Routine tests

Safety advice for working with live voltage

The basic requirements for working with live voltage are safety-insulated tools.
Legal regulations and the following safety advice should always be observed:

1. Transport your safety tools such that damage to the insulation is avoided.
2. Before use, make sure that the insulation is not damaged. Damaged tools must not be used.
3. Keep your safety tools clean and dry.
4. When working overhead or when using cutting pliers, protective glasses must be worn.
5. For your own safety, keep your work space clean and tidy when working with live voltage.
6. In enclosed, cramped spaces, protective clothing and equipment must be worn (e.g. safety gloves, covering drapes, protective hoods)
7. Only use suitable and tested tools. Make sure that loose and cut off parts do not fall onto live components.

Routine tests in accordance with VDE Norm 1000 V IEC 60900:2012

Cold-heading test

In this test, the toughness of the PVC material is checked by dropping a weight onto the tools which have been cooled down to -25°C. The tools must not show any cracking or other damage after the test.

Testing the adhesive strength of the PVC coating

After pliers have been stored for 168 hours at +70°C, the adhesive power of the PVC coating is tested using a pulling force of 500 Nm. The insulation material must stay firmly attached to the basic tool.

Flame resistance test

To exclude any fire risks, only flame-proof PVC material is used.

Pressure test

No puncture must occur, while testing the tool with a voltage of 5,000 V AC when also applying a pressure of 20 Nm at a temperature of +70°C to the tool.

Testing the insulating properties

After storing the tools under water for 24 hours, the tools are tested using 10,000 V AC for three minutes, while simultaneously measuring the discharge current. During this time, no puncture or sparkover must occur.

Voltage test

Each safety tool is individually voltage tested. This means that all tools which bear the relevant mark have been tested at 10,000 V AC and are approved for a voltage of 1,000 V, ensuring 10-fold safety.

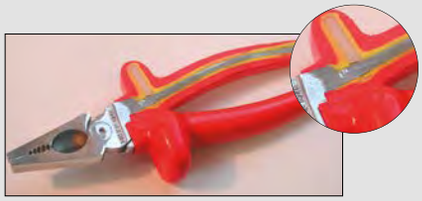
Screw profiles

- Slot
- Cross slot Phillips
- Cross slot Pozidriv
- Pozidriv/flat slot
- Tx
- Tx with safety pin
- Allen screw
- Hexagon head
- Ball point

Patent ratchet wrench

The HAUPA ratchet wrench has a number of patented advantages. it is characterised particularly ergonomic handling and high functional safety.
The excellent interlocking of the wrench insert, which must be able to withstand pull-out forces of up to 500 N is the main feature.

The ratchet can be operated with one hand due to a cross slide made from non-conducting material (polyamide). It is ergonomically designed such that it accessible with the thumb of the hand holding it. This cross slide, which is deep in the inside of the ratchet, also ensures that the testing voltage of 10 KV gema DIN 60900 can easily be achieved.



Safety of HAUPA products

All HAUPA products under the product area of "working with live voltage" have a 2-colour multi-layer insulation (wherever technically possible). This multi-layer insulation supports the current VBG4 regulations. This regulation requires that before use all tools are tested for any damage that can be seen externally. The 2-colourcoating – the second insulating layer contrast in yellow – ensures that any damages are visible immediately.