



# CALT<sup>®</sup>10 LEAKAGE TESTER



## Description

- Designed for performing pre-shipment leakage tests to ISO 12807 and ANSI N14.5.
- suitable for measuring and calculating the leakage rate of double O-ring seal closure arrangements typically present on transport packages for radioactive materials.
- Measures leakage rate and provides a detailed print-out of the test parameters and results as a Standardised Leakage Rate (SLR)/Reference Air Leakage Rate.

## New Features

- Touch screen interface
- 8-inch colour screen
- IP67 case
- CE and FCC marking
- Impact and vibration tested
- Easy reboot
- Combined measure volume and leakage test if required
- Test history saved for future print outs
- Automatic parameter testing

Customers familiar with the CALT<sup>®</sup>9 operation will be fully conversant with the CALT<sup>®</sup>10, as the testing principles and the test procedure remain unchanged. The CALT<sup>®</sup>9 will continue to be supported for spares, maintenance and calibration.



# CALT®10 Leakage Tester

## Operation

- Designed for ease of operation within safety critical environments. Fail-safe operation provided by the internal computer, which displays a series of screen prompts; leading the operator through the leakage testing procedure in a simple and comprehensive manner.
- All calculations are made by the computer, eliminating potential user calculation error. Full test details and results printed out automatically at the end of test, providing a hard copy data set for operational quality control.
- CALT®10 utilises pressure drop/pressure rise method to provide a quantitative result of leakage rate. The software automatically corrects for the change in dynamic viscosity of air which varies with temperature and converts the measured leakage rate into Standardised Leakage Rate (SLR)/Reference Air Leakage Rate.

## Menu Options

The CALT® software has five main options:

- Leakage Test – Pressure drop or Pressure rise
- Measure Volume – The volume of the interspace must be known or measured before leakage testing can be carried out
- Print-Out – Prints out the last test performed or stored tests
- Gauge – Pressure/temperature gauge with or without a print-out
  - Utilities:
  - Password
  - Calibration
  - Pressure rise or drop
  - Standard (ISO or ANSI)
  - Username to appear on print-out
  - Set system clock and date

## Key Features

- Portable and robust
- High sensitivity Pressure Transducer
- Built-in printer
- User calibration
- Store calibration for spare transducers
- Calibration protected against power loss
- ISO and ANSI test modes
- Flat front panel for easy contamination monitoring
- Temperature probe
- Built-in electric pressuring pump
- Comprehensive print-out
- Battery operated and portable
- External battery socket for charging during storage
- Supplied with 2 cc reference volume
- IP67 case and outer components
- Manual downloadable as App or pdf
- Built under ISO 9001 quality management system
- Nominal test sensitivity of  $10^{-6}$  Pa.m<sup>3</sup>.s<sup>-1</sup> SLR or  $10^{-5}$  ref.cm<sup>3</sup>.s<sup>-1</sup> (dependent on volume, time and temperature)

## Customisation

The instrument has been designed to be customisable to meet specific user requirements. Bespoke software and/or hardware variations can be supplied to satisfy customer-specific operations.

## After Sales Service

A full after sales service is offered including:

- Calibration and complete instrument functional check over
- Spare parts/consumables either installed or supplied for user installation
- Training at Croft or at customer sites
  - Software upgrades and customer-specific changes
- Hardware modification
- Hot line support

Dimensions and Weight	
Width (mm)	470
Depth (mm)	357
Height (mm)	176
Weight (kg)	10

### ISO Leak Test (example results)

```

Croft
Test Date: 17 Aug 2019 15:40:12
CALT10 S/N: 0006
Software Version: 2004V02
User Name: Croft
Asset Number: 0411001
Press Sensor S/N: 279626
Calibration Date: 24 Jul 2019 0:18:21
Calibration Span: 24 days old
Temp Sensor S/N: 258211
Calibration Date: 24 Jul 2019 0:11:48
Calibration Span: 24 days old

-----
TEST INPUT DATA
Test Mode: ISO
Test Reference No: C195001
Design No: 2828
Serial No: 001
Comment: L14
Interspace Volume: 1.080 cc
Interspace Volume: 0.0000000 M3
Temperature: 24.1 DegC
Test Duration: 1 min
Settling Time: 2 min
Test Date: 5.00e-04 bar cc/s SLR
5.00e-05 Pa m3/s SLR
Operator Name: JOW
Viscosity Ratio: 0.999
Standard Pressure: 1013 mBar

-----
LEAKAGE TEST
TIME Pressure SLR
mBar Bar cc/s
15:33:0 1323.09 4.15e-05
15:40:3 1287.50 2.64e-04

-----
TEST RESULTS
Pressure Date/Time
mBar
Atmos: 1009.13
Start: 1303.09 17 Aug 2019 15:33:0
Stop: 1287.50 17 Aug 2019 15:40:3
Exact Test Duration: 430 seconds
Leakage Rate: 2.64e-04 bar cc/s SLR
(2.64e-05 Pa m3/s)
*** PASS ***

Sign: _____
Date: _____

Sign: _____
Date: _____
    
```

### ANSI Leak Test (example results)

```

Croft
Test Date: 17 Aug 2019 15:43:0
CALT10 S/N: 0006
Software Version: 2004V02
User Name: Croft
Asset Number: 0411001
Press Sensor S/N: 279626
Calibration Date: 24 Jul 2019 0:18:21
Calibration Span: 24 days old
Temp Sensor S/N: 258211
Calibration Date: 24 Jul 2019 0:11:48
Calibration Span: 24 days old

-----
TEST INPUT DATA
Test Mode: ANSI (REF cc/sec)
Test Method Name: L14 Test
Test Reference No: C195001
Design No: 2828
Serial No: 001
Comment: L14
Interspace Volume: 1.080 cc
Interspace Volume: 0.0000000 M3
Start Temperature: 24.1 DegC
Settling Time: 1 min
Penetration: 5.00e-04 REF cc/s
Operator Name: JOW
Viscosity Ratio: 0.999
Standard Pressure: 1013 mBar

-----
TEST RESULTS
Pressure Temp Date/Time
mBar degC
Atmos: 1009.13 24.1 17 Aug 2019 15:43:0
Start: 1323.09 17 Aug 2019 15:33:0
Test Duration: 0 min 60 sec

*** NO LEAK DETECTED ***

Sign: _____
Date: _____

Sign: _____
Date: _____
    
```