

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.



• **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 (4°C) 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 & 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™ COMPLETE SYSTEMS

	OPTION	ITEM#	NSN#
	Quantum System	35-0006	6515-01-693-7810
	Trainer System*	35-0029	

OPERATIONAL CAPABILITIES

IV FLUIDS From a single battery charge, capable of warming 1700 mL of 68°F (20°C)

IV fluids to an output temperature of 100.4°F

(38°+/- 2°C). Warm up time: 24 seconds.

Delivery Flow rate: 200mL/min.



1 x *Quantum*[™] Charger

1 x *Quantum*™ Battery

1 x *Quantum*™ Controller



 R_{XONLY}

(Blood, blood products & IV solutions)

SPECIFICATIONS

Total Operational Weight: 22 oz. (Quantum™ Controller, Battery & TTS-B)

Battery: 16 oz. Controller: 3 oz. Battery Charger: 22 oz. Controller Cover: 0.23 oz.

Thermal Transfusion Set (TTS-B): 2.7 oz.

TTS-B Drip Rate: 20 atts/ml



BLOOD or **BLOOD PRODUCTS**

From a *single battery charge*, capable of warming *1000 mL* of *39°F (4°C) Whole Blood* to an output temperature of *100.4°F (38°+/- 2°C)*.

Warm up time: *24 seconds*.

Delivery Flow rate: *100mL/min*.

TTS-B Thermal Transfusion Set

- Compatible with whole blood, component therapy (including FDP), colloids, and isotonics
- Similar size and weight to traditional IV tubing
- Intelligent sensing & heating elements integrated into the walls of the tubing set
- · No disruption to the fluid path or laminar flow of the fluid
- Easy bi-directional connection to the Quantum Controller
- 20 gtts/mL drip rate

SPECIFICATIONS

 R_{XONLY}

TTS-B package (each): 6.5 in. x 11 in. Tubing Length: 80 in.

TTS-B Wat (each): 2.6 oz



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OPTION	ITEM#	NSN#
TTS-B	35-0005	6515-01-695-4444
Trainer Tubing	35-0028	

Quantum™ BATTERY

- Designed for the tactical environment- water resistant, subdued color, and the option to disable the audible alarm
- 44V Lithium-Polymer Battery
- Intelligent, state-of-the-art battery technology senses charge demand and will *Retain a ready charge by keeping charge as needed but never overcharge*
 - Status button to check charge state at any time

SPECIFICATIONS

Replacement cover

is also available

H 4.5 in. x W 3.25 in. x D 1.25 in. Weight: 16 oz

Minimum service life -

W 1.25 in. x H 3 in. x D 0.75 in.

Controller Total Length: 51.25 in.

Weight (Controller only): 2.5 oz

Packaged Weight: 5 oz

SPECIFICATIONS

Controller Body:

1000 insertions/removals

QUANTUM™ BATTERY

Always re-charge after each use,

Battery plugged into Charger.

even if not fully discharged.

ITEM#	NSN#
35-0001	

Quantum™

CONTROLLER

- Moderates the energy flow from the Quantum Battery to the Thermal Tubing
- Designed for ease of connecting and durability
- Colored LED lights constantly show during administration of blood/fluid to show status
- Lightweight & durable
- IP53 rated for dust & water resistance with jacket

OLIANTLIM™ CONTROL LED

QUANTOM CONTROLLER		
OPTION	ITEM#	
Controller	35-0003	
Trainer Controller*	35-0027	
Cover (Replacement)	35-0010	

TIS Thermal Infusion Set

- Similar size and weight to traditional IV tubing
- Intelligent sensing and heating elements integrated into the walls of the tubing set
- No disruption to the fluid path or laminar flow of the fluid
- Easy bi-directional connection to the Quantum Controller
- Compatible with standard IV fluids such as colloids and isotonics
- 20 gtts/mL drip rate

SPECIFICATIONS

 R_{XONLY}

TIS packaged (each): 6.5 in. x 11 in. Tubing Length: 80 in. Weight: TIS (each): 2.1 oz Packaged (2 TIS & box): 10 oz



Quantum™

HARDCASE



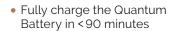
- to protect your Quantum from dust, dirt, and moisture Features pressure relief

Rugged hard case designed

- valve for automatic pressure equalization
- Custom laser cut high density foam holds components securely in place
- Flexible storage capacity for multiple batteries, controllers and thermal tubing sets

QUANTUM™ HARDCASE

ITEM#	NSN#
35-0008	



- · Smart, safe charging
- Includes 6 ft AC power cord
- Colored LED lights to inform the user of charging and battery status
- IP 22 rated for dust and water resistance
- 100V to 264V AC input; 50Hz, 60Hz
- Minimum service life-2500 insertions/removals

QUANTUM™ CHARGER

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ITEM#	NSN#	
35-0002		



R_XONLY

SPECIFICATIONS

Charger: H 6 in. x W 2.25 in. x D 1.75 in. AC power cord length: 6 feet Charger Wgt: 1 lb 4 oz Wat with cord: 1 lb 10 oz



NUONT Field Blood Transfusion Kit

- Comprehensive kit designed for use with the Quantum Blood & Fluid Warming System allowing rapid, consistent normothermic field blood transfusion in far forward and near point of injury (POI) prehospital casualty management.
- Includes the Quantum Thermal Transfusion Set (Blood) that incorporates an integrated heating system that does not disrupt the fluid path
- Equipped with Donor/Recipient Modules to verify blood types of the donor and recipient
- Also allows collecting of blood samples from the donor for additional surveillance testing



QUANTUM FIELD BLOOD TRANSFUSION KIT CONTENTS:





















Each Donor Module Kit contains:



















All the needed supplies to allow the user to rapidly perform a field blood transfusion as outlined in the



















Joint Theater Trauma System Clinical **Practice Guidelines**

Each Recipient Module Kit contains:



















SPECIFICATIONS R_{XONLY} L 10 in. x W 7 in. x D 2.5 in. Weight: 1.09 lb















QUANTUM™ FIELD **BLOOD TRANSFUSION KIT**

ITEM#	NSN#
83-0028	



The Quantum™ Trainer System is designed to facilitate training and practice in treatment simulations utilizing blood, IV solutions, or other training aids. This innovative trainer enables users to familiarize themselves with the essential steps involved in preparing and operating the Quantum™ Blood and Fluid Warming System.

The Quantum™ Trainer Tubing Set is a component for use with the Quantum™ Trainer System ONLY. It is designed for non-warming training purposes and does not contain any heating elements. With its user-friendly design, users can confidently practice the setup process, fluid container placement, and connection techniques, simulating a real-life scenario.

- Allows medical trainers to thoroughly instruct personnel on the proper use of the Quantum $^{\text{TM}}$ Blood and Fluid Warming System
- Designed for non-warming training purposes
- NOT FOR CLINICAL USE

SPECIFICATIONS

 R_{XONLY}

Dimensions:

Trainer Tubing Package: W 6.5 in . x L 11 in. (ea.) Tubing Length: 85 in.

Controller Body: W 1.25 in. x H 3 in. x D 0.75 in.

Controller Total Length: 51.25 in.

Weights:

Trainer Tubing Set: 2.7 oz.
Trainer Controller: 2.5 oz.
Trainer Controller (Pkgd): 5 oz.
Battery: 16 oz. | Charger: 22 oz.
Total Trainer Operational Weight: 22 oz.









QUANTUM™ TRAINER SYSTEM & COMPONENTS

OPTION	ITEM#	
Trainer System	35-0029	
Trainer Tubing	35-0028	
Trainer Controller	35-0027	

Crēdo PROMED™ SERIES FOUR CONTAINER

Designed specifically for the dynamic needs of first responders, the Crēdo ProMed™ product line currently consists of three different sized temperature-controlled portable medical transport bags that thermally protect the integrity of valuable medical supply payloads.

Once the TIC™ system panels are staged and properly placed inside the Vacuum Insulated Panel (VIP) assembly, simply insert payload content and



- Temperature-controlled portable medical transport bags that thermally protect the integrity of valuable medical supply payloads for 48 - 96 hours
- Outer Container: Ballistic nylon fabric with durable web strapping and secure buckles
- Featuring the patented Thermal Insulation Chamber (TIC™) panels with phase change material and VIP components contained within to consistently protect medical materials such as blood and platelets within 2-8°C.
- Available in 3 capacities: 2L, 4L & 8L

CREDO PROMED™ SERIES FOUR CONTAINER

CAPACITY	ITEM#
2 Liters	35-0011
4 Liters	35-0012
8 Liters	35-0013

SPECIFICATIONS

2 Liter: Volume: 2L Duration: 48 hours L 8 in. x W 9 in. x D 10 in. Weight: 7.64 lb

4 Liter: Volume: 4L Duration: 96 hours L 10 in. x W 10.5 in. x D 10.5 in. Weight: 11.45 lb

8 Liter: Volume: 8L Duration: 72 hours L 11 in. x W 15.5 in. x D 11 in





PAX COOLER BAG

For the Crēdo ProMed™ Series Four 2L Container

Carry both your temperature controlled medical supply needs as well as your blood & IV fluid warming device in the same bag for rapid access. The NAR® Pax Cooler Bag features a main compartment custom sized to fit the Thermal Insulation Chamber - TIC™ and VIP components from the Crēdo ProMed™ Series Four 2 Liter Container. Simply transfer the removable TIC™ and VIP's into the NAR® PAX Blood Cooler Bag from your Crēdo.

> Be prepared to easily transport Blood and IV fluids for field deployment with the Blood Cooler Bag for the Crēdo ProMed Series Four 2 Liter Container.



- Features the non-porous PAX Tech material that provides an easy-to-clean and decontaminate exterior
- Has a detachable section that is ideal for storing the Quantum™ Blood & Fluid Warming System and other essential IV access equipment
- Compatible with the Thermal Insulation Chamber - TIC[™] and VIP components from the 2 Liter Crēdo cooler panels

Volume: 2L

PAX COOLER BAG

CAPACITY	ITEM #
2 Liters	35-0032



