

The Warrior & Warrior lite Modular Product Lines

Warrior and Warrior lite product lines are designed to rapidly warm blood and IV fluids across the entire continuum of care; namely, point of injury, critical care transports, emergency departments, trauma bays, operating rooms, and intensive care units. Both product lines feature devices powered by battery or AC, and a Hybrid power setting option.



July 2024 | Version 9

Warrior lite Product Line Datasheet

  Warrior lite  → 	  Warrior lite (Extra Power Battery)  → 	  Warrior lite Hybrid 	  Warrior lite AC 
Compact Disposable Unit 		Same light-weight and commercially affordable disposable unit for all Warrior configurations	

Configurations:

Intro Set Part Number	Q1301S0000	Q1310S0000	Q2301S0000 (with lite battery) & Q2310S0000 (with Extra Power battery)	Q230000000
Where Used	Field settings: point of injury and critical care transports	Field settings: point of injury and mid-and long-haul critical care transports	Emergency Departments & integrated health-care systems	Operating rooms and other hospital settings
Typical Users	Space and weight constrained rescue gears, first responders, and short-haul critical care transports	Space and weight constrained rescue gears, first responders, and short and mid-haul critical care transports	Emergency departments, trauma units and integrated healthcare systems that require high warming performance, simplicity of operation, and seamless transition between AC and battery operable modes	Operating rooms and intensive care units that require high warming performance yet simple-to-operate device. Portability not required
Key Benefits	<ul style="list-style-type: none"> • Portable • High warming performance • Compact design • Light weight • Handles push-pull and other intermittent flow transfusion methods 	<ul style="list-style-type: none"> • Portable • Optimal balance between warming performance and operating weight • Handles push-pull and other intermittent flow transfusion methods 	<ul style="list-style-type: none"> • Portable • Handles push-pull and other intermittent flow transfusion methods • High warming performance • Power source flexibility (i.e. battery and AC operable modes) 	<ul style="list-style-type: none"> • High warming performance • Handles push-pull and other intermittent flow transfusion methods • Simple to use (compared with other hospital warmers) • Clear path to portability (if so needed)
Components:				
Basic Configuration	<ul style="list-style-type: none"> • lite Base Unit (BU) • lite battery • Charging components • Carrying bag 	<ul style="list-style-type: none"> • lite Base Unit (BU) • Extra Power battery • Charging components • Carrying bag 	<ul style="list-style-type: none"> • lite Base Unit (BU) • lite or Extra Power battery • Charging components • Carrying bag • AC Power Supply module 	<ul style="list-style-type: none"> • lite Base Unit (BU) • AC Power Supply Module
Disposable Units	Compact Disposable Unit (CDU)	Compact Disposable Unit (CDU)	Compact Disposable Unit (CDU)	Compact Disposable Unit (CDU)
Optional Accessories	<ul style="list-style-type: none"> • Spare battery • Extension Cable • Mount accessory • 12-24V charger 	<ul style="list-style-type: none"> • Spare battery • Extension Cable • Mount accessory • 12-24V charger 	<ul style="list-style-type: none"> • Spare battery • Extension Cable • Mount accessory • 12-24V charger • CDU Basket 	<ul style="list-style-type: none"> • Extension Cable • Mount accessory • CDU Basket

For more information: info@qinflow.com

Warrior lite Product Line Datasheet

	Warrior lite (lite Battery)	Warrior lite (Extra Power Battery)	Warrior lite Hybrid	Warrior lite AC
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]}	170 ml/min	180 ml/min	<ul style="list-style-type: none"> lite battery: 170 ml/min Extra Power battery and AC: 180 ml/min 	180 ml/min
Maximum Delivery Rate at 20°C / 68°F Input ^{[1][2]}	250 ml/min	270 ml/min	<ul style="list-style-type: none"> lite battery: 250 ml/min Extra Power battery and AC: 270 ml/min 	270 ml/min
Battery Capacity at 4°C/39.2°F Input ^{[1][2]}	1.3 liters	3 liters	<ul style="list-style-type: none"> lite battery: 1.3 liters Extra Power battery: 3 liters 	NA
Battery Capacity at 20°C/68°F Input ^{[1][2]}	2.5 liters	5 liters	<ul style="list-style-type: none"> lite battery: 2.5 liters Extra Power battery: 5 liters 	NA
Physical Characteristics:				
System Dimension (H x W x L)	8.4 x 8.8 x 11.5 cm 3.3" x 3.46" x 4.52"	10.5 x 8.8 x 11.5 cm 4.13" x 3.46" x 4.52"	<ul style="list-style-type: none"> With lite battery: 8.4 x 8.8 x 11.5 cm 3.3" x 3.46" x 4.52" With Extra Power battery: 10.5 x 8.8 x 11.5 cm 4.13" x 3.46" x 4.52" With AC: 22 x 12.5 x 10 cm 8.66" x 4.92" x 3.93" 	22 x 12.5 x 10 cm 8.66" x 4.92" x 3.93"
Operational Weight (BU & Power Source)	0.8 kg / 1.76 lb	1.1 kg / 2.4 lb	<ul style="list-style-type: none"> With lite battery: 0.8 kg / 1.76 lb With Extra Power battery: 1.1 kg / 2.4 lb With AC: 1.46 kg / 3.22 lb 	1.46 kg / 3.22 lb
Compact Disposable Unit (CDU):				
CDU	Size: 7.22 x 11.75 x 6.85 cm / 2.84" x 4.63" x 2.70" Weight: 106 g / 0.23 lb (117 g / 0.26 lb in sterile pack)			
Electrical Characteristics:				
Battery Characteristics	Rechargeable, Li-ion, 18.0V, 3.0Ah, 54.0Wh	Rechargeable, Li-ion, 18.0V, 5.5Ah, 99Wh	<ul style="list-style-type: none"> lite battery: Rechargeable, Li-ion, 18.0V, 3.0Ah, 54.0Wh Extra Power battery: Rechargeable, Li-ion, 18.0V, 5.5Ah, 99.0Wh 	NA
Battery Charging Input Voltage	100-240 VAC 50-60 Hz Max 1.0 A	100-240 VAC 50-60 Hz Max 2.0 A	<ul style="list-style-type: none"> lite battery: 100-240 VAC 50-60 Hz Max 1.0 A Extra Power battery: 100-240 VAC 50-60 Hz Max 2.0 A 	NA
Electrical Specifications	NA	NA	100-240VAC 50-60Hz; 2.2-5.3A	100-240VAC 50-60Hz; 2.2-5.3A
Target Regulatory Envelope:				
Certifications	CE, FDA & Health Canada	CE, FDA & Health Canada	CE, FDA & Health Canada	CE, FDA & Health Canada
IEC	<ul style="list-style-type: none"> IEC 60601-1 IEC 60601-1-2:2014 ^[3] IEC 60601-1-12 	<ul style="list-style-type: none"> IEC 60601-1 IEC 60601-1-2:2014 ^[3] IEC 60601-1-12 	<ul style="list-style-type: none"> IEC 60601-1 IEC 60601-1-2:2014 ^[3] IEC 60601-1-12 (Battery mode) 	<ul style="list-style-type: none"> IEC 60601-1 IEC 60601-1-2:2014 ^[3]
Compliance	MIL-STD 461G RE102 & RS103	MIL-STD 461G RE102 & RS103	Battery mode: MIL-STD 461G RE102 & RS103 (Battery mode)	NA
Environmental Specifications:				
Storage Conditions	-20°C to 70°C (-4°F to 158°F) & 93% RH	-20°C to 70°C (-4°F to 158°F) & 93% RH	-20°C to 70°C (-4°F to 158°F) & 93% RH	-20°C to 70°C (-4°F to 158°F) & 93% RH
Operating conditions	<ul style="list-style-type: none"> -5°C to 50°C (23°F to 122°F) & 93% RH Transient operating conditions: -20°C to 50°C (-4°F to 122°F) & 90% RH 	<ul style="list-style-type: none"> -5°C to 50°C (23°F to 122°F) & 93% RH Transient operating conditions: -20°C to 50°C (-4°F to 122°F) & 90% RH 	<ul style="list-style-type: none"> -5°C to 50°C (23°F to 122°F) & 93% RH Transient operating conditions: -20°C to 50°C (-4°F to 122°F) & 90% RH (Battery mode) 	-5°C to 50°C (23°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)	549 to 1,060 hPa / -400 to 4,572 meter (-1,312 to 15,000 ft)	<ul style="list-style-type: none"> Battery operated: 549 to 1,060 hPa / -400 to 4,572 meter (-1,312 to 15,000 ft) AC operated: 700 to 1,060 hPa / -400 to 3,200 meter (-1,312 to 10,499 ft) 	700 to 1,060 hPa / -400 to 3,200 meter (-1,312 to 10,499 ft)
Ingress Protection (IP)	IP56	IP56	<ul style="list-style-type: none"> Battery: IP56 AC: IP22 	IP22

[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 adjusted to CE spec; for exact performance of the USA-cleared version, please refer to the relevant IFU or contact your QinFlow representative.

[3] EMC standard 4th edition.

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

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Warrior/Extreme Product Line Datasheet



Configurations:				
Intro Set Part Number	Q111050000 (Warrior) Q121050000 (Warrior EXTREME)	Q211050000 (Warrior BU) and Q221050000 (EXTREME BU)	Q210000000	Q21X000000
Where Used	Field settings: mid- and long-haul critical care transports	Emergency Departments & integrated health-care systems	Surgery & Intensive Care Units	Surgery & Intensive Care Units
Typical Users	Mid- and long-haul critical care transports that require non-compromising warming performance, high battery capacity and yet utmost portability	Emergency departments, trauma units and integrated healthcare systems that require non-compromising warming performance, simplicity of operation, and seamless transition between AC and battery operable modes	Operating rooms and intensive care units that require top warming performance yet simple-to-operate device. Portability not required yet can be added at a later stage	Operating rooms and intensive care units that require high warming performance yet simple-to-operate device. Portability not required and cannot be added
Key Benefits	<ul style="list-style-type: none"> • Portable • Top warming performance • Handles push-pull and other intermittent flow transfusion methods • High battery capacity 	<ul style="list-style-type: none"> • Portable • Handles push-pull and other intermittent flow transfusion methods • Top warming performance • Power source flexibility (i.e. battery and AC operable modes) 	<ul style="list-style-type: none"> • Top warming performance • Handles push-pull and other intermittent flow transfusion methods • Simple to use • Clear path to portability (if so needed) 	<ul style="list-style-type: none"> • High warming performance • Handles push-pull and other intermittent flow transfusion methods • Simple to use
Components:				
Basic Configuration	<ul style="list-style-type: none"> • Standard or EXTREME Base Unit • Enhanced battery • Charging components • Carrying bag 	<ul style="list-style-type: none"> • Standard or EXTREME Base Unit • Enhanced battery • Charging components • Carrying bag • AC Power Supply Module 	<ul style="list-style-type: none"> • Standard Base Unit • AC Power Supply Module 	Warrior AC Station
Disposable Units	Compact Disposable Unit (CDU)	Compact Disposable Unit (CDU)	Compact Disposable Unit (CDU)	Compact Disposable Unit (CDU)
Optional Accessories	<ul style="list-style-type: none"> • Spare battery • Extension Cable • Mount accessory • 12-24V charger 	<ul style="list-style-type: none"> • Spare battery • Extension Cable • Mount accessory • 12-24V charger • CDU Basket 	<ul style="list-style-type: none"> • Extension Cable • CDU Basket 	Extension Cable

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Warrior/Extreme Product Line Datasheet

	Warrior & Warrior EXTREME	Warrior Hybrid	Warrior AC	Warrior AC Station
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]}	17 ml/min	• Battery operated: 200 ml/min • AC operated: 290 ml/min	290 ml/min	290 ml/min
Maximum Delivery Rate at 20°C / 68°F Input ^{[1][2]}	290 ml/min	• Battery operated: 290 ml/min • AC operated: 500 ml/min	500 ml/min	500 ml/min
Battery Capacity at 4°C/39.2°F Input ^{[1][2]}	3.5 liters	3.5 liters	NA	NA
Battery Capacity at 20°C/68°F Input ^{[1][2]}	5 liters	5 liters	NA	NA
Physical Characteristics				
System Dimension (H x W x L)	23.2 x 15.6 x 7.8 cm 9.13" x 6.14" x 3.07"	• Battery operated: 23.2 x 15.6 x 7.8 cm 9.13" x 6.14" x 3.07" • AC operated: 30 x 19 x 18 cm 11.81" x 7.48" x 7.08"	30 x 19 x 18 cm 11.81" x 7.48" x 7.08"	27 x 17.3 x 17.3 cm 10.6" x 6.8" x 6.8"
Operating Weight (BU & Power Source)	1.7 kg / 3.8 lb	• Battery operated: 1.7 kg / 3.8 lb • AC operated: 3.7 kg / 8 lb	3.7 kg / 8 lb	3.4 kg / 7.5 lb
Compact Disposable Unit (CDU):				
CDU	Size: 7.22 x 11.75 x 6.85 cm / 2.84" x 4.63" x 2.70" Weight: 106 g / 0.23 lb (117 g / 0.26 lb in sterile pack)			
Electrical Characteristics:				
Battery Characteristics	Rechargeable, Li-ion, 21.6V, 4.6Ah, 99.36Wh	Rechargeable, Li-ion, 21.6V, 4.6Ah, 99.36Wh	NA	NA
Battery Charging Input Voltage	100–240 VAC 50–60 Hz Max 2.0 A 12/24V	100–240 VAC 50–60 Hz Max 2.0 A 12/24V	NA	NA
Electrical Specifications	NA	Input: 110VAC 7A RMS 240VAC 3.5A RMS 50-60 Hz	Input: 110VAC 7A RMS 240VAC 3.5A RMS 50-60 Hz	Input: 110VAC 7A RMS 240VAC 3.5A RMS 50-60 Hz
Target Regulatory Envelope:				
Certifications	CE, FDA & Health Canada	CE, FDA & Health Canada	CE, FDA & Health Canada	CE, FDA & Health Canada
IEC	• IEC 60601-1 • IEC 60601-1-2:2014 ^[3] • IEC 60601-1-12	• IEC 60601-1 • IEC 60601-1-2:2014 ^[3] • IEC 60601-1-12 (battery mode)	• IEC 60601-1 • IEC 60601-1-2:2014 ^[3]	• IEC 60601-1 • IEC 60601-1-2:2014 ^[3]
Compliance	• EN1789 • MIL-STD 461G RE102 & RS103 (Warrior EXTREME BU)	• EN1789 (battery operable) • MIL-STD 461G RE102 & RS103 (Warrior EXTREME BU)	NA	NA
Environmental Specifications:				
Storage Conditions	-30°C to 70°C (-22°F to 158°F) ^[4]	• Battery operated: -30°C to 70°C (-22°F to 158°F) ^[4] • AC operated: -20°C to 60°C (-4°F to 140°F) & 93% RH	-20°C to 60°C (-4°F to 140°F) & 93% RH	-20°C to 60°C (-4°F to 140°F) & 93% RH
Operating conditions	• -5°C to 40°C (23°F to 104°F) ^{[4][5]} • Transient operating conditions (EXTREME version): -20°C to 50°C (-4°F to 122°F) & 90% RH	• Battery operated: -5°C to 40°C (23°F to 104°F) ^[4] • AC operated: 5°C (41°F) & 15% RH to 40°C (104°F) and 93% RH	5°C (41°F) & 15% RH to 40°C (104°F) and 93% RH	5°C (41°F) & 15% RH to 40°C (104°F) & 93%RH
Atmospheric Pressure / Altitude	549 to 1,060 hPa / -400 to 4,572 meter (-1,312 to 15,000 ft) ^[6]	• Battery operated: 549 to 1,060 hPa / -400 to 4,572 meter (-1,312 to 15,000 ft) ^[6] • AC operated: 700 to 1,060 hPa / -400 to 3,200 meter (-1,312 to 10,499 ft)	700 to 1,060 hPa / -400 to 3,200 meter (-1,312 to 10,499 ft)	700 to 1,060 hPa / -400 to 3,200 meter (-1,312 to 10,499 ft)
Ingress Protection (IP)	IP56 (Warrior EXTREME) and IP33 (Warrior)	IP56 (EXTREME BU), IP33 (standard BU), IP22 (AC)	IP22	IP22

[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 adjusted to CE spec; for exact performance of the USA-cleared version, please refer to the relevant IFU or contact your QinFlow representative.

[3] EMC standard 4th edition.

[4] Under EN1789:2007 +A2:2014.

[5] The benchmark tests were performed after storage at extremely cold temperature of -30°C (-22°F).

[6] In compliance with IEC60601-1-11:2010 section 4.2.2c.

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Kg = kilogram
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MIL-STD = Military Standard
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RH = Relative Humidity

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