

## NEPS1000 *advantage* Leaktesting

The NEPS1000 has four selectable options for leak testing. Leak testing can be carried out at three pressure levels depending on the equipment to be tested mechanical strength.

The three pressure levels are

*10.3 Kpa (1.5 psi)*  
*17.2 Kpa (2.5 psi)*  
*34.4 Kpa (5.0 psi)*

The four selectable functions are

*17.2 Kpa (2.5 psi) Measuring the rate of leakage from 0.00*

*10.3 Kpa (1.5 psi) Measuring the rate of 17.2 Kpa (2.5 psi) leakage from the test 34.4 Kpa (5.0 psi) pressure.*

Leak testing with NEPS1000 *advantage* is a simple operation and has a sensitivity which is related to pressure degradation against time.

This allows a user to measure accurate leakage rates with high sensitivity. The NEPS1000 *advantage* has a display resolution of 0.01 psi.

Users can achieve high sensitivities depending on the monitored time for the equipment under test to degrade from the test commencement pressure to the readable pressure against time.

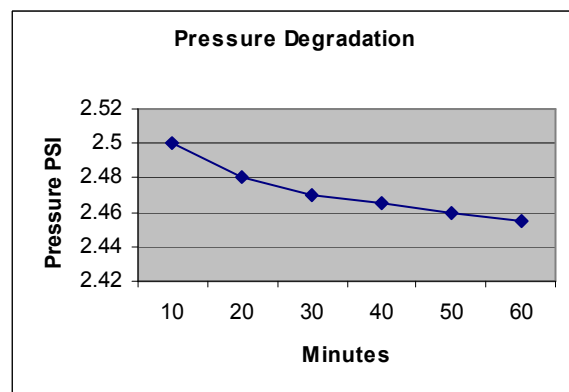
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The rate of leakage must take into consideration the equipment volume.

A leakrate of 0.1 cc/second will have a different result for equipment volumes of 1 litre and 10 litres when considered against time.

A typical production test for leakage that is often used is immersion in water. This has



a typical sensitivity of  $10^{-2}$  to  $10^{-3}$  cc per second at the test pressure. This is the sensitivity and not the actual leak rate which if checked with other lower methods could be an order of 100 to 1000 times better.

Typical sensitivities for NEPS1000 are

*60 Minutes to degrade by 0.01 psi*

*1000 cc volume =  $1.9 \times 10^{-4}$  cc per sec*

*10000 cc volume =  $1.9 \times 10^{-3}$  cc per sec*

**Caution** *Leak testing must be conducted with a stable/constant ambient/equipment Temperature. A variation of 2°C can cause up to a 0.1 psi change in pressure*