

Chromium Connect Specifications

FOR USE WITH

Chromium Connect, PN-1000171

Notices

Document Number

CG000255 • Rev C

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Document
Revision
Summary

Document Number	CG000255
Title	Chromium Connect Specifications
Revision	Rev B to Rev C
Revision Date	February 2020

Specific Changes:

- Updated Electrical Requirements on page 6 and 7.

General Changes:

- Updated for general minor consistency of language and terms throughout.








1.0 Safety & Compliance

1.1 Safety

Before operating this instrument please ensure that everyone involved with the operation of the instrument has:



- Received instruction in general safety practices for laboratories
- Received instruction in specific safety practices for the instrument
- Read and understood all related Safety Data Sheet (SDS) documents

Precautions are illustrated in the following way:

Symbols	Description
	The general Warning symbol indicates the possibility of damaging the instrument or compromising the results of a method.
	The Electrical Hazard symbol indicates the presence of electrical components that can be harmful to the operator if handled incorrectly.
	The Mechanical Hazard symbol indicates the presence of moving mechanical parts that can be harmful to the operator if handled incorrectly.
	The Hazardous Materials symbol indicates the presence of materials that are toxic or otherwise harmful to the operator if handled incorrectly.
	The Biohazard symbol indicates the presence of biological samples that can be harmful to the operator if handled incorrectly.
	The Magnetic Field symbol indicates the presence of a magnetic field that can be harmful to the operator if handled incorrectly.
	The Caution, Hot Surface symbol indicates the possibility of touchable surface that may exceed 105°C.

1.2 Regulatory

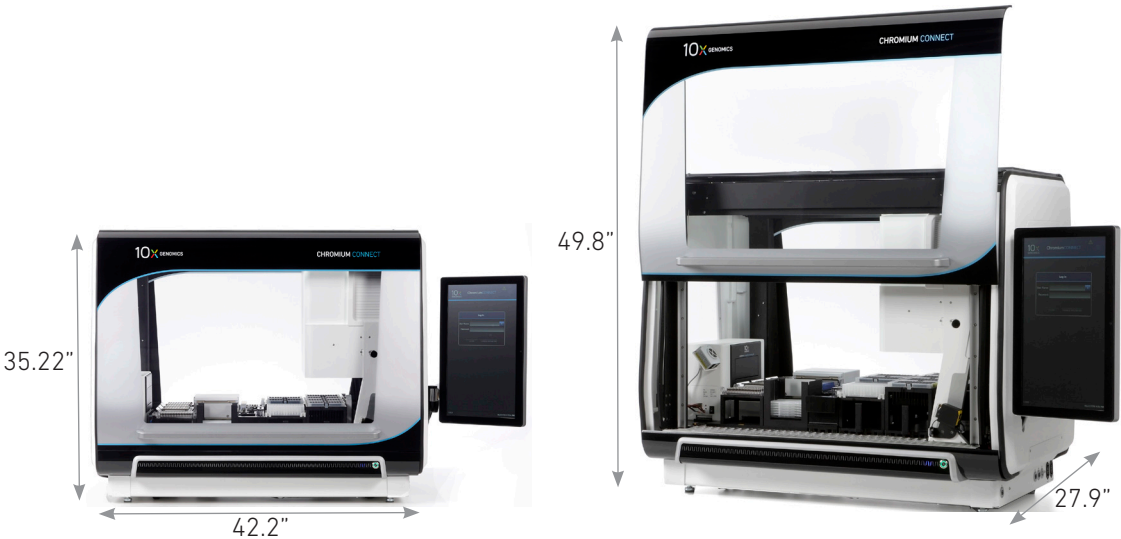
The Chromium Connect has been designed, tested, and certified to be in compliance with the following standards:

Certification	Standards
	<p>Product Certification The CSA C//US mark signifies that the product is certified for both U.S. and Canadian markets, to the applicable U.S. and Canadian standards</p>
	IEC/EN 61010-1:2010 (3rd Edition): Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory use.
	EN 61326-1:2013: Electrical Equipment for Measurement, Control and Laboratory Use. EMC Requirements.
	EN 61326-2-6: specifies minimum requirements for immunity and emissions regarding electromagnetic compatibility for in vitro diagnostic medical equipment, taking into account the particularities and specific aspects of this electrical equipment and their electromagnetic environment.
	EN 61000-3-2: Electromagnetic compatibility (EMC) - Part 3-2: Limits - Limits for harmonic current emissions (equipment input current ≤ 16 A per phase).
	EN 61000-3-3: Electromagnetic compatibility (EMC) - 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.
	CE Mark indicates that the Chromium Controller assembly is covered by a Declaration of Conformity, and has been declared in conformity with the provisions of all applicable directives in the European Union.
	RoHS Directive (2011/65/EU): Restriction of the use of certain hazardous substances in electrical and electronic equipment.
	WEEE Directive (2012/19/EU): Waste Electrical and Electronic Equipment
	<p>FCC Part 15 Class A. NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.</p> <p>This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.</p>
	ICES-003 (Canada): This Class A digital apparatus complies with Canadian ICES-003. Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.
	<p>TUV Certification only for Chromium Automated Controller UL 61010-1:2012 and CAN/CSA C22.2 No. 61010-1-12 with a cTUVus mark to indicate that the product has been tested and certified to Canadian and US standards by TUV Rheinland and can be legally installed in those countries.</p>

2.0 Product Specifications

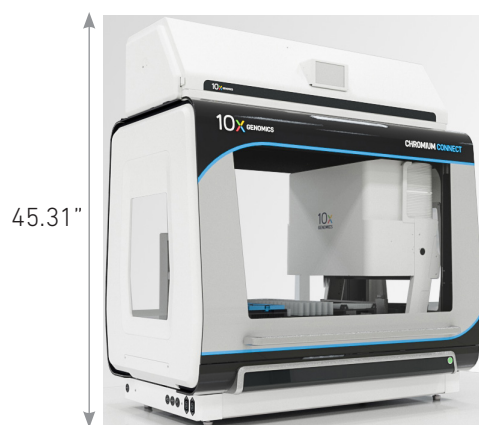
2.1 Instrument Specifications

Parameter	Specifications		
Weight	350 lb (158.8 kg)		
Instrument Dimensions with: Front Panel close Front Panel open	W 42.2"[107.2 cm]	D 27.9"[70.9 cm]	H 35.22"[89.5 cm] 49.8"[126.5 cm]
Instrument Dimensions with Ergo Arm: Fully extended to the right Fully extended to the front	W 71.0"[180.3 cm] 51.2"[130.1 cm]	D 27.9"[70.9 cm] 48.5"[123.2 cm]	H 35.22"[89.5 cm]
Electrical Requirements System power supply Thermal Cycler power supply Two independent electrical circuits are required	3 A, 50/60 Hz, 100-240 V 12 A, 50/60 Hz, 100-240 V		
Operating Temperature	19-25°C (66-77°F) Use in a typical indoor laboratory environment. Extreme temperature conditions will affect the sensitive reagents used with the instrument.		
Ventilation Requirement	Minimum 12"[10 cm] on all sides		
Humidity	30-80% R.H. non-condensing		
Altitude	Altitude up to 2000 m (1.2 mile) above sea level		
Power Cable Length The 2 power cables will be in accordance with regional specifications.	9 ft Standard		



2.2 HEPA Hood Specifications (Optional)

Parameter	Specifications		
Weight			
HEPA Filter	19.0 lbs (8.6 kg)		
HEPA Hood	41.0 lbs (18.6 kg)		
HEPA Hood: Dimensions	W	D	H
	40.26"[102.3 cm] x 17.4"[44.2 cm] x 10.18"[25.9 cm]		
Instrument with HEPA Hood: Dimensions	W	D	H
	42.2"[107.2 cm] x 27.9"[70.9 cm] x 45.31"[115.1 cm]		
Electrical Requirements			
Input power universal supply	2.5 A, 50/60 Hz, 100-230 VAC		
Operating Temperature	19-25°C (66-77°F)		
	Use in a typical indoor laboratory environment. Extreme temperature conditions will affect the sensitive reagents used with the instrument.		
Humidity	30-80% R.H. non-condensing		
Altitude	Altitude 2000 m (1.2 mile) above sea level		



3.0 Service

Service

10x Genomics expects to contact users for routine preventative maintenance every 6 months. For additional service requests, contact support@10xgenomics.com with the details.

Moving the Instrument

Contact 10x Genomics for moving and re-installation services. The instrument should not be moved or reinstalled by the user.