



# PURE

**SAVE HELIUM**

SAVE MONEY

# THE BIGGEST PROBLEM FACING HELIUM LEAK TESTING TODAY

With helium costs rising year on year, and costs set to continue rising, it can be difficult to complete leak tests to a high standard whilst staying in budget.

Test gasses can only be diluted so far before the integrity of the test is compromised, and having to buy more helium for every test only pushes the helium shortage further and prices higher. Now more than ever, reusing helium is of paramount importance.

Historically, it has been a challenge to implement a helium recovery system retrospectively, particularly in low-pressure applications such as fuel or gas tanks. This is due to helium dilution in the test being unsustainable when recycled, or subsequent fresh helium topup draining away any cost savings.

That's why VES have created **PURE** - a Helium Recovery and Purification System.



# SOLVING THE SHORTAGE WITH PURE

The unique PURE system recovers helium from any leak test machine.

- VES' PURE system purifies to a much higher concentration than any other helium recovery solution.
- PURE is plug-and-play, there's no need to shut down production for days. Our quick and easy setup lets you start boosting line profitability straight away.
- It is compatible with any HeLT using helium at < 3 bar.
- PURE is transferable between machines, meaning one PURE system could be transferred between high volume lines to meet production requirements.
- PURE vastly outstrips other helium recovery systems in both helium recovery and purity.
- PURE can accept helium mixed in air/nitrogen as low as 50% and purify it to your required machine input pressure and concentration - so even low leak rate tests can be run at high efficiency, without widescale parameter changes.
- PURE does not require changes in the machine's pre-evacuation levels, so there's no need to drastically change cycle times to save helium.



“Our expert engineers created the PURE system because we wanted our customers to get the most from their helium, especially now costs have risen, regardless of what testing machines they use.”

Luke Sansby  
Sales Director, VES

# PURE FEATURES

## WHY SHOULD YOU CHOOSE PURE?

**01**

PURE is a self-contained Helium Recovery Unit. It only requires a gas connection and a comms connection, making it quick and easy to install on any HeLT, with minimal disruption to production.

The system does not need to be flushed with pure helium before use - it is topped up gradually inline during testing, so there are no additional helium costs from system prep.

**02****03**

Our technology enables PURE to accept helium content as low as 50% and deliver it back with a concentration between 90-99% at 5 bar. Simply connect PURE to any machine without any need to change machine setup.

Other helium recovery systems require a high concentration of helium to recover any usable gas, but because PURE concentrates helium so effectively, even your low concentration leak tests can have high recovery efficiency.

**04****05**

The built-in helium concentration meter dynamically reads the helium concentration entering the leak testing system, giving you full traceability of helium concentration used in leak tests.

# RETURN ON INVESTMENT

## Scenario One



A test on a 181-litre volume pickup truck tank. The tank was pre-evacuated to 29 mbar and injected with 120 mbar of fresh helium, resulting in a 77% helium concentration during the test. After the test, the tank was evacuated to 55 mbar and the evacuated gas exhausted from the system.

After implementing PURE, the exhausted gas was recaptured and the 77% helium mix was re-concentrated to >99%. This gas was fed back into the machine at 2 bar.

**Implementing PURE saved \$0.27 per tank, resulting in a 1.6 year payback.**

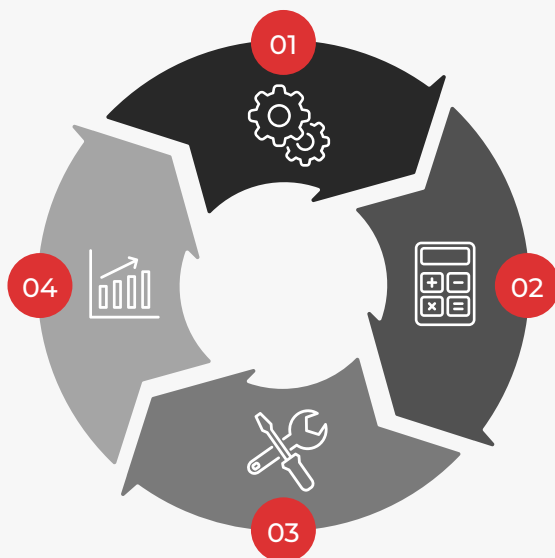
## Scenario Two



A test on a 90-litre volume car tank. The tank was pre-evacuated to 6 mbar, and 74 mbar of fresh helium was injected on top, meaning a 91% helium concentration was used during the test. Post-test, the tank was evacuated to 31 mbar and the evacuated gas exhausted from the system.

Using PURE, the exhausted gas was captured and the 91% helium mix was re-concentrated to >99% and fed back into the machine at 2 bar.

**Using PURE saved \$0.11 per tank and demonstrated a 2.0-year return on investment.**



01

Take your existing helium leak testing machine(s) from any manufacturer.

02

We will calculate your ROI using your helium concentration percentage and the percentage of gas removed after test.

03

Fit your PURE system (requires only a gas connection and a comms connection) and start recycling and re-purifying helium up to 99% purity.

04

Instantly start saving helium and increasing line profitability.



# PURE MODEL SPECIFICATION



From the built-in helium concentration meter to the simple HMI display, every aspect of PURE is designed to make helium recovery and purification simple, flexible, and traceable!

## Internal Elements

- Gas Storage Bottles and Valve Plate
- Helium Filtration Technology
- Compressor
- Gas Inlet 1.25" BSPP Female
- Helium Atmospheric 400 Litre Storage Bag
- Large Buffer Volume for Purified Helium

## External Elements

- HMI Display
- Removable Panel for Access (Side)
- Double Hinged Doors for Access (Front)
- **Height:** 2200mm
- **Width:** 1409mm
- **Depth:** 2095mm



# WHO ARE VES?

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Vacuum Engineering Services are a specialist company offering leak test solutions to a variety of industries worldwide.

Formed in 1994, we offer unrivalled expertise in helium leak testing. We use our design and manufacturing expertise to provide bespoke leak detection systems that can be found across the world and are actively supported by our worldwide aftersales network.

Our leak test machines are used for guaranteeing leak tightness to very high levels and are used across the automotive, HVAC, fire safety, and nuclear industries. These machines are utilised on production lines in operation 24/7, where reliable results are vital.

# SERVICE AND SUPPORT

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At VES, ensuring reliable machine performance is key.

We offer full after-sales service through our service department, which provides emergency cover, service contracts and machine upgrades. We also provide service for vacuum systems and other manufacturers' machines subject to inspection.

Our service coordinators organise a highly trained team of engineers to meet our customer's requirements to ensure reliable performance from our machines.

# WHO USES VES?



Interested in our after-sales service?

Call us on  
**0161 866 6307**



PURE



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