



PHENIX
TECHNOLOGIES

AERIAL LIFT TEST SETS MODELS (BK60, BK130, BK130-1)



PHENIX 130kV Model BK130

Description

PHENIX TECHNOLOGIES manufactures three models of Aerial Lift Test Sets. The **BK60**, **BK130** and **BK130-1**. These units are designed specifically for AC dielectric testing in accordance with the latest and upcoming ANSI A92.2 draft standards.

The **BK60** is the most economical solution for boom testing on distribution level devices.

The **BK130** is the more powerful unit with output current sufficient to test both the elevating boom as well as the insulated work platform and linings.

For those performing testing that requires transmission and distribution level boom testing but not lining testing, the **BK130-1** is the more economical choice.

These units can also be used in many other testing situations calling for AC dielectric and insulation testing.

Designed for full portability, these test sets are mounted on a rugged two-wheel cart (except **BK60**) and consist of:

- High voltage transformer
- Control Unit
- Interconnect cables

When testing, the high voltage transformer is removed from the cart and placed close to the test object. The cart with the control box can then be moved away from the test area for the operator's safety.

Optional Accessory Package includes:

- 1 HV Output cable 50'
- 1 Return Cable 50'
- 1 Upper Boom Cable, 50'
- 3 5' Jumper Leads
- 1 Foot Switch, 30' Lead or 50' lead
(hand switch also available)
- 1 A92.2 (latest revision) Standard
- 8 2' x 2' x 3/8" Insulating Pads



Accessory Package

Safety and Design Features

- Internal Voltage dividers for all units
- Controls in a removable enclosure, grounded through the power cord with provisions for a separate ground cable
- Circuit breaker for control power, combined with EMERGENCY OFF pushbutton
- Guard mode for accurate current measurements
- External interlock provision
- ZERO START interlock
- Overload circuit, adjustable from 10% to 110% of rated output current
- BK130's have a backup overload protection in the supply circuit
- CONTROL POWER ON indicator
- HV ON/OFF pushbuttons with indicator
- Manual control of output voltage
- Resettable OVERLOAD indicator
- 20 ft. (6m) interconnect cables between controls and high voltage unit
- Grounding studs on control panel and high voltage transformer.
- 20 ft. (6 m) ground and return leads
- Cable storage provision
- Two copies of Operation/ Maintenance Manual
- Optional cart mounted, telescoping red flashing light high voltage warning indicator

Design Details

The high voltage transformers are oil-filled, insulating cylinders mounted on a steel base. The high voltage output is available from a toroid on top of the cylinder. The BK130 also utilizes a 35kV side output tap for liner testing.

The voltage regulator is an adjustable autotransformer; air-insulated with a limit switch for "zero start" interlock. All units are equipped with a high accuracy internal divider. The low voltage arm of the divider feeds the panel-mounted voltmeter. Total measuring accuracy is better than 1% of full scale from 10%-100% of range.

The lower end of the high voltage winding is connected to ground through a currentmeter circuit. Measuring accuracy is better than 1% of full scale. A return terminal provides precise measurement of actual current flow through the test object to guard out capacitive leakage currents (guard mode).

An adjustable electronic overload circuit, with a total response time of less than 30 milli-seconds, provides protection from flashovers and short circuits for the high voltage transformer and for the test object.

Cover photos: Courtesy of Allegheny Power

Technical Data* —PHENIX Aerial Lift Test Sets

| Model | BK60 | BK130 | BK130-1 |
|---|--|---|--|
| Input | 120 volts, 10 amps, 50-60 Hz, single phase or 220 volts, 6 amps, 50-60 Hz, single phase | 120 volts, 30 amps, 50-60 Hz, single-phase or 220 volts, 15 amps, 50-60 Hz, single phase | 120 volts, 15 amps, 50-60 Hz, single phase 220 Volts, 8 amps, 50/60 Hz, single phase |
| Output | 0-60kVAC, 10mA | 0-130kVAC @ 50mA, and 0-35kVAC @171 mA | 0-130kVAC @ 11.7mA |
| Duty | 1 hour ON/ 1 hour OFF @ 7mA 5 min. ON/ 15 min. OFF @ 10mA Continuous @ 5mA | 1 hour ON/ 1 hour OFF @ 33.3mA/114mA 5 min. ON/ 15 min. OFF @ 50mA/171mA Continuous @ 25mA/86mA | 1 hour ON/ 1 hour OFF @ 8.33mA 5 min. ON/ 15 min. OFF @ 11.7mA Continuous @ 5.6mA |
| Voltmeter | Single range digital with accuracy of 1% of reading from 12-60kV Range: 0-60kVAC | Double range digital with accuracy of 1% of reading: 12-35kV, 12-130kV Range: 0-35kVAC, 0-130kVAC | Single range digital with accuracy of 1% of reading from 12-130kV Range: 0-130kVAC |
| Currentmeter | Triple-range digital with accuracy +/- 1% F.S. Range: Three range 0-200uA, 2mA, 20mA | Quadruple range digital with accuracy +/- 1% F.S. Range: Four-range 0-200uA/2mA/20mA/200mA | Triple-range digital with accuracy +/- 1% F.S. Range: Three range 0-200uA, 2mA, 20mA |
| Dimensions | | | |
| Complete Unit (with optional cart) | 23" W x 27" D x 46.25" H; 166 lbs. (584mm) (686mm) (1175mm); (105.7kg) | 23" W x 27" D x 48" H; 300 lbs. (584mm) (686mm) (1220mm); (136kg) | 23" W x 27" D x 48" H; 230.5 lbs. (584mm) (686mm) (1220mm); (104.6kg) |
| High Voltage Transformer | 14" W x 14" D x 14" H; 70 lbs. (356mm) (356mm) (356mm); (32kg) | 16" W x 16" D x 30" H; 178 lbs. (406mm) (405mm) (762mm); (80.7kg) | 15" W x 16" D x 27" H; 132 lbs. (381mm) (407mm) (686mm); (59.9kg) |
| Control Box | 16.5" W x 15.25" D x 11.25" H; 35 lbs. (420mm) (390mm) (285mm); (15.9kg) | 21.5" W x 17" D x 14" H; 45 lbs. (564mm) (426mm) (350mm); (20.4kg) | 21.5" W x 17" D x 14" H; 40 lbs. (564mm) (432mm) (350mm); (18.2kg) |
| Cart | OPTIONAL 22.5" W x 29.5" D x 46.5" H; 61 lbs. (572mm) (750mm) (1180mm); (27.7 kg) | 22.5" W x 29.5" D x 46.5" H; 61 lbs. (572mm) (750mm) (1180mm); (27.7 kg) | 22.5" W x 29.5" D x 46.5" H; 61 lbs. (572mm) (750mm) (1180mm); (27.7 kg) |

*Based on our commitment to continual research and development PHENIX Technologies reserves the right to update product specification without notice.



BK130 controls with digital metering

Quick Reference Capabilities

| Models | BK60 | BK130 | BK130-1 |
|---|------|-------|---------|
| Category A&B Devices Periodic Test | | | |
| 46kV & Below Voltage Class | Yes | Yes | Yes |
| 69kV Voltage Class | Yes | Yes | Yes |
| 138kV Voltage Class | No | Yes | Yes |
| Category C Devices Periodic Test | | | |
| 46kV & Below Voltage Class | Yes | Yes | Yes |
| Insulating Aerial Ladders and Insulating Aerial Vertical Towers Periodic Test | | | |
| 46kV & Below | Yes | Yes | Yes |
| 20kV & Below | Yes | Yes | Yes |
| Category A&B Devices | | | |
| 50/60 Hz Qualification Test | | | |
| 46kV & Below Voltage Class | Yes | Yes | Yes |
| 69kV Voltage Class | Yes | Yes | Yes |
| 138kV Voltage Class | No | Yes | Yes |
| Category A&B Devices | | | |
| Double Rated Voltage Test | | | |
| 46kV & Below Voltage Class | Yes | Yes | Yes |
| 69kV Voltage Test | No | Yes | Yes |
| Category C Qualification Test | | | |
| 46kV & Below Voltage Class | No | Yes | Yes |
| Insulating Aerial Ladders and Insulating Aerial Vertical Towers Qualification Test | | | |
| 46kV & Below | No | Yes | Yes |
| 20kV & Below | Yes | Yes | Yes |



**PHENIX
Model
BK130-1
(with optional
red high
voltage light)**



**PHENIX
Model BK60**

The PHENIX Technologies Product Line

- AC Dielectric Test Sets
- Resonant Test Sets
- DC Hipots and Insulation Test Sets
- Automatic Insulating Material Testers (DI49)
- Liquid Dielectric Test Sets
- Megohmmeters
- Vacuum/Oil Interrupter Testers
- Bucket Truck Testers
- High-Frequency Cable Aging Test Sets
- Heat Cycling Test Sets
- Rubber Goods—Protective Equipment Testers
- Core Loss Testers
- AC, DC and AC/DC Motor Test Sets
- Transformer Test Systems
- Computerized Circuit Breaker Test Sets
- Computerized Recloser Test Sets
- DC Power Supplies
- High Voltage DC Cable Thumpers
- High Voltage Terminations
- High Power Column-Type Variable Transformers
- High Power Thoma-Type Variable Transformers
- Voltage and Current Stabilizers

Your local representative is

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