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Made in USA

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Level 1[®] HOTLINE[®] Blood and Fluid Warmer



OPERATOR'S MANUAL

PN 4534005-GB Rev. 006

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SECTION 13

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Specifications and Accessories

System Specifications

Standard Compliance	Guidelines	
Product Safety	EN 60601-1, UL 2601-1	
EMC	EN 60601-1-2, FCC 47 CFR Part 15, Class B	
Enclosure Protection	IEC 60529 IP Code: IPX1	
Fluid Warmers	ASTM F2172-02	
Physical	Dimensions	
Height, Overall	24.1 cm	(9.5 inches)
Width, Overall	21.0 cm	(8.3 inches)
Depth, Overall	17.8 cm	(7.0 inches)
Weight, Dry	3.5 Kg	(7.6 lbs)
Weight, Wet (with recirculating solution)	5.0 Kg	(11.0 lbs)
Weight, Shipping	3.6 Kg	(7.95 lbs)
Recirculating Solution Capacity	1.4 L	(0.37 gallons)
Maximum Height on I.V. Pole	107 cm	(42 inches)
Environmental	Temperature	Humidity [%]
Operation	10°C to 45°C	10 to 95
Transportation	-18°C to 60°C	5 to 90
Storage	-18°C to 60°C	5 to 90
Thermal	Temperature	
Temperature Set Point	$41.9^{\circ}C \pm 0.1^{\circ}C$	
Over Temperature Set Point	43.1°C	
Electrical	Туре	
MAINS Power Input:		
100V	100VAC, 50/60 Hz, 3.8 Amps	
115V	115VAC, 50/60 Hz, 3.0 Amps	
230V	230VAC, 50/60 Hz, 1.5 Amps	
MAINS Auxiliary Supply Power Output:		
100V	100VAC, 50/60 Hz, 1.0 Amps	
115V	115VAC, 50/60 Hz, 1.0 Amps	
230V	230VAC, 50/60 Hz, 0.6 Amps	

Electrical	Туре
Protection Against Electrical Shock	Class 1 Equipment, Type BF
Mode of Operation	Continuous
Type of Current	Alternating
Ingress Protection Rating	IPX1
Performance	
Recirculating Solution	Recirculating solution temperature reaches
Temperature	37°C from ambient in about 4 minutes
Normothermic Flow Rates	At gravity flow rates to 5,000 ml per hour

The HOTLINE[®] Warmer is manufactured to be in compliance with UL 2601-1 (HL-90 115V) and EN 60601-1 (HL-90 230V).

Electromagnetic Compliance

HOTLINE[®] Warmer is certified to be in compliance with the European Communities Council Directive relating to Electromagnetic Compatibility (EMC): (89/336/EEC). Test methods and acceptance criteria as specified in EN 60601-1-2 demonstrate conformance.

Electromagnetic Environmental Recommendations

Recommended separation distances between portable and mobile RF communications equipment and the HOTLINE[®] Warmer

The HOTLINE[®] Warmer is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the HOTLINE[®] Warmer can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the HOTLINE[®] Warmer as recommended below, according to the maximum output power of the communications equipment.

Rated maximum	Separation distance according to frequency of transmitter m			
output power of transmitter W	150 kHz to 80 MHz d=[3.5/V1]√P	80 MHz to 800 MHz d=[3.5/E1]√P	800 MHz to 2.5 GHz d=[7/E1]√P	
0.01	0.116	0.116	0.233	
0.1	0.368	0.368	0.737	
1	1.16	1.16	2.33	
10	3.69	3.69	7.38	
100	11.66	11.66	23.33	

For transmitters rated at a maximum output power not listed above, the recommended separation distance d in metres (m) can be estimated using the equation applicable to the frequency of the transmitter, where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter

manufacturer.

NOTE 1 At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.

NOTE 2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

Accessories

REF	Product Description	
L-70	HOTLINE [®] Fluid Warming Set with Injection Port	
L-70NI	HOTLINE® Fluid Warming Set without Injection Port	
L-80	HOTLINE® Warming Set with L-10 Gas Vent	
L-10	Gas Vent	
PC-8	T-Connector, 20.3 cm (8") Patient Lead with Injection Port	
YC-8	Y-Connector, 20.3 cm (8") Patient Lead with Injection Port	