

HST-TFR Textile Flame Retardancy Tester (Vertical Burning Test Chamber)



Image for reference only.

Instrument Introduction:

The Touchscreen Controlled Vertical Combustion Tester for Textiles is an upgraded product based on the original equipment technology. It adopts touchscreen control, resulting in a high degree of automation. In addition to the automation functions achieved by various buttons and instruments, the touchscreen control version can store past test data and retrieve it during the test. This equipment is suitable for various fabrics and their products, such as safety nets, protective clothing, and safety belts. It is applicable to the test method for the combustion performance of textiles under vertical edge ignition as specified in GB5455-2014 standard. Design Standard: GB5455-2014 "Textiles - Combustion Performance - Vertical Release - Determination of Damage Length, Afterflame and Afterflame Time"

Applicable Standards: GB6529, GB5725-2009 Safety Nets

GB 8965.1-2009 Protective Clothing - Flame Retardant Protection - Part 1: Flame Retardant Clothing

GB/T 6096-2009 Safety Belt Test Methods

GBT13489-2008 Vertical Small Flame Test Method for Determining the Combustion Performance of Rubber-Coated Fabrics

Technical Parameters:

1. Touchscreen display/control
2. The equipment consists of a control unit and a combustion chamber. The internal dimensions of the combustion chamber are 330*330*765mm.
3. The front of the combustion chamber is a tempered glass observation door.
4. Sixteen exhaust holes are evenly distributed on the top of the chamber, with an inner diameter of 12.5mm; six exhaust holes are distributed on each side of the combustion chamber, with an

inner diameter of 12.5mm.

5. A top plate is installed on the top of the chamber.

6. A bracket is provided on the top of the chamber to support a sample clip. The bottom of the sample clip is 17mm above the highest point of the igniter nozzle.

7. The inner diameter of the igniter nozzle is 11mm, and the nozzle head is at a 25° angle to the vertical.

8. Ignition Time: Accurate to 0.5s

9. Gas Source: Industrial-grade propane, butane, or propane/butane mixture. Methane gas with a purity of not less than 97% should be used if the sample is pretreated according to 7.3.

10. Sample Size: 300*89mm, five pieces each horizontally and vertically.

11. Ambient Temperature: -10℃~30℃

12. Power Supply Voltage and Power: 220V±10% 50HZ Power less than 100W

13. Bunsen Burner Flame Application Time: 0-99M99S, adjustable, accuracy ±0.1s (standard is 12s).

14. Afterglow Time: Maximum 0-99M99S

15. Bunsen Burner Blue Flame Height: Adjustable from 15mm-175mm, equipped with a flame height scale. (Height 40mm)

15. Bunsen burner with automatic ignition and timing; ignition time can be preset.

16. Touchscreen parameters:

a. Size: 7 inches; effective display size: 15.5cm (length) x 8.6cm (width);

b. Resolution: 800*480

c. Communication interface: RS232, 3.3V CMOS or TTL, serial port

d. Storage capacity: 1GB

e. Pure hardware FPGA driven display; "zero" startup time; ready to run upon power-on.

f. M3+FPGA architecture; M3 handles instruction parsing, FPGA focuses on TFT display.

g. All main controllers use low-power processors and automatically enter energy-saving mode.

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