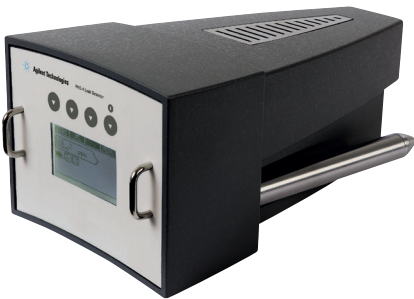


PHD-4 Sniffer Leak Detector

Best Practices to Ensure Efficient Performance



Transportation and Storage

The appropriate storage and transportation of the PHD-4 require the following environmental conditions to be respected:

- temperature: from -20 °C to +70 °C
- relative humidity: 0 - 95 % (non-condensing)

Operation

The PHD-4 operation requires the following environmental conditions to be respected:

- temperature: from +5 to +35 °C
- relative humidity: 0 - 95 % (non-condensing)

The product should be switched on with regularity.

Sensor life

In case of infrequent use, it is recommended to perform a monthly power cycle by switching the unit on once a month, for 30 minutes. This allows for a self-test along with helium-free operation.

Correct use

- turn on the unit in He-free environment (standard room, free of any helium source)
- allow the unit to warm up in low sensitivity (default setting) for a few minutes and press "Auto Zero" (AZ)
- perform a leak check in the low sensitivity mode of operation
- if no leak is detected, switch to the high sensitivity mode of operation
- after the leak checking procedure and before turning the unit off, leave the PHD-4 on for a few minutes in an environment free of helium
- turn the unit off

Do not allow the unit to work in high helium concentrations for long periods of time.

Once helium is detected, move the probe away from the source.

High helium concentration saturates the PHD-4 sensor (ion pump).

If PHD-4 sniffs a very large quantity of helium and the sensor gets "saturated", you can clean it by following the procedure indicated in the [user manual](#) (page 114).

Once a year the PHD-4 sensor reading needs to be adjusted to eliminate any possible imprecision.

Follow the procedure reported in the user manual (page 115) and use the capillary leak with refillable reservoir ([PN 9693540](#)) to adjust PHD-4 reading.

Sampling pump life

Do not let the unit sniff any critical substances, like water, dust, etc.

Check the glass-wool filter (internal filter kit [PN SR03702959](#)) monthly. If it appears dirty, replace it immediately; otherwise, replace it every 6 months.

Maintain probe with sampling line (PN SR03702538) clean and dry, replace it when necessary.

Check and clean tip probe sintered filter ([PN SR2890001201](#)) regularly. Replace it when necessary.

When the unit is OFF for a long period of time, it should be stored in a plastic bag, to protect it.

If necessary, you can replace the PHD-4 sampling pump ordering it in Agilent eStore ([PN SR03702513](#))

Battery life

Fully charge your PHD-4 battery before its first use and whenever it's depleted.

If you anticipate a period of inactivity for your instrument, store the battery in a cool, dry place and recharge it periodically to prevent self-discharge.

Check your battery performance regularly.

If you notice a significant decrease in operating time or a decline in efficiency, it may be necessary to activate the battery maintenance function (see user manual page 118) or replace the battery ([PN SR03702609](#))

Find more details about PHD-4 use in the PHD-4 [Quick Reference Guide](#) or PHD-4 [User Manual](#).

www.agilent.com/en/product/vacuum-technologies/helium-leak-detectors/portable-sniffer-leak-detector

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