



JDG "Kilovolt"

www.hvkilovolt.com
sales@hvkilovolt.com

CTV-32 Cable Test Van Technical Offer



APPLICATION

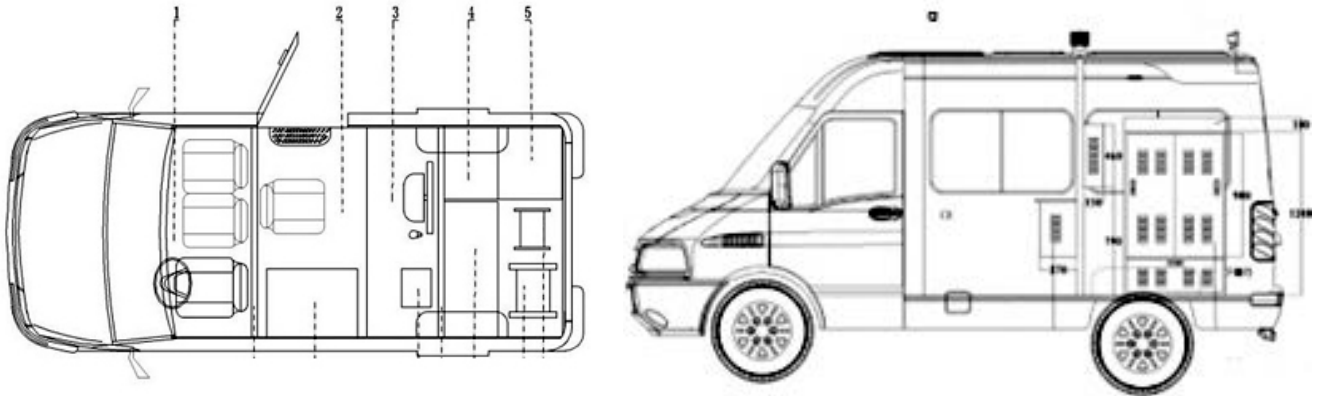
CTV-32 Cable Test Van is a complex solution for preliminary and accurate location of faults in power cables, as well as their subsequent high voltage tests.

The main application of CTV-32:

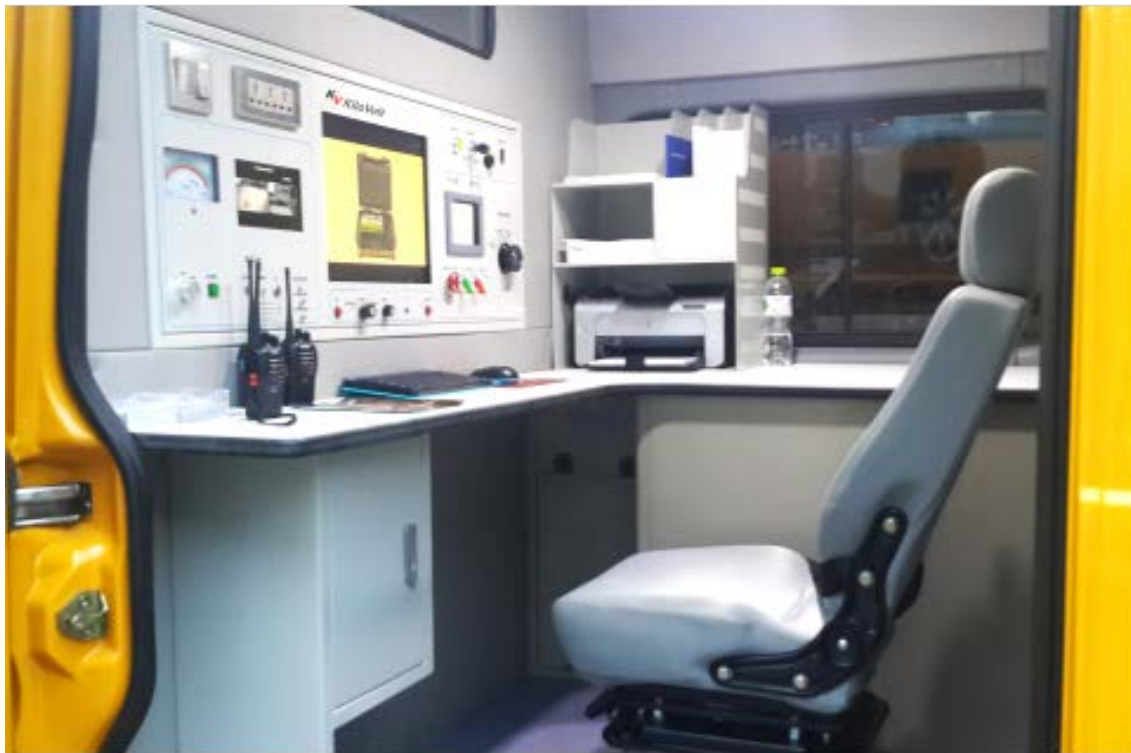
- **DC voltage testing** up to 32 kV of insulation of power cables, insulators, surge arrestors, etc;
- **burning** faulty cable insulation (optional);
- **pre-location of the distance of the cable fault** using the built-in reflectometer (TDR, ICE, MIM, and Decay methods);
- **precise pinpointing of cable faults** by the induction and acoustic method using digital acoustic-magnetic pin-pointer PP-4 with noise reduction.

DESIGN

CTV-32 offers a comprehensive solution designed for testing cable lines within the voltage range of 0.4 kV to 10 kV, accurately providing pinpoint areas of cable faults. Structurally, it encompasses both an operator's compartment and a dedicated high-voltage compartment.



A distinct control rack serves as the demarcation between the operator's compartment and the high-voltage section. This control rack hosts essential control components of the test van, alongside display elements that facilitate real-time monitoring of test parameter values. The rack is also equipped with sliding drawers for storage of additional equipment or tools.



DC voltage testing

HV unit is a fully computerized advanced device with output voltage up to 32 kV. Its energy per impulse is up to 2048 J.

Parameter	Value
Output DC voltage	0...32 kV
Output Impulse voltage	0...32 kV
Integrated capacitor	4 μ F
Maximum energy	2048 J
Pre-location method	ICE, MIM, Decay
Impulse period	3...8 s
Discharge	auto discharge
Cable drum	HV Connection drum 50 m, grounding cable drum 50 m, power supply drum 50 m

Burning of faulty cable insulation (optional)



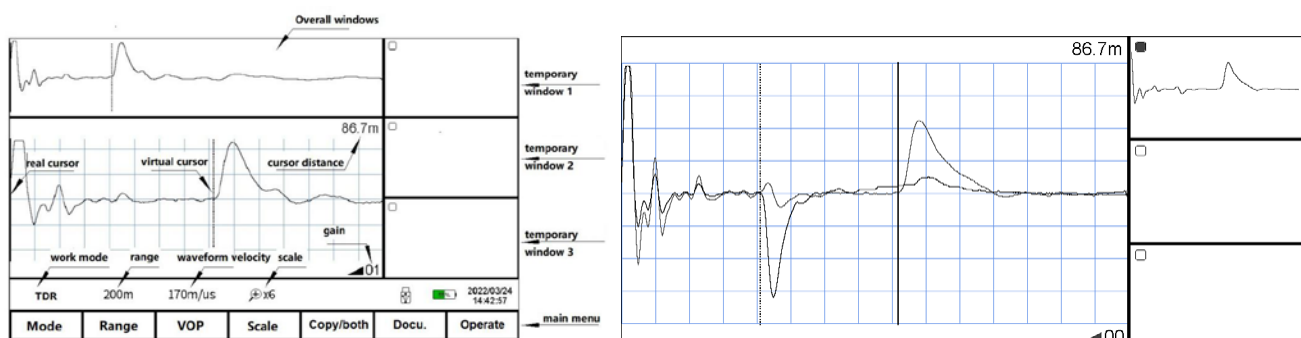
BU-60/500 (or BU-60/600) Burning unit is used for burning the faulty cable insulation with DC current. It is also designed for charging capacitive accumulators in the acoustic method of fault location.

The BU-60/500 (or BU-60/600) can provides smooth change of current in the load is provided by changing the mains voltage.

Parameter	Value
Maximum output voltage	60 kV
Maximum output current	500 mA (option A) 600 mA (option B)
Mode	pure burning (option A) Burning integrated with voltage drop method pre-location smart bridge (option B)

Pre-location of the distance to the cable fault

Built-in Digital Time Domain Reflectometer is a 250 MHz high-end TDR with a 60 km range, which is designed to measure cable total length, fault distance for low resistance or conductor-broken cable faults.



Parameter	Value
Working mode	TDR (low voltage pulse), ICE (impulse current method), MIM (multiple impulse method) Decay
Maximum ranging range	0...60 km
Highest resolution	0.1 m
Measurement error	± 0.1 %
Pin-pointing accuracy	±0.2 m
Sampling frequency	250 MHz
LCD Display	17" TFT
Operation system	Windows 10
Connection port	USB2.0
Language	English, Turkey, Ukrainian
Storage	2000 waves

Precise pinpointing of cable faults

PP-4 Acoustic-Magnetic Pin-pointer is an easy in operation device used to pinpoint the fault point. It integrated the function of acoustic-magnetic synchronization method, magnetic field strength method to make the pinpointing accuracy. The acoustic-magnetic synchronization pinpointing support both intelligent pinpointing and waveform pinpointing. When use the intelligent pinpointing method, device will auto-display the acoustic-magnetic delay value and when use the waveform pinpointing method, we need to make sure the cursor position and measure the delay value.



- Wonderful acoustic quality & noise immunity.
- Intelligent acoustic-magnetic method.
- Background noise reduction function
- Automatic mute function to protect your ears.
- Bright, transfective sunshine display.
- Cable routine left-right indication.
- Easiest operation.



Parameter	Value
Bandwidth	all-pass: 80...1500 Hz low-pass: 80...400 Hz high-pass: 200...1500 Hz band-pass: 150...600 Hz
Signal gain	≥ 80 dB
Accuracy	0.1 m
Background noise reduction mode	support, no and adaptive noise reduction
Display	800 x 470 dot LCD
Power supply	3.7 V, 6700 mAh (built-in Li-ion battery series)
Continuous work time	above 9 hours
Charger	input 220 V AC ± 10 %, 50 Hz; output 8.4 V, 5 V / 2 A
Dimensions	230 x 127 x 55 mm
Weight	1 kg (main unit), 1.4 kg (sensor)



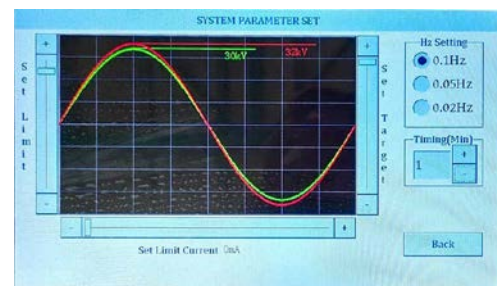
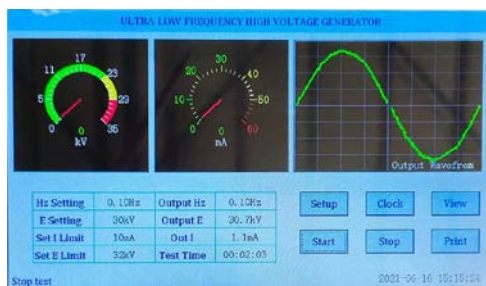
ADDITIONAL EQUIPMENT INCLUDED TO THE PACKAGE CONTENT

1. Set of electrical equipment consists of:

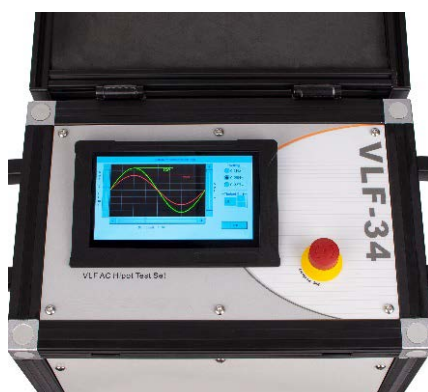
- Door locking limit switch;
- Red signal lamp;
- Sound Alarm System;
- Lightings (2 pcs.).

2. VLF-34/60/80 Portable High-voltage Test System

VLF-34/60/80 is designed for VLF testing of XLPE cables with AC testing voltage up 34/60/80 kV_{peak} with frequency 0.02, 0.05 or 0.1 Hz (0.01 Hz – option). This unit introduced the latest international electrical components and latest ARM7 single chip microcomputer technology, further reducing the size and weight of the equipment. The operation is easier, and the performance is more stable.



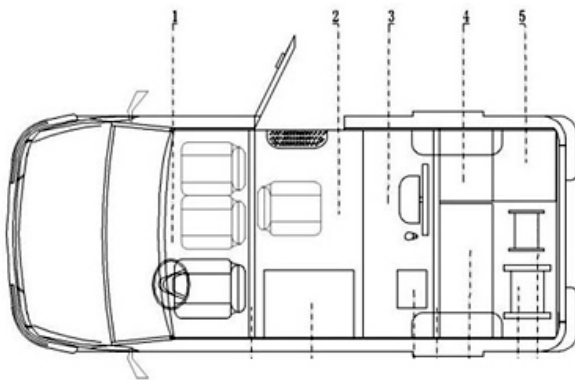
- High accuracy information about output current, voltage and waveform.
- Advanced technology of digital frequency conversion, fully automatic control, voltage boost/step-down, measurement, protection, etc.
- Integrated structure of control and high-voltage parts and only a high voltage and ground wires are need to be connected to the tested object.
- Over-voltage and over-current protections with action time less than 10 ms.
- The control unit and the booster are connected at low voltage, with photoelectric isolation control for safe and reliable to use.
- Closed-loop negative feedback circuit for prevention capacity rising during test.
- Capacitive LCD touch screen, automatic result storage and printing.
- Wide test frequency range: 0.1, 0.05 and 0.02 Hz (0.01 Hz – option).



Parameter	Value
Output voltage (peak)	34/60/80 kV
Type wave	sine
Output frequency	0.1, 0.05, 0.02 Hz (0.01 Hz – option)
Output current	10 mA
Output voltage accuracy	± 3 %
Waveform distortion	± 5 %
Load carrying capacity	0.1 Hz ≤ 1.1 μF 0.05 Hz ≤ 2.2 μF 0.02 Hz ≤ 5.5 μF 0.01 Hz ≤ 7.0 μF

VEHICLE

Ford Transit L3H3



Parameter	Value
Motor	2.2 TDCI 125 hp. EURO5
Fuel	Diesel
Volume	2198 cm ³
Maximum power	125 (92) / 3500 hp (kW) / at (rpm)
Torque	350/1500 - 2000 Nm / speed (rpm)
Cylinders/valves per cylinder	4/4 pcs.
Emission standard	Euro 5
Drive	Rear (RWD)
ABS - antilock braking system	Yes
ESP - electronic stability program	Yes
ROM - Roll Over Mitigation System	Yes
EBA - brake assist system	Yes
A function that activates the hazard warning lights during emergency braking	Yes
TC - traction control system	Yes
HLA - uphill assist system	Yes
Driver front airbag	Yes
Driver and passenger seat belts	Yes
Air conditioning	Yes
Board computer	Yes