trutest™
DETECTOR SENSITIVITY TESTER

Smoke Detector Sensitivity Test Equipment

WHY TEST DETECTOR FUNCTION *AND* SENSITIVITY?

Detector sensitivity can, and does, drift. Over-sensitivity leads to false alarms, under-sensitivity to late alarms - or no alarms. The need for functional testing through introducing a smoke type stimulus is well recognized:

"The detectors shall be tested in place to ensure smoke entry into the sensing chamber and an alarm response. Testing with smoke or listed aerosol...shall be permitted as acceptable test methods..."
USA NFPA 72 2000 Table 10.4.2.2 13.g.1

"Each smoke detector shall be tested for operation by introducing smoke or simulated smoke into the detecting chamber..."
CAN/ULC - S-536-04, 5.7.4.1.2

But the requirement for sensitivity checks is also clear in national standards:

"....tests shall be performed to ensure that each smoke detector is within its listed and marked sensitivity range..."
USA NFPA 72 2000 Table 10.4.2.2 13.g.1

"....each detector shall be tested to confirm that it is within its rated operating range..."
CAN/ULC - S536-04, 5.7.4.1.3

With its measured introduction of listed smoke aerosol to the sensing chamber of the installed detector, Trutest enables the functional and sensitivity checks to be combined within a single, cost effective test.

A revolutionary product, Trutest not only introduces a smoke test aerosol through the vents of the installed detector to the sensing chamber, but operates using a precision closed loop system - measuring smoke obscuration and feeding back information to a controlling microprocessor.

- *Reduces false alarms - a huge problem in the industry*
- *Verifies the protection you need from your detector*
- *Battery operated and lightweight*
- *Simple to use*
- *Suits most detectors*
- *Calibrated in % / ft*
- *Tests installed detectors*
- *Self calibrates before testing*
- *Measures actual sensitivity*

trutest™ enables fire alarm technicians to measure the sensitivity of installed smoke detectors quickly, accurately, easily, and professionally.

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Trutest accuracy for sensitivity measurements:

Note: *Specified at 68°F +/- 5°F < 60% RH using slow ramp.*

All detector types and profiles:	±(10% of reading + 0.6 %/ft) typically ±(10% of reading + 0.3 %/ft)
Size of detectors	All diameters from 2.8in/71mm to 5.7in/145mm

Operating parameters:

Maximum working height:	20ft 8ins (6.3m)
Average test time	120 seconds (1%/ft/minute fast ramp, 0.5%/ft/minute slow ramp)
Average calibration time:*	40 seconds
Average clearing time:*	120 seconds
Average tests per aerosol canister	100 tests
Maximum obscuration for ionization:	4.00 %/ft
Maximum obscuration for photoelectric	6.00 %/ft
Resolution:	0.01 %/ft
Average battery life:	8-10 hours testing on a full charge

**can be conducted whilst walking between detectors*

Type of aerosol:

Environmentally friendly, non-flammable, non toxic

Safety Data Sheet available on request

Calibration & servicing:

In operation:	Self-calibrates before each test
Servicing intervals:	1 year recommended, but max interval 5000 tests

Environment:

Operating temperature:	50°F to 95°F (+10ºC to +35°C)
Storage temperature:	15°F to 120°F (-10ºC to +50°C) (Do not store in direct sunlight)
Humidity:	0 - 85% RH non-condensing
Weight of main unit:	6lb 9oz (3kg) (incl. aerosol canister)

Because our policy is one of continuous improvement, details described within this publication are subject change without notice.

Ordering information:

Trutest 800:	Complete kit with telescopic pole
Trutest 801:	Kit for users who already own Solo 100 telescopic pole
Smoke 400:	Smoke Aerosol for Trutest - minimum order 12 canisters
TT-CTR	Annual Service Contract

Please specify country of use when ordering.

solo detectortesters

Trutest is fully compatible with the Solo range of detector maintenance tools including:

Solo 330 Smoke Detector Tester
- Functional smoke testing

Solo 461 Cordless Heat Detector Tester
- Functional heat testing

Solo 200 Universal Detector Removal Tool
- Adjustable to allow removal and replacement of various size detectors.

Solo 101 Extension Pole
- Allows access up to 30ft. / 9m.

www.sdifire.com

APPLIES TO BOTH CONVENTIONAL *AND* INTELLIGENT SYSTEMS

CONVENTIONAL DETECTORS

These detectors have no means of measuring their own sensitivity. Their sensitivity drifts, and so it should be tracked over a period of time, using Trutest.

ANALOG/INTELLIGENT DETECTORS

Interrogating the fire system panel of an intelligent system enables, at best, a check of the value of 'clean air' response levels. It does not verify the condition of the vents or ability of the detector to receive smoke into its sensing chamber. Correlating an unmeasured smoke source (e.g. hand-held can of smoke) with a panel interrogation also does not produce a quantified test, as US NFPA 72 confirms:

"...The detector sensitivity shall not be measured using any device that administers an unmeasured concentration of smoke or other aerosol into the detector".
NFPA 72 2007 (10.4.4.2.6)

By introducing a measured and controlled smoke stimulus into the sensing chamber, Trutest enables cross-references to be made between the independent Trutest readings and the analog readings from the system panel. Only in this way can a true test of intelligent systems be achieved.

GENUINE 'ONE TEST' MEASUREMENT

Some standards permit sensitivity test frequencies to be extended after proven detector stability. This relies on tracking drift, which can be done only by measuring actual sensitivity readings. Trutest does not need two tests to check the upper and lower limits (which, in itself, does not establish actual sensitivity). Just one test provides an actual reading in % / ft which can be compared year on year to establish drift. Other features include:

- *Auto self calibration before each test*
- *Telescopic adjustment to over 20ft / 6m*
- *Battery charge for a complete day's testing*
- *All hardware supplied in kit price quoted*

REALLY SIMPLE TO USE

- *Assemble with ease*
- *Offer up to detector*
- *Select detector type and profile*
- *Start test*
- *Smoke level automatically increases until detector goes into alarm*
- *Stop test and take reading*

Trutest Control Panel

Trutest 800 Kit

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Specialized Fire Products