



# Calibration Leaks

## THE EASY WAY TO CALIBRATE HYDROGEN LEAK DETECTORS

Leak testing is a matter of quantifying leaks. To be able to correctly accept/reject test objects you need to measure to a set standard. You also need to calibrate your leak detector against a reliable reference leak. INFICON calibration leaks for hydrogen leak detectors cover a wide range of leak rates to suit your specific application.

For maximum accuracy, our calibration leaks are equipped with a specially developed diffuser nozzle. This nozzle allows the gas to spread evenly after leaving the leak without variations caused by air convection. The distinctive diffuser holder also eliminates the risk of varying or irregular readings depending on the way the probe approaches the leak. The calibration leaks are designed to suit INFICON Hydrogen Leak Detector Sensistor ISH2000, but can easily be used to calibrate most gas detectors. The INFICON family of calibration leaks for hydrogen leak detectors include bigger leaks (Types A-C) and smaller leaks (Types E and G). Leak Type A is intended for accumulation testing only. All leaks are traceable to NIST, NMIJ, NPL, PTB, etc., through the "Mutual Recognition Arrangement of the BIPM".

### FEATURES AT A GLANCE

- Suitable for industrial applications
- Simple to use
- Special nozzles included for all INFICON hydrogen leak detector hand probes (not Leak A)
- Traceable to NIST, NMIJ, NPL, PTB
- Certificate included
- Available in different flows
- Refillable
- Suit different concentrations of hydrogen tracer gas

### TYPES AND CONNECTIONS

#### A - C

Sintered stainless steel.

Inlet: Compression connector for 6 x 4 mm and 1/4" x 5/32" tubing. ISO G1/8" internal behind connector.

Outlet: ISO G1/8" external.

Purge valve: Plug to be opened with 2.5 mm Allen key (hex drive). M5 internal behind plug. (Fits also UNF10-32).

#### E and G

Crimped metal capillary.

Filling connection: 1/4" male NPT, adapter for male ISO 1/4" included.



**CONTENT AT DELIVERY**

**Type A**

- Calibration leak assembly comprising leak and purge valve assembly
- Red G1/8" gasket
- Collet nut for connection to 1/4" tubing (marked red)
- Calibration certificate
- Delivery and storage case
- Manual

**Type B and C**

- Calibration leak assembly comprising leak and purge valve assembly
- Diffusor holder (for hand probe calibration)
- Diffusor filter (2 off)
- White probe guide ring for calibration of 8 mm tip probes
- Black probe guide ring for calibration of 10 mm tip probes
- Red G1/8" gasket
- Collet nut for connection to 1/4" tubing (marked red)
- 2.5 mm Allen key (hex drive) for purge valve and assembly of diffusor
- Calibration certificate
- Delivery and storage case
- Manual

**Type E and G**

- Reference leak assembly
- Thread adapter (NPT-ISO)
- Diffusor holder (for hand probe calibration)
- Diffusor filter
- White probe guide ring for calibration of probes with 8 mm tip
- Black probe guide ring for calibration of probes with 10 mm tip
- 2.5 mm Allen key (hex drive) for assembly of diffusor
- Calibration certificate

**TYPE A**



**TYPE B AND C**



**TYPE E AND G**



**SPECIFICATIONS AND ORDERING INFORMATION**

Target flow for standard leaks:

Type	Part no.	Nominal flow** atm ml/s	Accuracy	Equivalent to g/yr (R134a)	For equivalent flow in: mbar.l/s or atm cc/s (air)	mbar.l/s or atm cc/s (5%H <sub>2</sub> /95%N <sub>2</sub> )
A*	590-420	5x10 <sup>-2</sup> (Air)	±2 %		multiply with 1	multiply with 1.04
B	590-421	5x10 <sup>-3</sup> (Air)	±2 %		multiply with 1	multiply with 1.04
C	590-422	5x10 <sup>-4</sup> (Air)	±2 %		multiply with 1	multiply with 1.04
E	590-427	7x10 <sup>-5</sup> (5%H <sub>2</sub> /95%N <sub>2</sub> )	±10 %	10	multiply with 0.96	multiply with 1
G	590-429	2x10 <sup>-5</sup> (5%H <sub>2</sub> /95%N <sub>2</sub> )	±10 %	3	multiply with 0.96	multiply with 1

A-C leaks are certified at 1 bar pressure, E and G leaks shall be pressurized according to certificate.

\*Type A leaks are delivered without diffuser nozzle and are recommended for accumulation testing only. They can not be used for calibrating hand probes with 5% H<sub>2</sub> / 95% N<sub>2</sub>.

\*\*A-C leaks are delivered with leak size within ±10% of nominal flow, E and G leaks with leak size within ±25% of nominal flow.

