ResMed

Script conversion guide

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IMPORTANT: The comparisons presented are intended to serve only as a reference for clinicians, based on publicly-available user guides for competitor products (reference 1120832 04/2015, 1002159 06/2010, 1105933 01/2013, 1071073 12/2010). They may not reflect the most up-to-date information regarding competitive products from the manufacturer; therefore, please reference their current manufacturer user guides as needed.

Therapy mode conversion recommendations

Scripted therapy mode	ResMed therapy mode	ResMed therapy device	HCPCS coding
CPAP	CPAP	AirSense™ 10 Elite	E0601
APAP	AutoSet™	AirSense 10 AutoSet / AutoSet for Her	E0601
Bilevel	S	AirCurve™ 10 S	E0470
Bilevel	S	S9 VPAP™ COPD	E0470
Auto-Bilevel	VAuto	AirCurve 10 VAuto	E0470
T	T	AirCurve 10 ST / AirCurve 10 ST-A	E0471
ST	ST	AirCurve 10 ST / AirCurve 10 ST-A	E0471
ASV (with fixed EPAP)	ASV	AirCurve 10 ASV	E0471
ASV (with auto-EPAP)	ASVAuto	AirCurve 10 ASV	E0471
AVAPS	iVAPS	AirCurve 10 ST-A	E0471

Scripted therapy mode: CPAP

Mode	Philips	ResMed recommended setting		Mode
CPAP	DreamStation™ CPAP Pro	AirSense 10 Elite	Conversion formula	CPAP
	CPAP (4–20 cm H_2O)	CPAP (4–20 cm H_2O)	CPAP = CPAP	
	Flex (C-Flex, C-Flex+, None)	EPR (Full Time, Ramp Only, Off)	EPR = Set to Full Time if C-Flex or C-Flex+ scripted; if not scripted, consider using to aid therapy comfort and acceptance, or set to Off	
	Flex Level (1, 2, 3)	EPR Level (1, 2, 3)	EPR Level = Flex Level	
	Ramp Time (0–45 mins, SmartRamp)	Ramp Time (0–45 mins, AutoRamp)	Ramp Time = Ramp Time	
	Ramp Start (4–[CPAP] cm H_2O)	Start Pressure (4–[CPAP] cm H_2O)	Start Pressure = Ramp Start	

Example

CPAP	DreamStation CPAP Pro	AirSense 10 Elite	Conversion formula	CPAP
	CPAP: 10.0 cm H_2O	CPAP: 10.0 cm H_2O	CPAP = CPAP	
	Flex: C-Flex+	EPR: Full Time	EPR = Flex	
	Flex Level: 3	EPR Level: 3	EPR Level = Flex Level	
	Ramp Time: 20 mins	Ramp Time: 20 mins	Ramp Time = Ramp Time	
	Ramp Start: 4.0	Start Pressure: 4.0	Start Pressure = Ramp Start	

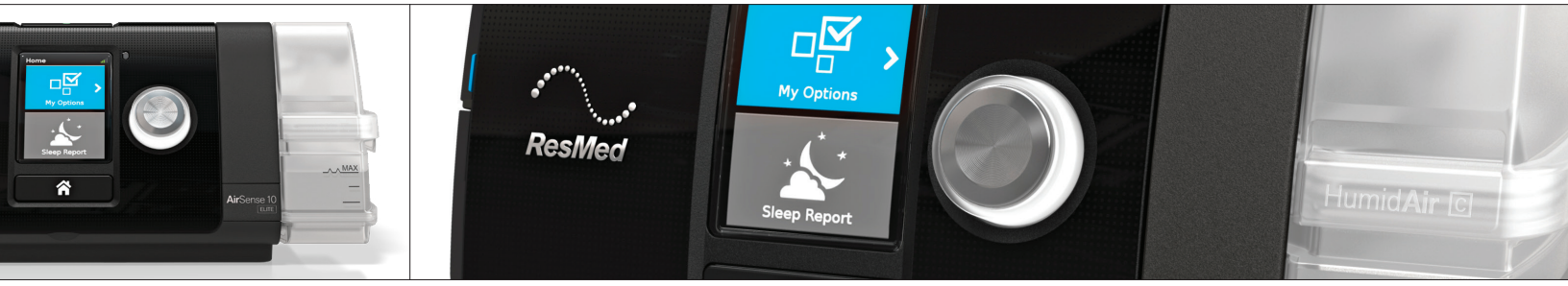
HCPCS coding	Description
E0601	CPAP devices

Scripted therapy mode: CPAP

EPR

C-Flex and ResMed EPR™ (expiratory pressure relief) are both pressure relief technologies. They lower pressure when your patient exhales so they can breathe more comfortably.

EPR uses the patented Easy-Breathe waveform. Easy-Breathe replicates the wave shape of normal breathing to deliver a smooth, natural breathing experience. EPR maintains optimal treatment for the patient during inhalation and reduces the delivered mask pressure during exhalation. Like C-Flex, EPR has three levels of pressure relief. However, unlike C-Flex, ResMed EPR is highly predictable, with each setting corresponding to set pressure reduction. Setting 1 reduces pressure by 1 cm H_2O for mild relief, Setting 2 reduces pressure by 2 cm H_2O for moderate relief, and Setting 3 reduces pressure by 3 cm H_2O for maximum pressure relief during exhalation. EPR can be set for use throughout the therapy session (Full Time) or during the ramp period only. Setting EPR to Ramp Only enables EPR as your patients are falling asleep, when they're generally more aware of the pressure. When the ramp period expires, pressure reverts comfortably to the prescribed CPAP level.



Scripted therapy mode: APAP

Mode	Philips	ResMed recommended setting		Mode
APAP	DreamStation Auto CPAP	AirSense 10 AutoSet / AutoSet for Her	Conversion formula	AutoSet / AutoSet for Her Note: CPAP mode also available on device
	Auto Max (4–20 cm H_2O)	Max Pressure (4–20 cm H_2O)	Max Pressure = Auto Max	
	Auto Min (4–20 cm H_2O)	Min Pressure (4–20 cm H_2O)	Min Pressure = Auto Min	
	Flex (C-Flex, A-Flex, None)	EPR (Full Time, Ramp Only, Off)	EPR: Set to Full Time if C-Flex or A-Flex scripted; if not scripted, consider using to to aid therapy comfort and acceptance, or set to Off	
	Flex Level (1, 2, 3)	EPR Level (1, 2, 3)	EPR Level = Flex Level	
	Ramp Time (0–45 mins, SmartRamp)	Ramp Time (0–45 mins, AutoRamp)	Ramp Time = Ramp Time	
	Ramp Start (4–[Auto Min] cm H_2O)	Start Pressure (4–[Min Pressure] cm H_2O)	Start Pressure = Ramp Start	

Example

APAP	DreamStation Auto CPAP	AirSense 10 AutoSet / AutoSet for Her	Conversion formula	AutoSet
	Auto Max: 20 cm H_2O	Max Pressure: 20 cm H_2O	Max Pressure = Auto Max	
	Auto Min: 4 cm H_2O	Min Pressure: 4 cm H_2O	Min Pressure = Auto Min	
	Flex Type: A-Flex	EPR: Full Time	EPR = Flex	
	Flex Level: 3	EPR Level: 3	EPR Level = Flex Level	
	Ramp Time: 20 mins	Ramp Time: 20 mins	Ramp Time = Ramp Time	
	Ramp Start: 4.0	Start Pressure: 4.0	Start Pressure = Ramp Start	

HCPCS coding	Description
E0601	CPAP devices

Scripted therapy mode: APAP

EPR

C-Flex, A-Flex and ResMed EPR™ (expiratory pressure relief) are pressure relief technologies. They lower pressure when your patient exhales so that they can breathe more comfortably.

EPR uses the patented Easy-Breathe waveform. Easy-Breathe replicates the wave shape of normal breathing to deliver a smooth, natural breathing experience. Like C-Flex, EPR has three levels of pressure relief. However, unlike C-Flex and A-Flex, EPR is highly predictable, with each setting corresponding to set pressure reduction. Setting 1 reduces pressure by 1 cm H_2O for mild relief, Setting 2 reduces pressure by 2 cm H_2O for moderate relief, and Setting 3 reduces pressure by 3 cm H_2O for maximum pressure relief during exhalation. EPR can be set for use throughout the therapy session (Full Time) or during the ramp period only. Setting EPR to Ramp Only enables EPR as your patients are falling asleep, when they're generally more aware of the pressure. When the ramp period expires, the device will start automatically adjusting pressure in response to changes in your patient's upper airway patency.

Auto and AutoSet

Auto and AutoSet™ are therapy modes that automatically adjust pressure in response to changes in your patient's upper airway patency. Pressure is increased when upper airway instability is detected and reduced again after a time period without events. Unlike CPAP, this type of therapy (often referred to as APAP) allows for changes in your patient's pressure needs both within a single night, and also on a night-to-night basis. Pressure needs can vary based on sleep position, alcohol consumption, seasonal allergies, weight gain or loss and other lifestyle changes.

ResMed's AutoSet mode adjusts pressure delivery to provide the lowest pressure required to keep your patient's airway open. The AutoSet algorithm continually monitors your patient's breathing, adjusting pressure breath by breath and responding immediately to airway changes such as flow limitation, snoring and obstructive apneas. Flow limitation often precedes snoring and apneas, so by responding to flow limitation, AutoSet is able to preemptively treat apneic events and prevent more serious, subsequent events from occurring. Unlike some other APAP algorithms, AutoSet assesses the severity of the event and determines the best pressure, applying it comfortably. The algorithm also monitors and compensates for mask seal (unintentional) leak. Forced oscillation technique (FOT) is used by the algorithm to determine the state of the airway during apneas, allowing the device to differentiate between central and obstructive events. The apnea type is reported in the data recorded by the device, and pressure increases only occur if the apnea was determined to be obstructive.

AutoSet for Her

There is evidence to show that sleep apnea in women is different from sleep apnea in men.[1] Typically, women take longer to fall asleep and have greater flow limitations and more frequent arousals during sleep than men.[2] Women with obstructive sleep apnea (OSA) also tend to have fewer and shorter apneas or hypopneas, as well as a lower apnea–hypopnea index (AHI).[3] With nearly 40% of newly diagnosed sleep apnea patients being women,[4] it was important to develop the first therapy device specifically designed to meet their needs.

ResMed AirSense™ 10 AutoSet for Her is the first device that provides therapy tailored to respond to female-specific characteristics of sleep-disordered breathing. It works by increasing sensitivity to flow limitation and optimizing the response to these events. By responding to each flow-limited breath, the algorithm helps provide comfortable therapy. The AirSense10 AutoSet for Her can be paired with the AirFit™ for Her mask series to provide a complete offering for women.

1 Lin CM, Davidson TM and Ancoli-Israel S. Gender differences in obstructive sleep apnea and treatment implications. *Sleep Med Rev* 2008. 12(6): 481-96

2 Valipour et al. Gender-related differences in symptoms of patients with suspected breathing disorders in sleep: a clinical population study using the sleep disorders questionnaire. *Sleep* 2007. 30(3): 312-9

3 O'Connor C, Thornlye KS and Hanly PJ. Gender differences in the polysomnographic features of obstructive sleep apnea. *Am J Respir Crit Care Med* 2000. 161(5): 1465-726

4 Medicare 5% sample & OptumInsight medical claims data, 2012

Scripted therapy mode: Bilevel (S)

Mode	Philips	ResMed recommended setting		Mode
Bilevel	DreamStation BiPAP® Pro	AirCurve 10 S	Conversion formula	S Note: CPAP mode also available on device
	IPAP (4–25 cm H_2O)	IPAP (4–25 cm H_2O)	IPAP = IPAP	
	EPAP (4–25 cm H_2O)	EPAP (4–25 cm H_2O)	EPAP = EPAP	
	Flex (Bi-Flex®, None)	Easy-Breathe (On, Off)	Easy-Breathe: Set to On if Bi-Flex is scripted; if not scripted then consider using to aid therapy comfort and acceptance, or set to Off and select appropriate Rise Time for the patient	
	Flex Setting (1, 2, 3)			

Example

Bilevel	DreamStation BiPAP Pro	AirCurve 10 S	Conversion formula	S
	IPAP: 17 cm H_2O	IPAP: 17 cm H_2O	IPAP = IPAP	
	EPAP: 12 cm H_2O	EPAP: 12 cm H_2O	EPAP = EPAP	
	Flex: Bi-Flex	Easy-Breathe: On	Easy-Breathe: Set to On if Bi-Flex is scripted	
	Bi-Flex (1, 2, 3): 2			

HCPCS coding	Description
E0470	Bilevel device without a backup rate

Scripted therapy mode: Bilevel (S)

Bilevel devices without a backup rate

Bilevel devices without a backup rate can be used to treat OSA in patients who are ineffectively treated with, or unable to tolerate, CPAP/APAP therapy, or those who require high therapy pressures to manage their upper airway patency (typically considered to be pressures higher than 15 cm H_2O). With the ability to independently control both inspiratory (IPAP) and expiratory (EPAP) pressures, these devices can be adjusted in the sleep lab so that upper airway instability is treated while achieving a comfortable exhalation pressure for your patient. EPAP is usually adjusted for obstructive apneas, and IPAP for obstructive hypopneas and snoring. In patients who have shown intolerance to CPAP, the recommended initial titration settings for S mode are IPAP=CPAP setting and EPAP=[4 cm H_2O below IPAP].

These devices rely on the patient spontaneously breathing and therefore being able to trigger (beginning of inhalation) and cycle (beginning of exhalation) the device. The AirCurve 10 S device and mode name (S) refer to this spontaneous breathing.

Bi-Flex and Easy-Breathe

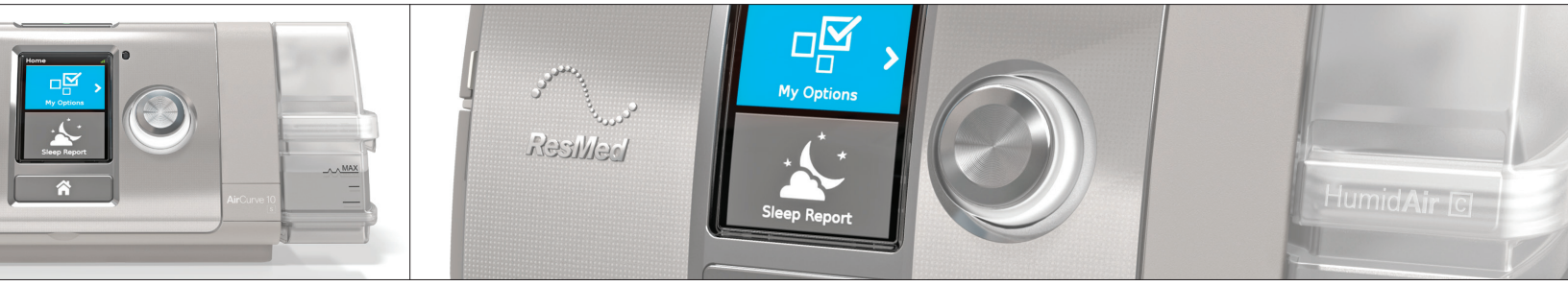
Bi-Flex® and Easy-Breathe are both comfort technologies that are offered as alternatives to the traditional square/ventilation waveform. Bi-Flex takes the traditional square waveform and softens both inspiration and expiration. Three Bi-Flex settings lower the pressure by increasing amounts at the beginning of expiration prior to returning to the EPAP level. ResMed's patented Easy-Breathe waveform replicates the wave shape of normal breathing to deliver a smooth, natural breathing experience. Easy-Breathe is designed for patients with normal lung mechanics and may be set to either On or Off. If Easy-Breathe is disabled, a traditional square waveform is provided and the Rise Time setting can be used to adjust the rate at which pressure transitions from EPAP to IPAP. Rise Time may be adjusted for comfort or according to lung mechanics. A longer time would slow the transition and may be more comfortable for patients with normal lung mechanics or for those who breathe slowly. Patients with high ventilatory demand may prefer a shorter Rise Time. Vsync, ResMed's automatic leak compensation algorithm, is used to reliably detect breaths to maintain synchrony with the patient's breathing and optimize comfort.

Inspiratory time and trigger and cycle sensitivities

ResMed's S therapy mode includes a number of secondary settings that can be used to fine-tune therapy for your patients. While default values should be appropriate for most patients, these technologies can also be used to accommodate their *unique* needs.

TiControl provides minimum and maximum inspiratory time limits (Ti Min and Ti Max settings, respectively) for each breath. Ti Min and Ti Max can be used to prolong or limit, respectively, the time the device spends at IPAP. Along with Vsync, TiControl can ensure synchronization even in the presence of significant mouth and/or mask leak.

Adjustable trigger and cycle sensitivities can be used to optimize synchrony. The device triggers (initiates IPAP) and cycles (initiates EPAP) as it senses changes in patient flow. At higher sensitivity settings, smaller flow changes make it easier for the patient to trigger and cycle the device.



Scripted therapy mode: Bilevel

Mode	Philips	ResMed recommended setting		Mode
Bilevel	DreamStation BiPAP Pro	S9 VPAP COPD	Conversion formula	S Note: CPAP mode also available on device
	IPAP (4–25 cm H_2O)	IPAP (4–30 cm H_2O)	IPAP = IPAP	
	EPAP (4–25 cm H_2O)	EPAP (3–25 cm H_2O)	EPAP = EPAP	
	Flex (Bi-Flex, None)		Default rise time has been optimized for COPD patients. Adjust the rise time as required to improve comfort and outcomes.	
	Flex Level (1, 2, 3)			

Example

Bilevel	DreamStation BiPAP Pro	S9 VPAP COPD	Conversion formula	S
	IPAP: 17 cm H_2O	IPAP: 17 cm H_2O	IPAP = IPAP	
	EPAP: 12 cm H_2O	EPAP: 12 cm H_2O	EPAP = EPAP	
	Flex: Bi-Flex		Default rise time has been optimized for COPD patients. Adjust the rise time as required to improve comfort and outcomes.	
	Flex Level: 2			

HCPCS coding	Description
E0470	Bilevel device without a backup rate

Scripted therapy mode: Bilevel

VPAP COPD

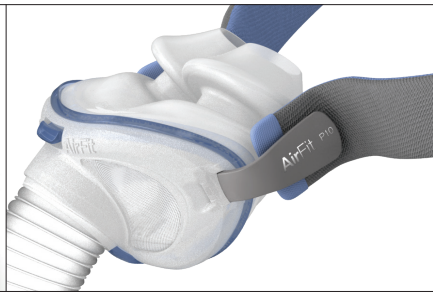
VPAP COPD is the first and only spontaneous bilevel device without a backup rate, designed and indicated to treat chronic obstructive pulmonary disease (COPD). COPD patients who require NIV have specific needs to ensure optimal ventilation. These patients often have difficulty exhaling air, which can lead to gas trapping and hyperinflation. Maintaining synchrony and comfort for these patients is critical in getting them to be compliant with their therapy. VPAP COPD's default settings make initial setup quick and easy. The fast rise time, high-cycle sensitivity and shortened Ti Max all contribute to minimizing hyperinflation and improving synchrony and comfort.

Inspiratory time and trigger and cycle sensitivities

ResMed's S therapy mode includes a number of secondary settings that can be used to fine-tune therapy for your patients. While default values should be appropriate for most patients, these technologies can also be used to accommodate their *unique* needs.

TiControl provides minimum and maximum inspiratory time limits (Ti Min and Ti Max settings, respectively) for each breath. Ti Min and Ti Max can be used to prolong or limit, respectively, the time the device spends at IPAP. Along with Vsync, TiControl can ensure synchronization even in the presence of significant mouth and/or mask leak.

Adjustable trigger and cycle sensitivities can be used to optimize synchrony. The device triggers (initiates IPAP) and cycles (initiates EPAP) as it senses changes in patient flow. At higher sensitivity settings, smaller flow changes make it easier for the patient to trigger and cycle the device.



Scripted therapy mode: Auto-bilevel

Mode	Philips	ResMed recommended setting		Mode
Auto-bilevel	DreamStation Auto BiPAP	AirCurve 10 VAuto	Conversion formula	VAuto Note: CPAP and S modes also available on device
	IPAP Max (4–25 cm H_2O)	Max IPAP (4–25 cm H_2O)	Max IPAP = IPAP Max	
	EPAP Min (4–25 cm H_2O)	Min EPAP (4–25 cm H_2O)	Min EPAP = EPAP Min	
	PS Min (0–8 cm H_2O)			
	PS Max (0–8 cm H_2O)	PS (0–10 cm H_2O)	Adjust PS for comfort; selected PS should not exceed Max PS and should ideally be 4 cm H_2O or greater to provide expiratory relief	
	Flex (Bi-Flex, None)			
	Flex Level (1, 2, 3)			

Example

Auto-bilevel	DreamStation Auto BiPAP	AirCurve 10 VAuto	Conversion formula	VAuto
	IPAP Max: 25 cm H_2O	Max IPAP: 25 cm H_2O	Max IPAP = IPAP Max	
	EPAP Min: 6 cm H_2O	Min EPAP: 6 cm H_2O	Min EPAP = EPAP Min	
	PS Min: 0			
	PS Max: 6	PS: 4 cm H_2O	Adjust PS for comfort; selected PS should not exceed Max PS and should ideally be 4 cm H_2O or greater to provide expiratory relief	
	Flex: Bi-Flex			
	Flex Level: 2			

HCPCS coding	Description
E0470	Bilevel device without a backup rate

Scripted therapy mode: Auto-bilevel

Bilevel devices without a backup rate

Bilevel devices without a backup rate can be used to treat OSA in patients who are ineffectively treated with, or unable to tolerate, CPAP/APAP therapy, or those who require high therapy pressures to manage their upper airway patency (typically considered pressures higher than 15 cm H_2O). In Spontaneous (S) mode, inspiratory (IPAP) and expiratory (EPAP) pressures are set, and the difference between the two pressures is known as Pressure Support (PS). The IPAP and EPAP are fixed values and are usually titrated, like CPAP, to resolve upper airway instability and keep the airway open. For auto-bilevels, such as the AirCurve 10 VAuto and Auto BiPAP, the pressures are automatically titrated by device algorithms to keep the upper airway open. The lower and upper pressures used by the algorithms can be controlled using the Min EPAP and Max IPAP settings. In ResMed's VAuto mode, a Pressure Support value is set according to what is most comfortable to the patient (a starting value of 4 cm H_2O is commonly used) and is fixed for the night. The absolute IPAP and EPAP values are automatically adjusted by the algorithm, responding to snore, flow limitation and obstructive apneas. But the difference between the inspiratory and expiratory pressure remains consistent throughout the night. The auto-bilevel mode on the Auto BiPAP uses a range of pressure support values that are selected using the PS Min and PS Max settings. The algorithm automatically adjusts EPAP and IPAP separately, with EPAP adjusted for snore and apnea and IPAP adjusted for flow limitation and hypopneas.

Like standard, spontaneous (S) bilevel therapy, these auto-bilevel devices depend on a patient's ability to spontaneously breathing to trigger (beginning of inhalation) and cycle (beginning of exhalation) the device.

Bi-Flex and Easy-Breathe

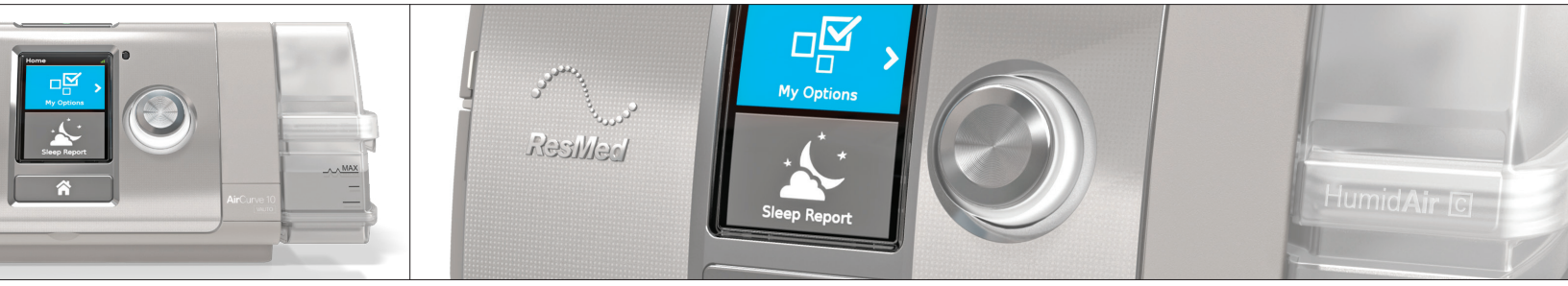
Bi-Flex and Easy-Breathe are both comfort technologies that are offered as alternatives to the traditional square, ventilation waveform. Bi-Flex takes the traditional square waveform and softens both inspiration and expiration. Three Bi-Flex settings lower the pressure by increasing amounts at the beginning of expiration prior to returning to the EPAP level. ResMed's VAuto mode uses the patented Easy-Breathe waveform, which replicates the wave shape of normal breathing to deliver a smooth, natural breathing experience. Easy-Breathe is designed to be ultra comfortable for patients with normal lung mechanics. Vsync, ResMed's automatic leak compensation algorithm, is used to reliably detect breaths to maintain synchrony with the patient's breathing and optimize comfort.

Inspiratory time and trigger and cycle sensitivities

ResMed's VAuto therapy mode includes a number of secondary settings that can be used to fine-tune therapy for your patients. While default values should be appropriate for most patients, these technologies can be used to accommodate their *unique* needs.

TiControl provides minimum and maximum inspiratory time limits (Ti Min and Ti Max settings, respectively) for each breath. Ti Min and Ti Max can be used to prolong or limit, respectively, the time the device spends at IPAP. Along with Vsync, TiControl can ensure synchronization even in the presence of significant mouth and/or mask leak.

Adjustable trigger and cycle sensitivities can be used to optimize synchrony. The device triggers (initiates IPAP) and cycles (initiates EPAP) as it detects changes in patient flow. At higher sensitivity settings, smaller flow changes make it easier for the patient to trigger and cycle the device.



Scripted therapy mode: T

Mode	Philips	ResMed recommended setting		Mode
T	BiPAP S/T	AirCurve ST / AirCurve 10 ST-A	Conversion formula	T
	IPAP (4–25 cm H_2O)	IPAP (4–25 cm H_2O) / IPAP (4–30 cm H_2O)	IPAP = IPAP	Note: CPAP and ST modes also available on device ST-A devices include CPAP, ST, T, PAC and iVAPS modes
	EPAP (4–25 cm H_2O)	EPAP (4–25 cm H_2O) / EPAP (3–25 cm H_2O)	EPAP = EPAP	
	Breath Rate (0–30 bpm)	Respiratory Rate (5–50 bpm)	Respiratory Rate = Breath Rate	
	Ti (0.5–3.0 sec)	Ti (0.1–4.0 sec)	Ti = Ti	
	Rise Time Control (Yes, No)			
	Rise Time (0–3 ms)	Rise Time (Min/100–900 ms)	Set Rise Time according to: 1 = 200 ms, 2 = 300 ms, 3 = 400 ms	

Example

T	BiPAP S/T	AirCurve ST / AirCurve 10 ST-A	Conversion formula	T
	IPAP: 17 cm H_2O	IPAP: 17 cm H_2O	IPAP = IPAP	
	EPAP: 12 cm H_2O	EPAP: 12 cm H_2O	EPAP = EPAP	
	Breath Rate: 10	Respiratory Rate (RR): 10		
	Ti: 4 sec	Ti: 4 sec	Ti = Ti	
	Rise Time Control: Yes			
	Rise Time: 2	Rise Time: 300 ms		

HCPCS coding	Description
E0471	Bilevel device with a backup rate

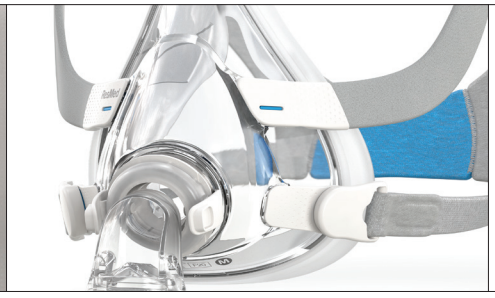
Scripted therapy mode: T

Bilevel devices with a backup rate

The ResMed AirCurve 10 ST, AirCurve 10 ST-A and BiPAP S/T include a Timed (T) therapy mode. In T mode, devices provide a fixed breath rate and fixed inspiration expiration time regardless of patient effort.

Rise Time

The Rise Time setting adjusts the rate at which pressure transitions from EPAP to IPAP. Rise Time may be adjusted for comfort or according to lung mechanics. A longer time would slow the transition and may be more comfortable for patients with normal lung mechanics or those who breathe slowly. Patients with high ventilatory demand may prefer a shorter Rise Time. A typical Rise Time for a patient with normal lungs is 300 milliseconds (ms). Restrictive patients may also prefer a 300 ms Rise Time. Patients with obstructive lung diseases may prefer faster Rise Times to fill their lungs quickly (potentially leaving more time for a prolonged exhalation to reduce air trapping). Rise Time should not be set longer than the patient's normal inspiratory time. On the BiPAP S/T, Rise Time settings are represented as a range (0, 1, 2, 3). On ResMed's AirCurve 10 ST and AirCurve 10 ST-A, Rise Time settings are presented in milliseconds (ms) and adjusted in 50-ms increments.



Scripted therapy mode: S/T

Mode	Philips	ResMed recommended setting		Mode
S/T	BiPAP® S/T	AirCurve 10 ST / AirCurve 10 ST-A	Conversion formula	ST Note: CPAP, ST and T modes also available on device ST-A devices include CPAP, ST, T, PAC and iVAPS modes
	IPAP (4–25 cm H_2O)	IPAP (4–25 cm H_2O) / IPAP (4–30 cm H_2O)	IPAP = IPAP	
	EPAP (4–25 cm H_2O)	EPAP (4–25 cm H_2O) / EPAP (3–25 cm H_2O)	EPAP = EPAP	
	Breath Rate (0–30 bpm)	Respiratory Rate (5–50 bpm)	Respiratory Rate = Breath Rate	
	Rise Time Control (Yes, No)			
	Rise Time (0–3 ms)	Rise Time (Min/100–900 ms)	Set Rise Time according to: 1 = 200 ms, 2 = 300 ms, 3 = 400 ms	

Example

S/T	BiPAP® S/T	AirCurve 10 ST / AirCurve 10 ST-A	Conversion formula	ST
	IPAP: 17 cm H_2O	IPAP: 17 cm H_2O	IPAP = IPAP	
	EPAP: 12 cm H_2O	EPAP: 12 cm H_2O	EPAP = EPAP	
	Breath Rate: 10	Respiratory Rate (RR): 10	Respiratory Rate = Breath Rate	
	Rise Time Control: Yes			
	Rise Time: 1	Rise Time: 200 ms		

HCPCS coding	Description
E0471	Bilevel device with a backup rate

Scripted therapy mode: S/T

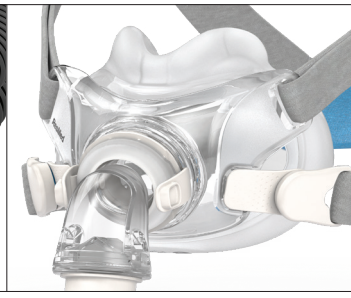
Bilevel devices with a backup rate

The ResMed AirCurve 10 ST, AirCurve 10 ST-A and BiPAP S/T include both Timed (T) and Spontaneous/Timed (S/T) therapy modes. In S/T mode, the devices augment breaths initiated by the patient and will also supply additional breaths should the patient's breath rate fall below the set backup breath rate.

Inspiratory time and trigger and cycle sensitivities

ResMed's ST therapy mode includes a number of secondary settings that can be used to fine-tune therapy for your patient. While default values should be appropriate for most patients, these technologies can also be used to accommodate their *unique* needs. TiControl provides minimum and maximum inspiratory time limits (Ti Min and Ti Max) for each breath. Ti Min and Ti Max can be used to prolong or limit, respectively, the time the device spends at IPAP. Along with Vsync, TiControl can ensure synchronization even in the presence of significant mouth and/or mask leak. Ti Max enables you to set a maximum inspiratory time to reduce the risk of intrinsic positive end-expiratory pressure (PEEP) and missed patient effort. Ti Min can be used to set a minimum inspiratory time to ensure adequate time for gas exchange without having to increase the pressure setting.

ResMed's ST therapy mode also includes adjustable trigger and cycle sensitivities, which can be used to optimize synchrony. The device triggers (initiates IPAP) and cycles (initiates EPAP) as it detects changes in patient flow. At higher sensitivity settings, smaller flow changes make it easier for the patient to trigger and cycle the device. Adjusting trigger sensitivity can support patients with a weak inspiratory effort by increasing sensitivity to every patient effort. Adjustable cycle sensitivity is crucial for those at risk of instrinsic PEEP or premature breath cycle. Setting a rapid rise time and high cycle sensitivity can help decrease the inspiratory time and extend the expiratory time, resulting in improved patient-ventilator synchrony for patients who are prone to intrinsic PEEP. A slower rise time and lower cycle sensitivity, along with an adequate Ti Min, ensure that patients with weak inspiratory effort have adequate time for gas exchange.

Scripted therapy mode: ASV (fixed EPAP)

Mode	Philips	ResMed		Mode
ASV fixed EPAP	BiPAP AutoSV Advanced	AirCurve 10 ASV	Conversion formula	ASV
	Max Pressure (4–25 cm H_2O)		Fixed at 25 cm H_2O	Note: CPAP and ASVAuto modes also available on device
	EPAP (4–25 cm H_2O)	EPAP (4–15 cm H_2O)	EPAP = EPAP	
	PS min (0–21 cm H_2O)	Min PS (0–6 cm H_2O)	Min PS = PS min	
	PS max (0–21 cm H_2O)	Max PS (5–20 cm H_2O)	Max PS = PS max	
	Breath Rate (Auto, 4–30 bpm)		Automatic: Dynamic backup rate built-in	
	Flex Type (None, Bi-Flex)		Automatic: Easy-Breathe waveform	
	Bi-Flex (1, 2, 3)		Automatic: Easy-Breathe waveform	
	Rise Time (1, 2, 3)		Automatic: Easy-Breathe waveform	

Example

ASV fixed EPAP	BiPAP AutoSV Advanced	AirCurve 10 ASV	Conversion formula	ASV
	Max Pressure: 25		Fixed at 25 cm H_2O	
	EPAP: 10	EPAP: 10	EPAP = EPAP	
	PS min: 0	Min PS: 0	Min PS = PS min	
	PS max: 13	Max PS: 13	Max PS = PS max	
	BPM: Auto		Automatic: Dynamic backup rate built-in	
	Flex Type: Bi-Flex		Automatic: Easy-Breathe waveform	
	Bi-Flex: 3		Automatic: Easy-Breathe waveform	
	Rise Time: N/A		Automatic: Easy-Breathe waveform	

HCPCS coding	Description
E0471	Bilevel device with a backup rate

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

Scripted therapy mode: ASV (fixed EPAP)

ASV therapy

In this context, the term ASV therapy is used to describe a therapy for treating central sleep apnea (CSA) in its various forms. However, ASV, or adaptive servo-ventilation, is actually a generic, descriptive term for the functioning of a control system (and is not specific to CSA). ASV devices work by creating an adaptive target, in this case based on the patient's breathing, and then adjusting a parameter, in this case pressure support, to meet that target.

ResMed's unique ASV algorithm uses minute ventilation as the target since this is the most direct measure of patient breathing, enabling the most timely interventions to normalize breathing quickly. The algorithm continually monitors and learns the patient's recent minute ventilation (tidal volume x respiratory rate) and then sets a target at 90% of this value. The algorithm then automatically adjusts the pressure support to meet that target. Patients receive the minimum pressure support (a setting prescribed by the physician) whenever they're breathing at or above this target – such as would occur in normal breathing or hyperpnea (over-breathing). If the patient's instantaneous ventilation decreases away from the target, then pressure support is rapidly increased to bring ventilation back to the target. During this time, pressure support may be automatically increased up to the maximum pressure support value (as prescribed by the physician). In the absence of spontaneous effort, such as in a CSA event, the device inserts breaths at the patient's recent respiratory rate.

The auto-adjusting pressure support (the difference between inspiratory pressure) is provided on top of a manually adjusted EPAP in ResMed's original ASV therapy mode. The EPAP setting is titrated in a sleep lab to a value that keeps the patient's upper airway open (just like with a CPAP device). In ResMed's ASVAuto mode, EPAP is automatically adjusted by the device algorithm in response to flow limitation, snore and obstructive apneas in proportion to the severity of the events (like with ResMed's AutoSet therapy). This algorithm predicts the onset of airway collapse by detecting and assessing the flow shape of each breath, increasing EPAP in response to flow limitation, and detecting and responding to snoring. During obstructive events, instantaneous ventilation decreases away from the target and pressure support is increased in response. The algorithm monitors how minute ventilation responds to the increased pressure support, and if there is little or no flow during this period, it deduces that the airway is obstructed. Once breathing resumes, EPAP is increased to prevent the occurrence of further obstructive apneas. The EPAP range used by the algorithm can be restricted with the Min and Max EPAP settings. Once breathing is stabilized, EPAP gradually decreases towards the minimum EPAP setting, for comfort, over a 20- to 40-minute period depending on the type of event that occurred.

Bi-Flex and Easy-Breathe

Bi-Flex® and Easy-Breathe are both comfort technologies that are offered as alternatives to the traditional square, ventilation waveform. Bi-Flex takes the traditional square waveform and softens both inspiration and expiration. Three Bi-Flex settings lower the pressure by increasing amounts at the beginning of expiration prior to returning to the EPAP level. When Flex is set to Off, a traditional square waveform is used and a Rise Time setting is adjusted to determine how quickly the device moves from providing expiratory to inspiratory pressure. ResMed's ASV therapy uses the patented Easy-Breathe waveform, which replicates the wave shape of normal breathing to deliver a smooth, natural breathing experience. Easy-Breathe is designed to be ultra comfortable for patients with normal lung mechanics. Comfort is further enhanced by the ASV algorithm's high-resolution breath-phase mapping, which learns both patients' respiratory rate and the rate at which they progress through each breath, dynamically predicting inspiratory and expiratory durations. This enables the device to deliver pressure that reaches its therapy peak at end-inspiration and its nadir by end-expiration continuously and smoothly. In addition to delivering optimal synchrony, this information is used to insert breaths at the patient's recent rate during apneas (when spontaneous effort ceases).

Scripted therapy mode: ASV (with auto-EPAP)

Mode	Philips	ResMed		Mode
ASV auto-EPAP	BiPAP AutoSV Advanced	AirCurve 10 ASV	Conversion formula	ASVAuto
	Max Pressure (4–25 cm H_2O)		Fixed at 25 cm H_2O	Note: CPAP and ASV modes also available on device
	EPAP min (4–25 cm H_2O)	Min EPAP (4–15 cm H_2O)	Min EPAP = EPAP min	
	EPAP max (4–25 cm H_2O)	Max EPAP (4–15 cm H_2O)	Max EPAP = EPAP max	
	PS min (0–26 cm H_2O)	Min PS (0–6 cm H_2O)	Min PS = PS min	
	PS max (0–26 cm H_2O)	Max PS (5–20cm H_2O)	Max PS = PS max	
	BPM (Auto, 4–30, Off)		Automatic: Dynamic backup rate built-in	
	Flex Type (None, Bi-Flex)		Automatic: Easy-Breathe waveform	
	Bi-Flex (1, 2, 3)		Automatic: Easy-Breathe waveform	
	Rise Time (1, 2, 3)		Automatic: Easy-Breathe waveform	

Example

ASV auto-EPAP	BiPAP AutoSV Advanced	AirCurve 10 ASV	Conversion formula	ASVAuto
	Max Pressure: 25	Automatic: Total maximum device pressure is 25 cm H_2O	Fixed at 25 cm H_2O	
	EPAP min: 5	Min EPAP: 5	Min EPAP = EPAP min	
	EPAP max: 12	Max EPAP: 12	Max EPAP = EPAP max	
	PS min: 0	Min PS: 0	Min PS = PS min	
	PS max: 13	Max PS: 13	Max PS = PS max	
	BPM: Auto		Automatic: Dynamic backup rate built-in	
	Flex Type: Bi-Flex		Automatic: Easy-Breathe waveform	
	Bi-Flex: 3		Automatic: Easy-Breathe waveform	
	Rise Time: N/A		Automatic: Easy-Breathe waveform	

HCPCS coding	Description
E0471	Bilevel device with a backup rate

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

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ASV therapy

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The auto-adjusting pressure support (the difference between inspiratory pressure) is provided on top of a manually adjusted EPAP in ResMed's original ASV therapy mode. The EPAP setting is titrated in a sleep lab to a value that keeps the patient's upper airway open (just like with a CPAP device). In ResMed's ASVAuto mode, EPAP is automatically adjusted by the device algorithm in response to flow limitation, snore and obstructive apneas in proportion to the severity of the event (like with ResMed's AutoSet therapy). This algorithm predicts the onset of airway collapse by detecting and assessing the flow shape of each breath, increasing EPAP in response to flow limitation, and detecting and responding to snoring. During obstructive events, instantaneous ventilation decreases away from the target and pressure support is increased in response. The algorithm monitors how minute ventilation responds to the increased pressure support, and if there is little or no flow during this period, it deduces that the airway is obstructed. Once breathing resumes, EPAP is increased to prevent the occurrence of further obstructive apneas. The EPAP range used by the algorithm can be restricted with the Min and Max EPAP settings. Once breathing is stabilized, EPAP gradually decreases towards the minimum EPAP setting, for comfort, over a 20- to 40-minute period depending on the type of event that occurred.

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Scripted therapy mode: AVAPS

Mode	Philips	ResMed		Mode
AVAPS	BiPAP AVAPS	AirCurve 10 ST-A	Conversion formula	iVAPS
	Tidal Volume (Vte; mL)	Target Alveolar Ventilation (1–30 L/min)	Target Va: set Vt = Vte (Vt, along with the patient's height and RR, can be used to calculate the Va)	Note: CPAP, S, ST and T modes also available on device
	IPAP Max (4–25 cm H_2O)	Max PS (0–27 cm H_2O)	Max PS = IPAP Max–EPAP	
	IPAP Min (4–25 cm H_2O)	Min PS (0–20 cm H_2O)	Min PS = IPAP Min–EPAP	
	EPAP (4–IPAP)	EPAP (3–25 cm H_2O)	EPAP = EPAP	
	BPM (breaths per minute): 0–30	Target Pt Rate (8–30 bpm)	See Recommendation Table	
		Height (44–100 inches)	Set to patient's actual height in inches	

Example

AVAPS	BiPAP AVAPS	AirCurve 10 ST-A	Conversion formula	iVAPS
	Tidal Volume (Vte): 500 mL	Target Alveolar Ventilation: set Vt = 500 mL		
	IPAP Max: 15 cm H_2O	Max PS: 10 cm H_2O	Max PS = IPAP Max–EPAP	
	IPAP Min: 10 cm H_2O	Min PS: 5 cm H_2O	Min PS = IPAP Min–EPAP	
	EPAP: 5 cm H_2O	EPAP: 5 cm H_2O	EPAP = EPAP	
	BPM (breaths per minute): 12/min	Target Pt Rate: 15/min		
		Height: 72 inches (6 ft)	Set to patient's actual height in inches	

Backup rate recommendation table																
Philips Respironics Breaths per Minute (bpm)	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
ResMed Target Patient Rate (RR)	15	15	15	15	15	15	16	17	18	19	20	21	22	23	24	25

Optimally, Target Patient Rate (RR) should be set at the patient's spontaneous respiratory rate

HCPCS coding	Description
E0471	Bilevel device with a backup rate

Scripted therapy mode: AVAPS

iVAPS

iVAPS* and AVAPS therapies are volume-assured pressure support devices using a fixed EPAP and auto-adjusting pressure support to manage patients with hypoventilation – particularly those whose conditions are likely to change. Patient conditions may include: restrictive conditions such as neuromuscular disease and obstructive conditions such as chronic obstructive pulmonary disease (COPD).

iVAPS is designed to automatically adjust pressure support and maintain a target alveolar ventilation (learned by the device or set by a clinician). Targeting alveolar ventilation takes into account a patient's anatomical dead space, to ventilate patients more effectively. Unlike other volume-assured modes, iVAPS maintains the alveolar target even when respiratory rate changes with its intelligent Backup Rate (iBR). Target alveolar ventilation (Va) requires the input of patient height information to estimate anatomical dead space.

NIV with Volume-Assured Pressure Support (VAPS)

Noninvasive ventilation (NIV) has two key goals: to improve the exchange of oxygen and carbon dioxide, and to support the work of breathing when the patient's own physiology is ineffective. To achieve these goals, the appropriate inspiratory and expiratory pressures (IPAP and EPAP settings) to support the patient's ventilatory demands needs to be determined. In patients with progressive conditions (and even during different sleep states or body positions), the IPAP and EPAP settings required to achieve this objective may change over time. These patients may benefit from volume-assured pressure support devices that use auto-adjusting pressure support to reach a prescribed ventilation target and therefore adjust the IPAP according to the patient's changing needs. iVAPS adapts to the patient's changing ventilatory requirements by constantly monitoring their alveolar ventilation in relation to target aleolar ventilation, and the patient's actual respiratory rate in relation to the target rate. iVAPS is quick enough to maintain stable alveolar ventilation, helping to minimize disruptions to blood gases even during sleep, especially during postural changes and REM sleep. This may in turn contribute to improved daytime ventilation.

Intelligent Backup Rate (iBR)

ResMed's iVAPS technology accommodates changes in your patient's respiratory rate to consistently meet the required ventilation target. iBR maximizes the patient's opportunity to spontaneously breathe yet provides a safety net with backup breaths when required. iBR stays out of the way while the patient is spontaneously breathing and steps in during periods of no spontaneous effort, using the patient's own breath rate.

** iVAPS mode is indicated for patients weighing more than 66 lbs (30 kg).*

Scripted therapy mode: AVAPS

Inspiratory time and trigger and cycle sensitivities

ResMed's unique synchrony technology includes the TiControl feature along with settable trigger and cycle sensitivity and Rise Time settings. These technologies can be used to optimize synchrony and accommodate patients' unique needs. TiControl provides minimum and maximum inspiratory time limits (Ti Min and Ti Max) for each breath. Ti Min and Ti Max can be used to prolong or limit the time the device spends at IPAP. Along with Vsync, TiControl can ensure synchronization even in the presence of significant mouth and/or mask leak. Ti Max enables you to set a maximum inspiratory time to reduce the risk of intrinsic positive end-expiratory pressure (PEEP) and missed patient effort. Ti Min can be used to set a minimum inspiratory time to ensure adequate time for gas exchange without having to increase the pressure setting.

Adjustable trigger and cycle sensitivities can be used to optimize synchrony. The device triggers (initiates IPAP) and cycles (initiates EPAP) as it senses changes in patient flow. At higher sensitivity settings, smaller flow changes make it easier for the patient to trigger and cycle the device. Adjusting trigger sensitivity can support patients with a weak inspiratory effort by increasing sensitivity to recognize every patient's effort. Adjustable cycle sensitivity is crucial for those at risk for instrinsic PEEP or premature breath cycle. Setting a rapid rise time and high cycle sensitivity can help decrease the inspiratory time and extend the expiratory time, resulting in improved patient–ventilator synchrony for patients who are prone to intrinsic PEEP. A slower rise time and lower cycle sensitivity, along with an adequate Ti Min, help ensure that patients with weak inspiratory effort have adequate time for gas exchange.

Script note pad

Patient name: _____ **Order date:** _____

Address: _____ **DOB:** _____

_____ **Phone number:** _____

Email: _____ **Insurance number:** _____

Insurance name: _____ **Diagnosis test date:** _____

Date seen prior to sleep test: _____ **Duration of need:** ☐ 99 mo. ☐ Other: _____

Diagnosis: ☐ OSA: ICD-10 G47.33 ☐ Primary CSA: ICD-10 G47.31
☐ Nonobstructive alveolar hypoventilation: ICD-10 G47.34 ☐ Other: _____

CPAP therapy — E0601 + E0562 + A9279

☐ **AirSense™ 10 Elite** with heated humidification

	DEFAULTS
☐ Pressure:_____cm H_2O (4–20 cm H_2O)	10
Ramp time:_____min(s) (Auto, OFF–45 min.)	
EPR™: ☐1 ☐2 ☐3	

APAP therapy — E0601 + E0562 + A9279

☐ **AirSense™ 10 AutoSet™** with heated humidification

☐ AutoSet mode	DEFAULTS
☐ Default mode settings	
Min. pressure:_____cm H_2O (4–20 cm H_2O)	4
Max. pressure:_____cm H_2O (4–20 cm H_2O)	20
Ramp time:_____min(s) (Auto, OFF–45 min.)	
EPR™: ☐1 ☐2 ☐3	

☐ **AirSense™ 10 AutoSet™ for Her** with heated humidification

☐ AutoSet for Her mode	DEFAULTS
☐ Default mode settings	
Min. pressure:_____cm H_2O (4–20 cm H_2O)	4
Max. pressure:_____cm H_2O (4–20 cm H_2O)	20
Ramp time:_____min(s) (Auto, OFF–45 min.)	
EPR™: ☐1 ☐2 ☐3	

Bilevel therapy — E0470 + E0562 + A9279

☐ **AirCurve™ 10 VAuto** with heated humidification

☐ VAuto mode	DEFAULTS
☐ Default mode settings	
Max. IPAP:_____cm H_2O (4–25 cm H_2O)	25
Min. EPAP:_____cm H_2O (4–25 cm H_2O)	4
PS:_____cm H_2O (0–10 cm H_2O)	4
Ramp time:_____min(s) (OFF–45 min.)	
☐ Spont mode	
IPAP:_____cm H_2O (4–25 cm H_2O)	10
EPAP:_____cm H_2O (3–25 cm H_2O)	4
Ramp time:_____min(s) (OFF–45 min.)	
☐ Easy-Breathe ON	

☐ **AirCurve™ 10 S** with heated humidification

☐ Spont mode	
IPAP:_____cm H_2O (4–25 cm H_2O)	10
EPAP:_____cm H_2O (3–25 cm H_2O)	4
Ramp time:_____min(s) (OFF–45 min.)	
☐ Easy-Breathe ON	

☐ **S9™ VPAP™ COPD*** with heated humidification

☐ Spont mode	DEFAULTS
☐ Default mode settings	
IPAP: _____cm H_2O (4–30 cm H_2O)	13
EPAP: _____cm H_2O (3–25 cm H_2O)	5
Ramp time: _____min(s) (OFF–45 min.)	

Bilevel w/ backup rate therapy — E0471 + E0562 + A9279

☐ **AirCurve™ 10 ASV** with heated humidification

☐ ASV mode	DEFAULTS
☐ Default mode settings	
EPAP:_____cm H_2O (4–15 cm H_2O)	5
Min. PS:_____cm H_2O (0–6 cm H_2O)	3
Max. PS:_____cm H_2O (5–20 cm H_2O)	15
Ramp time:_____min(s) (OFF–45 min.)	
Backup rate: Automatic (15 BPM)	

☐ ASV Auto mode	DEFAULTS
☐ Default mode settings	
Min. EPAP:_____cm H_2O (4–15 cm H_2O)	4
Max. EPAP:_____cm H_2O (4–15 cm H_2O)	15
Min. PS:_____cm H_2O (0–6 cm H_2O)	3
Max. PS:_____cm H_2O (5–20 cm H_2O)	15
Ramp time:_____min(s) (OFF–45 min.)	
Backup rate: Automatic (15 BPM)	

☐ **AirCurve™ 10 ST** with heated humidification

☐ Spont/timed mode	
IPAP:_____cm H_2O (4–25 cm H_2O)	10
EPAP:_____cm H_2O (3–25 cm H_2O)	4
Rate:_____BPM (5–50 BPM)	10

☐ **AirCurve™ 10 ST-A** with heated humidification

☐ Timed mode ☐ PAC mode

☐ Spont/timed mode	
IPAP:_____cm H_2O (4–30 cm H_2O)	10
EPAP:_____cm H_2O (3–25 cm H_2O)	4
Rate:_____BPM (5–50 BPM)	10
Ti:_____sec. (0.1–4 sec.)	2

☐ iVAPS™ mode	
Height:_____in. (44–100 in.)	70
Target patient rate:_____BPM (8–30 BPM)	15
Target Va:_____L/min. (1–30 L/min.)	5.2
Vt (Tidal volume)_____(mL)	
Vt/kg_____(mL/kg)	
EPAP:_____cm H_2O (3–25 cm H_2O)	4
Min. PS:_____cm H_2O (0–20 cm H_2O)	4
Max. PS:_____cm H_2O (0–27 cm H_2O)	20

*Device does not include integrated wireless module, but does include SD card.

Script note pad

Mask interface	HCPCS	Qty/Freq
Full face masks	**A7030**	**1 per 3 months***
☐ AirFit™ F30		☐ AirTouch™ F20
☐ F20 – AirFit™ or AirTouch™		☐ AirTouch™ F20 for Her
☐ F20 for Her – AirFit™ or AirTouch™		☐ AirFit™ F10
☐ AirFit™ F20		☐ AirFit™ F10 for Her
☐ AirFit™ F20 for Her		☐ Mirage Quattro™
☐ Other _____		
Nasal masks	**A7034**	**1 per 3 months***
☐ AirFit™ N30i		☐ AirFit™ N10
☐ AirFit™ N20		☐ AirFit™ N10 for Her
☐ AirFit™ N20 for Her		☐ Mirage™ FX
		☐ Mirage™ FX for Her
☐ Other _____		
Nasal pillows masks	**A7034**	**1 per 3 months***
☐ AirFit™ P10		☐ Swift FX™ for Her
☐ AirFit™ P10 for Her		☐ Swift FX Bella™
☐ Swift FX™		☐ Swift FX Bella™ Gray
☐ Other _____		

Therapy accessories	HCPCS	Qty/Freq
☐ **Heated tubing**	**A4604**	**1 per 3 months***
☒ Wireless monitoring	A9279	
☐ Associate physician to patient in AirView™		
☐ ClimateLineAir™ heated tubing	A4604	1 per 3 months*
☐ ClimateLineAir Oxy™ heated tubing	A4604	1 per 3 months*
☐ SlimLine™ tubing	A7037	1 per 3 months*
☐ Standard tubing	A7037	1 per 3 months*
☐ Humidifier tub, disposable	A7046	1 per 6 months*
☐ Humidifier tub, cleanable	A7046	1 per 6 months*
☐ Filter, disposable	A7038	2 per month*
☐ Nasal cushions	A7032	2 per month*
☐ Pillows cushions	A7033	2 per month*
☐ Full face cushions	A7031	1 per month*
☐ Headgear	A7035	1 per 6 months*
☐ Chin strap	A7036	1 per 6 months*

Attach

1) Copy of sleep test

2) Copy of medical record from initial face-to-face prior to sleep test

Medicare and commercial payers may not authorize service without supporting documentation.

Notes

DO NOT SUBSTITUTE

Statement of medical necessity: The above patient has undergone a diagnostic evaluation. This evaluation has confirmed a positive diagnosis of sleep apnea. Positive airway pressure therapy is medically necessary and provides effective treatment for this disorder.

NPI#: _____ **Practitioner name:** _____

_____ _____

Practitioner signature *Signature date*

*As required, consistent with insurer replacement requirements.

**Combined responses of those expressing a preference in an independent patient survey in the USA, UK, Germany, France & Australia, March 2017. Visit ResMed.com/maskbrand.

Conversion recommendations

Trilogy™ AVAPS AE settings	Astral™ PS/SVt conversion example	ResMed iVAPS conversion example
Tidal Volume (Vte) *Example: 500 mL*	**Safety Vt = Tidal Volume:** *Example: 500 mL*	**Target Va: Set Avg Vt = prescribed Vt** *Example: 500 mL*
Maximum Pressure Support (PS Max) *Example: PS max = 25 cmH_2O*	**PS Max = PS Max** *Example: Set at 25 cmH_2O*	**Max PS = PS Max** *Example: Set at 25 cmH_20*
Minimum Pressure Support (PS Min) *Example: PS Min = 6 cmH_2O*	**PS = PS Min** *Example: Set at 6 cmH_2O*	**Min PS = PS Min** *Example: Set at 6 cmH_20*
Expiratory Positive Airway Pressure Maximum (EPAP Max) *Example: EPAP = 15 cmH_2O*	N/A	N/A
Expiratory Positive Airway Pressure Minimum (EPAP Min) *Example: EPAP = 5 cmH_2O*	**PEEP = EPAP** *Example: Set PEEP at 5 cmH_2O*	**EPAP = EPAP** *Example: Set EPAP at 5 cmH_2O*
Respiratory Rate *Example: BPM = Auto**	**Respiratory Rate = RR** *Example: 15 bpm**	**Target Pt Rate (RR)*** *Example: 15 bpm*

Pressure Support with Safety Tidal Volume (PS/SVt) and iVAPS modes
PS/SVt and iVAPS are commonly utilized modes with COPD patients. Both modes are similar to **Trilogy AVAPS**, as AVAPS is also a VAPS mode.

Primary PS/SVt and iVAPS settings
Below are primary settings to be prescribed for PS with Safety Vt:

PS/Min PS: Pressure Support. Set as the minimum pressure support requirement, also equivalent to **Trilogy PS Min**

PS Max/Max PS: Pressure Support Maximum. Set as the maximum pressure support allowable/limit, equivalent to **Trilogy PS Max**

PEEP/EPAP: Positive End-Expiratory Pressure, also equivalent to **Trilogy EPAP**

RR: Respiratory Rate to be set as a traditional back-up rate, equivalent to **Trilogy Rate**

Target Pt RR: Target Patient Rate to be set equivalent to patient's spontaneous respiratory rate or at device default of 15 bpm

SVt/Avg Vt: Volume guarantee, set at 6–8 mL/kg IBW or equivalent to **Trilogy Tidal Volume** on an AVAPS prescription

Notes

Notes

Notes

Notes

ResMed.com