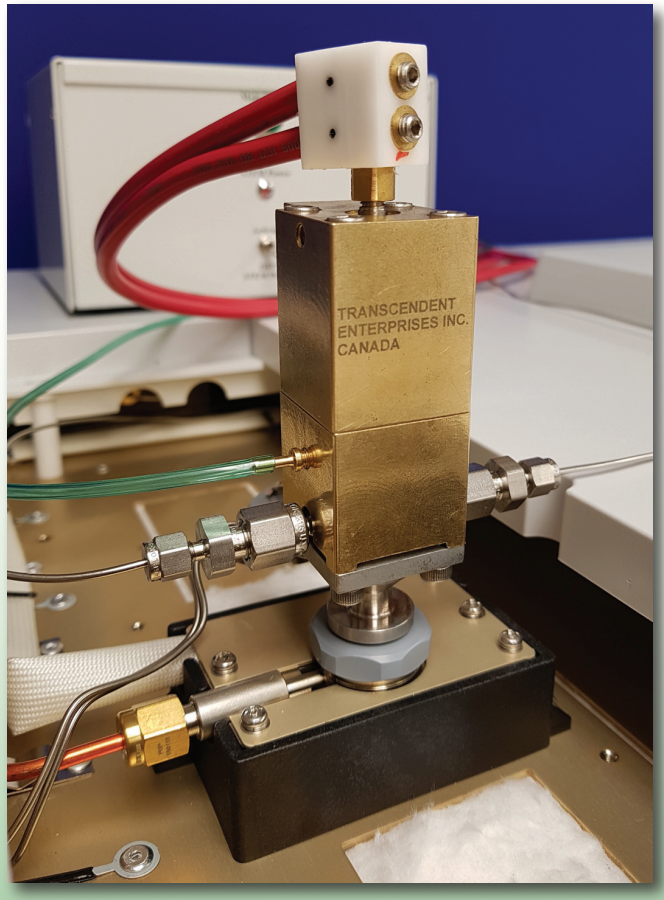
TRANSCENDENT
Enterprises Inc.

www.transcendent.ca

*Introducing...*

# The only GC sample introduction system that allows the analysis of both light and heavy hydrocarbons in live crude oil in a single run.

This Heated and Pressurized Liquid Injection System HPLIS® is particularly useful in petrochemical applications for the analysis of light and heavy hydrocarbons ranging from C2 to C40+. In fact, HPLIS® was specifically designed to resolve issues encountered in the ASTM D7900 / ASTM D7169 methods.




***The patent pending system is approved under ASTM D8003, essentially replacing 2 analyses (D7900 / D7169) into one single injection / analysis.***

HPLIS® overcomes the limitations of conventional liquid injection systems when analyzing pressurized samples and/or those with wide boiling point ranges. Those limitations include:

- Fractionation
- Loss of light ends
- Peak broadening
- Injection speed effects
- Temperature effects
- Pressure restrictions

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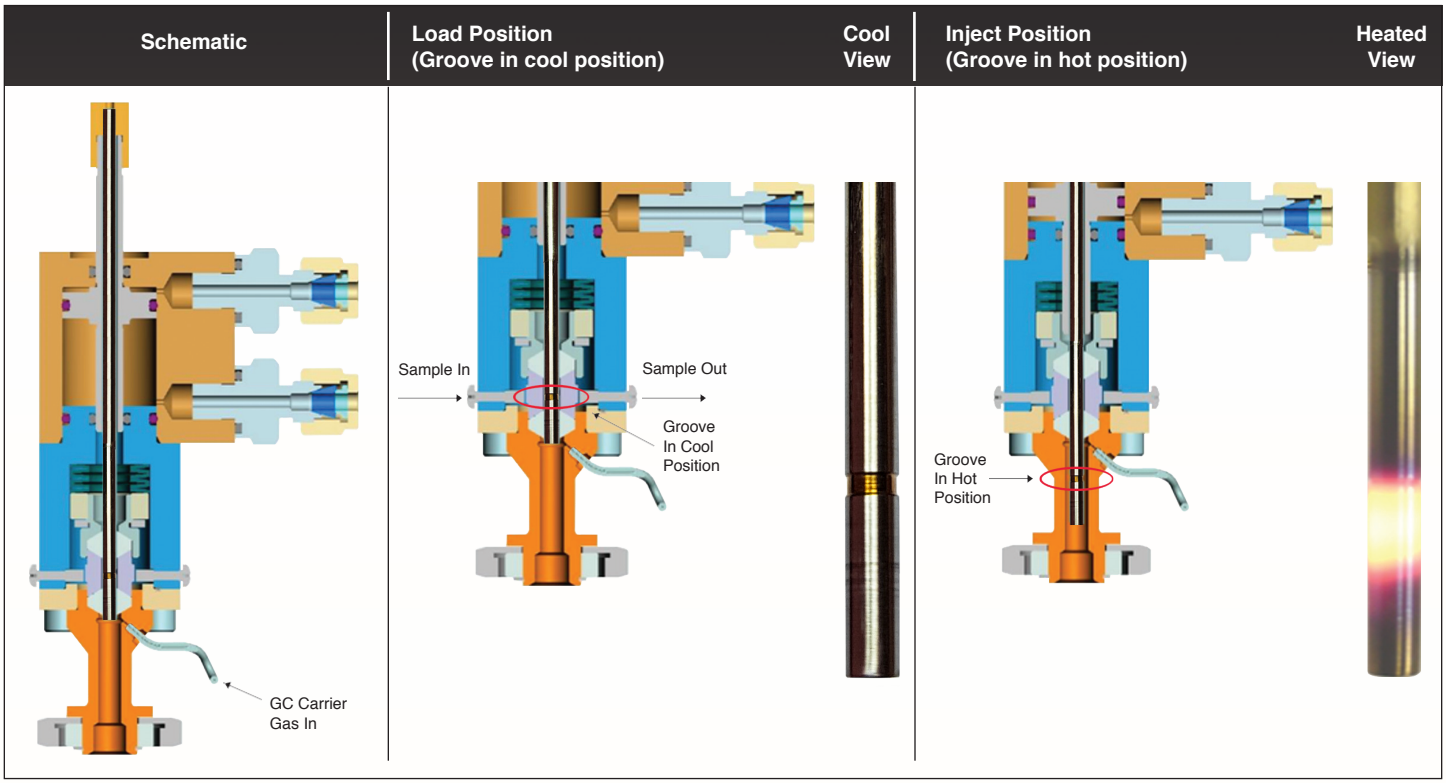
Here's how the HPLIS® works:

The sample is loaded into a groove machined into the HPLIS® stem, in this 'load' position the groove is maintained at an ambient temperature. At the time of injection, the stem is moved into position at the head of the GC column and flash vaporized; allowing the entire sample to enter the GC in a tight, single plug.




The HPLIS® is unique in that the sample components are maintained at a temperature and pressure level that allows them to remain intact until analysis, at which time they are flash vaporized and introduced directly to the head of the GC column.

The HPLIS® …

- Introduces pressurized liquid samples with very broad boiling range components; C2 to C40+
- Is pressure rated to handle the most demanding pressurized liquid sample - ethane (C2)
- Has a variety of stem options (groove volumes) that can quickly and easily be changed to match the application requirements
- Features a fast sample groove temperature rise time (ambient to > 500° in less than a second) to facilitate flash vaporization
- Can be custom calibrated for a specific sample injection temperature
- Is closely positioned to the GC inlet, eliminating cold spots in the transfer lines and related chromatographic complications
- Is reproducible independent of injection speed
- Features "no flow interruption" during injection, maintaining a consistent flow of carrier gas through the GC at all times
- Is compact and simplistic in design and operation, including an integrated pneumatic actuator
- Is compatible with virtually any GC on the market equipped with a split/splitless capillary inlet or direct-to-column injector
- Can be quickly and easily removed for conversion of the GC to a standard syringe injection (i.e. the GC is not married to the HPLIS® device, so the GC retains versatility)

Contact our Instrumentation Team to discuss your application and learn how the HPLIS® can simplify and improve your chromatography for difficult sample components.

Chromatographic Specialties is pleased to announce that we have purchased the manufacturing and distribution rights to Transcendent Enterprise Inc's novel and patent-pending HPLIS® GC injection system.

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