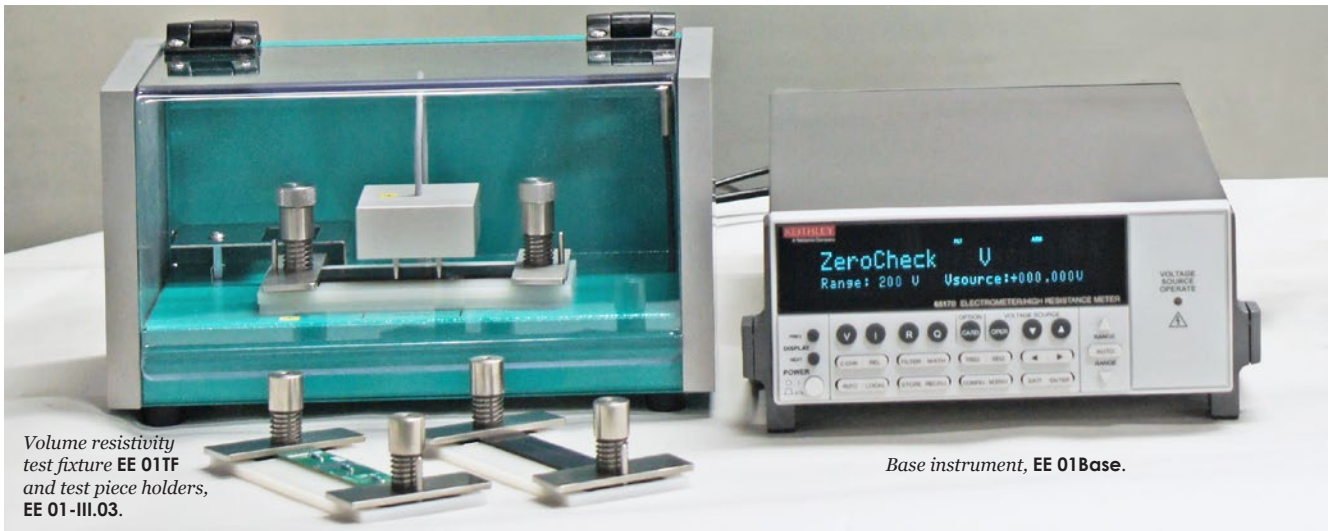


Elastocon®

Electrical testers

Volume resistivity tester, EE 01TF



Volume resistivity test fixture **EE 01TF** and test piece holders, **EE 01-III.03**.

Base instrument, **EE 01Base**.

The test fixture **EE 01TF** combined with the base instrument **EE 01Base** is used for determination of volume resistivity on conductive and semi-conductive rubber and plastic materials, according to ISO 1853.

For a complete system you need:

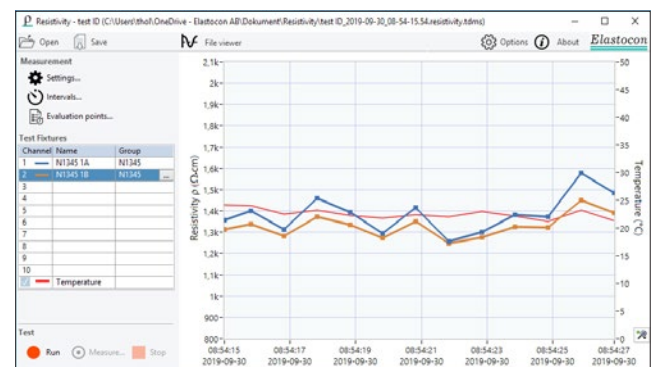
- The base instrument (**EE 01Base**)
- The volume resistivity test fixture (**EE 01TF**), which includes:
 - 3 sets of test piece holders (**EE 01-III.03**)
 - An electrode with specified contact design and load
 - A safety cage which disconnects the voltage when opened
 - Required cables
- The resistivity software, **EC 14**

Accessories

- Test piece holders (**EE 01-III.03**)
Extra test piece holders can be purchased, if you need more than the included 3 sets of test piece holders.
- Relative humidity probe (**EE 01-III.02**)
For accurate comparisons of readings acquired under varying conditions.

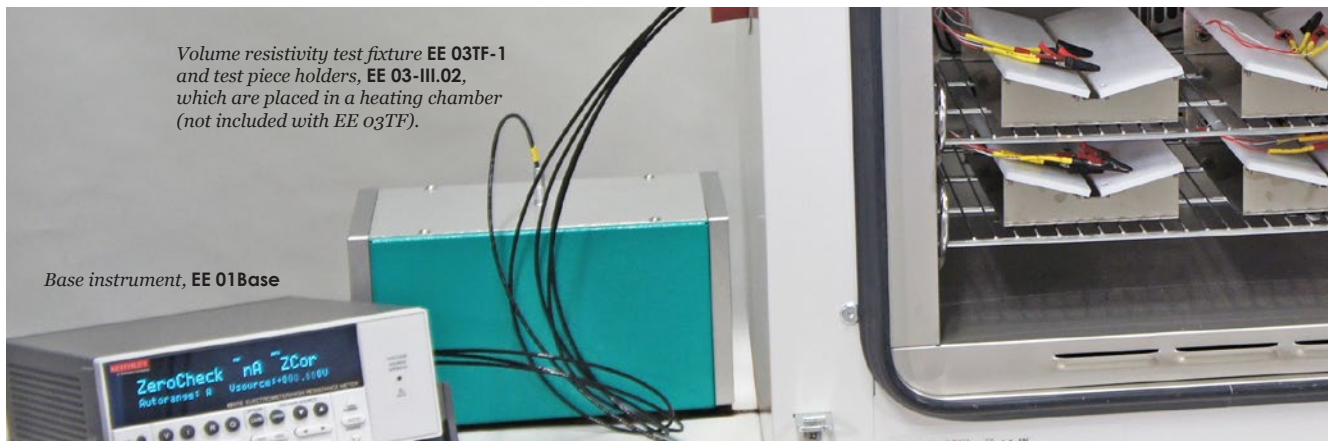
Software EC 14

The **EC 14 software** is also required for making the resistivity measurements and for presenting and storing the data.



Software **EC 14**

Volume resistivity tester, EE 03TF



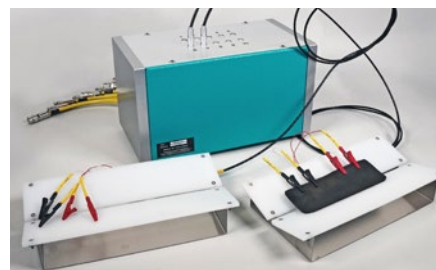
The test fixture **EE 03TF-1/10** combined with the base instrument **EE 01Base** is used for determination of volume resistivity on semi-conductive materials, according to cable standard IEC 60502-2 and ASTM D257 fig 6 for insulating materials.

For a complete system you need:

- The base instrument (**EE 01Base**)
- The volume resistivity test fixture, available in 2 models:
 - **EE 03TF-1** with 1 test piece holder (**EE 03-III.02**)
 - **EE 03TF-10** which includes a selector switch box and 10 test piece holders (**EE 03-III.02**)

Both models include:

- Silver paint (1 jar with 3 g)
 - Required cables
 - Temperature sensor type K
- The resistivity software, **EC 14**



EE 03TF-10 includes a selector switch box and 10 test piece holders, for determination of volume resistivity on semi-conductive materials.

Accessories and consumables

- **Test piece holders, EE 03-III.02**
Extra test piece holders can be purchased, if you need more than the included test piece holders.
- **Relative humidity probe, EE 01-III.02**
For accurate comparisons of readings acquired under varying conditions.
- **Silver paint, EE 03.01** – 1 jar with 3 g.

Volume resistivity tester, EE 04TF

The test fixture **EE 04TF** combined with the base instrument **EE 01Base** is used for volume and surface resistivity tests on insulated materials according to ISO 14309, IEC 62631-3-1 and ASTM D257 fig 4.

For a complete system you need the base instrument (**EE 01Base**), the resistivity test fixture (**EE 04TF**), which includes required cables, and the **EC 14** software.



Volume resistivity test fixture, **EE 04TF**.



Base instrument, **EE 01Base**.

Resistance tester, EE 02

Instrument for determination of electrical resistance on conductive and antistatic rubber products according to ISO 2878.

The instrument consists of a battery driven (6×1.5 V AA batteries – alkaline or heavy duty batteries are recommended) megaohm-meter which can produce test voltages from 125 VDC to 1000 VDC together with insulated stainless steel electrodes according to ISO 2878.

One pen with conductive silver paint and 1 litre of conductive fluid are also included.



Resistance tester, **EE 02**.

Consumables

- EE 02.01** – Conductive silver pen
- EE 02.02** – Conductive liquid, 1 l
- EE 02.03** – Fuller's earth paste, 1 kg

Technical specification, volume resistivity testers (EE 01Base)

Voltage measurements:	up to 200 V
Input impedance:	>200 TΩ
Current measurement resolution:	10 aA (10 × 10 ⁻¹⁸ A)
Measures resistances up to:	1018 Ω
Built-in voltage source:	± 1 000 V

Volume resistivity range: 0,01 to 10¹² Ω·m (1 to 10¹⁴ Ω·cm)

Function	Range	Resolution	Accuracy	Input resistance
Current	20.00 mA	0.01 mA	± 1 % + 2 digits	
	2.000 mA	0.001mA	± 1 % + 2 digits	
	200.0 μA	0.1 μA	± 1 % + 2 digits	
	20.00 μA	0.01 μA	± 1 % + 2 digits	
	2.000 μA	0.001μA	± 1 % + 2 digits	
	200.0 nA	0.1 nA	± 1 % + 2 digits	
	20.00 nA	0.01 nA	± 1 % + 2 digits	
	2.000 nA	0.001 nA	± 1 % + 2 digits	
Voltage	200.0 mV	0.1 mV	± 1 % + 2 digits	> 0.2 TΩ
	2.000 V	0.001V	± 1 % + 2 digits	> 0.2 TΩ
	20.00 V	0.01 V	± 1 % + 2 digits	> 0.2 TΩ
	>20.00 V	0.1 V	± 1 % + 2 digits	> 0.2 TΩ

Dimensions external

w × d × h, mm:	520 × 510 × 165 (200 on stand)
Weight, kg:	approx 17.2
Voltage, V:	230
Power, W:	110 (Max)

TEMPERATURE (Thermocouple)

Thermocouple type	Range	Accuracy (1 year) 18–28 °C ±(% rdg + °C)
K	-25 °C to 150 °C	±(0.3% + 1.5 °C)

HUMIDITY (The humidity probe is optional)

Range	Accuracy (1 year) 18–28 °C ±(% rdg + % RH)
0–100%	±(0.3% + 0.5)

POWER (for all models): 230 VAC 50/60 Hz

Test piece dimensions, EE 01TF

Length: 100 mm ±1 mm.
Width: <35 mm
Thickness: <6,5 mm

Technical specification, EE 04TF volume resistivity test fixture

Operating voltages: 1 kV Peak source (safety banana plugs supplied with 6517)
200 V Peak measure (triax, 3-lug)
200 V Peak common mode
0.1 A Peak test current
1 VA

Volume resistivity range: 10^1 to 10^{16} Ohm·m

Surface resistivity range: 10^3 to 10^{17} Ohm

Center electrode: 50.8 mm O.D. ± 0.05 mm (2.0 in. ± 0.002 in.) conductive rubber pad

Electrode concentricity: Within 0.01 in. of center of ring electrode

Ring electrode: 57.2 mm I.D. ± 0.05 mm (2.25 in. ± 0.002 in.)

Top electrode: 85.7 mm O.D. ± 0.05 mm (3.375 in. ± 0.002 in.),
54 mm diameter (2.125 in.) conductive rubber pad

Electrode material: Type #303 stainless

Pad durometer: 70 Shore A

Pad resistivity: Volume = $10^{3/4}$ /square max

Sample size (min.): 63.5 mm diameter (2.5 in.) (surface)

Sample size (max.): 101.6 mm sq. × 3.2 mm thick (4 in. × 0.125 in.)

Interlock: 4 pin for use with 6517

Test force:

Center electrode: 6 lbs. min.; 1.9 psi, 13.2 kPa
10 lbs max.; 3.2 psi, 21.9 kPa

Ring electrode: 2 lbs. min.; 9.3 psi, 64.1 kPa
23 lbs. max.; 107 psi, 737.6 kPa
(dependent upon sample thickness)

Operating temperature: -30 °C to +80 °C

Operating humidity: 0% RH to 65% RH up to 35 °C, linearly derate 3% RH per degree above 35 °C

Dimensions: 107.95 mm high × 165.1 mm wide × 139.7 mm deep
(4.25 in. × 6.5 in. × 5.5 in.)

Weight: 1.45 kg (3.19 lbs.)

ELASTOCON reserve the right to modify these specifications in part or in whole.

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