

Specification Sheet

GCMS-QP2010 *Ultra*



The GCMS-QP2010 Ultra is our most advanced gas chromatograph mass spectrometer. Descended from the GCMS-QP2010 Plus, it features best-in-class scan speed and sensitivity. A newly designed and patented technology called ASSP (Advanced Scan Speed Protocol) allows this GC-MS to scan at 20,000 u/sec without sensitivity loss or spectral distortion. The result is an instrument that is perfect for "Fast GC" or Comprehensive GC/MS (GC × GCMSq) analyses. Productivity and sample throughput can be dramatically increased. Ecology mode saves power and carrier gas consumption allowing for a lower cost of ownership and less environmental stress.

Instrument

GC

Model:	Shimadzu GC-2010 Plus
Oven temperature:	Up to 450°C
Injector port temp:	Up to 450°C
AFC pressure range:	0 to 970 kPa
Column oven temp:	Up to 450°C
High-power oven with fast heat-up rate compatible with fast GC-MS (230 VAC)	

MS

[GCMS Interface]

Type:	Direct connection with capillary column
Temperature:	50 to 350°C

[Ion Source]

Model:	EI (Standard), PCI (Option) EI, PCI and NCI with NCI source (Option)
Ion source temperature:	140 to 300°C
Filament:	Dual (Automatic Switching)
Electron energy:	10 to 200 eV
Emission current:	5 to 250 µA
Front access structure for easy maintenance	

DI (Option)

Temp. setting:	Room temp. to 500°C
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[Mass Analyzer and Detector]

Mass analyzer:	Metal quadrupole mass filter with pre-rod
Mass range:	<i>m/z</i> 1.5–1090
Mass resolution:	2M (FWHM)
High-speed scanning control:	Advanced Scanning Speed Protocol (ASSP)
High-speed scan rate:	20,000 u/sec
Minimum measurement interval:	0.01 s (Maximum 100 scan/sec)
Detector:	Secondary electron multiplier with the patented overdrive lens and conversion dynode
Main pump:	Differentially pumped vacuum system (179/185 L/sec for He)
Fore pump:	30 L/min (60 Hz) Rotary pump
Column flow:	Up to 15 mL/min (He)

Software

[GCMSsolution Ver. 2.6]

Mode:	Scan, SIM, FASST (Fast Automated Scan/SIM Type)
SIM:	64 channels × 128 groups
Energy saving:	Ecology mode
Insert replacement:	Easy sTop
Method creation:	COAST (Creation of Automatic SIM Table), AART (Automatic Adjustment of Retention Time)
Library search:	Similarity search, Similarity search with retention index, Index search
Instrument tuning:	Autotuning for all ionization modes (EI, PCI and NCI)
Mass spectrum libraries (Option):	NIST, Wiley, Pesticide Library, FFNSC Library (Flavor and Fragrance), Drug Library

Database (Option):	Method Package (Residual Pesticide in Foods, EPA524, EPA525), Compound Composer Database Software for Simultaneous Analysis, EPA Optional Software, VOC Analysis Software, GC/MS Metabolomics Database
Quality control functions:	QA/QC function for accuracy control, System check for instrument management, Security function for user management
File format:	Compound Structure Format, best-suited for GLP
Maintenance support:	MSNAVIGATOR
Report:	Highly flexible report creation, Template

Installation Checkout Specifications

EI scan sensitivity:	1 pg octafluoronaphthalene <i>m/z</i> 272 S/N > 500
PCI scan sensitivity:	100 pg benzophenone <i>m/z</i> 183 S/N > 500
NCI scan sensitivity:	100 fg octafluoronaphthalene <i>m/z</i> 272 S/N > 500

Installation Example

Power Requirements

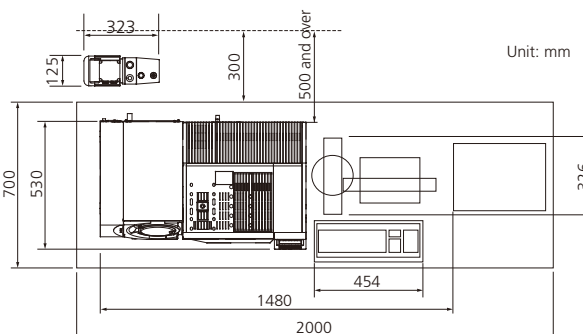
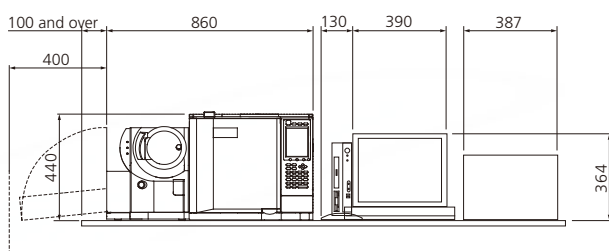
Frequency:	50/60 Hz
GC:	1800 VA (115 VAC)/*2600 VA (230 VAC) * High-power oven
MS:	1000 VA (100 – 230 VAC)

Environment

Temperature:	Constant temperature between 18 and 28°C
Humidity:	40 to 70 % (No condensation)

Size and Weight

GC/MS:	74 kg
Rotary pump:	10 kg
Size and weight of PC/Printer vary according to models.	



For More Information

For more information on Shimadzu products, visit our website at <http://www.shimadzu.com/>

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