

# DreamStation BiPAP AVAPS & S/T

创新无止境  
打造家庭呼吸智联管理新体验

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## 飞利浦伟康

作为全球呼吸治疗行业的领导者，飞利浦伟康不断探索、持续创新，为使用者、操作者及合作伙伴提供优质的呼吸治疗整体解决方案

## Philips Respironics

A global leader in respiratory technology, we are passionate about *providing innovation and integrated solutions* for healthier patients, healthier practices, and healthier businesses.

# DreamStation家庭呼吸治疗解决方案

## DreamStation Home NIV Solution

### DreamStation 呼吸机

全新平台携双重独特技术  
轻松为患者定制个性化治疗  
保障患者院后长期治疗有效性

DreamStation platform with automatic functions.  
Customizable therapy to meet the needs of a  
diverse set of patients.

Providing long-term HNIV therapy effectively and  
efficiently

### 飞畅 远程智能管家 Remote Respiratory Butler

飞畅远程智能管家是专为COPD患者量身定制的远程智能管理和管家服务体系，帮助患者及其家人更清楚准确地管理呼吸治疗，更快速方便地解决设备使用的疑惑和问题

Fei Chang Remote Respiratory Butler is a kind of family co-management and butler service system customized to COPD patients, which helps patients and their families stay engaged with their therapy through coaching, feedback and encouragement.



# DreamStation无创呼吸机系列

## DreamStation NIV portfolio



**DS S/T 25**

经济惠选型

最高治疗压力: 25cmH2O  
通气模式: CPAP、S、ST  
附加模式: **AAM**



**DS S/T 30**

常规智选型

最高治疗压力: 30cmH2O  
通气模式: CPAP、S、ST  
附加模式: **AAM**



**DS AVAPS**

升级优选型

最高治疗压力: 30cmH2O  
通气模式: CPAP、S、ST、T、PC  
附加模式: AAM、**AVAPS**



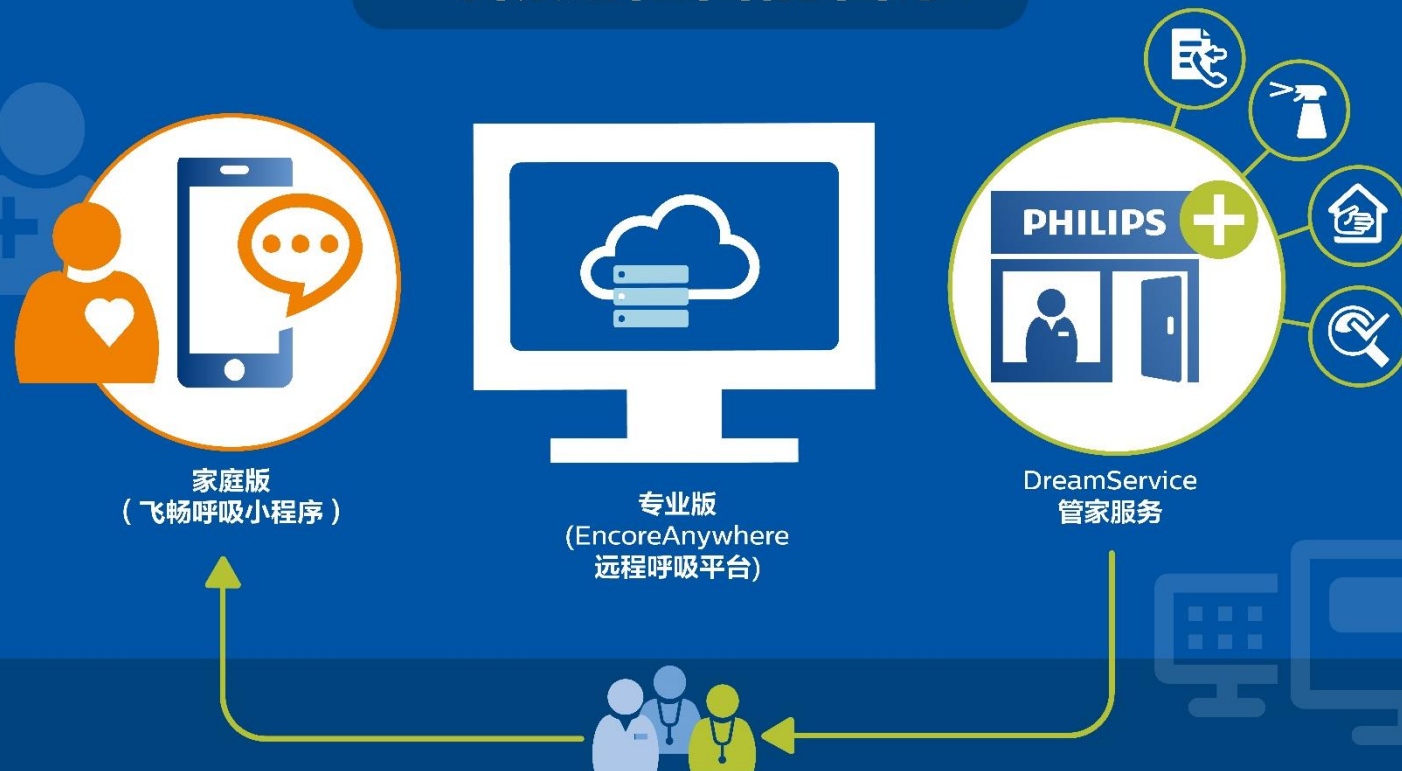
**DS AVAPS-AE**

高端尊享型

最高治疗压力: 30cmH2O  
通气模式: CPAP、S、ST、T、PC、**AVAPS-AE**  
附加模式: AAM、AVAPS

# Remote Respiratory Butler

## 飞畅远程智能管家



家庭端

### 飞畅呼吸小程序

Fei Chang Hu Xi mini APP

帮助患者及其家属清晰掌握并管理家庭呼吸治疗

To help patients and their families grasp and manage the NIV therapy.

有助于降低住院次数和急诊就诊率，提高患者生活质量

Contribute to decrease hospitalization time and emergency visit rate, improve the quality of life.

服务端

### DreamService管家服务

DreamService

飞利浦伟康在全国范围内设立了百余家睡眠呼吸体验中心

Philips Respironics has built over 100 Experience Centers in China.

用规范化的服务体系为用户提供服务支持，保障长期使用需求

To provide normative service process to our users and response to their requests in long-term using.

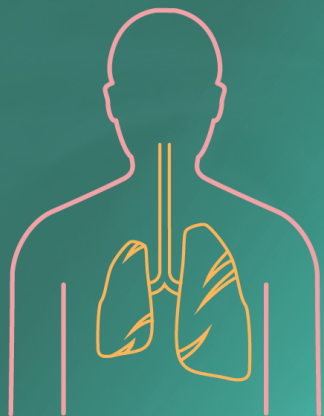
DreamStation BiPAP AVAPS & S/T



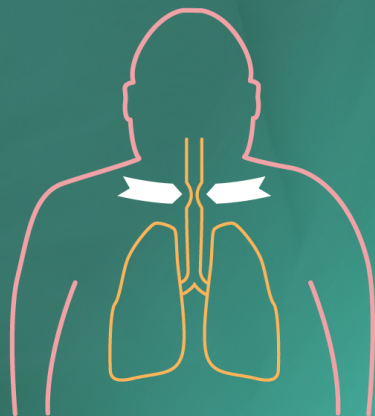
DreamStation BiPAP AVAPS & S/T

## 为慢性呼吸功能不全患者提供通气支持

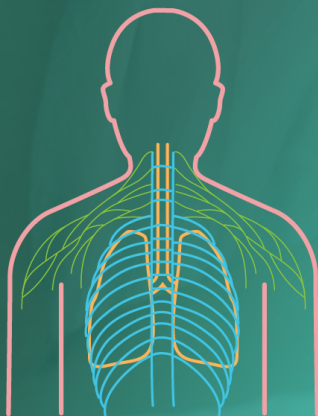
Helping support patients suffering from chronic respiratory insufficiency issues due to chronic diseases



慢性阻塞性肺疾病  
COPD



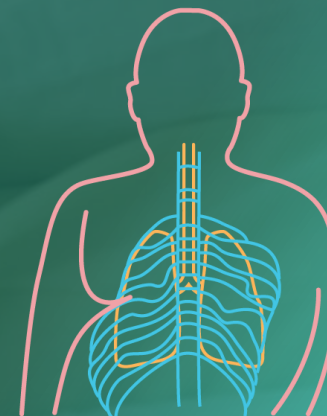
肥胖低通气  
Obesity  
hypoventilation



神经肌肉疾病  
Neuromuscular  
diseases



限制性及阻塞性  
呼吸紊乱  
Restrictive and  
obstructive disorders



胸廓畸形和外伤  
Chest wall deformities  
and trauma

DreamStation BiPAP AVAPS & S/T

## 满足患者治疗需求

Meeting patients' therapeutic needs

DreamStation呼吸治疗解决方案为患者提供高效、舒适的治疗体验，提高患者的生活质量

DreamStation ventilation solutions are designed to deliver effective and comfortable therapy so patients can experience an improved quality of life.

### DreamStation BiPAP AVAPS & S/T算法

DreamStation BiPAP AVAPS & S/T algorithms:

在所有双水平通气模式下均能实时同步解决低通气\*和OSA  
Simultaneously and dynamically treat hypoventilation\* and OSA in any ventilation mode

在长期治疗的过程中，会根据患者不同时期的需求提供相应的压力支持  
Provide appropriate therapeutic support to meet the changing needs of patients over time

\*仅限BiPAP AVAPS



平均容量保障  
压力支持  
AVAPS



自动气道管理  
AAM



自动追踪灵敏度  
Digital  
Auto-Trak



AVAPS-AE



DreamStation BiPAP AVAPS & S/T

## 平均容量保障压力支持功能(AVAPS)

Average Volume Assured Pressure Support

- 容量保证通气模式是一种可以保证每次呼吸的潮气量稳定的压控通气模式，且不会影响舒适度\*†
- Hybrid mode that provides consistent tidal volume per breath while delivering the comfort and advantages of pressure support ventilation\*†
- 目的是时刻为患者提供最小的压力支持水平，同时能保障患者吸入达到治疗效果的潮气量
- Designed to apply the minimum pressure support required to achieve the prescribed tidal volume
- 该功能既可以简化参数设置流程，又可以在保障治疗有效性的同时提供最佳治疗舒适度
- Helps to maintain optimal patient comfort while supporting patient care and ventilation efficacy while simplifying the titration process.



平均容量保障  
压力支持  
AVAPS



自动气道管理  
AAM



自动追踪灵敏度  
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AVAPS-AE

\*With respiratory insufficiency patients diagnosed with Obesity Hypoventilation Syndrome  
Storre, J.H., Seuthe, B., Fiechter, R., and Windisch, W., Average volume-assured pressure support in obesity hypoventilation, *Chest* 130(3):815-21, Sept. 2006

DreamStation BiPAP AVAPS & S/T

## 自动气道管理功能(AAM)

Automated Airway Management

- 在所有双水平通气模式下都可以开启此功能，开启后可自动实时管理气道开放程度
- Automatically and dynamically manages a patient's upper airway in any ventilation mode
- 持续监测上气道开放程度，并及时调整压力来响应变化
- Continuously monitors and reacts to changes in the upper airway
- 始终搜索最低的有效治疗呼气压力
- Applies only the lowest possible pressure
- 可有效治疗重叠综合征
- Treats overlapping breathing syndromes

AVAPS

平均容量保障  
压力支持  
AVAPS



自动气道管理  
AAM



自动追踪灵敏度  
Digital  
Auto-Trak



AVAPS-AE







Automated Airway Management

## 来自不同气道状况的挑战

Patient Airway Challenges

OSA合并呼吸功能不全的症状出现在不同疾病群体中

OSA overlap in respiratory insufficiency patients

- 29%-40%的COPD患者合并患有OSA<sup>1</sup>
- 29% to 40% of COPD patients have OSA<sup>1</sup>
- 90%的OHS患者合并患有OSA<sup>2</sup>
- 90% of OHS patients have OSA<sup>2</sup>
- 21%的多发性硬化症患者合并患有OSA<sup>3</sup>
- 21% of Multiple Sclerosis patients have OSA<sup>3</sup>



<sup>1</sup>Jelic International Journal of COPD 2008;3(2)269-275

<sup>2</sup>Mohklesi. Chest 2007;131;1624-1626

<sup>3</sup>J Clin Sleep Med. 2014 Feb 15; 10(2): 155-162



## Automated Airway Management

# 让自动来处理最棘手的参数设置

Automate the hardest settings

一项为期4周的临床研究显示，自动气道管理功能在处理OSA睡眠事件的效果上，和现在OSA患者常用的睡眠双水平呼吸机一样有效

A four week clinical study suggests Automated Airway Management is just as effective in managing OSA compared to the patient's current fixed bi-level settings to manage OSA\*



- AHI差异为1
- AHI difference of 1
- EPAP差异为0.9cmH2O
- EPAP difference of .9 cmH2O
- 提高了0.1小时的睡眠依从性
- Improvement of sleep adherence by .1 hours

\* Internal Philips trial, 30 day crossover clinical trial with 14 non-naïve bi-level patients with OSA to assess treatment efficacy and comfort of the AAM compared to manually titrated, fixed pressure BiPAP using the new DreamStation AVAPs device.

† William Hardy, Jeremy Powers, Fatima Sert Kuniyoshi, Lauren Bedont, Jeffrey Jasko, Jim McKenzie. Efficacy and Comfort of a New Automated Ventilation Feature to Manage Obstructive Sleep Apnea (OSA) During Nocturnal NIV. Poster presented at ERS 2017, 9-13 September 2017, Milan, Italy



## Automated Airway Management

# 舒适加倍升级

## Equivalent Comfort

- 58%的患者认为，相比他们之前的睡眠呼吸机，自动气道管理功能更加舒适\*†
- 58% of patients preferred the comfort of Automated Airway Management compared to their prior bi-level device\*†
- 33%的患者认为，自动气道管理功能和他们之前的睡眠呼吸机一样舒适\*†
- 33% of patients said it was just as comfortable compared to their prior bi-level device\*†

\* Internal Philips trial, 30 day crossover clinical trial with 14 non-naïve bi-level patients with OSA to assess treatment efficacy and comfort of the AAM compared to manually titrated, fixed pressure BiPAP using the new DreamStation AVAPs device.

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Automated Airway Management

## 一次设置，持续滴定

One setting – continuous titration

## 让个性化参数设置更加简单

Feel confident because each patient is unique

- 自动气道管理功能与AVAPS-AE通气模式中的auto EPAP工作机制相同\*
- Equivalent functionality as the auto EPAP function in the AVAPS-AE ventilation mode\*
- 可针对患者每晚的不同需求自动调压
- Adapts to unique needs of patients every night
- 在所有双水平模式\*\*下都可以开启自动气道管理功能，且不会影响固定/动态(AVAPS)压力支持
- Automatically manages patient's airway in any ventilation mode\*\* without affecting fixed or dynamic (AVAPS) pressure support

\* Included in Trilogy and BiPAP A40 ventilators

\*\* Dreamstation AVAPS / S/T ventilation modes S, S/T, PC, T

## Automated Airway Management

# 关于自动气道管理的应用

## Application

- 实时监测患者的上气道阻力，并自动调整EPAP已保证上气道开放
- Monitors the patient's upper airway resistance and automatically adjusts the delivered EPAP required to maintain a patent airway
- 在无创双水平通气模式下均可应用
- Noninvasive mode applications
  - S, S/T, T, and PC Modes
- 一键开启自动——选择“开”即可工作
- One button automation - Select On to enable

\*禁忌用于儿童

\*Contraindicated for pediatric use





DreamStation BiPAP AVAPS & S/T

## 自动灵敏度追踪技术

Digital Auto-Trak

- 精确的漏气监测及补偿算法保证治疗有效性，实时触发/切换灵敏度监测保障人机同步性
- Monitors each breath with an automated breath triggering, cycling and leak compensation algorithm to provide personalized therapy adjustments
- 自动补偿漏气，并自动调整呼吸机以贴合患者的自然呼吸节律
- Auto adjusts ventilation to the patient's natural breathing patterns and compensates for leaks
- 自动调整触发/切换灵敏度以满足不同疾病进程的需求
- Adapts breath triggering and cycling as the patients disease progresses
- 无需手动调整或设置
- Helps to eliminates need for manual adjustments

AVAPS

平均容量保障  
压力支持  
AVAPS



自动气道管理  
AAM



自动追踪灵敏度  
Digital  
Auto-Trak



AVAPS-AE





## DreamStation BiPAP AVAPS & S/T

### AVAPS-AE

- 合并自动气道管理和平均容量保障双重自动功能，既可以保证气道开放程度，又能兼得AVAPS的临床疗效
- Automatically maintains a patent airway and maintains a targeted tidal volume with the proven performance of AVAPS
- 使用舒适的EPAP有效保证上气道开放
- Applies comfortable pressures to achieve a patent upper airway
- 自动后备通气频率随时贴合患者的静息呼吸频率
- Applies an auto backup rate near a patient's resting rate
- 相比于手动滴定，AVAPS-AE模式在夜间通气治疗时可以延长20%的总睡眠时间
- Increases Total Sleep Time by 20% when compared to manual titration for nocturnal ventilation\*†

AVAPS

平均容量保障  
压力支持  
AVAPS



自动气道管理  
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AVAPS-AE

\*With respiratory insufficiency patients diagnosed with COPD

† Murphy, Patrick, et al. "The effect of volume targeted pressure support (PS) ventilation with auto titrating expiratory positive airways pressure (EPAP) and backup rate (BUR) on sleep quality in COPD-obstructive sleep apnea (OSA) overlap syndrome." European Respiratory Journal 42:Suppl 57 (2013): P2583

## DreamStation BiPAP AVAPS & S/T

### AVAPS-AE

- 在S/T通气模式上叠加三重自动功能
- S/T mode (with auto features)
- 设定EPAP和压力支持水平的最大值和最小值——自动调压的范围值
- Min/Max - EPAP and Pressure Support allow for auto therapy adjustments
- 灵活的后备通气频率设置（自主触发、固定和自动后备通气频率）
- Flexible BUR setting (spontaneous, fixed and auto)
- 利用阻力震荡技术（FOT, 5Hz 1cmH<sub>2</sub>O的振荡波）探测并判断气道的开放情况
- FOT (5 hz at 1cm amplitude) intervals to determine airway patency/state changes



平均容量保障  
压力支持  
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DreamStation BiPAP AVAPS & S/T

## 高效设置，自信在手

BiPAP AVAPS & S/T therapy you can trust

为每位患者提供满足长期治疗中不同需求的个性化治疗方案

Helps you feel confident to treat because each patient is unique

- 满足患者的不同需求
- Adapts to unique needs of patients
- 矫正患者的通气问题
- Normalizes patient ventilation
- 自动气道管理保障气道持续开放
- Automatically manages patient's airway
- 减少OSA事件\*
- Helps reduce OSA events\*
- 在所有双水平模式下可保障通气量
- Supports their ventilation in any mode

\* With the application of automated airway management or a prescription set with a strict protocolised setup

**PHILIPS**



DreamStation 平台

## 以用户为中心的设计理念

Powerful, patient-driven design

- AVAPS功能自动调整IPAP保证稳定的通气量，从而降低PaCO<sub>2</sub>\*†
- AVAPS ventilation feature automatically provides treatment for PaCO<sub>2</sub> reduction\*†
- AVAPS功能相比于单纯的S/T模式，可以更加有效的降低PtcCO<sub>2</sub>
- AVAPS provides beneficial physiological improvements, resulting in a more efficient decrease of PtcCO<sub>2</sub> compared to BPV-S/T therapy alone\*

在以下方面可与睡眠室滴定的PS效果相媲美

Produces results comparable to sleep lab titration of PS in:



降低  
PaCO<sub>2</sub>  
CO<sub>2</sub> reduction



生活质量  
(HRQL)



睡眠质量  
Sleep quality



\*With respiratory insufficiency patients diagnosed with Obesity Hypoventilation Syndrome

† Storre, J.H., Seuthe, B., Fiechter, R., and Windisch, W., Average volume-assured pressure support in obesity hypoventilation, *Chest* 130(3):815-21, Sept. 2006

^ Murphy, PB Thorax thoraxjnl-2011-201081: Published Online First: 1 March 2012 doi:10.1136/thoraxjnl-2011-201081





DreamStation BiPAP AVAPS & S/T

## BiPAP AVAPS & S/T，值得信赖

BiPAP AVAPS & S/T therapy you can trust

DreamStation BiPAP AVAPS 和 S/T在DreamStation的全新平台上搭载了可靠且独特的功能，使用更简单，治疗更有效

The DreamStation BiPAP AVAPS & S/T delivers the trusted features of the DreamStation platform to help you manage your business and your patients' therapy.



- 性能检测功能可一键排查设备故障
- Performance Check for easy remote troubleshooting
- 支持Wi-Fi、蓝牙等多种远程连接和数据传输方式
- Available Wi-Fi, Bluetooth and cellular connectivity options for therapy data transmission and script changes
- EncoreAnywhere可与EMR系统连接
- EncoreAnywhere, which connects to EMR platforms and allows for changing settings remotely

DreamStation BiPAP AVAPS & S/T

## BiPAP AVAPS & S/T, 值得信赖

BiPAP AVAPS & S/T therapy you can trust

5种通气模式，应对从基础到复杂  
患者的不同需求

Choice of five ventilation modes for your basic to  
your more complex patients

内置Wi-Fi和蓝牙模块进行远程  
数据连接

Integrated connectivity with option to add  
cellular service or a Wi-Fi modem for remote  
connectivity

循环滚动菜单，轻松上手，床旁  
操作更简单

Continuous Flow menu for easy setup and real  
time bedside titration for clinicians



## 总结

### Takeaways

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1

治疗效果经过临床验证  
Clinically proven to support your patients

2

在任何一种双水平模式下都可以解决  
低通气和OSA问题  
Able to manage hypoventilation and OSA in  
any noninvasive ventilation mode

3

可根据患者需求，量身定制治疗方案  
Customizable therapy to meet the needs of a  
diverse set of patients

4

DreamStation全面升级的硬件平台，让  
呼吸治疗更加高效  
Equipped with the trusted DreamStation  
platform features to provide NIV therapy  
effectively and efficiently

飞利浦致力于满足各种患者复杂且不断变换的需求的解决方案

全新DreamStation平台兼备多重自动算法及功能，更大程度上满足了患者在呼吸治疗和管理的过程中不断变化的需求

Philips offers solutions that adapt to the complex and changing demands of your patients.

Let us show you how the power of the DreamStation platform can help you adapt to the changing demands of healthcare.



