



# Pernicka 700H

## Cumulative Helium Leak Detector

HERMETIC TESTING FOR THE  
NEXT-GENERATION OF SEALED DEVICES

### STATE-OF-THE-ART HELIUM LEAK TESTING SYSTEM FOR LAB OR FACTORY OPERATION

Today's high-reliability space/satellite parts, implantable electronic medical devices, or semiconductor packages require rigorous new testing methods that protect your investments in design, production and development. With industry leading reliability and precision, the Pernicka 700H is a robust and cost-effective testing platform that delivers proven performance in any lab or production environment.

#### ULTRA HIGH VACUUM FOR ENHANCED PERFORMANCE

The Cumulative Helium Leak Detector (CHLD), a single step leak testing system for sealed packages, combines mass spectrometer expertise with cryogenic ultra-high vacuum. The Pernicka 700H offers hermetic testing superior to conventional Gross Leak and Fine Leak methods. This technique can be applied to any hermetically sealed device which either contains a gas such as Nitrogen, Helium, Argon, Krypton, Xenon, etc. or can be "bombed" with Helium.

#### EFFECTIVE ANALYSIS AND CONTROL

The Pernicka 700H is controlled by an onboard computer that makes it easy to analyze sealed objects and archive test data simultaneously. The database provides a historical record and facilitates the tracking of production yields.

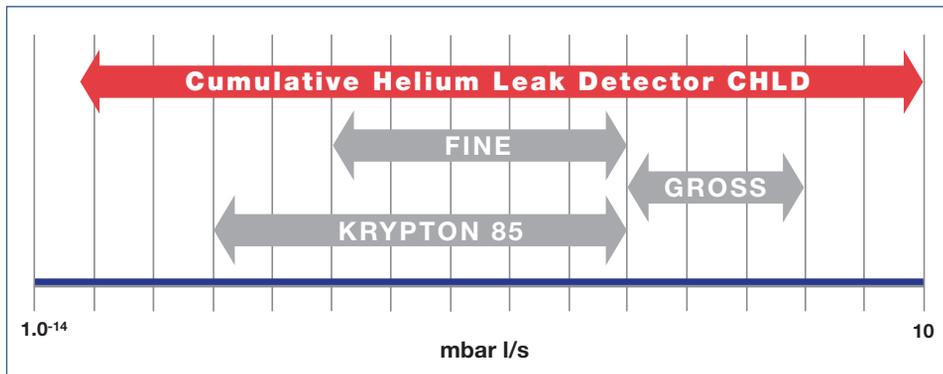
#### APPLICATIONS

- Implantable medical devices
- High-reliability electronics
- Gas-filled electronic components
- Ultra-small volume devices, such as UB packages
- Large hybrid packages

#### FEATURES AT A GLANCE

- High sensitivity for smallest detectable leak rate of  $4.0 \cdot 10^{-14}$  mbar l /s
- Combining Fine and Gross tests into a single operation results in fast and effective testing procedures
- Simultaneously detection of FC's, Nitrogen, Argon, Xenon, etc.
- Environmentally friendly - no toxic or hazardous materials required
- Multiple display modes
- Integrated LCD monitor provides simplified operation
- Onboard computer provides real-time data reading and recording
- Industrial, user-friendly design
- Suitable for leak test methods according to MIL-STD-750, method 1071, procedure CH1-CH2  
MIL-STD-883, method 1014

## LEAK DETECTION RANGE



Graph: Dynamic leak detection range of CHLD technology vs. other methods

## SPECIFICATIONS

Sensitivity	4.0 <sup>-14</sup> mbar l /s for Helium
Throughput	Fine and Gross combined; up to 5000 parts/day possible
Power requirements	13 A @ 110/120 V and 8 A @ 220/240 V; 60 Hz
Service requirements	Compressed air @ 100 psig Nitrogen or Argon @ 2 psig Water cooling (optional)
Operational temperature	15 °C - 28 °C (60 °F - 80 °F)
Weight	160 kg (350 lbs)
Dimensions (W x H x T)	66 x 138.4 x 87 mm 26 x 54.5 x 34.25 in

## ORDERING INFORMATION

	Cat.No.
Pernicka 700H Cumulative helium leak detector system	550-700
Options:	
High Purity Gas Regulator for Helium	551-701
High Purity Gas Regulator for Nitrogen	551-702
High Purity Gas Regulator for Argon	551-703
Stainless Steel Work Top	551-705
Spare Parts Kit	551-708
Large Double O-ring Chamber	551-710
Medium Double O-ring Chamber	551-711
Small Double O-ring Chamber	551-712
Small Metal Seal Chamber	551-715



[www.inficon.com](http://www.inficon.com) [reachus@inficon.com](mailto:reachus@inficon.com)

Due to our continuing program of product improvements, specifications are subject to change without notice.

miba75e1-a (1103) ©2011 INFICON