

FLAMMABILITY CHECK

STAINLESS STEEL CABINET FOR PERFORMING FLAMMABILITY TESTS OF
PLASTIC MATERIALS, FOAMS AND RUBBER



gibitre[®]
INSTRUMENTS

Standards the instrument complies with:

ASTM D635; ASTM D3801; ASTM D4804; ASTM D4986; ASTM D5048; ISO 1210; ISO 8030;
ISO 9772; ISO 9773; UL 94;

Key Features

Instrument for flame resistance test according to UL 94 standard fitted with:

- **Stainless steel cabinet** with tempered glass viewing window and interior light
- **Bunsen burner** according to **ASTM D5025** standard
- **Flow meter** for gas flow regulation
- Support for **flame angle set** (0°, 20°, 45°)
- **Slide** for the regulation of the **position of the flame**
- Sample holder according to the standards with sample position regulation
- **Digital thermometer** for the measurement of the temperature of the flame **integrated in the instrument**
- **Digital Timer** with 0.1 second resolution for the measurement of test time
- **Exhaust fan** to remove combustion fumes

Control Panel

The control panel includes:

- Digital reading of the temperature of the flame
- Timer for the measure of test time
- Button for Start / Stop button for the Timer
- Button for Reset of the Timer
- Button for activation of internal light
- Button for activation of fume aspiration



Gas Flow Adjustment

The instrument must be connected to a **Methan source**.

The instrument is equipped with:

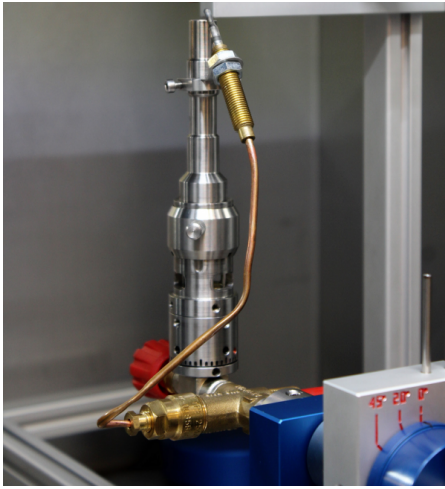
- Manometer between between 0 and 25 mBar
- Fluxometer between 0,04-0,36 NL\min with flow regulation knob
- Fluxometer between 0,2-1,3 NL\min with flow regulation knob



Bunsen Burner

Bunsen burner compliant with ASTM D 5025 equipped with:

- **Safety sensor for interruption of gas flow with flame absent**
- Ring for the adjustment of the air / gas mix
- **Tiltable support** for testing with inclined flame (0 °, 20 °, 45 °)



Temperature Calibration

The instrument is supplied with:

- Internal Thermometer with thermocouple for 20 mm Test Flame according to ASTM D 5207 standard.
- Ruler for the check of the height of the flame.

The Thermocouple and the ruler are installed inside the chamber.

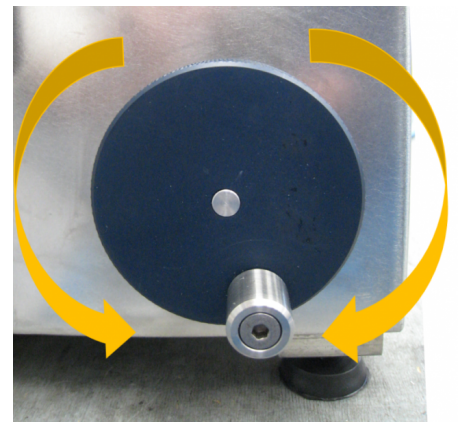
To test the temperature of the flame, you only need to move the burner under the Thermocouple using the movement knob.



Device for moving the burner in the chamber

The knob located outside the Cabin allows you to operate the slide and move the burner horizontally inside the chamber.

The device allows the operator to perfectly control the position of the flame under the specimen through the inspection window.



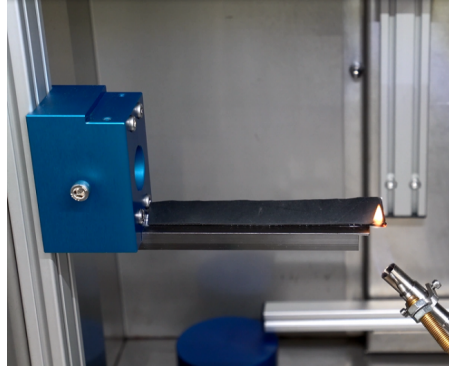
Test with Vertical Sample

- Specimen support for Vertical Burning of Non-rigid Solid Plastics (MVB) test conforming to UL 94 (tests VTM-0, VTM-1 and VTM- 2), ASTM D 4804 and equivalent standards.
- Specimen support for Vertical Burning of Solid Plastics (VB) test conforming to UL 94 (tests V-0, V-1, V-2, 5VA, 5VB), ASTM D 3801 and equivalent standards.
- Specimen support for Vertical Burning (VB) test conforming to JAR 25 853 B standard.



Test with Horizontal sample

- Specimen support for Horizontal Burning (HB) test conforming to UL 94, ASTM D 635 and equivalent standards.



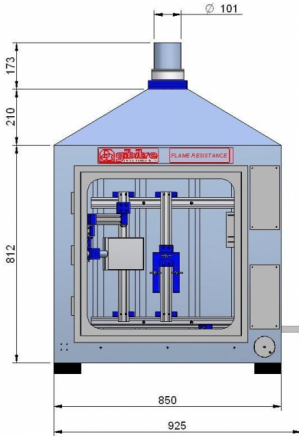
Test with Horizontal Sample of Expanded products

Specimen support for Horizontal Burning of Cellular Polymeric materials (HBF) test conforming to UL 94, ASTM D 4986 and equivalent.



Instrument Structure

The instrument, completely made of Stainless Steel, is optimized for being placed on the table of your lab and for the connection to fume evacuation systems.



Development and production

The instrument is totally developed and produced in the plant of Gibitre Instruments in Italy.

All the mechanical parts are produced in the company workshop using modern CNC machines.

Components and sensors from well-known brands are selected in order to ensure the maximum reliability in the measures.

Internal trained personnel takes care of all the production stages: assembly, start-up, calibration, packing, shipment and installation.



Testing Configuration

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| Types of test that can be performed | HB (Horizontal Burning Foamed Material), HB (Horizontal Burning), MVB (Material Vertical Burning), VB (Vertical Burning) |
| Test Cabinet | Stainless steel cabinet with tempered glass viewing window and internal light. |
| Burner | Conforming to ASTM D 5025 standard. With support for flame angle set (0°, 20°, 45°). |
| Temperature Control | Internal Digital thermometer in conformity with ASTM D 5207 standard |
| Gas flow Regulation (Methane) | Integrated Flow meter |
| Timer | Digital Timer with 0.1 sec. resolution. The timer permits to set the flame exposition time. At the end of the count down for flame exposition, the timer permits to count flame extinction time. |
| Slide for the regulation of the position | The slide is controlled by an external handle that permits to move the burner inside the chamber. |
| Aspiration of Fumes | Exhaust fan to remove fumes at the end of the test |
| Safety Devices | |
| Safety Devices | Safety valve for gas flow interruption without flame |
| Labelling | CE Labelling |
| Calibration | |
| Calibration | Calibration Report conforming to UL 94 with traceability to primary standards |

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|----------------------------------|---|
| Calibration of test Flame | Internal Thermometer with thermocouples for 20 mm Test Flame according to ASTM D 5207 standard. |
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| Technical specifications | |
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| Power | 220 VAC \pm 10%, 50 Hz \pm 3,4 A, single phase, 40 W - 110 VAC \pm 10%, 60 Hz \pm 3 on request |
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| Gas Supply | The instrument must be connected to a Methan Source or Methan Cylinder. A pressure reducer (not included) is required to supply the instrument with a pressure of 1 bar. |
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| Internal Dimension | (W x D x H) 850 x 700 x 812 mm |
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| External Dimension | (W x D x H) 925 x 800 x 1235 mm |
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| Weight | 85 kg |
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