Compact Tester
Installation, Operation and Maintenance

Made in the
United States of America



Figure 1. 222506 Wrist Strap Test Station.

Description

The Vermason Compact Tester series can be used to test personnel wrist straps (222504, 222506) and footwear (222507). The tester uses LEDs and an audible alarm to indicate whether the measured resistance is within the range specified by EN 61340-5-1.

A foot plate is included with the Vermason 222507 Compact Tester to allow users to test both their footwear and wrist strap. The Compact Tester is powered by a 9 V PP3 battery for portability.

“The typical verification frequency, used by industry, for wrist cords is once per shift due to the wrist cord’s importance to the success of the program and the likelihood of failure.” (CLC TR 61340-5-2 User guide compliance verification clause 4.3.3 Verification frequency).

“While wearing the wrist strap, connect the loose end of the cord to the tester terminal and depress the test button or touch the metal test surface with a finger or hand. If the resistance is over 3,5 x 10^7 Ω, test the cord alone for continuity. If the resistance of the cord alone is approximately 1,0 x 10^6 Ω, check the fit of the band around the wrist and adjust it for a snug fit. Snap the cord back on the cuff and retest. If the resistance is still over 3,5 x 10^7 Ω, substitute a new band.” (CLC TR 61340-5-2 User guide Wrist Strap clause 4.7.2.4.3 Test procedure)

“For standing operations, personnel can be grounded via a wrist strap system or by a footwear-flooring system. When a footwear-flooring system is used, personnel shall wear ESD footwear on both feet and the two following conditions shall be met:

- the total resistance of the system (from the person, through the footwear and flooring to ground) shall be less than 1,0 × 10^9 Ω;
- the maximum body voltage generation shall be less than 100 V.”

(EN 6140-5-1 clause 5.3.3 Personnel grounding)

“The operator shall stand with one foot on the conductive footwear electrode. The hand contact plate shall be pressed to verify that the person/footwear system resistance is within acceptable parameters (see Figure A.1). The test shall be repeated for the other foot. The test apparatus can be an integrated, commercially available tester or other instrumentation that is capable of measuring resistance from 5,0 × 10^4 Ω to at least 1,0 × 10^9 Ω.” (EN 6140-5-1 Annex A)

Packaging

Remove the test unit from the carton and inspect for shipping damages.

Each 222504 unit should include the following:
1 Compact Wrist Strap Tester
1 9 V PP3 Alkaline Battery

Each 222506 unit should include the following:
1 Compact Wrist Strap Tester
1 9 V PP3 Alkaline Battery
1 Wall Plate

Each 222507 unit should include the following:
1 Compact Wrist Strap / Footwear Tester
1 9 V PP3 Alkaline Battery
1 Wall Plate
1 Foot Plate with Cord

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Procedure to test wrist strap

1. Wear wristband. Choose one that fits snugly or adjust it to do so.
2. Connect the ground cord securely to the band using the snap connector.
3. Connect the other end of the cord to a matching termination on the tester.
4. Push the contact plate on the tester with one or two fingers. The tester will now indicate whether the total resistance is within the acceptable range.
5. Green light and buzzer indicate that the specification is met.
   Green = OK
6. A red light on either High fail or Low fail indicates non-conformance.
   Red = FAIL
   Do not proceed in the usual manner but contact your supervisor or follow your company procedure.

Procedure to test footwear

1. Place one foot on the test plate and depress the contact plate on the tester. The tester will now indicate whether the total resistance is within the acceptable range.
2. Green light and buzzer indicate that the specification is met.
   Green = OK
3. A red light on either High fail or Low fail indicates non-conformance.
   Red = FAIL
   Do not proceed in the usual manner but contact your supervisor or follow your company procedure.

In case of non-conformance

The instrument measures the resistance of the external circuit between the metal contact button and the cord connectors or the foot test plates. The wristband and cord, the plates and the footwear, the connection to the operator, the operator's body resistance and the fingertip button contact are all part of the circuit. In case of a failure being indicated, determine whether the wrist strap or the footwear alone is failing by ensuring that the other elements of the circuit are sound.

Note:

If 'battery low' light comes on, insert a new 9 V alkaline PP3 battery. The 'battery low' threshold is factory set at 6.5 V.

Calibration

Desco Europe recommends annual calibration for all testers, monitors and ionisers. Please use the Vermason 222547 to verify the calibration of your Compact Tester.

Limited Warranty, Warranty Exclusions, Limit of Liability and RMA Request Instructions

See the Desco Europe Warranty - DescoEurope.com/Limited-Warranty.aspx

Specifications

Dimensions:	115 mm x 70 mm x 26 mm
Mass:	0.1 kg excluding battery
Resistance Limit	
Low:	750 Kilohms
High:	35 Megohms
Accuracy:	±5%
Power Supply:	9 V PP3 Battery
Typical Battery Life:	3500 tests

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