



 **LIFEWARMER™**
Quantum™
Blood & Fluid Warming System



*No need to wrestle
with **CAPACITY** vs.
CAPABILITY
anymore...*

The Quantum is a Game-Changing innovation that has succeeded in closing a critical capability gap previously left exposed by other commercial off-the-shelf fluid warmers currently fielded. Size, weight, performance, and ease of use are no longer collective barriers to the delivery of whole blood in far forward and near POI casualty management.

The Quantum™ Solution

The Quantum exceeds all healthcare and logistical requirements for the delivery of warmed blood or fluids across the defined spectrum of care. The system consists of unique thermal administration sets that incorporate sensing elements with an integrated heating system that does not disrupt the fluid path. With advanced intelligence throughout the system, the lightweight Controller modulates and moderates the energy flow to the integrated heating elements to ensure consistent normothermic fluid delivery to the casualty. The 44V battery is the smallest in category, able to rapidly adjust power distribution based on the temperature and flow rate of the input fluid. This creates a highly efficient system capable of previously unrealized performance optimizations. The Quantum system has an operational weight of just 22 total ounces yet can deliver two units of 39°F Whole Blood (WB) at 100mL/min with an output temperature of 100.4°F (38°± 2°C) with only a 24 second warm-up period. The Quantum Blood and Fluid Warmer provides the Tactical Health Care Professional with significant technological overmatch in the fight to eliminate preventable combat death.

Quantum™ Blood & Fluid Warming System

- **Lightweight** The Quantum™ has the lightest operational weight of any portable blood & fluid warming system (Total Operational Weight: 22 oz)
- **Powerful** Warms two units of 39°F refrigerated whole blood at 100mL/min+ on a single charge
- **Compact** Fewest components to carry (three)
- **Fast** Warm-up time of only 24 seconds
- **Intuitive** The thermal transfusion/infusion set looks, handles, and sets up/primes like any conventional IV set
- **Safe** Tested safe for blood, blood products and IV solutions
- **Effective** The system is plug-and-play for ease of setup under stressful conditions such as tactical field care (only two connection points, with no plug orientation or set-up order requirements – system status constantly visible at a glance)
- **Complete** Does not require additional standard transfusion or infusion set – all other warmers do
- **Tactical** Only system FDA cleared allowing easy disable of audible alerts to protect operators in combat

Quantum Charger

Quantum Battery

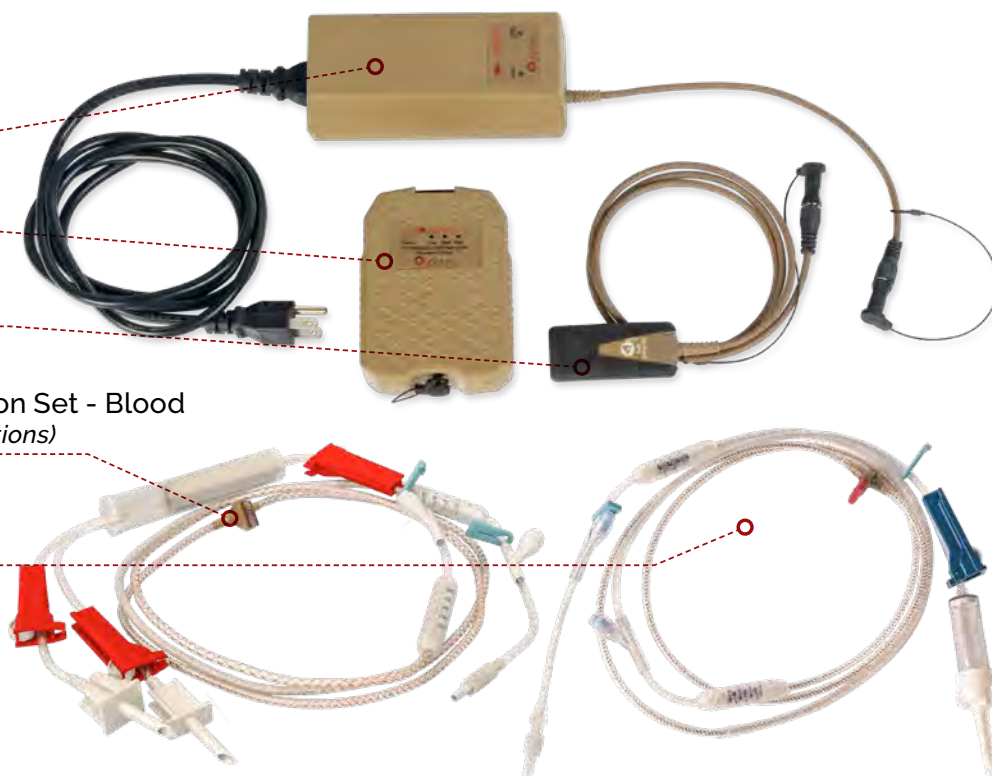
Quantum Controller

TTS-B Thermal Transfusion Set - Blood (Blood, blood products & IV solutions)

TIS Thermal Infusion Set (IV solutions)

PRODUCT WEIGHTS

Total Operational Weight: 22 oz
(Quantum™ Controller, Battery & TTS-B)
Battery: 16 oz
Controller: 3 oz
Thermal Transfusion Set: 2.7 oz
Thermal Infusion Set: 2.3 oz
Charger: 22 oz



*NOTE: Complete System includes 1 x Controller, 1 x Battery, 1 x Charger & 2 x TTS-B

OPERATING PARAMETERS

IV FLUIDS

- Input Temp: 68°F
- Output Temp: 100.4°F (38°+/- 2°C)
- Flow-Rate: 2 - 200mL/min (+)
- Warm-up Time: 24 seconds
- Warming Capacity with a Single Battery: 1700 mL

BLOOD or BLOOD PRODUCTS

- Input Temp: 39°F
- Output Temp: 100.4°F (38°+/- 2°C)
- Flow-Rate: 2 - 100mL/min (+)
- Warm-up Time: 24 seconds
- Warming Capacity with Single Battery: 2 units (+)

ORDERING INFORMATION

COMPONENTS	ITEM #
♦ Complete System*	35-0006
♦ TTS-B (Pack of 2)	35-0005
♦ TIS (Pack of 2)	35-0004
♦ Controller	35-0003
♦ Battery Charger	35-0002
♦ Battery	35-0001

Experience the **Quantum** **DIFFERENCE** The CAPACITY vs. CAPABILITY solution...



**Blood & Fluid
Warming System**

Quantum[™]

Close the **fluid resuscitation capability gap** that requires a **normothermic whole blood** delivery system for far forward, near point-of-injury use

FAST | EFFECTIVE | SAFE | INTUITIVE | LIGHTWEIGHT | POWERFUL

REQUIREMENT:

- ▶ Delivery of 2 units of 39°F (4°C) Whole Blood at 100ml/min with an output temperature of 100.4°F (38°+/- 2°C) on a single battery charge
- ▶ Warm-up time - 24 seconds ▶ Lightweight & Portable - 22 oz total

We aren't playing the game. We're changing it.

Explore all NEW Online Educational Materials/Videos available at
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