

Single Flame Source Tester

User manual



Advanced Instruments Co., Limited

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Attention

- ◆ The instrument is a laboratory-specific device that requires authorized professional operators to operate, and laboratory operators must be professionally trained.
- ◆ Please read this User Manual carefully before using the instrument.
- ◆ Do not place the instrument in a wet and watery test environment in order to reduce the risk of fire.
- ◆ Built-in high voltage, do not open the case; please contact our service personnel when you need to check the inside of the instrument or repair it.
- ◆ Clean the instrument with a dry cloth or vacuum cleaner. Disconnect the power and air supply before cleaning the instrument.
- ◆ Please use our supplied power plug to connect the power supply, the operator can not change the power circuit.
- ◆ The power outlet requires a ground wire.
- ◆ The plug of the instrument power cord set is the disconnect device for the instrument and power supply. At the end of the test, the power outlet needs to be removed to disconnect the instrument from the

power supply.

- ◆ The external power outlet needs to be placed in an easy-to-operate location so that the operator can easily unplug the power cord in an emergency.

Transport

- ◆ Be careful when unpacking and handling the instrument to prevent scratching and breaking.
- ◆ Appropriate protective measures, such as wearing protective shoes, are required during handling of the instrument. If you need to move or transport the instrument over long distances, you need a suitable professional tool (such as a forklift) to move.

Warranty

Advanced Instruments Co.Limited supply

(1) 12 months warranty service since finishing installation and commissioning the instrument;

(2) Permanent technical support.

Before the instrument leaves the factory,we

(1) Inspect instrument strictly;

(2) Choose good spare parts in the world and excellent production and processing technology;

(3) Operate our instrument strictly in according with User Manual.

We will strictly abide by the above warranty terms and provide timely after-sales service.

The scope of the warranty is limited to the repair or replacement of parts of the instrument. Instrument damage caused by abuse, misuse, accident, alteration, negligence, unauthorized repair and installation, etc,is not covered by the warranty.Advanced Instruments Co.,Limited has the right to a final interpretation of the instrument's defects

.When the instrument has replacement or repair parts, the remaining parts of the original warranty device are still valid.

We have the right to improve and update our instruments, and we are not obligated to improve or update the instruments that our customers have previously purchased.

Spare Parts Warranty

The parts and corresponding consumables of the instruments supplied by Advanced Instruments Co., Limited are rigorously tested and selected before they leave the factory, to meet the test requirements. Properly install or use the supplied spare parts and consumables during the test. The warranty period for parts (excluding consumable parts such as light sources, optical components, etc.) is within 6 months after installation and commissioning.

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1 Introduction

The equipment is suitable for testing methods for the flammability of various building materials. In the absence of external radiation, a vertically placed sample was impacted with a small flame to determine its combustible method. It is an accurate, reproducible, and convenient detection instrument. It can be used not only as a means to identify the flammability of a test sample, but also as a research tool..

This equipment is necessary for the flammability of materials. Use external igniter, flame-adjustable combustion method. Conforms to the standard ISO 11925-2:2002.

This manual contains operating procedures and safety precautions. Please read carefully before installing and operating your instrument to ensure safe use and accurate test results. Our company strongly recommends reading this manual, and is not responsible for the accidents caused by the inconsistency operation with described in this manual.

2 Safety sign



Wear Gloves to Operate.



Wear Protective Glasses to Operate.



High temperature, Hot, Be careful.



Glass Fragile.

3 Technical specification

Physical condition

Width: 70cm (27.6 inch)

Depth: 40cm (15.7 inch)

Height: 81 cm (31.9 inch)

Structure: Stainless steel cabinet

Two fireproof glass doors for easy viewing of specimens

Shipping weight: about 50kg,in plywood case

Gas requirement: Propane gas,purity above 95%.

Working space: 150 x 90 cm (5 x 3 ft)。

Environment

Indoor use

Altitude: maximum 2000m

Environmental temperature: 18 ~ 28 °C (64.4 ~ 82.4 °F)

Relative humidity:(50±20)%

4 Installation

4.1 Unpacking

When you receive this product, please check whether the packaging is complete. If there is any damage, please contact courier or our sales..

4.2 Package list

Main Unit	1 Set
Ignition locator	2 PCS
Flame height measurement tool	1 PC
Burner	1 Set
Standard sample holder	5 Sets
Loose fill sample holder	1 Set
Portable timer	1 PC
Portable anemometer	1 PC
Gas pipe	Some
Pressure reducing valve	1 PC
User manual	1 Copy

Users need to prepare :

Tray(made by Aluminum foil)

Propane gas cylinder(purity above 95%)

Sensitive gas pressure regulator

4.3 Commissioning

1. After unpacking, place the instrument on a smooth surface of the fume hood or indoor exhaust system. Indoors should have stable temperature and humidity.

2.Connect the pressure relief valve outlet on the propane cylinder to the instrument propane inlet.

3.The smoke exhaust device of this instrument should be connected to the smoke exhaust system effectively.

4.Keep gas at a safe distance from the device(more than 2m)

5 Operation

5.1 Cabinet

The front and right side doors of the instrument can be opened, and the hand push rod can push the igniter forward and backward. The height of the sample holder can be manually adjusted. The needle valve is used to control the flame size. The bottom of the box is a cross stainless steel grid to facilitate ventilation. External exhaust fan is connected to smoke exhaust hood to control flue wind speed

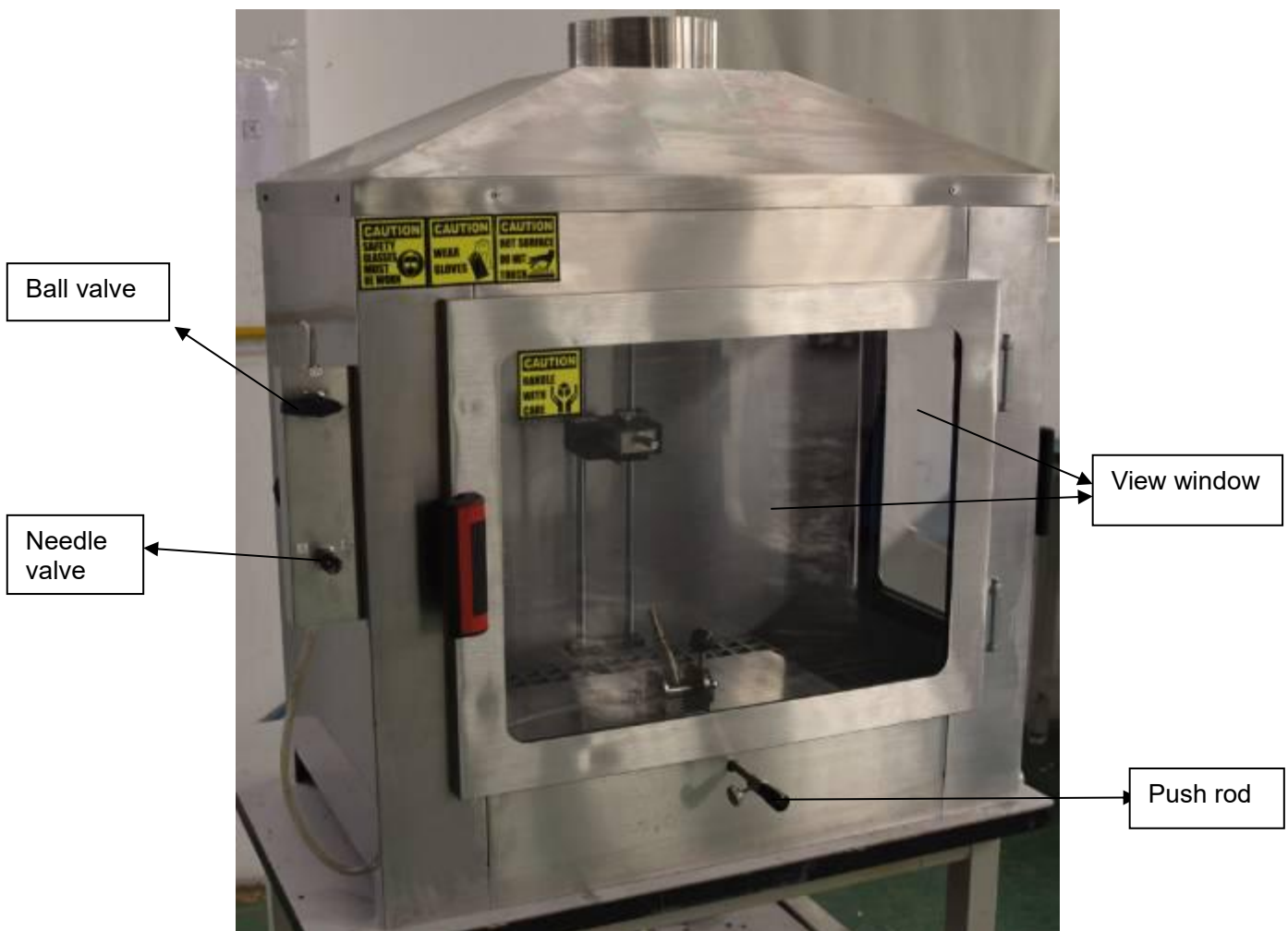


Fig.1:Overall picture

5.2 Sample installation

The right side of the cabinet is a manual push rod, which can pull the sample

back and forth.



Fig.2:Push rod

Use the appropriate test method, install the sample holder on the sample support, adjust the height up and down as appropriate, adjust to the standard height, and fix it with the right side fastening bolts

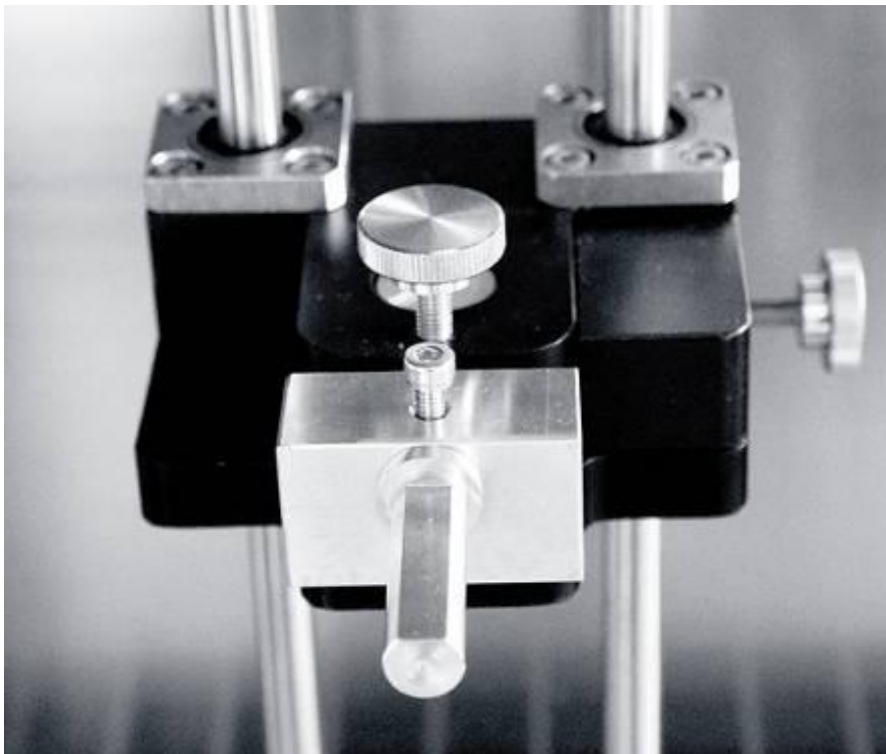


Fig 3:Sample support

5.3 Burner adjustment

Adjust the flame height with a needle valve, move the burner back and forth through the push rod, and burner can be adjusted to 45 degrees.



Fig. 4: Burner

5.4 Flame adjustment and measurement

Leave the burner in a vertical position and ignite the flame until the flame is stable. Adjust the needle valve and the flame height should be 20 ± 1 mm. The height of the flame is flush with the tip of the measuring tool
The.



Fig.5. Flame adjustment

5.5 General procedure

Insert the sample into the sample holder, and ensure that the sample holder is 30mm away from the bottom end of the sample. Then insert the sample holder into the hanging rod and fix it. After the ignition mode is determined, insert the corresponding positioner to adjust the burner angle to 45°, then adjust the position of the sample and burner. Manually raise the burner, ignite and wait for the flame to stabilize. Use the flowmeter to adjust the flame height and measure whether it is 20±1mm. Again adjust the burner angle to a 45° angle and use the push rod to advance horizontally until the flame reaches the preset sample contact point. When the flame comes into contact with the sample, the ignition time is 15S or 30S as required. Then smoothly withdraw the burner.

6 Maintenance

6.1 Cabinet

Clean the cabinet at the end of each day's test. Clean up the burning residue and use a non-combustible solvent to clean the burning residue that has dripped on the instrument and the floor to prevent the accumulation of odor or toxic residue. Clean the test room window as needed for viewing. Clean the glass with a suitable window glass cleaner.

6.2 Sample holder

Clean all sample holders regularly with appropriate solutions and detergents.

6.3 Burner

Check the burner nozzle before each test to confirm that it is not blocked or damaged.

7. Reference standards

We can obtain relevant standard information from the following organization, or purchase from the designated places.

<p>DIN (德国标准化学会) DIN Deutsches Institut für Normung e.V. Burggrafenstrabe 610787 Berlin Germany 6D-10787 柏林德国 通信地址: D-10772 柏林</p>	<p>Tel:49 30 26 01-0 Fax:+49 30 26 01 12 31 E-mail: postmaster@din.de http://www.din.de</p>
<p>ISO 第一次联系时,应联系贵国的成员组织 关于成员组织的全球信息,请访问ISO 的网站: http://www.iso.ch 中央秘书的地址: 国际标准化组织 1, rue de Varembe Case postale 56 CH-1211 Geneve 20瑞士</p>	<p>ISO Central Secretariat Tel: +41 22 749 01 11 Fax: +41 22 733 34 30 Email: central@iso.ch</p> <p>ISO/IEC Information Center: Tel:+41 22 749 01 55 Email:mbinfo@iso.ch</p>
<p>GB 中华人民共和国国标 National standard of the People's Republic of China</p>	<p>Web: http://www.sac.gov.cn/</p>