheters (CH 8, 10, 12, 14, 16, 18) – Rüsch P/N 179360

Rüsch Temperature Supracath (CH 10, 12, 14) — Rüsch P/N 179370





