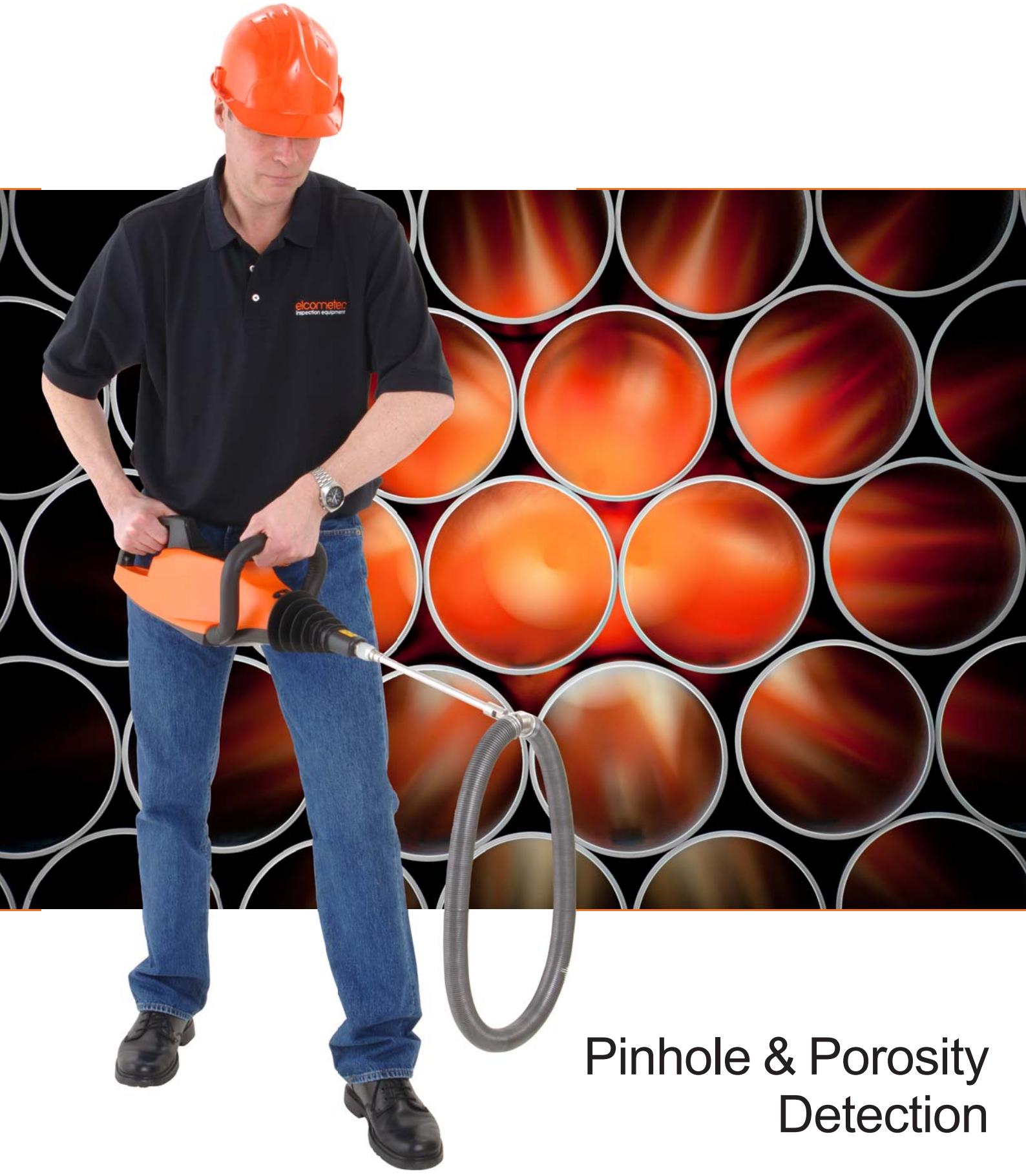
elcometer®



Pinhole & Porosity Detection

Pinhole & Porosity Detection

Premature corrosion of a substrate is usually due to a coating failure. A major cause is the presence of flaws in the finished coating.

Collectively referred to as *porosity*, the main types of flaws are:

Runs & Sags:	Coatings move under gravity leaving a thin dry film.
Cissing:	When a coating does not re-flow to cover the voids generated by air bubbles being released from the surface of a coating.
Cratering:	If the substrate is wet or the coating has poor flow characteristics, voids are created in the coating.
Pinholes:	Caused by air entrapment which is then released from the surface, or by the entrapment of particulates (dust, sand etc.) which do not stay in place.
Over Coating:	If too much coating is applied, as it cures internal stresses of the coating can cause it to crack.
Under Coating:	Un-coated areas, or where the coating flows away from edges or corners of a substrate or welds. Insufficient coating over a rough surface profile may also leave the peaks of the profile exposed.

There are, essentially, three flaw detection methods:

UV Pinhole Detection

UV light can be used as a low cost, quick method of detecting pinholes in coatings. A base coat containing a UV fluorescing additive is applied. When the UV flashlight shines on the coating, areas where the base coat is not covered fluoresce, identifying the location of the pinhole.

Wet Sponge Technique

A low voltage is applied to a moist sponge. When the sponge moves over a coating flaw, liquid penetrates to the substrate and completes an electrical circuit, setting off the alarm. The wet sponge technique is suitable for measuring insulating coatings less than 500µm (20mils) on conductive substrates, and is ideal for powder coatings and other coatings where the user does not wish to damage the coating.

High Voltage Technique

The high voltage, or porosity technique, can be used to test coatings up to 25mm (1") thick and is ideal for inspecting pipelines and other protective coatings. Coatings on concrete can also be tested using this method.

A power supply generates a high voltage DC or pulsed DC to a probe. As the probe passes over a flaw, a spark at the contact point sets off the alarm.

This technique is suitable for locating the types of flaws described above, although care is required on thin coatings.

Elcometer 260 UV Pinhole Flashlight

Battery powered and housed in a rugged aluminium case, the Elcometer 260 provides a quick, low cost method of testing coatings for pinholes.

Featuring a single Watt purple light emitting diode, the Elcometer 260 UV flashlight has a beam wavelength of 405nm (±5nm), which the human eye perceives as a purple light.

A UV reflective additive is applied to the base coat. The UV flashlight shines the purple light on the coating, the base coat fluoresces where it is not covered by any subsequent coating - identifying any pinholes in the top coat.

Technical Specification

Part Number	D260----2
Beam Wavelength	405nm ±5nm
Flashlight Casing	Hard anodised aluminium
Battery Life	6 hours (continuous use)
Battery Type	2 x CR123A lithium batteries
Lens Type	Dual element diffuser
Dimensions	150 x 35mm (6 x 1.4")
Weight	173g (6.1oz)
Packing List	Elcometer 260 UV Pinhole Flashlight, UV protective glasses, nylon belt holster, 2 x 123A lithium batteries, operating instructions

Can be used in accordance with: (see Standards Explained inside back cover)

ASTM E2501

Accessories

T26020140	UV Protective Glasses
T26020141	2 x Replacement Lithium 123A Batteries

Elcometer 270 Pinhole Detector

The Elcometer 270 range utilises the wet sponge technique and sets the standard for wet sponge detectors - high quality, low voltage detectors with a wide range of accessories to meet your requirements.

A wide range of wand accessories available

Visual and audible alarms indicate a pinhole

User selectable voltages: 9V, 67.5V or 90V

Each unit can be converted into a separate wand with base unit using the separate wand adaptor

Automatic internal voltage check ensures that the selected voltage can be achieved

Easy release, snag proof cables - available in 4m (13'2") & 10m (32'10") lengths

Can be used in accordance with:
(see Standards Explained inside back cover)

AS 3894.2	BS 7793-2	NACE RP 0188
ASTM D 5162-A	ISO 8289-A	NACE SP 0188
ASTM G6	ISO 14654	NACE TM0384
ASTM G62-A	JIS K 6766	

Accessories

Standard wand T27016867
A universal flat sponge to suit almost all applications

Spare flat sponge set T27018050
Pack of 3 sponges; 150x60x25mm (6x2.3x1")

Roller sponge wand T27016960
Ideal for large flat surface inspection

Spare roller sponge T27018051

Separate wand adaptor T27016999
with belt clip - converts the gauge into a separate pinhole detector

Telescopic wand adaptor T27016998
with belt clip - extends to 1m(39"), ideal for floors or high areas

Extension piece T27016965
420mm (16.5") extensions to expand operators reach
Additional extension pieces can be connected to each other

Pinhole Inspector's Kit T27018191
The complete pinhole detection kit. Each kit is supplied with:

- 1 x separate wand handle & lead
- 1 x roller wand
- 1 x 10m (32') signal return cable
- 2 x extension pieces
- 1 x telescopic extension
- 1 x belt clip
- 1 x bottle of wetting agent
- 3 x AA batteries
- 1 x spare flat sponge
- 1 x spare roller sponge

The kit does not include the main instrument; simply add the model number to the order

Return cable - 4m (13') T99916954
supplied as standard, complete with crocodile clip and plug

Return cable - 10m (32') T99916996
supplied on a drum, complete with clip and connection plug

Wetting agent T27018024
50ml (1.7floz) bottle - helps aid the fast detection of pinholes. Simply add to the water used to dampen the sponge

Technical Specification

C certificate available

Model		Elcometer 270/3	Elcometer 270/2	Elcometer 270/4
Part Number		D270----3	D270----2	D270----4
Voltage		9V and 90V	67.5V	9V, 67.5V and 90V
Maximum Measurement Range		500µm (20mils)	500µm (20mils)	500µm (20mils)
Sensitivity		9V: 90kΩ ±5% 90V: 400kΩ ±5%	125kΩ ±5%	9V: 90kΩ ±5% 67.5V: 125kΩ ±5% 90V: 400kΩ ±5%
Battery Life (continuous use)		9V: up to 200 hours 90V: up to 80 hours	Up to 100 hours	9V: up to 200 hours 67.5V: up to 100 hours 90V: up to 80 hours
Battery Type		3 x AA (LR1600) 1.5V alkaline (NiMH rechargeable batteries can also be used, battery life will be reduced by up to 75%)		
Accuracy of Setting		±5%		
Dimensions	Without wand	210 x 42 x 37mm (8.3 x 1.7 x 1.5")		
	Standard wand	175mm (6.9") long (including sponge)		
Weight		610g (21oz) including wand, cable and batteries		
Packing List		Pinhole Detector, standard wand and flat sponge, 4m (13' 2") return lead with crocodile clip, 3 x AA (LR1600) batteries and operating instructions		

Elcometer 280 Pulsed DC Holiday Detector

The Elcometer 280 is a 'stick type' holiday detector which has been designed to make pulsed DC high voltage holiday detection safer, easier and more reliable than ever before.

Using state of the art electronics, the Elcometer 280 allows users to inspect coatings - without connecting the earth return lead to the component substrate - ideal for inspecting large surfaces and pipelines.

Flashing display, bright LED and a user adjustable volume alarm indicates detection of a holiday

0.5 - 35kV range (user selectable) for detecting porosity in coatings up to 25mm (1") thick

Safety trigger integrated inside the handle cuts power if released

Rugged, shock proof and water resistant design to ensure long life - even in harsh environments

Balanced, ergonomic design, complete with shoulder strap allows long periods of continuous use

A wide range of interchangeable probe accessories available - compatible with all Elcometer holiday detectors

Ideal for testing clean, damp, dirty or slightly conductive coatings

Voltage calculator automatically sets the correct voltage from your coating thickness value

Internal jeep tester ensures that the selected voltage equals the test voltage

Can be used in accordance with:
(see Standards Explained inside back cover)

AS 3894.1
ANSI/AWWA C203
ANSI/AWWA C214
ASTM D4787
ASTM D5162
ISO 29601
JIS G 3491
JIS G 3492
NACE RP0274
NACE SP0188
NACE SP0490
NACE TM0186
NACE TM0384

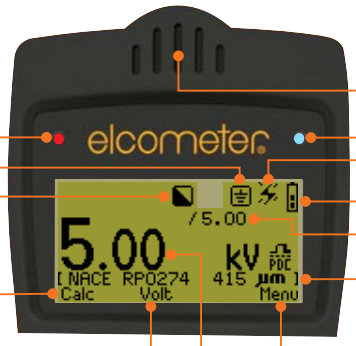
The Elcometer 280 uses the high voltage pulsed DC technique to detect holidays in coatings - even if the coating is damp, dirty or slightly conductive.

From the two stage safety switch, bright LED's and screen icons signifying when the high voltage is on, to the extended ribbing to protect the user from spark creep, the Elcometer 280 sets the standard for high voltage measurement safety.

Using the wide range of probe accessories users can detect porosity / holidays in coatings up to 25mm (1") thick.

Rugged, shockproof and water resistant, each unit is designed for use even in the harshest of environments.

Elcometer 280 Features



Red LED indicates high voltage ON

Earth signal return lead disconnected icon

Porosity Detector overload icon
indicates that the unit cannot obtain selected voltage with current accessory / coating combination

Calculation softkey
select relevant standard & coating thickness value

Voltage adjustment softkey

Waterproof buzzer

Blue LED flashes as holidays are detected

Holiday detected icon

Battery symbol indicating remaining charge

Voltage selected

Porosity standard in use
used in conjunction with setting the coating thickness within the Voltage Calculator

Menu softkey

Voltage level achieved at probe

Specialised extended ribbing
designed to standard EN61010, ribs provide additional protection to the user during use

Integrated safety trigger switch
switches off the high voltage if released

Quick release battery pack
fully charged in 4 hours, provides up to 30+ hours of continuous use*

Earth return lead socket
including ¼ turn lock/release to ensure connection during testing

Rubberised second hand grip
provides greater control and balance during testing

Large, waterproof buttons
ideal for use - even in gloves

Shoulder harness point
strap can be quickly clipped on as required

Clear, backlit LCD display
shows all relevant information, even in dark environments

High Voltage ON/OFF
separate button minimises risk of accidental switch on

* the battery life is dependant on selected voltage and load applied - see Technical Specification for more information

Technical Specification

C certificate available

Description	Model S	Model T
Elcometer 280 Pulsed DC Holiday Detector	D280-S----	D280-T----
Elcometer 280 Pulsed DC Holiday Detector Inspection Kit	D280-S-KIT	D280-T-KIT
Rugged, Shock Proof & Water Resistant	●	●
Integrated Safety Trigger Switch	●	●
Quick Release Battery Pack	●	●
Internal Jeep Tester	●	●
Integrated Voltage Calculator		●
Pulsed DC High Voltage Range	0.5kV - 35kV	
Voltage Adjustment	User adjustable: 0.5 - 1kV: 10 Volt steps, 1 - 35kV: 100V steps	
High Voltage Output Accuracy	±5% or ±50V below 1000 Volts	
Pulse Repetition Rate	~30Hz	
Operating Temperature	0°C to 50°C (32°F to 120°F)	
Power Supply	Rechargeable lithium ion battery, fully charged within 4 hours	
Typical Battery Life	Battery life is dependant on selected voltage and load applied; 12" (DN305) Rolling Spring: 30 hours at 10kV; 12 hours at 35kV 40" (DN1016) Rolling Spring: 22 hours at 10kV; 8 hours at 35kV	
Instrument Case Dimensions	PC ABS case; (l x w x h): 603 x 219 x 193mm (23.7 x 8.6 x 7.6″)	
Weight (no probes attached)	3.0kg (6.6lb) - including battery pack	
Packing List	**Elcometer 280 Pulsed DC Holiday Detector** Gauge (Model S or T), 5m (16') trailing signal return lead, battery pack, battery charger with mains cables (UK, EUR and US), shoulder strap and operating instructions **Elcometer 280 Pulsed DC Holiday Detector Inspection Kit** Gauge (Model S or T), 5m (16') trailing signal return lead, battery pack (2 supplied with Model T), battery charger with mains cables (UK, EUR & US), stainless steel rolling spring holder (supplied with Model T only), 250mm (9.8") probe extension shaft, shoulder strap and operating instructions - packed in a light weight, rugged, wheeled transit case - ideal for transportation	

Accessories

Light weight, rugged, wheeled transit case - ideal for gauge transportation, with additional space to house up to 20m (66') of phosphor bronze or 6m (30') of stainless steel rolling spring	T28022769
Grounding mats are ideal for testing on un-grounded pipes. The conductive rubber mat is wrapped around the coated pipe and connected to both the grounding pin (supplied separately) and the signal return lead.	
750mm (29.5") long - for pipe diameters up to 9" (NPS) / 229mm (DN)	T28022637-1
1500mm (59") long - for pipe diameters up to 18" (NPS) / 457mm (DN)	T28022637-2
2500mm (98.5") long - for pipe diameters up to 30" (NPS) / 762mm (DN)	T28022637-3
3500mm (137.5") long - for pipe diameters up to 42" (NPS) / 1067mm (DN)	T28022637-4
Grounding pin; 60cm (23.5") long x 0.2cm (0.75") diameter	T28022748
Trailing signal return lead, 5m (16')	T28022622
10m (32') earth lead, clips each end (for use with the grounding mat)	T28022749
10m (32') earth lead, clip / Elcometer 280 connector (for use with the grounding mat)	T28022750

For rolling springs, rubber or wire brush probes and other accessories see pages 14 - 18

Elcometer 266 Holiday Detector

The Elcometer 266 revolutionises High Voltage DC testing of coatings porosity detection making it safer, easier and more reliable than ever before.

A wide range of probe brushes and springs available

Voltage calculator automatically sets the correct voltage from your coating thickness value

Adjustable Voltage:
0.5kV - 1kV in 50V steps
1kV to 30kV in 100V steps

To change maximum voltage range, select a different handle; 5kV, 15kV or 30kV DC

Internal Voltmeter/Jeep tester ensures that the test voltage equals the selected voltage

Dual safety switch on handle to avoid accidental switch on

Can be used in accordance with:
(see Standards Explained inside back cover)

ANSI/AWWA C213	ASTM D 5162-B	ISO 2746	NACE RP0190
AS 3894.1	ASTM G 62-B	ISO 29601	NACE RP0490
ASTM C 536	BS1344-11	JIS K 6766	NACE SP0188
ASTM C 537	DIN 55670	NACE RP0274	NACE SP0490
ASTM D 4787	EN 14430	NACE RP0188	

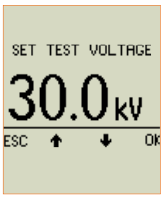
Elcometer 266 Key Features

Interchangeable DC probe handles

Voltage Range	Max Coating Range
500 - 5,000 Volts	1.25mm (50mils)
500 - 15,000 Volts	3.75mm (150mils)
500 - 30,000 Volts	7.50mm (300mils)

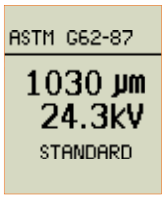
Visual and audible holiday alarms

Bright LEDs on the handle, as well as a loud buzzer, clearly indicate when a holiday is detected



Internal jeep tester

Continuous testing ensures that the selected test Voltage is always generated - regardless of the battery life or climatic conditions



Integrated voltage calculator

Enter the test standard & the coating thickness then the gauge will automatically programme the correct voltage

Testing has never been safer

Ribbing provides additional user protection - specifically designed to meet EN 61010

Second hand grip is available

Ideal for testing pipes and tank floors with 2 hands - without compromising safety

Removeable, quick charge batteries

Fully charge the battery pack in 4 hours, within the gauge or separately, for up to 40 hours of continuous testing

Universal probe adaptors

Enables the Elcometer 266 to work with all major holiday detector's accessories

Technical Specification

certificate available

Description	Part Number		
Elcometer 266*	D266----4		
High Voltage Output Accuracy	±5% or ±50V below 1000 Volts		
Operating Temperature	0°C to 50°C (32°F to 120°F)		
Power Supply	Rechargeable lithium ion battery, fully charged within 4 hours		
Measured Current Flow Accuracy	±5% of full scale	Output Current:	0 - 100µA maximum
Typical Battery Life - Backlight Off (On)	DC5: 40 (20) hours	DC15: 20 (15) hours	DC30: 10 (8) hours
Instrument Case Dimensions	Waterproof, ABS case; 520 x 370 x 125mm (20.5 x 14.5 x 5″)		
Weight	Base unit (including battery pack): 1.2kg (2.7lb) Handle: 0.6kg (1.3lb)		
Packing List	Elcometer 266 DC Holiday Detector, lithium battery, curly connection cable for high voltage handle, 10m (32′) signal return lead, battery charger with 3 mains cables (UK, EUR and US), band brush, shoulder strap, tough plastic carry case and operating instructions		

Accessories

	DC5 (0 - 5KV)	DC15 (0 - 15kV)	DC30 (0 - 30kV)
Elcometer 266 Probe Handle (Voltage)*	T26620033-1	T26620033-2	T26620033-3
Second Hand Grip	T26620081		
Earth Signal Return Lead	4m(13'): T99916954	10m(32'): T99916996	

For rolling springs, rubber or wire brush probes and other accessories see pages 14 - 18

**The Elcometer 266 does not include the probe handle; please select the required handle from the list above*

Elcometer 236 Holiday Detector

This instrument provides high voltage porosity testing to detect pits, flaws, holes, etc, in a wide variety of non-metallic coatings.

Standard and telescopic handles available for hard to reach areas

Available in 2 versions; 15 and 30kV; fully adjustable in 100 Volt steps

Integrated neon bulb in the handle, together with buzzer indicate when a holiday has been located

Adjustable sensitivity allows use on partially conductive surfaces

A wide range of probe brushes and springs available

Can be used in accordance with:
(see Standards Explained inside back cover)

ANSI/AWWA C213	ASTM D 5162-B	ISO 2746	NACE RP0190
AS 3894.1	ASTM G 62-B	ISO 29601	NACE RP0490
ASTM C 536	BS1344-11	JIS K 6766	NACE SP0188
ASTM C 537	DIN 55670	NACE RP0274	NACE SP0490
ASTM D 4787	EN 14430	NACE RP0188	

Available in 2 versions, 15kV and 30kV, each Elcometer 236 unit provides the user with complete control of voltage and sensitivity settings.

Each unit is supplied in a convenient carrying case which also holds the probe handle and an additional (optional) external re-chargeable battery pack which doubles the testing time available.

Due to it's unique design, the probe handle can be replaced with a telescopic probe handle - extending the measurement reach up to almost 4m (13'), ideal for testing on large structures.

Technical Specification

C certificate available

	Elcometer 236 15kV Holiday Detector	Elcometer 236 30kV Holiday Detector
Part Number	D236--15KV	D236--30KV
Voltage Output	0.5 - 15kV in 100V steps	0.5 - 30kV in 100V steps
Display Resolution	0.01kV	0.1kV
Approximate Thickness Range	0 - 3.75mm (0 - 150mils)	0 - 7.5mm (0 - 300mils)
Alarms	Audible & Visual	
Power Supply	NiMH 12V internal rechargeable battery	
Battery Life (approximate)	10/12 hours continuous use, 20/24 hours with the optional external battery pack	
Dimensions	200 x 170 x 70mm (6 x 7 x 3″)	
Weight	2.8kg (6lb 3oz)	
Packing List	Elcometer 236, probe handle and lead, band brush probe, 2m (79″) & 10m (394″) signal return/earth leads, battery charger with 3 mains cables (UK, EUR and US), carry case, transit case and operating instructions	

Accessories

T23622790-1	Telescopic probe handle, 600 - 1200mm (24 - 47")
T23622790-2	Telescopic probe handle, 1800 - 3600mm (71 - 142")
T236139031	2m (6.5') earth signal return lead
T236139032	10m (32') earth signal return lead
T23615550	External battery pack

For rolling springs, rubber or wire brush probes and other accessories see pages 14 - 18

Accessories for all Elcometer High Voltage Holiday Detectors

Batteries, Chargers & Earth Signal Return Leads

Part Number	Description	Compatible with Elcometer 236	Elcometer 266	Elcometer 280
T23615550	External rechargeable battery pack	•		
T23613907	Battery charger & mains lead (UK 240V)	•		
T23613908	Battery charger & mains lead (EU 220V)	•		
T23613909	Battery charger & mains lead (US 110V)	•		
T99919950	Rechargeable lithium ion battery pack		•	•
T99919999A	Battery charger & mains lead (UK 240V)		•	•
T99919999B	Battery charger & mains lead (EU 220V)		•	•
T99919999C	Battery charger & mains lead (US 110V)		•	•

T236139031	Earth signal return lead, 2m (6.5')	•		
T236139032	Earth signal return lead, 10m (32')	•		
T99916954	Earth signal return lead, 4m (13')		•	
T99916996	Earth signal return lead, 10m (32')		•	
T28022750	10m (32') earth lead, clip / Elcometer 280 connector			•
T28022622	Trailing signal return lead, 5m (16')			•

Telescopic Probes, Probe Extension Rods

T23622790-1	Telescopic probe handle, 0.6 - 1.20m (24 - 47")	○		
T23622790-2	Telescopic probe handle, 1.8 - 3.60m (71 - 142")	○		
T99919988-3	Probe extension piece, 250mm (9.8")	○	•	•
T99919988-1	Probe extension piece, 500mm (20")	○	•	•
T99919988-2	Probe extension piece, 1000mm (39")	○	•	•

Accessory Adaptors, allowing other manufacturer's accessories to fit Elcometer models

T99920084	Adaptor for models: AP, APS, AP/S1, AP/S2, AP/W, 10/20, 14/20,10, 20 & 20S	○	•	•
T99920083	Adaptor for models: P20, P40, P60, 780, 785 & 790	○	•	•
T99920252	Adaptor for models: PHD 1-20 & PHD 2-40	○	•	•
T99922747	Adaptor for models: 4S, 4.0, 8.0, 35	○	•	•
T99920082	Adaptor for current range to fit old accessories	•	•	•
T99922768	Adaptor for Elcometer 136 and older 236 models	•		

○ Older Elcometer 236 models may require adaptor piece T99922768

Accessories for all Elcometer High Voltage Holiday Detectors

Wire Brush Probes, band brush, flat brush, internal and external pipe brush probes

Part Number	Description	Width		Compatible with Elcometer 236	Elcometer 266	Elcometer 280
T99919975	Band brush probe			○	•	•
T99922751	Phosphor bronze brush probe			○	•	•
T99920022-1	Right angled wire brush probe	0.25m	9.8"	○	•	•
T99920022-2	Right angled wire brush probe	0.50m	19.7"	○	•	•
T99920022-3	Right angled wire brush probe	1.00m	39"	○	•	•
T99926621	Spare wire brush electrode	0.25m	9.8"	•	•	•
T99926622	Spare wire brush electrode	0.50m	19.7"	•	•	•
T99926623	Spare wire brush electrode	1.00m	39"	•	•	•

Part Number	Description	Diameter		Compatible with Elcometer 236	Elcometer 266	Elcometer 280
T99920071-1	Internal circular wire pipe brush probe	38mm	1.5"	○	•	•
T99920071-2	Internal circular wire pipe brush probe	51mm	2.0"	○	•	•
T99920071-3	Internal circular wire pipe brush probe	64mm	2.5"	○	•	•
T99920071-4	Internal circular wire pipe brush probe	76mm	3.0"	○	•	•
T99920071-5	Internal circular wire pipe brush probe	89mm	3.5"	○	•	•
T99920071-6	Internal circular wire pipe brush probe	102mm	4.0"	○	•	•
T99920071-7	Internal circular wire pipe brush probe	114mm	4.5"	○	•	•
T99920071-8	Internal circular wire pipe brush probe	127mm	5.0"	○	•	•
T99920071-9	Internal circular wire pipe brush probe	152mm	6.0"	○	•	•
T99920071-10	Internal circular wire pipe brush probe	203mm	8.0"	○	•	•
T99920071-11	Internal circular wire pipe brush probe	254mm	10"	○	•	•
T99920071-12	Internal circular wire pipe brush probe	305mm	12"	○	•	•
T9993766-	Spare circular wire brush electrode	38mm	1.5"	•	•	•
T9993767-	Spare circular wire brush electrode	51mm	2.0"	•	•	•
T9993768-	Spare circular wire brush electrode	64mm	2.5"	•	•	•
T9993769-	Spare circular wire brush electrode	76mm	3.0"	•	•	•
T9993770-	Spare circular wire brush electrode	89mm	3.5"	•	•	•
T9993771-	Spare circular wire brush electrode	102mm	4.0"	•	•	•
T9993772-	Spare circular wire brush electrode	114mm	4.5"	•	•	•
T9993773-	Spare circular wire brush electrode	127mm	5.0"	•	•	•
T9993774-	Spare circular wire brush electrode	152mm	6.0"	•	•	•
T9993775-	Spare circular wire brush electrode	203mm	8.0"	•	•	•
T9993776-	Spare circular wire brush electrode	254mm	10"	•	•	•
T9993777-	Spare circular wire brush electrode	305mm	12"	•	•	•

○ Older Elcometer 236 models may require adaptor piece T99922768

Accessories for all Elcometer High Voltage Holiday Detectors

Wire Brush Probes, band brush, flat brush, internal and external pipe brush probes

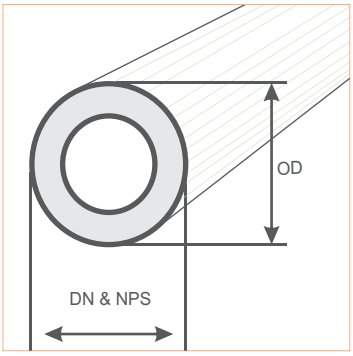
Part Number	Description	Outside Diameter (OD) DN	Outside Diameter (OD) NPS	Compatible with Elcometer 236	Elcometer 266	Elcometer 280
T99922752	'C-type' wire brush holder† (order C-type brush from the list below)			○	•	•
T99922907	'C-type' wire brush support handle			○	•	•
T99922745-1	External 'C-type' wire brush	150 - 250mm	6 - 9"	•	•	•
T99922745-2	External 'C-type' wire brush	250 - 350mm	9 - 12"	•	•	•
T99922745-3	External 'C-type' wire brush	350 - 450mm	12 - 16"	•	•	•
T99922745-4	External 'C-type' wire brush	450 - 550mm	16 - 20"	•	•	•
T99922745-5	External 'C-type' wire brush	550 - 650mm	20 - 24"	•	•	•
T99922745-6	External 'C-type' wire brush	650 - 750mm	24 - 28"	•	•	•
T99922745-7	External 'C-type' wire brush	750 - 850mm	28 - 32"	•	•	•
T99922745-8	External 'C-type' wire brush	850 - 950mm	32 - 36"	•	•	•
T99922745-9	External 'C-type' wire brush	950 - 1050mm	36 - 40"	•	•	•
T99922745-10	External 'C-type' wire brush	1050 - 1150mm	40 - 44"	•	•	•

†Wire brush holder supplied separately (T99922752)

Conductive Rubber Probes

Part Number	Description	Width		Compatible with Elcometer 236	Elcometer 266	Elcometer 280
T99920022-11	Right angled rubber probe	250mm	9.8"	○	•	•
T99920022-12	Right angled rubber probe	500mm	19.7"	○	•	•
T99920022-13	Right angled rubber probe	1000mm	39"	○	•	•
T99920022-14	Right angled rubber probe	1400mm	55"	○	•	•
T99926731	Spare rubber electrode	250mm	9.8"	•	•	•
T99926732	Spare rubber electrode	500mm	19.7"	•	•	•
T99926733	Spare rubber electrode	1000mm	39"	•	•	•
T99926734	Spare rubber electrode	1400mm	55"	•	•	•

Rolling Springs, available in phosphor bronze or stainless steel



Each spring is supplied with an easy-release coupling piece, allowing users to quickly connect and disconnect the rolling spring at stanchions, pillars, etc.

Please note that rolling springs are not supplied with a spring holder. Please order the appropriate rolling spring holder separately.

Rolling springs are available in 2 versions, phosphor bronze round spring and 304 stainless steel box section spring. The 19mm (0.75") diameter phosphor bronze springs are almost 3 times lighter than the 34mm (1.33") diameter stainless steel springs.

○ Older Elcometer 236 models may require adaptor piece T99922768

Accessories for all Elcometer High Voltage Holiday Detectors

Part Number	Description	Compatible with Elcometer 236	Elcometer 266	Elcometer 280
Rolling Springs, available in phosphor bronze or stainless steel, rolling spring holders are supplied separately				
T99920086	Phosphor bronze rolling spring holder Order the relevant phosphor bronze spring(s) from the list below	○	•	•
T99922746	Stainless steel rolling spring holder Order the relevant stainless spring(s) from the list below	○	•	•

Phosphor Bronze

Stainless Steel

Rolling Spring Description / Dimensions

Phosphor Bronze	Stainless Steel	Nominal Pipe Size DN (mm)	Nominal Pipe Size NPS (inches)	Pipe Outside Diameter (OD) millimeters (mm) min OD	Pipe Outside Diameter (OD) millimeters (mm) max OD	Pipe Outside Diameter (OD) inches (") min OD	Pipe Outside Diameter (OD) inches (") max OD
T99920438-15A	-	40	1.5	48	54	1.9	2.1
T99920438-15B	-			54	60	2.1	2.4
T99920438-20A	-	50	2.0	60	66	2.4	2.6
T99920438-20B	-			66	73	2.6	2.9
T99920438-25A	T99922744-25A	65	2.5	73	80	2.9	3.1
T99920438-25B	T99922744-25B			80	88	3.1	3.5
T99920438-30A	T99922744-30A	80	3.0	88	95	3.5	3.7
T99920438-30B	T99922744-30B			95	100	3.7	3.9
T99920438-35A	T99922744-35A	90	3.5	100	108	3.9	4.3
T99920438-35B	T99922744-35B			108	114	4.3	4.5
T99920438-40A	T99922744-40A	100	4.0	114	125	4.5	4.9
T99920438-45A	T99922744-45A	114	4.5	125	136	4.9	5.4
T99920438-45B	T99922744-45B			136	141	5.4	5.6
T99920438-50A	T99922744-50A	125	5.0	141	155	5.6	6.1
T99920438-50B	T99922744-50B			155	168	6.1	6.6
T99920438-60A	T99922744-60A	152	6.0	168	180	6.6	7.1
T99920438-60B	T99922744-60B			180	193	7.1	7.6
T99920438-70A	T99922744-70A	178	7.0	193	213	7.6	8.4
T99920438-70B	T99922744-70B			213	219	8.4	8.6
T99920438-80A	T99922744-80A	203	8.0	219	240	8.6	9.4
T99920438-90A	T99922744-90A	229	9.0	240	264	9.4	10.4
T99920438-100A	T99922744-100A	254	10.0	264	290	10.4	11.4
T99920438-110A	T99922744-110A	279	11.0	290	320	11.4	12.6
T99920438-120A	T99922744-120A	305	12.0	320	350	12.6	13.8
T99920438-140A	T99922744-140A	356	14.0	350	375	13.8	14.8
T99920438-140B	T99922744-140B			375	400	14.8	15.7

○ Older Elcometer 236 models may require adaptor piece T99922768

Accessories for all Elcometer High Voltage Holiday Detectors

Rolling Springs, available in phosphor bronze or stainless steel, rolling spring holders are supplied separately

Rolling Spring Description / Dimensions

Phosphor Bronze	Stainless Steel	Nominal Pipe Size DN (mm)	Nominal Pipe Size NPS (inches)	Pipe Outside Diameter (OD) millimeters (mm) min OD	Pipe Outside Diameter (OD) millimeters (mm) max OD	Pipe Outside Diameter (OD) inches (") min OD	Pipe Outside Diameter (OD) inches (") max OD
T99920438-160A	T99922744-160A	406	16.0	400	435	15.7	17.1
T99920438-160B	T99922744-160B			435	450	17.1	17.7
T99920438-180A	T99922744-180A	457	18.0	450	500	17.7	19.7
T99920438-200A	T99922744-200A	508	20.0	500	550	19.7	21.7
T99920438-220A	T99922744-220A	559	22.0	550	600	21.7	23.6
T99920438-240A	T99922744-240A	610	24.0	600	650	23.6	25.6
T99920438-260A	T99922744-260A	660	26.0	650	700	25.6	27.6
T99920438-280A	T99922744-280A	711	28.0	700	750	27.6	29.5
T99920438-300A	T99922744-300A	762	30.0	750	810	29.5	31.9
T99920438-320A	T99922744-320A	813	32.0	810	860	31.9	33.9
T99920438-340A	T99922744-340A	864	34.0	860	910	33.9	35.8
T99920438-360A	T99922744-360A	914	36.0	910	960	35.8	37.8
T99920438-380A	T99922744-380A	965	38.0	960	1010	37.8	39.8
T99920438-400A	T99922744-400A	1016	40.0	1010	1060	39.8	41.7
T99920438-420A	T99922744-420A	1067	42.0	1060	1110	41.7	43.7
T99920438-440A	T99922744-440A	1118	44.0	1110	1160	43.7	45.7
T99920438-460A	T99922744-460A	1168	46.0	1160	1210	45.7	47.6
T99920438-480A	T99922744-480A	1219	48.0	1210	1270	47.6	50.0
T99920438-500A	T99922744-500A	1270	50.0	1270	1320	50.0	52.0
T99920438-520A	T99922744-520A	1321	52.0	1320	1370	52.0	53.9
T99920438-540A	T99922744-540A	1372	54.0	1370	1425	53.9	56.1

Other sizes are available upon request. Please contact your nearest distributor for more information.

Accessories for all Elcometer High Voltage Holiday Detectors

Grounding mats

Grounding mats are ideal for testing on un-grounded pipes. The conductive rubber mat is wrapped around the coated pipe and connected to both the grounding pin (supplied separately) and the signal return lead.

		Outside Diameter (OD)		Compatible with		
		DN	NPS	Elcometer 236	Elcometer 266	Elcometer 280
T28022637-1	Grounding Mat	up to 229mm	up to 9"			•
T28022637-2	Grounding Mat	up to 457mm	up to 18"			•
T28022637-3	Grounding Mat	up to 762mm	up to 30"			•
T28022637-4	Grounding Mat	up to 1067mm	up to 42"			•
T28022748	Grounding pin; 60cm (23.5") long					•
T28022749	10m (32') earth lead, clips each end					•
T28022750	10m (32') earth lead, clip / Elcometer 280 connector					•

Why choose Elcometer ?

For more than sixty years Elcometer has been a world leader in the design, manufacture and supply of inspection equipment to the coatings industry.

Ever since the first Elcometer gauge was manufactured in 1947, our philosophy has been to provide 'best in class' design, quality and service at a competitive price. By concentrating on these core values, Elcometer has grown into a global network with representation in over 70 countries.

With a range of products specifically developed to meet the needs of the coatings industry, Elcometer is well positioned to provide you with the solution to your inspection requirements - whatever and wherever they might be.

Fit for Purpose - Standards Explained

All Elcometer products are designed to comply with National and International Standards. We have a team of experts working with Standards bodies around the world, ensuring we have products fit for purpose, exceeding the demands of our customers.

In this catalogue, we have identified the latest National and International Standards - those in Orange are current and those in Grey have been superseded but are still recognised in some industries.

We continuously review our products against current and new Standards and for the most up to date list, visit our online catalogue which provides the latest information on all new, current and superseded Standards which our products can be used in accordance with.

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