Run Safer, Run Smarter, Run Better

Alfa Laval Integrity Testing
– the proactive approach to maintaining your gasketed plate heat exchangers

Alfa Laval Integrity Testing can identify microscopic cracks and material fatigue before they develop into harmful leaks. By giving you this detailed understanding of your plates and gaskets, you can protect your equipment, and take control of its maintenance.

Alfa Laval Integrity Test

What is it?
Gasketed plate heat exchangers are resilient, but like all equipment they require proper maintenance.

Alfa Laval Integrity Testing can identify the smallest of emerging flaws, so that you can deal with damaged plates and gaskets before unexpected breakdowns occur.

This service offers a new way of giving you clear awareness about your unit's status, letting you run in the safest mode.

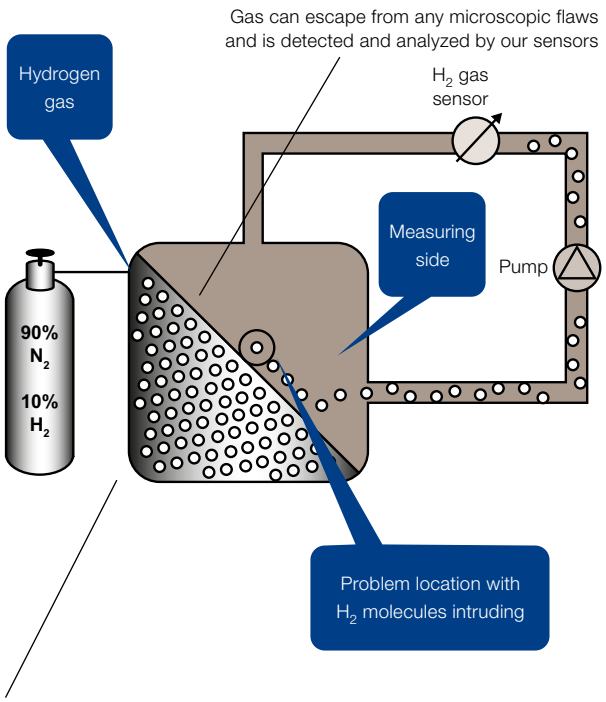
- **Thinking Ahead.** Leaks in gasketed plate heat exchangers lead to unplanned shutdowns or unexpected downtime, and can cause entire batches of product to be damaged or lost. Our integrity test helps you anticipate potential cracks and leaks, so you can act before any damage is done.
- **Knowledge.** Our integrity test helps you understand more about the condition of your plates and gaskets. With this knowledge you can schedule servicing to suit your business needs and stay in control of your production process.
- **Reliability.** A proactive approach gives you confidence in the reliability of your equipment, so you can plan for the future with certainty.

How it works

Our integrity testing offers unmatched convenience, accuracy and safety.

A non-toxic, non-flammable mix of hydrogen and nitrogen is pumped through your gasketed plate heat exchanger, revealing any microscopic cracks, corrosion or material fatigue.

Our precision sensors pick up any discharge of gas and can even identify the type of flaw (micro-crack, corrosion, gasket failure etc.) The test can take as little as 15 minutes per section.



Hygienic, inert mixture of nitrogen and hydrogen pumped through one side of the heat exchanger

The Alfa Laval method

In designing our integrity test, we chose a methodology that delivers accuracy, safety, speed and sustainability.

- **Accuracy.** The 5-10% hydrogen-nitrogen mix is the ideal substance for testing the condition of your gasketed plate heat exchangers, as it diffuses quickly and completely revealing flaws smaller than liquid can permeate anywhere inside your units.

  Since the hydrogen-nitrogen mix dissipates quickly after use and has a very low ppm in the atmosphere, it has a lower probability of false positives than other tracer gases. Our automated detection system minimizes the possibility of user error.

- **Safety.** Our hydrogen mix is non-flammable (ISO 10156 classified), non-toxic (approved for use in the food industry) and does not stress or corrode plates or gaskets.

- **Speed.** Testing your gasketed heat exchangers is quick and convenient, as it does not involve opening the plate packs. We simply connect the gas pumps to a drained* unit and the results can be seen 15 minutes later. It doesn't require cleaning or any other post-test procedures and can even be used with hard-to-access units.

- **Sustainability.** Unlike helium, which is a scarce and non-renewable natural resource. Hydrogen and nitrogen are sustainable, non-scarce resources that can be used without environmentally harmful outcomes.

* Unit does not need to be fully drained. Some remaining water will not affect the result of the test.

How the Alfa Laval method compares with other field tests

	Inspection range / failures					
Methods – field testing	Plate cracks	Micro cracks >30 µm	Micro cracks <30 µm	Corrosion	Fatigue	External gasket leakage
Water pressure test	✓	×	×	×	×	×
Conductivity test	✓	×	×	×	×	×
Tracer fluid test	✓	✓	×	×	×	×
Field dye test*	✓	✓	✓	×	×	×
Field Helium test**	✓	✓	✓	×	×	×
Alfa Laval Integrity Test	✓	✓	✓	✓	✓	✓

*Introducing substance that require cleaning afterwards.
**Require vacuum & risk for background contamination.

How to contact Alfa Laval
Up-to-date Alfa Laval contact details for all countries are always available on our website at www.alfalaval.com