

*Do you want
trend-setting technology
or
more time for your patients?
Or maybe both?*

Sleep Therapy from Weinmann



With trend-setting technology and close ties to patients












Learn all about our SOMNO products!

Weinmann stands for efficiency and safety ensured by self-adjusting products that make your life easier. Our innovative technologies set standards in sleep medicine too. SOMNO products provide reliable data for diagnostics, titration-made-easy, therapeutic effectiveness and greater comfort for the sleeping patient.

Weinmann sleep therapy – the right choice.



Weinmann SOMNO device portfolio

Diagnosis	Type of Therapy	Modes	SOMNO Therapy Device	
<ul style="list-style-type: none"> ■ Obstruction of upper airways ■ Invariable pressure needs 	CPAP ¹	<ul style="list-style-type: none"> ■ CPAP (with softPAP) 	SOMNOsoft 2e 	OPP page 4 
<ul style="list-style-type: none"> ■ Obstruction of upper airways ■ Invariable or variable pressure needs ■ No CPAP compliance 	autoCPAP	<ul style="list-style-type: none"> ■ CPAP (with softPAP) ■ autoCPAP (with softPAP) 	SOMNObalance e 	OPP page 4 
<ul style="list-style-type: none"> ■ Obstructive, mixed or complex sleep apnea and <ul style="list-style-type: none"> - High-pressure needs, - Poor compliance with CPAP, - Changing pressure needs or - Nighttime intermittent hypoventilation (as with OHS) 	(auto) BiLevel S	<ul style="list-style-type: none"> ■ CPAP ■ BiLevel S ■ autoBiLevel S 	SOMNOvent auto-S 	auto TriLevel page 6 
<ul style="list-style-type: none"> ■ Obstructive, mixed or complex sleep apnea and <ul style="list-style-type: none"> - High-pressure needs, - Poor compliance with CPAP, - Changing pressure needs, - Central apnea, - Nighttime intermittent hypoventilation (as with OHS), - Respiratory insufficiency; e.g. coprevalent COPD (overlap) 	(auto) BiLevel ST	<ul style="list-style-type: none"> ■ CPAP ■ BiLevel S/ST/T ■ autoBiLevel S/ST 	SOMNOvent auto-ST 	auto TriLevel with SCOPES page 8  
<ul style="list-style-type: none"> ■ Periodic breathing Central sleep apnea of Cheyne-Stokes variety associated with heart failure ■ Central, mixed or complex sleep apnea 	ACMV ²	ACMV	SOMNOvent CR 	auto TriLevel with ACMV page 10 

¹CPAP = Continuous Positive Airway Pressure ²ACMV = Anticyclical Modulated Ventilation (also known as ASV)

What do you expect in treatment of OSAS*?

*Guaranteed sleeping comfort for your patients?
Or the best therapy pressure automatically?
Or maybe both?*



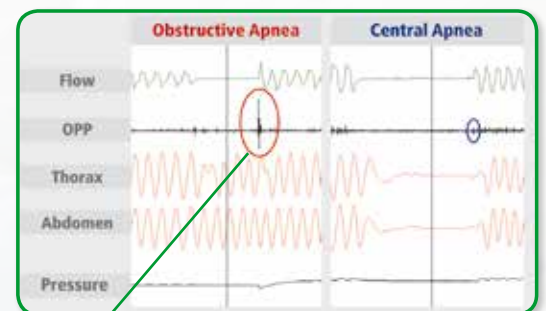
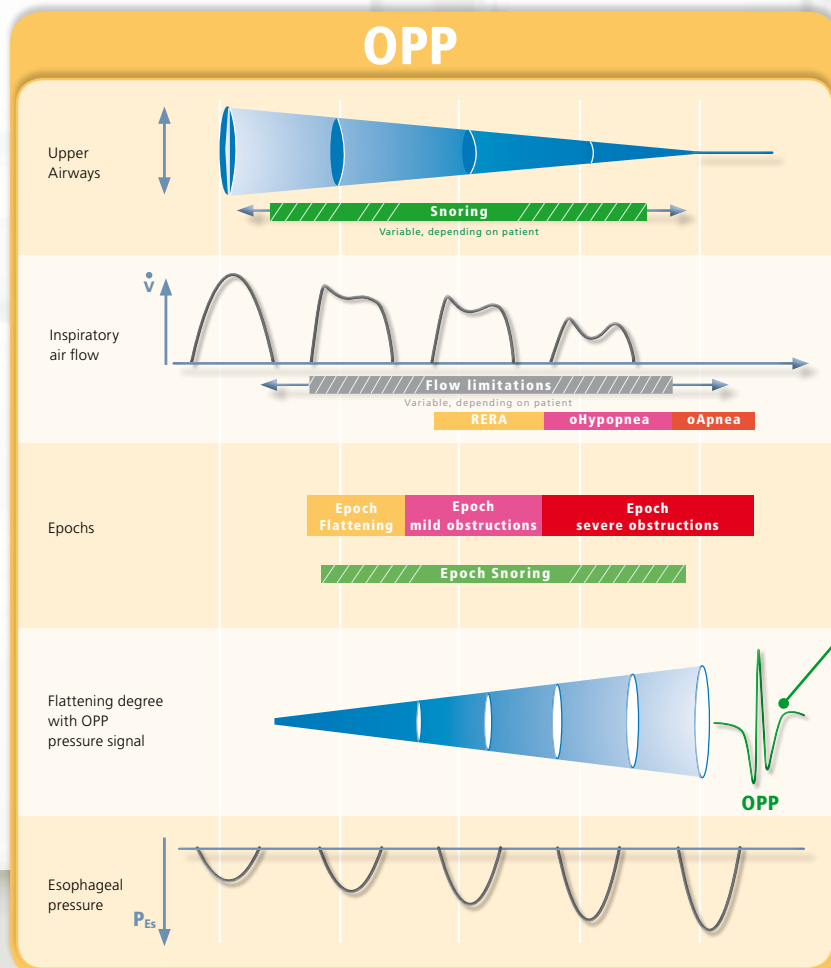
Weinmann. The autoCPAP pioneer. The creator of **OPP**.

Our autoCPAP therapy device **SOMNObalance e** increases your patients' sleeping comfort with the intelligent pressure relief softPAP. The OPP technology distinguishes between obstructive and central apneas. The pro-active algorithm treats mildly obstructive events early in order to prevent more severe events. It does all that with unheard-of stillness!

autoCPAP therapy with SOMNObalance e CPAP-therapy with SOMNOsoft 2e

Reliable pressure regulation with **OPP** increases patient comfort

SOMNObalance e continuously monitors and assesses the patient's breathing. Changes to air flow caused by snoring, flow limitation and narrowing of the upper airways, prompt a pressure increase to keep the airways open. The OPP signal assists in determining whether airways are open or closed. With this information, the algorithm prevents unnecessary pressure increases and thus contributes to greater patient comfort and therapeutic effectiveness. Health care staff can review all events and data and use them as the foundation for additional therapy options.



SOMNObalance e

What is important to you in the treatment of complex SDB*:

*Automatic fast track to therapy success?
Or automatic best breathing sensation?
Or maybe both?*



*SDB: Sleep-Disordered Breathing

Weinmann. The inventor of **autoTriLevel.
The optimizer of breathing comfort.**



Automatically the most comfortable breathing sensation, even with complex breathing patterns. The autoTriLevel technology by Weinmann ideally combines two proven types of therapy – autoCPAP and BiLevel – and provides, completely automatically, greater breathing comfort and therapeutic effectiveness.

Our three with autoTriLevel. Your benefits:

- ▶ Therapeutically effective maximum and mean pressures that are lower than BiLevel with the same tidal volume for fewer side effects such as leakage.
- ▶ It's like a new titration every day – adjusts to patient's high variability
- ▶ Effortless titration and monitoring



SOMNOvent auto-S
autoBiLevel S



SOMNOvent auto-ST
autoBiLevel ST



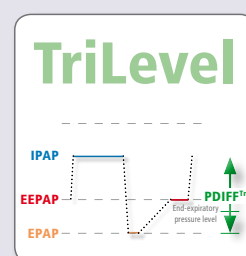
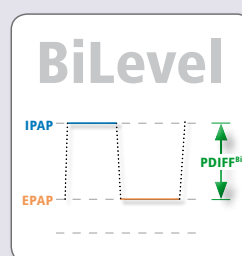
SOMNOvent CR
ACMV (ASV)

IPAP: inspiratory pneumatic splinting of the airways (ventilation)

EPAP: easier exhalation at a low expiratory pressure level for a pleasant breathing sensation

EEPAP: required minimum pressure for adequate splinting of airways during phase when risk of collapse is highest

PDIFTH (Δ IPAP-EPAP): need-oriented ventilation support by means of changes between inspiratory (IPAP) and expiratory (EPAP) pressure levels

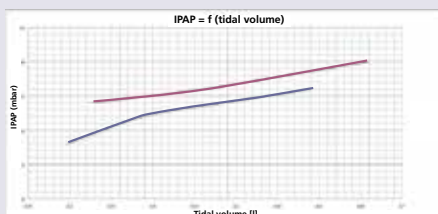


Effectiveness of TriLevel pressure curve

Result¹: pressure level required to generate a defined tidal volume

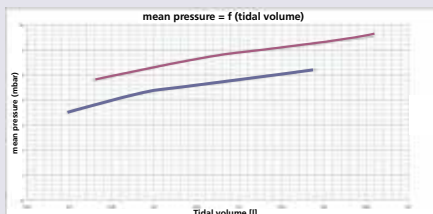
+ about 2.3 hPa* lower IPAP than BiLevel

*Tidal volume 0.6 l



+ about 2.1 hPa* lower mean pressure level than BiLevel

*Tidal volume 0.6 l



— TriLevel

— BiLevel

Bench test: Comparison of pressure required to generate different tidal volumes

- Artificial lung: ASL 5000,
- Compliance 60 mbar/ml,
- Resistance 10 mbar/L/s,
- Passive ventilation,
- Frequency 10 bpm,
- End-expiratory therapy pressure 8 hPa

SOMNOvent auto-ST
(Mode BiLevel/autoTriLevel ST)

¹ D. Klausmann, K. Pietruska, M. Schwaibold: Reduced mean and maximum therapy pressure under TriLevel: Results of a bench test comparison with BiLevel therapy. Accepted as abstract for the German Sleep Society (DGSM) annual meeting 2011.

Additional end-expiratory pressure (EEPAP)

The last breath (breath -1) clearly shows that the airways are wide open during the early phase of expiration. At the end of expiration the risk of a passive collapse of the upper airways is highest. In the following inspiration phase it can lead to a complete closure of the upper airways.

Thanks to additional end-expiratory pressure (EEPAP), it is possible to hold open the upper airways sufficiently to prevent obstructive events during the phase with the greatest risk of collapse.



The airway images show four breaths prior to an obstructive apnea, divided into inspiration (Nadir Insp), early expiration (Peak Exp) and late expiration (End Exp).

Reprinted with the permission of the American Thoracic Society. Copyright © American Thoracic Society, Mary J. Morrell et al.: "Progressive Retropalatal Narrowing Preceding Obstructive Apnea", in: Am. J. Respir. Crit. Care Med., Volume 158, Number 6, December 1998, 1974-1981; Official Journal of the American Thoracic Society; Diane Gern, Publisher

What is important to you in the treatment of complex SDB?

*Getting the best setting automatically?
Or simply more time for your patients?
Or maybe both?*

Weinmann. The BiLevel specialist with **autoTriLevel principle. The inventor of **SCOPES*****.



SOMNOvent auto-ST – Setting options in many therapy systems are at best a compromise for patients with complex breathing patterns. That's not the case with **SOMNOvent auto-ST**. This device is the solution, particularly for patients with complex Sleep Disordered Breathing that cannot be treated with a CPAP device.

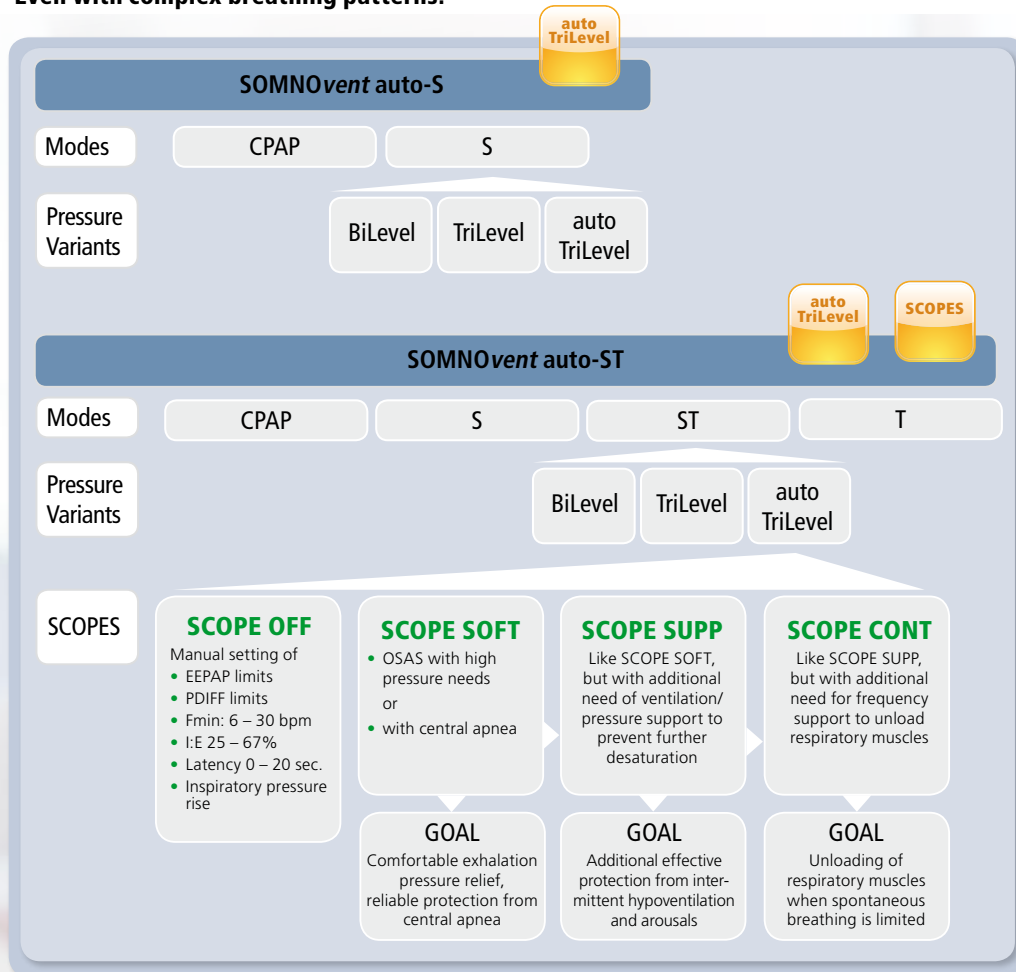
Quick therapy success gives you more time for your patients. **SOMNOvent auto-S**, the "little brother" of **SOMNOvent auto-ST**, impresses with its clever combination of automatic BiLevel S therapy and autoCPAP.

* SCOPES, the goal-oriented therapy settings

SOMNOvent auto-S and SOMNOvent auto-ST

BiLevel flexibility and greatest setting convenience, thanks to **autoTriLevel** and **SCOPES**.

Even with complex breathing patterns.



SOMNOvent auto-ST

What is most important to you in Cheyne-Stokes therapy?

*The fastest therapy success automatically?
Or minimal effort for setting and monitoring?
Or maybe both?*

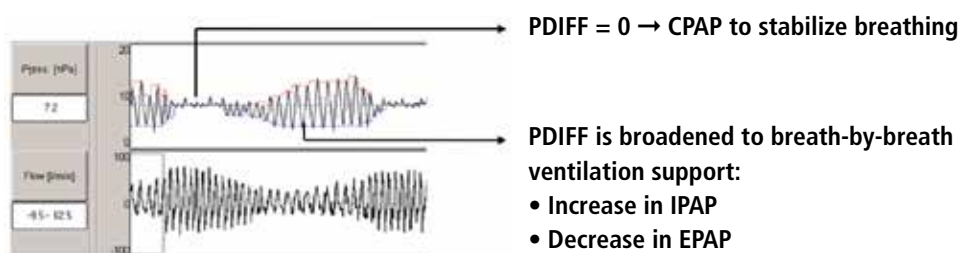
Weinmann. The specialist for treatment of complicated breathing patterns. The expert in **Anticyclical Modulated Ventilation.**

SOMNOvent CR is the ideal sleep therapy solution for Cheyne-Stokes respiration and obstructive or mixed sleep apnea. The autoTriLevel with ACMV* gently and effectively stabilizes the patient's spontaneous breathing and protects from desaturation by means of the innovative automatic backup frequency. The prerequisites for fast therapy results and minimized manual titration and therapy control.

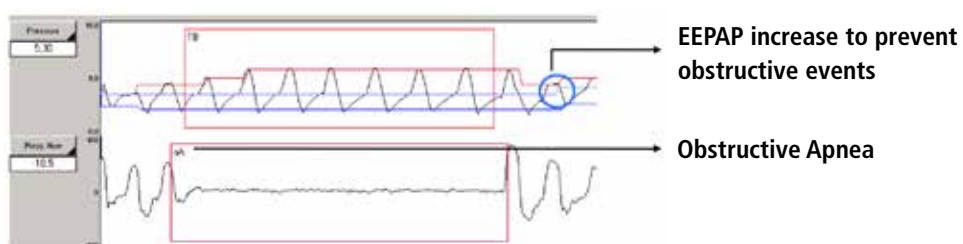
*ACMV = Anticyclical Modulated Ventilation (also known as ASV)

SOMNOvent CR

Anticyclical Modulated Ventilation (ACMV) at beginning of therapy



Splinting of airways – thanks to EEPAP – in phase with high risk of collapse



SOMNOvent CR



partner for life

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