

## Touch Screen Horizontal-Vertical and Needle Flame Burning Machine



### I.Product description

The horizontal vertical and needle flame burning machine is developed according to the provisions of the standard GB-T2408-2008 for horizontal and vertical burning test and GB5169.5-2008 and GB4706.1-2005 for the needle flame burning test. The new integrated equipment that meets national standards and relevant UL and IEC standards is the only original instrument on the market that neutralizes two different types of test methods. In addition to the originality of the large function of the device itself, The

instrument is automatically ignited and automatically timed. At the same time, the horizontal and vertical combustion type clamps are controlled by the motor, which can be moved up and down, left and right, without manual hand dialing; the above functions are not available in other manufacturers.

## II. The main technical parameters

1. Test background: black background
2. Test process: automatic control of test procedures, independent ventilation
3. Dimensions: width 1160mm × depth 600mm × height 1310 (including feet) mm
4. Combustion test area volume: >0.5 cubic, length \* width \* height about 900mm × 590mm × 1050mm, background black, background illumination ≤ 20Lux

### Needle flame part

- ① Needle burner: inner hole  $\Phi$  0.5mm  $\pm$  0.1mm, outer diameter  $\leq$   $\Phi$  0.9mm, length  $\geq$  35mm,
- ② Burner flame angle: 0- 45 ° (arbitrary adjustment)
- ③ Combustion time: 0-999.9s  $\pm$  0.1s can be adjusted arbitrarily (flame automatically advance and retreat, no hands-on operation)
- ④ Burning time: 0-999.9s  $\pm$  0.1s, automatic recording, manual suspension
- ⑤ Flame height: 12mm  $\pm$  1mm (with height gauge)
- ⑥ Needle height: greater than 35mm (inside diameter  $\phi$ 0.5, outer diameter  $\phi$ 0.9)
- ⑦ Gas supply: 95% butane gas (can be bottled with liquefied petroleum gas)
- ⑧ Adjustable gas volume (flow meter)
- ⑨ Temperature test range: 0~1000°C
- ⑩ Flame temperature requirement: the time from 100 °C  $\pm$  2 °C to 700 °C  $\pm$  3 °C within 23.5 seconds  $\pm$  1 second
- ⑪ Thermocouple:  $\Phi$ 0.5mm imported armored (K type) thermocouple

⑫ Heat transfer copper block:  $\Phi 4.0 \times 6.0 \text{mm}$

## Horizontal vertical test section

1. Ambient temperature: room temperature  $\sim 40^\circ \text{C}$ ; relative humidity:  $\leq 75\%$ ;
2. Power supply voltage and power:  $220\text{V} \pm 10\%$  50HZ power 150W
3. Bunsen burner automatic ignition time: any setting
4. Bunsen burner inner diameter  $9.5\text{mm} \pm 0.5\text{mm}$
5. Gas source: liquefied petroleum gas (addition industry methane gas during arbitration);
6. Working power supply: 220V AC 50HZ
7. Timing range: 0~999s Timekeeping accuracy:  $10\text{s} \pm 0.2\text{s}$   $30\text{s} \pm 0.2\text{s}$ ;
8. Flame time: 0 ~ 999.9S (adjustable)
9. Afterflame time: 0~999.9S (adjustable)
10. Afterburning time: 0~999.9S (adjustable)
11. Burning angle:  $0^\circ$ ,  $20^\circ$ ,  $45^\circ$
12. Flame height: 20mm ~ 175mm adjustable
13. Flame temperature: (100-1000)  $^\circ\text{C}$  adjustable
14. Gas flow rate: gas flow rate adjustable from 105ml/min to 1000ml/min
15. Burning lamp: The inner diameter of the lamp is  $9.5 \pm 0.3\text{mm}$ , and the length is  $100\text{mm} \pm 10\text{mm}$ .
16. Time device: can be accurate to 0.5S
17. Position adjustment: The sample holder can be adjusted up and down, left and right, the combustion seat can be adjusted back and forth, and the adjustment stroke is large.

## The design standards

**Design of the horizontal vertical burning test part:** GB-T2408-2008 "Test of plastic burning performance - horizontal method and vertical method"

**Horizontal vertical burning test part applicable standards:** UL94-2006, GB-T 5455, GB-T13488, GB-T5169IEC60695-11-3, IEC60695-11-4, IEC60950-1, IEC695-2

**Needle flame test part equipment GB:** GB5169.5-2008 Electrical and electronic products fire hazard test Part 5: Test flame Needle flame test method Device, confirmation test

GB4706.1-2005 General requirements for safety of household and similar electrical appliances