

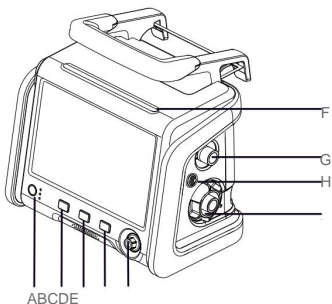


Basic operation, daily maintenance and disinfection guidelines

The guidelines apply to the TV80/TV85/TV80S fan.

This guideline is designed as a useful reference for ventilating adult, pediatric, and infant patients. It primarily describes general information, basic operation, daily maintenance, cleaning and disinfection of the ventilator, and some important precautions. For more information, please refer to the Operator's Manual.

Introduction to the fan:



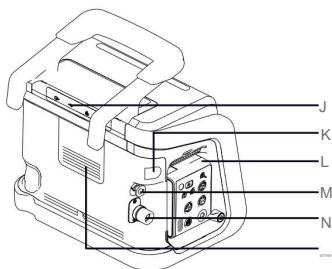
A. Power switch B. Outdoor mode/
battery level indicator off C. Screen lock button D.

Audio pause button

E. Control knob F. Alarm indicator G.

Inspiratory port H. Flow sensor port

I. Expiratory port



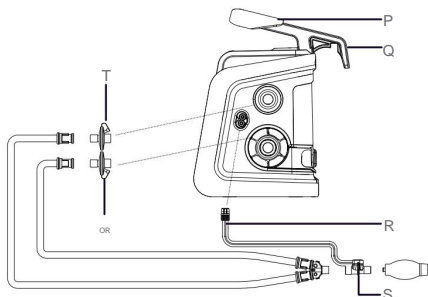
J. Connectors (VGA connector, connector

USB, network connector and RS232 connector)

K. DC power connector L. Plug-in module M.

Low-pressure oxygen supply

inlet N. High-pressure oxygen supply inlet O. HEPA
filter inlet



P. Loop

Q. Mounting hook R. Flow

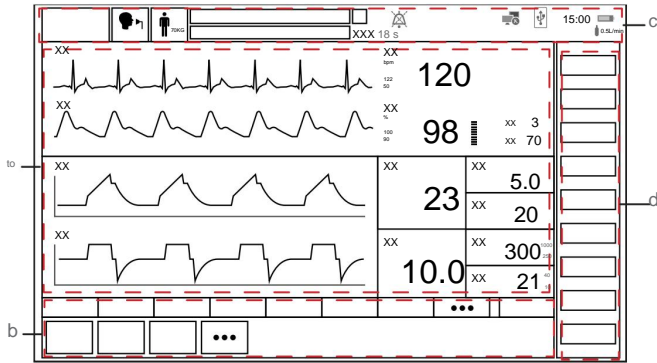
sensor sampling tube S. Flow sensor T. Inspiratory

port bacteria filter U.

Expiratory port bacteria filter



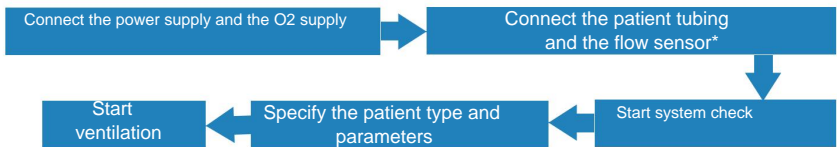
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Main screen

- a. Waveform/parameter/trend display area
- b. Ventilation mode and parameter adjustment area
- c. Icon area
- d. Functional key area

Basic operation:



* Note: Refer to the tube connection diagram on page 1.

Daily maintenance:

Interval	Procedure
Before each patient or as needed	Perform a zeroing of the pressure and flow for the patient tube; perform a system check; calibrate the flow sensor; replace with disinfected or sterilized parts or with new disposable parts.
As needed	Replace the expiration valve if it is damaged; calibrate the CO2 module when the measured CO2 value shows a large deviation; replace the flow sensor if it is damaged.
Several times a day or as needed	Check if water has accumulated in the patient's tubing and the drainage system. Drain any accumulated water. Check that the patient tube components are not damaged. Replace them as needed.
Daily or as needed	Clean the external surfaces of the fan.
Before each use or after continuous use, perform a system check and verify that there are no leaks in the breathing system. two weeks.	

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Daily maintenance:

Interval	Procedure
Monthly or as needed	Check that there is no dust buildup in the HEPA air intake dust filter and the main unit's air intake dust cover. Clean or replace as needed.
Check every 6 months. Check the charge and discharge of the lithium battery every 6 months and replace every three years.	and replace it every three years.
Annually, every 5000 hours or according to the following: Replace the air intake HEPA filter; check or replace the expiration valve membrane; check the backup alarm system alarm duration (buzzer); check or replace the gas source sealing ring; perform preventive maintenance.	if necessary
Every 6 years or as needed	Replace the clock module battery.
Note: For maintenance of the BeneVision N1 patient monitor, refer to the operator's manual.	

Cleaning, disinfection and sterilization:

Recommended frequency interval	Parts	Cleaning, disinfection and sterilization methods
Before each patient	External surface of the fan (including the housing, with soap and water, and remove detergent residue from the Plug-in module housing and the supply hose with clean water and a dry, lint-free cloth. (gas), the cart, the IV hanger, the support arm, the AC adapter, the support arm, the coupling, and the touchscreen. Disinfectant (ethanol, isopropanol, glutaraldehyde or OPA), and remove any traces of disinfectant with clean water.	and a dry, lint-free cloth; or perform ultraviolet radiation for 30 to 60 minutes.
Before each	Patient valve membrane/ expiration, set of the weekly expiration valve and reusable flow sensor	Cleaning: Rinse first with water, then soak in soapy water for 3 minutes. Then rinse thoroughly with water. Disinfection: Immerse it in a disinfectant (glutaraldehyde or OPA) for 30 minutes. Next, rinse with clean water and dry completely. Sterilization: Sterilize with steam in an autoclave at 134 °C for 10 to 20 minutes.
	Reusable patient tubing, direct flow CO2 module, SpO2 sensor and cable, electronic nebulizer, humidifier, and BeneVision N1 patient monitor	Consult the supplier's cleaning and disinfection methods.



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Every four filter weeks or as needed	cleaning: rinse thoroughly with water. Disinfection: immerse it in a disinfectant (glutaraldehyde or HEPA air OPA) for 30 minutes. Then rinse with clean water and dry completely.	first with water and then soak in water with soap powder for 3 minutes. Then rinse with water.
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Precautions:

And when using the flow sensor for the first time or when tidal volume monitoring is not accurate, perform a flow calibration according to the ventilator display diagram.

When connecting the patient tube, ensure that the flow sensor is properly connected to the breathing circuit.

When connecting the power supply, align the red dot on the DC power input connector with the red dot located next to the power interface on the main unit. A click indicates that the connector is properly seated. To remove the connector, grasp both sides of the red dot and disconnect it.

Before removing the BeneVision N1 patient monitor, first move the switch locking pin to the right, then hook the pin at the bottom of the monitor, **and** pick it up.

The BeneVision N1 patient monitor can be charged using its integrated power adapter. If the monitor is installed on the ventilator, it can also be charged when the ventilator is turned on and connected to an external power source.

To avoid risks to the patient due to an inadequate oxygen supply during patient transfer or surgery, check the cylinder pressure before starting the system, calculate the oxygen delivery time, and prepare a backup oxygen supply according to actual clinical needs.

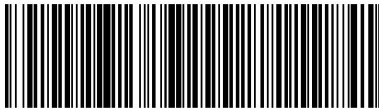
The estimated oxygen consumption monitoring time may be reduced if there is a gas leak in the ventilator on the patient side. If a leak occurs in the patient tubing or the cylinder pressure relief valve, the oxygen consumption reading will not be accurate. Determine oxygen consumption based on the patient's actual clinical condition.

And after using the ventilator, close the oxygen cylinder valve promptly.

And when using the safety rope, make sure it is hooked and bolted down. correctly attach the fan handle, and ensure the other end is securely locked with the locking ring.

The fan can be secured in the following ways during transfer:

- Hospital use: Align the cart's position pins and install the ventilator on the cart.
- Use at the headboard: Hang and secure the fan to the headboard using the mounting hook.
- Use in the ambulance: ensure that the ventilator is securely positioned in the docking station.
- Aircraft use: Mount the fan in a fixed manner as provided by the manufacturer of the aircraft.



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