

RESPINA-P1 Quick Reference



This is a quick reference extracted from the user manual of Respina P1. This document must be used by professional users only and the user manual should be read before.

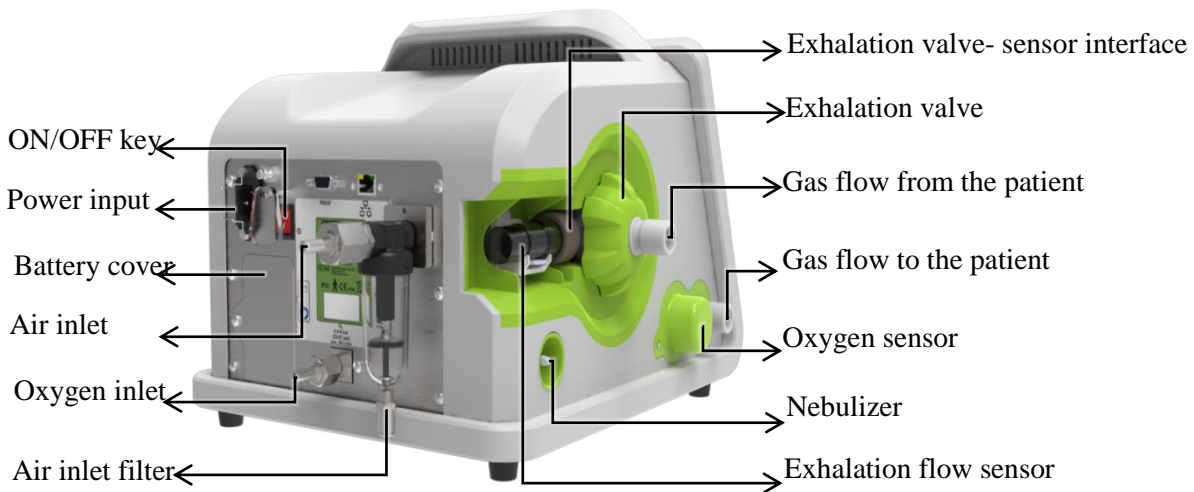


Respina P1 is intended to be used for adult and pediatric patients with more than 5Kg weight. This device is not suitable for neonates.



To ensure the proper function of the battery, the battery health test should be performed every 3 months (according to the device user manual) and the device should not be used in case of battery failure.

Air and Oxygen connection



Connect the Air and Oxygen supply hoses to the corresponding inlets on the back of the device as shown.

If the hospital is equipped with central air, connect the central outlet to the compressor and the compressor outlet to the ventilator and turn on the compressor. Therefore, the compressor acts as an alternative supply and will only enter the path if the central pressure drops.

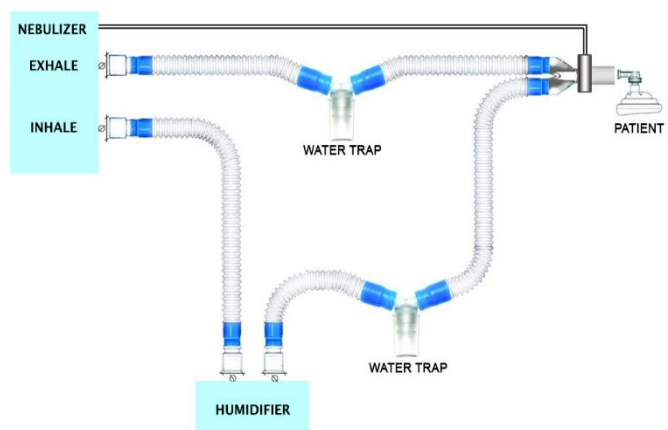
Installation of breathing tubes

Connect the breathing circuit to the patient and the device as shown.

If necessary, connect the humidifier and nebulizer as shown.



Using a nebulizer or humidifier can increase the resistance of airway filters. The user should check the airway filters continuously.



Set up the device

In order to start the device, make sure that the ventilator and compressor power cables and the Air and Oxygen supplies are connected.

Self-Test: Wait for the device to complete the Self-Test after turning it on. If there is a problem at this stage, contact the company's after sales service.

Calibration

Before ventilating the patient, on the first page, by selecting the Calibration option, a window will appear in which the following tests can be selected in order to calibrate the device.

»» Note that the patient must be disconnected from the device during calibration.

In any case, if you are not able to calibrate the device by following the tips, contact the company's after sales service office.

- **SYSTEM TEST:** This test is performed to measure the possible leakage in the system and the compliance of the airways and should always be done before using the ventilator or after changing the airway tubes. If the failure message is observed, according to the type of message, the problem should be investigated and the device should not be connected to the patient until the problem is solved.
- **Exh Flow Sensor:** This test should be performed before using the ventilator each time the expiratory flow sensor is washed or replaced or if the wrong expiratory volume is read by the sensor. If the test is not successful, the flow sensor must be replaced.
- **O2 Sensor Cal:** Oxygen sensor calibration should be done before using the ventilator and after replacing the oxygen sensor. If the test is not successful, the oxygen sensor must be replaced.

»» Always finalize the calibration procedure by selecting the **SAVE** option after performing the calibration items.

Patient option

On the first page, by selecting the Patient Option, the patient characteristics can be adjusted. If you are using the device for a new patient, select “New” then select the patient's height, gender and age group. In this case, IBW is displayed automatically. If the displayed IBW is not appropriate, the user can change it manually.

If you select “PREVIOUS”, the device will be set up with the previous settings.

Selecting respiratory mode and adjusting setting parameters

Select the desired breathing mode from the Modes window, adjust the parameters of that window and click Accept button.

»» P-SIMV and PSV modes are available for non-invasive ventilation (NIV).

»» To select CPAP mode, select the PSV mode and set the Psupport parameter zero.

Adjusting the device alarms

Use the ALARMS menu to adjust the alarm ranges and save them after each change.

- » By selecting a new patient, alarm ranges will be set as default.
- » The upper limit of the Ppeak alarm can only be adjusted manually.
- » The lower limits of PEEP and Vte alarms can be turned off.
- » The lower limit of MV alarm can only be turned off in non-invasive (NIV) breathing mode.



Note that in stanbdby mode, the sound of active alarms is deactivated and only visual alarms (alarm message and LED) are displayed.



Improper selection of the Ppeak and VTi Lim alarm range can interfere with the ventilation. To prevent this, the range of these two alarms should be adjusted according to the patient's condition and device settings.

The following table defines some alarms and the measures needed to eliminate them:

Alarm	Description	Troubleshooting
Gas Temp	The gas output temperature of the device has exceeded the allowed temperature ranges.	Control the ambient temperature. Ensure that the temperature of delivered air or oxygen is not too high.
High/ Low Oxygen	The percentage of monitored oxygen has increased/ decreased by more than 6% compared to the amount set by the user.	Make sure the Oxygen sensor is valid and calibrated. Check Air and Oxygen inlet supplies.
Low AIR/ O2 Pressure	The Air/ Oxygen inlet pressure to the device is less than a certain value.	Make sure there is an Air/ Oxygen supply with the proper pressure range.
High/ Low MV	Exhaled minute volume has been exceeded/ below the limit set in the three respiratory cycles.	Check the patient's condition, device settings and alarm ranges. check the airway for leaks. Make sure the exhalation flow sensor is valid and calibrated.
High Inh Pressure	The maximum pressure has been exceeded from its limit during inhalation.	Check the Ppeak alarm setting range, device settings, patient condition and airway.
AC Unplug	The device is unplugged.	Check the power input.
Plim Reached	If in volume based modes, the airway pressure in five consecutive breaths approaches the pressure alarm limit but does not exceed it.	Check the patient's condition and airway for occlusion. Check the device settings and change the settings if necessary. Check the pressure alarm limit and increase it if necessary.



Note that if the Plim reached alarm is activated, less volume may be delivered to the patient



Continued Plim alarm due to reduced delivery volume may cause harm to the patient.

Front panel keys

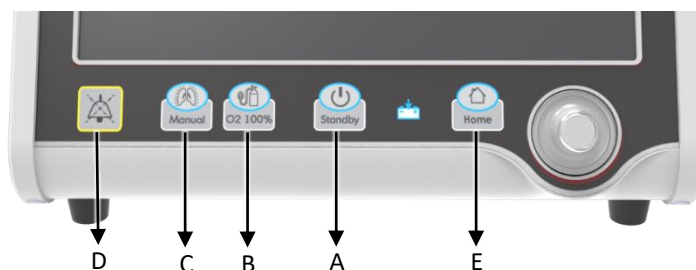
A) Standby: If you want to stop ventilation, press the Standby button on the front panel and select the Standby option after.

B) O2 100%: Ventilation will be done with 100% oxygen and current settings for about 2 minutes.

C) Manual: Delivers one breath to patient in the current settings instantly.

D) Alarm Silence: The alarm sounds off for 2 minutes, unless a new alarm triggers.

E) Home: This key is used to return to the previous menu.



Turning off the device

Go to Standby mode and select Shutdown.

In this case, the message “Please wait...” is displayed and then the ventilator is turned off.



Pay attention that hardware shutdown the ventilator is not recommended in normal a situation because it may cause problems to save the latest data and settings.

Cleaning, disinfecting and sterilizing the device

Follow the table below to clean, disinfect and sterilize the device.

Ventilator part	Single use	Cleaning	Disinfection	Sterilization
Display screen	-	Using water and soap	Using ethanol	-
Exterior surfaces, trolley and tubes holder	-		Using isopropyl alcohol	-
Air compressor	-		-	-
Hoses and the components behind the ventilator	-		Using isopropyl alcohol	Using autoclave (at 121°C for 20 minutes)
Exhalation valve	-		According to manufacturer instructions	
Exhalation valve- flow sensor interface	-	-	-	-
Exhalation flow sensor	-	-	-	-
Exhalation membrane	✓	-	-	-
Tubing system	✓	-	-	-
NIV mask	-	According to manufacturer instructions		
HME	✓	-	-	-
Nebulizer	✓	-	-	-
Humidifier	-	According to manufacturer instructions		
Humidifier temperature probe	-	-	-	-
chamber Humidifier	✓	-	-	-
Exhalation filter	✓	-	-	-