

IEC 60695-11-2 1kW Test Flame Burner

Brass Burner for Standardized 1 kW Pre-mixed Test Flame

Standard: IEC 60695-11-2 Figure A.1 (1 kW nominal pre-mixed flame burner)

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1. Product Overview

The KingPo IEC 60695-11-2 1kW Test Flame Burner is a precision brass burner designed according to IEC 60695-11-2 Figure A.1. It is used to generate a standardized 1 kW nominal pre-mixed propane/air test flame for fire hazard testing applications.

The burner features a precisely machined tube with an inner diameter of $7 \text{ mm} \pm 0.05 \text{ mm}$, ensuring repeatable flame geometry and consistent flame behavior. It is an important component in standardized flammability test setups, commonly used by testing laboratories, electrical and electronic product manufacturers, certification bodies, and quality control departments.

2. Applicable Standards

- **IEC 60695-11-2 Figure A.1** — Fire hazard testing – Part 11-2: Test flames – 1 kW nominal pre-mixed flame – Apparatus, confirmatory test arrangement and guidance

3. Purpose

The IEC 60695-11-2 1kW Test Flame Burner is designed to generate a stable nominal 1 kW pre-mixed propane/air flame for controlled fire hazard testing. When connected to the proper gas and air supply, the burner produces a consistent test flame that can be applied to materials, components, or product parts according to the relevant test method.

This helps laboratories evaluate ignition behavior, flame response, and fire hazard performance under repeatable test conditions. The precision-machined $\Phi 7 \text{ mm} \pm 0.05 \text{ mm}$ burner tube helps maintain stable flame geometry and supports reliable comparison between tests.

4. Key Features

- **Precision Brass Construction** — Inner diameter of $\Phi 7 \text{ mm} \pm 0.05 \text{ mm}$ with high-accuracy machining for consistent flame characteristics.
- **Standardized 1 kW Flame** — Designed to produce a stable 1 kW nominal pre-mixed flame per IEC 60695-11-2.
- **Durable Material** — Brass construction provides excellent heat resistance and longevity under high-temperature conditions.
- **Repeatable Performance** — Precision-machined for stable flame formation and repeatable test conditions.
- **Robust & Long-Lasting** — Suitable for repeated use in laboratory testing environments.

5. Technical Specifications

Parameter	Specification	Notes
Applicable Standard	IEC 60695-11-2 Figure A.1	Defines the 1 kW nominal pre-mixed flame burner
Burner Tube Material	Brass	Excellent thermal conductivity and durability
Burner Inner Diameter	$\Phi 7 \text{ mm} \pm 0.05 \text{ mm}$	Precision-machined tolerance for consistent flame geometry
Flame Type	1 kW nominal pre-mixed flame	Standardized test flame used across multiple IEC methods
Gas Type	Propane or propane/butane mixture	Commonly used fuel for stable pre-mixed

		flame
Flame Characteristics	Stable and well-defined flame geometry	Consistent ignition energy for reliable evaluation
Construction	Precision-machined brass burner assembly	Robust construction for repeated laboratory use

6. Typical Use

1. Connect the burner to a suitable propane (or propane/butane) gas supply and air supply with proper flow control.
2. Adjust gas and air mixing ratios to achieve the required 1 kW nominal pre-mixed flame.
3. Allow sufficient warm-up time to stabilize the flame.
4. Verify flame characteristics against IEC 60695-11-2 requirements before testing.
5. Apply the flame to the test specimen or setup according to the relevant test method.

7. Applications

- Testing Laboratories — Standardized 1 kW pre-mixed flame for various IEC fire hazard tests
- Electrical & Electronic Product Manufacturers — Fire hazard evaluation of materials and components
- Certification Bodies — Compliance verification using controlled flame exposure
- Research Institutions — Studying ignition behavior and flame response of new materials

8. Standard Configuration

The standard configuration includes:

- Precision-machined brass burner assembly with $\Phi 7 \text{ mm} \pm 0.05 \text{ mm}$ inner diameter
- Designed for use with suitable gas supply, air supply, flow control system, and flame verification procedure

Note: The burner tube dimensions should be periodically verified. Regular cleaning and inspection are recommended to ensure stable flame performance.

9. Ordering Information

Please confirm the following when requesting a quotation:

- Quantity required
- Whether any accessories (e.g., flow meters, stands) are needed
- Any specific verification or documentation requirements

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