YUYANG INDUSTRIAL CO., LIMITED

China Manufacturer of Fire Testing Equipment

Solar Cell Flammability Testing Equipment ASTM E 108-04 Burning Brand Tester

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- **Product Details:**
- Place of Origin: **China**
- Brand Name: **YUYANG**
- Certification: **UL 1730 UL 790 IEC 61730-2 Annex.A ASTM E 108-04 KS C IEC 61730-2 Annex .A**
- Model Number: **YY108**
- **Payment & Shipping Terms:**
- Minimum Order Quantity: **1 set**
- Price: **Negotiation**
- Packaging Details: **Plywood Box**
- Delivery Time: **5-8 work days**
- Payment Terms: **T/T L/C Western Union**
- Supply Ability: **5 sets per month**

- Share to：

ASTM E 108-04 Solar Cell Spread of Flammability & Burning Brand Testing Equipment

Description:

This equipment virtually simulates an external fire to evaluate the resistance of the roof and other physical elements of fire, in order to qualify for the flame spread experiments(A~C class), in case of A 1.82m, B 2.4m and C 3.9m. It is an equipment to displacement of the testing material and the exposure and falling of the roof structure.

Standards:

UL 1730 : Smoke Detector Monitors and Accessories for Individual Living Units of Multifamily Residences and Hotel/Motel Rooms: Electrically operated annunciators for residential type smoke detectors.
UL 790 : Standard Test Methods for Fire Tests of Roof Coverings
IEC 61730-2 Annex.A: Fire Tests, Spread-of-Flame and Burning-Brand Tests
ASTM E 108-04: Standard Test Methods for Fire Tests of Roof Coverings
KS C IEC 61730-2 Annex .A: Fire resistance test, Spread-of-Flame and Burning-Brand Test.

Specification:

A Test Room to install the equipment
- The material should consist of minimal fire-proof material with sandwich panels including fireproof urethane.(Suggests a sandwich panel consisting of Glass Wool)
- Measures : 7,000(W) × 4,000(D) × 4,000(H) or greater.
Test Deck
Eaves and cornice
Air Ducts
Non-Combustible Board

Auto Ignition System
7-Segment timer mark
Velocity Measurement System
DAQ Control Unit
PC Operation • Adequate for removal of moisture in compressed air or nitrogen gas.
Power Voltage : 220 V-60 Hz

Features:

Slop of Deck Plate can be easy to control by Air Cylinder.
Fire resistance board attached eaves of Test Deck.
Using auto control valve for adjusting temperature condition by Class.
- Class A, B : 760 ±28°C(1400 ±50°F) - 21,000 ~ 22,000 Btu/min(369 ~ 387 kWh)
- Class C : 704 ±28°C(1300 ±50°F) - 18,000 ~ 19,000 Btu/min(316 ~ 334 kWh)
Each gases supplied to Burner follows up different measurement and control way.
- LNG: Using MFM, accuracy flow measurement (Flow control is controlled by Auto Control Valve)
- LPG: Using MFC, accuracy flow measurement and control.
Inverter System gives maintain Air Velocity: 19±8 km/h(5.5m/sec) on the Test Deck.
Auto ignition way is adapted for test and ignite in the same time.
Guide Plate is attached in the Air Duct because of protecting of flow turbulence which is supplied to Test Deck.
Slop adjustment panel for adjusting of Air flow direction is installed in the Air Duct.
Individual burner is installed for burning-brand test.
Thermocouple is installed on 58.7mm from top of burning-brand burner, measures for temperature as 888±28°C.
Using DAQ system be programmed to have automatic control and measurement.

Test result:

1) General Performance Criteria of Spread of Flame.
Any portion of the roof covering material (Module or Panel) be blown or fall off the Test Deck in the form of flaming or glowing cases

The roof deck be exposed by breaking, sliding, cracking or warping of the roof covering cases.
The fire safety Class A case: A flame-spread range is 1.82M, the fire safety Class B case: A flame-spread range is 2.4M,
the fire safety Class C case: A flame-spread range is 3.9M, a flame-spread is measured from leading edge of specimen.
During test, both side of flame-spread occurs from direct exposure path on the testing flame. Flame-spread includes upper side flame (surface contact with outside flame) and stand-off flame or any mid of path flame.
2) General Performance Criteria of burning brand.
Any portion of the module or panel be blown off or fall off the test deck in the form of flaming or glowing brands case.
Portions of the roof deck, or portions of a module or panel intended for installation integral with or forming a part of the building roof structure, fall away in the form of glowing particles.
Flame of module or panel is keep doing.