

# Warrior lite (lite battery)

(Q1301S0000)

High performance yet compact and light blood and IV fluid warmer for space and weight constrained rescue gears, first responders, and critical care transports



April 2020 | Version 5



## Key Benefits:

- **Simple to Operate:** Failsafe assembly, simple setup
- **Lite & Compact:** 0.8 kg / 1.76 lb | 8.4 x 8.8 x 11.5 cm / 3.3" x 3.46" x 4.52"
- **Immediate Warming:** Warm fluids in less than 11 seconds
- **At Any Input Temperature:** Even at 4°C / 39°F fluid input temperature
- **Even At High Flow Rates:** Up to 170ml/min for the full warming range (4°C-38°C / 39.2°F-100.4°F)
- **Highly Efficient Technology:** 1-2.5 liters of warmed fluids with a single lite battery
- **2 Battery-Size Options:** lite battery and Extra Power battery options for optional operational fit (the Extra Power battery warms up to 3 liters of near-freeze fluids at max delivery rate of 180 ml/min)
- **Highest Regulatory Envelope:** IEC 60601-1-12 and IEC 60601-1-2:2014 (EMC standard 4th edition) certified; MIL-STD 461G RE102 & RS103 compliant
- **Defibrillator-Proof:** Disposable Unit is safe to be used jointly with a defibrillator
- **Night Vision Goggles Compliant:** Designed to be operated with night-vision goggles
- **No Calibration:** No need for periodic calibration
- **Practically Zero Maintenance:** 5 years between service cycles



- **Patent-Protected Smart Warming Technology:** Microprocessor-controlled smart warming technology that measures fluids temperature 100s of times a second and automatically adjusts warming to maintain 38°C / 100.4°F output
- **Safe Technology:** Gradual warming; real-time temperature sensing with auto-adjustments and audio and visual notifications; aluminum free (heat exchanger using medical grade stainless steel)
- **Field Proven Technology:** In clinical use since early 2014 with hundreds of end users and thousands of field utilizations
- **Affordable Consumables:** Cost effective consumable design
- **Multipurpose Consumables:** The same consumable fits all protocols
- **Unique Continuum of Emergency Care Proposition:** Same consumable can be used across the entire continuum of emergency care, simplifying patient handoff between emergency settings and reducing costs

# Warrior lite (lite battery)

(Q130150000)



Performance:	
Set-Point Temperature	38°C (±2°C) / 100.4°F (±3.6°F)
Warming Time	Up to 11 seconds
Minimum Delivery Rate	KVO or 2 ml/min
Maximum Delivery Rate at 4°C/39.2°F Input <sup>[1] [2]</sup>	170 ml/min
Maximum Delivery Rate at 20°C/68°F Input <sup>[1] [2]</sup>	250 ml/min
Battery Capacity at 4°C/39.2°F Input	1-1.5 liters
Battery Capacity at 20°C/68°F Input	2.5 liters
Physical Characteristics:	
Dimension (H x W x L)	8.4 x 8.8 x 115 cm 3.3" x 3.46" x 4.52"
Weight	0.8 kg / 1.76 lb
Electrical Characteristics:	
Battery Characteristics	Rechargeable, Li-ion, 18.0V, 3.0Ah, 54.0Wh
Battery Charging Input Voltage	100–240 VAC   50–60 Hz   Max 1.0 A
Target Regulatory Envelope:	
Certifications	CE, FDA & Health Canada
IEC	<ul style="list-style-type: none"> <li>• IEC 60601-1</li> <li>• IEC 60601-1-2:2014 (EMC standard 4th edition)</li> <li>• IEC 60601-1-12</li> </ul>
Compliance	<ul style="list-style-type: none"> <li>• MIL-STD 461G RE102 &amp; RS103</li> </ul>
Environmental Specifications:	
Storage Conditions	-20°C to 70°C (-22°F to 158°F); 93% RH
Operating Conditions	-5°C to 50°C (23°F to 122°F); RH 90%
Transient operating conditions:	-20°C to 50°C (-4°F to 122°F) & 90% RH
Atmospheric Pressure /Altitude	549 to 1,060 hPa / -400 to 4,572 meter (-1,312 to 15,000 ft)
Ingress Protection (IP)	IP56

## Core Components:

### Base (QIF03-BUA1000)

Hosts the control module and LED indications. Connects with the battery and the Compact Disposable Unit

### lite battery (QIF03-BTA1000)

Rechargeable, Li-ion, 18.0V, 3.0Ah, 54.0Wh  
Note: Extra Power battery available as well (3 liters of near-freeze fluids at up to 180 ml/min)

## Disposable Unit Options:

### Standard Disposable Unit (QPORT1200)

Standard sterile disposable unit; hosts the warming apparatus (available with Extension Cable accessory only)

### Compact Disposable Unit (QPORT0500)

Compact sterile disposable unit for space constrained

## Charging Components:

### Charger (QIF03-CHR1000 and MASCOT2240Li)

### Adapter (QIF03-CHA1001)

## Accessories:

### Mounting (QIF03-MUA1000)

### Extension Cable (QIF-CBL00019)

To extend the connection between the base unit and the disposable unit

### Carrying Bag (QIF03-SBG1000)

[1] Using standard IV kit and a 14G catheter. Blood products' flow rate may differ due to their viscosity. Output temperature and volume may differ based on ambient temperature, flow rate and battery condition.

[2] This document is based on EU-approved spec. For the USA-cleared version, once available, please refer to your QinFlow representative.

Note: the information provided in the Instructions For Use (IFU) shall govern in case of conflict. This document is adjusted to CE approvals; for exact specifications of the USA-cleared version, please refer to the relevant IFU or contact your QinFlow

°C = degree in Celsius  
°F = degree in Fahrenheit Standard  
" = Inch  
AC = Alternate Current  
BU = Base Unit

cm = centimeter  
DU = Disposable Unit  
EN = European Norms  
FDA = Federal Drug Administration  
Ft = Feet

hPa = hecto Pascal (100 Pascal)  
HxWxL = Height x Width x Length  
IEC = International Electrotechnical Commission  
IFU = Instructions for Use  
IP = Ingress Protection rating

Kg = kilogram  
KVO = Keep Vein Open  
lb = Libra (Pound)  
MIL-STD = Military Standard  
ml/min = milliliter per minute