

# HYGRO-MINI

## User Manual



# CONTENTS

<b>INTRODUCTION</b>	<b>3</b>
PRODUCT WARRANTY	4
UNPACKING INSTRUCTIONS	5
CALIBRATOR APPLICATIONS	5
STANDARD PACKING CHECK LIST	6
VISUAL ITEM CHECK LIST	7
ACCESSORIES BAG CONTENTS	8
AVAILABLE ACCESSORIES	9
UNIT DIAGRAM AND PARTS LISTING	10
<b>QUICK START GUIDE</b>	<b>11</b>
FILLING THE RESERVOIR	13
INSERT THE SATURATOR	15
PLUG THE CONNECTOR FOR BATTERY	16
CHARGING AND POWERING THE UNIT	17
UNIT OPERATION	18
GENERAL SPECIFICATIONS	19
CONSUMABLES	20
MECHANICAL	20
INDICATION ICONS	21
<b>CALIBRATION</b>	<b>22</b>
UUTs (UNITS UNDER TEST)	22
ENTERING Hygro-Mini OFFSETS	23
UNIT CALIBRATION OVERVIEW	24
ACCESSING THE DEVICE MANAGER	24
READING THE COM PORT	25
INSTALLING PUTTY	25
PUTTY SETUP	25
CONNECTING THROUGH PUTTY	26
READING TEMPERATURE AND HUMIDITY OFFSETS	26
CHANGING HUMIDITY AND TEMPERATURE OFFSETS	27
<b>SAFETY WARNING</b>	<b>28</b>
GENERAL SAFETY INFORMATION	28
BATTERY SAFETY INFORMATION	28
<b>SAFETY WARNING</b>	<b>29</b>
DISPOSAL SAFETY INFORMATION	29
<b>TECHNICAL SUPPORT</b>	<b>29</b>
<b>REPAIRS</b>	<b>30</b>
UNIT REPAIR PROCEDURE	30
<b>UNIT MAINTENANCE</b>	<b>31</b>
SERVICE SCHEDULE	31
DESICCANT CHANGE VISUAL GUIDE	32
REPLACING THE CANISTER	32
REFILLING THE CANISTER	34

# INTRODUCTION



## MESSAGE FROM GEO CALIBRATION

Thank you for purchasing the GEO Calibration Hygro-Mini humidity and temperature generator/calibrator. We look forward to providing you the highest quality technical support as you become familiar with your new humidity and temperature calibrator.

To better familiarize yourself with the Hygro-Mini, please [visit our Youtube Channel by searching GEO Calibration for user friendly videos.](#)

To start using your GEO Hygro-Mini immediately, you may proceed to our [Quick Start Guide \(page 11\).](#)

For a deeper review of the Hygro-Mini, See our [Calibration Technical Recommendations \(page 18\).](#)

**Regards,**  
GEO Calibration Service Team

### WARNING

As you read through this product manual, please familiarize yourself with our recommended best practices. By following the proper procedures, you will ensure your unit consistently performs to its highest potential.



Once you have removed the Hygro-Mini from its external packaging, please visually inspect the unit for damage. If damage is found, please immediately contact your supplier.

# LIMITED WARRANTY AND LIMITATION OF LIABILITY

Each GEO Calibration product is warranted to be free from defects in material and workmanship under normal use and service. The warranty period is one year and begins on the date of shipment. Parts, product repairs, and services are warranted for 90 days. This warranty extends only to the original buyer or end-user customer of a GEO Calibration authorized reseller, and does not apply to fuses, disposable batteries, desiccants, distilled water, or to any product which, in GEO Calibration's opinion, has been misused, altered, neglected, contaminated, or damaged by accident or abnormal conditions of operation or handling. GEO Calibration does not warrant that software will be error free or operate without interruption.

GEO Calibration authorized resellers shall extend this warranty on new and unused products to end-use customers only but have no authority to extend a greater or different warranty on behalf of GEO Calibration. **Warranty support requires activation and registration at:**

<https://www.geocalibration.com/register>

and is purchased through a GEO Calibration authorized sales outlet or Buyer has purchased unit directly from GEO Calibration. GEO Calibration reserves the right to invoice Buyer for importation costs of repair/replacement parts when product purchased in one country is submitted for repair in another country. GEO Calibration's warranty obligation is limited, at GEO Calibration's option, to refund of the purchase price, free of charge repair, or replacement of a defective product which is returned to a GEO Calibration authorized service center within the warranty period.

To obtain warranty service, contact your nearest GEO Calibration authorized service center to obtain return authorization information, then send the product to that service center, with a description of the difficulty, postage and insurance prepaid (FOB Destination). GEO Calibration assumes no risk for damage in transit. Following warranty repair, the product will be returned to Buyer, transportation prepaid (FOB Destination). If GEO Calibration determines that failure was caused by neglect, misuse, contamination, alteration, accident, or abnormal condition of operation or handling, including over voltage failures caused by use outside the product's specified rating, or normal wear and tear of mechanical components, GEO Calibration will provide an estimate of repair costs and obtain authorization before commencing the work. Following repair, the product will be returned to the Buyer, shipped Ex Works FOB Suffolk County NY.

THIS WARRANTY IS BUYER'S SOLE AND EXCLUSIVE REMEDY AND IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. GEO CALIBRATION SHALL NOT BE LIABLE FOR ANY SPECIAL, INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES OR LOSSES, INCLUDING LOSS OF DATA, ARISING FROM ANY CAUSE OR THEORY.

Since some countries or states do not allow limitation of the term of an implied warranty, or exclusion or limitation of incidental or consequential damages, the limitations and exclusions of this warranty may not apply to every buyer. If any provision of this Warranty is held invalid or unenforceable by a court or other decision-maker of competent jurisdiction, such holding will not affect the validity or enforceability of any other provision.

GEO Calibration Inc.  
2190 Smithtown Avenue  
Ronkonkoma, NY, 11779  
U.S.A.

## UNPACKING INSTRUCTIONS

Once you have removed the Hygro-Mini from its external packaging, please visually inspect the unit for damage. If damage is found, please immediately contact your supplier.

## CALIBRATOR APPLICATIONS

The GEO Hygro-Mini Humidity Calibrator generates and maintains a controlled humidity and temperature environment for the purpose of testing or calibrating humidity and temperature sensors, also known as hygrometers. The humidity calibration range is 5% up to 85%, while the temperature range is from 18°C to 35°C.

[See the full technical specifications \(page 18\).](#)

The Hygro-Mini can calibrate many hygrometer types, including but not limited to:

- Probes
- Dataloggers with External Sensors
- Chart Recorders with External Sensors

Before purchasing a Hygro-Mini, please review the dimensions of the calibration chamber to ensure compatibility with the size requirements of any Hygrometers you intend to calibrate.

To view the full list of compatible hygrometers, please download our compatibility spreadsheet at: <https://www.geocalibration.com/products/hygro-mini/>

## STANDARD PACKING CHECK LIST

Contents of Shipment			
✓	QTY	Part Number	Description
	1	01-020-00-0000	Hygro-Mini Humidity Calibrator
	1	01-020-36-0007	Hygro-Mini Case
	1	01-200-36-0002	Reference Standard / Control Probe
	1	01-020-01-0021	Hygro-Mini Accessories Kit
	1	01-020-36-0009	Power Supply
	1	N/A	Calibration Documents / Trace Paperwork
	1	HYGROMINI-UM	User Manual

Contents of Accessories Kit			
✓	QTY	Part Number	Description
	1	01-020-11-0002	Hygro-Mini Desiccant
	1	01-020-11-0001	Hygro-Mini Tube Saturator Cartridge
	1	01-200-36-0006	Fill Syringe (20ml)
	1	01-022-69-0001	Type A Male to Type B Male USB Cable
	2	01-004-09-0039	Probe Port Plug .525"(1 pack)
	2	01-004-09-0044	Probe Port Plug .65"(1 pack)
	2	01-020-09-0005	Silicone Door Spacer .25"(1 pack)
	2	01-020-09-0006	Silicone Door Spacer .50"(1 pack)
	1	01-400-80-0001	USB Stick (Contains GEO Software)

Calibration Documents			
✓	QTY	Part Number	Description
	1	N/A	Factory Calibration Report
	1	01-999-99-0001	3rd Party Calibration Certification (IF ORDERED)

## VISUAL ITEM CHECK LIST

Listed below are standard contents included with the purchase of a new Hygro-Mini.



**Humidity Generator**  
GEO Calibration  
Hygro-Mini  
P/N: 01-020-00-0000



**Control Probe**  
HC2-S HygroClip  
control probe (pre-installed)  
P/N: 01-200-36-0002

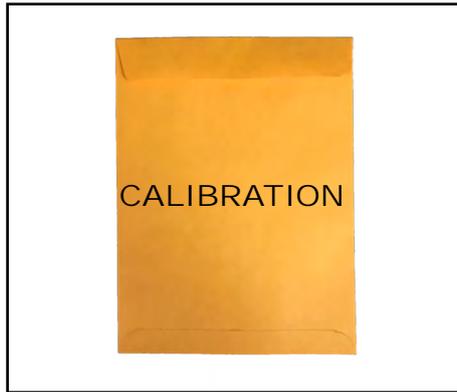


**Hygro-Mini Accessories Kit**  
Contents:  
See Page 8  
P/N: 01-020-01-0021



**Power Supply**

P/N: 01-200-46-0001



**Calibration Documents**



**Hygro-Mini Carrying Case**

P/N: 01-020-36-0007

## ACCESSORIES BAG CONTENTS



### Desiccant Canister

Pre-Filled with molecular sieve

P/N: 01-020-11-0002



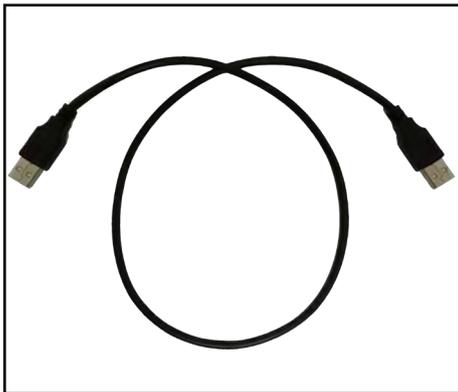
### Saturator Cartridge

P/N: 01-020-11-0001



### Fill Syringe

P/N: 01-200-36-0006



### USB Cable (A to A)

P/N: 01-022-69-0001



### Probe Port Plug .525"

P/N: 01-004-09-0039



### Probe Port Plug .65"

P/N: 01-004-09-0044



### Silicone Door Spacer .25"

P/N: 01-020-09-0005



### Silicone Door Spacer .50"

P/N: 01-020-09-0006



### USB Stick

Contains GEO Software

P/N: 01-400-80-0001

AVAILABLE ACCESSORIES



**Replacement  
Desiccant**

P/N: 01-020-11-0002



**Replacement  
Fill Tube**

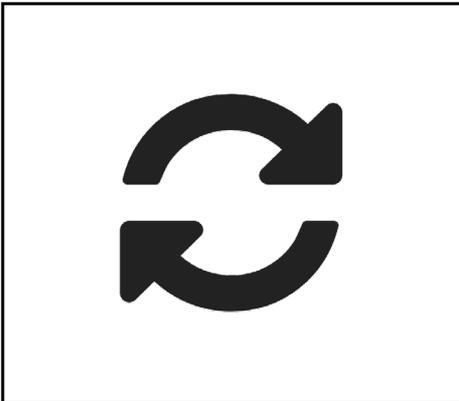
P/N: 01-200-36-0006



**Replacement  
Control Sensor**

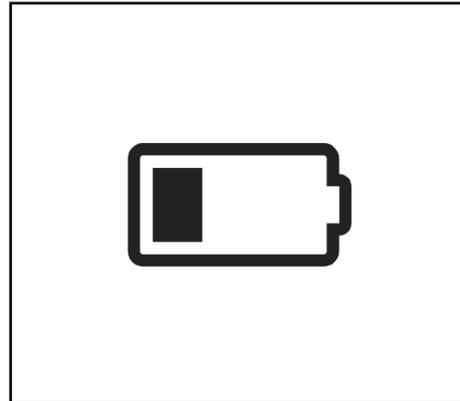
HC2-S HygroClip  
control probe

P/N: 01-200-36-0002



**ISO 17025 System  
Recalibration**

P/N: 01-999-99-0004



**Battery  
Replacement**

P/N: 01-020-36-0005

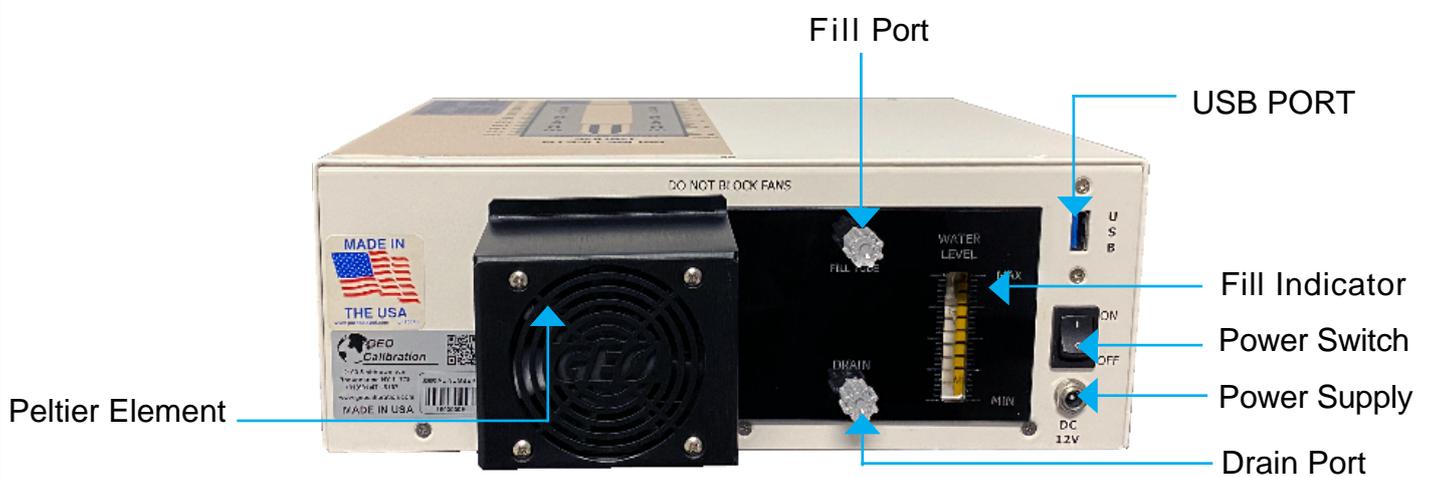
## UNIT DIAGRAM AND PARTS LISTING

Below you will find a diagram of the Hygro-Mini's various operational parts.

### FRONT



### REAR



# QUICK START GUIDE

This guide is intended to give you the necessary information to quickly get up and running with your Hygro-Mini humidity and temperature generator.

It includes the following instructions:

- Filling the Reservoir
- Powering On the Unit
- Operating the Front Panel Controller
- Reading the Status Indicator Lights

## Read Before Turning On The Unit

1.

After receiving the unit, open the door to let the chamber dry for 10 minutes. Use soft paper towel to wipe the water in the chamber if needed.

2.

Turn on the unit and set the temperature to 30 °C and humidity to 30 % to let the unit settle, approximately for 20 minutes (first time only).

### PLEASE NOTE:

1. Do not use alcohol inside the chamber.
2. The above instruction must be followed to ensure unit is dry from any changes during shipping.

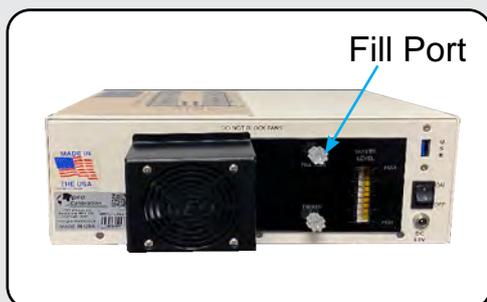
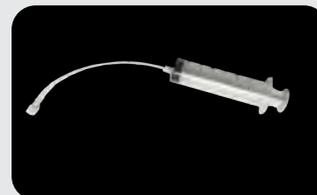
## FILLING THE RESERVOIR

### Supplies Needed

#### Distilled Water



#### Fill Syringe



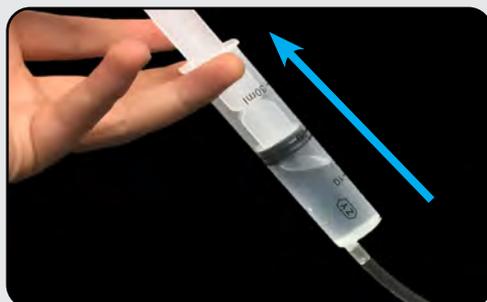
### 1. Locate the Fill Port

The port is located on the center top area of the front panel of the unit.



### 2. Remove the Fill Cap

Rotate Counter-Clockwise to remove.



### 3. Draw Distilled Water into Fill Syringe

The limit for the Hygro-Mini reservoir is 30 mL.  
Fillable 10 mL at a time (DO NOT OVERFILL)

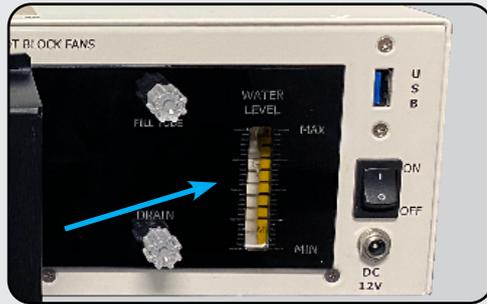
If you received the syringe type without a plunger, pour water into the elevated tube body.



### 4. Attach Fill Syringe to Fill Port

Press the Fill Syringe tip into the Fill Port, then rotate the cap clockwise to secure.

## FILLING THE RESERVOIR



### 5. Note the Fill Level

While executing step 6, monitor this fill level. As water enters the reservoir, the red ball will rise.



### 7. Raise & Allow Water to Flow

Bring the syringe to a higher level than the fill port. Allow the water to flow into the unit.



### 8. Loosen and Remove Syringe

Turn the fill syringe tip counter-clockwise to loosen.



### 9. Re-Install the Fill Cap

Turn the cap clockwise to tighten the cap and seal the fill port.

## INSERT THE SATURATOR



### 1. Remove the Saturator Cap



### 2. Insert the Saturator

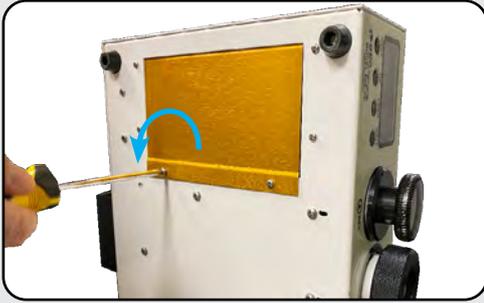
Fill 10 mL water into the tube then insert the saturator.



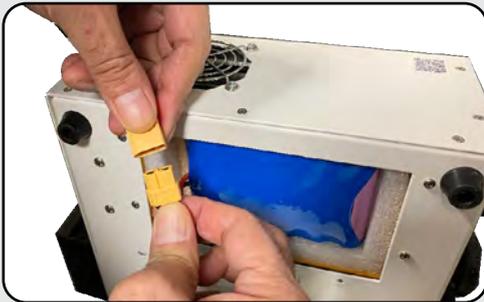
### 3. Reinstall the Cap

## PLUG THE CONNECTOR FOR BATTERY

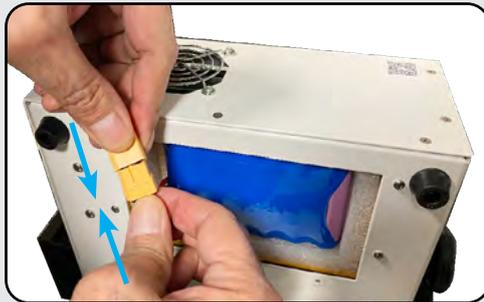
When receive the unit, follow the instruction below to connect the battery:



1. **Unscrew Two Screws of Battery Cover on the Bottom of the Unit**



2. **Locate the Battery Connector**



3. **Plug the Battery Connector into the Mating Connector**

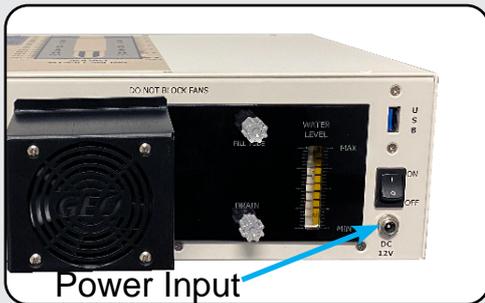


4. **Reinstall the Battery Cover by Screwing Back Two Screws**

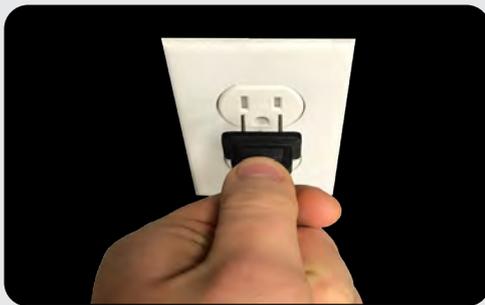
## CHARGING AND POWERING THE UNIT

### Supplies Needed

Mains Power Cord



#### 1. Locate the Power Input



#### 2. Plug Power Supply into Wall



#### 3. Plug Power Supply into Unit

Unit will reach a full charge after 10 hours of charging time while powered off.



#### 4. Flip the Power Switch to “ON”

### **NOTE:**

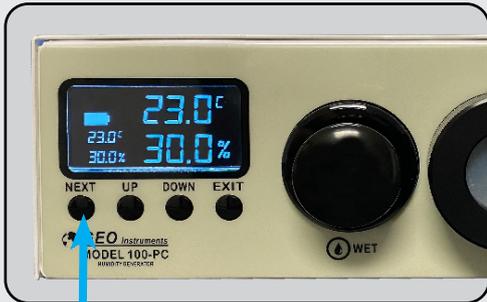
To get the best performance, let the unit settle down for 30 minutes before you use the unit.

## UNIT OPERATION



### 1. Display Overview

Current Temperature	Top Right
Current Relative Humidity	Bottom Right
Programmed Temperature	Middle Left
Programmed Relative Humidity	Bottom Left



### 2. Changing Humidity & Temperature

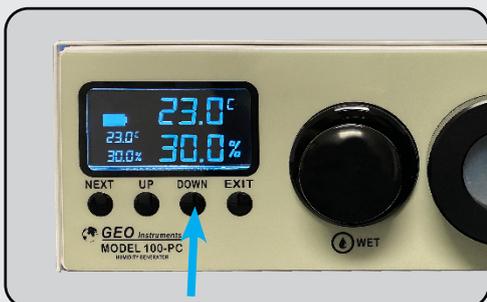
Pressing the “Next” button activates the set-point toggle. The selected field will repeatedly flash its current programmed value. Repeated presses will toggle between the Humidity and Temperature fields.



### 3. Raise the Desired Set-point

Pressing the “UP” key will incrementally raise the selected set-point.

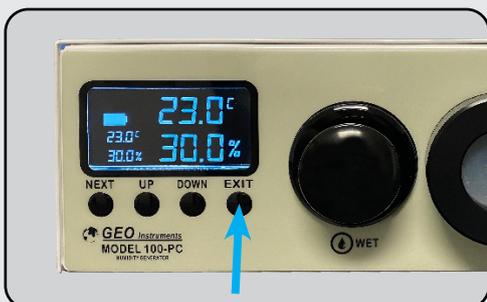
Holding the “UP” key will rapidly raise the selected set-point.



### 4. Lower the Desired Set-point

Pressing the “DOWN” key will incrementally lower the selected set-point.

Holding the “DOWN” key will rapidly lower the selected set-point.



### 5. Commit Your Changes

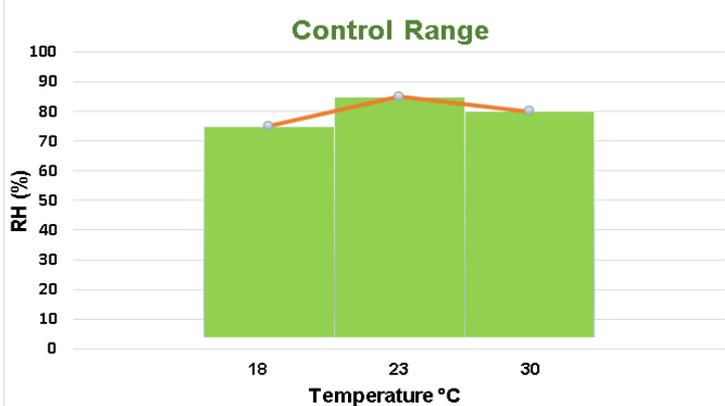
Pressing the “EXIT” key will commit your changes.

The Unit will also commit your changes if left alone for 30 seconds.

# GENERAL SPECIFICATIONS

CALIBRATION TO (17025 TRACEABLE TO NIST)	TRANSFER STANDARD	No Charge	
	CERTIFICATE	17025 Validation (Additional Fees Apply)	
OPERATING AMBIENT CONDITIONS	TEMPERATURE	18 °C to 28 °C	
	HUMIDITY	Up to 80 % RH	
STORAGE CONDITIONS	TEMPERATURE	-20 °C to 50 °C	
	HUMIDITY	0 % to 95 % RH (non-condensing)	
CALIBRATION SYSTEM ACCURACY	TEMPERATURE	± 0.10 °C	*Based on Probe Accuracy
	HUMIDITY	± 1.00 % RH	*Based on Probe Accuracy
	CONTROLLER TYPE	PID Controller	
UNIFORMITY	TEMPERATURE	0.20 °C	
	HUMIDITY	0.40 % RH @ 23 °C	
STABILITY	TEMPERATURE	0.10 °C	
	HUMIDITY	0.15 % RH @ 23 °C	
WARM-UP PERIOD	Ambient Condition	30 Minutes Maximum	
	Cold	45 to 60 Minutes	

RESOLUTION	DISPLAY	Temperature	0.1 °C
		Humidity	0.1 % RH



RAMP / SOAK RATE OF CHANGE		
*Depends on ambient and desiccant conditions		
TEMPERATURE	High → Low	1.00 °C / minute *Typical
	Low → High	1.00 °C / minute *Typical
HUMIDITY	High → Low	3.00 % RH / minute *Typical
	Low → High	3.00 % RH / minute *Typical

CONTROLLED RANGE			
TEMPERATURE	18 °C to 35 °C @ Ambient Temperature 23 °C		
HUMIDITY @ 18°C	5 % to 75% RH	HUMIDITY @ 23°C	5 % to 85 % RH
HUMIDITY @ 30°C	5 % to 80 % RH		

## SPECIFICATION ANNOTATIONS

If the desired humidity set-point is higher than 70%,

\* Set the temperature to your desired point first, and let the chamber stabilize. Next, set the humidity to the desired set point.

\*\* To achieve low temperature with high humidity, you must first set the humidity value to 70% or lower, and let the chamber stabilize. Then, set the temperature to the desired set point. This avoids condensation appearing within the chamber.

Note:

If condensation is formed in the chamber:

- Open the chamber door and wipe any visible water away with a paper towel.
- Set humidity to 30% and temperature to 30 °C then let the unit dry and stabilize.

## CONSUMABLES

WATER	RESERVOIR	30 mL (Fillable in 10 mL increments)
	SPILL RESISTANT	Yes
	REQUIRED FLUID	Distilled Water Only
	EST REFILL PERIOD	1 Month (Typical) *Depends on Usage
	FILL INDICATOR	Front Panel *Screen Icon
DESICCANT	TYPE	Indicating Molecular Sieve
	SIZE	90 CC
	REPLACEMENT	When Indicating Desiccant is 3/4 Used
	REPLACEMENT FREQUENCY	Depends Entirely on User Workload
	LOCATION	Front Side Mounted
BATTERY	SIZE	6000 mAh 12 VDC
	TYPE	Lithium-Ion
	CYCLES	300 (Average) *Typical
	AVERAGE USE TIME	3 Hours
RECALIBRATION	FREQUENCY	Depends on User Uncertainty Requirements
		Once Per Year Recommended
EXTERNAL INTERFACE	USB	Cable and Software Included

## MECHANICAL

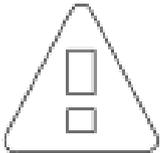
GENERATOR DIMENSIONS	Measurement Type	Width	Depth	Height
	Metric	26.97 cm	31.81 cm	11.00 cm
	English	10.62 in	12.52 in	4.33 in
WORKING DIMENSIONS AND VOLUME	Measurement Type	Depth	Diameter	
	Metric	16.49 cm	6.06 cm	
	English	6.49 in	2.39 in	
	Volume	0.15 Liter Effective Working Volume		
	WEIGHT	Unit Only (With Desiccant)	Metric	4.00 kg
English			8.82 lb	
Shipping		Metric	8.00 kg	
		English	17.64 lb	
POWER SUPPLY FOR EXTERNAL USE		Power Supply	12 Volt DC @ 10A	
STANDARD PORT QUANTITY	1 Port			
CAPACITY	1 RH Probe Size	6 - 25 mm		

## INDICATION ICONS

The Hygro-Mini does not display error codes.

Instead, the unit utilizes a series of on-screen icons to communicate machine status to the user.

### Icon Descriptions

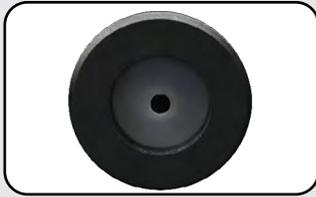
Name	Icon	Indication	Action
<b>WET WARNING/ ATTENTION</b>		The unit is not adding humidity at a sufficient rate.	Check reservoir fill level.
<b>DRY WARNING/ ATTENTION</b>		The unit is not drying at a sufficient rate.	Check desiccant. Replace if desiccant is fully saturated.
<b>COMM</b>		Unit is receiving commands from the GEO Software Application	No Action Required
<b>LOW BATTERY</b>		The battery is nearing critically low levels of charge.	You must connect the unit to a power supply.
<b>FAULT</b>		The BIT (Built in Test) has detected a condition which will not allow control of the chamber.	
Please Contact GEO +001 (631) 471 - 6157 <a href="mailto:service@geocalibration.com">service@geocalibration.com</a>			

# CALIBRATION

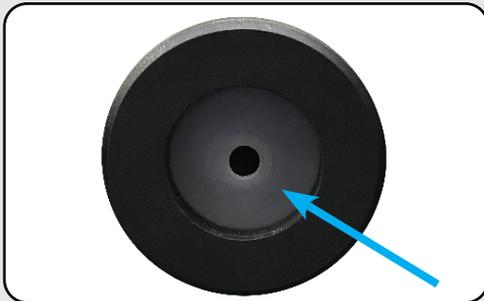
## UUTs (UNITS UNDER TEST)

### Supplies Needed

Port Adapter



UUT  
[ Unit Under Test ]



### 1. Select Port Size Adapter

Measure the diameter of the UUT and select the appropriately sized silicone adapter. Unscrew the Hygro-Mini door and replace the adapter if necessary. Ensure the door is securely fastened to the chamber.



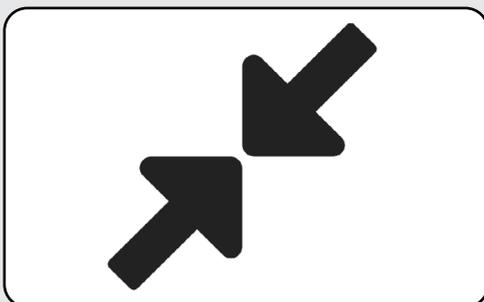
### 2. Insert UUT

Insert your UUT at least 3 inches into the Hygro-Mini chamber.



### 3. Program Unit Set-points

Allow the unit to reach the programmed set-points and settle. To best preserve desiccant, it is advised that you begin multi-point calibrations with low humidity set-points.

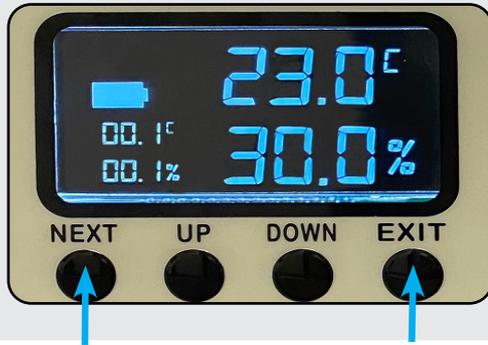


### 4. Compare Readouts

Follow the manufacturer's recommendation for recalibration and programming offsets.

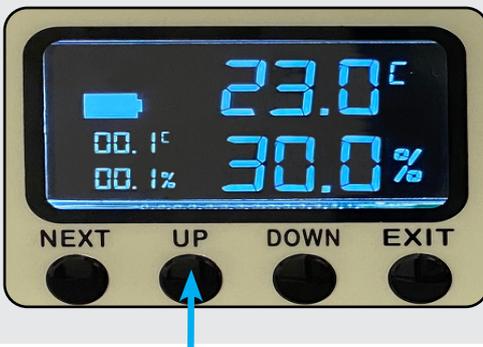
# ENTERING HYGRO-MINI OFFSETS

The probe calibration screen allows the user to introduce a calibration offset to the internal probe used to control the GEO Calibration Hygro-Mini chamber. This allows the user to calibrate the internal probe to an external reference.



## 1. Press the “Next” and “Exit” button

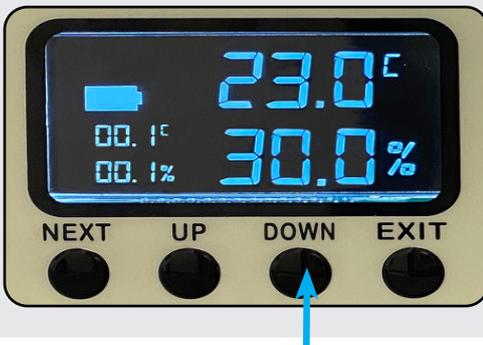
Pressing the “Next” and “Exit” button at the same time to activates the offset points appear and toggle. The selected field will repeatedly flash its current programmed value. Repeated presses will toggle between the Humidity and Temperature fields.



## 2. Raise the Desired Set-point

Pressing the “UP” key will incrementally raise the selected set-point.

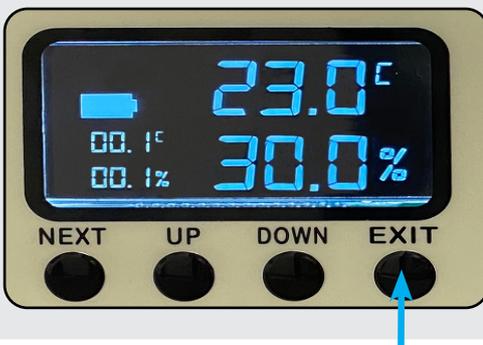
Holding the “UP” key will rapidly raise the selected set-point.



## 3. Lower the Desired Set-point

Pressing the “DOWN” key will incrementally lower the selected set-point.

Holding the “DOWN” key will rapidly lower the selected set-point.



## 4. Commit Your Changes

Pressing the “EXIT” key will commit your changes.

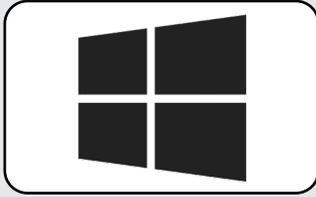
The Unit will also commit your changes if left alone for 30 seconds.

In the image above the current probe offset is 0.1° C and the offset is 0.1% RH. The current chamber temperature and humidity are displayed for reference. Once the offsets are configured the values are permanently stored in the unit and do not need to be reset when the unit is subsequently powered on.

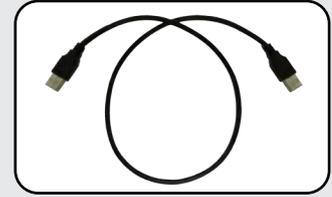
# ENTERING HYGRO-MINI OFFSETS

## Supplies Needed

Windows PC with  
USB Port



USB Cable



## Unit Calibration Overview

The Hygro-Mini uses a capacitive internal reference sensor that has an average uncertainty drift of 1.0% RH per year. It is recommended that users recalibrate their unit as needed to fit their overall uncertainty requirements. The factory recommended recalibration interval is once every six months.

Recalibration of the Hygro-Mini's reference sensor can be done with a two-pressure primary measurement standard.

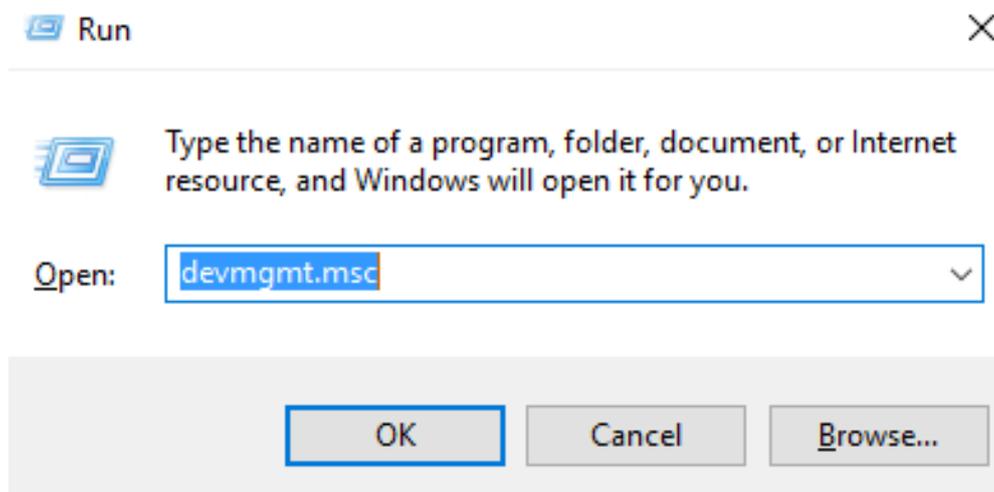
The following software items are required for recalibration:

- Windows Device Manager
- PuTTY \*

## Accessing the Device Manager

Press and hold the Windows key, tap R, then release both keys.

A Run window will appear. Type **devmgmt.msc** into this window, then hit Enter on your keyboard.



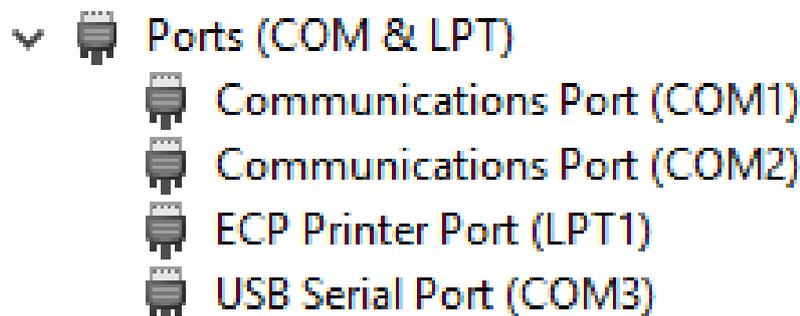
\* PuTTY is a free and open-source terminal emulator. It is distributed under the MIT Software License, and is completely free for unrestricted commercial use. For more details on the PuTTY license, [click here](#).

# ENTERING HYGRO-MINI OFFSETS

## Reading the COM Port

At this time, plug the unit's power supply into an approved power source. Plug the USB cable into the Unit, ensuring the other end is unplugged from the PC. Toggle the power switch on the unit to the "ON" position.

With Device Manager open, expand the Ports (COM & LPT) menu. While watching the expanded Ports sub-menu, plug the free end of the USB cable into the computer. A new entry will appear, called USB Serial Port. To the right of this text, will be parenthesis. Remember the text enclosed within these parenthesis. This is your COM Port, and will be referenced in the following sections.



## Installing PuTTY

Visit [www.ninite.com/putty](http://www.ninite.com/putty) to download the PuTTY installation executable file.

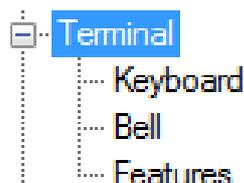
Run the executable and follow the automatic installer instructions to install PuTTY.

Once the installation is complete, run PuTTY by double clicking on the newly created desktop icon.

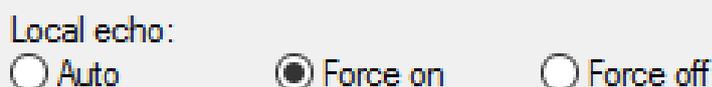
## PuTTY Setup

Ensure that PuTTY is running on your computer.

From the Category option on the left side of the window, click Terminal menu item to expand the sub-menu.



Under Local echo, select the Force on button



# ENTERING HYGRO-MINI OFFSETS

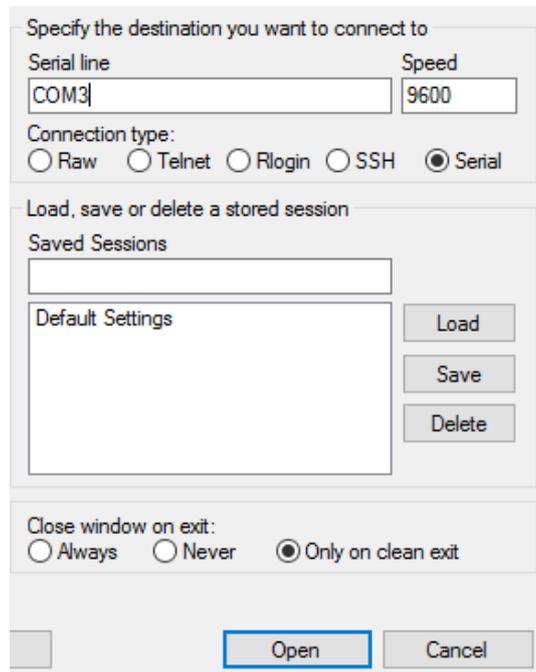
## Connecting Through PuTTY

In PuTTY, select **Session** menu under Category on the left

Input your COM Port (reference **Reading the Serial Port** instruction from above) into the **Serial line** field

Under **Connection type**, select **Serial**

Click **Open**



## Reading Temperature and Humidity Offsets

Temperature: type **TOFFSET** and press the enter key. The unit will query and display the temperature offset

```
COM3 - PuTTY
>TOFFSET
Temperature Offset is: 0.1
>
```

Humidity: type **HOFFSET** and press the enter key. The unit will query and display the humidity offset

```
COM3 - PuTTY
>HOFFSET
Humidity Offset is: 0.2
>
```

# ENTERING HYGRO-MINI OFFSETS

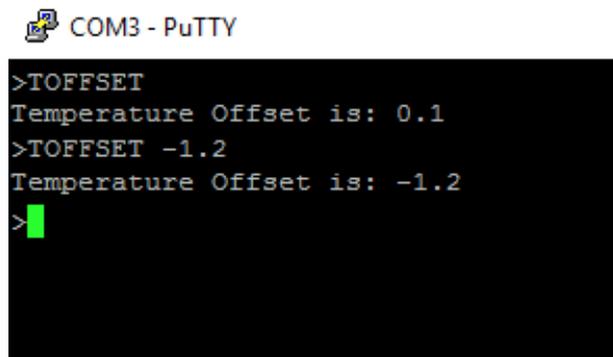
## Changing Humidity and Temperature Offsets

### PLEASE NOTE:

**## is a placeholder**

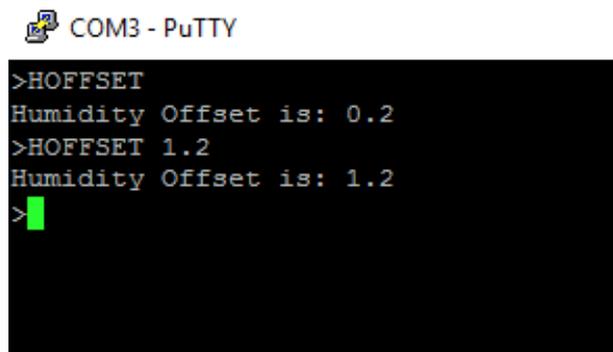
In the following instructions, replace # with your desired integers.  
(For example, ## would become 1.2 or -0.2)

Temperature: type **TOFFSET ##** and press the **Enter** key. The unit will query and display the temperature offset. Ensure it has been changed by typing in **TOFFSET** . Press the **Enter** key.



```
COM3 - PuTTY
>TOFFSET
Temperature Offset is: 0.1
>TOFFSET -1.2
Temperature Offset is: -1.2
>
```

Humidity: type **HOFFSET ##** and press the **Enter** key. The unit will set the humidity offset to the new value given by the argument. Ensure it has been changed by typing in **HOFFSET** . Press the **Enter** key.



```
COM3 - PuTTY
>HOFFSET
Humidity Offset is: 0.2
>HOFFSET 1.2
Humidity Offset is: 1.2
>
```

# SAFETY WARNING

## General Safety Information

- Read all provided and available safety information before you use the Hygro-Mini.
- Carefully read all available instructions.
- Use only the power cord and supply approved for the voltage for the Hygro-Mini.
- Replace the power cord if the insulation is damaged or if the insulation shows any signs of wear.
- Make sure the ground conductor in the power cord is connected to a functioning ground. Disruption of the ground could put voltage on the chassis that could cause death.
- Use the Hygro-Mini only as specified, or the protection supplied by the Product can be compromised.
- Do not put the Hygro-Mini where access to the power cord isn't possible.
- Immediately cease using and disable the Hygro-Mini if it is damaged.
- Do not use the Hygro-Mini if it operates in an incorrect way.
- Do not operate the Hygro-Mini with unit casing removed. Hazardous voltage exposure is possible.
- Use only specified GEO Calibration replacement parts.
- The Hygro-Mini may only be repaired by approved technicians.
- The Hygro-Mini reservoir must be completely emptied before shipment.
- Do not use the Hygro-Mini around explosive gas, vapor, or in damp or wet environments.
- To ship the unit, open the battery compartment, unplug the battery connector and reinstall the battery cover by screwing back two screws.

## Battery Safety Information

### Battery

Do not attempt to replace the Hygro-Mini battery yourself—you may damage the battery, which could cause overheating, fire, and injury.

The lithium-ion battery in your Hygro-Mini should be serviced or recycled by GEO Calibration or an authorized service provider, and must be recycled or disposed of separately from household waste. Dispose of batteries according to your local environmental laws and guidelines.

# SAFETY WARNING

## Disposal Safety Information

### European Union—Disposal Information



The symbol above means that according to local laws and regulations your product and/or its desiccant shall be disposed of separately from household waste. When this product reaches its end of life, take it to a collection point designated by local authorities. The separate collection and recycling of your product and/or its desiccant at the time of disposal will help conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment.

## TECHNICAL SUPPORT

### Locations



**GEO Calibration Inc**  
**2190 Smithtown Avenue, Ronkonkoma, NY 11779, USA**  
Tel.: +001 (631) 471 - 6157 • Fax: +001 (631) 471 - 6158  
support@geocalibration.com • www.geocalibration.com

# REPAIRS

## Unit Repair Procedure

- Contact GEO Calibration and request an RMA #
- Have the Product information ready such as the purchase date and serial number to schedule the repair
- Ship the unit to GEO in the original shipping container or one designed specifically for “Safe Travel”
- Apply your RMA # on the outside of the shipping package in large numbers
- Apply the top right portion of your quotation with RMA # and barcode to the outside of the shipping package, so that it is visible.
- Include a copy of all GEO communication documentation inside your package
- Estimated Return Ship-Date is 15 business days from the date both the unit and a valid method of payment is received
- On the Purchase Order, please ensure the “Vendor Name” is GEO Calibration Inc., and the address is 2190 Smithtown Avenue, Ronkonkoma NY 11779
- Payment Terms are “Immediate Payment” from Date of Invoice, FOB Origin, the respective Dollar Amounts, and any return shipping instructions are completed. (Please, do not send a copy of your internal “Purchase Requisition” as we need the actual “Purchase Order” with the above items included)
- Reference the RMA # on the completed PO and forward a copy via fax (631.471.6158) or email to: [service@geocalibration.com](mailto:service@geocalibration.com)
- If credit card is being used for payment and has not been provided as yet, please call +1 (631) 471 - 6157 and provide information; referencing your RMA # when you call
- \*\* Exception pricing may apply upon evaluation by the service center. If applicable, this will be presented in a formal re-quote before proceeding\*\*
- Please note that a “Payment Method” must be on file, reviewed and approved before any service work may begin on your item
- If you have any questions do not hesitate to call or email us.

**Please ship the unit to:**

Attn: Repairs  
GEO Calibration Inc.  
2190 Smithtown Avenue  
Ronkonkoma, NY, 11779, USA

# UNIT MAINTENANCE

- **Maintenance Recommendations:**

GEO Calibration recommends that the unit be annually shipped back to our facility for general maintenance.

Daily	Annual	As Needed
General Cleaning	Control Probe Calibration or As Required	Refill Reservoir with Distilled Water
Use Proper Cleaning Materials		Replace Desiccant Canister
		Make Sure Water Level is Maintained

## DESICCANT CHANGE VISUAL GUIDE

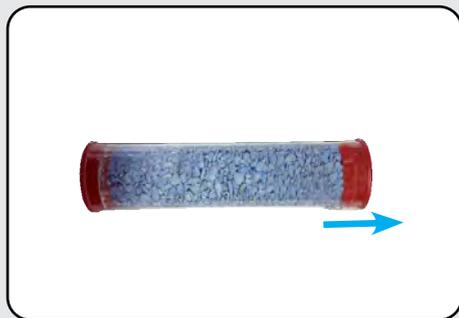
### Changing the Desiccant

#### Overview

The Hygro-Mini ships with a desiccant canister that must be fresh to provide the user with optimal performance. The desiccant type is molecular sieve, which may be regenerated by the user through heating.

The user must replace the desiccant as soon as they see drying performance begin to degrade. To aid in this process, the Hygro-Mini has an on-screen indicator that displays once sub par performance is detected.

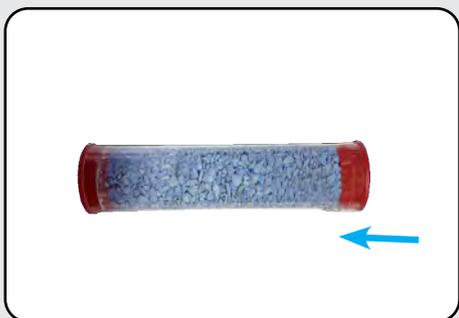
### REFILLING THE CANISTER



#### 1. Open the Cover of Desiccant



#### 2. Refill Canister with Desiccant Material



#### 3. Reinstall the Cover of Desiccant

## REPLACING THE CANISTER



1. Remove the Desiccant Cap



2. Remove Canister



3. Insert the New Desiccant



4. Reinstall the Desiccant Cap

# INDUSTRIES

PHARMACEUTICAL  
MANUFACTURING

CALIBRATION LABS

BIOMEDICAL

R&D  
FACILITIES

FOOD PRODUCTION

AUTOMOTIVE  
MANUFACTURING

AEROSPACE

HOSPITAL / MEDICAL

CLEAN ROOMS

For complete product and accessory review, please  
visit our website: [www.geocalibration.com](http://www.geocalibration.com)



CONTACT US:



Email: [Sales@GeoCalibration.com](mailto:Sales@GeoCalibration.com)

Website: [www.GeoCalibration.com](http://www.GeoCalibration.com)



# GEO Calibration

Humidity Control Company



Proudly Made in the USA 

Email: [Sales@GeoCalibration.com](mailto:Sales@GeoCalibration.com) Website: [www.GeoCalibration.com](http://www.GeoCalibration.com)