

RESPIRONICS®



COMFORT IS DIFFERENT FOR EVERYONE.  
SO WE CREATED THREE WAYS  
TO MAKE SLEEP THERAPY COMFORTABLE.

**Flex Family™**  
of Pressure Relief Technologies  
A-Flex™ | Bi-Flex® | C-Flex™

## THE FLEX FAMILY OF PRESSURE RELIEF TECHNOLOGIES. MORE WAYS TO MAKE SLEEP THERAPY MORE COMFORTABLE.

Respironics has always been at the forefront of sleep therapy, but the real revolution began when we started searching for a way to make therapy more comfortable by making pressure delivery more comfortable.

Using revolutionary software algorithms designed to detect the onset of inspiration and expiration, we introduced the BiPAP® Pro bi-level system with Bi-Flex pressure relief technology to deliver improved comfort during inhalation and exhalation transitions. This helps to make each breath more comfortable – and it helps patients stick with their therapy.

We built on this big idea by developing C-Flex pressure relief technology in our CPAP units, which, like Bi-Flex, reduces pressure at the beginning of exhalation to improve comfort and compliance. Since its introduction in 2002, there have been several clinical studies that validate the proven comfort and compliance of CPAP with C-Flex versus traditional CPAP.

In fact, in one clinical study, patients who used CPAP with C-Flex pressure relief technology used their therapy longer each night – 102 minutes longer per night than traditional CPAP patients<sup>1</sup>. The successful launch of C-Flex pressure relief technology led us to the next logical step – completing the Flex Family with A-Flex pressure relief technology.

A-Flex pressure relief technology is designed to make our auto-CPAP therapy even more comfortable by matching pressure delivery to the patient's entire breathing cycle. It brings a new dimension of comfort to sleep therapy.

Together, the Flex Family of pressure relief technologies offers every sleep therapy patient a comfortable, clinically proven alternative to ordinary pressure therapy – and a great way to get a good night's sleep.



## A STRONG FAMILY RESEMBLANCE.

Inside and out, the entire Flex Family of pressure relief technologies relies on two Respironics innovations: Digital Auto-Trak™ Sensitivity and the M Series sleep systems. Digital Auto-Trak, the brains behind all of our Flex Family pressure relief technologies, is a highly sensitive algorithm that detects the onset of inspiration and expiration – even in the presence of mask leaks. Being able to track, react and respond to each and every breath makes it possible for C-Flex, A-Flex and Bi-Flex to deliver the right pressure relief at the right moment.

The small and sleek M Series design puts the power of the Flex Family into the hands of thousands of patients around the world. This intuitive, consumer-friendly design makes advanced sleep therapy technology easy to understand, easy to use and easy to take care of.



# THREE MEMBERS OF THE FLEX FAMILY – THREE DIFFERENT WAYS TO IMPROVE COMFORT.

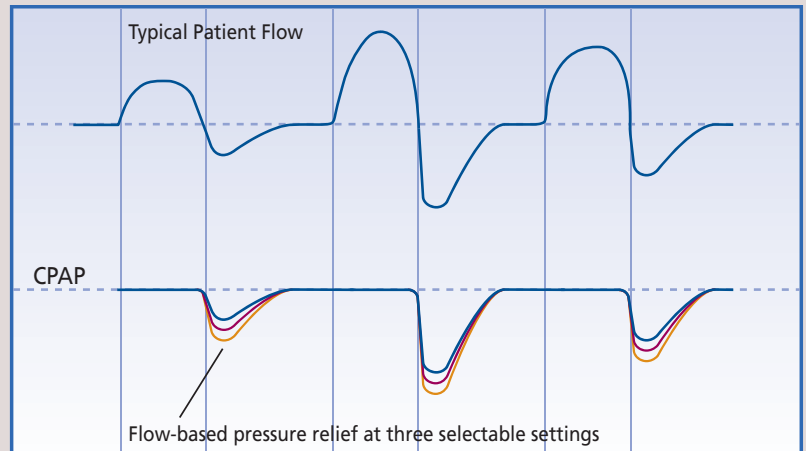
**C-Flex** pressure relief technology makes sleep therapy more comfortable by reducing pressure at the beginning of exhalation and returning to therapeutic pressure just before inhalation. **The level of pressure relief varies based on the patient's expiratory flow** and which of the three C-Flex settings has been selected.

**Bi-Flex** pressure relief technology offers pressure relief at inhalation and exhalation to make BiPAP therapy more like natural breathing. By tracking each breath, **Bi-Flex pressure relief technology delivers pressure relief at three critical points in the breathing cycle**: the transition from exhalation to inhalation, the transition from inhalation to exhalation and during exhalation.

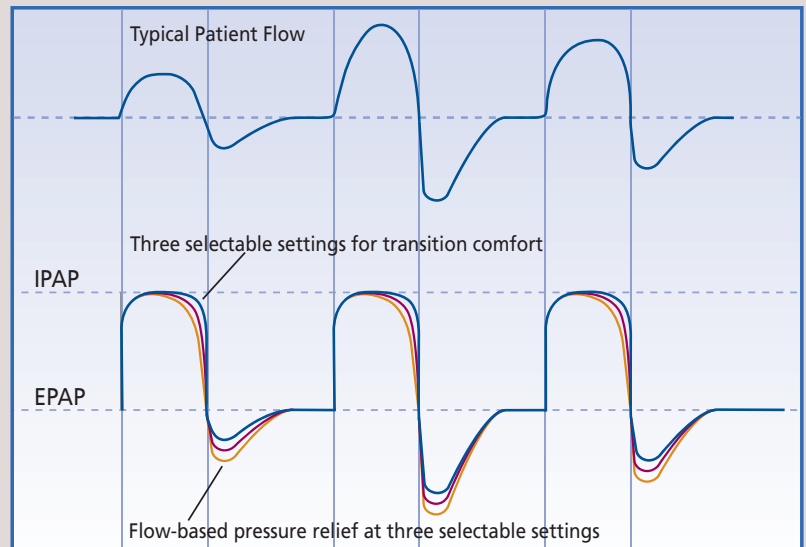
**A-Flex** is designed to work with our clinically proven auto-CPAP algorithm to improve comfort even more by matching pressure delivery to the patient's entire breathing cycle. Like C-Flex, **A-Flex provides flow-based pressure relief** at the beginning of exhalation. Like Bi-Flex, **A-Flex softens the pressure transition** from inhalation to exhalation to provide additional comfort in an auto-CPAP mode. The pressure profile mirrors the patient's breathing, and with the auto algorithm intelligence, it will respond to the patient's therapeutic need throughout the sleep session.

## THE FLEX FAMILY AT A GLANCE

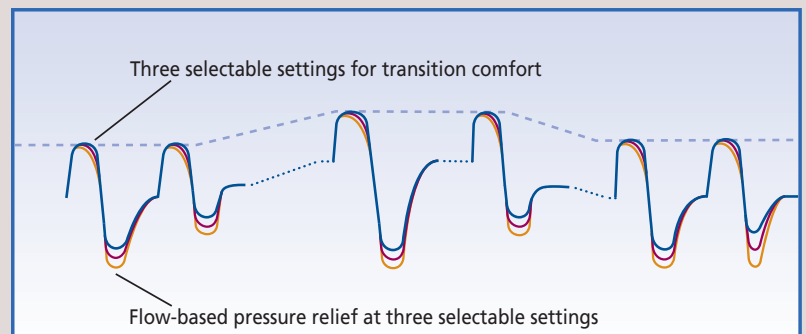
C-Flex Pressure Profile



Bi-Flex Pressure Profile



Auto Algorithm with A-Flex



Examples of pressure profiles delivered by the auto algorithm over time

Pressure automatically adjusted by the proactive Auto Algorithm. Set minimum pressure at 6 cm H<sub>2</sub>O to enable A-Flex.

# PROOF THAT THE FLEX FAMILY OF PRESSURE RELIEF TECHNOLOGIES MAKES A DIFFERENCE.

## C-FLEX PRESSURE RELIEF TECHNOLOGY

Patients on C-Flex pressure relief technology have shown a 1-hour 42-minute increase in nightly use vs. traditional CPAP after three months.

<sup>1</sup>Aloia, M., et al., *Chest* 2005. Vol. 1-27, pg. 2085-93.

Patients on C-Flex pressure relief technology were 3.8 times more likely to use their C-Flex device approximately 6 hours a night after 6 months of use.

<sup>2</sup>Ruyak, P.S., et al., *Sleep* 2005. Vol. 28, p. A170, #503.

## BI-FLEX PRESSURE RELIEF TECHNOLOGY

In a study of non-adherent sleep therapy patients, 54% of the patients using Bi-Flex pressure relief technology used their machine > 4 hours per night compared to 32% for traditional CPAP patients.

<sup>3</sup>Gay, P.C., et al., *Sleep*. Vol. 28. Abstract Supplement 2005, p. A210, #625.

## A-FLEX PRESSURE RELIEF TECHNOLOGY

A recent clinical study shows that A-Flex pressure relief technology substantially improves the comfort of positive pressure therapy – patients preferred A-Flex over ordinary CPAP or even CPAP with C-Flex pressure relief technology.<sup>4,5</sup>

A clinical study also shows that the REMstar Auto with A-Flex pressure relief technology maintained effective therapy throughout the night while delivering a mean airway pressure of up to 4 cm H<sub>2</sub>O lower than the mean airway pressure of fixed CPAP titration.<sup>4</sup>

*Advancements to the Event Detection and Control Algorithm in Auto-Adjusting PAP Devices for the Treatment of OSA*

<sup>4</sup>Grover, Sukhdev MD; Sleep Center of Greater Pittsburgh, Pittsburgh, PA

<sup>5</sup>Wylie, Paul MD; Arkansas Center for Sleep Medicine, Little Rock, AR

AND THIS LIST IS JUST THE BEGINNING. FOR EVEN MORE CLINICAL PROOF, VISIT [FLEXFAMILY.RESPIRONICS.COM](http://FLEXFAMILY.RESPIRONICS.COM).



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