

elcometer® 270 Pinhole Detectors

The Elcometer 270 Range utilises the 'wet sponge' method of holiday detection and has been designed to set a new standard for wet sponge detectors namely, a quality low voltage detector with similar accessories to a high voltage spark tester.



Can be used in accordance with the following standards :

ISO 8289-2000E, BS 1344-11, 7295-1, 8289 A, 7793-2, EN 8289 A, ASTM G6-83, G62-87, D-1562, NACE RP 0188-99

- Automatic Voltage Calibration & Voltage Checks
- Low Battery Indicator
- Visual and Audio Pinhole Alarm
- Integral and Separate Wand Functionality
- 4 Model Variants: Single, Dual and Triple Voltage Variants
- Easy Release, Snag Proof Cables
- Larger Standard Sponge – 150 x 60 x 25 mm
- A Wide Range of Fully Interchangeable Wand Accessories
- Optional Photo-Flo™ Wetting Agent for Improved Pinhole Detection

Product Features



Automatic Voltage and Sensitivity Calibration Check: A feature of the Elcometer 270 which makes it unique and distinguishes it from any other pinhole detector available on the market today, is the internal calibration check. When the detector is switched on or after a voltage setting change, the unit runs an internal voltage and sensitivity setting calibration check. A successful check is signified audibly and visually. The detector will only function after a successful calibration check has been made, giving the User complete confidence in its performance.

← Elcometer 270 Ready to Use



Low Battery Indicator: To ensure the gauges always generate the required voltage, the Elcometer 270 is fitted with a low battery indicator which not only warns the user when the batteries need changing, but also gives them a minimum of 10 hours to change them - providing ample time to complete the work in the sure knowledge that the voltage and alarm threshold accuracies are maintained.

← Elcometer 270 in use as an Integral Wand

Elcometer 270 using Separate, Telescopic Wand and Roller Sponge (150 mm width)



Visual and Audio Alarm: When the wet sponge passes over a pinhole, current flows from the detector through the moisture in the hole to the substrate below and back to the detector via the signal return lead. This current flow triggers an audible and visual alarm.

Integral and Separate Wand Functionality: Each model can be simply and quickly transformed from an integral version into a separate wand version (with a belt clip for the detector). When purchasing a separate wand accessory (T27016999 or T27016998), the belt clip is provided free of charge

4 Model Variants: Having recognised the fact that the USA market demands 67.5V to meet the ASTM standard and customers around the world require 9V to measure thin coatings up to 300µm (12 thou) and 90V to measure thicker coatings up to 500µm (20 thou) to meet ISO standards, the Elcometer 270 is available in single, dual and triple voltage variants.

Easy release, snag proof cables: To avoid snapping the cables when snagged, each cable is connected to the wand or the gauge by a simple push fit connector. This cable connection releases if the cable becomes snagged. In the unlikely event of a cable break, the bare cable can be connected to the gauge using the special terminal at the gauge.

Larger Standard Sponge: The Elcometer 270 Standard Gauge is supplied with a larger sponge than the Elcometer 204 and 269 gauges it replaces. A larger sponge means a faster inspection time as more area can be tested in a single sweep. The larger sponge can still be used to precisely locate the pinhole by using a corner of the sponge to find the hole.

A Wide Range of Fully Interchangeable Wand Accessories: We have developed a range of accessories for the Elcometer 270 increasing the versatility of the instrument and the range of applications for which it can be used.

Specifications

Measurement Range		9V Setting:	300 microns
		67.5 & 90V Setting:	500 microns
Sensitivity		9V Setting:	90 kohm +/- 5%
		67.5V Setting:	125 kohm +/- 5%
		90V Setting:	400 kohm +/- 5%
Accuracy of Voltage Settings			+/- 5%
Dimensions	<i>Unit Without Wand</i>		210 x 42 x 37mm
	<i>Standard Wand Assembly</i>		175mm long with sponge
	<i>Approx. Flat Sponge Size</i>		150 x 60 x 25mm
Weight			610g (21oz) (including 3 Dry Batteries, Integral Wand Assembly and Standard Signal Return Cable)
Battery Type			3 x AA (LR1600) 1.5V Alkaline - NiMH rechargeable batteries can also be used, however, battery life will be reduced to approximately 25%.
Battery Life (approximate)		9V Setting:	200 hours of continuous use
		67.5V Setting:	100 hours of continuous use
		90V Setting:	80 hours of continuous use
Shipping List			Elcometer 270 of Specified Voltage, Standard Wand Assembly (Flat Sponge), 4m Signal Return Cable, 3 x AA Batteries and Instruction Book.
Part Numbers			
Elcometer 270 Pinhole Detector 9V			D270----1
Elcometer 270 Pinhole Detector 67.5V			D270----2
Elcometer 270 Pinhole Detector 9V & 90V			D270----3
Elcometer 270 Pinhole Detector 9, 67.5 & 90V			D270----4

Test Method - Wet Sponge Technique

This technique is suitable for locating pinholes through a non-conductive coating and a conductive substrate.

A sponge, moistened with a wetting agent, is supplied with a low voltage. Normal tap water can be used to moisten the sponge as it contains salts that keep its electrical conductivity relatively high.

To further encourage moisture to pass through the pinhole by reducing the surface tension of the water, a surfactant such as Kodak Photo-Flo™ can be used, Part Number T27018024.

When the sponge is moved over a pinhole, liquid penetrates the flaw and flows to the substrate and completes the electrical circuit.

The resulting current flow generates an audible and visual alarm in the detector.

Sponge Accessories



T27016960 Roller Wand and Roller Sponge
T27018051 Spare Roller Sponge Set with Washer and Clip

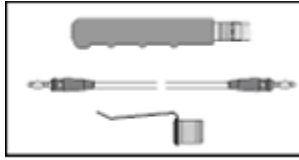


T27016867 Standard Wand with Flat Sponge
T27018050 Spare Rectangular Sponges 150 x 60 x 25mm (Pack of 3 with a wing nut)

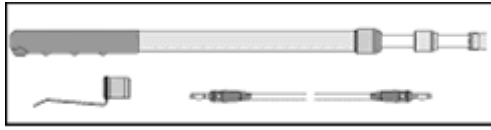


T27018024 Wetting Agent (50ml)

Separate Wand Accessories



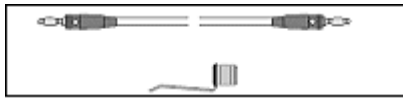
T27016999 Handle, Lead and Belt Clip to make a Separate Wand



T27016998 Telescopic Handle with Lead and Belt Clip - Extends to 1m



T27016965 420mm Extension Piece



T27016983 Replacement Separate Wand Lead (1.7m / 5.5")

T27016981 Replacement Belt Clip

Cables



T27016996 10m (32.5') Signal Return Cable and Storage Drum

Consultants Carry Case



T27018191

This kit case is also available as an empty case order using Part Number T27018025
Consultants Carry Case complete with:

- 1 x Separate Wand Handle & Lead
- 1 x Roller Wand
- 1 x 10m Signal Return Cable
- 2 x Extension Pieces
- 1 x Telescopic Extension
- 1 x Belt Clip
- 1 x Bottle of Wetting Agent
- 3 x AA Spare Batteries
- 1 x Spare Flat Sponge
- 1 x Spare Roller Sponge

NOTE: THIS INSPECTOR'S KIT DOES NOT INCLUDE MAIN INSTRUMENT, SIMPLY ORDER YOUR MODEL NUMBER TO COMPLETE THE KIT.

Used By :

Consultants on the Jahre Viking, one of the largest ships in the world at 648 tons.
30 000 sq metres were tested and the batteries lasted 140 hrs
The 270 was superior to other instruments tested