

Compact Disposable Unit (CDU)

(QPORT0500)

Sterile (per-patient) warming component, compatible with all Warrior configurations, i.e. the Warrior lite, Warrior, Warrior EXTREME, Warrior AC, and Warrior Hybrid

(NOTE: the CDU must be used together with a Warrior configuration!)

December 2021 | Version 3



Key Benefits:

Unmatched Performance

- **Fastest:** Warms near frozen blood/fluid to 38°C ($\pm 2^\circ\text{C}$) in under 11 seconds
- **Highest Delivery Rate:** Up to 200/290 ml/min (battery/AC) at 4°C fluid input temperature (configuration dependent)
- **Superb Handling of Push-Pull / Bolus / Intermittent Resuscitation Method:** Real time sensing, sufficient priming volume, highly efficient warming technology, and mechanical integrity guarantee fast reaction to flow changes and unmatched intermittent flows handling (e.g. hand pump, syringe, etc.)

Designed with the User in Mind

- **Compact and Light Weight:** 7.22 x 11.75 x 6.85 cm / 2.84" x 4.63" x 2.70"; 106 g / 0.23 lb
- **Simple To Use:** Gravity feed. Flow can be regulated with pressure bag or pump. Fail Safe assembly. Can be easily assembled even in rough settings
- **Fits Blood & Fluid Resuscitation Protocols:** Can be used for blood and fluid products
- **No Proprietary Tubing:** Connects to standard lines
- **Superb Thermal Performance:** No heat dissipation towards the patient or caregiver
- **Can Be Connected to an Extension Cable:** To provide greater operational flexibility
- **Unique Continuum of Care Proposition:** Same CDU can be used across the entire continuum, simplifying patients' handoff and reducing cost



Compelling Commercial

- **Significantly Lower Per-Use Price:** Compared with all modern warmers
- **Long Shelf Life:** Up to 3 years

Cutting Edge, Patented, Safe Underlying Technology

- **Smart Warming Technology:** Microprocessor-controlled smart and highly efficient warming technology. Fluids temperature is sampled hundreds of times a second to ensure constant 38°C / 100.4°F output ($\pm 2^\circ\text{C}$ / 3.6°F)
- **Extremely Relaxed Heat Transfer Mechanism:** Incremental heat transfer over 220cm / 7.2 ft medical-grade stainless steel coil
- **Undisrupted Fluid Path:** Same diameter as the line and smooth curves ensure qualitative delivery of warm fluids / blood
- **Fast Auto-Correction:** Temperature adjustments to flow changes within seconds
- **No Heating Inertia:** Heating element cools immediately when heating stops
- **Mature Technology:** Field Proven technology with thousands of field utilizations
- **Aluminum free!**

For more information: info@qinflow.com

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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]}	<ul style="list-style-type: none"> Battery operated: up to 200 ml/min (configuration dependent) AC operated: up to 290 ml/min
Maximum Delivery Rate at 20°C/68°F Input ^{[1] [2]}	<ul style="list-style-type: none"> Battery operated: up to 290 ml/min (configuration dependent) AC operated: up to 500 ml/min
Pressure Handling	300 millimeter of mercury (mmHg), with comfortable tolerances
Bolus Flow Handling	Immediately adjusts to flow changes

Physical Characteristics:

Dimension (H x W x L)	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)
Priming Volume	19 ml
Materials	Medical grade stainless steel coil, PVC tubing, EPP casing, temperature sensors

Usability Aspects:

Intended Use	Warm both IV and blood products
Positioning	Between fluid/blood bag and patient. Connects to the Base Unit to receive energy and provide sensing information. Extension Cable (QIF-CBL00019) can be used for greater operational flexibility
Orientation	Flexible (i.e. no limitation)
Assembly	Fail safe (can only be assembled in the proper way)
Heat Dissipation	None
Shelf Life	Up to 3 years

Regulatory Envelope & Environmental Specifications:

Certifications	As per the specific Warrior configuration
Environmental Specifications	As per the specific Warrior configuration

[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 the specific Warrior configuration, ambient temperature, flow rate, and battery condition. NOTE: must be used together with a Warrior configuration!

[2] This document is based on EU-approved spec. For the USA-cleared version, please refer to the IFU or 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

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