

Hidden HPR-20 DLS

Ultra-high Resolution & Sensitivity Analysis of Hydrogen
Isotopes and Light Gases

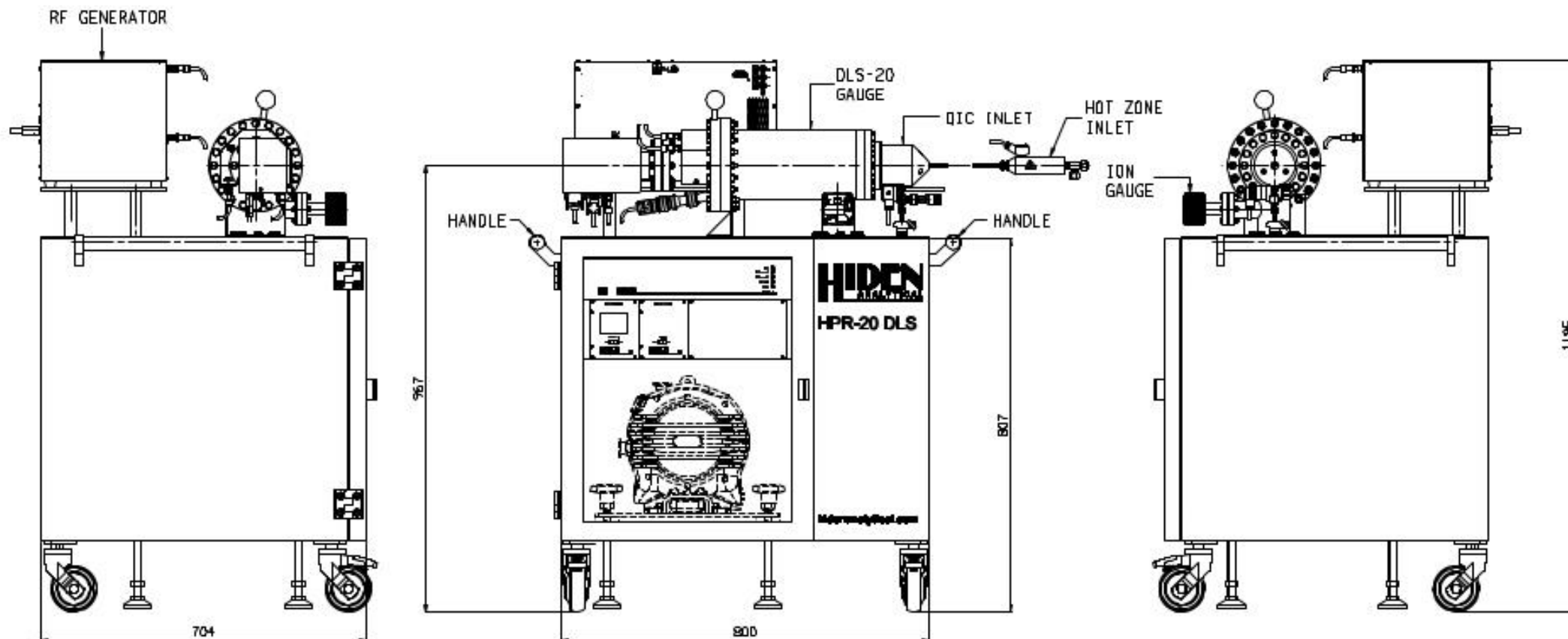
Introduction

The Hiden **HPR-20 DLS** gas analysis system is configured for continuous analysis of gases and vapours at pressures near atmosphere in standard form, with alternative inlet systems being offered for applications requiring direct sampling from higher pressures to 30 bar. The mass spectrometer includes an ultra-high resolution mode specifically designed for analysis at low masses, hydrogen isotopes and light gases.

HPR-20 DLS



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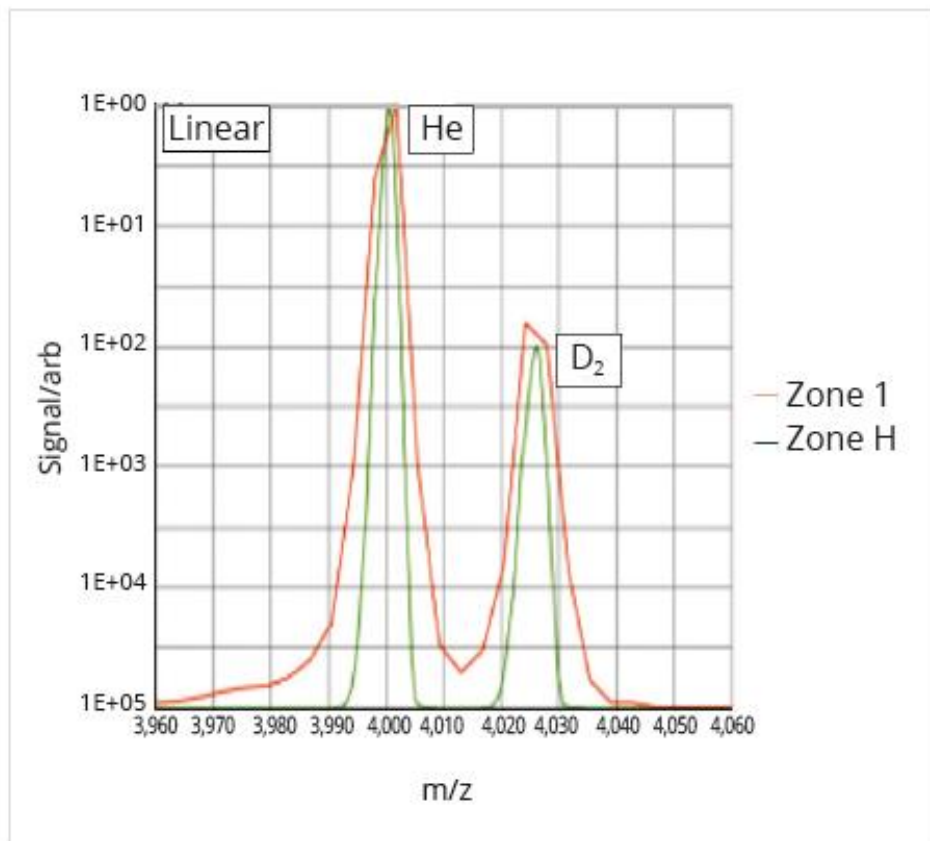
Application Areas

- Hydrogen Isotope Studies
- Nuclear Fusion Research
- Glovebox Monitoring

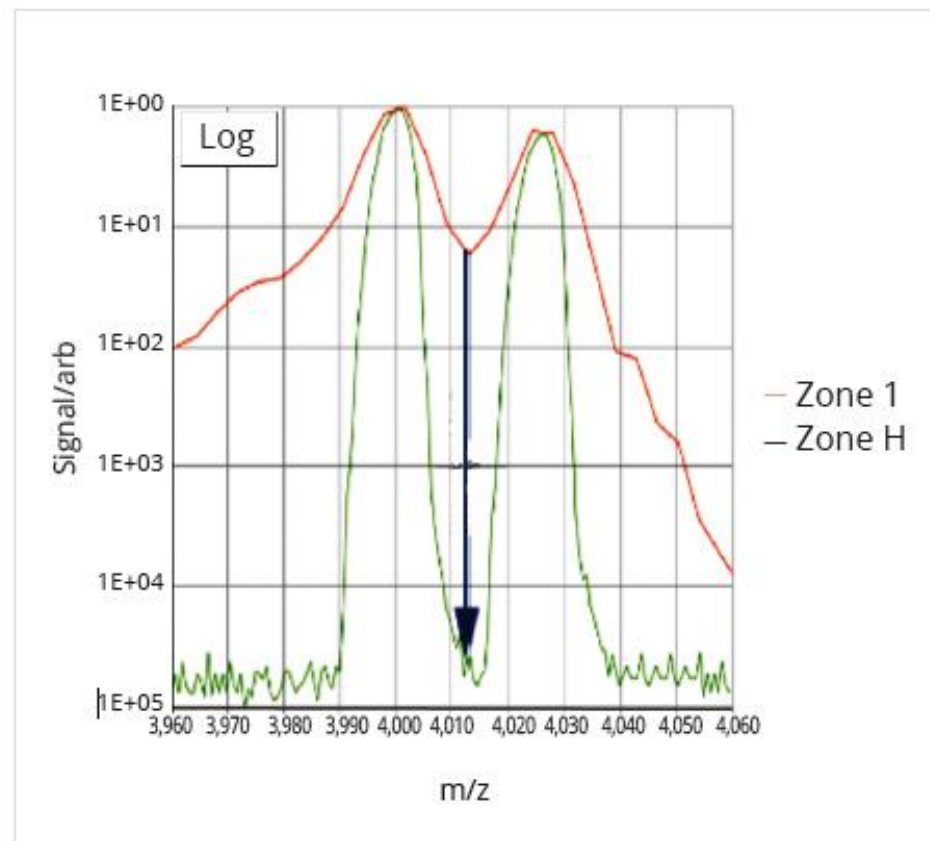
Standard Features

- Unique dual stability zone quadrupole switching mode: The ultra high resolving power of quadrupole Zone H operation is software selectable providing peak width at FWHM < 0.003 AMU.
- Mass range 200 AMU, and software switchable to 20 AMU mass range for the ultra high-resolution mode.
- Pulse ion counting electron multiplier detector with 7 decades continuous dynamic range.
- QIC inlet providing <300 ms response time to changes in gas concentrations.
- Fast scan speeds, with up to 650 measurements per second for transient analysis.
- Low dead volume, heated inlet for fast response to gases and vapours.
- Windows® PC software for data acquisition, data display and control of quadrupole parameters.
- Integration of external signals (temperature for example) simultaneously logged with mass spectrometer data. Two channels, $\pm 10V$ user labelled and user scalable in units of user choice are included.

Example Data: Resolving He and D₂ in Zone 1 and H

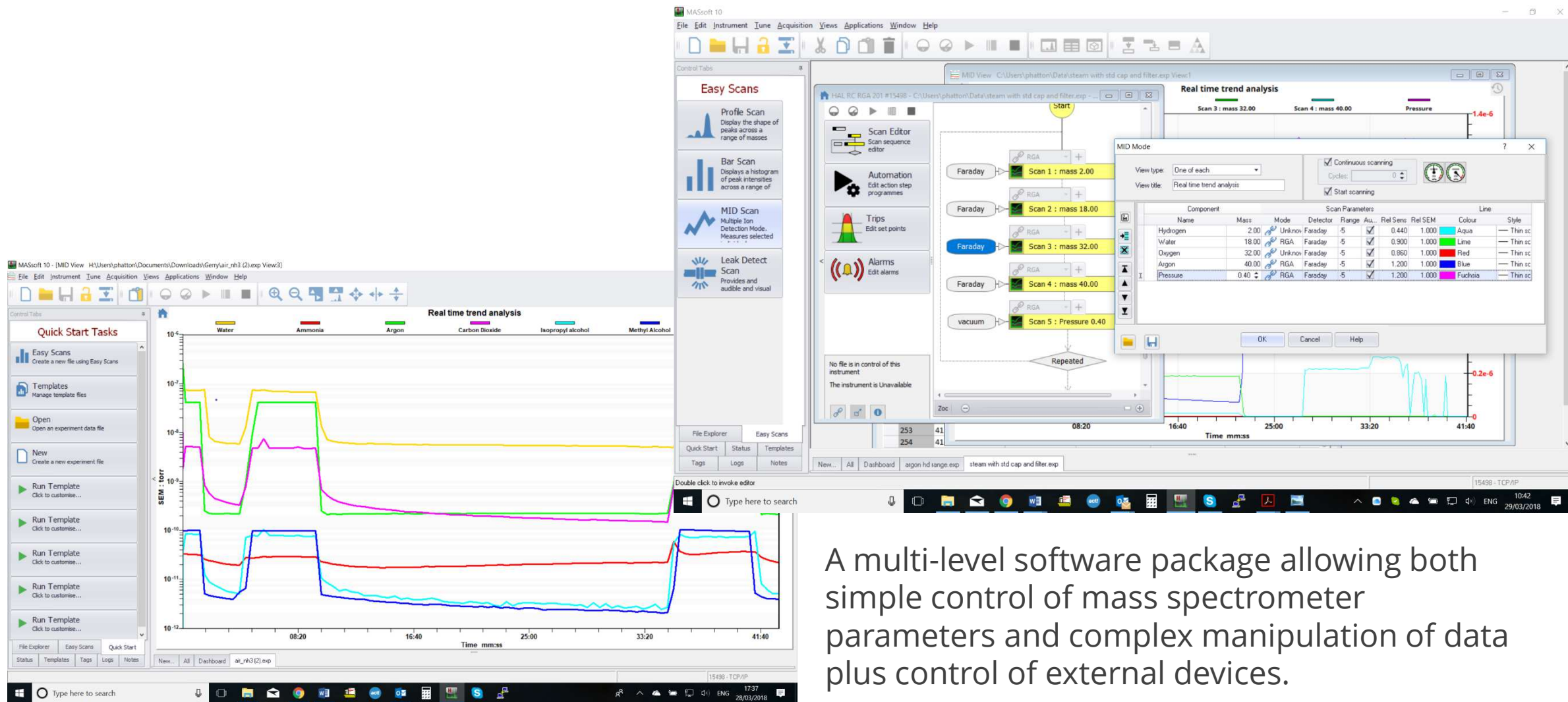


The red trace shows He and D₂ acquired in Zone 1 and the green in Zone H.



In Zone H the valley separation of He and D₂ continues for 5 decades, making possible the measurement of 1 ppm He in D₂.

MASsoft Professional Control Software

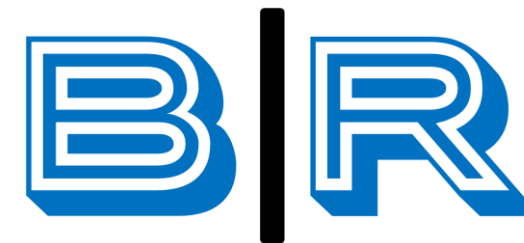


A multi-level software package allowing both simple control of mass spectrometer parameters and complex manipulation of data plus control of external devices.

Recent Customers



- Shanghai Institute of Ceramics of Chinese Academy of Sciences
- Lawrence Livermore National Laboratory LLNL
 - Breakwater Research LLC
- Sichuan Winntec Specialty Gases Co Ltd
 - Samsung Electronics



Summary

- Industry first 20 mm rod diameter quadrupole mass filter for ultra-high mass resolution
- Software switchable dual-zone RF power supply for Zone H ultra-high resolution 1-20 amu operation and Zone I ultra-high stability 1-200 amu operation
- 0.006 amu mass separation in real time

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- www.HidenAnalytical.com
 - The Hiden website is an excellent resource with product pages, brochures, catalogues, product pages with some application notes, presentation and other information.
 - Contact +44 1925 445225 for direct support.