

Penlon Prima SP2

Anesthesia Machine

Exceptional design and intuitive functionality

FEATURES

- › Advanced, easy-to-use features for maximum patient safety
- › Fully-loaded specifications as standard
- › Two-vaporizer station as standard
- › Six ventilation modes
 1. Spontaneous
 2. Volume
 3. Pressure
 4. Pressure Support
 5. SIMV
 6. SMMV
- › Large color touchscreen
- › Low cost of ownership—only two preventive maintenance service visits per year
- › Flexible and sophisticated for all your anesthesia needs

INTEGRATED DESIGN AND SUPERIOR BUILD QUALITY

- › High levels of workstation integration
- › Modular construction
- › GCX™ mounting rails for superior mounting solutions
- › Dual oxygen, nitrous oxide and air flowmeters
- › Two oxygen, one nitrous oxide and one air yoke
- › Open architecture for monitors and accessories
- › Many monitoring shelf configurations available
- › Three station Selectatec® back bar
- › Flowmeter and work surface lighting
- › Four electrical outlets
- › Oxygen auxiliary flowmeter



BALANCED ULTRA LOW-FLOW ANESTHESIA AND A PROVEN MECHANICAL ANTI-HYPOXIC DEVICE

- › Specifically designed for low flow
- › 50–75 ml/min minimum oxygen flow
- › 27–33% minimum Oxygen/Nitrous Oxide flow

AV-S MULTI-MODE VENTILATOR

- › Easy-to-use and designed for all patient profiles
- › Volume, PCV, PSV, SIMV and SMMV modes

A200SP ABSORBER

- › Advanced system integration, easy to use and high performance
- › Provides seamless ventilation mode switching

SIGMA DELTA VAPORIZER

- › Delivers accurate concentrations

SIGMA ALPHA VAPORIZER

- › Suprane® (Desflurane) delivery solution

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Technical Specifications

Prima SP2 Anesthesia System

Physical

Size (H x W x D).....	54" x 28.4" x 31.5" (1370 x 720 x 800 mm)
Weight.....	165.4 lb (75 kg)
Top Shelf.....	28.4" x 18.9" (720 x 480 mm)
Work Surface.....	25.6" x 11.8" (650 x 300 mm)
Drawers (up to three).....	7.5" x 20.5" x 15.4" (190 x 520 x 390 mm)

Features

Number of Vaporizers.....	2
Gases.....	Oxygen, Nitrous Oxide, Air
Cylinder Yokes.....	Four
Oxygen Fail Safe.....	Yes
Anti-Hypoxic Device.....	Mechanical, 27 to 33%
Standards.....	All relevant

AV-S Multi-Mode Ventilator

Physical

Size, Control Unit Only (HxWxD).....	7.3" x 11.4" x 11.8" (185 x 290 x 300 mm)
Size with Adult Bellows (HxWxD).....	15.2" x 11.4" x 11.8" (385 x 290 x 300 mm)
Weight (Control Unit).....	16.8 lb (7.6 kg)
Weight (w/Adult Bellows).....	19.8 lb (9.0 kg)
Screen (TFT).....	8.4 inches (210 mm)
Bellows (Latex-Free).....	20 to 1600 ml
Bellows (pediatric option).....	20 to 350 ml
Power.....	90 to 264 VAC, 47 to 63 Hz
Drive Gas.....	Oxygen or Air

Functions

Tidal Volume (Vt).....	20 to 1600 ml
Rate (BPM).....	4 to 100 bpm
Sigh Mode.....	Tidal Volume (Vt) x 1.5, every 50 breaths
I:E Ratio.....	1:0.3 to 1:8
Pressure Limit.....	10 to 80 cmH ₂ O
Fresh Gas Compensation.....	Automatic Tidal Volume Adjustment
Ventilation Modes.....	Off, Standby, Volume, Pressure Controlled, Spontaneous, SIMV, SMMV, PSV (for use in anesthesia procedures only)
Pressure Control.....	10 to 70 cmH ₂ O
Spontaneous Mode.....	Active Volume and Pressure Alarms, Patient Support Function—Automatic switch to Volume Cycle Mode if apnea alarm is triggered
Electronic PEEP.....	4 to 30 cmH ₂ O
Oxygen Monitor.....	Fuel Cell type

SIMV, SMMV, PSV

Trigger.....	0.2 to 0.4 L/min
Trigger Window.....	60% of Expiratory Time
Tidal Volume.....	As Volume Mode
Minute Volume.....	As Volume Mode
Inspiratory Time.....	0.5 to 5 secs
Support.....	Pressure 3 to 20 cmH ₂ O (PEEP referenced)

Alarms-Automatic

Alarm Mute.....	30 seconds
Low Drive Gas Pressure.....	Less than 235 kPa (34 psi)
High Cont. Airway Press.....	Above 30 cmH ₂ O at start of cycle
Low Pressure.....	4 to 14 cmH ₂ O (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

AV-S Multi-Mode Ventilator continued

Alarms—optional, user set

Tidal Volume—Minimum.....	0 to 1600 ml
Tidal Volume—Maximum.....	20 to 1600 ml
Minute Volume—Minimum.....	0 to 10 L
Minute Volume—Maximum.....	0 to 30 L
Apnea.....	Adjustable Reset Pressure (PEEP Ref)3 to 35 cmH ₂ O
Low and High O ₂ Concentration.....	18% to 105%
High Airway Pressure.....	10 to 80 cmH ₂ O adjustable

Default Settings

	Adult	Pediatric
Volume, Tidal Volume (Vt):	600 ml	150 ml
Volume, Rate (BPM):	10	15
Volume, I:E Ratio:	1:2	1:2
Volume, Pmax:	38 cmH ₂ O	38 cmH ₂ O

Pressure, Tidal Volume (Vt):	600 ml	150 ml
Pressure, Rate (BPM):	10	15
Pressure, I:E Ratio:	1:2	1:2
Pressure, P-Target:	10 cmH ₂ O	10 cmH ₂ O

SIMV, Tidal Volume (Vt):	600 ml	200 ml
SIMV, Rate (BPM):	6	10
SIMV, Inspiratory Time:	2 sec	1 sec
SIMV, Trigger:	0.4 L/min	0.4 L/min

SMMV, Minute Volume (Vt):	3.6 L	2 L
SMMV, Rate (BPM):	6	10
SMMV, Inspiratory Time:	2 sec	1 sec
SMMV, Trigger:	0.4 L/min	0.4 L/min

PSV, Support Pressure:	10 cmH ₂ O	10 cmH ₂ O
PSV, Inspiratory Time:	2 sec	1 sec

A200SP Absorber

Physical

Size (H x W x D).....	16.6" x 9.0" x 16.9" (420 x 230 x 430 mm)
Weight (empty).....	33 lb (15 kg)
Absorbent Capacity.....	2.9 lb (1.3 kg)

Sigma Delta and Alpha Vaporizer

Physical

	Sigma Delta	Sigma Alpha
Weight:	Approx. 5 kg	Approx. 6 kg
Capacity:	Volume at MAX mark: 250 ml nominal Volume at MIN mark: 35 ±10 ml	330 ml working volume 70 ml refill indicator

Note: After draining, approximately 60 ±10 ml of liquid is retained by the wick

Operating		
Flow Range:	0.2 to 15 liters / min	0.5 to 10 liters / min

Operating Temperature		
Range:	15 to 35°C (58 to 95°F)	18 to 30°C (64 to 86°F)

Size (H x W x D)

Cagemount Dimensions.....	8.6" x 5.2" x 6.2" (219 x 133 x 158 mm)
Selectatec® Compatible w/	
Interlock Dimensions.....	9.5" x 4.7" x 7.5" (242 x 120 x 190 mm)
Dräger Plug-In® Compatible Dim.....	9.5" x 3.9" x 7.5" (242 x 100 x 190 mm)