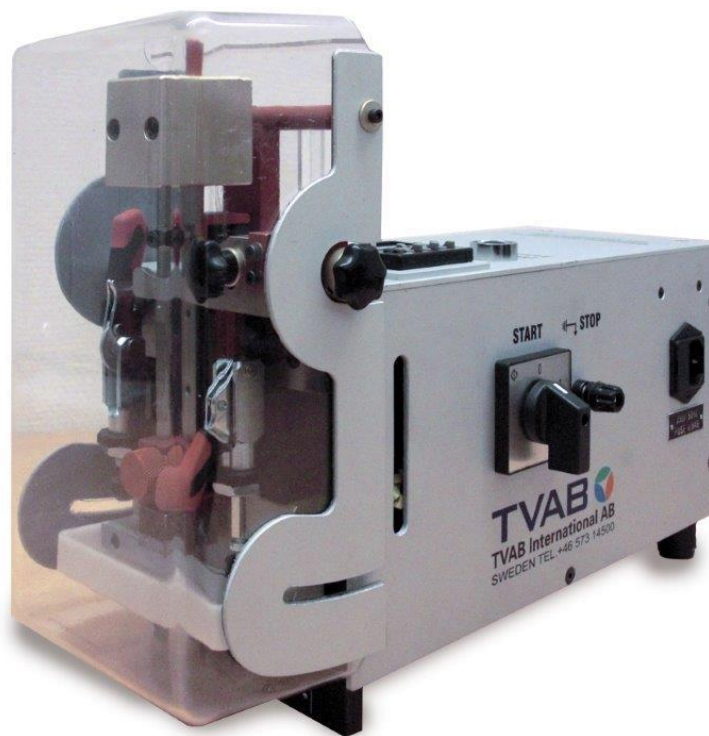




- Heat-shrink technology
- Test equipment
- Consultancy

Description of the TVAB 5420-7N-25 abrasion resistance test device

Date : 30-04-2024



TVAB 5420-7N-25 abrasion resistance test device

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| Part no. | Description |
|-----------------------|---|
| TVAB5420-7N-25 | Abrasion test equipment Electrical set up: 220-240V 50Hz, incl.: Programmable cycle counter. Cable fixture 0,80 mm Needle Wire holder 0,45 ± 0.01mm. 1 roll of 10 m of Needle Wire diameter 0,45mm. Load for vertical force 7N Tool kit, consisting of: <ul style="list-style-type: none">- 5 Allen wrenches 1,5-4,0 mm- 3 pieces of load for vertical force of 1N- 1 Brush- 1 Cutting Pliers- 1 Calibration pin 1,5mm- Solid Transportation box |

| Other parts | Description |
|---------------------|--|
| TVAB5420-4N | Load for vertical force 4N |
| TVAB5420-fixture-04 | Cable fixture 0.40mm |
| TVAB5420-fixture-08 | Cable fixture 0.80mm (<i>this cable fixture is standard and already included in above mentioned device</i>) |
| TVAB5420-045 | Needle wire holder 0,45 mm (<i>this needle wire holder is standard and already included in above mentioned device</i>) |
| TVAB5420-025 | Needle wire holder 0,25 mm |
| TVAB5420-T025 | Needle wire 0.25mm (10mtr reel) |
| TVAB5420-T045 | Needle wire 0.45mm (10mtr reel) |

Footprint of the test device : 170mm wide, 450mm long, 400mm height.
Weight : approx. 10kg
Footprint of Transportation Box: 250mm wide, 500mm long, 450mm height.
Weight : approx. 15kg (*including the weight of the test device*).

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Introduction

The TVAB 5420-7N test device has been developed for testing of the abrasion resistance durability of electrical wires and to verify the concentricity of the insulation on the conductor.

The testing can be performed on main types of wires with different types of insulation materials, with exception of certain types of very soft and tough materials.

The testing can further more be performed on wires with all main insulation thickness with an overall diameter of the insulated wire ranging from 1,0 mm up to 6,0 mm.

The recommended diameter for testing the abrasion resistance is 2,0 mm.

The principal of the testing operation is built on simulating the scraping of the wire against a sharp metal edge.

The wire to be tested is placed in a special cable fixture in the testing equipment.

A loaded abrasion tongue effects the abrasion of insulation with a well-defined needle wire moving forwards and backwards along the insulated wire, which is to be tested.

The resistance to abrasion is determined by the number of cycles that are performed before the wire insulation has been worn away.

The test device stops automatically at the moment that the needle wire touches the conductor of the wire, which is to be tested. At that moment a short-circuit is formed.

The number of cycles can directly be noted from the counter on the equipment.

The testing can be performed with the wire either in the air or submerged in liquids (i.e. Water). The testing under water makes it possible to detect micro cracks in the wire insulation.

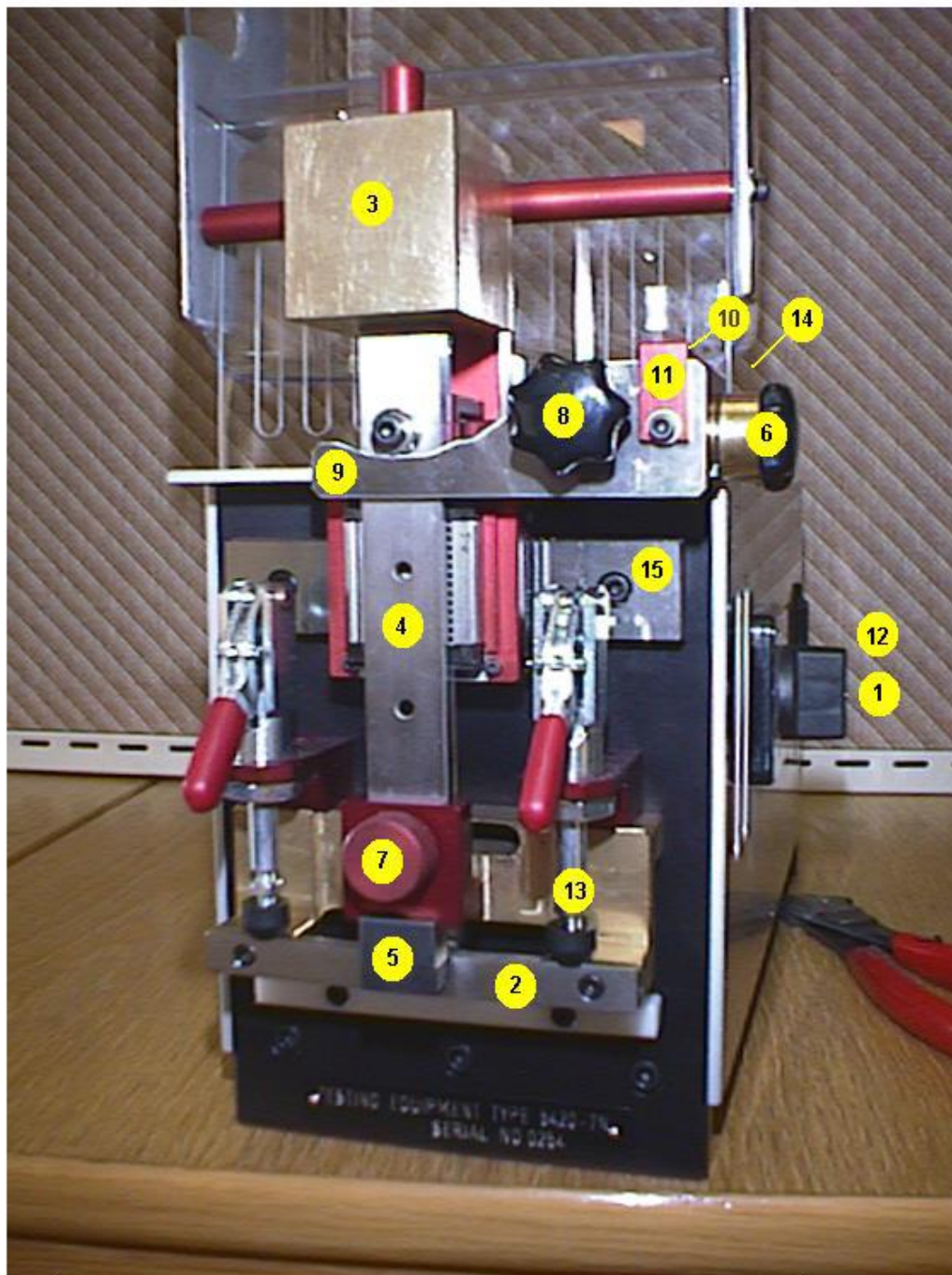
The standard test device will **not** have a container for this type of 'in liquid testing'.

The testing equipment is furthermore equipped with an effective cooling fan to avoid negative effects troughs heating of equipment by own produced heat during testing procedure.



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Impression of the abrasion-resistance test device, Type TVAB 5420-7 N



1. Switch
2. Fixture
3. Load.
4. Vertical ruler
5. Needle holder
6. Steering wheel lower
7. Steering wheel needle holder
8. Steering wheel calibration
9. Cam abrasion curve.
10. Calibration opening.
11. Calibration hook.
12. Terminal
13. Clamps.
14. Counter.
15. Horizontal ruler.