

Warrior lite (Extra Power battery)

(Q1310S0000)

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



June 2020 | Version 6



Key Benefits:

- **Simple to Operate:** Failsafe assembly, simple setup
- **Lite & Compact:** 1.1 kg / 2.39lb | 10.5x8.8x11.5 cm / 4.13"x3.46"x4.52"
- **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 180ml/min for the full warming range (4°C-38°C / 39.2°F-100.4°F)
- **Highly Efficient Technology:** 3-5 liters of warmed fluids with a single lite battery
- **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 visual indications; 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



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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 ^{[1] [2]}	180 ml/min
Maximum Delivery Rate at 20°C/68°F Input ^{[1] [2]}	270 ml/min
Battery Capacity at 4°C/39.2°F Input	3 liters
Battery Capacity at 20°C/68°F Input	5 liters
Physical Characteristics:	
Dimension (H x W x L)	10.5 x 8.8 x 11.5 cm 4.13" x 3.46" x 4.52"
Weight	1.1 kg / 2.39 lb
Electrical Characteristics:	
Battery Characteristics	Rechargeable, Li-ion, 18.0V, 5.5Ah, 99Wh
Battery Charging Input Voltage	100–240 VAC 50–60 Hz Max 2.0 A
Target Regulatory Envelope:	
Certifications	CE, FDA & Health Canada
IEC	• IEC 60601-1 • IEC 60601-1-2:2014 (EMC standard 4th edition) • IEC 60601-1-12
Compliance	• MIL-STD 461G RE102 & RS103
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

Extra Power battery (QIF03-BTA2000)

Rechargeable, Li-ion, 18.0V, 5.5Ah, 99Wh

Note: lite battery available as well (1-2.5 liters; 300 g / 0.65 lb lighter)

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 FY2102000

Adapter QIF03-CHA1002

Accessories:

Mounting (QIF03-MUA1000)

Extension Cable (QIF-CBL00019)

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

Carrying Bag (QIF03-SBG2000)

[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 representative.

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

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

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

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