

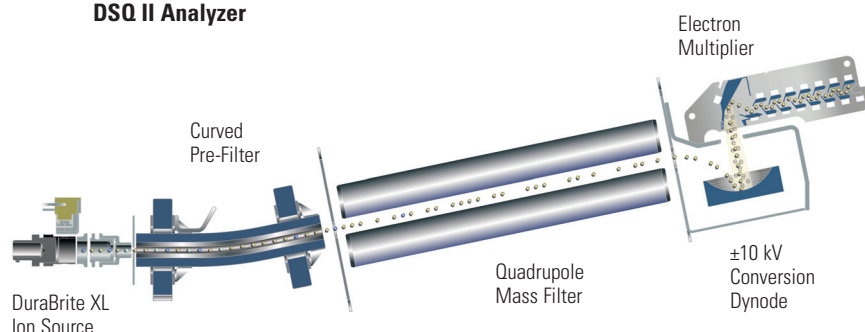
The innovations of the Thermo Scientific DSQ™ II, including curved pre-filter, DuraBrite™ XL source, and DynaMax XR detection system, offer fundamental improvements in your analytical results. The combination of noise reduction and increased source and detector performance provide unrivaled analytical performance across the widest range of concentrations.

Thermo Scientific DSQ II Single Quadrupole GC/MS

The reliable and easy to use advanced single quadrupole system



DSQ II Analyzer



DSQ II Mass Spectrometer

DuraBrite XL Source

- Improved ion optics increase transmission in matrix to deliver unmatched sensitivity while protecting critical analyzer components from contamination
- Electron energy adjustable between 0 and 130 eV and emission current up to 850 μ A
- Independently controlled heating from 125 – 300 °C for stable operation and chromatographic integrity
- Inert EI, PCI and NCI sources

Dual-Stage Quadrupole Mass Filter

- Curved quadrupole pre-filter
- Unit mass resolution throughout the mass range of 1 – 1050 amu
- Scan rate of >11,000 amu/s
- ± 0.1 amu mass axis stability for 48 hours
- Offers full-scan, segmented scanning, SIM, and sequential modes of mass analysis (Full-Scan/SIM and PPINICI)
- No tools required for source maintenance
- Durable, inert materials guarantee long life and simple maintenance
- One-Click Target Tuning for BFB and DFTPP
- Digital regulation of reagent gas flows for commonly used reagent gases: ammonia, methane, carbon dioxide and isobutane

DynaMax XR Detection System

- Post-acceleration 10 kV conversion dynode for efficient ion detection
- State of the art, off-axis, discrete dynode electron multiplier and electrometer with industry-leading extended dynamic range
- Centroid or profile data acquisition
- PPINICI option to acquire positive ion CI and negative ion CI spectra in alternating scans

Inlet/Vacuum Interlock Option

- Remove ion volumes to switch from EI to CI without venting, or for direct sample probe analysis
- Standard with CI, optional for EI systems

Vacuum System Options

- Three maintenance-free turbomolecular pump configurations:
 - 70 L/sec
 - 250 L/sec
 - 200/200 L/sec split flow

Productivity Solutions

- Turn-key installation for environmental, food safety, forensic, and toxicology applications
- Streamlined validation and integration, along with work-flow oriented application software

Gas Chromatograph Specifications

TRACE GC Ultra™ System

- Temperature programmable with seven ramps and eight levels, settable from 0.1–120 °C/min
- Eight independent, heated zones for injectors, detectors and auxiliary zones
- Oven cool-down: 450 °C to 50 °C in under 250 seconds
- Digital Pressure and Flow Control (DPFC) with gas saver
- Maximum oven temperature 450 °C

TRACE GC Ultra Options

- Sub-ambient cooling to -99 °C with LN₂ or -55 °C with CO₂
- Programmable Temperature Vaporizer (PTV) for split, cold split, splitless and large volume injection
- Cold on-column injector for true on-column and large volume injections
- Additional GC detector(s)
- Liquid or headspace autosampler(s)
- Purge and Trap and other autosampler options available

FOCUS Gas Chromatograph

- Temperature programmable with seven ramps and eight levels, settable from 0.1–120 °C/min
- Compatible with standard capillary column cages
- Oven cool-down: 350 °C to 50 °C in 270 seconds
- Digital Pressure and Flow Control (DPFC) with gas saver and septum purge
- Maximum oven temperature 350 °C

Data System Software Options

- Thermo Scientific Xcalibur™ Data system, common platform for all MS systems
- Thermo Scientific EnviroLab™ Forms Software
- Thermo Scientific ToxLab™ 2.0 Intelligent Sequencing Software
- Thermo Scientific QuanLab™ Forms Software
- Thermo Scientific ToxLab Forms Software
- NIST library
- Wiley library
- Pfleger-Maurer-Weber library
- Thermo Scientific pesticide library

Direct Probe System Option

- Switch to probe in under three minutes with GC interface undisturbed
- Available in two styles: rapid heating filament Direct-Exposure Probe (DEP) or slower volatilization Direct-Insertion Probe (DIP)

Standard Installation Specifications

Electron Impact Ionization

1 µL of 1 pg/µL octafluoronaphthalene (OFN) in iso-octane will produce the following minimum signal to noise for *m/z* 272 when scanning from 50–300 amu: **450:1** using helium as carrier gas.

Positive Chemical Ionization

1 µL of 10 pg/µL benzophenone in *n*-heptane will produce the following minimum signal to noise for *m/z* 183 when scanning from 80–230 amu: **50:1** (250 L/s pump); **50:1** (200/200 L/s pump).

Negative Chemical Ionization

1 µL of a 1 pg/µL standard of OFN in iso-octane will produce the following minimum signal to noise for *m/z* 272 when scanning from 50–300 amu: **5000:1** (250 L/s pump); **5000:1** (200/200 L/s pump).

Installation Requirements†

Supplies

- Power: 120 Vac +6%/-10% or 230 Vac ±10%, 50/60 Hz
- Helium: purity 99.999% with less than one ppm each of water, oxygen, and total hydrocarbons
- CI reagent gases: methane, isobutane, ammonia or carbon dioxide with purity 99.99%

Environment

- Complete system averages 3940 W (13,450 Btu/h) output when considering air conditioning needs
- Operating environment must be 15–31 °C (59–88 °F) and relative humidity must be 40–80% with no condensation. Optimum operating temperature is 18–26 °C (65–78 °F)

* Detailed installation requirements can be found in the DSQ II Preinstallation Guide P/N #120299-0001.

Certifications

- EMC – EN61326-1:1997+A1:1998+A2:2001
- Safety – EN61010-1:2001

System Dimensions/Weights

Complete GC-MS system requires 2 m (6') of linear workbench space. Allow 16 cm (6") of clearance behind the instrument (32 cm if using autosampler). Additional space should be allotted for data system and printer.

Mass Spectrometer

(height x width x depth)

44 x 33 x 68 cm (17 x 13 x 27 in)

Weight: 45 kg (98 lbs)

TRACE GC Ultra

44 x 61 x 65 cm (17 x 24 x 25.5 in)

Weight: 55 kg (120 lbs)

FOCUS GC

44 x 35 x 51 cm (17 x 14 x 20 in)

Weight: 30 kg (66 lbs)

Data System Specifications†

- 2.8 GHz Pentium D
- 1 GB DDR2, 2x512, 667 MHz
- 128 MB, ATI Radeon® X1300 graphics card
- 80 GB SATA, 3.0 GB/S hard drive
- 17.0" Flat panel monitor
- 3.5" 1.44 MB diskette drive
- 48X Max CD-RW/DVD
- Microsoft® Windows® XP with Microsoft Office 2003
- Gigabit Ethernet NIC 10/100/1000
- Two USB, two serial, and one parallel port

† Minimum specifications change frequently, call for latest. Special upgrade options are available to meet customer requirements.

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PS10001_E 05/08M

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