SENTINEL®
ENTERAL FEEDING PUMP
USER TRAINING PACKET

ALCOR® ENTERAL FEEDING SYSTEMS
from AMSINO

AMSINO
Advancing Healthcare Worldwide®
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<td>X.</td>
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</table>

**I. Sentinel® Enteral Feeding Pump In-service Video**

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**II. Sentinel Enteral Feeding Pump and Sets – Safety Features & Benefits** ................................................................. 4

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**V. Pump Programming**

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**X. Support Materials**

- ALCOR®/AMSure® Enteral Feeding Systems sell sheet
- Sentinel Enteral Feeding Pump Operating Manual
- ALCOR AMSure Enteral sets IFUs
- Set Spike/Container Compatibility Guide
- Enteral Set Cross Reference
SECTION I: *SENTEL® ENTERAL FEEDING PUMP IN-SERVICE VIDEO (DVD)*
SECTION II: **SENTINEL® PUMP AND SETS KEY FEATURES & BENEFITS**

**Pump**
- Large, dual display shows infusion rate and volume delivered simultaneously
- Patented drop detection technology minimizes nuisance alarms
- Advanced memory keeps settings until manually erased
- Clear audible & visual alarms
- Easy to use
  1. Press ON to turn on pump
  2. UP or DOWN to set infusion rate
  3. Press RUN to begin feeding

**Sets**
- New ENFit connector does not allow connectivity with any non-enteral connectors
- Purple anti-IV spikes compatible with Abbott & Nestle safety ports*
- IV warning tag
- Latex-free
* See Set Spike/Container Compatibility Guide (at back of manual)

**ALCOR® AMSure® Enteral Feeding Pump Sets**

<table>
<thead>
<tr>
<th>ENF1004K</th>
<th>Spike Set with ENFit connector &amp; transition connector</th>
<th>ENF1200K</th>
<th>1200 mL bag pump set with ENFit connector &amp; transition connector</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENF500K</td>
<td>500 mL bag pump set with ENFit connector &amp; transition connector</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Also available:**
- ENFit Gravity Sets
- Full line of irrigation syringes, kits & trays – flat top and thumb ring piston
SECTION III: **PUMP COMPONENTS**

Front

- DROP SENSOR
- TUBING HOOK
- SET LOCATOR
- SHELF
- INFUSION RATE DISPLAY
- VOLUME INFUSED DISPLAY
- KEYPAD
- VISUAL INDICATORS
- ROTOR

Back

- HANDLE
- POLE CLAMP
- CAP HOLDER
- CORD SPOOL
SECTION IV: SET INSTALLATION

1. Close roller clamp and insert and seat drip chamber.
2. Open roller clamp and expel air from tubing.
3. Close roller clamp.
4. Pull tubing under rotor.
5. Wrap tubing behind tubing retainer.
6. Open roller clamp.
7. Seat tube adapter into locator shelf.
Refer to Operating Manual for detailed instructions

See also Programming Directions on the pump
**Set Infusion Rate**  
(Left Display)

1. Press ON. Alarm will sound. Right display will flash.
2. Press UP or DOWN until desired infusion rate is displayed on left.
3. Press RUN/STOP to begin feeding.

**Set Dose Limit**  
(Right Display)

1. Press RUN/STOP. Right display will flash.
2. Press SET. Dose Limit will display on left.
3. Press UP or DOWN until desired dose limit is displayed on right.
4. Wait 5 seconds - Press RUN/STOP to resume feeding.

**Adjust Infusion Rate**  
(Left Display)

1. Press RUN/STOP. Right display will flash.
2. Press UP or DOWN until desired infusion rate is displayed on left.
3. Press RUN/STOP to resume feeding.

**Adjust Dose Limit**  
(Right Display)

1. Press RUN/STOP. Right display will flash.
2. Press SET. Dose Limit will display on left.
3. Press UP or DOWN until desired dose limit is displayed on right.
4. Wait 5 seconds - Press RUN/STOP to resume feeding.

**Check Dose Limit**  
(Right Display)

1. Press RUN/STOP. Right display will flash.
2. Press SET. Dose Limit will display on right.
3. Wait 5 seconds - Press RUN/STOP to resume feeding.

**Check Accumulated Volume Delivered**  
(Right Display)

1. Press RUN/STOP. Right display will flash.
2. Press DOSE CHECK. Tot will display on left. Accumulated volume delivered will display on right.
3. Wait 5 seconds - Press RUN/STOP to resume feeding.
<table>
<thead>
<tr>
<th><strong>Reset Volume Delivered (current dose) to Zero</strong></th>
<th><strong>Reset Volume Delivered (current dose) &amp; Dose Limit to Zero &amp; Infusion Rate to 5</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="RUN STOP" /> 1. Press RUN/STOP. Right display will flash.</td>
<td><img src="image" alt="RUN STOP" /> 1. Press RUN/STOP. Right display will flash.</td>
</tr>
<tr>
<td><img src="image" alt="CLEAR" /> 2. Press CLEAR. Hold for 3 beeps. Right display will reset to zero.</td>
<td><img src="image" alt="CLEAR" /> 2. Press CLEAR. Hold for 7 beeps. Left display will reset to 5, right display will reset to zero.</td>
</tr>
<tr>
<td><img src="image" alt="RUN STOP" /> 3. Press RUN/STOP to resume feeding.</td>
<td><img src="image" alt="RUN STOP" /> 3. Press RUN/STOP to resume feeding.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Reset Accumulated Volume Delivered to Zero</strong></th>
<th><strong>Change Display Brightness</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="RUN STOP" /> 1. Press RUN/STOP. Right display will flash.</td>
<td><img src="image" alt="RUN STOP" /> 1. Press RUN/STOP. Right display will flash.</td>
</tr>
<tr>
<td><img src="image" alt="Dose Check" /> 2. Press DOSE CHECK. tot will display on left. Accumulated volume delivered will display on right.</td>
<td><strong>SIMULTANEOUSLY PRESS</strong></td>
</tr>
<tr>
<td><img src="image" alt="CLEAR" /> 3. Press CLEAR. Hold for 3 beeps. Right display will reset to zero.</td>
<td><strong>UP</strong> AND <strong>SET</strong></td>
</tr>
<tr>
<td><img src="image" alt="RUN STOP" /> 4. Wait 5 seconds - Press RUN/STOP to resume feeding.</td>
<td>Hold for 5 seconds</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Change Alarm Volume</strong></th>
<th><strong>Lock/Unlock Keypad</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="RUN STOP" /> 1. Press RUN/STOP. Right display will flash.</td>
<td><strong>WHILE PUMP IS RUNNING</strong></td>
</tr>
<tr>
<td><strong>SIMULTANEOUSLY PRESS</strong></td>
<td><strong>SIMULTANEOUSLY PRESS</strong></td>
</tr>
<tr>
<td><img src="image" alt="DOWN" /> AND <strong>SET</strong></td>
<td><strong>DOWN</strong> AND <strong>UP</strong></td>
</tr>
<tr>
<td><strong>Hold for 5 seconds</strong></td>
<td>Hold for 5 seconds</td>
</tr>
</tbody>
</table>
ALARMS & INDICATORS

OCC/EMP  → Pathway occluded
         → Container empty
         → Drip chamber improperly installed, or
         → Pump inactive for over 2½ minutes

DOSE COMP  → Dose limit has been reached.
               (4 beeps, flashing indicator, 2½ minute repeats)

FLO FAST  → Tubing not on rotor, or
            Drop sensor blocked over 6 seconds.
            (Loud 3 tone beep)

LOW BAT  → Low battery. Plug into AC outlet

To Reset Alarms

1. Press RUN/STOP
2. Correct alarm condition
3. Press RUN/STOP to resume feeding
<table>
<thead>
<tr>
<th>SITUATION</th>
<th>POSSIBLE CAUSE</th>
<th>SOLUTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Battery light flashes. After 15 minutes, pump stops, displays flash, &amp; alarm beeps.</td>
<td>Battery charge level is low.</td>
<td>Plug cord into AC outlet for 10 hours for full recharge.</td>
</tr>
<tr>
<td>OCC/EMP alarm activates. Pump stops, alarm sounds, displays flash.</td>
<td>1. Container is empty.</td>
<td>1. Replace or refill.</td>
</tr>
<tr>
<td></td>
<td>2. Occlusion is restricting flow.</td>
<td>2. Find point of occlusion: kinked tubing or closed roller clamp in pump set; feeding tube; container.</td>
</tr>
<tr>
<td></td>
<td>3. Drip chamber not properly placed in locator shelf; drops not being sensed</td>
<td>3. Place properly.</td>
</tr>
<tr>
<td></td>
<td>4. Pump is on standby (STOP) more than 2 ½ minutes.</td>
<td>4. Press RUN/STOP or OFF</td>
</tr>
<tr>
<td>Alarm sounds when attempting rate change. Pump does not stop.</td>
<td>UP, DOWN, or CLEAR will only work when pump has been stopped.</td>
<td>Press RUN/STOP once. Change rate. Press RUN/STOP again to restart.</td>
</tr>
<tr>
<td>DOSE COMP alarm sounds. Displays flash.</td>
<td>Pump has delivered set dose.</td>
<td>Increase dose limit. Press RUN/STOP. Pump will run until dose is complete again.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>If feeding has been completed, press RUN/STOP then OFF. If feeding incomplete, set the dose limit to zero.</td>
</tr>
<tr>
<td>FLO FASt alarm sounds. Displays flash.</td>
<td>1. Pump set is dislodged. Tubing is off the rotor.</td>
<td>1. Stop excess flow. Check set placement on rotor. Restart pump.</td>
</tr>
<tr>
<td></td>
<td>2. Drop sensor blocked due to formula on drip chamber walls.</td>
<td>2. Clear drip chamber or replace pump set.</td>
</tr>
<tr>
<td></td>
<td>3. Drop sensor blocked due to overfilled drip chamber.</td>
<td>3. Invert and reinstall drip chamber.</td>
</tr>
</tbody>
</table>
SECTION VII: **PROFICIENCY TEST**

**SENTINEL® ENTERAL FEEDING PUMP PROFICIENCY TEST**

NAME ___________________________________________ DATE __________

FACILITY ____________________________________________________________________________

CITY, STATE __________________________________________________________________________

**PART A: DEMONSTRATE THESE PUMP/SET SETUP STEPS**

<table>
<thead>
<tr>
<th>Task</th>
<th>Satisfactory Completion</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Load the set into the pump and prime the line</td>
<td>______________________</td>
</tr>
<tr>
<td>2. Set the infusion rate at 50 mL/hour and the dose at 450 mL</td>
<td>______________________</td>
</tr>
<tr>
<td>3. View total accumulated volume then reset it to 0</td>
<td>______________________</td>
</tr>
<tr>
<td>4. Change infusion rate to 75 mL/hour and the dose to 750 mL</td>
<td>______________________</td>
</tr>
<tr>
<td>5. Clear the volume delivered and dose limit, and reset infusion rate to 5</td>
<td>______________________</td>
</tr>
</tbody>
</table>

**PART B: ANSWER THESE QUESTIONS**

1. Why do the ALCOR® AMSure® Enteral Feeding Sets have ENFit connectors?

____________________________________________________________________________________

2. Can a non-ALCOR AMSure set be used on the pump? [Circle either YES or NO]

3. Name 3 things that the “OCC/EMP” alarm could indicate.

____________________________________________________________________________________

____________________________________________________________________________________

4. What is the alarm that signals the dose limit has been reached?

____________________________________________________________________________________

5. What steps can you take to resolve an excess flow (“FLO FAST” alarm), if it occurs?

____________________________________________________________________________________

____________________________________________________________________________________

**Trainer/Facility Manager Signature of Successful Completion**

____________________________________________________________________________________
SECTION VIII: FREQUENTLY ASKED QUESTIONS

1. How can I clean the Sentinel® Enteral Feeding Pump?
   Clean the pump housing with warm soapy water and a damp cloth or sponge. Clean the drop sensor parts with soft cotton swabs dipped in isopropyl alcohol. Do not use cleaners that will degrade polycarbonate.

2. What are the minimum and maximum flow rates?
   5 – 295 mL/hr in 1 mL increments.

3. What is the dose accuracy?
   +/- 10% of selected flow rate with ALCOR® AMSure® sets.

4. What are the dimensions of the pump?
   H: 19 cm (7.48 inches)
   W: 23 cm (9.06 inches)
   D: 13 cm (5.12 inches)

5. What is the weight of the pump?
   2.45 kg (5.4 lbs)

6. Can I use a non- ALCOR AMSure set on the pump?
   No. To assure patient safety and accuracy of the pump delivery only a validated ALCOR AMSure set can be used on the Sentinel Enteral Feeding pump.

7. Does the pump retain its memory in a power failure or when the unit is turned off?
   Yes

8. Can I infuse water with the Sentinel pump?
   Yes. The Sentinel Enteral Feeding Pump is designed to work with all liquid nutrition formulas and water. It has a patented system to recognize fluid drops and to minimize false alarms caused by soiled drip chambers.

9. What is the battery life of the pump?
   6 hours minimum at 125 mL/hr

10. Is there a pause button on the pump?
    To pause the pump, simply press RUN/STOP button and the pump will notify you every 2 ½ minutes that it is not running.

11. Why do the ALCOR AMSure Enteral Feeding Sets have ENFit connectors?
    This is designed to help prevent the set from inadvertently being connected to non-entalal connectors.

12. When a programmed dose limit is reached, how many beeps does the pump alarm signal?
    The alarm will signal 4 beeps and the indicator will flash “DOSE COMP. This repeats every 2½ minutes.
SECTION IX: **KEY CONTACTS**

Orders/Customer Service ........................................... Amsino (800) 632-6746
Sets Technical Information ........................................ Amsino (800) 632-6746
Pump Technical Information ................................. ALCOR Scientific (800) 495-5270
Warranty/Repair ................................................. ALCOR Scientific (800) 495-5270
Sentinel® Enteral Feeding Pump Quick Reference
Refer to Operating Manual for detailed instructions
See also Programming Directions on the pump

Set Infusion Rate
(Left Display)

1. ON
2. DOWN UP
3. RUN STOP

Set Dose Limit
(Right Display)

1. RUN STOP
2. SET
3. DOWN UP
4. RUN STOP

Adjust Infusion Rate
(Left Display)

1. RUN STOP
2. DOWN UP
3. RUN STOP

Adjust Dose Limit
(Right Display)

1. RUN STOP
2. SET
3. DOWN UP
4. RUN STOP

Check Dose Limit
(Right Display)

1. RUN STOP
2. SET
3. RUN STOP

Check Accumulated Volume Delivered (Right Display)

1. RUN STOP
2. Dose Check
3. RUN STOP
**Sentinel® Enteral Feeding Pump Quick Reference**

Refer to Operating Manual for detailed instructions
See also Programming Directions on the pump

<table>
<thead>
<tr>
<th><strong>Reset Volume Delivered</strong>&lt;br&gt; (current dose) to Zero</th>
<th><strong>Reset Volume Delivered</strong>&lt;br&gt; (current dose) &amp; Dose Limit to Zero &amp; Infusion Rate to 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>![1](RUN STOP) <img src="CLEAR" alt="2" /> ![3](RUN STOP) ![4](RUN STOP)</td>
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</tr>
<tr>
<td>1. <strong>RUN STOP</strong>&lt;br&gt; <strong>Hold for 3 beeps</strong></td>
<td>1. <strong>RUN STOP</strong>&lt;br&gt; <strong>Hold for 7 beeps</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Reset Accumulated Volume Delivered to Zero</strong></th>
<th><strong>Alarms &amp; Indicators</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>![1](RUN STOP) ![2](Dose Check) <img src="CLEAR" alt="3" /> ![4](RUN STOP)</td>
<td><strong>OCC/EMP</strong></td>
</tr>
</tbody>
</table>
| 1. **RUN STOP**<br> **Hold for 3 beeps** | → Pathway occluded
→ Container empty
→ Drip chamber improperly installed, or
→ Pump inactive for over 2½ minutes |

<table>
<thead>
<tr>
<th><strong>Reset Alarms</strong></th>
<th><strong>DOSE COMP</strong></th>
</tr>
</thead>
</table>
| ![1](RUN STOP) ![2](CLEAR) ![3](RUN STOP) | → Dose limit has been reached.
(4 beeps, flashing indicator,
2 ½ minute repeats) |

<table>
<thead>
<tr>
<th><strong>Correct alarm condition</strong></th>
<th><strong>FLO FAST</strong></th>
</tr>
</thead>
</table>
| ![1](RUN STOP) ![2](CLEAR) ![3](RUN STOP) | → Tubing not on rotor, or
→ Drop sensor blocked over 6 seconds.
(Loud 3 tone beep) |

<table>
<thead>
<tr>
<th>![1](RUN STOP) <img src="CLEAR" alt="2" /> ![3](RUN STOP)</th>
<th><strong>LOW BAT</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>![1](RUN STOP) <img src="CLEAR" alt="2" /> ![3](RUN STOP)</td>
<td>→ Low battery. Plug into AC outlet</td>
</tr>
</tbody>
</table>