

Series 22-4144

User Guide



PROVEN. PRECISE. RELIABLE

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GOLDEN HOUR<sup>®</sup>  
TECHNOLOGY



# SPECIFICATION SHEET

## Series 22-4144

### Product Overview

Superior thermal protection in a convenient small-size container.

Qualified to hold room-temperature medical materials at a safe temperature for up to six days – ideal for long-duration international transport of pharmaceuticals, blood, biologics and tissues where customs delays are a real risk.

Modular TIC® System panels with integrated 22°C phase-change material break down easily for simple storage and preconditioning.

### Specifications

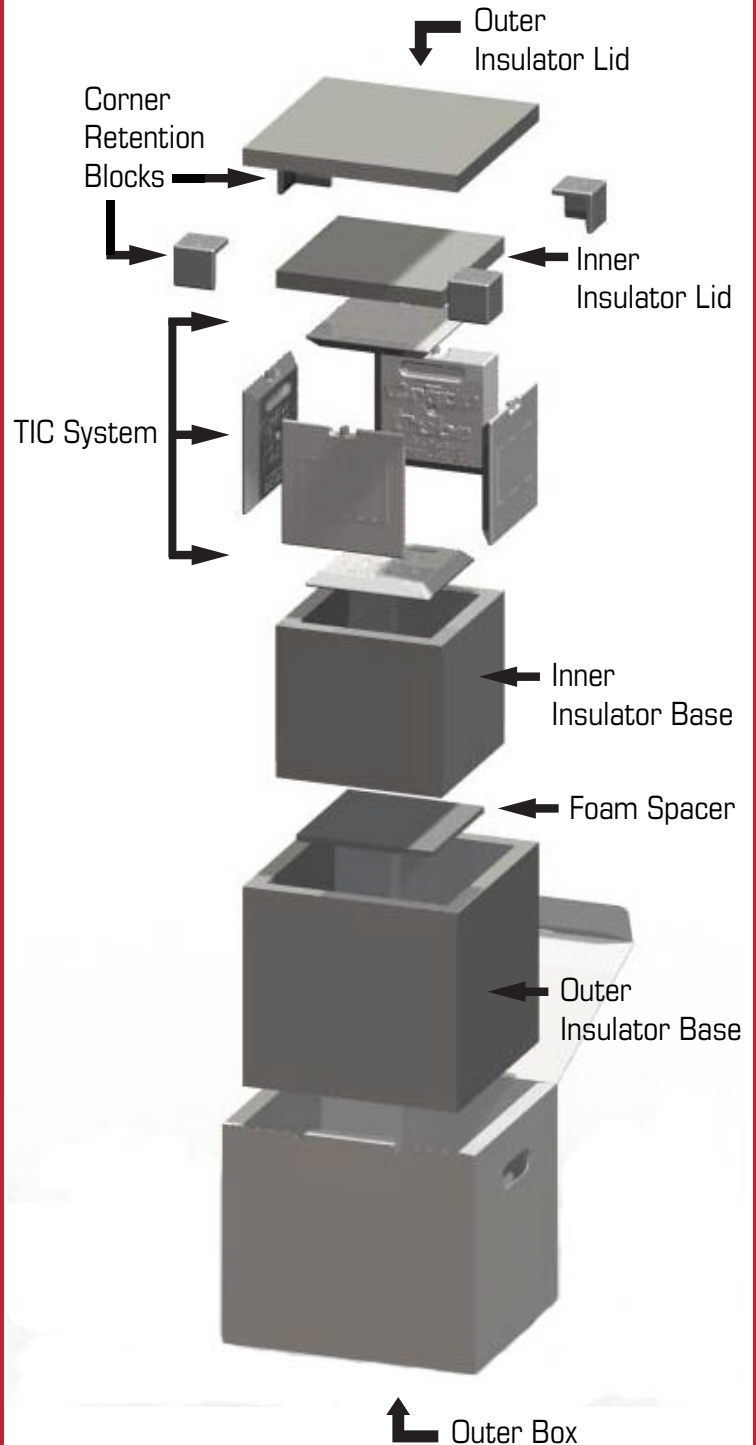
Unit of Measure	Standard	Metric
Temperature Range	Within 68°F - 75°F	Within 20°C - 24°C
Payload Capacity	216 in <sup>3</sup>	3539 cm <sup>3</sup>
Volumetric Capacity	1 Gallon	4 Liters
Payload Dimensions (L x W x H)	Inches	Centimeters
	6" x 6" x 6"	15 x 15 x 15
Exterior Dimensions (L x W x H)	Inches	Centimeters
	15" x 13" x 13.5"	38 x 33 x 34
Tare Weight	18 LBS	8 kg
Thermal Performance (ISTA Profile)	Winter Profile	Summer Profile
	96+ Hours	144+ Hours
Insulator	Vacuum Insulation Panels	

### Ensuring Consistent Performance

Exterior Ambient Conditions	Holds Payload 20° - 24°C
ISTA 7D summer shipping profile	144+ Hours
ISTA 7D winter shipping profile	96+ Hours
*Performance based on "maximum performance preconditioning"	

- Always precondition TIC System before use according to instructions on TIC lid.
- Ensure all components are clean and not damaged.
- Follow assembly instructions printed on outside corrugate box
- After loading, avoid opening container unnecessarily.
- Ensure both TIC lid and insulator lid are secure before sealing for transport.

### Product Components

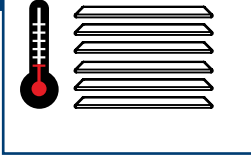


# USING YOUR CREDO THERMAL PACKAGING SOLUTION

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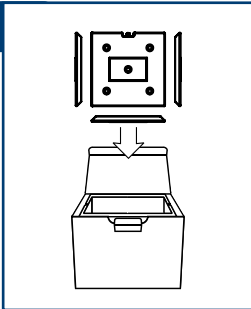


### 1 Precondition TIC® System



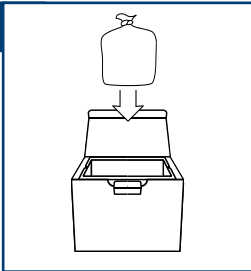
- Remove TIC (Thermal Isolation Chamber) System (6 panels) from the inner insulator base by pulling open the tab on the front of the corrugate box and removing the outer insulator lid to expose the inner insulator assembly.
- Remove the four white corner retention blocks along with the inner insulator lid. Remove the 6 panels from the inner insulator base.
- Precondition TIC System at 22°C for a minimum of 12 hours. Ensure the TIC panels lay flat.
- **Warm Conditions:** For maximum performance in expected warm ambient conditions, place TIC® System panels flat in a 20° to 21°C controlled environment for 12 hours minimum.
- **Cold Conditions:** For maximum performance in expected cold ambient conditions, place TIC® System panels flat in a 23° to 25°C controlled environment for 12 hours minimum.

### 2 Assemble TIC Base



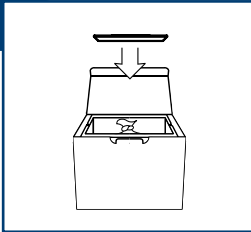
- Insert a TIC panel into the base of the inner insulator with the Credo Cube embossed logo facing up.
- Add 4 TIC panels to form the side walls with the Credo Cube embossed logo facing inward.

### 3 Load Payload



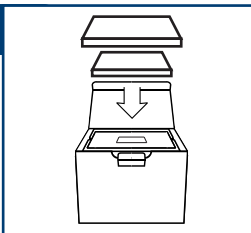
- Ensure payload (product to be shipped) is preconditioned at 22°C before loading into the 5 TIC panel assembly listed above. Do not overpack.
- Add non-insulating filler to fill empty payload space to prevent contents from shifting during transit.

### 4 Insert TIC Lid



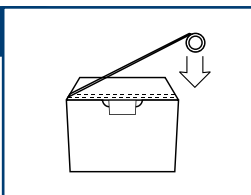
- Place the final TIC panel over payload area, ensuring the panel lies flat and level without forcing onto TIC side walls.

### 5 Insert Insulator Lids



- Place inner insulator lid onto inner insulator base making sure it rests flat and level without forcing.
- Install the four white corner retention blocks ensuring the cube logo is facing upwards. Ensure that all four blocks do not protrude above the outer insulator base assembly.
- Place outer insulator lid onto outer insulator base making sure it rests flat and level without forcing.

### 6 Close and Secure Container



- Close and secure box with packing tape where indicated.



### How to Clean Credo Components

- TIC<sup>®</sup> System (6 panels): The TIC panels can be cleaned using warm water and soap or alcohol. Sanitization can be performed using isopropyl alcohol and water mixture (typically 70/30 mix alcohol to water) or other salt-based disinfectants.
- Insulator lid and base: Insulator lid and base can be cleaned using a damp rag with soap or a rag with isopropyl alcohol.
- DO NOT:
  1. Autoclave any of the components.
  2. Use any organic solvents such as acetone or methyl ethyl ketone (MEK) on any of the components.
  3. Expose any of the TIC components or insulator to extreme heat (+75° C or above).
  4. Use any abrasive cleaners on any of the components.
- Contact Minnesota Thermal Science for verification if your preferred method is not listed.

### Notes on TIC<sup>®</sup> Preconditioning

- Proper TIC<sup>®</sup> preconditioning is vital for the containers correct operation. Follow the tips below to ensure proper operation.
  1. For standard performance make sure the TIC system is preconditioned at +22°C for a minimum of 12 hours.
  2. For maximum performance in expected cold conditions, precondition the TIC system between +23°C and the payload high temperature threshold (for example +23°C to +25°C) Shake the panels before use, they should be mostly liquid.
  3. For maximum performance in expected warm conditions, precondition the TIC system between the payload low temperature threshold and +21°C (for example +20°C to +21°C). Shake the panels before use, they should be mostly solid.
  4. An environmental chamber or incubator for preconditioning is recommended to achieve maximum performance.
  5. Remember to remove the TIC system from the insulator prior to preconditioning. You should not try to precondition the entire unit.

### How to Perform a Thermal and/or Transit Qualification

Minnesota Thermal Science offers thermal and transit qualification services via our ISTA certified laboratory. If you do not wish to utilize our services we offer NIST traceable PC based temperature data loggers that fit inside the container and provide accurate, continuous time and temperature data in excel format. We recommend that you reference and follow ISTA procedure 5B or ISTA procedure 7D which are ASTM D3103 compliant to guide you through your thermal testing process. We recommend that you reference and follow ISTA procedure series 1, 2 or 3, or ASTM D4169 to guide you through your transit testing. Many of our units are already transit tested to ISTA procedure 3A. The certification can be found on the bottom of the box.

### How to Inspect and Replace Vacuum Insulation Panels: (VIPs)

The Vacuum Insulation Panels (VIPs) in Credo containers are extremely effective as long as they hold an interior vacuum. Inspect VIP lid and VIP base surfaces to ensure they are gripped tight. Another indicator of a compromised panel is a loss of rigidity. A loose skin or non-rigid panel indicates vacuum loss and the product should be returned for refurbishment. Avoid removing VIP base from outer corrugated box unless corrugated or VIP is damaged and needs to be replaced. The VIP lid and VIP base will expire and should be replaced before the expiration date printed on each panel.

**Call 1-877-537-9800 if a component needs refurbishment.**

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