

Accutron Digital Ultra and Stand

Pre & Post Use Checklist

This checklist is intended for use with an Accutron Digital Ultra flowmeter mounted on a four-cylinder mobile stand. When followed correctly, it will help ensure the machine is thoroughly tested prior to patient use and safely shut down afterwards.

PRE USE

Step 1: Power supply check

1. Make sure your power lead is present and is connected firmly into the back of your Midas
2. Make sure that the power lead is connected to the wall socket and that the socket has been turned on.

Step 2: Cylinder contents & leak check

1. Open the "In Use" Oxygen cylinder by turning the valve anticlockwise then wait for ten seconds. The needle on the cylinder contents gauge should rise and then settle when it reaches the cylinders current contents.
2. Close the "In Use" Oxygen cylinder by turning the valve clockwise then wait for 20 seconds. The needle on the cylinder contents gauge should not drop from the position it has risen too.
3. Repeat this process with the remaining cylinders in the following order; "In Use" Nitrous Oxide, "Full" Oxygen, "Full" Nitrous Oxide.
4. Before proceeding with these tests, open both the Oxygen and Nitrous Oxide "In Use" cylinders by turning the valves anticlockwise. The pressure reading may initially appear higher, but it will drop to the 'in-use' level once the unit is switched on.

Please note: Due to Nitrous Oxide being stored in liquid form its pressure is not a clear indication of cylinder contents, the pressure gauge will read at 650psi until it is nearly depleted at which point it will drop rapidly. ALWAYS MAKE SURE YOU HAVE A "FULL" BACK UP CYLINDER BEFORE STARTING A PROCEDURE.

Step 3: Turn on Digital Ultra

1. Press the on/off button. The interface should light up
2. Once the main interface has turned on, adjust the levels of of N2O and LPM using the arrow buttons to ensure they work.
3. Press "Cancel/Test" button to check failure alarms. The machine will cycle through each failure alarm and sound for each.

Please note: If the machine fails to alarm during the test, please contact us.

Step 3: Oxygen flush test

1. Check that both the Oxygen and Nitrous Oxide "In Use" cylinders are open before firmly pressing the Oxygen flush button. A strong flow of Oxygen should be present while the button is engaged.

Please note: Watch out for changes in your flow while the flush is engaged over time as this may be a sign that your stand requires attention.

Step 4: Reservoir bag and Inspiratory valve check

1. Cover the common gas outlet (where your breathing system attaches to your MDM) using the palm of a gloved hand.
2. Press oxygen flush for two seconds to inflate the reservoir bag.
3. While you are still blocking the common gas outlet the bag should remain inflated.

Please note: If your machine fails this test examine your current reservoir bag for tears and if possible repeat with a different reservoir bag. Repeated failures may be an indication of a damaged inspiratory valve.

If the failure persists and there is no visible damage on the bag, please contact us.

Step 5: Oxygen failsafe (Hypoxic guard) check

1. Ensure that the Oxygen and Nitrous Oxide "In Use" cylinders are open then set the machine to a flow of 6 litres per minute.
2. Increase the Nitrous Oxide percentage to 50% and then close the Oxygen "In Use" cylinder. The needle on the Oxygen pressure gauge should slowly fall to zero and both Oxygen and Nitrous Oxide flows should gradually decrease before ceasing. The "Oxygen Failure" alarm will now sound. Reinstating the Oxygen supply will stop this alarm and return the Midas to its previous flow rate and percentage.

Please note: If the flow of Nitrous Oxide does not cease with the flow of Oxygen then your machine **MUST NOT BE USED** until it has been inspected by an RA Medical Services engineer.

Step 6: Nitrous oxide failsafe check

1. Ensure that the Oxygen and Nitrous Oxide "In Use" cylinders are open then set the machine to a flow of 6 litres per minute.
2. Increase the Nitrous Oxide percentage to 50% and then close the Nitrous Oxide "In Use" cylinder. The needle on the Nitrous Oxide pressure gauge should slowly fall to zero and the Nitrous Oxide flow should gradually decrease before ceasing. The "Nitrous Oxide Failure" alarm will now sound.

Please note: The Midas will have to have its flow rate and percentage reset when the Nitrous Oxide is reintroduced. It will not return to its previous setting.

Step 7: Final Checks

1. Once all checks have been completed, turn your cylinders back on by turning the valve on both in-use cylinders anticlockwise.

Machine is now ready for use

POST USE

Drain gas and ready machine for storage

1. Set the machine to a flow of 6 litres per minute and set the Nitrous Oxide percentage to 50%.
2. Close the "In Use" Nitrous Oxide cylinder by turning it clockwise. Wait for the Nitrous Oxide contents gauge to fall to zero.
3. Close the "In Use" Oxygen cylinder by turning it clockwise. Wait for the Oxygen contents gauge to fall to zero.
4. Ensure that the flow control has been turned off and that the percentage wheel has been set to 100%.

Machine is now ready for storage



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