

G4™ SEQUENCING PLATFORM SITE PREPARATION GUIDE

This guide provides important information about how to prepare your site for delivery, installation, and operation of the Singular Genomics™ G4 instrument.

Delivery and Installation

Ensure that your site can accommodate the delivery and installation of the G4 Sequencing Platform. Use the following dimensions to ensure access through doors leading to the laboratory where the system will be installed.

NOTE

Only personnel authorized by Singular Genomics can uncrate, install, service, or move the instrument. If you must relocate the instrument, contact your Singular Genomics representative.

Crate Contents and Dimensions

Dimension	Instrument Crate	Computer Case	UPS Case
Weight	~158 kg (350 lbs)	~18.2 kg (40 lbs)	~45.36 kg (100 lbs)
Length	113.5 cm (44.7 in)	68.6 cm (27 in)	41.4 cm (16.3 in)
Width	76.5 cm (30.1 in)	61.0 cm (24 in)	69.9 cm (27.5 in)
Height	108.1 cm (42.6 in)	38.1 cm (15 in)	69.1 cm (27.2 in)

Installation

A Singular Genomics Field Service Engineer will uncrate the G4 instrument, install the instrument, and perform an operational check of the system. Ensure that your laboratory space is prepared prior to scheduling. Allow one day for installation and two days for the operational check.

Laboratory Requirements

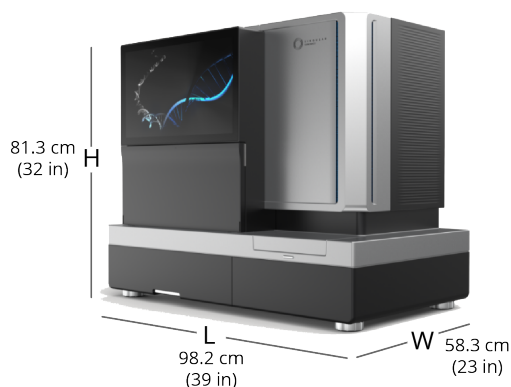
Use the following information to ensure your lab can accommodate the space requirements and is set up properly for the instrument.

System Dimensions

Dimension	Instrument	High Performance Computer (HPC)	UPS (Quantity 2)
Weight	135 kg (298 lbs)	17.2 kg (38 lbs)	19.5 kg (43 lbs)
Length	98.2 cm (39 in)	51.3 cm (20.2 in)	43.7 cm (17.24 in)
Width	58.3 cm (23 in)	17.4 cm (6.85 in)	30.2 cm (11.89 in)
Height	81.3 cm (32 in)	45.7 cm (18 in)	13.1 cm (5.16 in)

For Research Use Only. Not for use in diagnostic procedures.

Figure 1 Height, width, and length dimensions and clearance for the G4 Sequencing Platform.

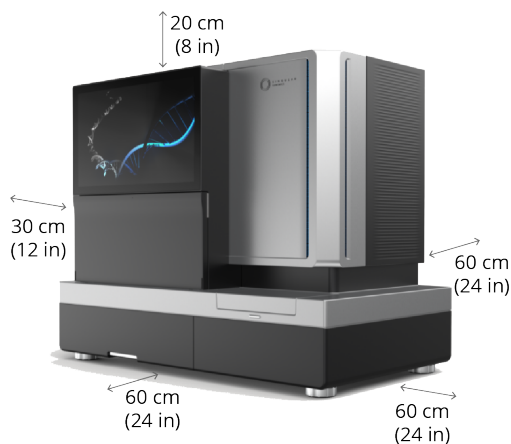


Lab Bench and Table Specifications

Provide a sturdy lab bench or low vibration table with the following requirements:

- The bench or table can accommodate the size and weight of the instrument. The bench or table should be able to support at least 204 kg (450 lbs).
- Avoid placing equipment that produces vibrations, such as a shaker, vortex, or centrifuge, on the bench or table.
- Avoid contact with equipment that causes vibrations, for example, freezers, pumps, and similar equipment.
- The location should not be in direct sunlight.
- The location should not be directly under a ventilation or HVAC outlet vent.
- The location should provide a safe route for power and data cables. Make sure cables are not a tripping hazard.
- The instrument requires the following clearance for airflow and service access:
 - Front, rear, and right side: 60 cm (24 in)
 - Left side: 30 cm (12 in)
 - Above: 20 cm (8 in)

Figure 2 Clearance required for the G4 Sequencing Platform.



If you are using a lab bench, make sure to meet following minimum dimensions:

Dimension	Lab Bench Specification
Length	213.4 cm (84 in)
Depth	119.4 cm (47 in)

Alternatively, you can place the instrument on a low-vibration table. Tested low vibration tables can be ordered directly from Bench-Craft (<http://bench-craft.com/>). Recommended model has manufacturer part number HS-366036-ESK-FLS-SCLvL-TM. Allow for enough lead-time when ordering direct from the vendor. Make sure to lock the feet down when the table is in place.

Power Specifications

HPC UPS	One outlet of at least 20A with a dedicated circuit
Instrument UPS	One outlet of at least 20A with a dedicated circuit
Electrical Outlets	NEMA 5-20R grounded, three-pronged outlets
Electrical Outlet Voltage	90 - 130VAC, 50-60Hz
Distance to Electrical Outlet	At most 6 feet away from instrument location

If you need to replace the instrument main supply cable, make sure to adhere to the following minimum requirements:

Connector	NEMA 5-15P to IEC-320-C13
Input Current Rating	15 A
VoltageOutlets	125 VAC
Product Certifications	UL Listed

Data Connections

Internet	Wired connection: 1x Gigabit internet port to enable data transfer. A 10 Gigabit connection is supported and results in faster data transfer. Wireless connection: 1x Wireless internet access to the instrument computer for remote instrument support. Discuss appropriate security protocols with IT representatives.
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NOTE

Make sure you have identified your location for data storage before installation. The instrument can only store a limited amount of run data, and fastQ files need to be transferred regularly to a local server or the cloud to free up space for the next run.

Environmental Specifications

Element	Specification
Housing	Indoor use only
Temperature	19°C to 27°C
Altitude	Not exceeding 2000 m (6562 feet)
Maximum Relative Humidity	20% to 80%, non-condensing
Vibration	See <i>Vibration Best Practices</i> on page 4 and <i>Lab Bench and Table Specifications</i> on page 2.
Light	Locate the instrument away from direct sunlight.
Ventilation / HVAC	Do not place the instrument directly under a ventilation or HVAC outlet vent.

Sequencing Consumables Storage

Sequencing consumables are provided in the G4 Sequencing Kit. One sequencing kit is required to sequencing one flow cell on the G4 instrument. Use the following dimensions to determine required storage space.

Consumable (each)	Shipping Temperature	Storage Temperature	Approximate Storage Space (W x L x H)
Flow cell	2°C to 8°C	2°C to 8°C	5.1 cm x 15.2 cm x 3.2 cm (2 in x 6 in x 1.25 in)
SBS cartridge	-40°C to -15°C	-25°C to -15°C	11.4 cm x 33.7 cm x 8.9 cm (4.5 in x 13.25 in x 3.5 in)
Sample cartridge	2°C to 8°C	2°C to 8°C	7.6 cm x 10.2 cm x 2.9 cm (3 in x 4 in x 1.125 in)
Wash bottle	Room temperature	Room temperature	6.4 cm x 20.3 cm x 10.2 cm (2.5 in x 8 in x 4 in)

Sequencing Consumables Disposal

Use the following dimensions to determine required disposal space for hazardous materials.

Hazardous Liquid Disposal Container	10-gallon container recommended
Hazardous Plastics Disposal Container	Container should fit formamide well, one per flow cell per run (7.5 cm L x 5.0 cm W x 1.3 cm D, 3" x 2" x 0.5")

Vibration Best Practices

Avoid continuous vibration of the floor. Keep the vibration levels of the lab floor at or below the VC-A standard of 50 µm/s for ⅓ octave band frequencies of 8–80 Hz, which is typical for labs. During a sequencing run, avoid intermittent disturbances or shocks to the floor near the instrument, because excess vibration impacts the performance of the system.

Use the following best practices to minimize vibrations:

- Do not place consumables, keyboards, or other objects on top of the instrument.
- Do not install the instrument near equipment that produces vibration, for example motors, pumps, shake testers, and drop testers.
- Do not install the instrument near environmental sources of vibration, for example:
 - Floors directly above or below HVAC fans, and controllers, and helipads.
 - Areas with high foot traffic or heavy air flow.
 - Floors where construction or repair work is done.
- Use only the touch screen to interact with the instrument.
- Do not bump, knock, or move the instrument during a run.

Safety Considerations

Follow operating instructions to curtail potential safety hazards. Ensure that all personnel are trained in the correct operation of the instrument as described in the *G4 Sequencing Platform User Guide* and related safety considerations as described in the *G4 Sequencing Platform Safety and Compliance Guide*.

Customer Care

Our team is committed to ensuring your success. Field application scientists, field service engineers, and customer care specialists are dedicated to responding quickly and effectively to your inquiries. From preparing your lab for the arrival of your instrument, to onsite training in system operation and maintenance and continued support, we'll be with you every step of the way.

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