

**ResMed**

ResMed **Air** Solutions



# AirCurve 10 CS PaceWave™ :

ResMed's unique minute-ventilation adaptive servo-ventilator



# Managing central sleep apnoea

As your partner in patient care, ResMed offers a therapy device to help you manage patients with breathing disorders that can be challenging to treat.

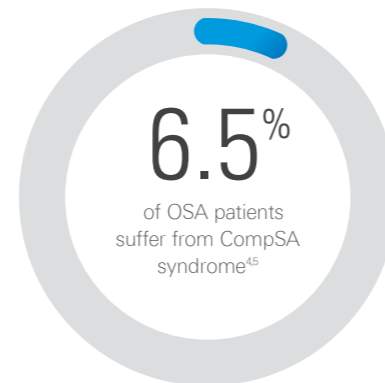
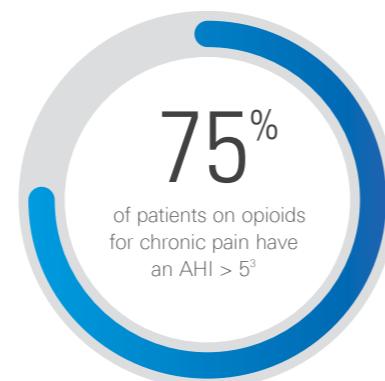
AirCurve 10 CS PaceWave is ResMed's premium adaptive servo-ventilation (ASV) device designed to treat central sleep apnoea (CSA), mixed and complex sleep apnoea (CompSA), as well as periodic breathing, with or without obstructive sleep apnoea (OSA).

## Introducing ResMed's AirCurve 10 CS PaceWave

Featuring the most clinically studied PaceWave ASV algorithm, the AirCurve 10 CS PaceWave device is the only one of its kind to target a patient's own recent minute-ventilation (MV) to deliver therapy that is optimised to suit each individual.

Treating both obstructive and central events, the device rapidly stabilises breathing and blood gases to help improve sleep quality.<sup>1,2</sup>

Part of the ResMed Air Solutions platform, AirCurve 10 CS PaceWave also features built-in wireless connectivity, integrated humidification and user-friendly controls, making it easy to manage your patients' condition.



The prevalence of central breathing disorders

## Meeting therapy goals

Sleep-related breathing disorders are characterised by obstructive and central events. Obstructive events are associated with destabilisation of blood gases, and arousals from sleep. Central events are associated with destabilisation of blood gases, and inadequate breathing control. AirCurve 10 CS PaceWave addresses both obstructive and central events to resolve upper airway collapse, and stabilise patient breathing.

### Clinical benefits of ASV therapy for CSA

**Reduced tiredness and daytime sleepiness:** Improvements in sleep with PaceWave ASV therapy help reduce excessive daytime sleepiness in patients.<sup>6</sup>

### Clinical benefits of ASV therapy for CompSA

**Reduced residual central apnoeas:** ASV is able to significantly reduce residual central apnoeas in patients with CompSA. When compared with CPAP therapy,<sup>1,7,8</sup> ASV treatment has also been shown to significantly reduce excessive daytime sleepiness in these patients.<sup>6</sup>

**What is CompSA?:** CompSA syndrome occurs when central sleep apnoea episodes persist after obstructive or mixed sleep apnoea has been treated with continuous positive airway pressure (CPAP).<sup>7</sup>



### Learning continuously for personalised therapy

The only ASV therapy to target the patient's own recent MV



### Responding rapidly for effective therapy

ResMed's most responsive ASV therapy



### Predicting each patient's unique needs for ease-of-care

Treating your challenging patients has never been easier



### Optimising comfort and synchrony for compliance

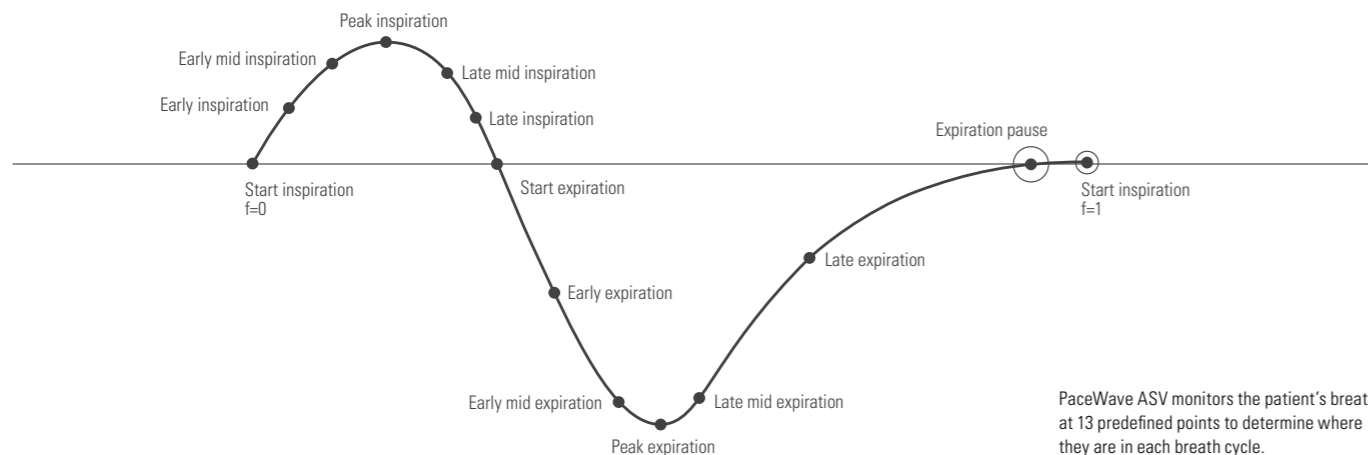
Boost compliance with natural breathing comfort and advanced synchrony

## Learning continuously for personalised therapy

While other ASV devices assess patients' peak flow to set ventilation targets, ResMed's PaceWave ASV algorithm is the only one that targets the patient's own recent minute-ventilation. By continuously monitoring and learning the patient's breathing pattern and recent minute-ventilation, PaceWave ASV can quickly adjust the pressure support to ensure the appropriate MV target is maintained, and respiration is stabilised.

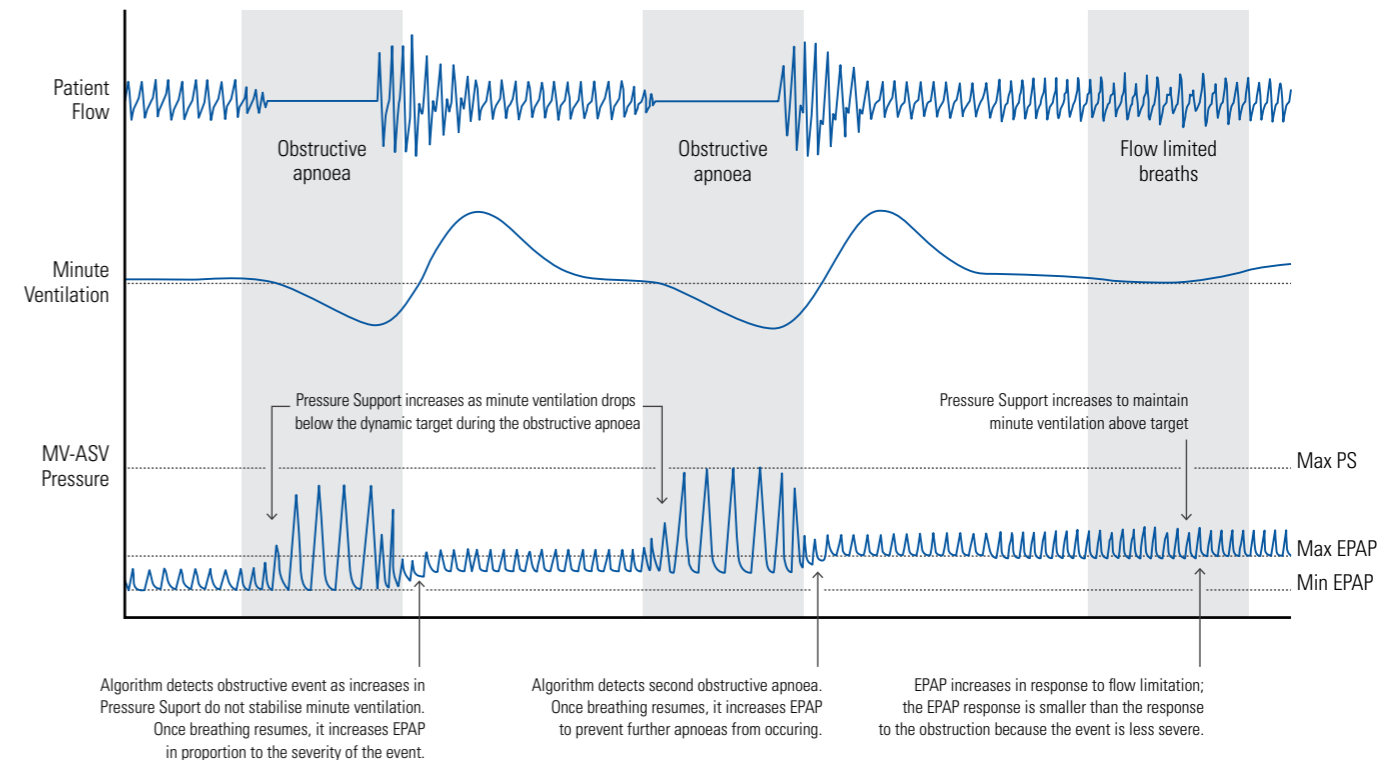
## Predicting each patient's unique needs for ease-of-care

Using high-resolution breath-phase mapping, PaceWave ASV can determine exactly where the patient is within each breath, and calculate their unique respiratory rate. It can then deliver pressure support synchronised to their own breathing pattern, where the delivered pressure reaches its therapy peak at end-inspiration and its lowest point by end-expiration. The result is a smooth, comfortable breathing experience.



## Responding rapidly for effective therapy

ResMed's PaceWave ASV algorithm responds rapidly within each breath, adjusting the pressure support to maintain a patient's target minute ventilation, and stabilise breathing.



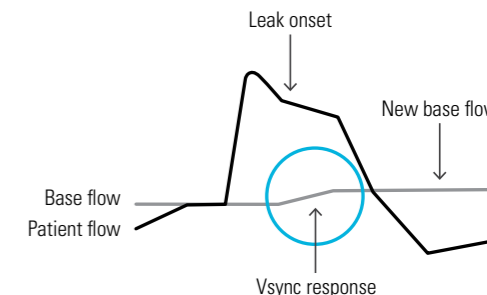
Upper airway patency is also maintained either manually in ASV mode, where EPAP is fixed and can be adjusted as needed, or in ASVAuto mode, where upper airway obstructions are treated automatically with auto-adjusting EPAP. By offering automatically adjusting pressure support and EPAP, ASVAuto mode can also aid in streamlining titration protocols.

## Optimising comfort and synchrony for compliance

As well as aiming to provide accurate and effective therapy, AirCurve 10 CS PaceWave delivers breathing comfort with even more innovative technologies.

### Easy-Breathe waveform

The Easy-Breathe waveform delivers a smoother, more comfortable breathing experience by replicating the natural wave shape of normal breathing.



Vsync responds to leak to stay in sync with your patients' breathing.

### Vsync

To manage unintentional mask leak, ResMed's renowned Vsync technology automatically tracks and compensates for fast-changing and unstable leaks, allowing the device to synchronise its response to every breath.



## Connected care

Thanks to the wireless connectivity built into the AirCurve 10 CS PaceWave device, it's easy to stay connected to your patients' therapy progress, and provide timely care.

Data from your patients' therapy device can be sent directly to ResMed's cloud-based patient management system, AirView™. Via AirView you can easily view valuable information such as compliance, leak, apnoea-hypopnoea index (AHI) and detailed data, so you can identify pain points in a timely and efficient manner.

AirView's remote assist feature enables you to both change settings and troubleshoot remotely – so common therapy issues can be resolved in minutes.

## Set up for comfort and ease-of-use

AirCurve 10 CS PaceWave is easy to set up, and offers a range of features to help you treat even the most challenging patients.

Making the comfort of humidification accessible to all your patients, heated humidification is a standard feature built into the AirCurve 10 CS PaceWave device.

And with the Climate Control Auto option, patients can receive therapy comfort by simply attaching the ClimateLineAir™ heated tube, and pressing Start on their device – no settings to change, and no complicated menus to navigate.

AirCurve 10 CS PaceWave	Therapy modes	Comfort features	Data
CPAP	•		
ASV	•		
ASV Auto	•		
Vsync		•	
Climate Control		•	
Climate Control Auto		•	
SmartStart™		•	
Built-in wireless connectivity			•
AirView			•
AirView's remote assist			•
ResScan™			•
SD card			•
myAir™			•

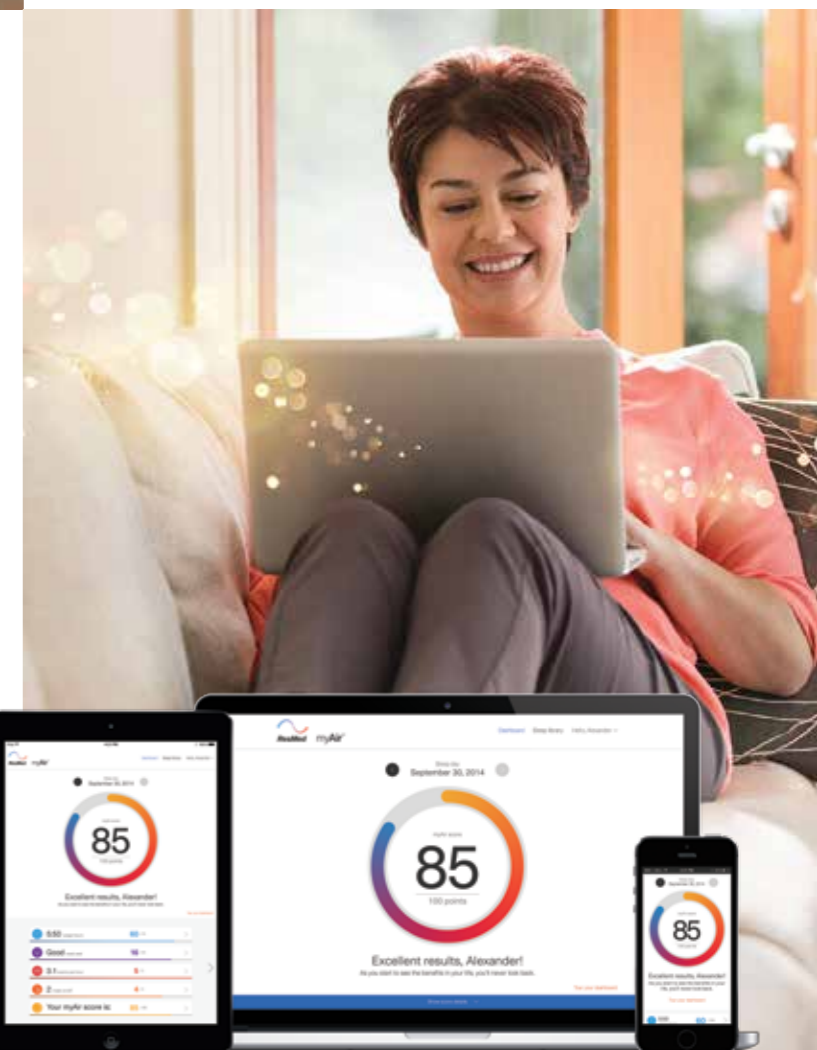
## Personalised support for your patients

ResMed's myAir™ patient engagement program helps keep your patients on track with therapy.

myAir is a free online support program that allows your patients to track their nightly sleep data and therapy progress online. Therapy data automatically syncs to the cloud shortly after patients wake up, providing timely feedback on their progress.

myAir also provides full-time support that patients need, with tailored coaching, educational support and handy tips on common questions.

By keeping them educated and motivated, patients are more likely to stay engaged with therapy – an important part of helping them with long-term compliance.





**Note:** ASV therapy is contraindicated in patients with chronic, symptomatic heart failure (NYHA 2–4) with reduced left ventricular ejection fraction (LVEF  $\leq$  45%) and moderate to severe predominant central sleep apnoea.

- 1 Morgenthaler TI et al. Adaptive servoventilation versus noninvasive positive pressure ventilation for central, mixed, and complex sleep apnea syndromes. *Sleep* 2007;30(4):468–75.
- 2 Brown SE et al. A retrospective case series of adaptive servoventilation for complex sleep apnea. *J Clin Sleep Med* 2011;7(2):187–195.
- 3 Webster LR et al. Sleep-disordered breathing and chronic opioid therapy. *Pain Med* 2008 May–Jun;9(4):425–32.
- 4 Javaheri S, Smith J, Chung E. The prevalence and natural history of complex sleep apnea. *J Clin Sleep Med* 2009;5(3):205–211.
- 5 Morgenthaler TI et al. Complex sleep apnea syndrome: is it a unique clinical syndrome? *Sleep* 2006 Sep;29(9):1203–9.
- 6 Su M et al. Adaptive pressure support servoventilation: a novel treatment for residual sleepiness associated with central sleep apnea events. *Sleep Breath* 2011;15(4):695–9.
- 7 Allam JS et al. Efficacy of adaptive servo-ventilation in treatment of complex and central sleep apnea syndromes. *Chest* 2007;132(6):1839–46.
- 8 Westhoff M, Arzt M, Litterst P. Prevalence and treatment of central sleep apnoea emerging after initiation of continuous positive airway pressure in patients with obstructive sleep apnoea without evidence of heart failure. *Sleep Breath* 2012;16(1):71–8.



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