iVAPS with optional AE

Our latest set of clinical enhancements includes iVAPS™ (intelligent Volume-Assured Pressure Support) with optional AutoEPAP™ (AE). iVAPS targets a patient’s alveolar ventilation while AE maintains a patient’s upper airway at a comfortable pressure. That’s why Astral™, already renowned for its portability and intuitive color touch screen, now features a suite of intelligent technologies that deliver adaptive ventilation to suit each patient’s individual needs.

The smarter choice

• Unlike other volume assurance modes, iVAPS is designed to maintain patients’ unique alveolar ventilation target, even when their respiratory rate changes throughout the night.
• Research shows that 1 year non-invasive ventilation (NIV) is accompanied by improvement in gas exchange. By improving therapy adherence, iVAPS may positively influence these outcomes.
• The intelligent Backup Rate (iBR) is a feature of iVAPS that provides backup breaths only when needed to allow maximum opportunity for spontaneous breathing.
• AE automatically adjusts expiratory pressure in response to either a flow limitation or a partial or full upper airway obstruction. EPAP is adjusted within Min EPAP and Max EPAP settings with the response depending on the degree of the upper airway obstruction.

iVAPS and AutoEPAP

A recent study using the Astral device shows that AutoEPAP in iVAPS mode treats upper airway obstruction in adult patients with respiratory failure just as effectively as manual EPAP. Auto algorithms, such as iVAPS and AutoEPAP, can help clinicians better control and adjust to patients’ changing needs.

How does iVAPS stack up?

iVAPS mode combines the benefits of pressure-targeted ventilation with the assurance of a volume guarantee – a mode that is particularly popular for treating COPD patients.

<table>
<thead>
<tr>
<th>AVAPS AE prescription</th>
<th>iVAPS suggested settings</th>
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<tbody>
<tr>
<td>Vt 6mL/kg Target alveolar ventilation 6mL/kg</td>
<td></td>
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<tr>
<td>Min PS 5 Min PS 5</td>
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<tr>
<td>Max PS 20 Max PS 20</td>
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<tr>
<td>Min EPAP 5 Min EPAP 5***</td>
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<tr>
<td>Max EPAP 15 Max EPAP 15</td>
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<tr>
<td>Resp Rate Auto Target Patient Rate 15</td>
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*iVAPS mode is intended for patients weighing more than 66 lbs (30 kg).
**AutoEPAP is contraindicated when using an invasive interface. AutoEPAP is only available in iVAPS mode.
***May increase EPAP if AHI is found to be elevated on EPAP 5.
Astral specifications

### Indications for use
- **Astral 100**: Life support for patients over 5 kg
- **Astral 150**: Life support for patients over 5 kg

### Circuit
- Single circuit with leak
- Single circuit with valve
- Double circuit

### Therapy
- Valve circuit therapy: CPAP, A/CV, MA/CV, P-SIMV, V-SIMV, PS
- Leak circuit therapy: CPAP, (ST), PA/C, iVAPS* with optional AE**, PS
- Manual breath
- Sigh breath (recruitment)
- Apnea ventilation: Volume and pressure

### Pressure range and settings
- **Delivered pressure (cm H2O)**
  - Leak circuit: 2–50
  - Valve circuit: 0–50
- **Delivered tidal volume (cm H2O)**
  - Adult: 100 to 2500 mL
  - Pediatric: 50 to 300 mL
- **Respiratory rate**
  - Adult: Off, 2 to 50 bpm
  - Pediatric: Off, 5 to 80 bpm

### Data
- **SpO2 monitoring**: Optional
- **FiO2 monitoring**: Optional
- **On screen**
  - 30 days of summary data
  - Real-time pressure and flow (25 Hz)
- **ResScan™ (via download)**
  - 365 days of summary data
  - 7 days of detailed data
- **AirView™ (RCM required)**
  - 365 days of summary data
  - 7 days of detailed data

### Alarms
- A wide range of settable alarms are available, including FiO2, and SpO2, when connected.

### Dimensions
- **Weight**: 3.2 kg
- **Dimensions (L x W x H)**
  - 285 mm x 215 mm x 93 mm
- **Internal battery**
  - Lithium-Ion battery, 14.4 V, 6.6 Ah, 95 Wh, Up to 8 hours of backup power
- **Sound power level**: 43 ± 3 dBA**
- **Sound pressure level**: 35 ± 3 dBA**

### IEC 60601-1 CLASSIFICATIONS:
- Medical electrical equipment - general requirements for basic safety and essential performance.

### Product and accessory codes
- **Astral 150**
  - 27003
  - 27001
- **Astral 100**
  - 27001
- **Device trolley**
  - 279001
- **Astral mobility bag**
  - 27917
- **Astral SlimFit mobility bag**
  - 27949
- **Astral table stand**
  - 27915
- **External battery**
  - 27919
- **Astral Remote Alarm II**
  - (does not include cable)
  - 27903
- **Single circuit smooth bore 15 mm QuickConnect™ circuit**
  - 21312
- **ResMed Connectivity Module**
  - (requires rental agreement)
  - 27201

*See the ventilation accessories catalog for the full suite of ResMed accessories.*

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