

# GRAINPRO®OXYGEN ANALYZER GPO2-AN INSTRUCTION MANUAL

MA4034RDC1013-05



GrainPro® Inc.  
5520 Connecticut Avenue. NW Washington, DC 20015  
Tel : +1 202-921-6700  
Email : sales@grainpro.com

GrainPro® Philippines, Inc.  
Lot 46 Efficiency Avenue, Subic Bay Gateway Park I, Subic Bay Freeport Zone 2222 Philippines  
Phone: +63 47 252 7884 Fax: +63 47 252 7885 Website: [www.grainpro.com](http://www.grainpro.com)  
Email: [salesasia@grainpro.com](mailto:salesasia@grainpro.com)

GrainPro® (Inc) Kenya Ltd.  
Space Apartments, GF Shop A1 & A2 Maimahui Rd. Nairobi West, Kenya  
Tel: +254 796 904 144  
Tel.: +254 791 222 169  
Email: [africa@grainpro.com](mailto:africa@grainpro.com)

GrainPro® Nigeria Ltd  
6, Adu Street, Aguda-Ogba, Ikeja, Lagos  
Email: [africa@grainpro.com](mailto:africa@grainpro.com)  
Tel: +234 806 564 3156

GrainPro® Mexico, S de RL de CV  
Cto. Garona No. 903, Sección Tres, Col. Amberes, 37237,  
León, Gto. Mexico  
Mobile: +52 (477) 392 0851  
Email: [guillermo@grainpro.com](mailto:guillermo@grainpro.com)

GrainPro® Costa Rica S.R.L.  
Residencial Valle del Sol, Calle Lajas, Casa #27 Alto de las Palomas,  
Santa Ana, San José, Costa Rica  
Tel : +506 2282 9129  
Email : [infogpcr@grainpro.com](mailto:infogpcr@grainpro.com)

GrainPro® India Post-Harvest Technology Pvt. Ltd.  
Office Number 18A109, WeWork Berger Tower 18th Floor,  
C-001/A2, Sector 16-B, Noida, INDIA – 201301  
Landline: +91 120 515 0017  
Customer Service: +91 960 292 0202  
Email: [praveen.gupta@grainpro.com](mailto:praveen.gupta@grainpro.com)

GrainPro® Inc., 1401 K Street NW, Suite 502, Washington D.C. 20005 USA  
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## 1. INTRODUCTION

The GrainPro® Oxygen Analyzer GPO2-AN (Model ICA) is a portable percent analyzer that can be used for general-purpose functions and is capable of measuring oxygen levels within 0 to 21% range. The GPO2-AN is a rugged, portable, hand-held, and lightweight oxygen monitor. It is installed with a long-life sensor specially designed for measuring oxygen in high concentrations of carbon dioxide.

### 1.1. FEATURES:

- 1.1.1. Easy to use.
- 1.1.2. Portable
- 1.1.3. It has 0-21% oxygen measurement
- 1.1.4. Monitors hermetic storage environment.
- 1.1.5. It has 5-year sensor life.

### 1.2. SPECIFICATIONS:

PARAMETERS	SPECIFICATIONS
<b>A. SENSOR/TRANSMITTER UNIT</b>	
Sensor Type	Electro-Chemical Cell
Sensor Range, % Oxygen	0-21
Resolution, %	0.1
Operating Temperature, °C	0 to 35
Operating Humidity, % RH max non condensing	95
Operating Flow	0.5-1.5 LPM
Sensor life, years	5
<b>B. GENERAL</b>	
Automatic switch off	Auto-off after 7-8 minutes
Power, V Lithium Manganese battery	9
Expected Life, years	5
Display Unit	LCD digital display (with low battery indicator)
Sampling Pump	Inflating/Deflating Hand Pump
Primary Means of Protection	Fully enclosed within plastic enclosure Installed with security screws to prevent unauthorized opening
Resistance to Heat, °C	Less than 58
Equipment Temperature limits, °C	-5 to 58
Oxygen Analyzer Dimensions, (A x B x C) cm	12 x 9 x 5
Carrying Case Dimensions, (L x W x H) cm	27 x 23 x 8
Weight, kg (inc. carrying case, sensor, and battery)	Approx. 0.90
Warranty, year	1

*Note: Battery operated, comes under the EMC low voltage directive  
The display is an electronic component which is tested and conforms to EN 61326-1 (2006)  
Restriction of hazardous substances (RoHS2) 2011/65/EU  
Including restriction of hazardous substances (RoHS3) 2011/863*

### 1.3. PRODUCT GUARANTEE:

1.3.1. In accordance with the terms and conditions herewith, GrainPro®, Inc. guarantees the quality of this product per its written warranty provided it is used according to the instructions in this manual.

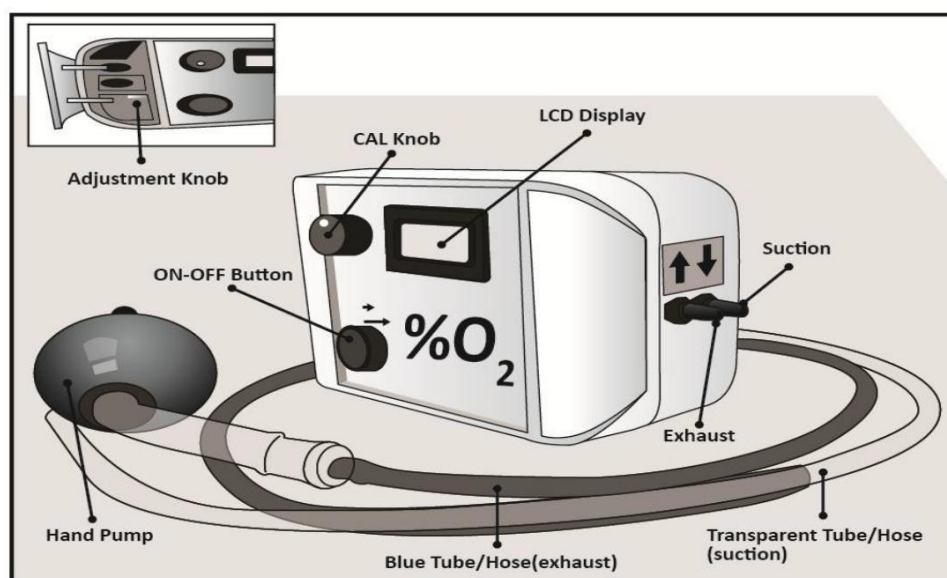
1.3.2. Please read and understand the manual thoroughly before using the GrainPro® Oxygen Analyzer.

### 1.4. COMMENTS, COMPLAINTS, AND/OR CLARIFICATIONS:

1.4.1. Please contact [customercare@grainpro.com](mailto:customercare@grainpro.com).

1.4.2. All queries will be answered by our team of post-harvest solutions experts.

## 2. COMPONENTS



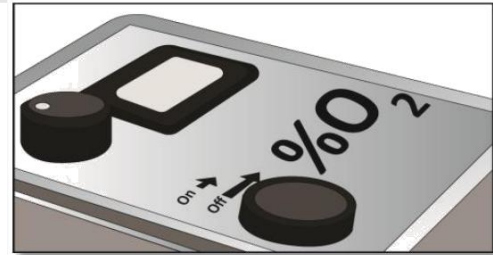
## 3. WARNINGS!

- 3.1. Do not expose the unit to high temperature fluctuations as it deteriorates the sensor cell and the battery.
- 3.2. Keep it free from dirt and liquid as it affects the accuracy of the reading and may result in short wiring connections.
- 3.3. Avoid dropping the unit as it might cause damage and may disconnect the wiring connections.
- 3.4. Use only parts which are being supplied or authorized by the supplier.
- 3.5. The unit must be calibrated annually, the filter must be replaced, and evaluated/compared to the calibrated unit.
- 3.6. Keep it clean and store it to normal temperature for storage.
- 3.7. Only trained GrainPro staff or authorized persons will calibrate the unit.

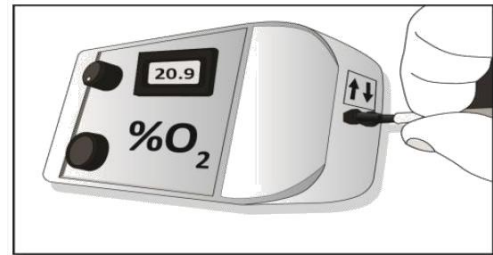
## OPERATING THE ANALYZER

### 4.1. PREPARATION

4.1.1. The instrument is activated by pushing the red Power button. The display then indicates a value.

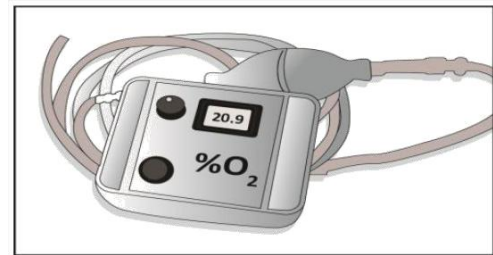


4.1.2. To prepare the analyzer for sampling, connect the exhaust tube (translucent white, soft) of the hand pump to the inlet port at the right side of the analyzer.

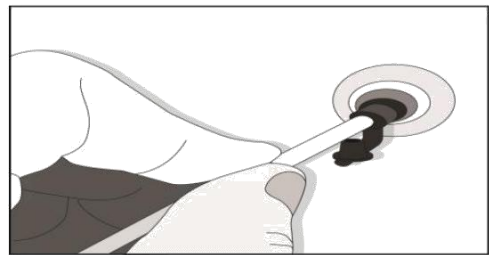


### 4.2. MEASUREMENT

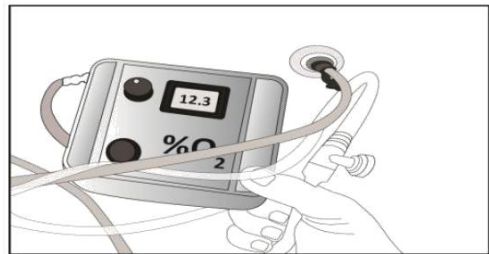
4.2.1. Perform span calibration by pumping clean air into the analyzer while setting the reading to  $20.9 \pm 0.1\%$  by turning the black front panel calibration knob either clockwise or counterclockwise.



4.2.2. Insert the suction tube of the hand pump into the gas sampling port of the storage enclosure.



4.2.3. Pump the analyzer to measure the oxygen level percentage inside the storage structure. Continue pumping until the reading stabilizes to its lowest possible reading. This will be accomplished in less than a minute.



## 5. MAINTENANCE AND REMINDER

### 5.1. BATTERY

5.1.1. The analyzer has an auto-off feature after 7-8 minutes of operation to conserve its battery.

5.1.2. The battery fitted in this analyzer is a non-rechargeable long-life 9V Lithium Manganese battery, expected to last for as long as five years and should be changed at the same time as the oxygen sensor.

5.1.3. A low battery will be indicated by a battery symbol on the display.

5.2. REMINDER 4.2.1. Gas samples should be free of dirt and liquid. Internal filter is fitted for the final protection of the sensor against sample contamination.

5.2.1. The filter can be changed by an authorized technician if needed.

## 6. WARRANTY CLAUSE

GrainPro® hereby warrants that product sold to Buyers shall be free of defects in workmanship and materials, for a period as follows, starting from the date of shipment (B/L): One year for the GrainPro® Oxygen Analyzer GPO2- AN (ICA 100).

The warranty liability is limited to replacement of defective products within the warranty period at GrainPro's plant in accordance with the provisions specifically and expressly set forth herein.

The Buyer will pay for the products which need to be replaced under warranty, a percentage of the full list price according to the ratio between the period, which has passed until replacement, and the full warranty period.

The Buyer shall bear the shipping costs for shipment of defective Products to GrainPro®, and GrainPro® shall bear the shipping costs of returning good Products to Buyer.

The Warranty does not cover the cost of any service, work, or material required for the replacement of defective Products at the site of installation.

GrainPro® shall have no obligation under the warranty to replace defective Products or parts thereof if the defect is a result of any of the following: normal wear and tear; damages occurring after delivery, accidents, acts of God, or catastrophes, buyer's fault or negligence, improper storage or installation and improper maintenance.

Replacement costs and shipping charges for Products found not to be under warranty as specified above shall be paid in full by the Buyer before new/refurbished Products are shipped.

Notwithstanding the above, if the Products include main parts or sub-assemblies purchased by GrainPro® from other vendors ("Additional Equipment"), then the period and terms of warranty for Additional Equipment are limited to the period and terms offered by the vendors of such equipment.

The Buyer agrees that the warranty liabilities of GrainPro® shall be and are limited to the express foregoing terms: THE EXPRESS WARRANTIES AND OBLIGATIONS SET FORTH ABOVE, ARE AND SHALL BE IN LIEU OF ALL OTHER WARRANTIES AND OBLIGATIONS OF GRAINPRO®, and EXPRESSED OR IMPLIED. EXCEPT TO THE EXTENT HEREIN PROVIDED, GRAINPRO® DOES NOT MAKE AND SHALL NOT BE DEEMED TO MAKE ANY WARRANTY WHATSOEVER, TO ANY END USER OR TO ANY OTHER PERSON OR PARTY, INCLUDING, WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY OR OF FITNESS FOR ANY PARTICULAR USE OR PURPOSE. GRAINPRO® SHALL NOT BE LIABLE FOR ANY LOSS OF USE, SALES OR PROFIT OR FOR ANY INDIRECT, CONSEQUENTIAL, OR INCIDENTAL DAMAGES CAUSED BY OR SUFFERED AS A RESULT OF THE SALE OR USE OF THE PRODUCTS.

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