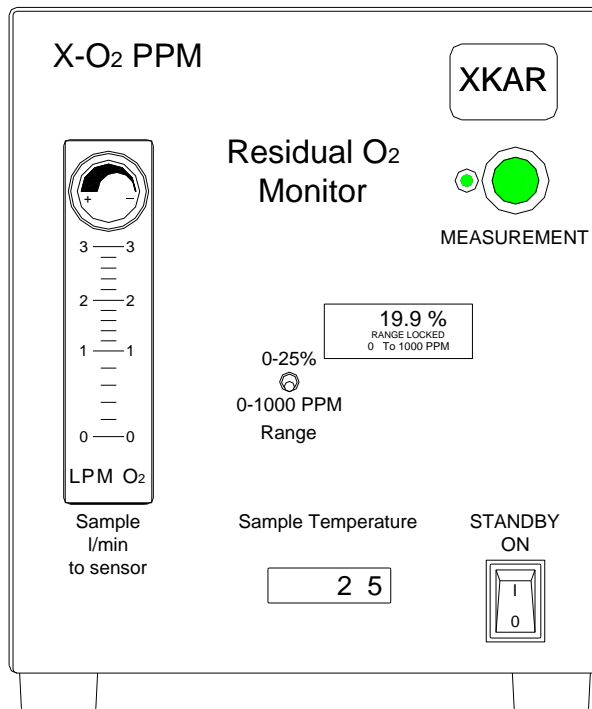




MANUAL

X- O₂ PPM Residual O₂ Monitor

to measure residual oxygen content in N₂ environment in reflow ovens.



P/N X-DOC180
Oct 16 / 2019
Rev. 1



Tel: (570) 842-2812

www.bokar.com

www.BestBatchOven.com

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Master Distributor: www.bomir.com

Description:

The monitor was developed especially for X-KAR Reflow Ovens, the best sealed units on the market, to allow heating of objects in a very high purity Nitrogen environment.

The XSO SuperOven can offer Nitrogen Purity down to 1000 – 2000 PPM or better.

The X-Reflow306/S, with proper care of the clamshell seal, can achieve purity down to 3000 PPM.

To give X-KAR ovens users the comfort of seeing the actual purity during the heating cycle in all heating zones, the X-O₂ PPM Monitor is equipped with all necessary hardware to connect to the X-KAR ovens in order to measure the residual O₂ content either constantly or on demand.

The cost this monitor is less than ½ of anything else found on the market.

The Monitor has built in a heat exchanger to cool the sampled gas and a pump which draws gas from the oven. It also has a temperature controller which measures the sample gas temperature and stops the pump when the gas temperature exceeds 60 degrees C.

The gas (N₂) in the ovens during the heating process can reach close to 400 deg. C.

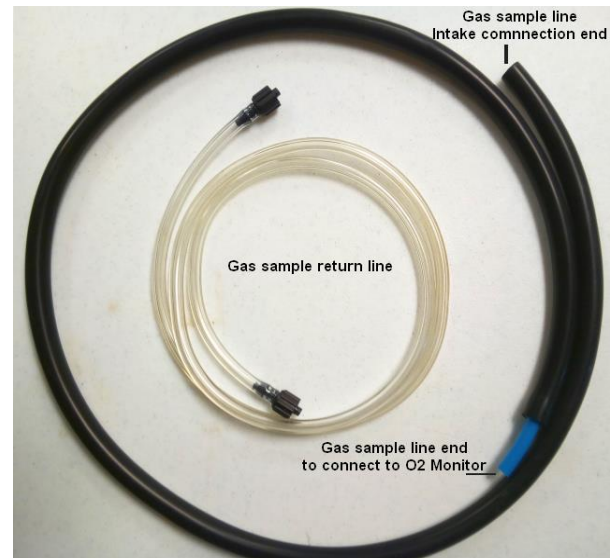
All O₂ sensors known to us today are temperature sensitive and will not work with monitored gas when its temperature exceeds 70 to 80 degrees C. The gas sample taken from the oven must be cooled before it can be passed through the sensor.

The X-KAR ovens have a built-in cooling coil which cools down the gas pulled through the sample-out connection. To protect the sensor and extend its life the X-O₂-PPM Monitor also has a built-in a heat exchanger to cool the sampled gas and a temperature controller which measures the sample gas temperature and cuts the pump supply extracting the sample gas from the oven when the gas temperature exceeds 60 degrees C.

The pump which draws the gas from the oven passes the gas through the flow meter and sensor, pushing it back to the oven through the sample out connector and return line back to the oven.

If the sample return line is not connected to the oven, the unit will still measure the residual Oxygen content in the sampled gas.

Please connect the power supply and the sample lines shown below (included with the unit) to the X-O₂-PPM Monitor connections on the back panel of the unit.



Note: This Residual O₂ Monitor can be safely used with all other ovens, not only X-KAR Ovens.



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Operating Instructions:

Once the unit is connected to the oven and is powered from the 12V power supply, it is ready for operation.



1. Turn the STANDBY switch "ON"
This starts the pump and the sample gas circulates through the Monitor but does not pass through the sensor chamber.
2. Set the flowmeter (on the left side of the unit) to 2 l/min, by turning the knob located on the upper side of the flowmeter. The sensor needs a flow between 2l/min to 3l/min to properly measure the residual O₂.
3. Turn the measurement switch to "ON" and measure the Oxygen content. The display in the center of the front panel will show the percentage of Oxygen.
If the O₂ level will drop below 1000 PPM, place the switch located on the left side of the display to the down position for better accuracy of measurement. If you do not need to measure the O₂ level constantly, please turn the Measurement switch to "OFF" to extend the life of the sensor.
4. At all times when the STANDBY switch is "ON" the display in the lower part of the front panel will show the temperature of the sampled gas.

Power Requirements	12V DC; 1A
Sample Gas Circulating Pump	Super low noise 12V DC pump
Air Flow	Variable, 0 – 2.5 l/min, controlled by the valve located on the top of the flow meter
System Dimension (without the air tubing)	L=10,6"xW=6,2"xH=7,3" (L=270mm x W=157mm x H=185mm)
Weight (unpacked)	7.7 lbs. (3.5 kg)
Packaged Weight and Dimension	12 lbs. (5.5 kg) L=13"xW=11"xH=7,9" (L=330mm x W=280mm x H=200mm)

Replacement Parts:

- Oxygen Sensor P/N X-02 S1
- 12V Power Supply P/N X-02-PS
- Flowmeter P/N X-02-FL
- Control Board P/N X-02-Ctr
- Temperature Controller/Relay P/N X-02-TR

The X-O2-PPM System Includes:

1. The main unit
2. 12 V, 1A DC power Supply
3. Two gas lines (one – larger diameter, to extract the sample gas and another to return it to the oven)
4. Operating Manual
5. Warranty Card.



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Please find below web pages describing other Bokar International products. We also have listed the pages of our partner Companies whose products are sold by our Distribution network.



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www.ESDlabcoats.com www.ESDcarts.net www.ESDbrushes.com

Other: www.SMT-ESD.com www.SuperiorScrewdrivers.com www.Super-Iron.com

Latest Additions:

www.FumeXtraction.com www.ULT.de (excellent German made Fume extractors)



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