ResMed

Astral™ series

Life support ventilators

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™.[1] 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.

Innovations in safety and security

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.

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.

A smarter choice

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.

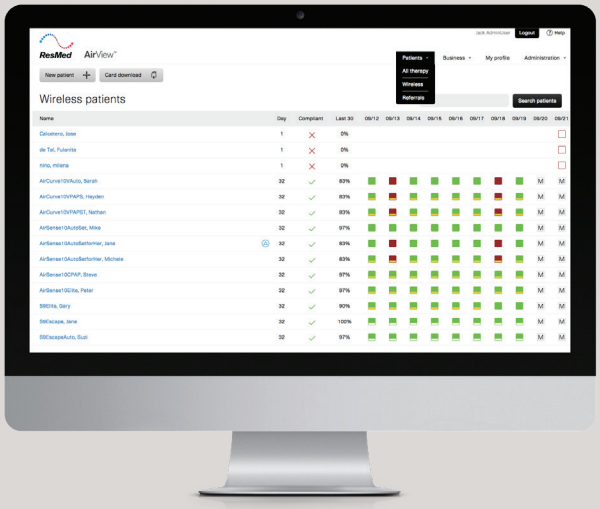
Supplemental oxygen.
Flow rates can be accommodated up to 30 L/min. Oxygen concentration varies, depending on factors such as leak, patient settings and work of breathing.

Connected health solutions

When Astral is paired with the ResMed Connectivity Module (RCM), wireless connectivity is enabled, allowing key patient therapy data to be transmitted directly from Astral to the ResMed secure, cloud-based management system, AirView™. Now you can collaborate more efficiently with your fellow clinicians, as well as HMEs and physicians to optimize patient care with Astral connectivity to AirView.

Astral in AirView gives you daily access to key patient data in the cloud, enabling efficient collaboration and coordinated patient care:

- Offers simplified workflows for physicians, HMEs and payors
- View key ventialation parameters, such as usage, AHI, tidal volume, minute ventilation and respiratory rate
- Allows for early patient intervention before a potential problem or hospitalization occurs



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.

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Astral specifications

	Astral 100	Astral 150
Indications for use	Life support for patients over 5 kg*	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, P(A)CV, P-SIMV, V-SIMV, PS	•	•
Leak circuit therapy: CPAP, (S)T, P(A)C, PS with SVt, and iVAPS* and optional AutoEPAP**	•	•
Mouthpiece ventilation therapy: (A)CV, P(A)CV, PS/SVt	•	•
Manual breath		•
Sigh breath (recruitment)		•
Apnea ventilation	Volume and pressure	Volume and pressure
Preset programs	2	4
Pressure range and settings		
Delivered pressure (cm H_2O)	2–50 (leak circuit) 0–50 (valve circuit)	2–50 (leak circuit) 0–50 (valve circuit)
Delivered tidal volume (cm H_2O)	Adult: 100 to 2500 mL Pediatric: 50 to 300 mL	Adult: 100 to 2500 mL Pediatric: 50 to 300 mL
Respiratory rate	Adult: Off, 2 to 50 bpm Pediatric: Off, 5 to 80 bpm	Adult: Off, 2 to 50 bpm Pediatric: Off, 5 to 80 bpm
Data		
SpO_2 monitoring	Optional	Optional
FiO_2 monitoring	Optional	•
On screen	30 days of summary data Real-time pressure and flow (25 Hz)	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	365 days of summary data 7 days of detailed data
AirView™ (RCM required)	365 days of summary data 7 days of detailed data	365 days of summary data 7 days of detailed data
Alarms	A wide range of settable alarms are available including FiO_2 and SpO_2 when connected.	
Dimensions		
Weight	3.2 kg	3.2 kg
Dimensions (L x W x H)	285 mm x 215 mm x 93 mm	285 mm x 215 mm x 93 mm
Internal battery	Lithium-Ion battery, 14.4 V, 6.6 Ah, 95 Wh. 8 hrs of backup power	Lithium-Ion battery, 14.4 V, 6.6 Ah, 95 Wh. 8 hrs of backup power
Sound power level	43 ± 3 dBA***	43 ± 3 dBA***
Sound pressure level	35 ± 3 dBA***	35 ± 3 dBA***
IEC 60601-1 CLASSIFICATIONS: Medical electrical equipment - general requirements for basic safety and essential performance.	Class II (double insulation) Type BF Continuous operation Suitable for use with oxygen	

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

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

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
27918

Single circuit smooth bore 15 mm including ResMed's QuickConnect with expiratory valve
21312

Oximetry set with reusable soft sensor
22370

ResMed Connectivity Module (RCM)
27201

MPV circuit support arm
27955

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1 Diesem Ryan. Astral/Trilogy iVAPS/AVAPS Comparison. Valley Inspired Products 2016; 16011.
Patient identity and data are fictional.

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