

TEST AND MEASUREMENT EQUIPMENT for the power industry

Rubber goods testing equipment:

- *Gloves*
- *Sleeves*
- *Mats*
- *Hot sticks*
- *Blankets*



2020

VENKO

 **BUTKO**



RUBBER GOODS TESTING EQUIPMENT

MSP-100SF Mobile Laboratory for Dielectric Glove, Sleeve, Blanket, Hot Sticks and Tools Testing

MSP-100S Dielectric Glove, Sleeve, Blanket, Hot Sticks and Tools Testers.

MSP-100 Dielectric Glove, Sleeve, Blanket, Hot Sticks and Tools Tester.

MSPA-40 Dielectric Glove, Sleeve and Boots Full Automatically Testing System.

Insulating Mats and Covers Testing Stand IMT-40.

VPT-52/VPT-110 voltage and phase indicator testing stand

Stand for testing conductor cover CTS-1

Stands for testing insulator cover CTS-2 and CTS-3

SzS-20 Cabinet for drying gloves, boots and sleeves.

DGT-2 Glove inflator



MSP-100SF MOBILE ON-SITE RUBBER GOODS AND STICK TESTING LABORATORY

PURPOSE OF THE PRODUCT

The mobile laboratory MSP-100SF is designed for testing of electrical safety PPE (Dielectric Gloves; Boots; Blankets; Mats; Hot Sticks; Dielectric Tools; Voltage and Phase indicator). All standard rubber goods can be tested, even class 4.

All equipment is mounted on a trailer, which allows tests in field conditions at remote sites.

Allows Testing to ASTM D120, F496 and IEC 60903 Standards.

Testing of personal protective equipment:

- **Gloves 00, 0, 1, 2, 3, 4 class;**
- **Boots 0, 1, 2, 3, 4 class.**
- **Sleeves 0, 1, 2, 3, 4 class.**

Testing of insulating equipment:

- **Blankets, mats, covers 0, 1, 2, 3, 4 class;**
- **Insulated tools and other electrically equipment.**
- **Hot sticks 100kV every 300mm. Up to 4m length.**
- **Phase and voltage indicator up to 52kV.**



Cabinet for drying 20 gloves.

All device adjustments are controlled via a menu operated microprocessor control system. With selection of the test voltage, current limit, test time.

The microprocessor control system provides the user with a menu based system to select which type (class, length, new or retest) of rubber good is to be tested.

This eliminates any chance for operator error and provides an extremely fast changeover from one class to another. Current readings for all position are conveniently displayed on the control panel, and the peak current during the test is saved on screen for easy record keeping.



TECHNICAL DATA

Trailer:

The approximate dimensions of the trailer:

The inner part of the trailer is – 5000x2200x2000(h) mm.

Overall dimensions – 7600x2270x2660(h) mm.

Weight with equipment about 2500kg.

Control unit

microprocessor control unit allows you to create all the test parameters (speed recovery voltage test voltage limit value of the load current, the tests). Printing reports.

High voltage source:

High voltage transformer BWI-30:

- maximum output AC (50 Hz) voltage – 30 kV;
- maximum output current – 100 mA.

High voltage transformer BWI-100:

- maximum output AC (50 Hz) voltage – 100 kV;
- maximum output current – 50 mA.



Hot Sticks testing stand SD/MSP-100

- maximum length of testing rods – 4m;
- maximum testing voltage – 100 kV on 300mm;
- possibility of simultaneous testing of three rods.
- quick installation in the operating position



Insulating mats and covers testing stand IMT-40

- maximum dimension of testing mats and covers – 1100×1100 mm;
- maximum testing voltage – 40 kV;
- replacement electrodes of various sizes for testing various types of blankets, mats, covers.



Bath for testing gloves and boots VN/MSP-100:

- number of testing electrodes – 4 pcs. (possibility of simultaneous testing of 4 gloves or 2 boots);
- maximum testing voltage – 40 kV;
- leakage current measurement on each glove;
- Manual water filling system.
- Water storage tank.
- Pump for pumping and discharging water.

**VPT-52 Voltage and Phase Indicator Testing stand**

- the stations is used for testing phasers with voltage up to 52 kV in compliance with EN 61481 standard or voltage indicators up to 52 kV in compliance with EN 61243;
- test voltage with MSP-100SF up to 52 kV;
- easy to install system
- secure access

**SzS-20 Cabinet for drying gloves, boots and sleeves**

- Simultaneous drying up to 20 gloves.
- Microcontroller adjustment and temperature control.
- Drying time 20 gloves up to 40 minutes.
- Power consumption up to 4kW



MSP-100S Dielectric Glove, Sleeve, Blanket, Hot Sticks and Tools Tester

PURPOSE OF THE PRODUCT

The high voltage stand MSP-100S is designed for testing of electrical safety PPE (Dielectric Gloves, Boots, Blankets, Mats, Hot Sticks and Tools). All standard rubber goods can be tested, even class 4.

All device adjustments are controlled via a menu operated microprocessor control system. With selection of the test voltage, current limit, test time.

The microprocessor control system provides the user with a menu based system to select which type (class, length, new or retest) of rubber good is to be tested.

This eliminates any chance for operator error and provides an extremely fast changeover from one class to another. Current readings for all position are conveniently displayed on the control panel, and the peak current during the test is saved on screen for easy record keeping.

Testing of personal protective equipment:

- gloves 00, 0, 1, 2, 3, 4 class;
- boots 0, 1, 2, 3, 4 class.

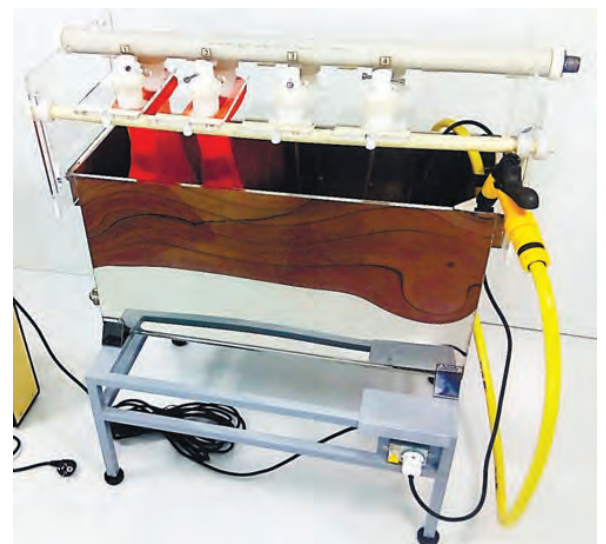
Testing of insulating equipment:

- blankets, mats, covers 0, 1, 2, 3, 4 class;
- insulated tools and other electrically equipment.
- Hot sticks 100kV every 300mm. Up to 2,5m length.
- Phase and voltage indicator up to 110kV.

Allows Testing to ASTM D120, F496 and IEC 60903 Standards.



MSP-100S



Bath

TECHNICAL DATA

Control unit – microprocessor control unit allows you to create all the test parameters (speed recovery voltage test voltage limit value of the load current, the tests). Printing reports.

High voltage transformer BWI-30:

- maximum output AC (50 Hz) voltage – 30 kV;
- maximum output current – 100 mA.

High voltage transformer BWI-100:

- maximum output AC (50 Hz) voltage – 100 kV;
- maximum output current – 50 mA.

High-potential AC milliammeter ITWR-4:

- measuring limit (alternating current) – 100 mA;
- reduced relative error of measurement, %, no more than – 3.

Bath for testing gloves and boots VN/MSP-100:

- number of testing electrodes – 4 pcs. (possibility of simultaneous testing of 4 gloves or 2 boots);
- maximum output AC (50 Hz) – 40 kV.

VPT-52 Voltage and Phase Indicator Testing stand

- The stations is used for testing phasers with voltage up to 36 kV in compliance with EN 61481 standard or voltage indicators up to 52 kV in compliance with EN 61243;
- Test voltage with MSP-100S up to 52 kV;

VPT-110 Voltage and Phase Indicator Testing stand

- The stations is used for testing phasers with voltage up to 110 kV in compliance with EN 61481 standard or voltage indicators up to 110 kV in compliance with EN 61243;
- Test voltage with MSP-100S up to 110 kV;

```
Gloves
* class 1, 10kV
radio, up to 4 pcs
```

```
Imax: 20mA
Umax: 10kV
* Rate: 1.0kV/s
Time: 1min
```

```
1: 0.00 mA - OK
2: 0.00 mA - OK
3: 0.00 mA - OK
4: 0.00 mA - OK
```



Voltage and Phase indicator testing stand VPT-52



Insulating mat and covers testing stand IMT-40

OPTIONAL EQUIPMENT

Insulating mats and covers testing stand IMT-40

- maximum dimension of mats and covers – 1200×1200 mm;
- maximum input AC (50 Hz) – 40 kV;
- replacement electrodes of various sizes for testing various types of blankets, mats, covers.
- Dimensions – 1300×1900×1000 mm;
- Weight (without electrodes) – 120 kg.

MSP-100 Dielectric Glove, Sleeve, Blanket, Hot Sticks and Tools Tester

PURPOSE OF THE PRODUCT

The high voltage stand MSP-100 is designed for testing of electrical safety PPE (Dielectric Gloves, Boots, Blankets, Mats, Hot Sticks and Tools). All standard rubber goods can be tested, even class 4.

All device adjustments are controlled via a menu operated microprocessor control system. With selection of the test voltage, current limit, test time.

The microprocessor control system provides the user with a menu based system to select which type (class, length, new or retest) of rubber good is to be tested.

This eliminates any chance for operator error and provides an extremely fast changeover from one class to another. Current readings for all position are conveniently displayed on the control panel, and the peak current during the test is saved on screen for easy record keeping.

Testing of personal protective equipment:

- gloves 00, 0, 1, 2, 3, 4 class;
- boots 0, 1, 2, 3, 4 class.

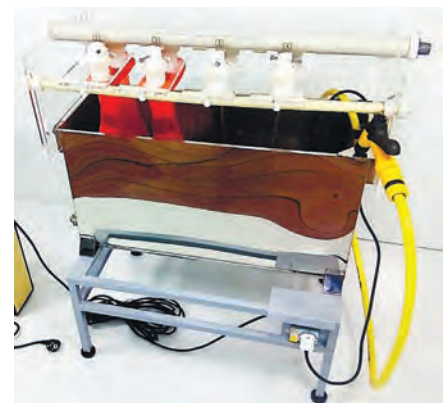
Testing of insulating equipment:

- blankets, mats, covers 0, 1, 2, 3, 4 class;
- insulated tools and other electrically equipment.
- Hot sticks 100kV every 300mm. Up to 2,5m length.
- Phase and voltage indicator up to 50kV.

Allows Testing to ASTM D120, F496 and IEC 60903 Standards.



MSP-100



Bath



Hot sticks testing stand

TECHNICAL DATA

Control unit – microprocessor control unit allows you to create all the test parameters (speed recovery voltage test voltage limit value of the load current, the tests). Printing reports.

High voltage transformer BWI-30:

- maximum output AC (50 Hz) voltage – 30 kV;
- maximum output current – 100 mA.

Two High voltage transformer BWI-50:

- maximum output AC (50 Hz) voltage – 50 kV;
- maximum output current – 50 mA.

High-potential AC milliammeter ITWR-4:

- measuring limit (alternating current) – 100 mA;
- reduced relative error of measurement, %, no more than – 3.

Bath for testing gloves and boots VN/MSP-100:

- number of testing electrodes – 4 pcs. (possibility of simultaneous testing of 4 gloves or 2 boots);
- maximum output AC (50 Hz) – 40 kV.

```
Gloves
* class 1, 10kV
radio, up to 4 pcs
```

```
Imax: 20mA
Umax: 10kV
* Rate: 1.0kV/s
Time: 1min
```

```
1: 0.00 mA - OK
2: 0.00 mA - OK
3: 0.00 mA - OK
4: 0.00 mA - OK
```

OPTIONAL EQUIPMENT

Insulating mats and covers testing stand IMT-40

- maximum dimension of mats – 1200×1200 mm;
- maximum input AC (50 Hz) – 40 kV;
- replacement electrodes of various sizes for testing various types of blankets, mats, covers.
- Dimensions – 1300×1900×1000 mm;
- Weight (without electrodes) – 120 kg.



Insulating mat and covers testing stand IMT-40

VPT-52 Voltage and Phase Indicator Testing stand

- The stations is used for testing phasers with voltage up to 36 kV in compliance with EN 61481 standard or voltage indicators up to 52 kV in compliance with EN 61243;
- Test voltage with MSP-100 up to 50 kV;



Voltage and Phase indicator testing stand VPT-52

MSPA-40 Dielectric Glove, Sleeve and Boots Automatically Testing System

PURPOSE OF THE PRODUCT

An automatic testing system for performing dielectric tests on personal protective equipment MSPA-40 is a modern device for testing electrical insulating protective gloves, shoes and boots.

- Simultaneous testing 2, 4 or 6 gloves
- Safe design
- Measurement, adjustment, control and protection systems
- Automatic measurement process
- Automatic hydraulic system
- Clear presentation of parameters
- Intuitive and ergonomic operation
- **Compliance with the harmonized standards EN 60903 and EN 50321**
- Color touch panel
- User-friendly interface
- Data archiving
- Ready-made programmes for different classes of equipment, in compliance with the standards or own parameters
- Innovative solutions of test circuits – elimination of voltage fluctuations and stoppage of testing after breakdown on one of the circuits.
- Possibility of controlling of an outside transformer
- Manufacturing process parameters comply with the Quality Management System acc. to PN-EN ISO 9001:2009.

Testing of personal protective equipment:

- Gloves - 00, 0, 1, 2, 3, 4 class
- Boots - 0, 1, 2, 3, 4 class
- Sleeves - 0, 1, 2, 3, 4 class



MSPA-40-2



MSPA-40-6



TECHNICAL DATA

A stand for simultaneous testing – according to the type of measuring tank – up to 2, 4, or 6 gloves, electrical insulating protective gloves, shoes and boots.

It consists of a cabinet provided with a measuring tank and a control cabinet with high voltage transformers, a control autotransformer with a drive, control systems and protections. Due to a system of interlocks, protections and an automatic earthing switch, the system is safe to the operators and requires no demarcated test field.

Each measuring circuit is supplied from its own 40 kV 25mA high voltage test transformer. A test takes place simultaneously on all the circuits. Such a supply solution allows avoiding voltage fluctuations in case of a breakdown in one of the items under testing. The system automatics allow filling the items under testing with water up to the required level and its immersion in the measuring tank.

The operation of the device is controlled by a microprocessor controller with a LCD touch screen. The parameters for the item under testing is achieved by selecting the item from a scroll menu (by selecting the class and length of a glove or by programming one's own parameters). The controller can either store the measurement results in an internal nonvolatile memory or send them to a computer for statistical processing or for making a protocol.

The control cabinet can be also connected to an external transformer with a power slightly exceeding 10 kVA to supervise its operation with a controller, which gives an option of performing tests on other equipment, like electrical insulating rods, indicators or mats.

If one item should be broken down during the test only the circuit (transformer) concerned, viz. in which the breakdown has taken place, will be switched off. It will not cause any fluctuations (or voltage decay) or switching surges in other circuits as it happens when a multi-circuit system supplied from one transformer.



MSPA-40-4



IMT-40 INSULATING MATS TESTING STAND

PURPOSE OF THE PRODUCT

Insulating mats testing stand IMT-40:

- test according standards IEC 61111 and ASTM D1048
- maximum dimension of mats – 1200×1200 mm;
- maximum tested voltage AC (50 Hz) – 40 kV;
- replacement electrodes of various sizes for testing various types of blankets, mats, covers.

Electrodes can be made for insulation cover of other sizes and shapes.



An example of a covers that is tested using a stand IMT-40



VPT-52/VPT-110 VOLTAGE AND PHASE INDICATOR TESTING STAND

PURPOSE OF THE PRODUCT

VPT-52

- The stand is used for testing phasers with voltage up to 36 kV in compliance with EN 61481 standard
- The stand is used for testing voltage indicators up to 52 kV in compliance with EN 61243;

VPT-110

- The stand is used for testing phasers with voltage up to 110 kV in compliance with EN 61481 standard
- The stand is used for testing voltage indicators up to 110 kV in compliance with EN 61243;



STAND FOR TESTING CONDUCTOR COVER CTS-1

PURPOSE OF THE PRODUCT

The test stand CTS-1 for testing conductor covers is designed for testing covers in accordance with the requirements of IEC 61479, ASTM F712 and ASTM D1050 up to 40kV.

Three pipe sizes included - 32, 45 and 57mm.

Maximum length of guards - 1800mm.

Stands can be made for insulation cover of other sizes and shapes.



An example of a conductor cover that is tested using a stand CTS-1



An example of a conductor cover that is tested using a stand CTS-1



STAND FOR TESTING INSULATOR COVERS CTS-2 i CTS-3

PURPOSE OF THE PRODUCT

The stand CTS-2 and CTS-3 for testing insulators covers is intended for testing covers for voltage up to 40kV. According ASTM F712.

Stands can be made for insulation cover of other sizes and shapes.



An example of a insulator cover that is tested using a stand CTS-2



An example of a insulator cover that is tested using a stand



SzS-20 Cabinet for drying gloves, boots and sleeves

PURPOSE OF THE PRODUCT

SzS-20 Cabinet for drying gloves, boots and sleeves designed to dry rubber gear either after electrical testing

- The glove/sleeve dryers contain built-in thermostatically controlled heating elements and air blowers which force heated air into the glove to assure fingertip drying
- Digital temperature control system for easy operation
- Totally self-contained with exhaust fan to remove humidity and heat
- Simultaneous drying up to 20 gloves.
- Microcontroller adjustment and temperature control.
- Drying time 20 gloves up to 40 minutes.
- Power consumption up to 4kW

Controls

- Controls include circuit breaker, start and stop buttons, and indicator
- Digital thermostat with high and low set-points
- Digital timer for heat/fan cycle times
- Programmable heater control

INPUT: 208/240 VAC, 50 Hz, 1 Phase

Heating power: 4 KW

Dimension: 630x740x1420mm;

Weight: 60kg.



DGT-2 GLOVE INFLATOR

PURPOSE OF THE PRODUCT

- Compressor glove inflator are used to visual inspect insulating gloves for mechanical damage (snag, holes, pinches, cuts or other physical defects), chemical damage (softening of the rubber if exposed to petroleum base products) and corona damage.
- These glove inflators are not dielectric tester. In addition to regular visual inspection of gloves using these inflators, all insulating gloves should be regularly dielectrically tested.
- Visual Inspection gloves of 00, 0, 1, 2, 3 & 4 class.





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