



# Precision with every breath

Finally, you can have both—the comfort of pressure ventilation and the consistent efficacy of assured tidal volume—all in one machine. **BiPAP AVAPS** (Average Volume Assured Pressure Support) delivers optimal ventilation, naturally inspired.

**PHILIPS**  
RESPIRONICS  
sense and simplicity

# Pressure vs. volume ventilation: which is best?

Now you don't have to choose to get the best of both—the comfort of pressure ventilation and the consistent clinical efficacy of delivering a target volume.

## Introducing BiPAP AVAPS (Average Volume Assured Pressure Support)

### Changing the way that you think about ventilation

The BiPAP AVAPS algorithm guarantees a minimum tidal volume by:

- Adapting to disease progression and to patients' changing needs—ideal for patients with respiratory insufficiency due to progressive neuromuscular disorders
- Maintaining optimal patient comfort without compromising clinical safety and efficacy
- Improving ventilation efficiency
- Simplifying the titration process

### The AVAPS algorithm adjusts IPAP pressure to maintain an average tidal volume

The BiPAP AVAPS clinically proven Digital Auto-Trak algorithm estimates the patient's tidal volume at each breath. The averaged patient tidal volume is compared to the set target tidal volume, and inspiratory pressure will increase or decrease from breath to breath to reach the set target volume. The pressure change is applied gradually (1 cm H<sub>2</sub>O per minute or less) to maintain patient comfort. The result is a smooth series of incremental pressure adjustments to continuously maintain an average tidal volume.

### Advanced leak-sensing technology

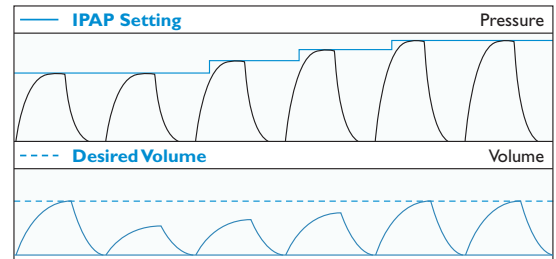
Digital Auto-Trak built-in leak detection system ensures a breath-by-breath response to a patient's breathing patterns and circuit leaks, providing optimum support with every breath.

Advanced leak compensation:

- Estimates patient tidal volume
- Estimates leaks, both intentional and unintentional

Automatic triggering and cycling:

- No adjustments required for optimal sensitivity



BiPAP AVAPS Digital Auto-Trak algorithm

*“Volume-targeted equipment may be favorable for many patients simply because... pressure targeted systems are not able to guarantee minimum minute ventilation.”*

*However...*

*“More recent reviews have cited the advantages of pressure targeted devices for comfort and in their ability to compensate for leaks.”*

Clinical indications for noninvasive positive pressure ventilation in chronic respiratory failure due to restrictive lung disease, COPD, and nocturnal hypoventilation: a consensus conference report. *Chest*. 1999; 116:521-534.

# BiPAP AVAPS

Ensures patient comfort, ventilation consistency, and ease of use

## BiPAP AVAPS specifications – control/accuracy

Dimensions	9.75" l x 6.625" w x 4.4" h
Weight	4.2 lbs

Parameter	Range	Pressure accuracy (static)	Pressure accuracy (dynamic)
IPAP	4 to 30 cm H <sub>2</sub> O	± 2 cm H <sub>2</sub> O of the settings	± 5 cm H <sub>2</sub> O of the settings
EPAP	4 to 25 cm H <sub>2</sub> O	± 2 cm H <sub>2</sub> O of the settings	± 5 cm H <sub>2</sub> O of the settings
CPAP	4 to 20 cm H <sub>2</sub> O	± 2 cm H <sub>2</sub> O of the settings	± 5 cm H <sub>2</sub> O of the settings

Parameter	Range	Accuracy
Breath rate	0 to 30 bpm	Greater of 1 bpm or ± 10% of 4 to 30 bpm setting when measured over a four-minute period
Timed inspiration	0.5 to 3.0 sec	± (0.10% of setting + 0.1 sec)
Rise time	100 to 600 msec	± 25%
Ramp duration	0 to 45 min	± 10% of setting
AVAPS		
IPAP min	From EPAP to IPAP max	
IPAP max	From IPAP min to 30 cm H <sub>2</sub> O	
Target VTE	From 200 ml to 1500 ml	
Alarm	Low VTE	



## Ordering information

Item	Part number
BiPAP AVAPS	1029744
BiPAP AVAPS core package	1029750
Carrying case	1005965
Encore Pro software	1009583
Encore shielded communications cable (6 ft/1.83 m)	1000814
Encore 9 to 25 pin cable adapter	532348
Smartcard reader station	1003543
Pack of Smartcards (10 cards)	1003304
Pollen filters (reusable; 2 per pack)	1005964
Ultra-fine filters (disposable; 2 per pack)	1005945
Reusable patient tubing (6 ft/1.83 m, gray)	622038
REMstar heated humidifier	1005792
REMstar heated humidifier chamber (replacement)	1008619

Philips Healthcare is part of  
Royal Philips Electronics

How to reach us  
[www.philips.com/healthcare](http://www.philips.com/healthcare)  
Fax: +31 40 27 64 887

Asia  
+852 2821 5888

Europe, Middle East, Africa  
+31 40 27 87246

Latin America  
+55 11 2125 0764

North America  
+1 425 487 7000  
800 285 5585 (toll free, US only)

Philips Respironics  
1010 Murry Ridge Lane  
Murrysville, PA 15668

Customer Service  
+1 724 387 4000  
800 345 6443 (toll free)

Respironics Europe, Middle East, Africa  
+33 1 47 52 30 00

Respironics Asia Pacific  
+852 3194 2280

[www.philips.com/respironics](http://www.philips.com/respironics)

Respironics, Auto-Trak, BiPAP, and AVAPS are trademarks of Respironics, Inc. and its affiliates.



©2008 Koninklijke Philips Electronics N.V. All rights are reserved.

Philips Healthcare reserves the right to make changes in specifications and/or to discontinue any product at any time without notice or obligation and will not be liable for any consequences resulting from the use of this publication.

CAUTION: US federal law restricts this device to sale by or on the order of a physician.

Geyer WMB 11/21/08 MCI 4102030 PN 1047096