7890A GC SP1-0496 Prefractionator Site Preparation Checklist.

Purpose

Your site must meet this specification to assure a successful and timely installation of your Agilent 7890A Prefractionator Analyser. This document is designed to prevent delays during installation, familiarisation, and the initial use of the GC system. It outlines the space and utility requirements for an Agilent 7890A Prefractionator Analyser.

Additional information is available from your sales representative, the Agilent consumables catalog, and Agilent Technologies, Inc.'s website.

Customer Responsibilities

Make sure your site meets this specification, including: the necessary space, electric outlets, gases, tubing, and operating supplies. If Agilent is delivering installation and familiarisation services, users of the instrument should be present throughout these services; otherwise, they will miss important operational, maintenance, and safety information.

Dimensions and weight

Select the laboratory bench space before your system arrives. Pay special attention to the total height requirements. Avoid bench space with overhanging shelves. Allow at least 20 cm clearance between the back of GC and a wall to dissipate hot air. A simple system that includes a GC, and a computer requires about 120cm wide by 74 cm deep of bench space.

Power consumption

A GC system with a computer, monitor, and printer, requires 4 outlets. The outlet for the GC must have a dedicated ground.

Each GC will have a label next to the power cord connector that lists the line voltage requirements.

The GC power consumption and requirements depend on the type of oven that you ordered and the country the unit is shipping to. Fast oven options 002 and 003 require more power.

Oven	Line voltage	Frequency	Current	Power
Standard Americas:	120V AC (1) single Phase +10 to -10%	47.5-63 Hz	18.8 amps	2250 VA
Standard	220/230/240V single/split phase +10 to -10%	47.5-63 Hz	10.2 / 9.8 / 9.4 amps	2250 VA
Fast	Japan: 200V split phase +10 to -10%	47.5-63 Hz	14.8 amps	2950 VA

Fast	220/230/240V (2)(3) single/split phase +10 to -10%	47.5-63 Hz	13.4 / 12.8 / 12.3 amps	2950 VA

1. Americas 120V requires 20 amp dedicated line. Americas 240V requires 15 amp dedicated line.
2. Option 003, 208V fast oven, uses a 220V unit with operating range of 193 to 231V. Most labs have 4-wire service resulting in 208V at the wall receptacle. It is important to measure the line voltage at the receptacle for the GC.
3. Power line conditioners should not be used with the G3440A Agilent 7890A GC.

Heat dissipation

Your facilities manager may wish to know the amount of heat that the system creates to understand its contribution to the overall room ventilation requirements.
The following table may help you calculate the additional BTU's of heat dissipation from this new equipment. Maximums represent the heat given off when heated zones are set for maximum temperatures.

Oven type	Agilent 7890A series
Standard oven ramp	7681 BTU / hour maximum
Fast oven ramp (options 002 and 003)	10,071 BTU / hour maximum

An oven exhaust deflector kit is available for attaching 10-cm exhaust duct to exhaust the hot air. This adds about 13 cm to the back of the GC. Order option 306 or part number G1530-80650.

Environmental conditions

Performance can be impacted by sources of heat and cold from heating, air conditioning systems, or drafts.

Temperature

Recommended operating temperature range is 15 to 35°C
Full operational temperature range is 0 to 50°C

Humidity

Recommended operating humidity range 50 to 60%, non-condensing
Full humidity range is temperature dependent
Up to 31°C, humidity range is 5 to 80%
At 40°C, humidity range is 5 to 50%

Altitude

Recommended operating altitude up to 2,000 m
Maximum altitude is 4,615.38 m

Gas supplies

Gases are supplied by tanks, an internal distribution system, or gas generators. Tank supplies require two staged, pressure regulation. To connect tubing to the supply, it must have one 1/8-inch Swagelok® female connector for each gas. Make sure that your regulator has the appropriate sized adapter to end with a 1/8- inch Swagelok® female connector.

The following tables list minimum and maximum pressures in psi for each electronic pneumatic control module (EPC). These requirements are for the input to the EPC module located at the back of the gas chromatograph.
Conversions: 1 psi = 6.8947 kPa = 0.068947 Bar = 0.068 ATM

Detectors

	FID
Hydrogen	35-100
Air	55-100
Make up	55-100

Inlets

	Split Inlet	**Aux EPC Module**
Helium	30-120	50-120

Gas purity and selection

Agilent recommends that carrier and detector gas purity of 99.9995% or better. Air for flame detectors should be zero grade. Agilent also recommends using traps to remove hydrocarbons, water, and oxygen.

Non-Agilent computer or software

Agilent hardware, recommended computers, and software are thoroughly tested for compatibility and reliable operation. Your company may have selected other suppliers for parts of your system. This list summarises some of the key requirements for computers and software.
The following Agilent software products are thoroughly tested and compatible:

- Multi-technique ChemStation, version B.04.01 or greater.
- EZChrom Elite, version 3.3.2 or greater.
- Microsoft® Windows® XP Professional with service pack 2 or greater. Microsoft® Windows® Vista Microsoft TCP/IP only. TCP/IP must be installed before installing the software.

The minimum requirements for the computer include: a Pentium 4 processor operating at 1.5 GHertz or higher; at least 1 GByte of RAM for a single instrument; at least 40 GByte hard driver; ATAPI CD, CD-RW or DVD drive; video with 1280 x 1024 resolution (SXGA); 10/100baseT LAN port.
This information is subject to change. For more details on software and hardware compatibility, please contact your sales representative.