



**ENTECH**  
INSTRUMENTS

*See What's Really There™*



# 2022 CATALOG

Solutions for Chemical Monitoring & Analysis

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## President's Letter



Entech Instruments is continuing its tradition of providing the most advanced and accurate sample preparations systems available for headspace and gas sample analysis by GC and GCMS. Our new Multi-Capillary Column Trapping Systems (MCCTS) are transforming the way that gas phase sample preconcentration is performed prior to GC injection, all without the use of liquid nitrogen or even electronic cooling systems. These "fan cooled", extremely robust and reliable multi-stage capillary column traps manage water and CO<sub>2</sub> hundreds of times better than any packed trap system. This means much faster release for better chromatography, supporting "faster" GC methods, while also demonstrating far better immunity to contamination when exposed to high concentration

samples. Our MCCTS traps have been implemented in a full cryogen free TO15 solution with much faster GC injections and shorter run times than other TO15 systems on the market. Other applications using this revolutionary capillary trapping technology will also soon be announced.

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Entech's patent pending Sorbent Pen™ technology takes SPME to the next level by providing enhanced sensitivity, improved quantitation, and greater robustness than its fiber-based predecessor. Sorbent Pens utilize a unique flow through cartridge that forms a seal on a vial allowing a vacuum to be created within the vial. This new technique called VASE (Vacuum Assisted Sorbent Extraction) has been demonstrated to cover the entire range of analytes from the lightest volatile compounds (Freon 12/Vinyl Chloride and others) to very heavy 5-6 ring PAH compounds, while remaining in the headspace to avoid actual contact with the sample matrix. With 50-150x higher phase loading and the use of traditional adsorbents with thousands of times more surface area than SPME, the Sorbent Pen™ can fully extract difficult compounds from complex matrices providing superior sensitivity and reproducibility. Sorbent Pens are also available for performing Diffusive and Active air monitoring, making the Sorbent Pen technique extremely versatile. Our newly released SPR40 -Sample Preparation Rail promises to be a game changer for headspace sample preparation and general thermal desorption methods. Rather than desorbing a TD tube into a completely different instrument with separate traps, transfer lines, and rotary valves to have to clean and maintain, the SPR40 allows thermal desorption of Sorbent Pens directly into a GC or GCMS to allow dramatically improved recovery, consistency, and easy of maintenance. Watch for a new wave of applications coming out in 2019-2020 using the SPR40 Robotic inlet.

Our unmatched Silonite™ surface coatings continue to be perfected, resulting in the most consistent, durable, and inert coatings available for GC inlet systems and for mercury vapor handling without surface interactions. Silonite™ surface treatments play a vital role in achieving our ultimate goal; to provide our customers with complete solutions for "analytical grade" VOC and SVOC handling and inlet systems that can sample, store, and recover virtually all GCMS compatible compounds.

Finally, for US EPA Method TO-15 and China HJ-759, Entech is proud to be the only supplier that manufacturers and supports the complete solution for sampling and analysis of airborne contaminants using Silonite™ coated stainless steel canisters. Entech has assembled an extraordinary and talented team of Chemists and Service Engineers with a combined knowledge of over 200 years of laboratory and field experience – to provide our clients with premier customer service and on-site support. To our valued customers we would like to say thank you for your patronage through the years and we look forward to servicing your analytical needs for many years to come.

Sincerely,  
Daniel B. Cardin – President



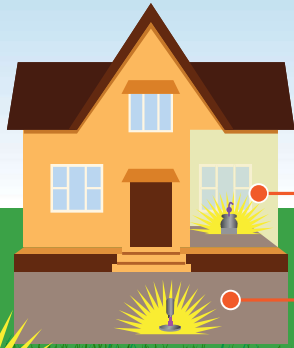
Entech Instruments is a leading developer and manufacturer of analytical instrumentation that supports professionals around the world in the Environmental, Industrial Hygiene, Food & Beverage, Product Testing, Forensics, and Clinical Analysis markets.

To provide solutions for such a diverse set of industry applications, Entech has assembled an extraordinary and talented team – a combined knowledge of over 200 years of laboratory and field experience – to provide our clients with premier customer service and on-site support. We invite you to share your application challenges and requirements so we can create a customized solution just for you.

~ The Entech Team

# The All-In-One Soil Gas Sampling Solution

## Solutions for all 5 ZONES



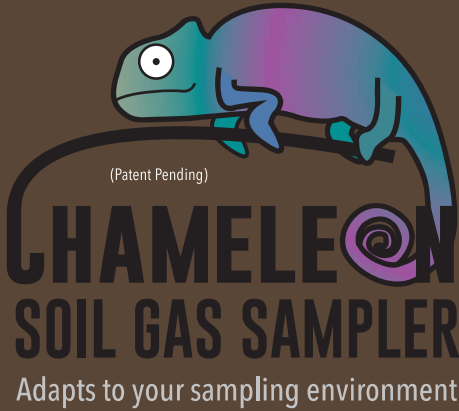
**1 Indoor Air Quality**  
Soil gas levels inside structures.

**2 Sub Slab / Vapor Intrusion**  
Reveals the soil gas concentrations right below buildings & potential for vapor intrusion over time.

**3 Surface Measurements**  
Determine contamination levels at the surface, or rate of emission from the surface into the air.

**4 Shallow Probe**  
For measuring soil gas concentrations near the surface.

**5 Monitoring Well**  
For measuring soil gas concentrations anywhere in the Vadose Zone.



Vadose Zone

Capillary Zone

Ground Water Table



## Advantages of Soil Gas Sampling with Canisters

Sampling soil gas into canisters provides significant advantages over the use of passive adsorbent samplers with regard to both maintaining the integrity of the sample in the field and ensuring that the best analytical technique is used in the laboratory.

Canisters eliminate the need for pumps, batteries, and media selection, and the same sampling approach can be utilized for any gas concentration while being universal for all compounds. Furthermore, humidity and temperature concerns inherent with tube sampling do not affect canister accuracy.

Entech has a long history of engineering turn-key solutions specific to the environments being sampled. Designed with feedback from numerous sampling professionals, the Chameleon provides an all-in-one solution that is changing the way soil gas studies are conducted world-wide.

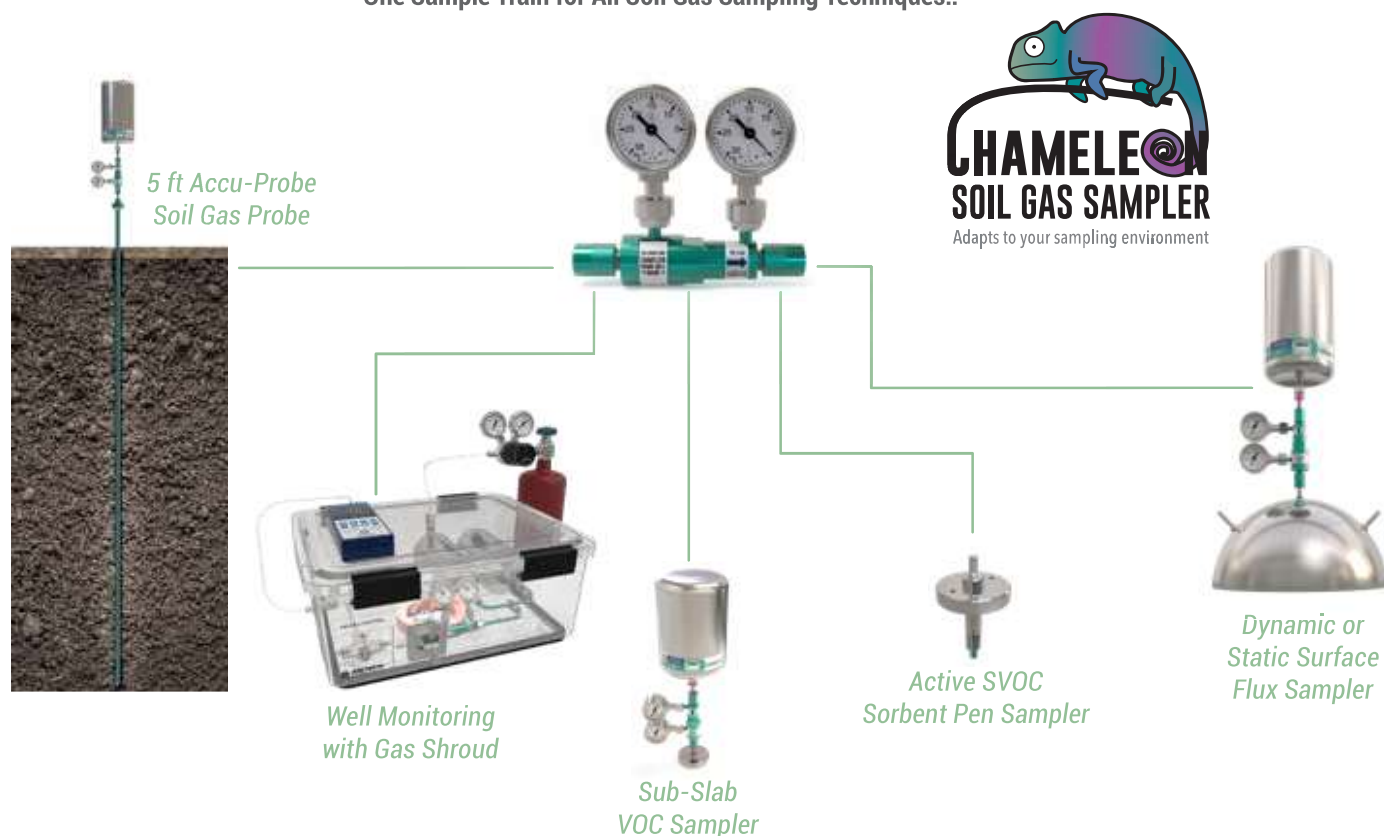
### Sampling systems must be considered an extension of the laboratory.

The Chameleon improves the accuracy of soil gas sampling by applying basic principles of gas chromatography. Chameleon maximizes recovery while minimizing carryover to yield the most accurate soil gas sample train available.

- Ensure all surfaces are inert (Entech Silonite™ coated stainless steel).
- Minimize surface area and shorten path lengths to canister.
- Minimize leak prone connections by engineering and machining custom solutions.
- Eliminate absorption (no plastic tubing where possible).
- Prove system is leak-tight before delivery to field.
- Isolate the flow path from the outside world during transportation.

## The Chameleon Soil Gas Sampling Train

One Sample Train for All Soil Gas Sampling Techniques!!

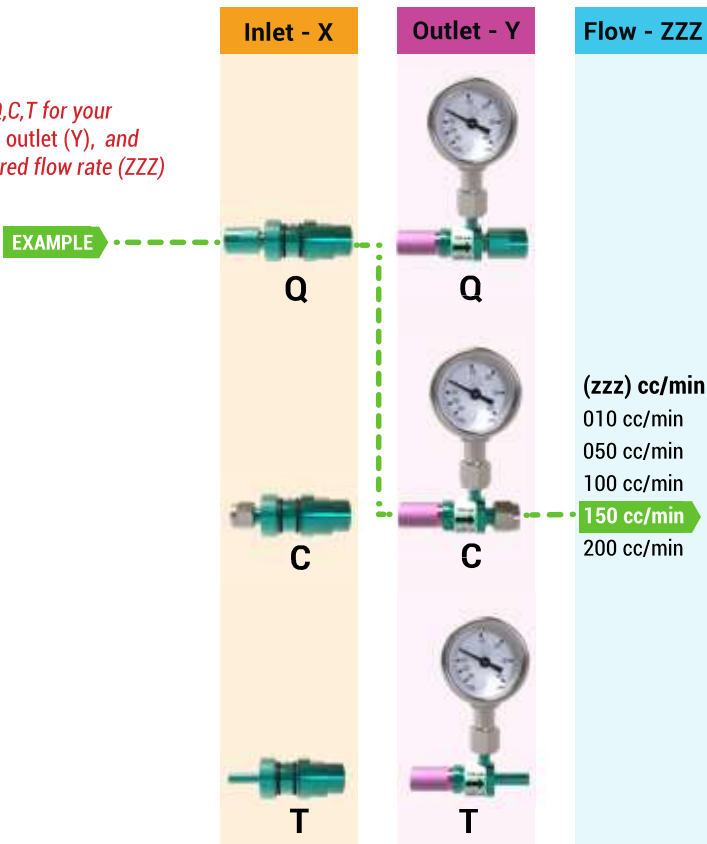


# Create Your Chameleon Part Number

Combine Any Inlet with Any Outlet!

## Configure your part # SG-CHAM - X Y - ZZZ

Substitute Q,C,T for your inlet (X) and outlet (Y), and append desired flow rate (ZZZ)



- The Chameleon can be configured to minimize compression fittings based on the line or fitting to which it connects.
- The inlet and outlet can be configured separately to optimize the sample train.
- The down hole vacuum gauge monitor can be added to any configuration, and verifies that excessive vacuum is not forming in the soil (<7.3" Hg vacuum).
- All configurations can be maintained under vacuum during shipment to the field to perform the shut-in test (leak test) automatically.

Do you need the Optional down-hole gauge?

ADD THIS PART # TO YOUR ORDER

PN SG-CHAM-DHG



COMPLETE **SG-CHAM-QC-150**

Example: SG-CHAM-QC-150 plus downhole gauge SG-CHAM-DHG

## Easy Maintenance and Replacement of All Components

