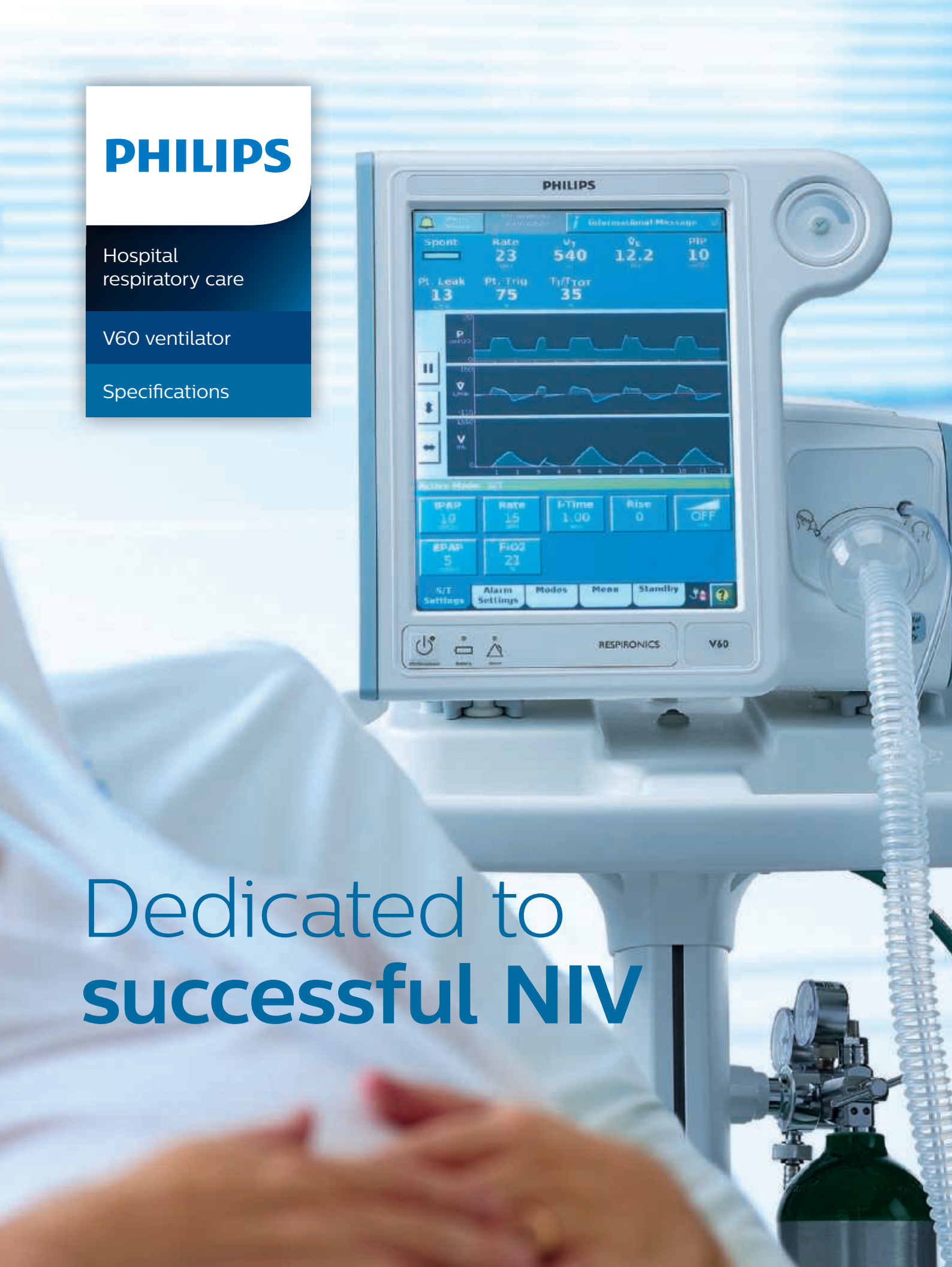
PHILIPS

Hospital respiratory care

V60 ventilator

Specifications



Dedicated to **successful NIV**

Specifications

The Philips Respironics V60 ventilator combines Respironics' ventilation expertise with Philips focus on simplifying advanced health care. The result is exceptional noninvasive ventilation with an invasive ventilation fallback and an interactive display that helps simplify patient management.

1. Patient types
Adult
Pediatric (≥20kg)

2. Modes
Standard
CPAP (continuous positive airway pressure)
S/T (spontaneous with timed backup)
PCV (pressure control ventilation)
AVAPS (average volume assured pressure support)
Optional
PPV (proportional pressure ventilation)*

3. Settings	
Settings	Range
C-Flex	OFF, 1 – 3
CPAP	4 – 25cmH_2O
EPAP	4 – 25cmH_2O
IPAP	4 – 40cmH_2O
I-time (inspiratory time)	0.30 – 3.00sec
Max P (AVAPS maximum IPAP)	6 – 40cmH_2O
Min P (AVAPS minimum IPAP)	5 – 30cmH_2O
O_2 (oxygen percent)	21 – 100%
Ramp time	OFF, 5 – 45min
Rate (respiratory rate)	4 – 60bpm
Rise (rise time)	1 – 5
Triggering and cycling	Auto-adaptive (Auto-Trak)
AVAPS target tidal volume	200 – 2,000ml btps
Max E	0 – 100cmH_2O/l
Max R	0 – 50cmH_2O/l/s
PPV%	0 – 100%
Max P (PPV maximum pressure limit)	5 – 40cmH_2O
Max V (PPV maximum volume limit)	200 – 3,500ml

* May not be available in all markets

4. Modes with settings

	CPAP	S/T	PCV	AVAPS	PPV
Rate		•	•	•	•
I-time		•	•	•	•
CPAP	•				
EPAP		•	•	•	•
IPAP		•	•		•
Rise		•	•	•	•
Min P				•	
Max P				•	•
Max V					•
Max E					•
Max R					•
PPV%					•
O_2	•	•	•	•	•
V_T (tidal volume)				•	
C-Flex	•				
Ramp time	•	•	•		

5. Monitored parameters

Patient data window	
Breath phase/trigger indicator	Spont, timed, exhale
PIP	0 – 50cmH_2O
Patient/total leak	0 – 200l/min btps
Patient trigger	0 – 100%
Respiratory rate	0 – 90bpm
Ti/Ttot	0 – 91%
Minute volume	0 – 99.0l/min btps
Tidal volume	0 – 3,500ml btps
Waveform window	
Pressure waveform	0 – 50cmH_2O
Flow waveform	-240 – 240l/min btps
Volume waveform	0 – 3,500ml btps

6. Alarms

Alarm	Adjustable range
Hi Rate (high respiratory rate alarm)	5 – 90bpm
Lo Rate (low respiratory rate alarm)	1 – 89bpm
Hi V_T (high tidal volume alarm)	200 – 3,500ml
Lo V_T (low tidal volume alarm)	Off, 5 – 1,500ml
HIP (high inspiratory pressure alarm)	5 – 50cmH_2O
LIP (low inspiratory pressure alarm)	OFF, 1 – 40cmH_2O
Lo V_E (low minute ventilation alarm)	OFF, 0.1 – 99l/min
LIP T (low inspiratory pressure delay time)	5 – 60sec

7. Other settings

Alarm volume	1 – 10 (relative scale)
Brightness	1 – 5 (relative scale)
Exhalation port selection	• DEP (disposable exhalation port) • Whisper Swivel • PEV (plateau exhalation valve) • Other • None (no inline circuit exhalation port)
Interface selection	ET/Trach, 1, 2, 3, Other
Screen lock	Off, On
Auto-Trak Plus	Optional*
Trigger*	Normal, 1 – 7
E-cycle*	-2, -1, Normal, 1 – 6

8. Environmental

Temperature	
Operating conditions	+5 – +40ºC
Storage conditions	-20 – +50ºC
Relative humidity	
Operating conditions	15 – 95% (non-condensing)
Storage conditions	10 – 95% (non-condensing)
Barometric pressure	
Operation and storage	79.9 – 101.1kPa (600 – 765mmHg)
Altitude	
Operation and storage	600 to 765 mmHg (approximately -61 to 1951m (-200 to 6400 ft) relative to sea level)

* May not be available in all markets

9. Communication

Philips IntelliBridge EC10
Philips IntelliBridge EC40/80
Philips VueLink Open Interface
Respi-Link remote diagnostic system
Bernoulli® management system
Capsule DataCaptor™ device interface driver
GE Healthcare (Centricty Critical Care)
Cerner CareAware® iBus™
Other monitoring and patient information systems
RS232 digital and analog

10. Electrical

External	
AC voltage	100 – 240 VAC
AC frequency	50/60Hz
AC power	300 VA
Battery (optional)	
Nominal voltage	14.4V
Capacity	11.0Ah
Battery chemistry	Lithium-ion
Operating time	6 hours in normal conditions

11. Physical

Weight	11.7kg (25.7lb) with optional battery 10.6kg (23.3lb) without optional battery
Dimensions	33.7cm (13.3in) height 39.4cm (15.5in) width 42.9cm (16.5in) depth

12. Regulatory compliance

2nd edition standards	
EN 60601-1-2	Electromagnetic Compatibility Requirements and Tests
EN 55011	Radiated and Conducted RF Disturbance Characteristics--Limits and Methods of Measurement (Level A)
EN 55014-1	Electromagnetic Compatibility Requirements. Part 1: Emissions
EN 61000-3-2	Limits for Harmonic Current Emissions
EN 61000-3-3	Limitation of Voltage Changes, Fluctuations, and Flicker Emissions
EN 61000-4-2	Electrostatic Discharge Immunity Test (8/15KV)
EN 61000-4-3	Radiated Electromagnetic Field Immunity Test (10V/M)
EN 61000-4-4	Electrical Fast Transient/Burst Immunity Test
EN 61000-4-5	Surge Immunity Test
EN 61000-4-6	Immunity to Conducted RF Disturbances (10V)
EN 61000-4-8	Power Frequency Magnetic Field Immunity Test
EN 61000-4-11	Voltage Dips, Short Interruptions, and Voltage Variations Immunity Tests
MIL-STD 461E RE101	Electromagnetic Field Generation (Army Level)
ANSI/AAMI ES 60601-1	Medical electrical equipment - Part 1: General requirements for basic safety and essential performance
WEEE recycling directive	Compliant with the WEEE recycling directive

3rd edition standards	
IEC 60601-1; Ed. 3.1	Medical electrical equipment – Part 1: General requirements form basic safety and essential performance
IEC 60601-1-2; Ed. 3.0	Medical electrical equipment - Part 1-2: General requirements for basic safety and essential performance - Collateral Standard: Electromagnetic disturbances
IEC 60601-1-6; 2013	Medical electrical equipment – Part 1-6: General requirements for safety
IEC 60601-1-8; Ed. 2.1	Medical electrical equipment – Part 1-8: General requirements for safety
IEC 62366; 2007 + A1: 2004	Medical devices - Application of usability engineering to medical devices
ISO 14971; 2007	Medical devices – Application of risk management to medical devices
EN ISO 14971; 2012	Medical devices – Application of risk management to medical devices
ISO 80601-2-12; 2011	Medical electrical equipment – Particular requirements for basic safety and essential performance of critical care ventilators
ISO 60529; Ed. 2.1	Degrees of protection provided by enclosures (IPX1 @ 0° tilt)
IEC 62304; Ed. 1.0	Medical device software - Software life cycle processes
ANSI/AAMI ES 60601-1	Medical electrical equipment - Part 1: General requirements for basic safety and essential performance
WEEE recycling directive	Compliant with the WEEE recycling directive

Please visit **www.philips.com/V60**

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