

# Esprit<sup>®</sup> Ventilator

*Please check with your local Respironics Representative to find out if this product is available for purchase in your country.*

The flexible Esprit Ventilator combines sophisticated design with easy-to-use features. This dual-platform (invasive and non-invasive) microprocessor driven ventilator offers a full range of modes and breath types in Volume Control Ventilation (VCV), Pressure Control Ventilation (PCV) and Non-Invasive Positive Pressure Ventilation (NPPV).

Esprit incorporates a fast response, high performance blower that removes the need for wall air source gas. Respironics exclusive Auto-TRAK<sup>®</sup> ensures correct sensing of patient effort and leak compensation.

The Esprit features a full array of graphics to rapidly assess patient condition. Scalars, Loops, Trends and Respiratory Mechanics guide therapy with immediate, real time feedback concerning patient response to ventilator settings. This allows fast optimization specific to each individual patient.

An optional communication package provides 2-way communication between Esprit and the NICO2 Cardiopulmonary Monitor with information displayed directly in Esprit trend graphs.

Full color, touch screen user interface is easy to read and operate. Intuitive menu structure provides a fast learning curve and easy to find settings. Simple patient breathing circuit enables fast and effective turn around between patients. Integrated self diagnosis screens accommodate rapid operation verification.

Esprit is a full featured, dual platform intensive care ventilator well suited for all patient populations and patient needs - neonate to adult.



## Features

- A full range of Modes and Breath Types - Volume Control(VCV), Pressure Control(PCV) and fully integrated Noninvasive Ventilation (NPPV)
- Upgradeable system software
- Optional Communication with NICO2 Cardiopulmonary monitor

### Easy to Use

- Touch screen (infrared) Graphical User Interface (GUI)
- Intuitive menu structure
- Three-step setting change process
- Mode preset capability
- Full graphics scalars, loops and trending
- Prioritized alarms

### Flexible

- No need for wall air or compressor
- Universal power supply plus battery back-up
- Mounting options (Carts and wall mount)
- Standard simple breathing circuit and filters

# Specifications

## Esprit<sup>®</sup> Ventilator

Type of Ventilation	Mode of Ventilation
Volume Controlled	Assisted/Control (A/C) SIMV CPAP
Pressure Controlled	Assisted/Control (A/C) SIMV
Apnea	CPAP
Noninvasive	Spont.; Spont./T

### Ventilation Settings and Ranges

Respiratory Rate	1 to 80 BPM
Rise Time	0.1 to 0.9 sec.

### Inspiratory Trigger

Pressure Trigger	-20 to -0.1 cm H <sub>2</sub> O
Flow Trigger	0.5 to 20 LPM Base Flow 3 LPM above flow sensitivity (with flow triggering)

### Expiratory Cycle

Flow Trigger	10 to 45% of peak flow
Percent O <sub>2</sub>	21 to 100%
Patient Type	Adult, Pediatric
Apnea Rate	1 to 80 BPM

### Volume Controlled Ventilation

### Settings and Ranges

Tidal Volume	50 ml to 2500 ml
Plateau	0 to 2.0 sec.
Peak Inspiratory Flow	3 to 140 LPM (Compensated)
Spontaneous Flow	Up to 200 LPM (Uncompensated)
PEEP/CPAP	0 to 35 cm H <sub>2</sub> O
PSV Pressure	0 to 100 cm H <sub>2</sub> O
Flow Wave Form	Descending Ramp, Square

### Pressure Controlled Ventilation

### Settings and Ranges

Inspiratory Pressure	5 to 100 cm H <sub>2</sub> O
Inspiratory Time	0.1 to 9.9 sec.

PSV Pressure

0 to 100 cm H<sub>2</sub>O**Noninvasive Positive Pressure Ventilation****Settings and Ranges**

EPAP/CPAP Pressure

2 to 25 cm H<sub>2</sub>O

IPAP Pressure

2 to 35 cm H<sub>2</sub>O

Leak Compensation

Up to 60 LPM

**Parameters and Ranges**

Respiratory Phase and Type

Mandatory, Assisted,  
Supported, Spont., Plateau

Respiratory Rate (Spont.)

0 to 150 BPM

Respiratory Rate (Total)

0 to 150 BPM

Exhaled Tidal Volume

0 to 9999 ml

Exhal. Min. Volume Total

0 to 99.9 LPM

Minute Volume (Spont.)

0 to 99.0 LPM

I:E Ratio

9.9 : 1 to 1 : 99

Patient Leak

0 to 140 LPM

Peak Inspiratory Pressure

-20 to 130 cm H<sub>2</sub>O  
(On Screen)

Average Pressure

-20 to 120 cm H<sub>2</sub>O  
(On Screen)

Plateau Pressure

-20 to 130 cm H<sub>2</sub>O  
(On Screen)

End Expiratory Pressure

-20 to 130 cm H<sub>2</sub>O  
(On Screen)

% Oxygen Delivered Optional

0 to 110%

f/Vt (RSBI)

0 to 500

**Graphics Module****Scalars**

Flow vs. Time

Pressure vs. Time

Volume vs. Time

Adjustable Time Scale

**Loops**

Flow/Volume

Pressure/Volume

**Freeze Screen**

Individual Analysis of Each Curve

Loop Save and Overlay Function

Individual Analysis of Each Loop

**Calculated Values (from Maneuvers)**

End Expiratory Pressure

-20 to 120 cm H<sub>2</sub>O  
(On Screen)

Expiratory Pause Pressure	-20 to 120 cm H <sub>2</sub> O (On Screen)
Auto PEEP	-20 to 120 cm H <sub>2</sub> O

## Alarms

### Alarm Controls

Audible Alarm Volume Adjustable:	54 to 77 db (complies with EN475 Standard)
Alarm Silence	120 sec.
Alarm Reset	

### Alarms

High Inspiratory Pressure	10 to 105 cm H <sub>2</sub> O
Low Inspiratory Pressure	3 to 105 cm H <sub>2</sub> O
Low PEEP/CPAP Pressure	0 to 35 cm H <sub>2</sub> O
High Respiratory Rate	0 to 150 BPM
Low Expiratory Mandatory Tidal Volume	0 ml to 2500 ml
Low Expiratory Spontaneous Tidal Volume	0 ml to 2500 ml
High Expiratory Minute Volume	0 to 60 LPM
Apnea Intervals	10 to 60 sec.

### Nonadjustable Alarms

<ul style="list-style-type: none"> <li>• Circuit Occlusion</li> <li>• Air Source Inop.</li> <li>• Low O<sub>2</sub> Pressure</li> </ul>	<ul style="list-style-type: none"> <li>• Long Inspiratory Time</li> <li>• Low O<sub>2</sub> Percentage</li> <li>• High O<sub>2</sub> Percentage</li> </ul>
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### AC Power and Battery Indicators:

- Loss of AC Power (Audible)
- Low AC Power (Audible)
- Charging, In Use, Low
- Alternating Current
- Main Battery in Use
- External Battery

### Self Test/Self Diagnosis:

- Short Self Test (SST)
- Extended Self Test (EST)
- Built-In Support/Trouble Shooting

### User Screen:

Color 10.4 Touch Screen

### Interface Port:

RS-232 Output and Remote Communication

### Software Upgrades:

- Color Screen
- Graphics
- Communications
- VueLink Interface
- Respiratory Mechanics

## Dimensions

Height	40.5 cm (16 in.)
Width	35.6 cm (14 in.)
Depth w/Filter	61.0 cm (24 in.) 69.9 cm (27.5 in.)
Weight w/Battery	30 kg (66 lbs.) 39 kg (86 lbs.)