Agilent 8890 GC – Site Preparation Checklist

Thank you for purchasing an Agilent **instrument**. To get you started and to assure a successful and timely installation, please refer to this specification or set of requirements.

Correct site preparation is the key first step in ensuring that your instruments and software systems operate reliably over an extended lifetime. This document is an **information guide and checklist** prepared for you that outlines the supplies, space, and utility requirements for your equipment.

Customer Responsibilities

Ensure that your site meets the following specifications before the installation date. For details, see specific sections within this checklist, including:

- ❑ The necessary laboratory or bench space is available.
- ❑ The environmental conditions for the site as well as laboratory gases, plumbing and extraction.
- ❑ The power requirements related to the product (e.g. number and location of electrical outlets).
- ❑ The required operating supplies necessary for the product and installation.
- ❑ If Agilent is delivering Installation and Familiarization services, users of the instrument should be present throughout these services. Otherwise, they will miss important operational, maintenance, and safety information.
- ❑ For more detailed Site Preparation information Consult the Agilent 8890 Gas Chromatograph Site Preparation Guide
- ❑ Please consult the Special Requirements section for other product-specific information.

Customer Information

1. If you have questions or problems in providing anything described as a Customer Responsibility, please contact your local Agilent or partner support service organization for assistance before the scheduled installation. In addition, Agilent and/or its partners reserve the right to reschedule the installation dependent upon the readiness of your site.
2. Should your site not be ready for whatever reasons, please contact Agilent as soon as possible to re-arrange any services that have been purchased.
3. Other optional services such as extra training, compliance services and consultation for user-specific applications may also be provided at the time of installation. Please discuss with your Agilent Sales representative before the installation is scheduled.

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Important Customer Web Links

- Videos about specific preparation requirements for your instrument can also be found by searching the **Agilent YouTube** channel https://www.youtube.com/user/agilent
- To access **Agilent University**, visit http://www.agilent.com/crosslab/university/ to learn about training options, which include online, classroom and onsite delivery. A training specialist can work directly with you to help determine your best options.
- A useful **Agilent Resource Center** web page is available, which includes short videos on maintenance, quick lists of consumables for new instruments, and other valuable information. Check out the Resource Page here: https://www.agilent.com/en-us/agilentresources
- Need technical support, FAQs, supplies? – visit our **Support Home page** http://www.agilent.com/search/support

Dimensions and Weight

Identify the laboratory bench space before your instrument arrives based on the following table.

Pay special attention to the **total height and total weight requirements for all system components you have ordered and avoid bench space with overhanging shelves**.

Special notes

- ❑ Requires 30 cm (12-inch) open space above GC.
- ❑ Requires 27 cm (10.7-inch) open space in front of GC.
- ❑ Requires 25 cm (10-inch) clearance between back of instrument and wall to dissipate hot air and allow for routine maintenance.

Instrument description	Weight		Height		Depth		Width	
	Kg	lbs	cm	in	cm	in	cm	in
8890 Series GC	50	112	50	19.2	54	21	59	23
8890 Series GC (w/ fourth detector)	57	125.4	50	19.2	54	21	68	27

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Environmental Conditions

Operating your instrument within the recommended temperature ranges ensures optimum instrument performance and lifetime.

Special notes

- Performance can be affected by sources of heat and cold, e.g., direct sunlight, heating/cooling from air conditioning outlets, drafts, and/or vibrations.
- The laboratory's ambient temperature conditions must be stable for optimum performance.
- During normal operation of the GC with many detector and inlet types, some of the carrier gas and sample vents outside the instrument through the split vent, septum purge vent, and detector exhaust. If any sample components are toxic or noxious, or if hydrogen is used as the carrier gas or detector fuel gas, these exhausts must be vented to a fume hood.

Instrument description	Operating temperature range °C (F)	Operating humidity range (%)	Heat dissipation (BTU)
8890 Series GC	15 to 35 °C	5 to 95%	7681
8890Series GC (Fast ramp oven)	15 to 35 °C	5 to 95%	10,071

Power Consumption

Special notes

1. If a computer system is supplied with your instrument, be sure to account for those electrical outlets.
2. 8890 Series GCs require dedicated circuits to operate correctly.

Instrument description	Line voltage and frequency (V, Hz)	Maximum power consumption (VA)	Maximum current consumption (amps)
8890 Series GC	Americas: 120 VAC single phase (–10% / +10%) 48 - 63 Hz	2250	18.8
8890Series GC	220/230/240 VAC single/split phase (–10% / +10%) 48 - 63 Hz	2250	10.2/9.8/ 9.4

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8890Series GC (Fast ramp oven)	Japan 200 VAC split phase (–10% / +10%) 48 - 63 Hz	2950	14.8
8890Series GC (Fast ramp oven)	220/230/240 VAC single/split phase (–10% / +10%) 48 - 63 Hz	2950	13.4/12.8/ 12.3

Required Operating Supplies by Customer for Installation

Use the following checklist to ensure that the site is properly prepared for GC system installation.

- ❑ 1 Ensure that the appropriate installation hardware has been acquired.
- ❑ 2 Ensure that the location in which the GC system is being installed meets the requirements for environmental conditions.
- ❑ 3 Prepare bench space for the GC system. Ensure that the bench has the size and weight capacity to accommodate the GC and associated components.
- ❑ 4 Ensure that system components are oriented so that they can be connected properly.
- ❑ 5 If the system being installed includes an MSD, ensure that the bench allows for proper installation and connection of the foreline pump.
- ❑ 6 Ensure that appropriate venting is provided for the GC system.
- ❑ 7 Ensure that a dedicated power circuit is available for each device in the system.
- ❑ 8 Ensure that appropriate gas and reagent supplies are provided for the GC system.
- ❑ 9 Ensure that appropriate gas plumbing is provided for the GC system.
- ❑ 10 If the GC uses cryogenic cooling, ensure that appropriate cryogenic cooling supplies are provided for the GC.
- ❑ 11 If the GC system being installed includes a data system, ensure that the PC meets the requirements necessary to properly support the GC system. For more information, see the site prep guide for your data system.
- ❑ 12 If the GC being installed is to be connected to a site LAN, ensure that the appropriate cabling is available.

Special note

1. Download the Essential Chromatography and Spectroscopy Supplies Catalogs for a complete overview about available supplies for your new and existing Agilent Instruments https://www.agilent.com/en-us/products/lab-supplies

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Special Requirements

Available Kits for 8890 GC system installation:

Kit	Part number	Contents
Recommended for GCs with FID, NPD, FPD		
GC Supply Gas Installation Kit with Gas Purifiers	19199N	Includes Gas Clean Filter system kit CP736530 (with 1 oxygen, 1 moisture, and 2 charcoal filters), 1/8-inch brass nuts and ferrules, copper tubing, 1/8-inch brass tees, tubing cutter, 1/8-inch brass caps, universal external split vent trap with replacement cartridges, and 1/8-inch ball valve
Recommended for GCs with TCD/ECD, MS, and MSD		
GC Supply Gas Installation Kit	19199M	Includes 1/8-inch brass nuts and ferrules (20), copper tubing, 1/8- inch brass tees, tubing cutter, 1/8-inch brass caps, 7-mm nut driver, T-10 Torx driver, T-20 Torx driver, 4 open-end wrenches, and 1/8-inch ball valve.
Gas Clean carrier gas filter kit, 1/8-inch	CP17974	

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Application	Gas*	Purity	Supply Pressure (psi)†
Carrier	Helium Hydrogen Nitrogen	99.9995 99.9995 99.9995	50 - 80 50 - 80 50 - 80
Detectors			
TCD	Helium	99.9995	50 - 80
FID, NPD, FPD, TCD	Hydrogen	99.9995	50 - 80
ECD, FID, FPD, NPD, TCD	Nitrogen	99.9995	50 - 80
FID, NPD, FPD	Air	Zero grade	50 - 80

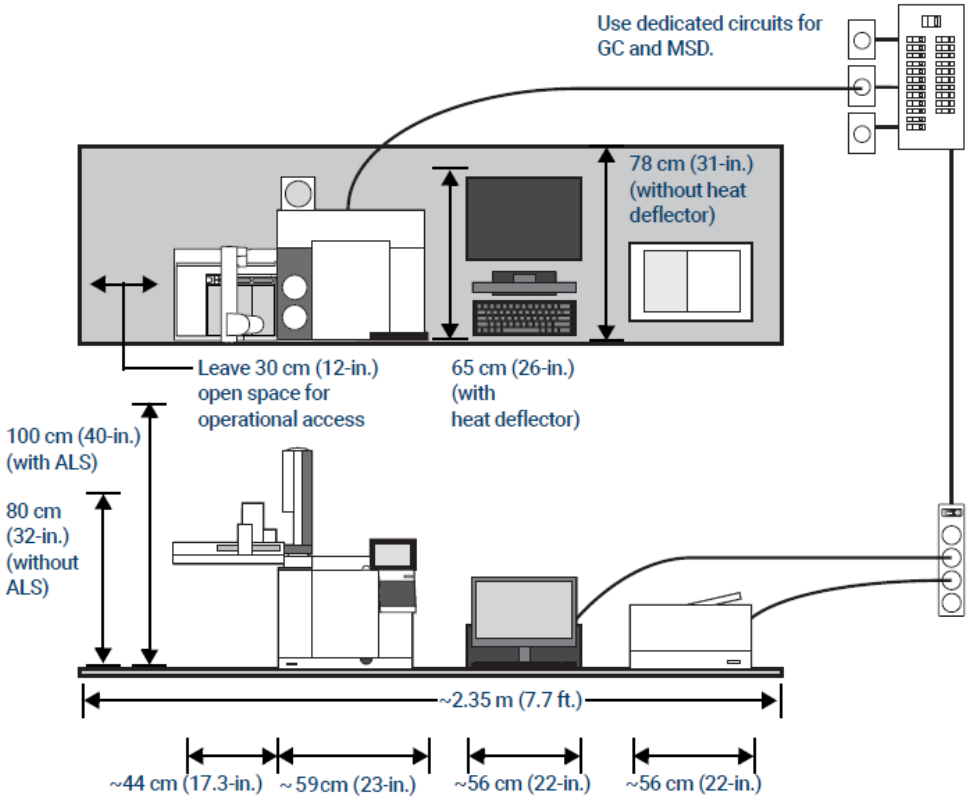
* Use 1/8-in Swagelok gas connections

† 1 psi = 6.89 kPa

Cryo Cooling (Liquid)	Tubing	Supply Pressure (psi)*
CO_2	1/8-inch stainless tubing	700-900
N_2	1/4-inch insulated tubing	20-25

* 1 psi = 6.89 kPa

Typical GC System - 8890 GC with computer and printer.



Total weight: ~84 kg (186 lb)
Maximum power consumption: ~3,950 VA (13,478 btu/hr)

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Application	Gas*	Purity	Supply Pressure (psi)†
Carrier	Helium Hydrogen Nitrogen	99.9995 99.9995 99.9995	50 - 80 50 - 80 50 - 80
Detectors			
TCD	Helium	99.9995	50 - 80
FID, NPD, FPD, TCD	Hydrogen	99.9995	50 - 80
ECD, FID, FPD, NPD, TCD	Nitrogen	99.9995	50 - 80
FID, NPD, FPD	Air	Zero grade	50 - 80

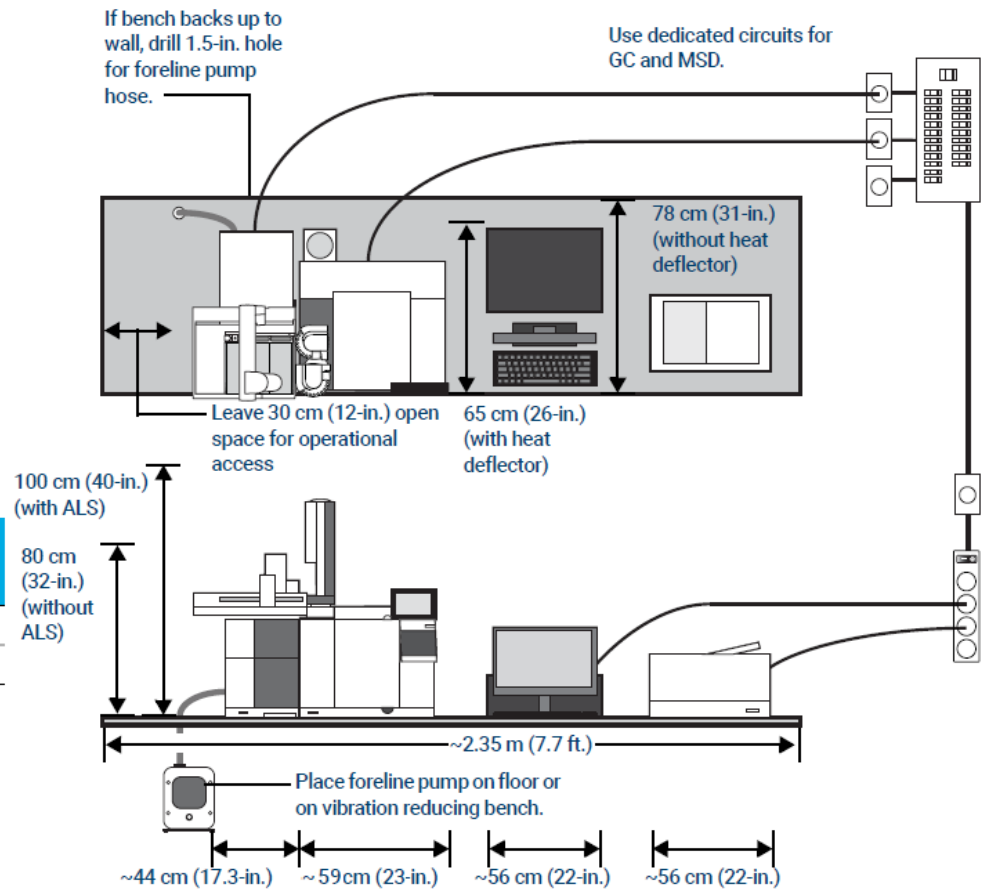
* Use 1/8-in Swagelok gas connections

† 1 psi = 6.89 kPa

Cryo Cooling (Liquid)	Tubing	Supply Pressure (psi)*
CO_2	1/8-inch stainless tubing	700-900
N_2	1/4-inch insulated tubing	20-25

* 1 psi = 6.89 kPa

Typical GC/MS System - 8890 GC, 5977 MSD, with computer and printer.



Total weight: ~123 kg (271 lb)
Maximum power consumption: ~5,050 VA (17,232 btu/hr)

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Agilent CrossLab
From Insight to Outcome

Application	Gas*	Purity	Supply Pressure (psi)†
Carrier	Helium Hydrogen Nitrogen	99.9995 99.9995 99.9995	50 - 80 50 - 80 50 - 80
Detectors			
TCD	Helium	99.9995	50 - 80
FID, NPD, FPD, TCD	Hydrogen	99.9995	50 - 80
ECD, FID, FPD, NPD, TCD	Nitrogen	99.9995	50 - 80
FID, NPD, FPD	Air	Zero grade	50 - 80

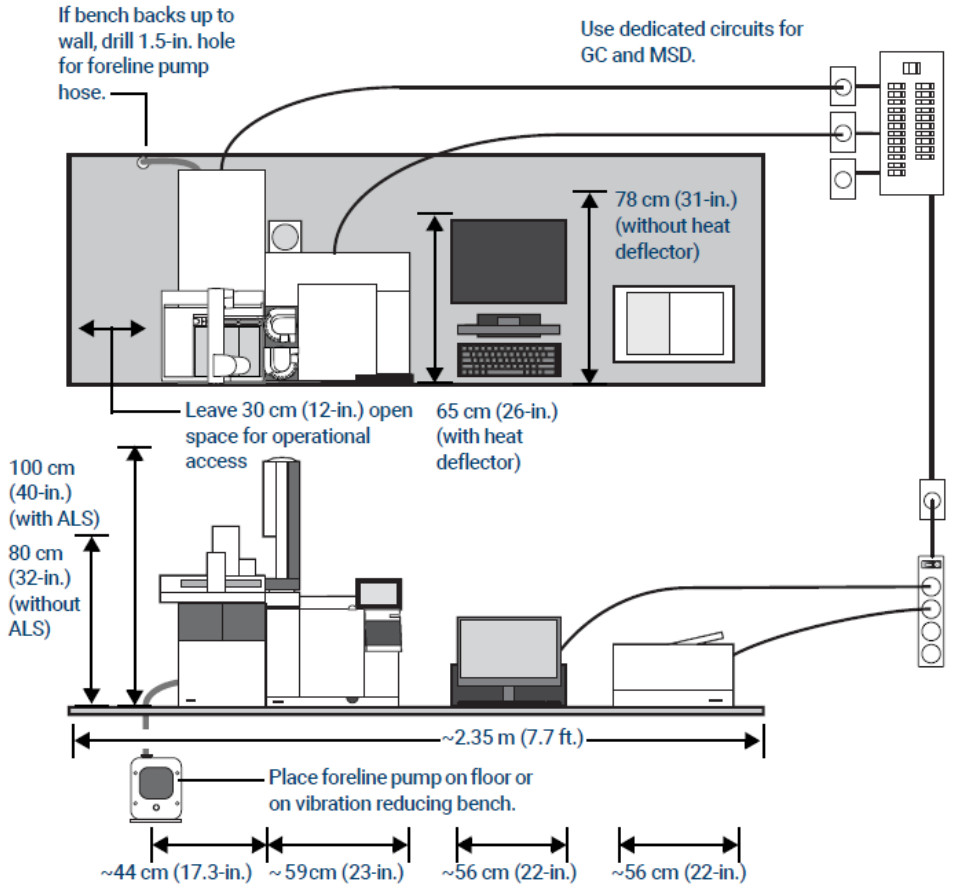
* Use 1/8-in Swagelok gas connections

† 1 psi = 6.89 kPa

Cryo Cooling (Liquid)	Tubing	Supply Pressure (psi)*
CO_2	1/8-inch stainless tubing	700-900
N_2	1/4-inch insulated tubing	20-25

* 1 psi = 6.89 kPa

Typical GC/MS System - 8890 GC, 7000 or 7010 MSD, with computer and printer.



Total weight: ~142 kg (311 lb)
Maximum power consumption: ~5,550 VA (18,938 btu/hr)

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Application	Gas*	Purity	Supply Pressure (psi)†
Carrier	Helium Hydrogen Nitrogen	99.9995 99.9995 99.9995	50 - 80 50 - 80 50 - 80
Detectors			
TCD	Helium	99.9995	50 - 80
FID, NPD, FPD, TCD	Hydrogen	99.9995	50 - 80
ECD, FID, FPD, NPD, TCD	Nitrogen	99.9995	50 - 80
FID, NPD, FPD	Air	Zero grade	50 - 80

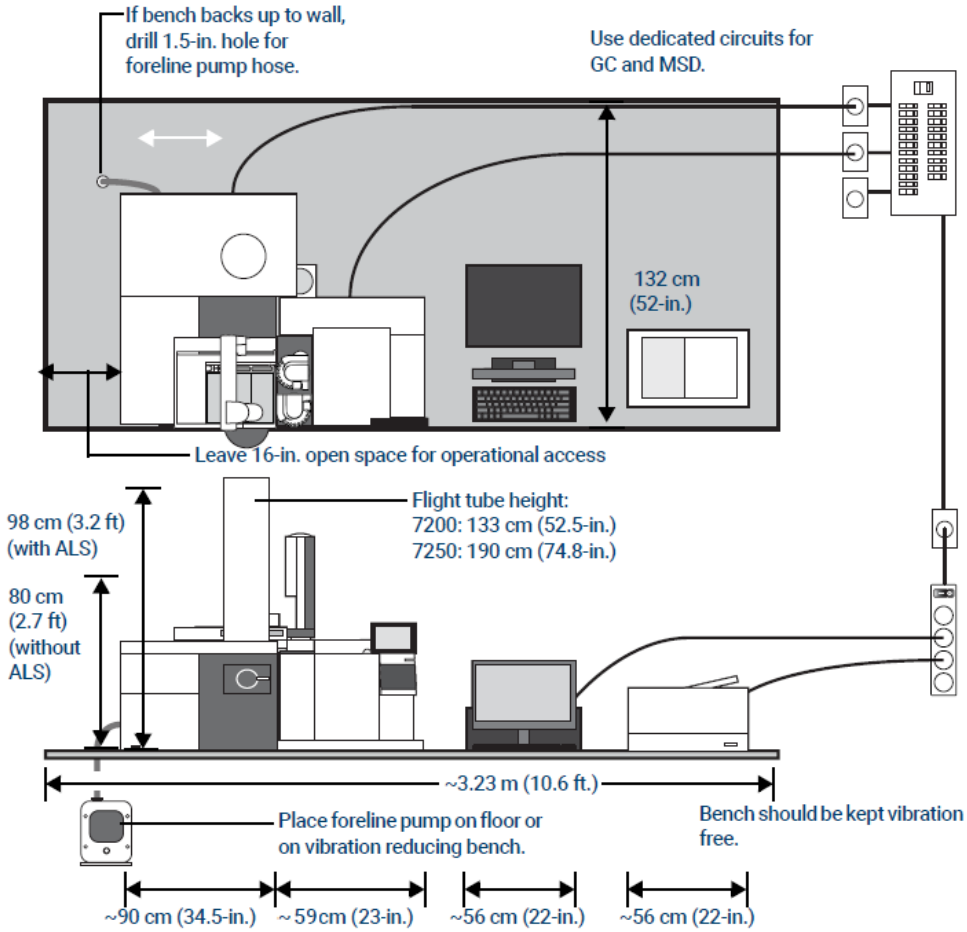
* Use 1/8-in Swagelok gas connections

† 1 psi = 6.89 kPa

Cryo Cooling (Liquid)	Tubing	Supply Pressure (psi)*
CO_2	1/8-inch stainless tubing	700-900
N_2	1/4-inch insulated tubing	20-25

* 1 psi = 6.89 kPa

Typical GC/MS System - 8890 GC, 7200 or 7250 Q-TOF MS, with computer and printer.



Total weight: ~244 kg (536 lb)
Maximum power consumption: ~5,750 VA (19,620 btu/hr)

Part Number	Country	Description				Wall Termination	Plug Termination
8121-0675	Argentina	240	16	4.5	C19	AS 3112	
8120-1369	Australia, New Zealand	240	10	2.5	C13	AS 3112	
8120-8619	Australia	240	16	2.5	C19	AS 3112	
8121-1787	Brazil	240	16	2.5	C19	IEC 60906-1	
8121-1809	Brazil	240	10	2.5	C13	IEC 60906-1	
8120-6978	Chile	240	10	2.5	C13	CEI 23-16	
8121-0070	China	220	16	2.5	C19	GB 1002	

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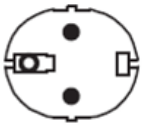
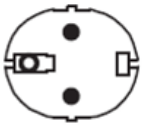
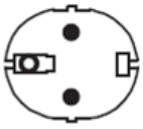
8121-0723	China	220	10	2.5	C13	GB 1002	
8120-3997	Denmark, Greenland	230	10	2.5	C13	AFSNIT 107-2-01	
8120-8622	Denmark, Switzerland	230	16	2.5	C19	Swiss/Denmark 1302	
8120-8621	Europe	220 / 230 / 240	16	2.5	C19	CEE/7/V11	
8121-1222	Korea	220 / 230 / 240	16	2.5	C19	CEE/7/V11	
8121-1226	Korea	220 / 230 / 240	10	2.5	C13	CEE/7/V11	
8121-0710	India, South Africa	240	15	2.5	C19	AS 3112	

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8120-5182	Israel	230	10	2.5	C13	Israeli SI32	
8120-0161	Israel	230	16, 16 AWG	2.5	C19	Israeli SI32	
8120-6903	Japan	200	20	4.5	C19	NEMA L6-20P	
8120-8620	United Kingdom, Hong Kong, Singapore, Malaysia	240	13	2.5	C19	BS1363/A	
8120-8705	United Kingdom, Hong Kong, Singapore, Malaysia	240	10	2.3	C13	BS1363/A	
8120-6894	United States	120	20	2.5	C19	NEMA 5-20P	

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8120-1992	United States	120	13	2.5	C13	NEMA 5-20P	
8121-0075	United States	240	15	2.5	C19	NEMA L6-15P	
8120-6360	Taiwan, South America	120	20	2.5	C19	NEMA 5-20P	
8121-1301	Thailand	220	15	1.8	C19		

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Document Control Logs

Revision Log

Revision	Date	Reason for update
Add revision number of document here	Date of issuance	Author to describe main features/changes made for this specific revision
1.00	02-Jan-2019	Initial Release

Approval Log

Revision	Approver	Title of approver
Add revision number	Add approver name here	Add approver's function or title here
1.00	Suneetha Tippireddy	GC and GCMS Product Support Manager

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