
Perma Pure™


maxtec

# ViaMed MaxBlend 2 Training

May 2024

Inspiring Healthier Lives Together

# Contents



# Our Mission

Advancing technology to enable a healthier world with every breath.

*From technology supporting continuous environment monitoring of the precious air we breath, to oxygen delivery supporting patient treatment and therapy.*

# Perma Pure Group


**MARKETS**

Medical
70%

Environmental
& Scientific
30%

**Manufacturing & Offices**

**Halma Hub Offices**
Leveraged by PPG

# Solutions and Applications

# Where You'll Find Us

## NICU, PICU, PACU

Inhaled Nitric Oxide Therapy & Pressure Monitoring

## Operating Room

Anesthesia Delivery, Capnography & Oxygen Delivery

## Emergency Room, ICU

Diagnostics, $FiO_2$ Monitoring & Inspired Oxygen Therapy

## Clinical, Research, Lab Testing

Breath & FeNO Analysis & Pulmonary Function Testing

# Product Offerings

# Medical Products


## SENSORS

Measure the amount of oxygen in an environment.

## BLENDERS & ANALYZERS

Deliver oxygen while analyzing flow, pressure, and/or $FiO_2$ during oxygen therapy in a hospital or homecare setting.

## NAFION™ TUBING

Nafion™ tubing technology conditions breath samples during critical patient monitoring and breath analysis.

# MaxBlend 2

Product Description

# MaxBlend 2 Resources

- Webpage
- IFU Manual
- Gas Savings Calculator

# Indications For Use

The MaxBlend 2 is designed to **provide a continuous air/oxygen gas mixture and to continuously monitor the concentration of oxygen being delivered** to **infant, pediatric, and adult** patients. It is a restricted medical device intended for use by qualified, trained personnel, under the direction of a physician, in professional healthcare settings, i.e., **hospital, subacute, and nursing-care facilities** where the delivery and monitoring of air/oxygen mixtures is required. This is not intended as a life supporting device.

# Setup & Installation

# Battery Installation

1. Open battery drawer by squeezing inward on both tabs.
2. Remove the battery drawer.
3. Install four new, “AA” batteries into the unit.
4. Slide drawer back in with the batteries facing upward.
5. Press in on the drawer until both tabs latch into place.

# MaxBlend 2 Setup

1. Connect the pressurized air source to the Air Inlet Connector.
2. Connect the pressurized oxygen source to the O2 Inlet Fitting.
3. Flush gas at the highest possible flow rate through the blender for at least one minute to eliminate any particulate that may have been introduced into the system during handling and installation.

# Sensor Installation

1. Attach the flow diverter onto the oxygen sensor.
2. Place the sensor into the sensor port located behind the flowmeter.
3. Attach the sensor cable directly to the sensor and the sensor jack on the back of the monitor enclosure. Ensure the cable is fully inserted into both connections.
4. Calibrate the sensor prior to use according to the calibration procedures in section 2.8

# Alarm Setting Procedure

# To Adjust Low Alarm Setting

1. Press the Unlock key to unlock the keypad. Note the LOW, SMART ALARM, CAL, and HIGH icons will begin to flash indicating the SET OPERATING MODE.
2. Press the DOWN (Low Alarm) key on the keypad.

# To Adjust High Alarm Setting

1. Press the Unlock key to unlock the keypad. Note the LOW, SMART ALARM, CAL and HIGH icons will begin to flash indicating the SET OPERATING MODE.
2. Press the UP (High Alarm) key on the keypad.

# Smart Alarm Mode

1. Press the Unlock Key  to unlock the keypad. Note the LOW, SMART ALARM, CAL, and HIGH icons will begin to flash indicating the SET OPERATING MODE.
2. Press the Smart Alarm key  on the keypad. Note the LOW digits, Alarm Mode and HIGH digits begin a slow flash indicating SMART ALARM MODE. The high alarm will now be set equal to the current oxygen reading +3% (rounded to the nearest integer). The low alarm will now be set equal to the current oxygen reading –3% (rounded to the nearest integer, but never lower than 18%.
3. Pressing of the UP key  will add 1% to the high alarm setting and subtract 1% from the low alarm setting. Pressing the DOWN key will subtract 1% from the high alarm setting and add 1% to the low alarm setting. In other words, the UP key widens the alarm band and the DOWN key tightens the alarm band. This feature will not set the alarm levels above 100% or below 18%.
4. Once the desired alarm settings are attained, press the Unlock key  again to save the settings and return to normal operation mode. If 30 seconds elapse without a key press by the user, the device will automatically save the latest alarm settings and return to normal operation mode.

# Calibration Procedures

# To Calibrate to 100% Oxygen

1. Connect the oxygen supply line (pressure differential alarm may sound). Verify the sensor is plugged into the O2 sensor port and connected to the sensor cable. DO NOT connect air supply line at this time.
2. Using the ON/OFF key, make sure the MaxBlend 2 is in the power on mode.
3. Rotate the FiO2 control knob to the 100% stop. Allow a few minutes for the reading to stabilize.
4. Press the Unlock key to unlock the keypad. Note the LOW, SMART ALARM, CAL, and HIGH icons will begin to flash indicating the SET OPERATING MODE.
5. Press the CAL (Calibration) key on the keypad. The word “CAL” will appear on the display for approximately 5 seconds and then finish with 100.0%.
6. The unit is now calibrated and in the normal operating mode.

# To Calibrate to Room Air

1. Connect the air supply line (pressure differential alarm may sound). Verify the sensor is plugged into the O2 sensor port and connected to the sensor cable DO NOT connect oxygen supply line at this time. (If preferred, room-air calibration may be performed by removing the sensor from the O2 sampling port and detaching the flow diverter. If using this method, the gas-supply lines may remain attached.)
2. Using the ON/OFF key, make sure the MaxBlend 2 is in the power on mode.
3. Rotate the FiO2 control knob to the 21% stop. Allow a few minutes for the reading to stabilize.
4. Press the Unlock key to unlock the keypad. Note the LOW, SMART ALARM, CAL and HIGH icons will begin to flash indicating the SET OPERATING MODE.
5. Press the CAL (Calibration) key on the keypad. The word "CAL" will appear on the display for approximately 5 seconds and then finish with 20.9%.
6. The unit is now calibrated and in the normal operating mode.

# Performance Check

Prior to placing the MaxBlend 2 into clinical use, perform these procedures:

| PROCEDURE | BLENDER RESPONSE |
|---|---|
| 1. Connect the blender to 50 ±5 PSIG air/oxygen gas sources. Adjust the blender control knob to 60%. Turn the bleed toggle switch on (up position) and adjust the flowmeter to a minimum of 2 LPM. | No response. Monitor display reads 60% ±3%. |
| 2. Disconnect the 50 PSIG AIR source from the MaxBlend 2. **NOTE:** The blender must be flowing gas for the alarm to activate. | Audible alarm sounds. Monitor display reads 100% ±3%. |
| 3. Reconnect 50 PSIG AIR source to the MaxBlend 2. | Audible alarm stops. Verify the monitor display reads 60% ±3%. |
| 4. Disconnect 50 PSIG OXYGEN source from the MaxBlend 2. | Audible alarm sounds. Monitor display reads 20.9% ±3%. |
| 5. Reconnect 50 PSIG OXYGEN to the MaxBlend 2. | Audible alarm stops. Verify the monitor display reads 60% ±3%. |
| 6. Adjust both air and oxygen inlet regulators to 0 PSIG. | No response. |
| 7. Remove air inlet hose at regulator and insert end into beaker of water. | No response. |
| 8. Slowly raise pressure of oxygen regulator to 50 PSIG and back to 0 PSIG while observing air hose end in beaker. | No bubbles should be observed. Audible alarm sounds. |
| 9. Dry and reattach air inlet hose to regulator. | No response. |
| 10. Remove oxygen inlet hose at regulator, and insert end into beaker of water. | No response. |
| 11. Slowly raise pressure of air regulator to 50 PSIG and back to 0 PSIG while observing oxygen hose end in beaker. | No bubbles should be observed. Audible alarm sounds. |
| 12. Dry and reattach oxygen inlet hose to regulator. | No response. |

# Troubleshooting? “Refer to IFU?”

# Cleaning & Disinfecting

1. Ensure battery drawer is closed and sensor/diverter are inserted into their port.
2. Using disposable Super Sani-Cloth germicidal wipes (medical-grade 2-in-1 cleaning/disinfecting wipes), remove all visible contamination from the external surfaces of the device and its accessories. Be sure to closely inspect and remove contamination from seams and recesses on the device that may trap contaminants. Wipe with clean paper towel to remove debris and bioburden.
3. After all visible contamination is removed, use a second germicidal wipe to thoroughly wet the surfaces of the device and accessories. Allow to remain wet for 4 minutes. Use additional wipes, if needed, to assure surfaces are wetted continuously for 4 minutes.
4. Allow device to air dry completely.
5. Visually inspect the device for visible contamination. Repeat cleaning/disinfection process if visible soil remains.

# Service & Maintenance

- Maxtec recommends that the Performance Check listed in section 3.0 of the product IFU is performed at least once a year.
- Maxtec recommends that the MaxBlend 2 be overhauled and serviced at a minimum of every three years.

# To Replace $O_2$ Sensor

1. Remove the sensor from the sensor monitor port.
2. Remove the sensor from the sensor cable.
3. Install a new O2 sensor with flow diverter and attach to the sensor cable.
4. Calibrate the sensor following the instructions for calibration listed in section 2.8.

# Monitor Alarm Testing

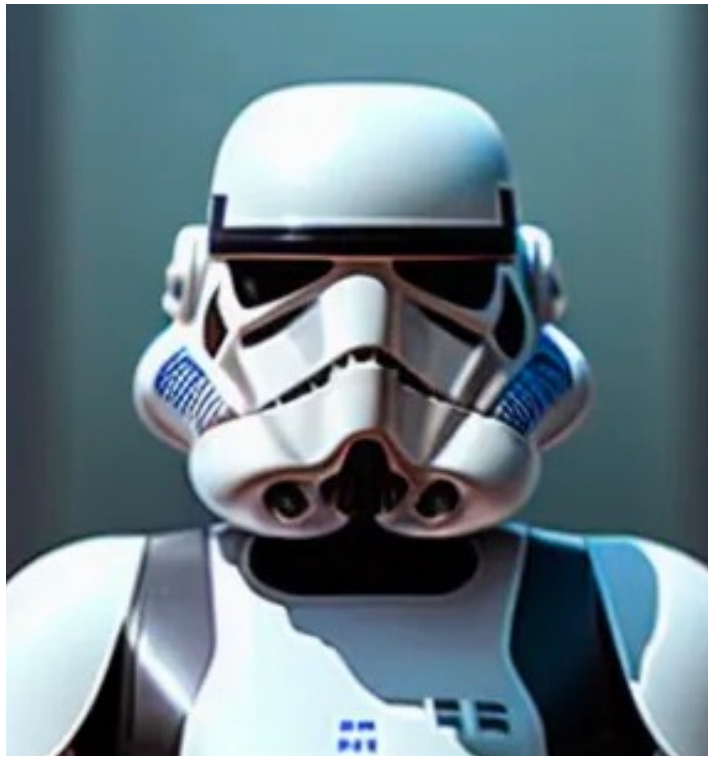
- Testing of alarms should be performed **on a yearly basis.**
- To check the low alarm:
  - Adjust the low alarm setting to 23%, or higher, and expose the sensor to room air (20.9%).
  - The low alarm LED should flash with the alarm sound.
- To check the high alarm:
  - Adjust the low alarm setting to 17%, or lower, and the high alarm setting to 18% and expose the sensor to room air (20.9%).
  - The high alarm LED should flash with the alarm sound. If one, or both alarms malfunction, contact a Maxtec Certified Service Technician.

# Spare Parts & Accessories

# Spare Parts & Accessories

| DESCRIPTION | PART NUMBER |
|---|---|
| MAX550E Oxygen Sensor | R140P02-001 |
| **ACCESSORIES DESCRIPTION** | |
| Monitor Cable | R228P49 |
| Rail Mount Bracket | R100P09 |
| Adjustable Pole Mount Bracket | R100P22 |
| Pole Mount Bracket | R100P26 |
| Compact Wall Mount | RP05P07 |
| Maxtec-Approved Power Supply | R230P10 |
| Wall Mount Large Bracket | RP05P09 |
| 10’ Dual Blender hose (DISS) | R129P01 |

# Thank You – who to contact for q's?



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