



5555 Dry Fork Road
Cleveland, Ohio 44130
(513) 367-6699
www.cincinnati-test.com

**The Need for Proper Part Evacuation and
Tracer Gas Management
For Sniffing Applications Using the
TracerMate CS Charge Solution**



The Need for Proper Part Evacuation and Tracer Gas Management For Leak Testing by Method Sniffing

This case study on the need for proper part evacuation and tracer gas management for leak testing by method sniffing applies to the following markets (i.e. HVAC/R, Appliance, Automotive, and other Industrial/ Consumer on components/products)

Problem Statement

While trying to Tracer gas leak test in manual sniffing environment, it can be difficult for customers trying to locate leaks on product. This may include but not limited to filling the part(s) and venting in the test area.

Problems:

1. Parts are not properly evacuated before being filled with a tracer gas. By just filling the part with a tracer gas and not evacuating you get stacking affect. A stacking affect is when a part is being filled with a tracer without getting rid of the atmosphere or air left in product. When the sniffing operation takes place, a part with a potential leak, is leaking atmosphere or air instead the tracer gas thus masking a potential leak.
2. After the sniffing operation is complete the tracer gas is lingering which leads to an elevated tracer gas background for the next test cycles to come. This can lead to a stoppage in production, having to wait until the tracer gas levels lower back down allowing a another product to be tested.
3. Entire sniffing operations become very time consuming, non-repeatable, or traceable when not being managed in an automated state.

TracerMate CS Solution

The TracerMate CS charge system is cost effective standard product solution designed to automate the sniffer leak test cycle by controlling the part evacuation, tracer gas full functions, by leading the operator through the sniffing portion of the test cycle, and making a test status decision accept or reject.

Benefit 1

The part is properly evacuated getting rid of atmosphere or air filled with tracer gas allowing a potential leak in a product to be located, removing the gas stacking affect.



The Need for Proper Part Evacuation and Tracer Gas Management For Leak Testing by Method Sniffing

Benefit 2

The part is properly vented away from the test area and re-evacuated. This is done to get rid of any residual tracer gas left in the test area for the next test cycle.

Benefit 3

The whole test cycle is automated or semi-automated allowing for a quicker cycle time, more repeatable, and a controlled test process for multipliable test points.

Benefit 4

The TracerMate CS evacuation and fill instrument communicates with the most popular brand mass spectrometers and sniffer instruments on the market today. The communication feature varies according to the capability of the tracer gas instrument being used, in most cases it allows for a more precision test. Examples include:

- Sets timers for minimum leak location test requirements
- CS instrument displays PASS/FAIL based on leak detector results
- CS instrument displays leak rate measured by leak detector for each location
- Many more functionality / Integration products

Benefit 5

The TracerMate CS also has other test benefits that can be utilized if needed: Additional capabilities include pressure decay leak test both gross and fine fill, pressure proof test, gas mixing, occlusion or capillary test, tracer gas reclaim vent, nitrogen purge, backfill cycles and more.

Summary

The CS Charge Solutions takes care of all the issues plaguing tracer gas sniffing operation. This includes: gas stacking, contaminated test areas to non-repeat sniffing, and integrated communication with tracer gas leak detector.

Tracer Gas Sniffer Testing

- Manual
- Auto Mode
- Sniffer Clam-Shell
- Up 20 Test Points
- Communicates with Leak Detector for Streaming Leak Rate to Make Acc/REJ Decision

