

Xevo TQ Absolute

Xevo™ TQ Absolute is an ultimate performance benchtop tandem quadrupole mass spectrometer which combines Absolute performance, efficiency, productivity, and confidence to give you the Absolute Power to quantitate your most challenging compounds and make fast decisions. It features StepWave™ XS ion transfer optics delivering enhanced sensitivity, robustness, and reliability; passively removing gas load and undesirable neutral contaminants while actively transferring ions into the mass analyzer. It also has an updated high voltage photomultiplier detector ensuring optimum performance in both positive and negative ionizing modes while maintaining excellent linear dynamic range and does not typically require gain adjustment or replacement during the lifetime of the instrument. The Xevo TQ Absolute also allows you to achieve improved environmental sustainability and lower your laboratory operational costs with an instrument that uses approximately 50% less electricity and gas and produces 50% less heat than most other high performance TQ mass spectrometry instruments on the market.



SYSTEM HARDWARE SPECIFICATIONS

API sources and ionization modes

High performance ZSpray™ dual-orthogonal API sources:

- 1) Multi-mode source – tool free ESI/APCI/ESCI™* (standard)
NB – Dedicated APCI requires an additional probe (optional)
- 2) UniSpray™ ion source (optional)
- 3) Tool-free APCI probe (optional)
- 4) nanoFlow™ ESI source* (optional)
- 5) ASAP* (optional)
- 6) APGC ion source* (optional)
- 7) ionKey™ source* (optional)
- 8) DESI XS targeted MS imaging source* (optional)

Optimized gas flow dynamics for efficient ESI desolvation

Tool-free source exchange

Vacuum isolation valve

Tool-free access to user serviceable elements

Plug-and-play probes

De-clustering cone gas

Software control of gas flows and heating elements

* Not available with waters_connect.™

UniSpray ion source option	UniSpray is an ionization technique designed to broaden the scope of compounds which can be analyzed in a single run, including those which typically optimize in ESI, APCI or APPI. Enhanced ionization efficiency and desolvation allow the potential to combine several methodologies into one, or simply enable the operator to keep the same source for multiple methods, requiring less time performing set-up and routine maintenance, and more time delivering results
Ion source transfer optics	StepWave XS ion transfer optics delivering class leading UPLC™-MS/MS sensitivity. The unique off-axis design and segmented quadrupole second stage dramatically increases the efficiency of ion transfer from the ion source to the quadrupole MS analyzer at the same time as actively eliminating undesirable neutral contaminants
Mass analyzer	Two high-resolution, high-stability quadrupole analyzers (MS1/MS2), plus pre-filters to maximize resolution and transmission while preventing contamination of the main analyzers
Collision cell	T-Wave™ enabled for optimal MS/MS performance at high data acquisition rates; Software programmable gas control
Detector	Low-noise, off-axis, long-life photomultiplier XDR™ Detector
Vacuum system	One splitflow turbomolecular pump One vacuum backing pump
Dimensions	Width: 43.0 cm (16.9 in.) Height: 79.0 cm (31.1 in.) Depth: 96.0 cm (37.8 in.)
Regulatory approvals/marks	CE, CB, NRTL (CAN/US), RCM

SYSTEM SOFTWARE SPECIFICATIONS

Software	Systems supported on waters_connect and MassLynx™ version 4.2 or later
System setup and method development	System parameter checks and alerts Integrated sample/calibrant delivery system + programmable divert valve Automated mass calibration Automated sample tuning Automated MRM method development UPLC-MS/MS System Check – on-column performance test
Automated MRM scheduling (acquisition rate assignment)	Dwell time, inter-channel delay time and inter-scan delay time for individual channels in a Multiple MRM experiment can be automatically assigned (using the Auto-Dwell feature) to ensure that the optimal number of MRM data points per chromatographic peak are acquired. The Auto-Dwell feature dynamically optimizes MRM cycle times to accommodate retention time windows that overlap. This greatly simplifies MRM method creation, irrespective of the number of compounds in a single assay, while at the same time ensuring the very best quantitative performance for every experiment

waters_connect Software

The waters_connect Software provides a modern user experience with a HUB design and apps that provide a consistent connected user experience across all applications. It is built for applications with convenient access to scientific apps allowing accelerated time-to-results and result quality. There are common utilities that complete the end-to-end workflow and help increase productivity and efficiency. Confidently report results with accurate, reliable, regulation-standard data from application-focused quantitative workflows with built in traceability for utmost integrity.

PERFORMANCE CAPABILITIES

Acquisition modes	Full scan MS
	Product ion scan
	Precursor ion scan
	Constant neutral loss scan
	Multiple reaction monitoring (MRM)
	Simultaneous Full scan and MRM (RADAR™)
RADAR	An information rich acquisition approach that allows you to collect highly specific quantitative data for target compounds while providing the ability to visualize all other components
Mass range	2 to 2048 m/z

For more detailed instrument performance specifications, please contact your local sales representative.

For patent information, please see [waters.com/patents](https://www.waters.com/patents)

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