

Penlon Prima 451 Anaesthetic Machine

Technical Specifications

ANAESTHESIA SOLUTIONS



- ◆ Approved for use with 1.5 and 3 tesla scanners, up to 1000 gauss¹
- ◆ Designed specifically for use in an MRI environment
- ◆ Electronic touchscreen ventilator
- ◆ Six ventilation modes, and support for spontaneous breathing patients
- ◆ Compact footprint, optimum manoeuvrability
- ◆ Total system compatibility
- ◆ Lockable castors - assists stability
- ◆ Enclosed body construction, with new drawer unit option²
- ◆ Large workspace
- ◆ Designed and manufactured in the UK
- ◆ Approved for use with GE Healthcare, Philips and Siemens MRI scanners²

Physical Specifications

Dimensions	
Size (H x W x D)	1390 x 790 x 700 mm (frame only) 1390 x 873 x 700 mm (frame and absorber)
Weight	110 kg (242 lb)

Work Surface	
Height	860 mm
Size (W x D)	580 x 250 mm
Loading	30 kg - evenly distributed

Top Shelf	
Size (W x D)	710 x 350 mm
Loading	30 kg - evenly distributed

Drawer (Optional)	
Size (H x W x D)	120 x 360 x 350 mm
Loading	30 kg - evenly distributed

Castors	
Diameter	125 mm
Brakes	Individually braked

Vaporizer Mounting	
Vaporizers	Sigma Delta - (Sev and Iso)
Number of Positions	Two
Type	Selectatec® compatible backbar

Gas Supply

Connections		
Cylinder Connections	Two	
Connection Type	Pin-indexed	
Pipeline Connection	Three inlets	
Territory Specific Pipeline Connections	UK/Europe:	NIST
	USA:	DISS
	Australia:	SIS

Gas Scavenging Fixing	
Location	Bracket on GCX™ compatible frame upright
Loading	30 kg

Environmental

Operating Conditions	
Temperature	+10 to 38°C (50 to 100°F)
Atmospheric Pressure	70 to 106 kPa
Altitude	2438 m (8000 feet) maximum
Humidity	10 to 85% R.H. non-condensing

Transport and Storage Conditions	
Temperature	-5 to 40°C (23 to 104°F)
Atmospheric Pressure	50 to 106 kPa
Humidity	10 to 85% R.H. non-condensing

Ventilator Specification

Physical	
Size (Control Panel Only)	185 x 290 x 300 mm (H x W x D)
Screen	8.4" Colour TFT touchscreen
Weight (Control Panel Only)	15 kg
Power	100 - 240 VAC, 50 - 60 Hz
Battery Back Up	60 minutes approximately
Drive Gas	Oxygen or Air

Functional	
Tidal Volume (Vt)	20 - 1600 ml (Adult), 20 - 350 ml (Paediatric)
Rate (BPM)	4 to 100 bpm
I:E Ratio	1:0.2 - 1:8
Pressure Limit (Volume Control Mode)	10 to 80 cmH ₂ O
Fresh Gas Compensation	Automatic Tidal Volume Adjustment
Ventilation Modes	Off, Standby, Volume, Pressure Controlled, Spontaneous, SIMV, SMMV, and PSV
Pressure Range (Pressure Control Mode)	5 to 70 cmH ₂ O
Electronic PEEP	4 to 20 cmH ₂ O (or 4 to 30 cmH ₂ O optional)
Oxygen Monitor	Fuel Cell type

SIMV, SMMV, PSV	
Trigger (PEEP Referenced)	0.7 to 4 L/min
Trigger Window	60% of Expiratory Time
Tidal Volume (Vt)	As Volume Mode
Inspiratory Time (Ti)	0.3 to 5 Seconds
Support Pressure (PSV only)	4 to 70 cmH ₂ O

Technical Specification

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 ₂ O	38 cmH ₂ O
PRESSURE		
• Tidal Volume (Vt)	600 ml	150 ml
• Rate (BPM)	10	15
• I:E Ratio	1:2	1:2
• P-Target	10 cmH ₂ O	10 cmH ₂ O
SIMV		
• Tidal Volume (Vt)	600 ml	150 ml
• Rate (BPM)	6	15
• Inspiratory Time	2 Seconds	1.3 Seconds
• Trigger	1 L/min	1 L/min
SMMV		
• Minute Volume (Vm)	3.6 L	2.2 L
• Rate (BPM)	6	15
• Inspiratory Time	2 Seconds	1.3 Seconds
• Trigger	1 L/min	1 L/min
PSV		
• Support Pressure	10 cmH ₂ O	10 cmH ₂ O
• Inspiratory Time	2 Seconds	1.3 Seconds
• Trigger	1 L/min	1 L/min



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