

## VM3COP43.13 Maxtec MAXO2+ME Calibration Test Procedure

① Before using this procedure, the user is advised to familiarise themselves with the operation manual. The user should have a basic understanding of the function of Oxygen monitors. This procedure tests the Maxtec MAXO2+ME Oxygen analyser can read accurately. A calibration must be performed before each use as environmental factors can affect the reading.

Equipment needed to perform this procedure:

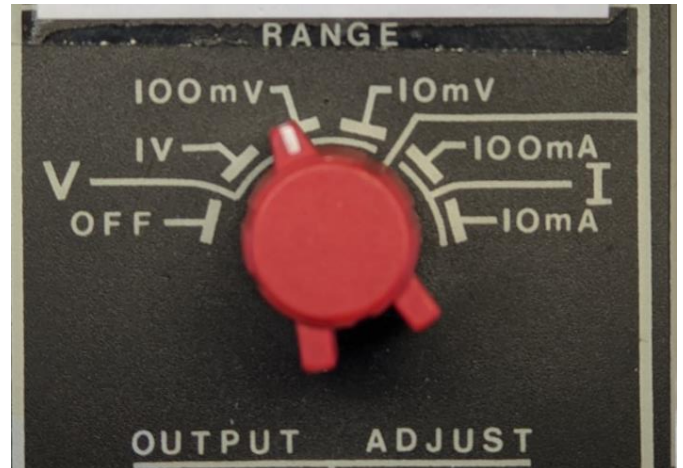
- Time Electronics LTD Microcal 1030 – Calibrated Voltage source (CE076) - calibration traceable to UKAS calibration standards.
- Test adapter – Microcal to MAXO2+ME.
- MAX-550E Oxygen sensor (PN: 0110452)

- 1) Connect the Microcal to the MAXO2+ME analyser using the adapter, as shown.

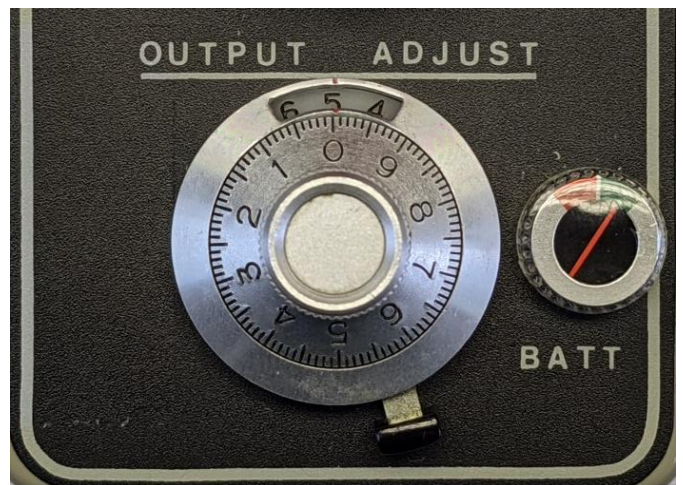
The test adapter will need to have a MAX-550E Oxygen sensor (PN: 0110452) connected for the monitor to work.



- 2) Set the Microcal to 100 mV scale and the polarity switch to NORM.



- 3) Set the output adjustment dial to 50.0 mV.



- 4) Power up the MAXO2+ME analyser
- 5) Using the calibrate button on the MAXO2+ME, calibrate the MAXO2+ME analyser. During the calibration procedure the analyser will display CAL.





- 6) At the end of the calibration procedure the analyser should display 100.0%. If the MAXO2+ME analyser fails to calibrate, then check the connections and repeat the test.

The Microcal is simulating the output of an Oxygen sensor reading a 100% Oxygen concentration. By decreasing the output of the Microcal to set values, the accuracy of the MAXO2+ME analyser can be determined across a range of simulated Oxygen concentrations.



- 7) In turn, dial in the input voltages from the table below. Record the values on the certificate (PN:0180020).



Microcal output	MAXO2+ME expected reading ( $\leq 2\%$ relative)
50.0 mV	100% (98.0% - 102.0%)
45.0 mV	90% (88.2% - 91.8%)
40.0 mV	80% (78.4% - 81.6%)
35.0 mV	70% (68.6% - 71.4%)
30.0 mV	60% (58.8% - 61.2%)
25.0 mV	50% (49.0% - 51.0%)
20.0 mV	40% (39.2% - 40.8%)
15.0 mV	30% (29.4% - 30.6%)
10.5 mV	20.9% (20.5% - 21.3%)
9.0 mV	18% (17.6% - 18.4%)