






PAC200 Cryogenic Probe System

This guide contains information to help prepare your facility for the arrival of your PAC200 probe system.

Probe System Requirements

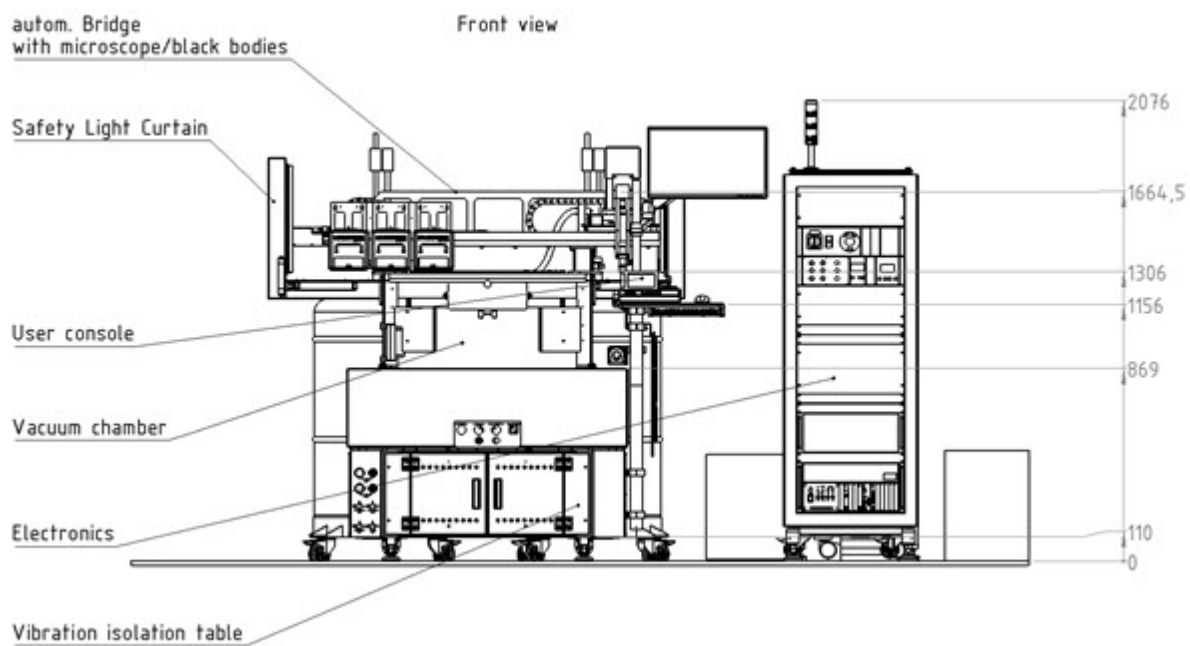
Utilities	Clean dry air (CDA)	<ul style="list-style-type: none"> • Filtered, dry and oil-free • Minimum 6 bar to 8 bar maximum • Flow rate insignificant • 8 mm hose (US 5/16")
	Dry Nitrogen (N ₂) input	<ul style="list-style-type: none"> • Class 5 or better, input 2 bar; 280 l per purging cycle, tube Ø 8mm OD
	Liquid Nitrogen (LN ₂) input	Optional with automatic refill option. <ul style="list-style-type: none"> • Pressure: 0.5 bar to 1.0 bar overpressure • 1x G 3/8" outside thread (connection point: LN₂ dewar armatures at 1.0 m to 1.3 m above floor level)
	Helium option	Helium gas (dewar) option, only required for LHe dewar: <ul style="list-style-type: none"> • Class 5 or better • 1.2 bar (precision pressure regulator suitable for low-flow condition is required) • Flow rate insignificant • 6mm OD hose
Power	Station	<ul style="list-style-type: none"> • 3 phase: 230/400 VAC 50/60 Hz or 120/208 VAC 50/60 Hz with transformer
	Protection class	<ul style="list-style-type: none"> • I (IEC 61140)
	Transient overvoltage	<ul style="list-style-type: none"> • Overvoltage category II (IEC 60364-4-443) • Short circuit current rating: 10 kA (UL508A)
	Main power connection	<ul style="list-style-type: none"> • For 230/400 VAC: <ul style="list-style-type: none"> – Direct connection without plug – 3x 20A IEC60269 class gG (lead fuses) For 120/208 VAC with transformer: <p>NOTE</p>  <i>This equipment shall be installed only within ordinary, indoor, non-hazardous use installations in accordance with ANSI/NFPA 70, National Electrical Code® (NEC)</i> <ul style="list-style-type: none"> – Direct connection without plug incl. disconnect according to NEC – 3x50A class J (lead fuses)
	Pre-pump	<ul style="list-style-type: none"> • CEE 7/7 SCHUKO Grounded (250 V, 16 A plug, P-N-G) or NEMA 5-20 (120 V, 20 A plug, P-N-G)

PAC200 Cryogenic Probe System

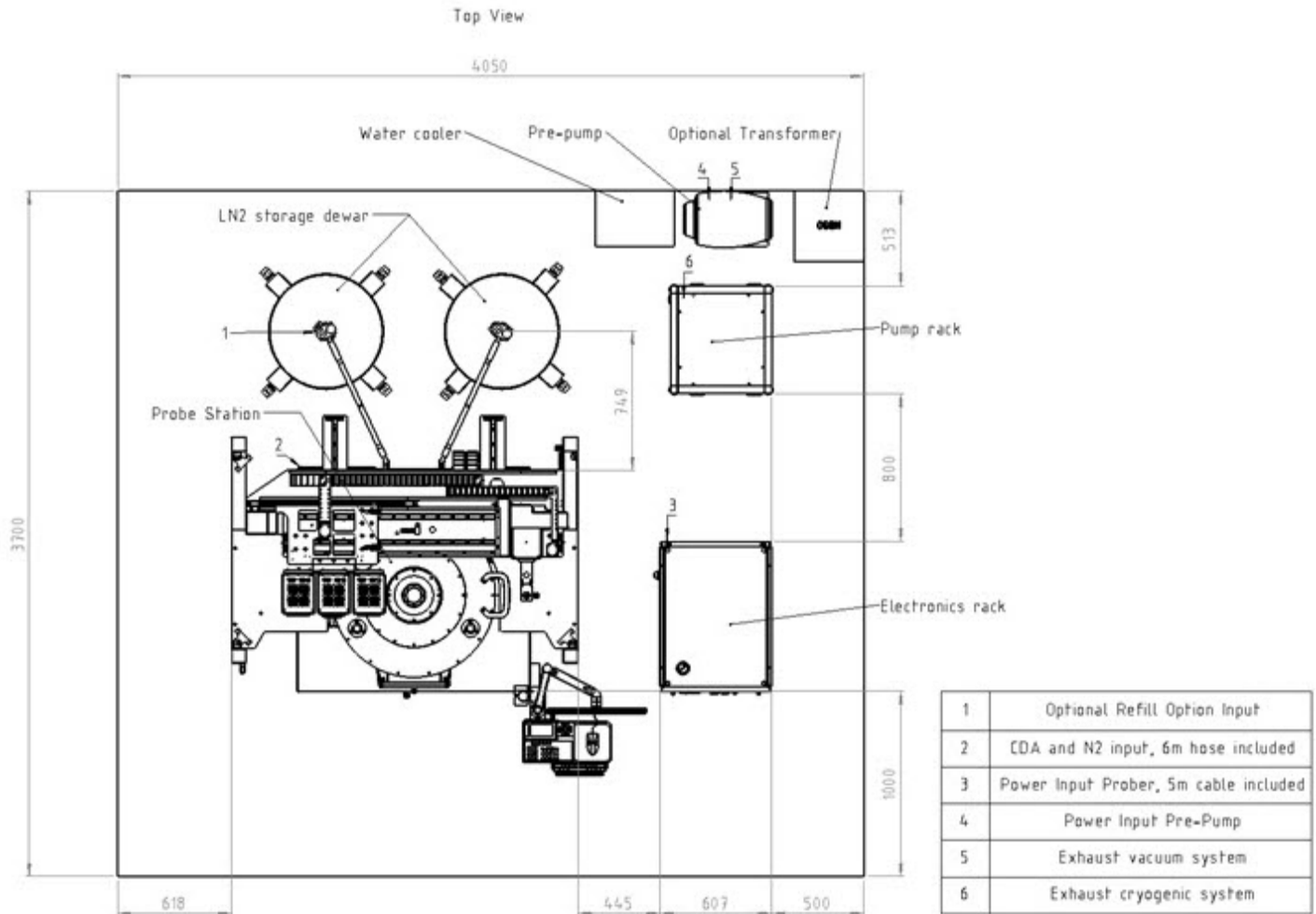
Environmental Conditions	Humidity	<ul style="list-style-type: none"> • Tool area: 25% to 60% • Support equipment area: 25% to 60%
	Temperature	<ul style="list-style-type: none"> • Operating range: 19° C to 24° C • Target temperature: 22° C <p> NOTE Keep electronics rack side ventilators and air expellers clear for air circulation.</p>
	Pollution level	• 1 (IEC 60664)
	Clean room class	• Class 7 corresponding to DIN EN ISO 14644-1
	Vibrations	The facility should be free of vibrations caused by other equipment.
<p> WARNING The use of an oxygen sensor with an alarm is mandatory! Release of nitrogen or helium gas imposes a potential danger due to oxygen depletion in the working environment. An oxygen-deficient atmosphere can lead to rapid asphyxiation, causing loss of consciousness and potentially resulting in serious injury or death. Consult your safety and facilities department to ensure that venting in your working environment is adequate to dissipate any nitrogen or helium buildup.</p>		
Exhaust	Cryogenic system	<ul style="list-style-type: none"> • 3/4-inch hose (connection point: pump rack) <p>Optional with refill option: 2x G 1/2-inch inside thread (connection point: LN₂ dewar armatures).</p> <p> NOTE Sound absorbers are installed when delivered, but the exhaust hoses can also be connected to an exhaust system.</p>
	Vacuum system	• 3/4-inch hose (connection point: pre-pump)
Dimensions (WxDxH)	Probe station	<ul style="list-style-type: none"> • Dimensions are dependent on configuration • Maximum size: 1880 x 1873 x 2000 mm (74 x 74 x 79 inches)
	Electronics rack	• 607 x 811 x 2100 mm (24 x 32 x 83), with connectors installed
	Pump rack	• 580 x 550 x 1000 mm (23 x 22 x 39 inches), with connectors installed
	Dewar(s)	• 600 x 600 x 1500 mm (24 x 24 x 59 inches)
Weight	Probe station	• 1050 kg (2315 pounds)
	Electronics rack	• 300 kg (661 pounds)
	Pump rack	• 100 kg (220 pounds)
Shipping Dimensions (WxDxH)	Probe station	• Dimensions: 2200 x 1790 x 2320 mm (87 x 70 x 91 inches)
	Electronics rack	• Dimensions: 1050 x 1170 x 2330 mm (41 x 46 x 90 inches)
	Accessories	• Dimensions: 2230 x 1760 x 1950 mm (88 x 69 x 77 inches)
Shipping Weight	<p> NOTE A forklift with minimum 1.3 m forks and a 1.5 ton lifting capacity is required.</p>	
	Probe station	• Weight: 1500 kg (3307 pounds)
	Electronics rack	• Weight: 420 kg (926 pounds)
	Accessories	• Weight: 720 kg (1587 pounds)

PAC200 Cryogenic Probe System

Dimensions (in mm)



PAC200 Cryogenic Probe System



© Copyright 2019 FormFactor, Inc. All rights reserved. No part of this document may be reproduced, transmitted or displayed in any form or by any means except as duly authorized by FormFactor, Inc. FormFactor and the FormFactor logo are trademarks of FormFactor, Inc. All other trademarks are the property of their respective owners.

Important Notice

While the information contained herein is believed to be accurate as of the date hereof, no express or implied representations or warranties are made with respect to its accuracy or completeness. FormFactor, Inc., and its subsidiaries disclaim liability for any inaccuracies or omissions. All information is subject to change without notice.

Users are required to read and follow carefully all safety, compliance and use instructions. Users assume all loss and liability arising from the use of products in any manner not expressly authorized. The conditions and methods of use of products and information referred to herein are the entire responsibility of the user and, to the maximum extent permitted by applicable law, FormFactor, Inc., and its subsidiaries shall not be liable for any damages, losses, costs or expenses arising out of, or related to, the use thereof.

No license, express or implied, by estoppel or otherwise, under any intellectual property right is granted in connection herewith. Users shall take all actions required to avoid intellectual property infringement.

Corporate Headquarters

7005 Southfront Road
 Livermore, CA 94551
 Phone: 925-290-4000
www.formfactor.com