

Introducing Newport HT70[®] Ventilator

- ◆ **Infant > 5 kg, Pediatric to Adult Application**
for invasive or non-invasive ventilation
- ◆ **Touch Screen Simplicity**
 - Clear, easy to read screens
 - Straight forward navigation paths
 - Dedicated screens for homecare and transport applications
- ◆ **Power Pac[™] Internal Battery System**
 - Up to 10 hours operation
 - Hot-swappable on the go for continuous power
 - Fast re-charge
 - Integrated alarm system
 - Minimum 30 minutes operation from back up internal battery
- ◆ **Clinically Sophisticated**
 - A/CMV, SIMV, SPONT
 - Back-up Ventilation for all modes
 - Volume or Pressure Control
 - Pressure Support (on Plus model)
- ◆ **Comprehensive monitoring**
 - Tidal Volume, Min. Volume, Resp. Rate
 - P-M-B Pressure, Slope/Rise, Expiratory Threshold
- ◆ **Self-Contained Volume or Pressure Ventilator**
 - Patented dual piston gas generator
- ◆ **Mobility, Mobility, Mobility**
 - Standard compact cart for hospital use
 - Carry bag converts from mini bag to duffel to back pack
 - Custom wheelchair mounting bracket
 - Rated for air and helicopter use
- ◆ **Oxygen Accessories**
 - Air/Oxygen Entrainment Mixer - high pressure .21 - 1.00
 - Lw Flow Oxygen Adapter





NEWPORT HT70 VENTILATOR SERIES

Distr.
Price



HT70	HT70 with Basic Features
HT70P	HT70 with Pressure Support and additional features
HT700M	HT70 with O2 monitor built-in
HT70POM	HT70P with O2 monitor built-in
Complete with	
HT460300	Air Intake Filter, Disposable (pk of 5 filters)
HT6004701	Prox. Inline Filter, Disposable (pk of 5 filters)
xxxxxxx	Expiratory Filter (1 ea)
PWR3202P	HT70 A.C. Power Supply
OPRHT70	HT70 Operating Manual

HT70 ACCESSORIES	Distr. Price	HT70 ACCESSORIES	Distr. Price
ADP3204P D.C. Auto Lighter Power Adapter		MIX3212A Air/Oxygen Entrainment Mixer	
BAT3270A Power Pac Battery Pack		xxxxxxx HT70 Nurse Call Cable	
PWR3202P HT70 A.C. Power Supply, includes North American Style Power Cord		MSK226P Disposable Mask, Adult small	
PWR3207P North American Style Power Cord		MSK326P Disposable Mask, Adult medium	
PWR3210P British Style Power Cord		MSK426P Disposable Mask, Adult Large	
PWR3211P French/German Style Power Cord		xxxxxxx HT70 Cruiser Bag	
 HT460300 Air Intake Filter, Disposable (pk. of 5 filters)		xxxxxxx HT70 Stand	
HT460300 Air Intake Filter, Disposable (Pk. Of 100 filters)		xxxxxxx HT70 Stand with Flex Arm	
 HT6004701 Prox. Inline Filter, Disposable (pk of 5 filters)		HTECH01 E-Cylinder Single Bracket	
xxxxxxx Expiratory Filter, Disposable		HTECH02 E-Cylinder Dual Bracket	
HT600044 Low Flow Oxygen Blending Bag		xxxxxxx Utility Basket	
xxxxxxx HT70 Low Flow Oxygen Adapter			

Price is USD

❖ Clinical In-Service Outline

➔ Overview

❖ General Description

- Combination control panel and color touch screen GUI
- Infant through adult application (≥ 5 kg)
- 3 Modes: Assist Control, SIMV and SPONT
 - 2 Mandatory Breath Types: Pressure Control & Volume Control
 - 2 Spontaneous Breath Types: Pressure Support, simple spontaneous (PS set at 0)
- NIV - Noninvasive On/ Off
- Power Management
 - Runs on 100-240 VAC
 - Runs on 12-30 VDC
 - Power Pac Integrated Battery
 - Emergency Internal Back-up Battery
 - External Battery
- Models: HT70 and HT70 plus. Either may have the optional oxygen monitor installed.

❖ Geography

- Front panel
 - Touch Screen GUI with Menus
 - Accept Button
 - Cancel Button
 - Alarm Silence/Reset Button
 - External Power Indicator LED
 - Battery Indicator (on screen)
 - Manual Inflation
 - Device Alert Indicator
 - Brightness Control
 - Up/Down Arrows
 - Breath Indicator LED
- Circuit / tubing connectors
- Side panels
- Back panel
- 360 Alarm Lamp in Handle

→ Setup

- ❖ Connecting the power and gas (optional)
 - Power Choices
 - AC or External DC (Battery)
 - Power Pac Integrated Battery (show how to remove/replace)
 - Back up Internal Battery
 - Gas Choices
 - No supplemental gas
 - Low Flow Oxygen
 - 50 psi oxygen
- ❖ Assembling the filters, breathing circuit, and humidifier/HME
 - Proximal Filter
 - Inline Filter
 - Breathing Circuit
 - Humidifier use
 - Moving Proximal Line Tee to the Dry Side of a Heated Humidifier to Avoid Water Contamination of Proximal Filter
 - HME use
 - Moving Proximal Line Tee to the Patient Side of an HME to improve confidence of Low Pressure Alarm for recognition of a circuit disconnect
- ❖ Powering up into Standby condition
 - Startup Screen
 - Circuit Check / Activate Preset / Start Ventilation
 - Activate Preset
 - Start up defaults / Custom defaults
 - Reset Event History for new patient
 - Performing a Circuit Check
- ❖ Setting Ventilation Controls
 - Selecting the mandatory breath type and mode
 - Adjusting Parameters
 - Monitor Data Buttons
 - Advanced Settings
 - Utility Settings

- ❖ Alarms
 - Setting Alarms (including Alarms Quickset) & Alarm Loudness
 - Understanding built-in alarms
 - Alarm Silence & Reset
- ❖ Selecting Domain
- ❖ Starting Ventilation
- ❖ Changing Domain while Ventilating
- ❖ Pressure Bar / Patient effort indicator
- ❖ Viewing monitored data
 - Numeric data
 - Trend data
 - Event History Log
- ❖ Battery Usage Display
- ❖ Help Button

➔ Additional

- ❖ Cleaning and maintenance
- ❖ Intake, inline and proximal line filters
- ❖ Breathing circuit and humidifier components
- ❖ Recharging batteries
- ❖ Changing the optional O₂ Sensor
- ❖ Mobility, Mobility, Mobility
 - Carry Bag - Standard Cart - Wheelchair mounting - Ambulance Mounting

Newport HT70 Ventilator

A New World of Mobility

The Newport HT70 series of ventilators combine ruggedness, exceptional mobility, safety and ease of use for invasive and non-invasive applications. It has the clinical finesse to provide ventilatory support for infant, pediatric and adult patients whether in the hospital, longterm care, home care or transport venues.

The integrated battery system consists of two internal batteries that can provide up to 10 hours of operation at standard settings. The primary, detachable battery pack is “hot-swappable” on the go. It can easily slide out and be replaced with a fresh battery pack. The secondary internal back up battery provides power when the battery pack is changed out for uninterrupted ventilation and for added safety, it ensures a minimum of 30 minutes of power when the primary battery is depleted.

The HT70 ventilators define ease of use. Everything is right at your fingertips on the front panel. There are no complicated menus or difficult sequences to follow in order to make any necessary adjustments.

The stylish exterior is made of rugged polycarbon materials that are nearly indestructible. The overall design and structure provides a solid base that stands up to the harsh environment found in the world of transport and homecare.

HOSPITAL

- Volume and pressure control, pressure support*
- Remote alarm / central monitoring compatible

HOME CARE

- Integrated battery system, up to 10-hours operation
- Internal dual micro-piston gas generator

EMERGENCY PREPAREDNESS

- Compatible with any standard NATO biochemical filter
- 24/7 Clinical and Technical Support

TRANSPORT

- Helicopter and Fixed Wing rated
- Rugged construction

Contact us today for a personal introduction to HT70's world of mobility.

* on Plus model



Newport
MEDICAL

Breathing care into all we do.

Newport HT70 Ventilator Specifications

PATIENT RANGE Infant/Pediatric (≥ 5 kg) - Adult

CONTROLS/SETTINGS

Modes (Pressure or Volume)	A/CMV SIMV SPONT
NIV (non-invasive ventilation)	available in all modes
Tidal Volume	50 to 2,200 mL
RR (Respiratory Rate)	1 to 99 b/min
i Time (Inspiratory Time)	0.1 to 3.0 sec
PEEP/CPAP	0 to 30 cmH ₂ O/0 to 30 mbar
PS (Pressure Support)**	0 to 60 cmH ₂ O/0 to 60 mbar*
Flow	5 to 100 L/min
I:E Ratio	1:99 to 3:1
Pressure Control (Target Pressure)	5 to 60 cmH ₂ O/5 to 60 mbar
P _{trig} (Sensitivity)	-9.9 to 0 cmH ₂ O/-9.9 to 0 mbar
Manual Inflation	3 sec maximum
FiO ₂ (Optional)+	.21 to 1.00
PS Max i time **	0.1 - 3.0 sec
PS %Exp. Threshold **	5 - 55%
Slope Rise	0 - 10
Flow Wave Pattern	square or descending
Auto Lock function	ON / OFF
Language Selection	multiple language options
Remote Alarm Option	Normally Open/Closed

*PEEP + PS cannot exceed 60 cmH₂O/mbar

MONITORED PARAMETERS

Paw (Peak, Mean, Base)	V _{Ti} (insp. tidal volume)
MV _i (insp. minute volume)	Peak Insp. Flow
Integrated Battery Pack	RR tot (total respiratory rate)
Back up internal battery	I:E Ratio
FIO ₂ ⁺	

ALARMS

High Airway Pressure	4 to 99 cmH ₂ O/4 to 99 mbar
Low Airway Pressure	3 to 98 cmH ₂ O/3 to 98 mbar
High Baseline Pressure	automatically set
Low Baseline Pressure	automatically set
High Resp. Rate	off, 30-100 b/min
High Insp. Minute Volume	1.1 to 50 L
Low Insp. Minute Volume	0.1 to 49.0 L
Back-up Ventilation Alert	
Apnea	20 - 60 sec
High FIO ₂ ⁺	off, 24 - 100
Low FIO ₂ ⁺	off, 22 - 98
Device Alert	malfunction alert
Low Battery	min. 30 minutes battery remains
Silence/Reset	60 sec

+ Only available with optional O₂ Sensor

** Only available on Plus model

PNEUMATICS

Gas Delivery System	internal dual micro-piston
Air/Oxygen Mixer (Optional)	35 to 90 psig oxygen

POWER REQUIREMENTS

100- 240 VAC, max. 2A
50/60/400 Hz
12-30 VDC, max. 12A

INTEGRATED BATTERY PACK

Lithium ion - provides up to 10 hours operation

INTERNAL BACK UP BATTERY

Lithium ion - min. 30 minutes

DIMENSIONS

Width	9 in (23 cm)
Depth	10 in (25 cm)
Height	9 in (23 cm)
Weight	17 lbs (7.8 kg)

MISCELLANEOUS

Operating Temperature	-18° C to 50° C
Operating Altitude	0 to 15,000 ft (0 to 4,572 m)
Operating Humidity	15 to 95% non-condensing
Storage Temperature	-40° C to 65° C
RS-232	8 pin Semconn connector 19,200 Baud
USB	2 ports, to upload or download data
Remote Alarm	RJ-435, to connect to nurse call or remote system

SPECIALTY SCREENS

Events	Records up to 600 events. Parameter settings for each event are recorded
Trends **	Displays trend graphs for last 24 hours
Download Data	Capture and download Events and screens
Patient Presets	Customized or Default
Customized Back Up Ventilation	Link with Apnea and/or Low MV _i and customize settings



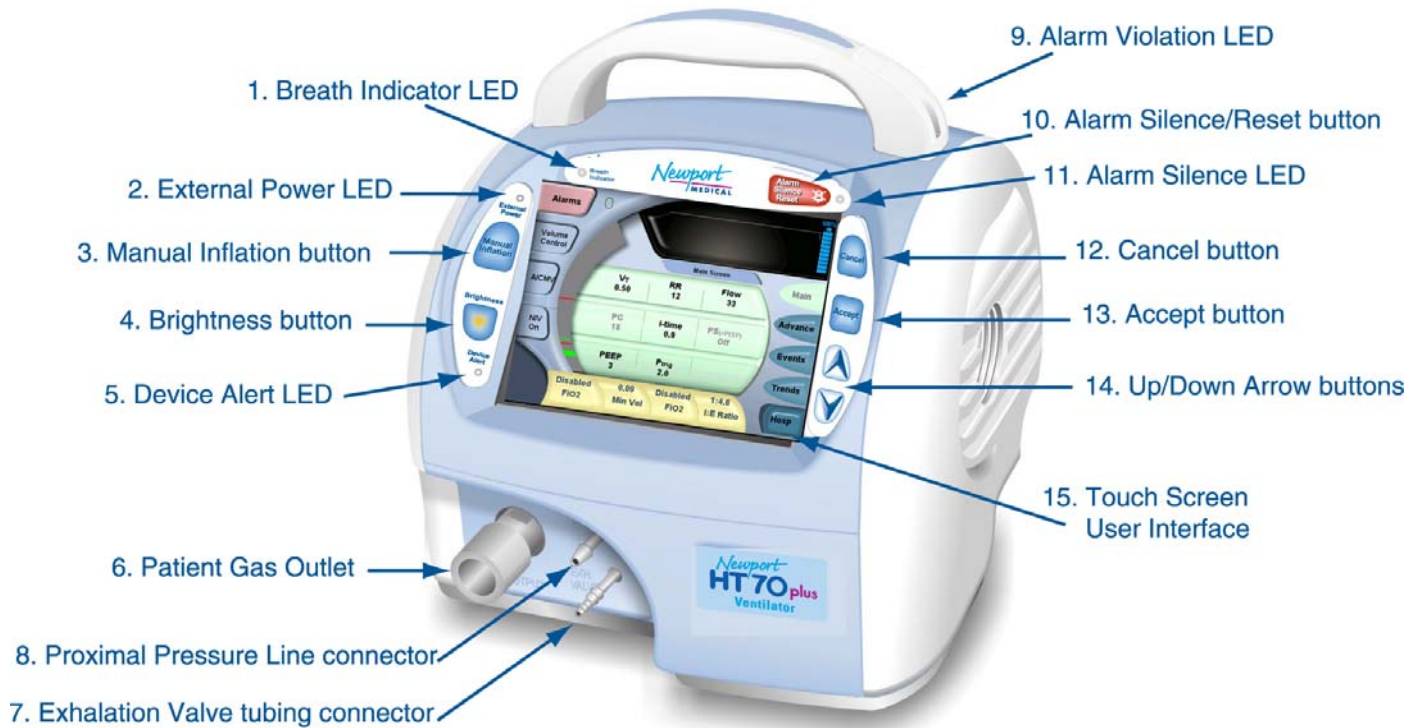
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Specifications subject to change without notice.

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Newport HT70 Quick Guide

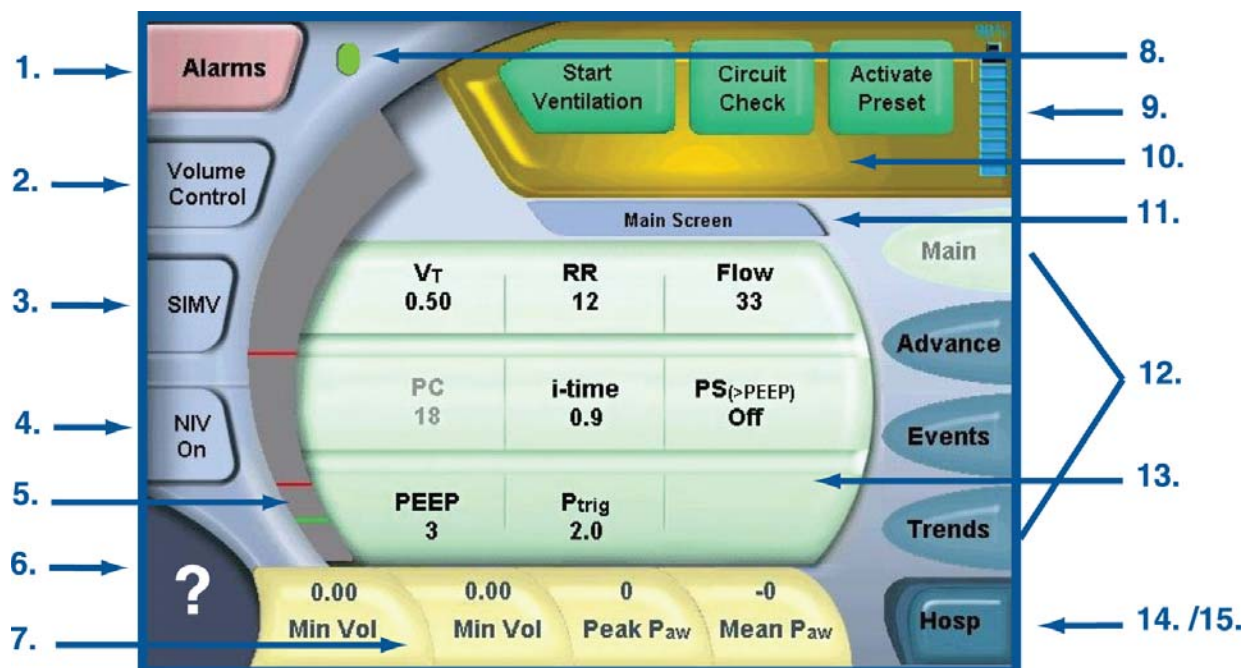
Front Panel Overview



1. **Breath Delivery Indicator.** LED flashes green with every breath delivered by the ventilator.
2. **External Power LED.** Lights green whenever external power is connected. This also indicates that the Integrated Battery System is being charged.
3. **Manual Inflation button.** Press and hold this button to deliver flow to the patient. The ventilator will deliver flow at the current settings while the button is pressed. Flow delivery is limited to a maximum of 3 seconds or until the High Pressure alarm setting is reached.
4. **Brightness button.** Press this button repeatedly to scroll to one of four screen brightness levels.
5. **Device Alert LED.** Lights red when there is a device alarm. Take the ventilator out of service and use an alternate means of ventilation.
6. **Patient Gas Outlet.** Attach patient breathing circuit tubing here.
7. **Exhalation Valve Drive Tubing connector.** Attach exhalation valve drive tubing here.
8. **Proximal Pressure Line connector.** Attach proximal pressure tubing here.
9. **Alarm Violation LEDs.** LEDs in the handle light to indicate alarm conditions.
10. **Alarm Silence/Reset button.** Press this button to silence the audible alarm for 1 minute. Once an alarm condition has been corrected, press this button to clear or Reset the alarm message and latched indicators.
11. **Alarm Silence LED.** Remains lit during the one minute alarm silence period.
12. **Cancel button.** Press this button if you want to cancel changes that have not already been accepted.
13. **Accept button.** Press this button to accept/confirm all changes made to control settings.
14. **▲ ▼ Up / Down Arrow buttons.** Press to change a highlighted parameter up/down one unit. Hold down continuously and the parameter will change at an increasingly quicker pace.
15. **Touch Screen User Interface.** Touch screen to access alarms and parameter settings.

Newport HT70 Quick Guide

Touch Screen Overview (Hospital Domain)



1. **Alarms settings / setup screen button.** Touching this button brings up the Alarm Setup screen with all alarm setting controls, including Alarm Loudness and Quickset Alarms.
2. **Breath Type Selector.** Touching this button toggles the breath type choice. The breath type will not change until you press the *Accept* button.
3. **Mode Selector.** Touching this button scrolls through the mode choices. The mode will not change until you press the *Accept* button.
4. **NIV Selector.** Touching this button toggles between NIV (NonInvasive) 'On' and 'Off'. To accept this change, press the *Accept* button.
5. **Pressure Bar.** Indicates dynamic pressure in the patient circuit in green, the High and Low Pressure Alarm settings in red and the peak pressure of the last breath in green.
6. **Help Screen button [future update].** Touching this enables a tutorial for each screen.
7. **Monitored Data buttons.** Touching any one of these four buttons opens a screen with a list of monitored parameter choices to display in that button.
8. **Patient Effort Indicator.** Indicator flashes green to show a spontaneous patient effort
9. **Battery Charge Level Indicator.** Shows current "Power Pac" battery pack (blue icon) or internal Backup Battery (red icon) charge level.
10. **Message Display.** This area shows all informational and alarm messages. During an alarm violation this area will light red for High Priority, amber for Medium Priority and yellow for Low Priority alarms and display the alarm message.
11. **Screen Title.** Indicates which screen is currently displayed and active.
12. **Screen Selections.** Touching any one of these buttons will take you to the new screen.
13. **Parameter Setting buttons.** Touching any one of these buttons will activate the parameter to allow adjustments.
14. **Domain button.** The HT70 can be set up in one of three Domains: Basic, Transport and Hospital. Touch to scroll through the Domain choices. Press *Accept* to confirm choice.
15. **AutoLock/Unlock button.** This button is only visible if *Auto Lock* is enabled and the panel is locked. Touch and hold for 3 seconds to unlock touch screen buttons.

NOTE: While operating on battery power, when *Power Save* is enabled and all alarms are cleared the touch screen will go to sleep after 2 minutes. Just touch the screen to bring it back into view.