

# Auto-Adjusting CPAP Evaluation on the Bench

Diesem R & McCoy R. Independent Bench Testing, March 2008.  
Valley Inspired Products, Minneapolis, USA.

## KEY FINDING:

The Fisher & Paykel Healthcare SleepStyle™ 200 Auto Series device responds to flow limitation, hypopnea and apnea.

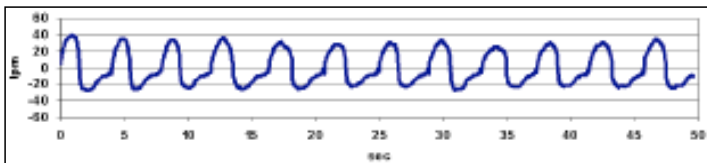
## AIM:

To compare selected response characteristics of the Fisher & Paykel Healthcare SleepStyle™ 200 Auto Series, Puritan Bennett's GoodKnight® 420 Evolution, Respironics REMstar® Auto M-Series with A-flex™ and ResMed's S8 AutoSet Vantage™.

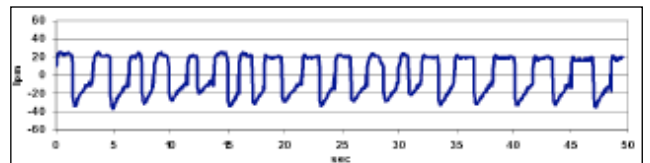
## METHODS:

Four simulated breathing patterns mimicked by a breathing simulator were presented to each AutoCPAP device and the subsequent response recorded. The four breathing patterns are shown below.

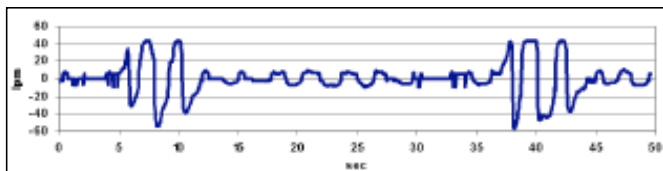
**NORMAL BREATHING**



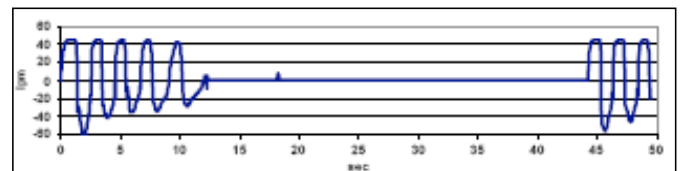
**FLOW LIMITED BREATHING**



**HYPOPNEIC BREATHING**



**APNEIC BREATHING**



## RESULTS:

- Although results varied, all devices exhibited a response to the change from normal to flow-limited breathing.
- All devices exhibited a response to the change from normal to hypopneic breathing.
- All devices exhibited a response to the change from normal to apneic breathing.

**KEY:**

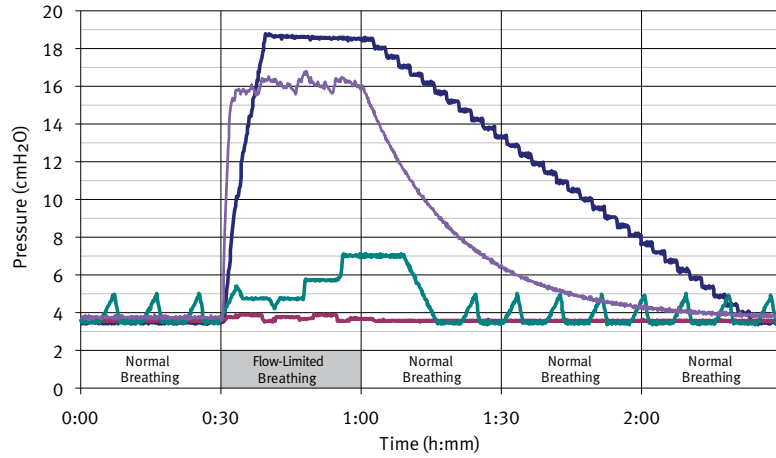
■ SleepStyle™ 200 Auto Series  
■ GoodKnight® 420 Evolution

■ REMstar® Auto M-Series with A-Flex™  
■ S8 AutoSet Vantage™

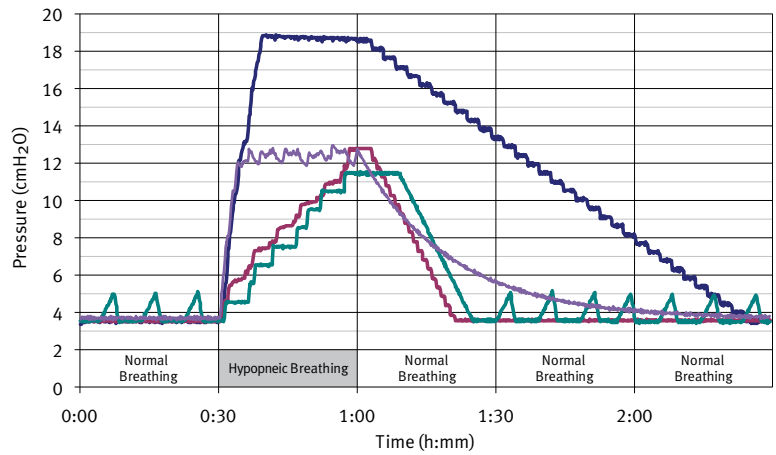
GoodKnight® is a registered trademark of Tyco Healthcare Group LP  
S8 AutoSet Vantage™ is a trademark of ResMed Ltd

REMstar® is a registered trademark of Respicronics Inc  
A-Flex™ is a trademark of Respicronics Inc

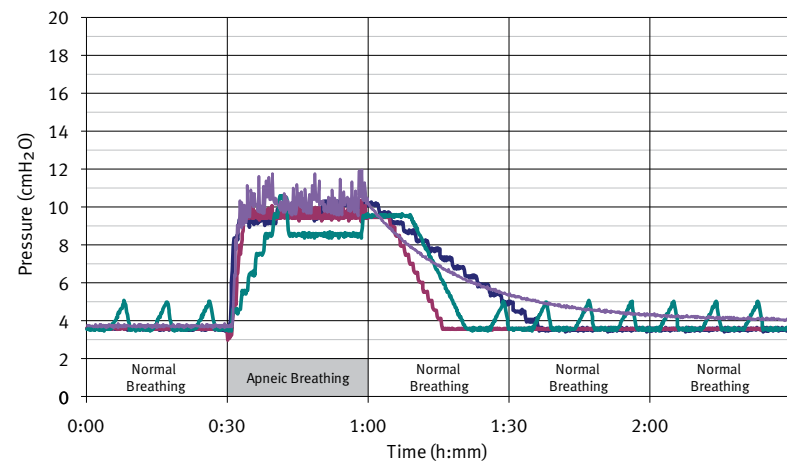
**ALL UNITS: FLOW-LIMITATION**



**ALL UNITS: HYPOPNEA**



**ALL UNITS: APNEA**



**CONCLUSION:**

- All AutoCPAPs exhibited slightly different responses to flow limitation, hypopnea and apnea, which is representative of their individual and proprietary algorithms.