VBT-75P

vacuum bottle tester

Vanguard Instruments Company, Inc.
www.vanguard-instruments.com

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The VBT-75P is a microprocessor-based, portable 75 kV dc vacuum bottle tester. This lightweight, portable tester is designed for testing circuit-breaker vacuum bottles in the field and at the shop.

Test voltages can be selected from 10 kV dc to 75 Kv dc in 1 Kv steps. The highvoltage 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 µA, 200 µA, or 300 µA, the test voltage is returned to zero and a "Pass" message is displayed. 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-75P features a back-lit LCD screen (20 characters by 4 lines) that is viewable in both bright sunlight and low-light levels. A rugged, 16-key, membrane keypad is used to control the unit. Test results can be printed on the built-in 2½" wide thermal printer.

The VBT-75P can store up to 84 records of 16 readings in Flash EEPROM. Test records can be retrieved and printed on the built-in thermal printer, or they can be transferred to a PC via the unit's RS-232C interface. Windows®-based software is provided with each unit. Using this software, test records can be retrieved from the VBT-75P and then stored on the PC for future analysis and report generation. Additionally, test records can be exported in PDF, Excel, and XML formats.

The VBT-75P is furnished with a 10-foot test cable that is terminated with a quick-disconnect test clip. A transportation case is also included.

outstanding features

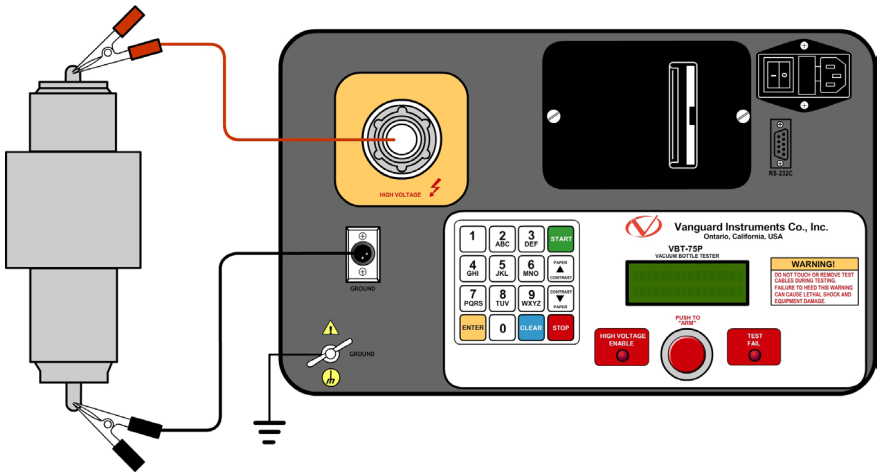
- Automatic testing
- 10 kV – 75 kV DC output in 1 kV steps
- Selectable test time duration from 5 seconds to 2 minutes
- Built-in 2½" thermal printer
- Stores 84 records (of 16 readings each)
- Failure indicator LED
- Very lightweight

ordering information

Part No.	Description
9116-UC	VBT-75P and cables
9116-SC	VBT-75P shipping case
TP3-CS	TP3 thermal printer paper (36 rolls)

High Voltage Cable

VBT-75P connections



Thermal Printer Output

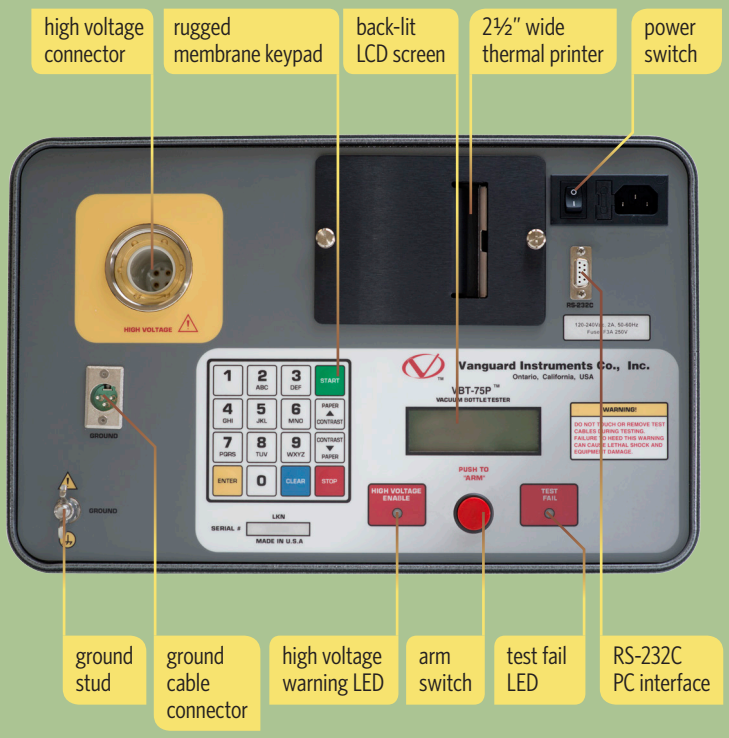
```
TEST RESULTS
DATE:01/09/15      TIME:07:39:01
COMPANY:     VANGUARD
STATION:     SHOP
CIRCUIT:     15KV
MFR:         ABB
MODEL:       681A308H24
S/N:         9809I82201
KVA RATING:
OPERATOR:

TEST VOLTAGE:   75 KV
TEST LIMIT:     300 uA
TEST TIME:      0:10
LAST MEAS CUR: 98.08 uA
LAST MEAS VTG: 80.2 KV
        TEST PASSED!!
NOTES: _____

TEST VOLTAGE:   75 KV
TEST LIMIT:     300 uA
TEST TIME:      0:10
        TEST FAILED!!
NOTES: _____

DATE:01/09/15      TIME:07:39:43
```

VBT-75P Controls & Indicators



VBT-75P *technical specifications*

physical specifications	**Dimensions:** 17"W x 10½"H x 6½" D (42.7 cm x 26.9 cm x 16.5 cm) **Weight:** 12 lbs. (5.44 Kg)	**input power**	90 – 240 Vac, 2A, 50/60 Hz
output voltage	10kV – 75 kV dc in 1 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 (20 characters x 4 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)	**keypad**	rugged membrane keypad (10 alpha-numeric keys, 6 function keys)
internal data storage	stores up to 84 records of 16 readings each	**printer**	built-in 2½" wide thermal printer
pc software	Windows®-based software is included with purchase price	**computer interface**	one RS-232C port
temperature	**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
cables	one 10-foot high-voltage cable, one 10-foot high voltage return cable, one ground cable, one power cord	**altitude**	2,000 m (6,562 ft) to full safety specifications
furnished accessories	shipping case	**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 circuit breaker analyzer, which was a resounding success. It became the forerunner of an entire series of circuit breaker 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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Revision A. February 13, 2015