InterMed Penlon

Advanced Ventilation

SIMV, SMMV and PSV

AV-S Ventilator

The intuitive user interface and comprehensive support modes provide the optimum therapy for all patient profiles

- Combines sophistication and ease of use
- Large, colour Touchscreen and Com-wheel control
- Volume and Pressure ventilation, plus SMMV, SIMV, PSV and PEEP
- Single/dual waveform display
- High quality, multi-option product with flexible specification
- 'Life-Care' or optional 'Life-Care *Plus*' Warranty and Customer Care scheme

Partnership for Life

Anaesthesia Monitoring SCT Laryngoscopes Medical Gas Service

InterMed Penlon

AV-S Ventilator

Multi-mode Ventilator

An easy to use, multifunction anaesthesia ventilator, designed for all patient profiles

- Volume, PCV, PSV, SIMV and SMMV modes
- Comprehensive printer/data outputs for networking and interfacing to patient monitors
- Integrated Oxygen Monitor and Spirometry
- Inverse I:E Ratio capability
- Electronic PEEP
- Autoclavable Latex Free Bellows
- Oxygen or Air drive gas
- 30 minutes battery backup
- Selectable Dual Waveform Display:
  - Pressure *v*. Time
  - Volume *v*. Time
  - Pressure *v*. Volume (for ventilation analysis)

  plus waveform freeze facility
- Save and recall function for user specific settings
- Adult and Paediatric default settings
- Flexible specification
  - Stand-alone operation or seamless integration with Prima SP Workstation
  - Display mounting option
  - Multilingual display

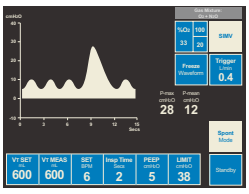
AV-S Ventilator

Partnership for Life

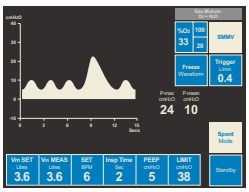
Penlon's philosophy embraces commitment to a successful, long term relationship with all our customers

Touchscreen Control
Prompt and easy operation from either the Touchscreen or via the Com-wheel

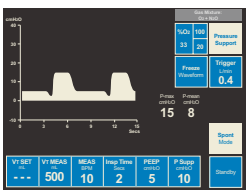
Latex-free bellows
The latex-free bellows, canister and base assembly are fully autoclavable



SIMV
Combines spontaneous and set mandatory breaths



SMMV
Combines spontaneous breaths with synchronised mandatory breaths to achieve the set minute volume



PSV
Assists each spontaneous breath with a preset pressure, thus reducing the effort required to breathe

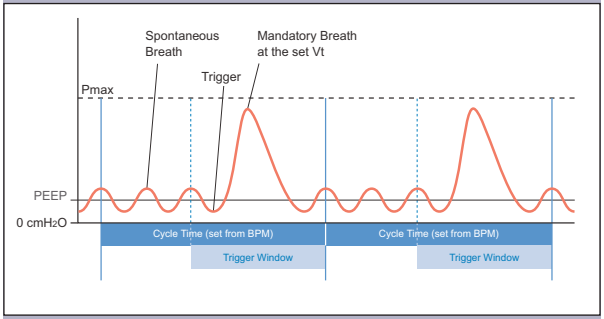
Advanced Spontaneous Breathing Modes

The AV-S ventilator provides three support modes that can be utilised as the patient attempts to breathe spontaneously. Patient recovery is accelerated by increased tidal volume and SpO_2, and reduced $EtCO_2$.

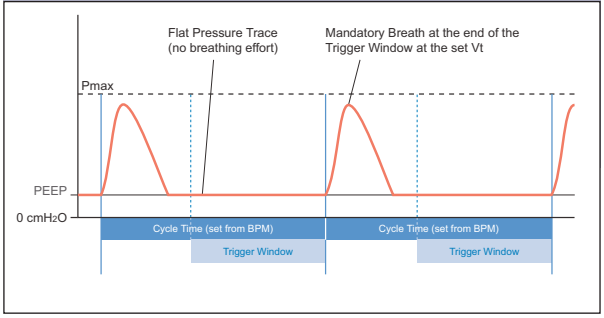
SIMV Synchronised Intermittent Mandatory Ventilation

Guarantees a minimum level of volume. SIMV allows spontaneous breaths and set mandatory breaths

SIMV - Spontaneously Breathing Patient
Negative pressure† in the Trigger Window* (generated by the patient's spontaneous breath) results in a synchronised mandatory breath at a preset volume and rate



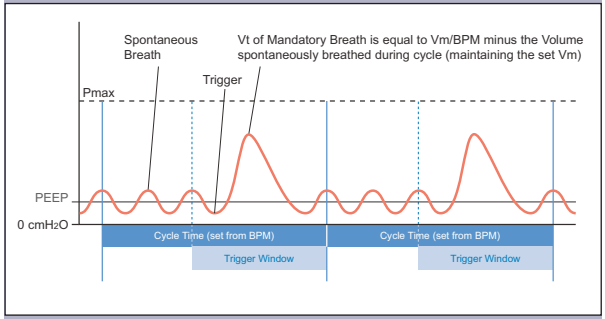
SIMV - Non-breathing Patient
If the patient makes no effort to breathe during a cycle, a mandatory breath, at the end of the Trigger Window,* will still be delivered at the preset volume and rate



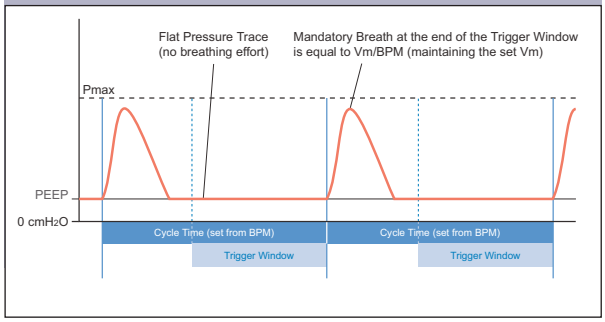
SMMV Synchronised Mandatory Minute Ventilation

Guarantees a set level of minute volume ventilation. SMMV allows spontaneous breaths, combined with a synchronised mandatory breath, to achieve the set minute volume

SMMV - Spontaneously Breathing Patient
Negative pressure† in the Trigger Window* (generated by the patient's spontaneous breath) results in a synchronised mandatory breath, ensuring that the set minute volume is achieved



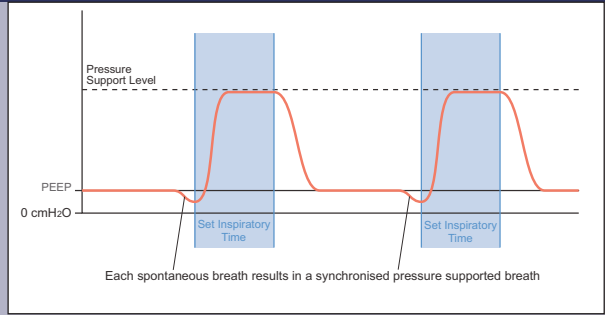
SMMV - Non-Breathing Patient
If the patient makes no effort to breathe during a cycle, a mandatory breath, at the end of the Trigger Window,* will still be delivered at the preset minute volume and rate



PSV Pressure Supported Ventilation

PSV assists each spontaneous breath with a preset pressure, thus reducing the effort required to breathe. Negative pressure† (generated by the patient's spontaneous breath) results in synchronised pressure support

PSV is used to support spontaneously breathing patients ONLY If the patient makes no attempt to breathe, the ventilator will not provide support and the apnoea alarm will be activated



*Trigger Window = 60% of Cycle Time • †Negative relative to PEEP

InterMed Penlon

Technical Specification

Physical	
Size - Control Unit Only - with Adult Bellows	185 x 290 x 300 mm (H x W x D) 385 x 290 x 300 mm (H x W x D)
Screen	210 mm (8.4") TFT
Weight - Control Unit Only - with Adult Bellows	7.6 kg 9.0 kg
Bellows (Latex free)	20 to 1600 ml, Paediatric option 20 to 350 ml
Power	90 to 264 VAC, 47 to 63 Hz
Drive Gas	Oxygen or Air

Functional	
Tidal Volume (Vt)	20 to 1600 ml
Rate (BPM)	4 to 100 bpm
I:E Ratio	1:0.2 to 1:8
Pressure Limit	10 to 100 cmH_2O
Fresh Gas Compensation	Automatic Tidal Volume Adjustment
Ventilation Modes	Off, Standby, Volume, Pressure Controlled, Spontaneous, SIMV, SMMV, PSV (for use in anaesthesia procedures only)
Sigh Function (Volume Mode)	Set Tidal Volume (Vt) x 1.5 is delivered at every 10 to 100 breaths (frequency is user selectable)
Pressure Control	10 to 70 cmH_2O
Spontaneous Mode	Active Volume and Pressure Alarms
Electronic PEEP	4 to 20 cmH_2O
Oxygen Monitor	Fuel Cell type

SIMV, SMMV, PSV	
Trigger	0.7 to 4 L/min (PEEP Referenced)
Trigger Window	60% of Expiratory Time
Tidal Volume (Vt)	As Volume Mode
Minute Volume (Vm)	As Volume Mode
Inspiratory Time (Ti)	0.5 to 5 Seconds
Support Pressure	3 to 20 cmH_2O (PEEP Referenced)

Alarms - Automatic	
Alarm Mute	30 Seconds
Low Drive Gas Pressure	Less than 235 kPa (34 psi)
High Continuous Airway Pressure	Above 30 cmH_2O at start of cycle
Low Pressure	4 to 14 cmH_2O PEEP Referenced
Low Tidal Volume	50% of Volume Set (Spirometry)
Incorrect Rate or Ratio	
Mains Failure	30 Minutes Battery Backup
Low Battery	5 Minutes Use
Vent Inop	Internal or Battery Failure
Apnoea	Flow Referenced

Alarms - Optional User Set		
Tidal Volume	- Minimum	0 to 1600 ml
	- Maximum	20 to 1600 ml
Minute Volume	- Minimum	0 to 10 L
	- Maximum	0 to 30 L
Low and High O_2 Concentration		18% to 105%
High Airway Pressure		10 to 80 cmH_2O Adjustable

Default Settings	Adult	Paediatric
VOLUME		
• Tidal Volume (Vt)	600 ml	150 ml
• Rate (BPM)	10	15
• I:E Ratio	1:2	1:2
• Pmax	38 cmH_2O	38 cmH_2O
PRESSURE		
• Tidal Volume (Vt)	600 ml	150 ml
• Rate (BPM)	10	15
• I:E Ratio	1:2	1:2
• P-Target	10 cmH_2O	10 cmH_2O
SIMV		
• Tidal Volume (Vt)	600 ml	200 ml
• Rate (BPM)	6	10
• Inspiratory Time	2 Seconds	1 Second
• Trigger	-1 cmH_2O	-1 cmH_2O
SMMV		
• Minute Volume (Vm)	3.6 L	2 L
• Rate (BPM)	6	10
• Inspiratory Time	2 Seconds	1 Second
• Trigger	-1 cmH_2O	-1 cmH_2O
PSV		
• Support Pressure	10 cmH_2O	10 cmH_2O
• Inspiratory Time	2 Seconds	1 Second

For further information please contact your local Penlon representative

Information contained in this leaflet is correct at the date of publication.
The policy of Penlon Limited is one of continued improvement to its products.
Because of this policy Penlon Limited reserves the right to make any changes, which may affect the information in this leaflet without giving prior notice.

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