



KONIK MS Q12 C series
**3 mass-spectrometers
in one**
HRGC/HPLC/DIP-MSQ

The power of sample
preparation, separation
and identification
Konik-Tech
25 years of innovation
1978-2003

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**KONIK-TECH is an
ISO 9001 Certified Company**

Design, manufacturing and
commercialization of analytical instruments,
laboratory equipment, consumables and
accessories.

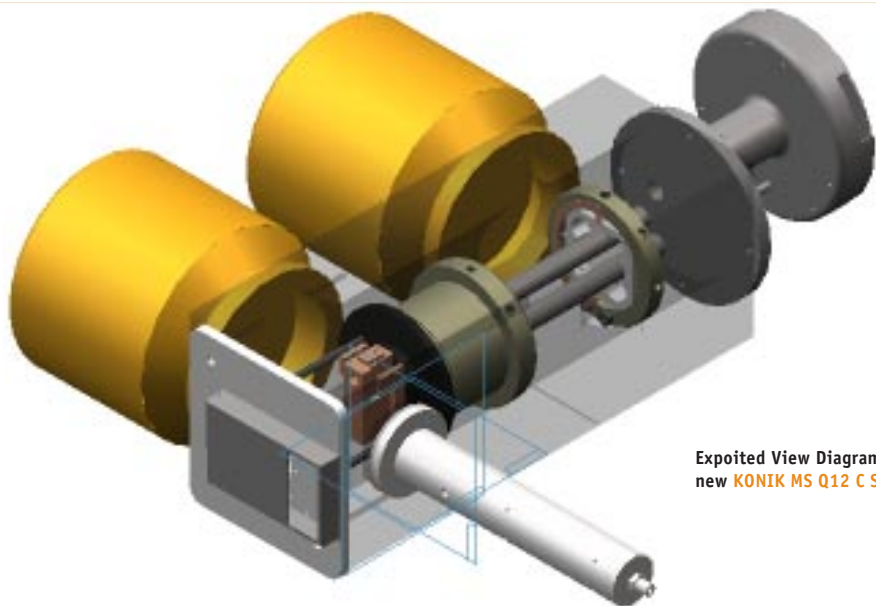


Specifications subject to change without notice
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The **ICHROM & SPEIC** Co.®
Analytical Solutions + Control

KONIK MS Q12 C series a new concept of Quad Analyzer in a compact benchtop GC/HPLC MS

The new **KONIK MS Q12 C Series** is the result of more than twenty-five years of creative analytical instrumentation design, technology and innovations. The concept of the new **KONIK MS Q12** is unique in the world and it is the scientist dream made reality. A new benchtop instrument provides utmost flexibility, sensitivity, modularity, analytical power, robustness and upgradability never seen before in any other benchtop quad MS. It has been designed thinking in the customer, taking into consideration all the customer's needs in terms of easy of use, minimum down-time, easy maintenance and lowest obsolescence, a classical feature in all KONIK's design as it is demonstrated in our long track-record history.



Exploded View Diagram of the
new **KONIK MS Q12 C Series**

The Konik Q12 is an innovated MS platform allowing three different inlets and twelve ionization modes for HRGC, HPLC and DIP/DEP in a single compact benchtop quadrupole mass spectrometer. The instrument is ready to use in any mode in less than ten minutes, totally operative.

- Higher Mass Range
- Full Remote Control
- Best Sensitivity

choice of 3 Ion Sources

EI/CI Sources

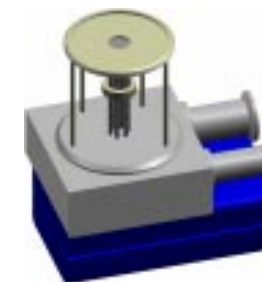
For both positive and negative ions are included as standard in the GC-MS mode. Easy to clean, a choice of interchangeable ionization volumes allows lowest sensitivity in the chosen mode. User programmable ionization energy and current. Digital flow control of reagent gases in CI mode increases the reproducibility. Choice of one or two CI gases.

Optional ACE™, Automated EI/CI switching between EI and CI allows both spectra to be obtained during the same chromatographic run, even in fast eluting peaks.



ESI/APCI Source

A new microvolume orthogonal source, with funneling effect ion optics, ensures the best sensitivity in both ionization modes: Electrospray and Chemical Ionization at Atmospheric Pressure. Easy and fast switching between ESI and APCI modes. A self-cleaning needle spray/nebulizer ensures easy maintenance while reducing solvent buffers precipitation.



Direct Insertion Probe (DIP) and Direct Exposure Probe (DEP) Source

For direct introduction of solid or liquid samples. Combined with standard EI/CI source for positive and negative ions with an additional back focussing plate for optimal sensitivity. Dual DIP/Pyrolysis probe concept. The same probe can be fitted into the KONIK HRGC 4000 series injector for pyrolysis work or stepwise thermal evolution studies of solid samples. Totally automated gate valve removes the risk of user's mis-operation. High temperature programming up to 800°C.



unlimited Mass Power

KONIK MS Q12 C series

Three different Quadrupole mass filters

easily exchangeable: 2-1,000+, 2-1,500+ and 2-2,000+ amu, each one optimized for high sensitivity HRGC-MS, dual HRGC/HPLC-MS and dedicated HPLC-MS applications.

Plug-in pre-filters enhance mass transmission and prevent direct contamination of the quadrupole.

The mass resolution is fully adjustable over the mass range to 2.5M at m/z 1,000 and to 1.8M between m/z 1,000 and 2,000.



Differential pumping

Two low noise air-cooled hybrid turbomolecular drag pumps 200l/s, backed by a dual stage 5m³/h Rotary Vane Pump improves overall instrument performance while enhances mass transmission.

These long-life field repairable pumps reduce drastically the instrument down-time and operational cost. Large bore flange for higher throughput and lower conductance increase the pumping efficiency. The pump-down time is reduced to less than 3 minutes from atmospheric to operation pressure. Computer controlled electrovalves and gauges provide automatic vacuum operation.

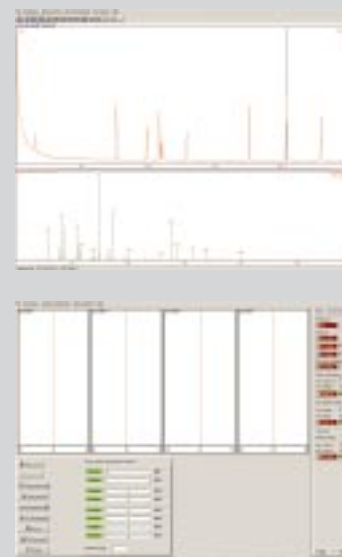
Optional Drypumps eliminate completely the oil backstreaming, producing a totally clean hydrocarbon-free working pressure.



Detector

Standard gas-sealed, long-life and stable Photo-Multiplier detector for positive and negative ions and dynode conversion. User programmable dynodes and Photomultiplier high voltages expands the instrument flexibility and HPLC-MS applications.

Optional Electron Multiplier detector increases the sensitivity while reducing noise.



Single Ion Monitoring Scan and Full Scan

Can be obtained during the same chromatographic run while acquiring data. This feature provides more information and better quantification results in less time. Three different acquisition modes expands the KONIK MS Q12 flexibility to the limits.

In the STEP MODE the data is acquired unit by unit mass with optional Mass Defect correction.

In the SEMI-PROFILE MODE the data is acquired at fixed 16 points/mass and the peak centroid is automatically calculated.

The PROFILE MODE allows the user to select the number of points/mass to be acquired between 2 and 64 and also the range time, increasing the sensitivity at the lowest level. Up to 50 sets of Scan functions/Run can be processed in any mode, SIM or Full Scan.

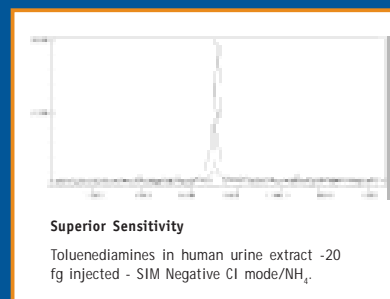
MS Tuning

Manual tuning or Autotuning are easily performed through dedicated menu. All the MS parameters can be programmed by the user and are included in the MS Method File.

Unmatched Accuracy and Sensitivity

The KONIK MS Q12 C Series new state-of-the-art electronics and quadrupole technology provides the best sensitivity in any ionization mode.

In Full Scan EI mode you can reach low picogram levels while you can detect low femtograms in SIM mode with excellent S/N ratio.



absolute flexible platform

KONIKROM™ MS Software performance at your fingertips

Konikrom MS Software

A new powerful user-friendly Windows™-based software allows full instrument control, data acquisition, qualitative analysis, quantitation and reporting in an intuitive and interactive environment.

Maximum productivity can be obtained by sequencing up to 170 samples from the new KONIK **Robokrom**® Autosampler linking different acquisition methods. Automatic and manual tuning, GC, HPLC and peripheral parameters set up, data processing, library search, compounds comparison, calibration and reporting are performed easily and fast by browsing through different menus from the starting software Home Page:

Method Set Up

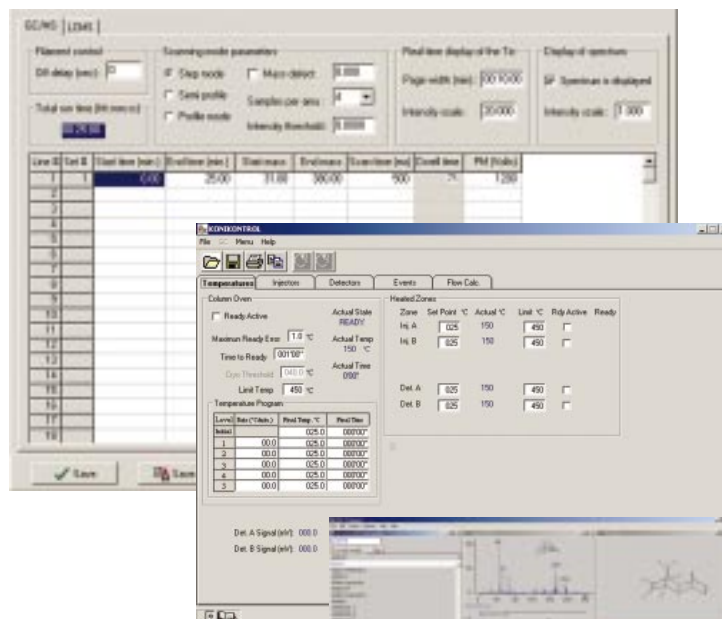
Allows easy access to all the system configuration: GC, HPLC, MS, DIP/DEP, Autosampler, ... to program all the instrument parameters that leads to an Acquisition Method file.

Acquisition

This menu access to a spreadsheet that includes the analysis sequence for each sample and starts the analysis. Sequences can be paused, stopped, modified, exported and re-started at any time.

Browser

This menu access to the Total Ion Current and mass spectra for qualitative analysis in real time. Data can be processed while acquiring.



Library Search

This menu access to the peak identification using commercial libraries such as NIST, Wiley, etc. The access to this menu can be done from other menus such the Browser or the Data Processing. Can be used to create unlimited customer libraries, providing utmost flexibility to meet any particular application.

Data Processing

This menu access to the quantitation application for easily integration, calibration and reporting. From this menu you can run other programs and additional software modules.

Remote control of the complete instrument

State-of-the-art new electronics, an embedded PC and a built-in modem allows instrument worldwide communications through the Net, not only for data processing and spectra import-export, but also for complete instrument control and servicing, diagnostics, software upgrades, fine tuning, inter-lab methods sharing and future upgrades. This feature opens unlimited flexibility, unmatched by any other MS in the current market.



Integral Solutions

A complete range of peripherals and instrumentation can be added to the **KONIK MS Q12 C Series** to meet any particular analytical application.

The new patented **KONIK HPLC-HRGC K2 A Series** allows sample preparation and dual separation by HPLC and HRGC in an automated single run, saving most time spent in sample preparation and increases the accuracy and precision.

The new **KONIK Robokrom™ B Series** is a powerful Multimode Autosampler that meets the most demanding requirements of sensitivity, performance, accuracy and precision. Can be configured in seven different working modes: GC Autosampler, HPLC Autosampler, Static Head Space, Purge & Trap, Solid Phase MicroExtraction, Thermal Desorption and Fraction Collector.

The **Robokrom™** can be expanded with a second arm to a Microchemical Station combining heating, stirring, standards addition, reagents addition, evaporation, dosing, concentration, drying and injecting in a single Autosampler.

