

Policy – Start-up and Initiating HFOV SensorMedics Oscillator

Step	Action
1	Perform circuit calibration: <ul style="list-style-type: none"> • Ensure stopper is inserted in patient Y connection (N.B. a lung is not used).
2	Turn Bias gas flow to 20 LPM. Switch machine on. Set freq to 15Hz and I time to 33%
3	Turn Mean Pressure Limit to max
4	Turn Mean Pressure Adjust to max
5	Depress and hold reset. Observe PAW display for a reading of 39-43cm H ₂ O. Adjust bias gas flow slightly to achieve this if necessary.
6	An inability to achieve this PAW means a leak in the circuit. (Refer to troubleshooting overleaf. Use Mean Pressure Adjust to set MAP 19-21. Press start-stop. Set amplitude to 6 in window. Centre piston. Check readings are MAP 17-32 and amplitude 56-75
7	Initiating treatment <ul style="list-style-type: none"> • Turn Bias gas flow back to desired LPM (usually 15 or 20lpm) • Set frequency (Hz) to 10Hz • Check Inspiratory-time is 33% • Set power on 2.
8	Determine treatment MAP. Rotate the mean pressure limit anti-clockwise to set PAW (MAP) to limit 5cm above treatment setting. Be aware if the infant later requires higher MAP levels, the limit may have to be increased.
9	Rotate Mean Pressure Adjust control anti-clockwise to set treatment MAP. Note: These dials are sensitive to major adjustments.
10	If a very high MAP is required, the Bias gas flow may have to be increased to 20 LPM.
11	Set pressure alarms 2cm above and 3cm below set PAW.
12	Check inspired O ₂ level on O ₂ blender to the side of oscillator.
13	Turn humidifier on.
14	Press 'start' to commence HFOV on infant. Medical staff to adjust amplitude while observing chest movement.
15	Adjust Piston Control to keep the piston in a central position. This will ensure both lungs are being oscillated equally.

Troubleshooting: SensorMedics Oscillator Ventilator

Process • Follow the steps below if the SensorMedics Oscillator fails to calibrate to 39-43cm H₂O

Step	Action
1	Check the water trap is closed and clear bungs in main circuit are in place
2	Check Bias Gas Flow is on 20 LPM. Increase Bias Flow slightly.
3	Remove and check the limit, control and dump cap/diaphragm valves (see diagram below). Replace valves if circuit still fails to calibrate.
4	Observe mean pressure display and adjust Patient Circuit Calibration Screw (pictured below), on left hand side of oscillator, until you get a reading of 39-43cm H ₂ O. If calibration is still not being met, replace with a new circuit.
5	If there has been a disconnection, press and hold reset, watch the rise in MAP to set set level, then press start/stop to recommence oscillations.
6	Battery low: has no audible alarm, means there is no electrical power to battery that supplies amplitude/power dial. The HFOV will still work.

