



Environmental Equipment, Inc.

# IMR 500P Portable Gas Conditioning System User Manual



Read this manual in full before using this device

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IMR 500P Portable Gas Conditioning System

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**IMR 500P Portable Gas Conditioning System****INTRODUCTION**

Thank you for purchasing the IMR® 500 gas dryer.  
Please read the following instructions before operating the unit for the first time.

Proper handling is necessary to make full use of the outstanding performance and features of this combustion gas conditioner.

**SAFETY INSTRUCTIONS**

Please make sure that you read this section carefully before use.

- Follow all warnings and instructions marked on the product.
- The AC inlet should only be connected to a socket with a protective earth contact.
- Any adjustment or maintenance of the dryer under voltage should be avoided.
- The maintenance of the dryer should be done by qualified personal and the instrument must be turned off and unplugged.
- Do not take the dryer out of the case during the warranty period as this will void the warranty.
- Do not use this dryer in water.
- Never spill water or any liquid on the dryer.

Important Guidelines:

- Use the instrument only within the recommended temperature range.
- Never measure without the dust filter installed inside of the unit.
- The dust filter and probe filter must be replaced when dirty.

NOTE: The IMR500P is single voltage see the plaque on the Heated Sample Line or Serial Sticker for voltage requirement!

**1. DESCRIPTION**

The IMR® 500 should be used when the measured gas contains excess water vapor.

It is a valuable asset for continuous gas analysis.

The unit includes a gas sampling probe with a filter, heated hose, gas dryer and connection lines to an IMR 2800 series gas analyzer.

Separate probe(s) are used for measuring gas temperature and for the sampling of the gas.

The temperature probe is a Type K thermocouple that can measure temperatures of up to 1200°C / 2192°F for a short time and up to 800°C / 1472°F for continuous operation.

**IMR 500P Portable Gas Conditioning System**

The sampling probe filter housing has an internal filter element for the removal of particulate matter from the sample gases and is easy to replace

The heated hose is controlled for a temperature of 120° C / 248° F. This avoids condensation during the transportation of the gas to the drier.

The unit requires an A/C connection to operate.

**2. SET UP**

Place the dryer within 1 meter of the sample point.

Connect the A/C cord and plug in the IMR500P.

**HEATED HOSE**

Connect the loose swivel fitting to the port on the IMR500P.

Connect the heated sample line to the swivel fitting.

Connect the power plug for the heated sample line to the plug adjacent to the Gas Input fitting.

Connect the probe metal to the filter at port 1.

Check the filter element inside the filter housing to determine if replacement is necessary. (#72650)

Connect the heated hose to the swivel fitting at port 2 on the probe filter.

Once the heated sample line is connected on both ends the IMR500P can be powered on.

*NOTE: See Section 5 for a drawing of the Gas Line assembly.*

**TEMPERATURE PROBE**

Connect the temperature probe to one of the thermocouple ports.

Connect the extension cable to the other thermocouple port and then to an IMR2800.

**ANALYZER START-UP**

Start the IMR2800 and let it complete calibration before connecting the gas line extension from the IMR500P.

Once start up calibration is completed connect the gas line extension tube.

**WARM UP**

The heated sample line will need ~10 to 15 minutes to reach temperature.

A red LED on it will flicker as the hose is approaching normal operating temperature.

Note: The fuse in the AC-inlet is a 4A / 5x20mm fuse.

Important: Use gloves for handling the gas probe and temperature probe.



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**3. CONSUMABLES**

| <u>ITEM</u>         | <u>PART NO.</u> |
|---------------------|-----------------|
| Dust filter(s)      | 72200           |
| Dust filter - Probe | 72560           |

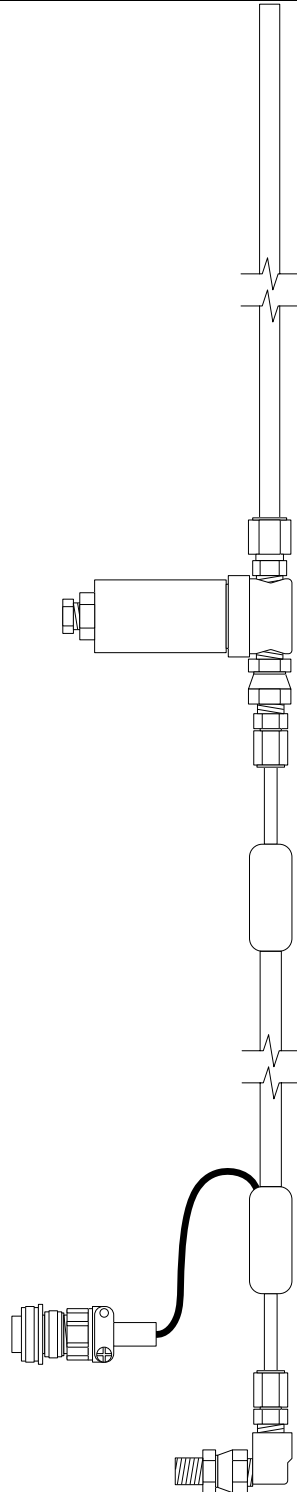
**4. SPARE PARTS**

| <u>ITEM</u>                  | <u>PART NO.</u> |
|------------------------------|-----------------|
| Silicon Tubing               | SL-1814         |
| Pump 6V Small                | Pump 6V Basic   |
| Pump 6V Large                | Pump 6V         |
| Stainless Filter Housing     | 05001-Filt      |
| Heated Sample Line 1.5m 220V | H226-1.5-220    |
| Temperature Probe            | 90500           |
| Permeation Dryer             | MD-110-72F      |

Please send the Serial Number and model of the instrument when ordering spare parts.  
Please ask about special items.

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## 5. GAS LINE CONNECTION DIAGRAM





## IMR 500P Portable Gas Conditioning System

**6. WARRANTY**

IMR Environmental Equipment, Inc. states the following:

IMR, as manufacturer hereby grants the following worldwide IMR warranty for an IMR analyzer purchased from an authorized dealer.

1. The IMR warranty shall entitle every IMR customer to demand a free replacement or repair of the defective parts from any IMR dealer authorized for the respective IMR unit.
2. The IMR warranty shall be granted on the factory new unit and shall commence on the date of the delivery of the original IMR unit to the customer.
3. The IMR warranty shall refer to absence of faults with respect to the state of the art nature of the sold unit in terms of material and finish. The warranty for all parts fitted during the twelve-month warranty period shall end with the unit warranty.
4. After the establishment of a material or production fault by IMR or the authorized IMR dealer, the faults will be eliminated by means of free repair or replacement. Replaced parts shall become the property of IMR.
5. No warranty claims may be made for maintenance and setting work, cleaning or other utility materials required for the function of the unit and other wear parts unless they have a direct bearing on work performed under the warranty.
6. The terms and conditions for the acknowledgement of this warranty shall be the presentation of the fully completed warranty card, which must contain the confirmation from the authorized IMR dealer on its delivery and, if applicable, the prescribed maintenance work.
7. The IMR warranty shall only be applicable if
  - 7.1. The analyzer has been maintained in accordance with the instructions issued by the manufacturers and the operating instructions by an authorized IMR dealer.
  - 7.2. Only original IMR spare parts have been used for any repairs.
  - 7.3. The unit has been used properly, the operating instructions observed and the unit has not been used for a purpose other than the one for which it has been designed.
  - 7.4. The IMR unit has been left in its original design and meets the original IMR specifications.
  - 7.5. The fault is not due to external influences or use for a purpose other than the one for which it has been designed.
  - 7.6. Exclusively authorized IMR dealers have made repairs to the IMR unit.
  - 7.7. The IMR unit has been sent to an authorized IMR dealer immediately after the fault was discovered.
8. Warranty time for the analyzer, including electrochemical sensors is 12 months.



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500P

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**7. CONTACT INFORMATION**



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