

GEOPYC[®] 1365

ENVELOPE DENSITY ANALYZER



micromeritics[®]

PRE-INSTALLATION INSTRUCTIONS AND CHECKLIST

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(Rev B)

TRADEMARKS

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Micromeritics is a registered trademark of Micromeritics Instrument Corporation.

T.A.P. is a trademark of Micromeritics Instrument Corporation.

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Support@Micromeritics.com

ABOUT THIS MANUAL



All references to GeoPyc or GeoPyc 1365 in this document encompass the GeoPyc 1365 and GeoPyc 1365 T.A.P. unless otherwise noted.

The following symbols or icons indicate safety precautions and/or supplemental information and may appear in this manual:



NOTE — Notes contain important information applicable to the topic.



CAUTION — Cautions contain information to help prevent actions that may damage the analyzer or components.



WARNING — Warnings contain information to help prevent actions that may cause personal injury.



T.A.P. Feature Only - Indicates the feature is applicable only when using the Transverse Axial Pressure (T.A.P.) upgrade option.

GENERAL SAFETY



Do not modify this instrument without the authorization of Micromeritics Service Personnel.

Any piece of laboratory equipment can become dangerous to personnel when improperly operated or poorly maintained. All employees operating and maintaining Micromeritics instruments should be familiar with its operation and should be thoroughly trained and instructed on safety.

- Read the operator manual for any special operational instructions for the instrument.
- Know how the instrument functions and understand the operating processes.



- Wear the appropriate personal protective equipment when operating this instrument — such as eye protection, lab coat, protective gloves, etc.
- When lifting or relocating the instrument, use proper lifting and transporting devices for heavy instruments. Ensure that sufficient personnel are available to assist in moving the instrument. The GeoPyc 1365 weighs approximately 19 kg (42 lbs).
- Always pay attention to the safety instructions provided on each label affixed to the instrument and do not alter or remove the labels. When inspecting the instrument, ensure that the safety labels have not become worn or damaged.
- Proper maintenance is critical to personnel safety and smooth instrument operation and performance. Instruments require regular maintenance to help promote safety, provide an optimum end test result, and to prevent costly down time. Failure to practice proper maintenance procedures can lead to unsafe conditions and shorten the life of the instrument.
- Improper handling, disposing of, or transporting potentially hazardous materials can cause serious bodily harm or damage to the instrument. Always refer to the MSDS when handling hazardous materials. Safe operation and handling of the instrument, supplies, and accessories is the responsibility of the operator.

REMOVAL FOR REPAIR OR DISPOSAL OF EQUIPMENT

By following these instructions, you can help ensure that equipment is safely removed from service for repair or disposal and that safety is not compromised when new equipment is put into service.

- Before removing equipment from use for repair or disposal, ensure that all power sources are disconnected and all stored energy sources have been discharged to prevent accidental injury to personnel. Remove all glassware and attachments. Plug any open ports. Shut off and disconnect gas supplies, vacuum pumps, and vents.
- Only qualified personnel should perform repairs or dispose of the equipment. This ensures that the work is done safely and that the equipment is properly disposed of according to local regulations.
- When removing equipment for repair, clearly label it with the reason for removal and the date it was taken out of service. This helps ensure that the equipment is not put back into service until it has been properly repaired and tested.
- When disposing of equipment, follow local regulations for hazardous waste disposal. This may involve recycling, special disposal methods, or other requirements.
- Keep records of all equipment removed from service, including the reason for removal and any repair or disposal actions taken. This helps ensure that the equipment is properly tracked and that safety issues are addressed in a timely manner.
- Ensure that all replacement equipment meets the same safety standards as the equipment being replaced. This helps ensure that safety is not compromised when new equipment is put into service.
- Before returning equipment to service, ensure that it has been properly repaired and tested to ensure that it meets all safety requirements. Only qualified personnel should perform this work.

INTENDED USE

The GeoPyc automatically determines the volume and density of a solid object by displacement of DryFlo, a solid medium. The medium consist of a narrow distribution of small, rigid spheres that have a high degree of flow ability and achieve close packing around the object under investigation. The particles are sufficiently small that during consolidation they conform closely to the surface of the object, yet do not invade pore space.



The instrument is intended to be operated by trained personnel familiar with the proper operation of the equipment recommended by the manufacturer and as well as relevant hazards involved and prevention methods. Other than what is described in this manual, all use is seen as unintended use and can cause a safety hazard.



The instrument is intended to be used as per applicable local and national regulations.

TRAINING

It is the customer's responsibility to ensure that all personnel operating or maintaining the equipment participate in training and instruction sessions. All personnel operating, inspecting, servicing, or cleaning this instrument must be properly trained in operation and machine safety before operating this instrument.

ENVIRONMENTALLY FRIENDLY USE PERIOD

Hazardous Substances Table

Part Name	Hazardous Substances					
	Lead (Pb)	Mercury (Hg)	Cadmium (Cd)	Hexavalent Chromium (Cr (VI))	Polybrominated biphenyls (PBB)	Polybrominated diphenyl ethers (PBDE)
Cabinet	x	0	0	0	0	0
Power Supplies	o	o	o	o	o	o
Printed Circuit Boards	x	o	o	o	o	o
TouchPanel & SBC	x	o	o	o	o	o
Connectors	x	o	o	o	o	o
Transducers	x	o	o	o	o	o

- o Hazardous substance is below the specified limits as described in SJ/T11363-2006.
- x Hazardous substance is above the specified limits as described in SJ/T11363-2006.

The Environmentally Friendly Use Period (EFUP) for all enclosed products and their parts are per the symbol shown here unless otherwise marked. Certain parts may have a different EFUP (for example, battery modules) and are marked to reflect such. The Environmentally Friendly Use Period is valid only when the product is operated under the conditions defined in the product manual.



SYMBOLS THAT MAY APPEAR ON THE INSTRUMENT

The following symbols or icons indicate safety precautions and/or supplemental information and may appear on your instrument:



Use extreme caution when working on the instrument where one of these symbols may be displayed. These symbols indicate the part may be hot and cause serious burns.



Use the cotton gloves provided in the accessory when handling heated surfaces. These cotton gloves are not intended to protect hands when heated surfaces are above 60 °C.



When working on the instrument where this symbol is displayed, refer to your Micromeritics' instruction manual for additional information.



When this symbol is displayed, toxic or flammable gases require proper venting of exhaust.

This symbol can also indicate the instrument uses mercury which is an extremely toxic substance. Read the Material Safety Data Sheet (MSDS) and be aware of the hazards of mercury and know what to do in the event of a spill or an exposure incident

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1 PRE-INSTALLATION DOCUMENT OVERVIEW

This document describes how to prepare a site for installation of the GeoPyc 1365. If Micromeritics will be performing this installation, when the enclosed procedures have been completed, return the signed and dated form to Micromeritics as outlined in [*Dates and Signatures on page 4 - 1*](#). If unsure about any part of this document or the checklist, contact the Micromeritics Service Department for clarification.

MICROMERITICS INSTALLED INSTRUMENTS ONLY

APPLICATION RELATED ISSUES

To ensure a thorough installation, it will be helpful for Micromeritics to know which types of samples will be tested. If known, list them in [*Application Related Issues Checklist on page 3 - 2.*](#)

Please advise Micromeritics if samples require any pretreatment. If required, do you have the proper equipment to pretreat your samples? Micromeritics offers application assistance through our materials analysis laboratory (Micromeritics Particle Testing Authority).

HAZARDS AND PRECAUTIONS

Inform Micromeritics of any on-site conditions that may present hazards to Micromeritics employees or equipment. Advise Micromeritics of any precautions that need to be taken.

SAFETY MEASURES

Inform Micromeritics of any safety equipment, requirements, or procedures necessary for Micromeritics employees to enter and install the system at your facility.

PERSONNEL SECURITY CLEARANCE

If security clearances, insurance certificates, or any other special arrangements are required for Micromeritics employees to enter your facility, see [*Personnel Security Clearance Checklist on page 3 - 3*](#) to explain. Inform Micromeritics how much advance notice you require to obtain clearance.

PROJECTED INSTALLATION DATE

Read this entire document carefully. Complete all checklists in this document. Sign and return all checklists and the form in [*Dates and Signatures on page 4 - 1*](#) to Micromeritics. Micromeritics will contact you to confirm an installation date.

2 PRE-INSTALLATION INSTRUCTIONS

UNPACKING AND INSPECTION

When the equipment is received, unpack and inspect the contents of the shipping container(s). Use the packing list to verify that all products, accessories, software (if applicable), and documentation are received intact and in the correct quantity. The shipping container(s) and contents should be inspected within a few days of receipt in the event damage or loss has occurred. Sort through all packing material before declaring missing equipment or parts.



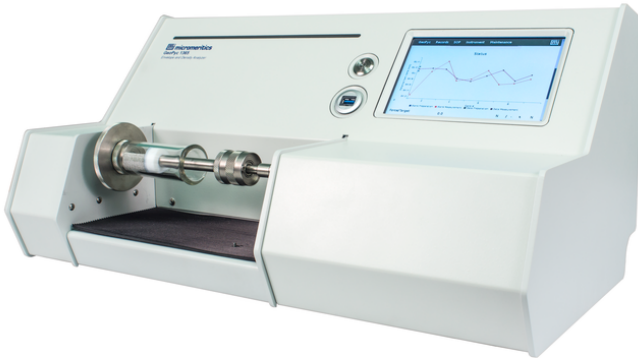
Micromeritics recommends saving all shipping containers until installation of the equipment is complete. All shipping containers where equipment is to be declared as damaged or lost must be examined by the claims investigator prior to completion of the inspection report.

SHIPPING DAMAGE

If equipment is damaged or lost in transit, you are required to make note of the damage or loss on the freight bill. The freight carrier, not Micromeritics, is responsible for all damage or loss occurring during shipment. If damage or loss of equipment is discovered during shipment, report the condition to the carrier immediately. Insurance claims **MUST** be made with the freight carrier, **NOT** Micromeritics.

- Keep all software, manuals, and accessories with the equipment.
- Report any shipping damage immediately to the carrier and follow their directions.
- Report missing or wrong parts to Micromeritics, in addition to any shipping damage, only after filing a claim with the carrier.
- Micromeritics will NOT file a claim for shipping damage.
- Do not discard shipping boxes and containers until installation is complete. If space is available, it is recommended that shipping containers be saved for future use in the event of return to factory for repair.

ANALYZER SPACE



Physical

Height	27 cm (11 in.)
Width	55 cm (22 in.)
Depth	38 cm (15 in.)
Weight	19 kg (42 lbs)



- The pycnometer performs best in a constant temperature environment.
- The pycnometer should be installed on a workbench set at a comfortable height.

INSTALLATION CONFIGURATION

Standard installation requires the use of 1/8 in. copper or stainless steel gas supply lines, located in the instrument accessories kit. A nonstandard installation will be created if another gas supply line is used or if the gas cylinders cannot be placed within 6 ft (2 m) of the analyzer. There may be additional costs associated with a nonstandard installation. Please contact the Micromeritics Service Department at 1-770-662-3666 to discuss a nonstandard installation.

ENVIRONMENTAL FACTORS

TEMPERATURE AND HUMIDITY

Temperature and humidity must be controlled to within:

Temperature: 10 to 35 °C (50 to 95 °F) operating; 0 to 50 °C (32 to 122 °F) non-operating

Humidity: 20 to 80% relative, non-condensing

Do Not:

- Allow room temperature or humidity to exceed limits.
- Install the analyzer where it is exposed to direct sunlight.
- Locate the analyzer near air conditioning or heating vents.

POWER

The GeoPyc 1365 is designed to operate with 90 to 264 VAC at 47 to 63 Hz. Noise-free power of the correct voltage and frequency, with a safety earth ground, should be available through a standard wall receptacle.



The analyzer and peripheral devices **must** be installed on their own dedicated power line. Other devices — such as motors, generators, or ovens — **should not** be placed on the same power line.

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3 PRE-INSTALLATION CHECKLISTS

For each question, circle **Y** if the condition applies to your laboratory or **N** if it does not. When this *Pre-installation Checklist* has been completed, see [Dates and Signatures on page 4 - 1](#). Sign and date the form, then send it along with all completed checklists to Micromeritics.

UNPACKING AND INSPECTION CHECKLIST

Unpacking and Inspection			Initial / Date
Have the shipping cartons been unpacked and their contents inspected?	Y	N	
Was there any shipping damage?	Y	N	
<ul style="list-style-type: none"> ▪ If Yes, has a claim been filed with the freight carrier? 	Y	N	
Were all items on the packing list received?	Y	N	
<ul style="list-style-type: none"> ▪ If No, has Micromeritics been notified? 	Y	N	

ANALYZER SPACE CHECKLIST

Analyzer Space			Initial / Date
Can the lab area where the analyzer and computer will be placed accommodate the combined dimensions of the analyzer, accessories, and computer?	Y	N	
Can the lab area where the analyzer will be placed accommodate the combined dimensions of the analyzer, accessories, and printer?	Y	N	

ENVIRONMENTAL FACTORS CHECKLIST

Environmental Factors			Initial / Date
Is power available with the correct voltage and frequency, and a safety earth ground?	Y	N	
Are temperature and humidity controlled within specifications?	Y	N	
Are hazards present or precautions necessary in area of installation?	Y	N	
<ul style="list-style-type: none"> If Yes, please explain: 			
Are safety measures required?	Y	N	
<ul style="list-style-type: none"> If Yes, please explain: 			

APPLICATION RELATED ISSUES CHECKLIST

Application Related Issues			Initial / Date
What types of samples will be tested?			
Initial / Date:			
Will these samples require pretreatment?	Y	N	
Will any application assistance from Micromeritics Particle Testing Authority be required?	Y	N	

PERSONNEL SECURITY CLEARANCE CHECKLIST

Security Clearance		
Are there any special arrangements required concerning security clearance?	Y	N
■ If Yes , please explain:		
Initial / Date:		

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4 DATES AND SIGNATURES



All checklists and this completed form should be returned only if Micromeritics will be performing this installation.

PROJECTED INSTALLATION DATE

This is not a commitment for a specific installation date. After reading the site preparation requirements in this document, enter a date your site will be prepared and a preferred date for installation. After returning the checklist and signed form to Micromeritics, your Micromeritics representative will contact you to confirm an installation date.

When would installation be most convenient? Date: _____/_____/_____

COMMITMENT STATEMENT AND SIGNATURE FORM

I have read this document and understand my responsibilities regarding preparations for the installation of our analysis system. I believe this site is ready for the system to be installed.

Signature: _____ Date: _____
Name (Printed): _____
Title (Printed): _____
Company: _____
City / State / Zip: _____
Phone Number: _____ Fax Number: _____
E-mail: _____
Analyzer: _____ Model: _____ Serial No.: _____

Is the Customer Representative also the End User? **Yes** _____ **No** _____

RETURN THE COMPLETED CHECKLIST AND FORMS TO:

Micromeritics Instrument Corporation
ATTN: Service Operations Manager
4356 Communications Drive
Norcross, GA / USA / 30093-2901

Email: Service.Helpdesk@Micromeritics.com
Fax: 1-770-662-3604

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EU DECLARATION OF CONFORMITY

This declaration of conformity is issued under the sole responsibility of the manufacturer:

Micromeritics Instrument Corporation
4356 Communications Drive
Norcross, GA 30093, USA

Hereby declares that the product:

GeoPyc 1365 Envelope and Density Analyzer

is in conformity with the following **EU harmonization legislation**:

2014/35/EU - LVD Directive
2014/30/EU - EMC Directive
2011/65/EU - RoHS Directive

and that the equipment is in conformity with the following harmonized and other appropriate standards;

2014/35/EU (LVD)

IEC 61010-1:2010/AMD:2016 - *Safety requirements for electrical equipment for measurement, control, and laboratory use — Part 1: General requirements.*

IEC 61010-2-081:2019 – *Particular requirements for automatic and semi-automatic laboratory equipment for analysis and other purposes.*

2014/30/EU (EMC)

IEC 61326-1:2020 Ed.3 - *Electrical equipment for measurement, control and laboratory use — EMC requirements — Part 1: General requirements*

IEC 61000-3-2:2018 /AMD1:2020 - *Part 3-2: Limits — Limits for harmonic current emissions (equipment input current ≤ 16 A per phase)*

IEC 61000-3-3:2013 - *Part 3-3: Limits — Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current ≤ 16 A per phase and not subject to conditional connection*

2011/65/EU (RoHS)

EN 63000:2018 - *Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances*

Name: John McCaffrey, Ph.D.

Title: Vice President, R & D

Signature: _____

Date of issue: 03/20/2023

Location: Norcross, GA USA



UK DECLARATION OF CONFORMITY

This declaration of conformity is issued under the sole responsibility of the manufacturer:

Micromeritics Instrument Corporation
4356 Communications Drive
Norcross, GA 30093, USA

Hereby declares that the product:

GeoPyc 1365 Envelope and Density Analyzer

is in conformity with the following UK legislation:

Electrical Equipment (Safety) Regulations 2016

Electromagnetic Compatibility Regulations 2016

Restriction of the Use of Certain Hazardous Substances in E&E Equipment Regulations 2012

and that the equipment is in conformity with the following designated and other appropriate standards;

Electrical Equipment (Safety) Regulations 2016

IEC 61010-1:2010/AMD1:2016 - *Safety requirements for electrical equipment for measurement, control, and laboratory use — Part 1: General requirements.*

IEC 61010-2-081:2019 – *Particular requirements for automatic and semi-automatic laboratory equipment for analysis and other purposes.*

Electromagnetic Compatibility Regulations 2016

IEC 61326-1:2020 - *Electrical equipment for measurement, control and laboratory use — EMC requirements — Part 1: General requirements*

IEC 61000-3-2:2019 - *Part 3-2: Limits — Limits for harmonic current emissions (equipment input current ≤ 16 A per phase)*

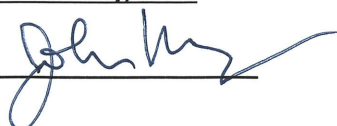
IEC 61000-3-3:2013 - *Part 3-3: Limits — Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current ≤ 16 A per phase and not subject to conditional connection*

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