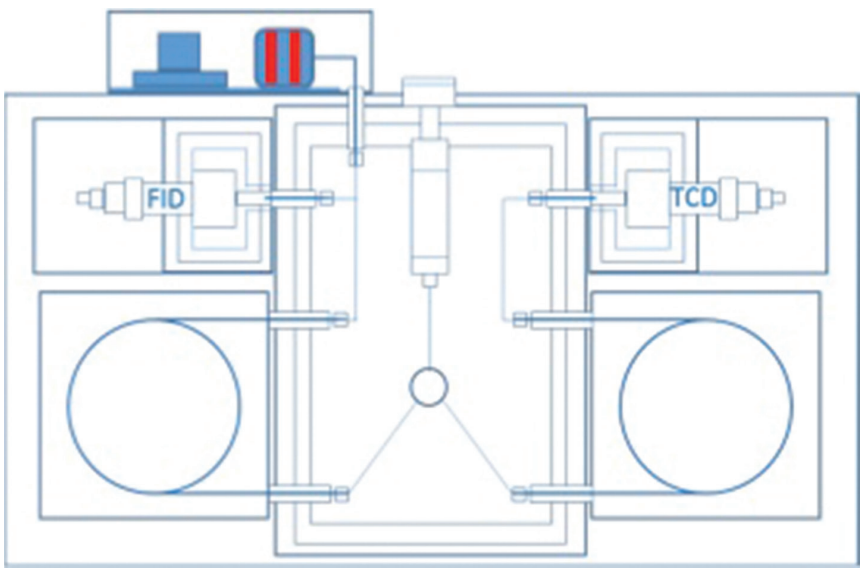
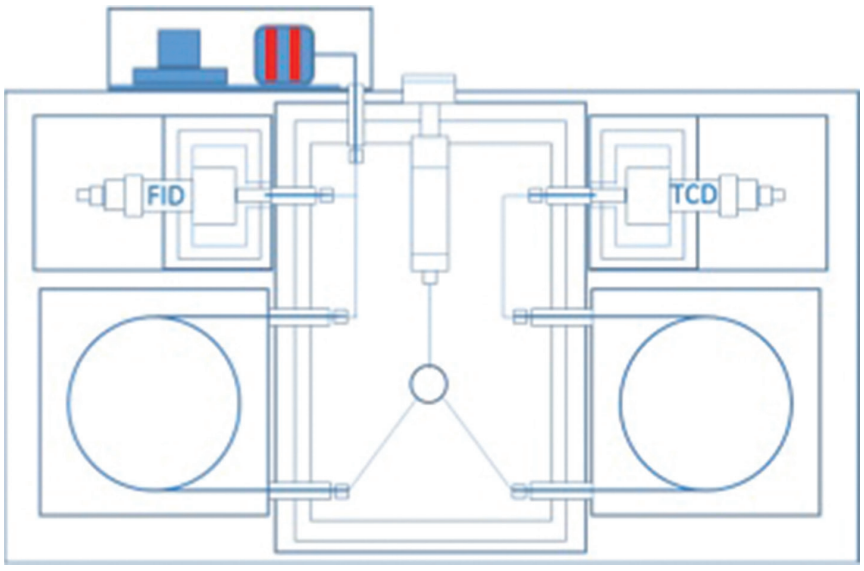
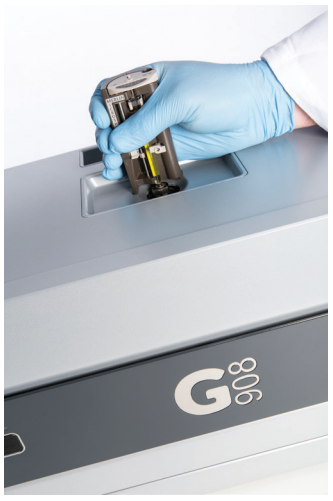
GC - MS ANALYSIS IN HYDROCARBON PROCESSING GOES BALLISTIC





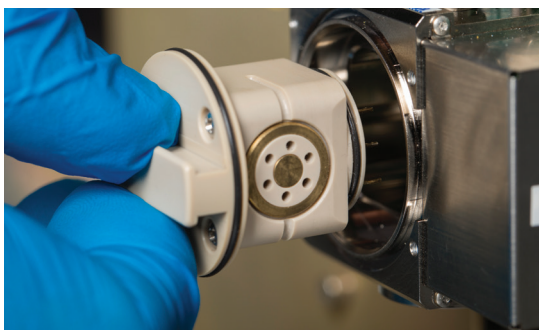
In addition to HPMS, G908 can be configured with both FID and TCD detectors for extended application support.



WHAT IS IT:

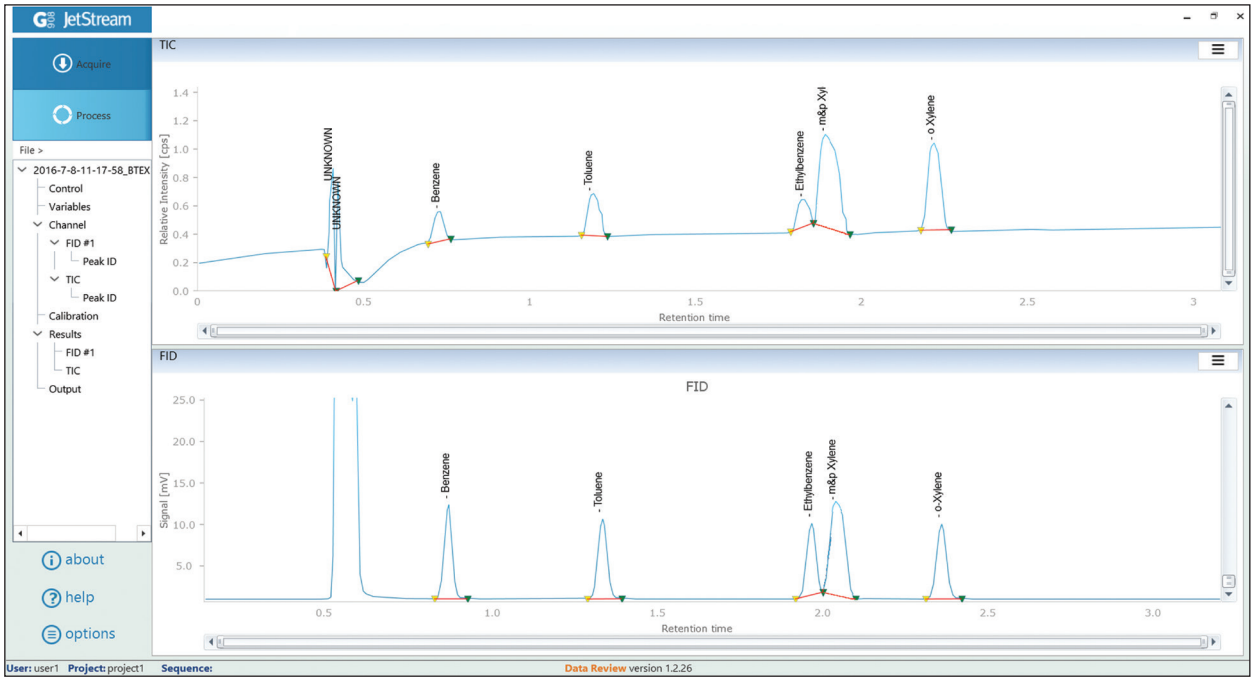
908 Devices' G908 is an easy-to-use analytical tool that integrates chromatographic separations with multiple detection. This includes 908 Devices' award winning high-pressure mass spectrometryTM (HPMS) detector, along with flame ionization (FID), thermal conductivity (TCD), flame photoionization (FPD), and dielectric barrier discharge (DBD). Up to three detectors (HPMS and two others) may be installed in a single system allowing for analysis of a wide range of compounds, confirmatory analyses, and general analytical flexibility.

HPMS features a revolutionary microscale ion trap with a removable compact core that operates at much higher pressures than conventional mass spectrometers. This eliminates the need for bulky and expensive diffusion, turbo, or rotary vane pumps. HPMS can achieve subpart- per-million sensitivity under vacuums as high as 7 Torr. The analytical mass range is currently 16 to 400 atomic mass units (AMU) and can be expanded to include higher or lower masses if needed. The core gas chromatograph (GC) utilizes a ballistic approach to chromatographic separations allowing for analytical runs that are seconds to minutes long as opposed to conventional GC's where separations are typically an order of magnitude longer. For example, complete separations of benzene, toluene, ethylbenzene, and xylene can be accomplished in under one minute. Further, the system can be configured with two independently heated columns to allow for a broader range of target compounds. Alternatively, the two columns can be connected in series to extend the effective column length, or to perform more complex GC x GC separations. Finally, multiport valves can be integrated with the system allowing for gas/liquid phase sample injection, cutting, splitting, column back-flushing and more.



At the heart of our system is a field-replaceable HPMS core. The unique proficiency of HPMS enables expanded analysis capabilities for inline, at-line, lab and field-based applications.

908 Devices' all new JetStream software suite controls data acquisition and processing through a simple and familiar interface designed from the ground up. In addition, an onboard computer handles all system functions and operates independently, allowing for remote control of multiple G908's from a single instance of JetStream.



The operator-friendly JetStream system control and data analysis software seamlessly combines data from multiple detectors into a single report.

All these features are built into a small, rugged enclosure that weighs only 28 pounds when fully configured. This small form factor allows for rapid field deployment, easy remote installation, and mobile operation from a vehicle.

HOW IT WORKS

Injection: samples such as natural gas or refinery gas can be introduced via liquid or gas sampling valves. A stream selector valve can be used in process applications. The chromatographic separations occur on analytical columns which are resistively heated. A conventional GC uses a heated air oven which requires columns of 30, 60 and 100M length.

Resistive heating is so precise it increases the efficiency of the column by reducing band broadening of the analytes. This allows for columns as short as 1m and up to 8m (expandable to 16m in series). Compoundselute from the column as narrow sharp peaks with improved signal to noise over conventional chromatography.

After sample separations occur, the column effluent is directed to a detector such as the HPMS, or by hardware splitting, to two or all three detectors that can be configured. Detector signals are recorded by the JetStream software and combined into a single data file for post-run processing including peak identification, quantification and reporting.

G908 BENEFITS

- Replaceable, compact MS Core
- Ballistic capillary GC column heating
- Smallest Size, Weight & Power Signature
- Operator-friendly JetStream user interface
- Low-maintenance with user serviceable components
- Qualitative and quantitative analysis of BTEX, Nat Gas, Oxygenates, and Sulfur

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