RESMED

MEDIA FACTSHEET

KEY FACTS

- PaceWave™ Adaptive Servo-Ventilation (ASV) therapy is the latest-generation technology for the effective, personalised and comfortable treatment of a range of central breathing disorders.
- It personalises treatment by learning, predicting, responding and optimising ventilation, to suit each patient's own unique breathing pattern.
- PaceWave™ is the only ASV therapy to target a patient's Minute Ventilation (MV) (the amount of air a person breathes in a minute), which allows it to make precise, accurate adjustments according to real-time data.
- Through intelligent, adaptive breathing control, PaceWave™ helps to improve sleep quality and has been shown to improve cardiac function in heart failure patients with central sleep-disordered breathing.[1,2,3]
- The effect of PaceWave™ therapy on patients with stable heart failure and central sleep-disordered breathing is currently being investigated SERVE-HF; the largest international randomised trial of its type.

Adaptive Servo-Ventilation therapy (ASV)

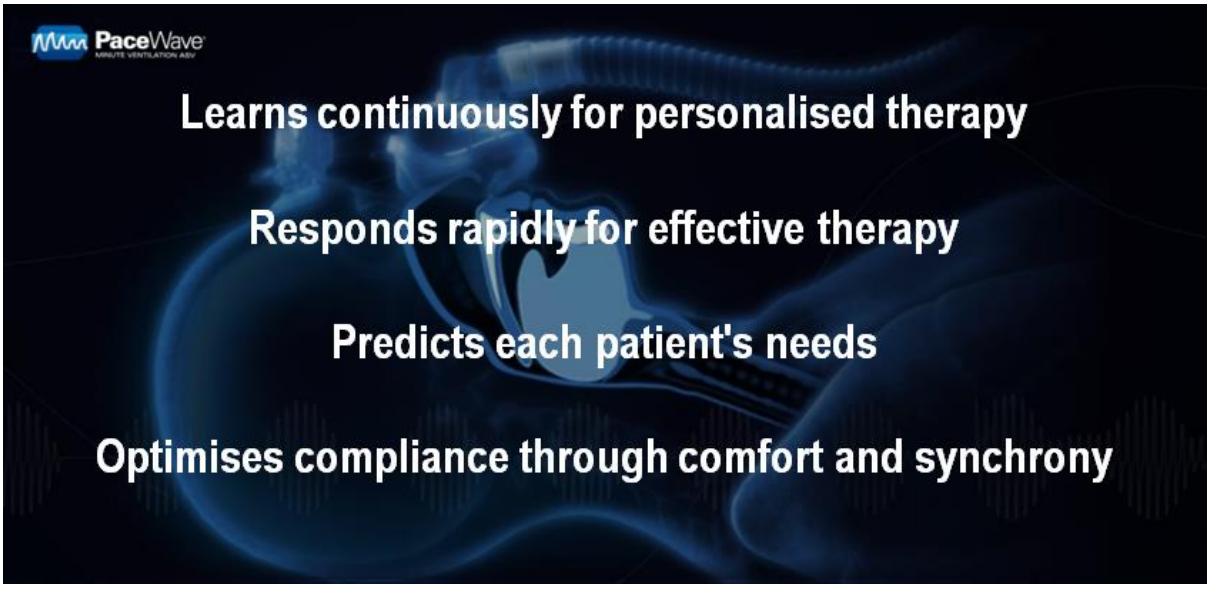
- PaceWave™ is the latest-generation form of Adaptive Servo-Ventilation (ASV) therapy.
- ASV refers to therapy in which a patient's ventilation is monitored and stabilised through adaptive positive airway pressure, supplied via a mask worn by the patient.

About PaceWave™

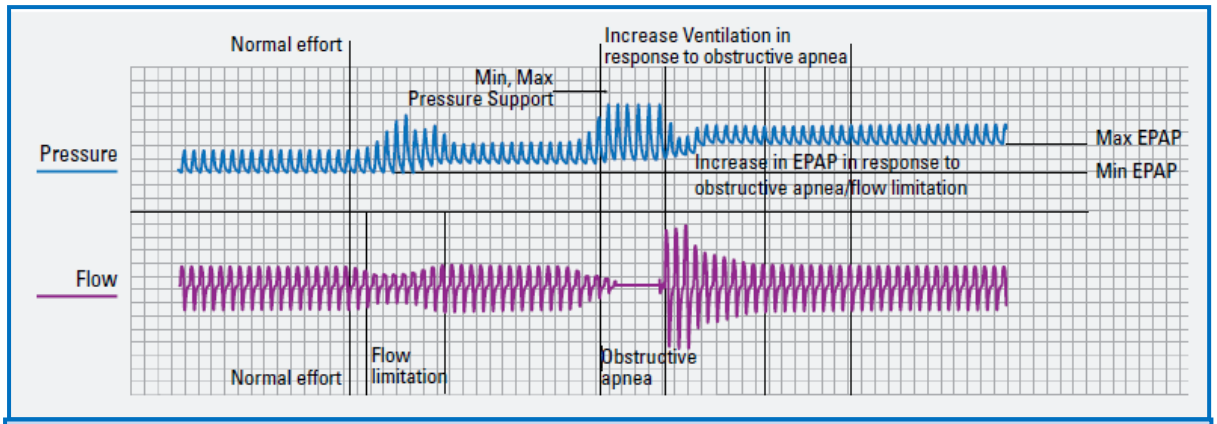
- PaceWave™, developed by ResMed, is an advanced ASV technology for the effective, personalised and comfortable treatment of a range of central breathing disorders (CBD), which can often be difficult to treat.
- It is the most clinically studied and proven ASV therapy and the only one of its kind to target minute ventilation (MV) (the amount of air a person breathes in a minute).
- Monitoring MV allows precise, accurate adjustments to be made to a patient's ventilation, based on real-time data.
- The only ASV therapy to target the patient's own MV, PaceWave's™ unique technology constantly monitors and learns a patient's breathing pattern, measuring ventilation directly and setting ventilation targets and air pressure accordingly to stabilise breathing.

- PaceWave™ calculates inspiratory (breathing in) and expiratory (breathing out) frequency as well as expiratory pauses, making it able to adjust air pressure support to suit an individual patients' needs.

- This helps to improve sleep quality and outcomes in patients with central sleep-disordered breathing by stabilising breathing, quickly restoring optimal oxygen levels and reducing stress on the heart.[1]



- Pacewave™ can also stabilise the upper airway to treat and prevent obstructions that would restrict airflow. It does this through intelligent monitoring and the application of expiratory positive airway pressure (EPAP).



Pacewave™ stabilises the upper airway to treat and prevent obstructions with expiratory positive airway pressure (EPAP)

RESMED

MEDIA FACTSHEET

PaceWave™ in heart failure

- Sleep-disordered breathing is a common co-morbidity in heart failure, estimated to occur in almost three quarters of heart failure patients. Between 30-50% of patients with heart failure and SDB will have central SDB (such as central sleep apnea with Cheynes-Stokes respiration).[4,5, 6]

- Evidence from a number of studies indicates that PaceWave™ ASV therapy improves cardiac function.[1,2,]

- In heart failure patients, quality of life can typically be poor, often due to fatigue and diminished ability to perform physical functions.

- Studies have shown that treatment of sleep-disordered breathing in these patients improves physical performance,[2,3] increases energy and vitality and improves heart-specific quality of life.[7]

- The impact that treatment of central sleep disordered breathing with PaceWave™ ASV therapy can have on patients with stable heart failure is currently being investigated in the SERVE-HF trial; the largest randomised study of its type to date, taking place across 80 centres in Europe and Australia.

For more information on ResMed's PaceWave™ ASV therapy, please visit:
http://www.resmed.com/uk/products/s9_vpap_series/asv.html?nc=patients

References

[1] Bitter, T., et al., Adaptive servoventilation in diastolic heart failure and Cheyne-Stokes respiration. *Eur Respir J,* 2010; 36(2):385-92.
[2] Oldenburg O. et al. Adaptive servoventilation improves cardiac function and respiratory stability. *Clin Res Cardiol,* 2010; 100:107-115.
[3] Karavidas, A. et al. The impact of positive airway pressure on cardiac status and clinical outcomes in patients with advanced heart failure and sleep-disordered breathing: a preliminary report. *Sleep Breath* 2011; 15:701-709.
[4] Woehrle H, Weinreich G, Wegscheider K, Erdmann E, Teschler H. Prevalance and sleep characteristics of sleep-disordered breathing in German patients with chronic heart failure. *Am J Respir Crit Care Med* 2010; 181(Suppl):A2478.
[5] Woehrle H, Weinreich G, Wegscheider K, Teschler H. SchlaHF register: prevalence of sleep-disordered breathing in German patients with chronic heart failure. *Eur Heart J* 2010; 31(Suppl):568.
[6] Akiko N, Seiko M and Yoshinari Y. Therapeutic Strategies for Sleep Apnea in Hypertension and Heart Failure. *Pulm Med,* 2013; 2013:814169.
[7] Topfer V. et al. [Adaptive servoventilation: effect on Cheyne-Stokes- Respiration and on quality of life. *Pneumologie* 2004; 58:28-32.