RESPINA-P2 Quick Reference

⚠ This is a quick reference extracted from the user manual of Respina P2. This document must be used by users only and the user manual should be read before.

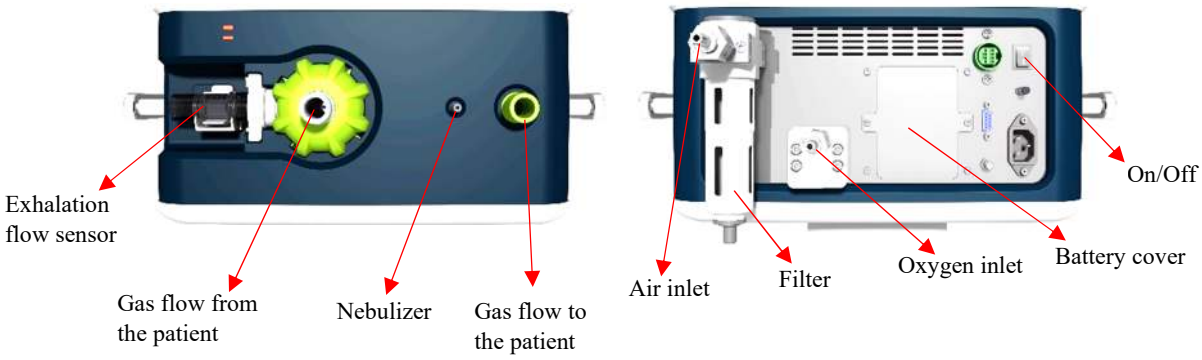
⚠ Respina P2 is intended to be used by adult and pediatric patients with more than 5Kg. This device is not suitable for neonates.

⚠ To ensure the proper function of the battery, the battery health test should be performed every 3 months (according to the device user manual).

⚠ The device should not be used in case of battery failure.

⚠ The NIV mask should be non-vented and have no PEEP control valve.

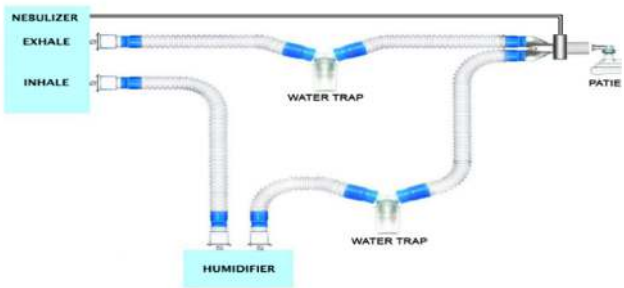
Device Connections



If you have a RespiAir compressor with a ventilator, connect the central outlet to the compressor and the compressor outlet to the ventilator. Therefore, the compressor acts as an alternative supply and turns on automatically 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 to the connections correctly as shown in the figure.



⚠ Using a nebulizer or humidifier can increase the airway resistance. Also, check the airway filters continuously.

Set up the device

Make sure that electrical connections and air and oxygen hoses are properly connected. Turn on the device. Wait for the device to complete the Self-Test stage. If all items are not approved, do not use the ventilator and notify the equipment manager.

Patient option

On the first page, you can enter the patient's details. If you are using the device for a new patient, select the New option and set the patient's height, gender, and age group. In this case, IBW is calculated automatically. If necessary, you can also change the IBW parameter manually.
If you select the PREVIOUS option, the device will start up with the previous settings.

Device calibration

⚠ that the patient must be disconnected from the device during calibration.

SYSTEM TEST Perform for each new patient, after each breathing tube change, and at regular intervals. This step is performed to ensure the correct connection of the patient's breathing tubes, measure the compliance of the breathing tubes, and measure the amount of air leakage. If approved, save the result. If rejected at this stage, do not use the ventilator and refer to the device user manual.

Exh Flow Sensor Perform for new patient, after each washing or replacement of the sensor. Also, perform this calibration if the expiratory volume value appears to be incorrect. If confirmed, save the result. If the calibration fails, do not use the ventilator and refer to the device user manual.

O2 SENSOR CAL This calibration can only be performed for the galvanic oxygen sensor. This calibration should be performed for each new patient or after replacing the oxygen sensor and at least once a week. If confirmed, save the result. If the test is not successful, the oxygen sensor must be replaced.

For permanent oxygen sensor, periodic calibration is not required, and in the case of sensor failure, contact the equipment manager.

Selection of ventilation mode and its parameters

Select the desired ventilation mode from the Modes menu, adjust the parameters and click the Accept button. To start ventilation, you need to press the Activate button.
For Non-Invasive Ventilation (NIV), two ventilation modes are selectable: P-SIMV and PSV.

To use CPAP mode, enter PSV mode and set Psupport to zero.

Quick access keys

	Alarm Silence	By pressing this key, the alarm sound off for 2 minutes, unless a new alarm reactivates the alarm sound during these 2 minutes.
	Manual Breath	Delivers one breathing cycle to patient with the current pattern.
	O2 100%	Ventilation will be done with 100% oxygen and current settings for about 2 minutes.
	Home	This key is used to return to the previous menu.
	Freeze	All signals and loops freeze. Pressing it again will unfreeze them.
	Standby	If you want to stop ventilation, select this icon and when the window opens, select the Standby option.

Adjusting the device alarms

Make the appropriate settings in the ALARMS menu and save them after each change.

By selecting a new patient, alarm ranges change and become the default.

The Ppeak alarm limit can only be adjusted manually and at the user's responsibility and must be selected carefully. The Ppeak alarm limit is plotted as a dashed line on the pressure graph so that you are always aware of its level.

⚠ Take the alarm caused by Ppeak seriously and immediately investigate and resolve the cause.

⚠ The Ppeak alarm limit is not just for warning purposes. If the lung pressure exceeds the Ppeak value for any reason, in addition to warning, ventilation will be immediately stopped for that cycle. This means that Vti will be lower than normal for that cycle.

⚠ If the alarm caused by Ppeak occurs consecutively, it will cause the minute volume to decrease and the patient's saturation to drop.

⚠ If the Ppeak alarm is set too high, the lung pressure may increase for various reasons and damage the patient's lungs. Also, if this parameter is set too low, the patient's saturation may drop. So set the Ppeak alarm limit carefully.

⚠ The Ppeak alarm limit should be adjusted according to the patient's condition, type of disease, patient's level of consciousness, ventilation mode, airway resistance, possible obstructions in the airway, etc. Because these are variable, it is necessary to continuously check the current conditions and review the ventilation settings or change the Ppeak alarm limit again.

The low limit of the PEEP and Vte alarms and high limit of the Vte alarm can be turned off.

The lower limit of the MV alarm can only be turned off in non-invasive ventilation (NIV) mode.

⚠ That the alarm sound is disabled in Standby. However, the message and LED for some alarms, such as battery and hardware alarms, will still be displayed if they are active.

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 displayed oxygen percentage has increased or decreased significantly from the set value.	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 consistently exceeded or fallen below the upper or lower limit set for it.	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 supply.
Pressure Limited	Airway pressure could have consistently exceeded the upper alarm limit but was limited by the device to a pressure below the alarm limit.	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.

⚠ That if the Pressure Limited alarm is activated, less volume may be delivered to the patient.

⚠ Persistent Pressure Limit alarm due to reduced delivered volume may cause harm to the patient.

Turning off the device

Put the device in Standby mode. Select the Shutdown button on the Standby page.
In this case, the message “Please wait…” is displayed and then the ventilator is turned off.

⚠ That turning off the ventilator using methods other than the above may disrupt the information stored in the device's memory.

Cleaning and disinfecting the device

Follow the table below to clean and disinfect the device.

Ventilator part	Single use	Cleaning	Disinfection
Display screen	-	Using water and soap	Using ethanol
Exterior surfaces ventilator, trolley	-		Using isopropyl alcohol
Exhalation valve	-		
Exhalation valve- flow sensor interface	-		
Exhalation flow sensor	-	According to manufacturer instructions	
Patient circuit	✓	-	
NIV mask	-	According to manufacturer instructions	
Exhalation membrane	✓	-	-
Exhalation filter	✓	-	-
HME filter	✓	-	-
Nebulizer	✓	-	-
Air compressor body	-	Using water and soap	Using isopropyl alcohol
Humidifier and its temperature probe	-	According to manufacturer instructions	
chamber Humidifier	✓	-	-

To view the device user manual, scan the following code.