

SITE PREPARATION GUIDE

SP200 Automation Instrument

FOR USE WITH
SP200 Automation Instrument

Notice

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Revision history

DOCUMENT	DATE	DESCRIPTION OF CHANGE
CF-1090 A	June 2025	Initial release

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Introduction

The SP200 Automation Instrument (SP200) automates the pipetting of liquids to prepare peptides for downstream analysis.

This guide is intended to help prepare your site for installation and training.

The instrument is installed at your site by a qualified field service representative. Once installation is complete, a field application scientist provides training on system operation and maintenance procedures. If your site requires special arrangements or has considerations outside the scope of this guide, please contact support@seer.bio.

Instrument delivery

NOTE

Provide a delivery contact and determine special considerations and readiness by reviewing [Materials required but not supplied \(page 12\)](#) and completing the tables, checklists, and forms in the [SP200 Site Preparation Checklist \(page 14\)](#).

Instrument delivery services are country-specific. Your Seer representative will provide more information about instrument delivery within your region.

CAUTION

Do not unpack the instrument crates upon delivery. They must be inspected and opened by a Seer representative.

Due to clearance limitations of doorways or elevators (see *Delivery dimensions*), it might be necessary to unpack the crates before they are transported to the installation site. If so, store the crates in a safe, temperature-controlled location until they can be unpacked by a Seer field service representative.

Examine the crates to ensure that they arrived in good shape with no visible damage. The crates are equipped with tilt and shock sensors to indicate whether they received potentially damaging mishandling. If there is visible damage or the shock indicators have been triggered, note the damage with the delivery company and notify support@seer.bio.

Figure 1. Tilt and shock indicators on the instrument crate



You may open boxes that accompany the shipment, as they might contain reagents that require special handling, storage, or refrigeration.

Retain the original packing and crates if you plan to move or return the system at a later date.

Crate contents

The instrument ships in crates.

CRATE	CONTENTS	LENGTH	WIDTH	HEIGHT	WEIGHT
1	SP200 Automation Instrument	53 in (135 cm)	39 in (99 cm)	51 in (130 cm)	450 lb (204 kg)
2	Accessories	49 in (124 cm)	33 in (83 cm)	57.5 in (146 cm)	265 lb (120 kg)

Delivery dimensions

The crated instrument requires extra attention to ensure safe transport from the delivery location to the prepared site. The crates should be inspected and unpacked only by qualified Seer representatives.

If the minimum clearances are not sufficient to move the instrument crates, verify that the clearances will allow the safe transport of the uncrated [instrument dimensions](#).

Elevator capacity

Elevators should accommodate the largest crate (or uncrated item), with a weight capacity of 450 lb (204 kg) plus delivery personnel and equipment.

- Minimum door width: 39 in (99 cm).
- Minimum internal dimensions (crated): 53 x 39 in (135 x 99 cm) or (uncrated) 43 x 31 in (140 x 79 cm).

Doorway clearance

Ensure that the path to the delivery site has enough space to maneuver around corners and through doorways.

The minimum doorway width is 39 in (99 cm) when crated, or 31 in (79 cm) when uncrated.

Instrument dimensions

The dimensions of the SP200 are shown below. Use this information to help identify a suitable installation location within your lab. For dimensions that provide adequate safe space surrounding the instrument and table, see [Placement requirements \(page 9\)](#).

A monitor arm holds a touchscreen monitor that you can position in front of the instrument and rotate as needed.

Figure 2. Dimensions of the instrument



COMPONENT	LENGTH	WIDTH	HEIGHT	WEIGHT
Instrument	55 in (139 cm)	31 in (79 cm)	36 in (91 cm)	331 lb (150 kg)

Table dimensions

The Seer® SP200 Automation Instrument does not ship with a table.

The table you supply should be sufficient in strength and size to hold the instrument securely. In addition, you may want sufficient table depth for a mouse and keyboard or working room while preparing samples and loading the work deck. In addition to the minimum safe distances surrounding the instrument, ensure that there is adequate space in front of the instrument and table for an operator to work plus space for walkways. For details, see [Placement requirements \(next page\)](#).

Recommendations include:

- A sturdy table that can support 485 lbs (220 kg) without bowing or swaying. A fully welded table is highly recommended. At a minimum, the legs should have cross support or a lower shelf connecting all legs for increased stability.
- The table should be level with the ground, ideally with threaded feet to allow leveling the table.
- Minimum table dimensions are 42 inches (107 cm) long x 36 inches (91 cm) wide. A table width of 42 inches (107 cm) provides a platform for the keyboard and mouse.
- The height should be comfortable while using the instrument's work deck. A typical height is between 30 - 34 inches (76 - 86 cm).

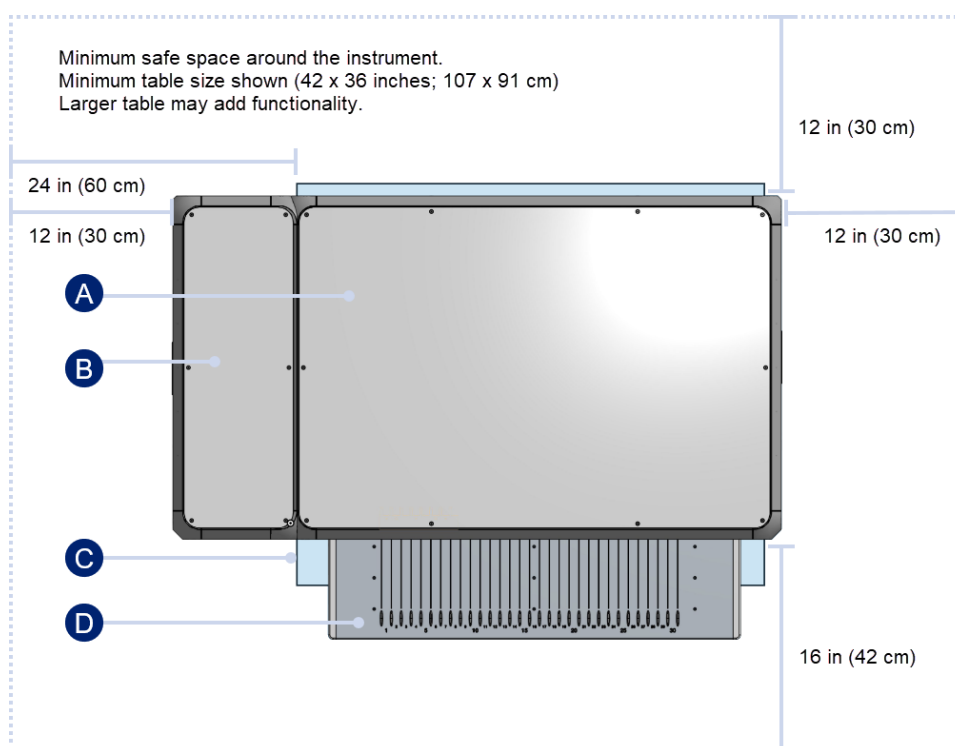
Laboratory requirements

The following sections provide detailed information to ensure that your laboratory meets installation and operational requirements.

Placement requirements

Consider the instrument dimensions and position the SP200 on a [table](#) in a space that provides at least 12 inches (30 cm) to the left side and 6 to 12 inches (15 - 30 cm) around it for adequate ventilation and to access the front and sides of the instrument for operation and maintenance purposes. Allow sufficient space for a person to comfortably work and easily access the power button and power cord.

Figure 3. Overhead view of the instrument on a table



- A SP200 Automation Instrument
- B Left side extension and waste container overhang the table edge
- C Table (minimum)
- D Autoload tray

There should be at least 12 inches (30 cm) of space behind the instrument. For optimum serviceability (and therefore minimum downtime during professional maintenance) the best location is as an island within the laboratory rather than against a wall.

There should be 12 inches (30 cm) of open space to the left and right of the instrument. More if accessibility is required.

The left-side instrument extension housing may overhang non-Hamilton tables by approximately 12 inches (30 cm).

Space in front of the table should be enough to allow comfortable access for the operators and passersby. There should be at least 5 feet (1.5 m) in front of it.

Ensure there are four 115-230 VAC outlets within proximity to allow the 6 feet (2 meter) length of the instruments power cords to connect without strain or necessitating extension cords. See [Electrical requirements \(next page\)](#).

CAUTION

Do not expose the instrument to open windows, direct sunlight, or fluctuating or intense artificial light. Rapid temperature changes or direct sunlight can negatively affect pipetting accuracy, barcode scanning, and other instrument functions.

An empty lab bench approximately as wide as the instrument either directly opposite the front of the instrument or adjacent to the instrument is required for loading the instrument. Alternatively, you can place a cart near the instrument to provide a staging area.

Non-networked setup

The SP200 is installed and tested in a non-networked mode and should not be connected to a network. For proper instrument operation, all automatic updates to Microsoft Windows operating system are disabled and must remain so.

CAUTION

Failure to comply may invalidate your instrument warranty.

Environmental constraints

ELEMENT	SPECIFICATION
Temperature	15 - 30 °C (59 - 86 °F). Use in a typical indoor laboratory environment. Extreme temperature conditions may negatively impact system performance.
Humidity	15 - 85% relative humidity, non-condensing.
Altitude	0 - 6562 ft. (0 - 2000 m) above sea level.
Ventilation	Ensure instrument ventilation outlets are not impaired by obstacles placed in the surrounding area.

Electrical requirements

Ensure access to four 115 or 230 VAC (50 or 60 Hz) electrical receptacles for the instrument. Outlets should be NEMA 5-15R or NEMA 5-20R (North America) and should be within 6 feet (2 meters) of the instrument location. For international electrical requirements, contact support@seer.bio.

NOTE

The SP200 requires three dedicated electrical outlets. We recommend having at least 5 outlets near the unit, as two are required for setup and verification testing the instrument.

We recommend using an uninterruptible power supply (UPS) with voltage regulating capacity to prevent damage from power fluctuations. On standby, instrument power consumption is 100 VA. Maximum power consumption is 600 W for the instrument and an additional 200 W for the PC and monitor.

Power cords

The main plug is on left side of the instrument.

Ensure access to a grounded electrical receptacle.

Electromagnetic considerations

Subjecting the SP200 to electromagnetic radio frequency (RF) fields or static electricity discharged directly onto the instrument might impair liquid level detection ability. Keep the instrument away from other equipment that emits electromagnetic RF fields and minimize static electricity in the immediate environment.

Materials required but not supplied

To successfully qualify your SP200, have the following additional equipment and materials on-site or readily available during installation, qualification, and training. The following materials are not supplied by Seer.

Materials required for installation and qualification

NOTE

Suggested suppliers for these materials are listed below. Where indicated, you may use alternate suppliers whose materials meet the stated requirements.

DESCRIPTION	RECOMMENDED SUPPLIER
1-10 mL pipette with tips or 10 mL Serological pipettes	Rainin, material # 17011783 ^a
20-200 µL pipette with tips	Rainin, material # 17014391 ^a
20-200 µL multichannel pipette with tips	Rainin, material # 17013810 ^a
2-20 µL pipette with tips.	Rainin, part # 17014392
100-1000 µL pipette with tips	Rainin, material # 17014382 ^a
50 µL Nested Conductive Tips (NCTs)	Hamilton, part #: 235947
300 µL Nested Conductive Tips (NCTs)	Hamilton, part #: 235950
70% isopropyl alcohol or 70% ethanol	General lab supplier
Disposable latex gloves	General lab supplier
Lab coats	General lab supplier
Protective goggles	General lab supplier
Waste bags with biohazard labeling	Hamilton, part # 199201 ^a
Waste container (biohazard) Approximately 11 in (28 cm) l x 20 in (51cm) w X 15 in (38 cm) h	General lab supplier

^a Or equivalent.

Materials required for training

Table 1. Required materials for training

DESCRIPTION	REQUIREMENTS	SUPPLIER (OR EQUIVALENT)
Centrifuge with plate adapter	Can achieve a relative centrifugal force of 500 x g and accommodate a standard 96 well microplate.	Centrifuge - Thermo Fisher Scientific, catalog # 75009521 Centrifuge Plate Adapter - Thermo Fisher Scientific, catalog # 75003624
Fluorometric microplate reader	Can measure peptide concentration via fluorescence (Ex. 390, Em. 475 nm) in a 96-well plate format.	Molecular Devices, SpectraMax, M2 [®]
Refrigerated microcentrifuge	Can achieve a relative centrifugal force of 5000 x g, maintain a temperature of 4C, and accommodate sample tubes.	Thermo Fisher Scientific, catalog # 75002441
Vacuum concentrator	Capable of maintaining refrigerated temperature at vacuum and accommodate a standard 96 well microplate.	Thermo Fisher Scientific, catalog # SRF110P1-115

SP200 Site Preparation Checklist

Use this site preparation guide to ensure you are ready for installation and training. Please complete the checklist and send it back to support@seer.bio.

Required personnel

Specification	Name and Contact Information
Delivery Contact Coordinates and receives the delivery.	
Site Preparation Manager Selects and prepares the installation location. Orders all required materials. Completes and submits site preparation checklist.	
Laboratory Safety Manager Ensures required safety measures are in place.	
SP200 Instrument User Available personnel to receive instrument training. Up to 4 individuals may attend hands-on sessions.	
Proteograph Analysis Suite (PAS) Administrator Available personnel to receive software training and manage Proteograph data within the software. Up to 4 individuals may attend hands-on sessions.	

Delivery requirements

Specification	Requirement Met?
A loading dock is available. If not, enter <i>Lift Gate Required</i> in comments.	☐
Minimum width for corridors and doorways of 50 in (127 cm). 76.2 in (195 cm) recommended for ease of maneuvering.	☐
The instrument does not need to go up a staircase or down a narrow hall. If this requirement is not met, please enter <i>Special Delivery Needs</i> in the comments area.	☐
If the installation is on the first floor, please mark <i>N/A</i> .	
A pallet jack or forklift is available.	☐
Comments on delivery requirements: 	

Space and layout requirements

Specification	Requirement Met?	Comments
A table of suitable size and capacity is placed at the instrument location.	☐	
Instrument Location (6' x 8' floor space).	☐	
Front, rear, and sides of the instrument are accessible.	☐	
Instrument ventilation is not impaired by surrounding.	☐	
115-230 VAC Outlets available (4 needed in total).	☐	

Electrical requirements

Specification	Requirement Met?	Comments
Dedicated circuit, 115 or 230 VAC (50 or 60 Hz).	☐	
NEMA 5-15R or NEMA 5-20R (North America). Contact support@seer.bio for international requirement.	☐	
Electrical outlets are within 6 feet (2 meters) of the instrument location.	☐	
Electrical power cords are of sufficient length to reach the instrument without strain.	☐	
Uninterruptible Power Supply (UPS) recommended. (Please enter the make/model of the UPS in the comments.)	☐	

Environmental requirements

Specification	Requirement Met?	Comments
Location is free from rapid or severe temperature fluctuations or extremes.	☐	
Humidity: 15 - 85% relative humidity (non-condensing).	☐	
Altitude: 0-6562 (0 -2000 m) above sea level.	☐	
Additional HVAC capacity to dissipate 4440 BTU/hour (1300 Watts) from the SP200 Automation Instrument.	☐	
Instrument location is protected from direct sunlight.	☐	

Materials needed for installation (customer-provided)

NOTE

If materials are not on-hand, please include the anticipated date of receipt and vendor descriptions on applicable equipment in the comments.

Item	Received?	Comments
Instrument table.	☐	
Deionized (DI) water.	☐	
Personal Protective Equipment (PPE): • Lab coat • Gloves • Safety glasses	☐	
Waste container for SP200 waste: • W: 24 in (61cm) • L: 24 in (61cm) • H: Maximum 20 in (51cm)	☐	
Waste bags for SP200 waste containers: • 25 in (64 cm) x 35 in (89 cm) for left side waste • 19 in (48 cm) x 23 in (58cm) for right side waste	☐	
Waste stream for SP200 liquid waste.	☐	
100-1000 μ L micropipette and tips.	☐	
70% isopropyl alcohol (IPA).	☐	

Materials needed for training (customer-provided materials)

NOTE

If materials are not on-hand, please include the anticipated date of receipt and vendor descriptions on applicable equipment in the comments.

Item	Received?	Comments
Fluorometric microplate reader that can measure peptide concentration via fluorescence (Ex. 390, Em. 475 nm) in a 96-well plate format.	☐	
Refrigerated microcentrifuge that can achieve a relative centrifugal force of 5000 x g, maintain a temperature of 4C, and accommodate sample tubes.	☐	
Centrifuge that can achieve a relative centrifugal force of 500 x g and accommodate a standard 96 well microplate.	☐	
Vacuum concentrator that can maintain a refrigerated temperature at vacuum and accommodate a standard 96 well microplate.	☐	
96 well microplate adapter.	☐	
A container for ice.	☐	
Sealing foil 5 × 3 inch.	☐	
Ice/water for bath.	☐	
Sample flotation device that can fit 2mL tubes.	☐	

Site preparation verification

Completed By	Date Completed