Supporting your patients’ every breath

ResMed.com/Astral
Leading with adaptive technologies

ResMed Astral™ is one of the most advanced life support ventilators in respiratory care, proven to reach a stable state of ventilation in significantly less breaths than Philips Trilogy™. Provide optimal care for patients with a wide range of respiratory disorders. Astral makes personalized ventilation easier than ever and adjusts to the changing conditions and breathing needs of patients with these innovative technologies:

IntelligentAir auto-adjusting therapy modes

- **intelligent Volume-Assured Pressure Support (iVAPS™)**
  Learns, targets and aims to maintain each patient’s unique alveolar ventilation.

- **intelligent Backup Rate (iBR)**
  Triggers the ventilator to add backup breaths as needed to bring patient back to target.

- **AutoEPAP**
  Auto-adjusts the expiratory pressure in response to a patient’s partial or full upper airway obstructions.
When life brings unexpected changes, a leading ventilator like Astral offers you and your respiratory patients peace of mind. With an impressive power-to-weight ratio and enhanced safety features, patients can feel safe and well prepared to leave home with Astral by their side.

Innovations in safety and security

Uninterrupted ventilation for dependents on the go

Extended battery life.
An internal battery provides patients up to 8 hours of extra backup power if needed. A maximum of two external batteries have the capacity to deliver up to 16 hours of continuous, portable power when connected to Astral.

Protective mobility bag.
This practical accessory helps safeguard Astral equipment (i.e. ventilator, external battery and power supply) when patients leave home. The transparent panel on the cover provides full access to the ventilator display so patients can easily check therapy, observe alarms and switch programs. The bag’s broad, comfortable straps allow for easy carrying and mounting.

Timely intervention for caregivers and clinicians on the move

Alarms.
Astral provides both audible and visual alerts when attention is required to ensure patient safety. Both adjustable and fixed alarms are based on high-, medium- and low-priority categories and non-essential alarms can be switched off.

Disconnection alarm.
An adjustable alarm allows you to optimize patient setups and customize tolerance and activation time to suit patient needs.
Astral has been designed with simple, yet sophisticated technologies for both portable invasive and noninvasive ventilation. One versatile ventilator is designed to provide the most targeted treatment to patients throughout every stage of their condition. Improve continuity of care while making operation easier for you and caregivers with the enhanced clinical capabilities of Astral:

**Pressure max alarms.**
High-pressure alarm threshold of 80 cm minimizes nuisance alarms during activities like speaking, coughing or breath stacking.

**Mouthpiece ventilation.**
Preconfigured therapy modes (i.e. ACV, PACV and PS) and trigger options offer convenience (i.e. touch, high, medium, low or off). You can also switch easily and quickly between mouthpiece or mask on a single limb leak circuit without changing adapters.

**Flexible therapy options.**
With a variety of therapy modes, including iVAPS* with optional AutoEPAP,** Astral is well-suited for COPD patients. In addition to multiple mode options, Astral’s leak circuits increase mask options and make therapy easier for patients to use.

**Supplemental oxygen.**
Flow rates can be accommodated up to 30 L/min. Oxygen concentration varies, depending on factors such as leak, patient settings and work of breathing.

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**Customized reports and timely care**

When Astral is connected to our secure, cloud-based patient management system, ResMed AirView™ for Respiratory, you’ll have access to key patient therapy data. Combining clinical depth with clinical efficiency, AirView for Respiratory offers a simplified user experience and enhanced features to help you proactively identify issues for early interventions, manage Astral patients more efficiently and collaborate with your fellow clinicians for optimized patient care.

AirView for Respiratory offers advanced features including:

- Interactive multi-program reporting, which gives you a bigger picture of your patient’s overall therapy
- Dynamic detailed reporting, which allows you to visualize trends, zoom in and out for one- to 24-hour windows, hover over data points for exact values, and see what alarms were triggered and when
- Management by exception, which makes it easy to prioritize patients needing intervention through automated patient triage

* When Astral is paired with the ResMed Connectivity Module (RCM), wireless connectivity is enabled, allowed key patient therapy data to be transmitted directly from the device to the ResMed secure, cloud-based management system, AirView.
Simplicity and ease

Operating Astral is a lot easier than you think! While new ventilators often come with steep learning curves, Astral is simple to learn, which means you can spend less time on new device training and more time on patient care. Here’s how Astral makes ventilation straightforward and efficient for caregivers and clinicians:

**Learn circuits.**
Measures breathing circuit characteristics and compensates therapy for circuit resistance and compliance to ensure optimized ventilation.

**Setup Assistant.**
Ensures Astral is accurately configured step-by-step, while the QuickConnect™ circuit system reduces device connections and prevents common errors. Settings may also be downloaded on a USB drive and therapy and alarm settings can be transferred between Astral devices.

**Pre-set programs.**
Allows you to switch between programs without stopping ventilation. Available to patients with therapy requirements that change under particular conditions (e.g. day/night or with/without humidification). In addition, 18 program names are available for easy access.

**Big button.**
Start or stop ventilation easily and mute alarms quickly with a large, touch-sensitive button for patients who have impaired dexterity or poor eyesight.
# Astral specifications

<table>
<thead>
<tr>
<th>Indications for use</th>
<th>Astral 100</th>
<th>Astral 150</th>
</tr>
</thead>
<tbody>
<tr>
<td>Circuit</td>
<td>•</td>
<td>•</td>
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<tr>
<td>Single circuit with leak</td>
<td></td>
<td></td>
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<tr>
<td>Single circuit with valve</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Double circuit</td>
<td></td>
<td>•</td>
</tr>
<tr>
<td>Therapy</td>
<td></td>
<td></td>
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<tr>
<td>Valve circuit therapy: CPAP, (A)CV, (P)ACV, P-SIMV, V-SIMV, PS</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>Leak circuit therapy: CPAP, (S)T, (P)ACV, PS with SVt, and iVAPS* and optional AutoEPAP**</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>Multiplepiece ventilation therapy: (A)CV, (P)ACV, PS/SVt</td>
<td>•</td>
<td>•</td>
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<tr>
<td>Manual breath</td>
<td></td>
<td></td>
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<tr>
<td>Sigh breath (recruitment)</td>
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<tr>
<td>Apneawaterventilation</td>
<td>Volume and pressure</td>
<td>Volume and pressure</td>
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<tr>
<td>Preset programs</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Pressure range and settings</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Delivered pressure (cm H₂O)</td>
<td>2 – 50 (leak circuit) 0 – 50 (valve circuit)</td>
<td>2 – 50 (leak circuit) 0 – 50 (valve circuit)</td>
</tr>
<tr>
<td>Delivered tidal volume (cm H₂O)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adult: 100 to 2500 mL  Pediatric: 50 to 300 mL</td>
<td>Adult: 100 to 2500 mL  Pediatric: 50 to 300 mL</td>
<td></td>
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<tr>
<td>Respiratory rate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adult: Off, 2 to 50 bpm  Pediatric: Off, 5 to 80 bpm</td>
<td>Adult: Off, 2 to 50 bpm  Pediatric: Off, 5 to 80 bpm</td>
<td></td>
</tr>
<tr>
<td>Data</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SpO₂ monitoring</td>
<td>Optional</td>
<td>Optional</td>
</tr>
<tr>
<td>FiO₂ monitoring</td>
<td>Optional</td>
<td>•</td>
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<tr>
<td>On screen</td>
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<tr>
<td>30 days of summary data Real-time pressure and flow (25 Hz)</td>
<td>30 days of summary data Real-time pressure and flow (25 Hz)</td>
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<tr>
<td>ResScan™ (via download)</td>
<td>365 days of summary data 7 days of detailed data</td>
<td>365 days of summary data 7 days of detailed data</td>
</tr>
<tr>
<td>AirView™ (RCM required)</td>
<td>365 days of summary data 7 days of detailed data</td>
<td>365 days of summary data 7 days of detailed data</td>
</tr>
<tr>
<td>Alarms</td>
<td></td>
<td></td>
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<tr>
<td>A wide range of settable alarms are available including FiO₂ and SpO₂ when connected.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dimensions</td>
<td></td>
<td></td>
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<tr>
<td>Weight</td>
<td>3.2 kg</td>
<td>3.2 kg</td>
</tr>
<tr>
<td>Dimensions (L x W x H)</td>
<td>285 mm x 215 mm x 93 mm</td>
<td>285 mm x 215 mm x 93 mm</td>
</tr>
<tr>
<td>Internal battery</td>
<td>Lithium-ion battery, 14.4 V, 6.6 Ah, 95 Wh, 8 hrs of backup power</td>
<td>Lithium-ion battery, 14.4 V, 6.6 Ah, 95 Wh, 8 hrs of backup power</td>
</tr>
<tr>
<td>Sound power level</td>
<td>43 ± 3 dBA***</td>
<td>43 ± 3 dBA***</td>
</tr>
<tr>
<td>Sound pressure level</td>
<td>35 ± 3 dBA**</td>
<td>35 ± 3 dBA**</td>
</tr>
</tbody>
</table>

**IEC 60601-1 CLASSIFICATIONS:**

- Class II (double insulation) Type BF
- Suitable for use with oxygen

- See the ventilation accessories catalogue for the full suite of ResMed accessories.

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*AutoEPAP is contraindicated when using an invasive interface. AutoEPAP is only available in iVAPS mode.

*As measured according to ISO 80601-2-12:2011

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**Product and accessory codes**

- Astral 150
  - 27003
- Astral 100
  - 27001
- Device stand
  - 279001
- Astral mobility bag
  - 27917
- Astral SlimFit mobility bag
  - 27949
- Astral table stand
  - 27915
- External battery
  - 27919
- Oximetry set with reusable soft sensor
  - 22370
- ResMed Connectivity Module (RCM)
  - 27201
- MPV circuit support arm
  - 27955