Masimo LiDCO™ Hemodynamic Monitoring System

The LiDCO Hemodynamic Monitoring System provides beat-to-beat advanced hemodynamic monitoring to support informed decision making in high-acuity care areas such as the Operating Room.

- Uses existing arterial line and blood pressure transducer to monitor hemodynamic parameters
- PulseCO™ algorithm converts beat-to-beat blood pressure into its constituent parts, flow and resistance, scaled to each patient’s age, height, and weight
- Proven to be reliable on patients on vasoactive drugs

1. [Masimo]
Key Features

- **Trend Notifications**: Alerts user to significant hemodynamic changes (>10%) to encourage an immediate response to patient deterioration.
- **Internal Battery**: For portability around the bed space and seamless transition to different clinical areas.
- **Day/Night Mode**: Switch between day and night mode to best suit your environment.
- **Guided Protocols**: To help you assess fluid responsiveness (Fluid Challenge, Passive Leg Raise and New Ventilator Tests).
- **Education**: On-screen educational screens for calibration.
- **Preload Response**: Displays volume status indications for Pulse Pressure Variation (PPV%) and Stroke Volume Variation (SVV%).

**Short-term Trend**
- 2-minute window for greater focus on the immediate response to interventions.

**Long-term Trend**
- Facilitates interpretation of trends from the start of monitoring, which can be customized to show only the parameters you need.

**Event Response**
- Allows you to mark and monitor specific events, like a fluid challenge.

**Internal Battery**
- For portability around the bed space and seamless transition to different clinical areas.

**Easy Setup and Operation**

The LiDCO Monitor is designed for efficient setup and simple operation, with an intuitive, easy-to-interpret display—facilitating effective hemodynamic management even on those patients who are hemodynamically unstable and require fluid and drug support.

- Plug-and-play operations using the invasive blood pressure output port on the vital signs monitor.
- Monitor using the existing blood pressure transducer, eliminating the need for an additional disposable.
Clinical Evidence

Reductions in Postoperative Complications and Costs

> In a randomized, controlled trial of 743 patients undergoing major abdominal surgery, researchers found hemodynamic optimization with LiDCO led to a 20% reduction in postoperative complications and, as a result, patients monitored with LiDCO were on average $530 less expensive to treat than control patients who were not monitored.\(^2\)

Reductions in 30-Day and 180-Day Mortality

> In a study comparing the outcomes of 600 emergency laparotomy patients, researchers found that, following the implementation of a program including LiDCO technology, there was a significant decrease in mortality at 30 days (from 21.8 to 15.5%) and 180 days (from 29.5 to 22.2%).\(^3\)

![30-Day Mortality Rate](image1)

![180-Day Mortality Rate](image2)

Parameters and Indicators

The beat-to-beat parameters displayed by the LiDCO monitor provide immediate feedback on a patient’s fluid and hemodynamic status.

The LiDCO monitor provides the following parameters:

> **Stroke Volume (SV):** The amount of blood pumped by the left ventricle of the heart in one contraction

> **Cardiac Output (CO):** The amount of blood the heart pumps through the circulatory system in a minute, calculated by multiplying the stroke volume by the patient’s heart rate

> **Systemic Vascular Resistance (SVR):** Reflects the resistance to flow and is calculated as the quotient of pressure and cardiac output

> **Oxygen Delivery (DO\(_2\)):** The amount of oxygen delivered to the tissues, calculated as the product of cardiac output and oxygen concentration

> **Stroke Volume Variation (SVV):** A dynamic variable that can predict fluid responsiveness in mechanically ventilated patients, SVV is the variation in stroke volume across at least one respiratory cycle

> **Pulse Pressure Variation (PPV):** Another dynamic variable that can predict fluid responsiveness in mechanically ventilated patients, PPV is the variation in arterial pulse pressure across at least one respiratory cycle
Monitor Specifications

<table>
<thead>
<tr>
<th>PHYSICAL CHARACTERISTICS</th>
<th>ORDERING INFORMATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight ..................</td>
<td>LiDCO Hemodynamic Monitor Kit .................................................. PN 99026</td>
</tr>
<tr>
<td>Dimensions ................</td>
<td>................................................................. 406 x 274 x 61 mm</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ENVIRONMENTAL</th>
<th>PARAMETERS SUPPORTED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating Temperature ......................................</td>
<td>Stroke Volume (SV)</td>
</tr>
<tr>
<td>Operating Humidity .........................................</td>
<td>Cardiac Output (CO)</td>
</tr>
<tr>
<td>Operating Atmospheric Pressure ..........................</td>
<td>Systemic Vascular Resistance (SVR)</td>
</tr>
<tr>
<td>........................................................................</td>
<td>Oxygen Delivery (DO₂)</td>
</tr>
<tr>
<td>........................................................................</td>
<td>Stroke Volume Variation (SVV)</td>
</tr>
<tr>
<td>........................................................................</td>
<td>Pulse Pressure Variation (PPV)</td>
</tr>
</tbody>
</table>

PHYSICAL CHARACTERISTICS

- Weight: 4.7 kg
- Dimensions: 406 x 274 x 61 mm

ENVIRONMENTAL

- Operating Temperature: 50–104°F (10–40°C)
- Operating Humidity: 30–75% RH non-condensing
- Operating Atmospheric Pressure: 700–1060 mbar

ORDERING INFORMATION

- LiDCO Hemodynamic Monitor Kit .................................................. PN 99026

PARAMETERS SUPPORTED

- Stroke Volume (SV)
- Cardiac Output (CO)
- Systemic Vascular Resistance (SVR)
- Oxygen Delivery (DO₂)
- Stroke Volume Variation (SVV)
- Pulse Pressure Variation (PPV)

Caution: Federal (USA) law restricts this device to sale by or on the order of a physician. See instructions for use for full prescribing information, including indications, contraindications, warnings, and precautions.