A total commitment to enteral nutrition.
The pump should be stored away from excessive temperatures or humidity. When pump will not be used for an extended period of time, keep it plugged in to ensure maximum battery capacity.

**LIMITED WARRANTY**

Ross Products Division, Abbott Laboratories warrants the FLEXIFLO Companion Infant Nutrition Pump against defects in material and workmanship for a period of one year from date of delivery. The warranty extends only to the original purchaser and does not extend to any product or part thereof that has been subjected to accident, alteration, abuse, misuse, repair by one other than Ross authorized representatives, or that has not been operated and maintained in the manner prescribed in the Operating Manual. In case the time of pump failure was being used with pump sets or containers other than Ross pump sets and containers.

In no event shall Ross be liable for any incidental, indirect, or consequential damages in connection with the purchase or use of the pump.

Ross reserves the right to repair or replace (at its option) any pump that fails to meet the foregoing warranty.

**THE WARRANTIES HEREIN ARE IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING WITHOUT LIMITATION, THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.**

**SERVICE**

This FLEXIFLO pump is designed to be highly reliable. As with any electronic/mechanical device, however, minor problems may occur. For assistance, contact the Ross Device Call Center.

**PUMP CHARACTERISTICS**

Uniquely designed and constructed, the FLEXIFLO Companion Infant Nutrition Pump is a volumetric infusion pump that uses a specially designed administration set, including a cassette with bellows to deliver measured amounts of enteral formula. The pump will operate on AC power or battery. The fluid delivery system and safety alarms function when the pump is used by an ambulatory patient or is mounted on an IV pole. The volume monitoring device does not depend on drop counting, so the pump is more versatile in adapting to patient activity.

The pump is microprocessor computer-controlled, which provides accurate delivery rates, easy-to-read displays, and simple controls. The Companion Pump comes with a charger unit that connects to any IV pole and carries the permanently attached power cord.

**PRECAUTIONS:** This pump is designed to deliver only a liquid enteral feeding product (parenteral liquid products, infant formula, or reconstituted powdered product) that has been thoroughly mixed into solution.

**The Companion Pump offers these features:**

- **Alarm:**
  - Low battery
  - Empty container
  - Tank underrun
  - Missing or improperly loaded cassette

- **Accuracy:** ± 10% of 5 to 200 mL/hr. See page 12.
- **Battery operation:** 150 mL/hr when fully charged.
- **Fluid flow and fluid monitoring independent of pump position** (no drop counting).
- **Adjustable alarm volume for low or high setting.
- **Flow rate selection of 5 to 300 mL/hr in 1-mL/hr increments.
- **VOLUME/FED accumulation display.
- **Automatic retention of values.
- **User-friendly operating controls.
- **Small and lightweight.
- **Simple setup (pump and cassette loading).
- **Compact design for easy viewing in a darkened room.
- **Self-test capability.

**PEDIATRIC USE**

Do not use this pump for feeding preemies or infants in a neonatal intensive care unit (NICU). All enteral pumps have the potential to bolus feed small amounts, which is an important consideration in feeding very premature patients. The FLEXIFLO Companion Pump should normally be used only for children 17 months of age or older, and only if the rate of feeding is 25 mL/hr or greater. In these cases, small-volume containers should be used that contain a volume of product no more than five times the hourly feeding rate.

**PRECAUTIONS:**

- **Confirm proper placement:** Ensure that the pump is properly placed and that all connections are secure.
- **Check connections:** Ensure that all connections are properly secured and that the pump is stable.
- **Stable platform:** Ensure that the pump is on a stable platform or table.
- **Secure connections:** Ensure that all connections are properly secured and that the pump is stable.
- **Proper location:** Ensure that the pump is in a location that is not exposed to direct sunlight or heat.
- **Proper function:** Ensure that the pump is functioning properly and that all connections are secure.
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Checking Pump Accuracy

Hard head height and viscosity are two variables that can affect flow rate. To check flow rate, use the following procedure:

1. Fill the container and set-up pump according to instructions. Start the pump and let it run for 15 minutes. Then run product into graduated cylinder for 1 hour and compare to rate set on pump. If flow rate is incorrect, try a new pump set and repeat procedure.

2. If the pump fails the accuracy test consistently, return it for service.

Refer to SPECIFICATIONS, page 15, for accuracy rate.

Battery Operation

Battery power can be used with or without charger attached. If battery power is in use, BATTERY is visually displayed.
INSTRUCTIONS FOR USE

1. Attach to, or place on, appropriate feeding stand. If pump is used, be sure pump is properly seated in charger, and then clamp charger to pole.

2. Plug in cord if AC power is available.

WARNING: When LOW BATTERY message appears, pump will run for approximately 30 minutes before shutting down completely. However, if battery is not getting the proper charge or no charge from the charger, or if pump is running 30 minutes after LOW BATTERY alarm, pump will then shut down while running on AC or DC power. When fully charged, pump can operate on battery power for 8 hours. A new pump should be plugged into an AC outlet for 17-15 hours before initial use on battery power to assure full battery charge.

3. Fill feeding container with enteral nutrition product. If an 8 oz glass bottle is used, place bottle in provided suspension bag. Attach Companion Pump. Set securely onto filled enteral nutrition container, if it is not preassembled.

4. Suspend container to side of or behind pump so that sink chamber is at or above level of pump.

Audio Alarms

Intermittent audio alarms are always accompanied by a visual message on display panel indicating cause of alarm. The visual display LOW ALARM indicates alarm volume level is low. If louder alarm volume is desired, select HI on volume switch, lower right front corner of pump face.

Visual Display

<table>
<thead>
<tr>
<th>OCCL</th>
<th>Flow has stopped</th>
</tr>
</thead>
<tbody>
<tr>
<td>EMPT</td>
<td>Empty feeding container or missing or improperly sealed cassette</td>
</tr>
<tr>
<td>SELECT RUN</td>
<td>Pump is on, but control dial is not set to RUN. Pump was left in setting other than POWER OFF or RUN for longer than 5 minutes.</td>
</tr>
<tr>
<td>RESET RATE</td>
<td>Flow rate selected is less than 5 ml/hr</td>
</tr>
<tr>
<td>LOW BATTERY</td>
<td>Approximately 40 minutes of battery power remain</td>
</tr>
</tbody>
</table>

Action

- Turn dial to HOLD. Check fluid container, pump set tubing and patients indwelling feeding tube for flow restriction.
- Turn dial to HOLD. If container is empty, provide new feeding or turn dial to POWER OFF if no additional feeding is desired. Assure that cassette is present and properly seated.
- If pumping is desired, turn dial to RUN.
- If additional time is desired in HOLD, turn dial briefly to RUN, then to HOLD. Alarm will sound again in 5 minutes.
- If feeding is completed, turn dial to POWER OFF.

RESET: In case microprocessor or motor malfunctions, pump will stop pumping action, all visual displays will cease, and a continuous audio alarm will be sounded. Continuous alarm will cease even if pump dial is turned to HOLD. TURN PUMP DIAL TO POWER OFF SERVICING IS REQUIRED.