

# VBT-60/VBT-80

*vacuum bottle testers*



**Vanguard Instruments Company, Inc.**  
[www.vanguard-instruments.com](http://www.vanguard-instruments.com)



### outstanding features

- Automatic Testing
- VBT-60 : 10 kV–60 kV DC output in 5 kV steps
- VBT-80 : 10 kV–80 kV DC output in 5 kV steps
- Selectable test time duration from 5 seconds to 2 minutes
- Digital voltage and current display
- Failure indicator LED
- Very lightweight



High Voltage Cable

# VBT-60/VBT-80 vacuum bottle testers

The VBT-60 and VBT-80 are microprocessor-based, portable, dc (60 kV and 80 kV, respectively) vacuum bottle testers. These lightweight, portable testers are designed for testing circuit-breaker vacuum bottles in the field and at the shop.

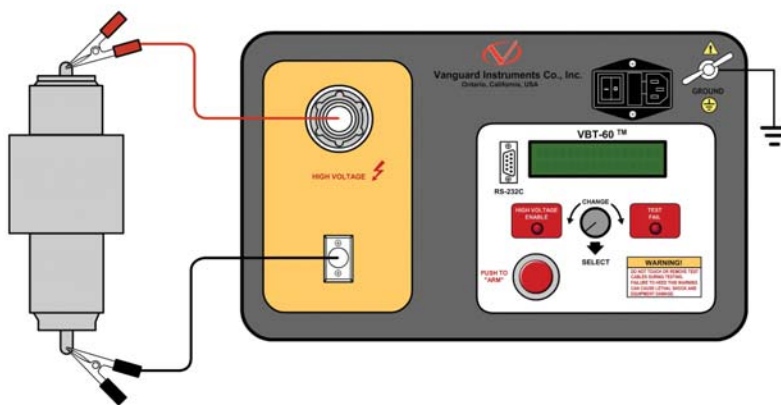
Test voltages can be selected from 10 kV dc to 60 kV dc in 5 kV steps for the VBT-60 and from 10 kV to 80 kV dc in 5 kV steps for the VBT-80. The high-voltage test time can be set from 5 seconds to 2 minutes. The test voltage is raised to the selected voltage and held for the test time duration. After the test time duration has elapsed and the leakage current did not pass the preset value of 100  $\mu$ A, 200  $\mu$ A, or 300  $\mu$ A, the test voltage is returned to zero. If a flash-over condition occurs, such as bottle failure, the test voltage is immediately turned off, a "Failure" message is displayed on the LCD screen, and the "TEST FAIL" LED light on the unit is also illuminated.

The presence of high voltage is indicated by an audible tone and an illuminated "HIGH VOLTAGE" LED light. For additional operator safety, an "ARM" switch must be held down during testing.

The VBT-60 and VBT-80 feature a back-lit LCD screen (16 characters by 2 lines) that is viewable in both bright sunlight and low-light levels. A turn-and-press knob is used to control the unit. An RS-232C interface port is provided for factory calibration and diagnostic testing.

Each unit is furnished with a 10-foot test cable that is terminated with a quick-disconnect test clip. A transportation case is also included.

### VBT-60/80 connections



### ordering information

Part number **VBT-60**

VBT-60 and cables

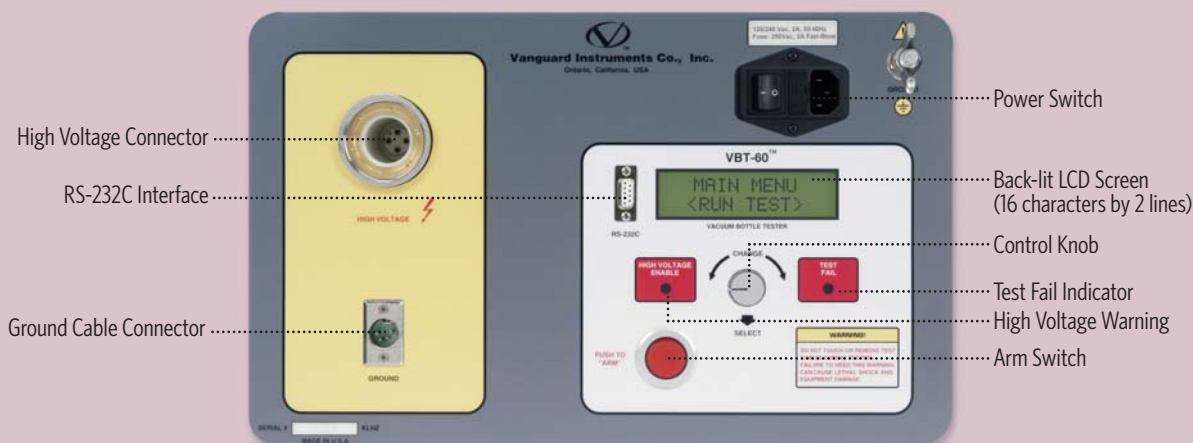
Part number **VBT-80**

VBT-80 and cables

Part number **VBT-HV-CABLE**

High Voltage Cable

# VBT-60/80 Controls & Indicators



## VBT-60/80 specifications

**type** **VBT-60:** portable, lightweight, 60 kV dc vacuum bottle tester  
**VBT-80:** portable, lightweight, 80 kV dc vacuum bottle tester

**physical specifications** 17"W x 10½"H x 3½"D (42.7 cm x 26.9cm x 8.9 cm); Weight: 10 lbs (4.53 kg)

**input power** 2 amps, 90 – 240 Vac, 50/60 Hz

**output voltage** **VBT-60:** 10kV – 60 kV dc in 5 kV steps; accuracy: 1.5%  
**VBT-80:** 10kV – 80 kV dc in 5 kV steps; accuracy: 1.5%

**output ripple voltage** 3% max

**discharge time** maximum discharge time for internal high voltage is 3 seconds

**display** back-lit LCD Screen (16 characters by 2 lines); viewable in bright sunlight and low-light levels

**failure indicator** failure indicator LED illuminates when test current exceeds 100 µA, 200 µA, 300 µA (programmable)

**control** single turn-and-press knob

**computer interface** RS-232C port for factory calibration and diagnostics

**environment** Operating: -10°C to +50°C (+15°F to +122°F); Storage: -30°C to +70°C (-22°F to +158°F)

**humidity** 90% RH @ 40°C (104°F) non-condensing

**altitude** 2,000 m (6,562 ft) to full safety specifications

**cables** one 10-foot high-voltage cable, one 10-foot high voltage return cable, one ground cable, one power cord

**transportation case** transportation case is included

**warranty** one year on parts and labor

**NOTE :** the above specifications are valid at nominal voltage and ambient temperature of +25°C (+77°F). Specifications are subject to change without notice.



## Instruments designed and developed by the hearts and minds of utility electricians around the world

Vanguard Instruments Company, (VIC), was founded in 1991. Currently, our 28,000 square-foot facility houses Administration, Design & Engineering, and Manufacturing operations. From its inception, VIC's vision was, and is to develop and manufacture innovative test equipment for use in testing substation EHV circuit breakers and other electrical apparatus.

The first VIC product was a computerized circuitbreaker analyzer, which was a resounding success. It became the forerunner of an entire series of circuitbreaker test equipment. Since its beginning, VIC's product line has expanded to include microcomputer-based, precision micro-ohmmeters, single and three phase transformer winding turns-ratio testers, transformer winding-resistance meters, mega-ohm resistance meters, and a variety of other electrical utility maintenance support products.

VIC's performance-oriented products are well suited for the utility industry. They are rugged, reliable, accurate, user friendly, and most are computer controlled. Computer control, with innovative programming, provides many automated testing functions. VIC's instruments eliminate tedious and time-consuming operations, while providing fast, complex, test-result calculations. Errors are reduced and the need to memorize long sequences of procedural steps is eliminated. Every VIC instrument is competitively priced and is covered by a liberal warranty.



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