neonatal solutions

Waterless Milk Warming
Use the Safer Practice
The life-giving benefits of human milk are crucial to the outcomes of NICU infants. Risk of contamination is present during storage, warming, handling and feeding of human milk. Protecting the beneficial properties of human milk can be a challenge.

Eliminate the risk of contamination from waterborne pathogens.

- Hospital tap water is one of the most overlooked, important and controllable source(s) of hospital acquired infections.\(^1\)
- Infants in NICU settings are among those patients at highest risk for nosocomial waterborne infections.\(^3\)
- Exposure to waterborne infection can occur from direct contact with tap water through bathing as well as contact with equipment rinsed in tap water (e.g., bottles for feedings) and conventional water-based warmers.\(^3\)
- Reducing vulnerable patient populations’ exposure to tap water can reduce their risk of nosocomial infection.\(^3\)
- Waterless milk warming removes the need to integrate milk warming into emergency water supply planning.\(^6\)

Did You Know?
The CDC suggests that facilities remove sources of contaminated water whenever possible to avoid contamination resulting from waterborne microorganisms.\(^2\)

Warm human milk to temperatures consistent with expressed human milk.

- Feeding preterm infants milk warmed to body temperature results in the least amount of gastric residuals and greater feeding tolerances.\(^4\)
- Maintaining milk temperature until ready to feed.
- In facilities with insta-heat water systems, water is often heated to 87 °C, well above the threshold of destroying beneficial components of human milk.\(^5\)

Did You Know?
Breast milk contains antibodies and immune system boosters which protect infants from NEC (necrotizing enterocolitis), diarrhea, ear and respiratory infections, skin allergies and more.\(^7,8,9,10\)

We’re up to the challenge.

Medela is committed to providing evidence-based solutions to support your efforts and improve outcomes in the NICU. Our solutions to some of the most common challenges in warming and handling human milk is the result of extensive research and conversations with you, our partners.
## Which Warmer When?

<table>
<thead>
<tr>
<th>Feeding Method</th>
<th>Thaw</th>
<th>Warm</th>
<th>Feed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enteral Pump</td>
<td><img src="image1.png" alt="Image" /></td>
<td><img src="image2.png" alt="Image" /></td>
<td><img src="image3.png" alt="Image" /></td>
</tr>
<tr>
<td>Enteral Gravity</td>
<td><img src="image4.png" alt="Image" /></td>
<td><img src="image5.png" alt="Image" /></td>
<td>N/A</td>
</tr>
<tr>
<td>Transition Oral/EF</td>
<td><img src="image6.png" alt="Image" /></td>
<td><img src="image7.png" alt="Image" /></td>
<td><img src="image8.png" alt="Image" /></td>
</tr>
<tr>
<td>Full Oral</td>
<td><img src="image9.png" alt="Image" /></td>
<td><img src="image10.png" alt="Image" /></td>
<td>N/A</td>
</tr>
</tbody>
</table>

NICU Feeding Progression
To standardize best practices for warming and milk handling, Medela offers the Waterless Milk Warmer.

Designed to help protect the anti-infective properties of human milk, eliminate pathogens introduced through water-warming and provide consistency in warming temperatures. The Waterless Milk Warmer safely, conveniently, and effectively warms milk to a temperature consistent with expressed human milk (temperatures may vary depending on actual container used).

**Features & Benefits:**

- Provides an affordable bedside unit that utilizes dry heat, eliminating risk of water contamination during thawing and warming feeds.

- Easy to use, audible and visual cues clearly indicate when warming cycle is complete.

- Warms < 120 mL in 12 minutes and thaws < 120 mL in 22 minutes or less.

- Separate syringe port, positions feeds for effective warming.
• Keeps milk warm for 30 minutes, providing easy integration into nursing workflow.

• Disposable, recyclable inserts minimize cross contamination, contain spills and position containers for effective warming.*

• Accommodates most human milk containers and 1 mL to 60 mL syringes used in NICU’s. Single well unit can minimize risk of milk mix-ups.

• Optional IV pole adapter converts warmer to portable unit for placement optimization and workspace efficiency.

Product Specifications:

<table>
<thead>
<tr>
<th>Item</th>
<th>Article#</th>
<th>Quantity Per Unit</th>
<th>Unit Dimensions (inches)</th>
<th>Unit Weight (lbs)</th>
<th>Qty Per Case Pack/Carton</th>
<th>Shipping Carton Weight (lbs)</th>
<th>Shipping Carton Dimensions (inches)</th>
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</thead>
<tbody>
<tr>
<td>Waterless Milk Warmer</td>
<td>87115</td>
<td>1</td>
<td>9 x 7 x 9 1/4</td>
<td>5.8</td>
<td>1</td>
<td>5.9</td>
<td>12 x 9 x 12 1/2</td>
</tr>
<tr>
<td>Disposable Inserts</td>
<td>87116-100</td>
<td>1</td>
<td>6 1/2 x 5 7/16 x 11 13/32</td>
<td>1.5</td>
<td>100 units</td>
<td>6.9</td>
<td>13 3/8 x 11 1/4 x 11 3/16</td>
</tr>
<tr>
<td>(Case Quantity Only)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IV Pole Adaptor</td>
<td>5007005</td>
<td>1</td>
<td>3 x 4 x 6</td>
<td>0.93</td>
<td>1</td>
<td>1.1</td>
<td>6 1/2 x 4 1/2 x 5 3/8</td>
</tr>
</tbody>
</table>

*Disposable inserts are a single-patient item for up to 12 hours of use.

**Target warming temperature of 30-38 °C. Temperatures may vary depending on actual container used. Device is optimized for syringes and Medela sterile 80 mL breastmilk containers.
Waterless, in-line enteral warming protects and supports neonatal nutritional needs. The Guardian Warmer can help.

Current enteral warming methods pre-warm an enteral feed and allow it to cool during syringe pump delivery. With the Medela Guardian Warmer, feeds are warmed during the delivery process to minimize cooling of the feed. An optimal temperature feed is delivered directly to the infant, providing the results you expect from an advanced neonatal enteral warming product.

Features & Benefits:

- Enteral feeds delivered in the optimal nutrient temperature range
- Limits rapid-cooling during syringe pump feeds
- Warms cold or room-temperature feedings for infant use
- Saves nursing time by eliminating pre-warming of syringe pump feeds
- Waterless warming
- Three-year manufacturer’s warranty
The extension set tubing sits firmly in a heated metal track to continuously warm the feed as it passes through the tubing.

An indicator light illuminates when the lid is closed, powered on and warming.

Use the suction cup accessory for hanging, or place the warmer on a flat surface inside the isolette.

**Product Specifications:**

<table>
<thead>
<tr>
<th>Item</th>
<th>Article#</th>
<th>Quantity Per Unit</th>
<th>Unit Dimensions (inches)</th>
<th>Unit Weight (ounces)</th>
<th>Control Box Dimensions (inches)</th>
<th>Control Box Weight (ounces)</th>
<th>Cord Lengths:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medela Guardian Warmer - with hooks</td>
<td>NGW2000</td>
<td>1</td>
<td>4.7 x 3.7 x .75</td>
<td>4.6</td>
<td>5.1 x 4.7 x 2.2</td>
<td>13.4</td>
<td>6 feet from plug to control box/8 feet from control box to Guardian</td>
</tr>
<tr>
<td>(includes hooks to hang controller box onto IV pole)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Guardian Warmer - Mom Clip</td>
<td>NGWCLIP</td>
<td>25</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

**Temperature Specifications:**

Average output temperatures: 91°F - 101°F** at 0.5 mL - 2.0 mL per minute

Safety features: Automatic temperature control with temperature variance sensor

Warmer outer surface temperature: 95°F - 102°F (top of device)

*Based on average room temperature of 72°F

**From distal end of extension set
References:

3. Outbreak of Pseudomonas aeruginosa infections in a neonatal care unit associated with feeding bottle heaters. Jesus Molina-Cabrillana PMDa et al., American Journal of Infection Control 41 (2013) e7-e9

To order or for more information, contact your Medela Sales Consultant.