

NEW

A new concept of Quad Analyzer

## KONIK MS Q12 C Series

Multimode Mass Spectrometer System  
3 mass spec in one HRGC/HPLC/DIP-MS

KONIK MS Q12 1



KONIK MS Q12 C Series

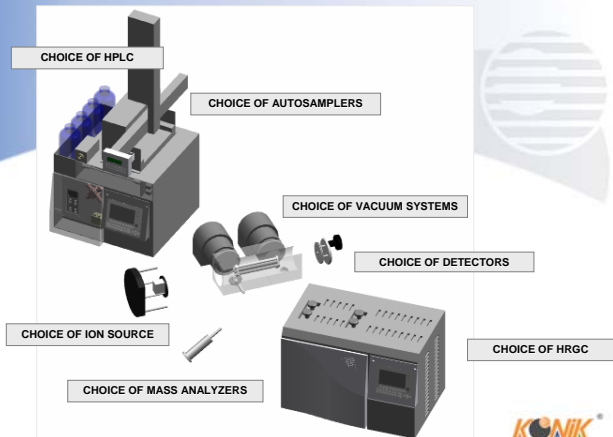
KONIK MS Q12 2



### The KONIK MS Q12 C series provides the following:

- 3 choices of mass filters to 1000, 1500 and 2000+ amu
- New and unique mass detector, modularly retrofittable, for GC, HPLC and DIP (direct probe)
- Provides the best sensitivity in all GC/MS and LC/MS ionization modes
- Best resolution in all modes
- Acquisition, instrument control and software upgrade through LAN or Internet.

KONIK MS Q12 3



KONIK MS Q12 4



- The KONIK MS Q12 is an innovated MS platform system allowing 3 different inlets and 12 ionization modes: HRGC (EI/CI /  $\pm$ ), HPLC (ESI / APCI /  $\pm$ ) and DIP (EI/CI /  $\pm$ ), in one compact benchtop quadrupole mass spectrometer with fast exchange of configurations.
- Based on a range of high transmission quadrupole mass filters, the KONIK MS Q12 provides the best sensitivity in all GC/MS and LC/MS ionization modes.
- The revolutionary concept of this system allows to switch from GC/MS to HPLC/MS in an easy and fast operation in less than 15 minutes.

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### EI/CI SOURCES

- Easy to clean choice of ionization volumes for optimal sensitivity in the chosen ionization mode.
- Electronic control of reagent gas flow in CI mode. Choice of one or two CI gases.
- Optional ACE: Automatic switching from EI to CI, or CI to EI, so both EI/CI spectra can be obtained even in fast eluting peaks.

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## ES/APCI SOURCES

- New **microvolume orthogonal source** with **funnelling** effect ion optics for optimal sensitivity
- Needle: **Self-cleaning** needle spray/nebulizer

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## DIP/DEP SOURCES

- Dual combined with standard EI/CI source with **additional back focusing 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

KONIK MS 012 10



KONIK MS 012 11



## MASS FILTERS

- Choice of 3 **quadrupole mass filters**: 2-1.000 amu, 2-1.500 amu and 2-2000+ amu each respectively optimised for High Sensitivity HRGC-MS, dual HRGC/HPLC-MS applications, or dedicated HPLC-MS.
- Easy to clean **plug-in pre-filters**.

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## DETECTORS

- Choice of Photo or Electron multiplier detectors. The photo multiplier with phosphorous screen and the preamplifier is sealed for longer life. The EM has a very stable, specially treated first conversion dynode, for better stability.
- Dual dynodes for positive and negative ion detection.

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KONIK MS Q12 14



## VACUUM SYSTEM

- Dual differential pumping with two turbo-drag pumps of 200 l/s each backed by a dual stage 5m<sup>3</sup>/h rotary vane pump. Supports any source and ionization mode and simplifies field upgrades while improving overall instrument performance.
- This new generation of turbo-drag pumps, owing to their lower rotor speed (36.000 rpm), have longer life and they are field repairable, reducing significantly the operational cost of the KONIK MS Q12.

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## VACUUM SYSTEM

- Large bore pump mounting (ISO 100 flanges) for higher throughput, (a) lower conductance to the analyzer and ionization chambers for most efficient pumping (CI, ACE, ES/APCI,...), (b) reduce drastically the pumping downtime. When exchanging sources (eg. From EI/CI to ES/APCI) the instruments is up and running in some 10 minutes.
- Lowest noise (a) The turbo-drag pumps have a maximum operational noise level of 54 dbA, and (b) the rotary vane pump of 48 dbA, thus adding to the comfort of the operator.

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KONIK MS Q12<sup>®</sup> C series

### Multimodal Quad-MS

HRGC/HPLC/DIP-MS

Unmatched flexibility, all couplings in a single platform  
3 Ion Sources: GC, HPLC and DIP/DEP  
3 Analyzers: up to 1000, 1500 and 2000+ amu



## STATE-OF-THE ART ELECTRONICS

- New RF/DC generator with unmatched stability. All electronics in one single board easy to exchange for servicing,
- New microelectronics maximizes digital processing for minimum noise,
- New control software adds unlimited flexibility,
- New auto-diagnostics, auto-tuning, and display routines.
- New user flexible and friendly instrument/user interfaces and software for data reduction, identification and quantitation.

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STATE-OF-THE ART ELECTRONICS

- Remote control of the complete instrument through the Net, via **built-in modem**, facilitates direct factory service, diagnostics, software upgrades, fine tuning, inter-lab method sharing, etc.
- KONIK traditional concept of flexible/upgradable platforms. The **guarantee for future updatability and growth**.

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KONIK MS 012 20

