



## Ameda Penguin Nutritional Warner & Therma-Liners

### Ameda Penguin is the **ONLY** nutritional warmer that:

- Warms to physiological temperature for proper nutrition absorption based on technology.
- Operates quietly below the AAP noise level recommendations of <45dB during day time and <35dB during night in NICU for proper neurodevelopment.<sup>1</sup>
- Provides a more even and uniform warming of feedings from all directions. Offers minimal temperature difference within the feeding container.
- Protects breast milk in a safe, closed-system, patented Therma-Liner. Water does not ever come in contact with milk.
- Offers a unique mixing feature that provides continuous gentle mixing throughout warming as recommended by WHO.<sup>2</sup>
- Leverages thermodynamic capabilities of water as water is a superior conductor of heat than hot air.

### Therma-Liners offer:

- A closed-system, double-jacketed pouch where the feedings are held during the warming cycle, providing protection from direct exposure to heat.
- A patented “bag-in-bag” design that isolates feedings in an inner pocket away from water for safe warming.
- Compatibility with all sizes and types of feeding containers
- Label space for shift, staff and patient information reducing chances of errors
- Disposable and 100% recyclable

### Why is Ameda Penguin Nutritional Warmer’s Therma-Liner™ “Shift-Use” (Maximum 12 hrs.)?

All our quality evaluation, product testing and user evaluations have been conducted based on a 12-hour shift system, which is approximately 6-10 feeds per 12-hour period. Although we do not anticipate any negative impact from prolonged use beyond recommendation, any such off-label use is up to the institution’s policy and discretion.

Even though the Ameda Penguin Nutritional Warmer offers the safest method of warming breast milk, we always recommend erring on the side of caution, especially in a NICU environment.

### Other ease-of-use reasons include:

- Nurses normally share many instruments and other items between shifts
- Using a new Therma-Liner™ at shift change helps reduce potential human errors and minimize mix-ups
- The Penguin® Therma-Liners™ are offered at a very economical cost to assist hospitals with cost-effective infection control, minimize potential errors and promote ease-of-care

### Sterile vs tap water use:

Ameda Penguin leverages thermal transfer properties of water – the most efficient and controlled method for heat exchange because water is a superior conductor of heat than dry air. Therma-Liner™ bags features a patented design to achieve a protective closed-system. The proprietary “bag-in-bag” design isolates the milk container from an outer layer that contains water for a true 360° safe warming. The water in the outer compartment is designed to never come in contact with the feeding container housed in the inner compartment of the bag.

Per our quality evaluation and product testing, it is very safe to use room temperature tap water to warm breast milk using the Penguin Nutritional Warming System. It is up to the institution’s policy and discretion to exercise any additional precautionary methods.

### Reference:

<sup>1</sup>Noise: A Hazard for the Fetus and Newborn, Committee on Environmental Health, Pediatrics 1997;100:724, DOI: 10.1542/peds.100.4.724 | <sup>2</sup>Bransburg-Zabary S, Virozub A, Mimouni FB (2015) Human Milk Warming Temperatures Using a Simulation of Currently Available Storage and Warming Methods. PLoS ONE 10(6): e0128806. <https://doi.org/10.1371/journal.pone.0128806>