

# Temperature detection and fire extinguishing integrated machine

## **User's Manual**

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## **Chapter 1、 Introduction to fire extinguishing device**

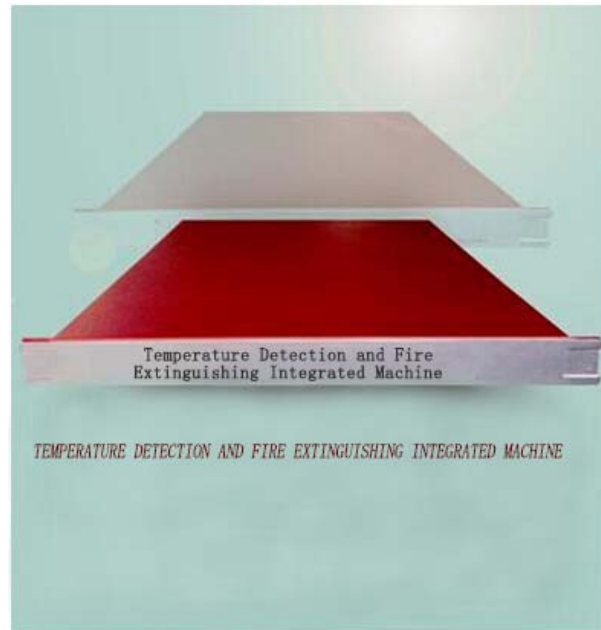
The integrated temperature detection and fire extinguishing machine is a new type of automatic fire extinguishing product independently developed by our company. It is an automatic fire extinguishing device specially developed for the 19# cabinet. Thermal detection and fire extinguishing integrated machine fire extinguishing device, also known as prefabricated fire extinguishing device, refers to the pre-assembly of fire extinguishing agent storage devices, pipelines, nozzles, shells, pipe fittings, pressure indicators, fire detectors, signal feedback devices, etc. into an independent fire extinguishing unit A kind of fire extinguishing device. The fire extinguishing device of the integrated temperature detection and fire extinguishing machine is suitable for various cabinets with independent units. A set of fire extinguishing device can protect one or more cabinets.

The fire extinguishing agent used in this device is perfluorohexanone (also called 1230). Perfluorohexanone is a clean gas fire extinguishing agent that mainly uses chemical fire extinguishing and has physical fire extinguishing effects; it is colorless, odorless, low-toxic, It is non-conductive, does not pollute the protected object, and will not cause damage to property and precision facilities; it can reliably extinguish Class B and C fires and electrical fires with a low extinguishing concentration. There are two types of fire detectors in this device, one is a temperature-sensitive glass ball ( $68^{\circ}\text{C}$ ), and the other is a fire detector ( $160^{\circ}\text{C}\pm 10^{\circ}\text{C}$ ). It does not need a traditional fire detection system composed of smoke, temperature and fire controllers to achieve. Our company's products can better play the role of detection and fire extinguishing, and the integrated machine can better adapt to the installation of the 19# cabinet, which can save more space and will not affect the components of the cabinet.

## **Chapter 2、 The device application place**

1. IT and computer system server cabinet.

2. In the telecommunication system and the server of the communication system.
3. Inside the control cabinet of bank equipment.
4. Various control cabinets in other industries.



Physical picture of product

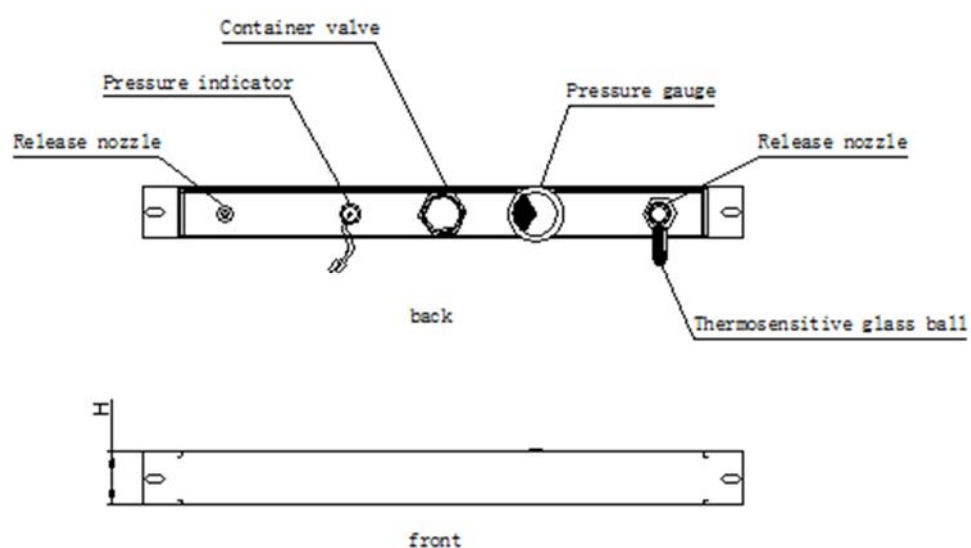


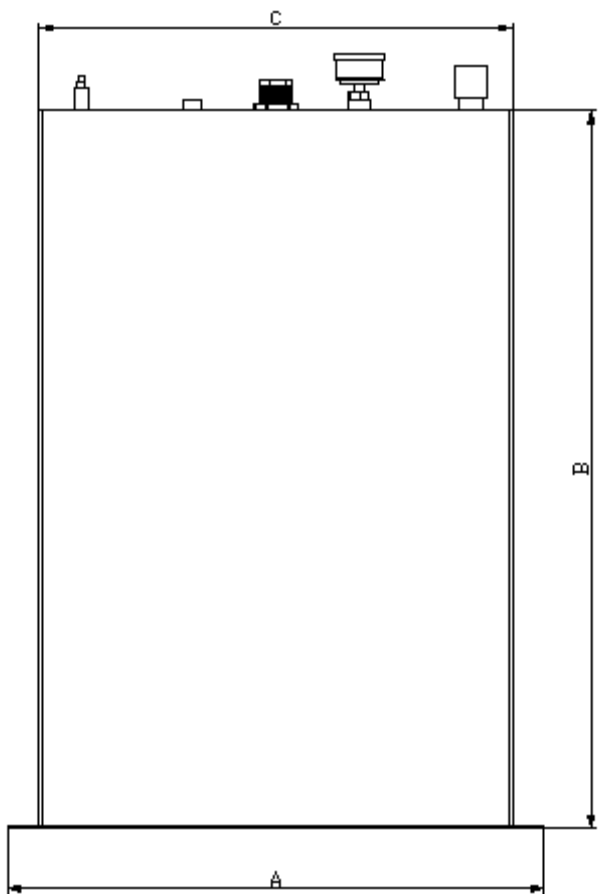
Physical picture of product application scenarios

### Chapter 3、working principle

The fire extinguishing device of the integrated temperature detection and fire extinguishing machine has two sensing temperature start methods: temperature sensing glass ball and fire detection tube. When the ambient temperature of the protection zone reaches the burst temperature set by the temperature-sensitive glass ball ( $68^{\circ}\text{C}$ ), it can also be selected according to customer requirements), the temperature-sensitive glass ball bursts immediately, and the fire-extinguishing gas filling pipe is opened instantly and stored in the device. The gas fire extinguishing agent inside is immediately sprayed out from the nozzle to cool down the protection area and extinguish fire. Another starting method is to use the fire detection tube as a fire detector; when the fire detection tube senses the fire source signal ( $160^{\circ}\text{C}\pm 10^{\circ}\text{C}$ ), the gas in the fire detection tube will expand rapidly, and finally the highest temperature anywhere in the pipeline. The point blasts a spout, and then opens the fire extinguishing agent storage device. The fire extinguishing gas is sprayed from the blasting port through the fire detection pipeline to achieve cooling and extinguishing.

### Chapter 4、Main technical parameters and characteristics





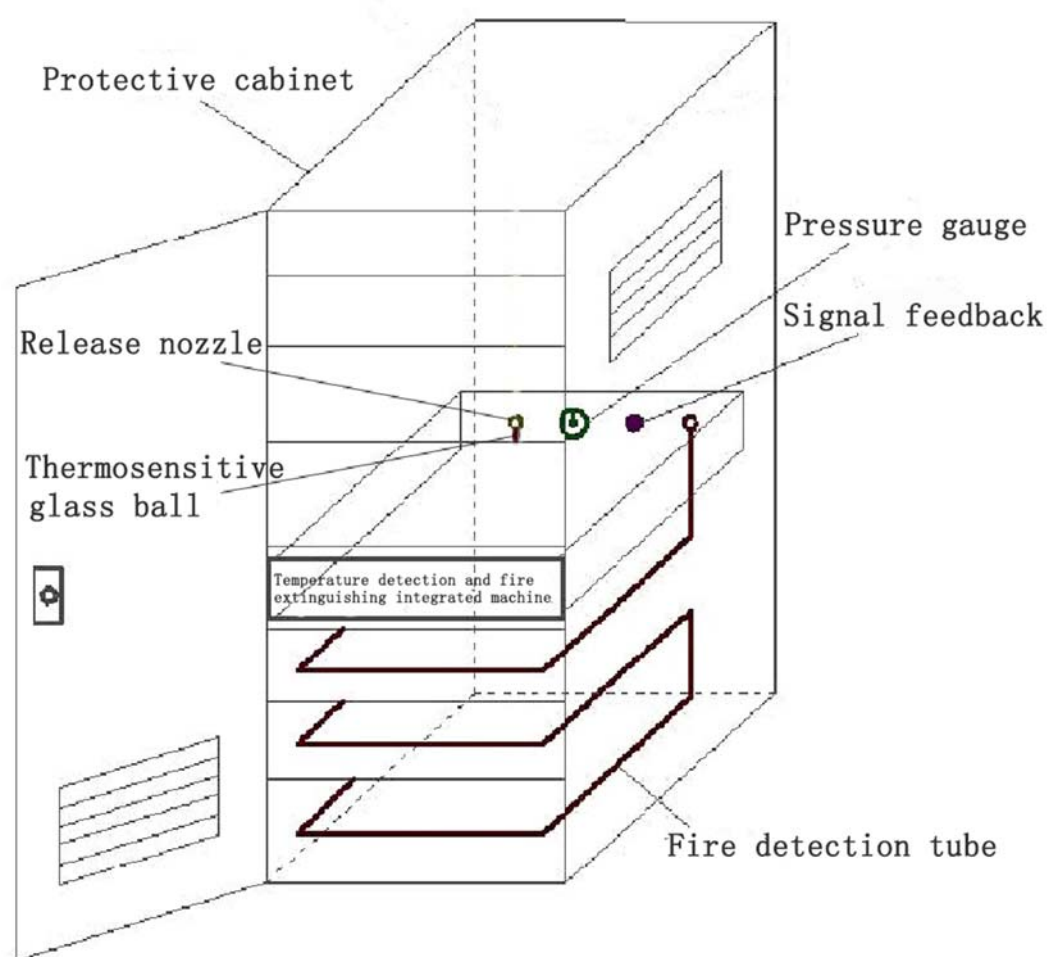
specification	Dimensions C×H×B×A ( mm )	Storage container volume ( L )	Filling density ( kg/m ³ )	Storage pressure ( 20℃;M Pa )	Maximum working pressure ( 50℃;MPa )	working environment
XQQW2.4/ 1.6/160 -H600	432×44×600×483	2.4	≤1150	1.6	2.5	temperature: 0℃～ 50℃  Relative humidity: ≤97%
	432×44×800×483					
	432×44×1000×483					
	432×44×1200×483					

1. The set temperature of the temperature-sensitive glass bulb: 68°C (the temperature can also be selected according to customer requirements).
2. Setting temperature of fire detection tube: (160°C ±10°C)
3. No need to start the power supply.
4. Complete product series, flexible and convenient installation, accurate and reliable work, convenient operation and maintenance, no need to design a storage room separately, and low project investment.
5. It has a fire extinguishing unit that completes fire detection and fire fighting independently.
6. Choose one or all of the two temperature sensors.

## **Chapter 5、installation and maintenance management**

### **1. Installation of integrated temperature detection and fire extinguishing machine**

The installation method of the integrated temperature detection and fire extinguishing machine is as shown in the figure below. The integrated temperature detection and fire extinguishing machine is installed in the cabinet in the form of a drawer and fixed. The release pipe and the fire detection tube of the integrated temperature detection and fire extinguishing machine are arranged As shown in the figure below, the release pipe is fixed on the cabinet with related fixing accessories; the layout of the fire detection pipe is arranged in a fire-prone place as far as possible, with an S-shaped arrangement, and a fixed tie is used to fix it firmly.



Installation diagram

2. The maintenance and management of the integrated temperature detection and fire extinguishing machine should be arranged with dedicated maintenance and management personnel to maintain and manage the integrated temperature detection and fire extinguishing machine. The maintenance management should be recorded; maintenance management personnel are required to be familiar with the working principle and performance of the device .

a. The following content twice a week:

a1. The pressure indication value of the integrated temperature detection and fire extinguishing machine should be within the range of the green zone; a2.

The switch at the container valve should be in the "open" state;

a3. The device should be normal.

b. The device components should also be inspected quarterly and meet the following requirements: b1. The device components should have no mechanical damage, no surface corrosion, good coating protection, and clear nameplate marks; b2. Fire extinguishing agent container, fire detection tube, release tube It should be firm and connected reliably.

c. Comprehensive inspection and maintenance of the integrated temperature detection and fire extinguishing machine every year, in addition to meeting the requirements of Articles a and b, should also meet the requirements:

c1. Observe the pressure gauge value and check whether the pressure of the integrated temperature detection and fire extinguishing machine is leaking. When the pressure gauge is not within the green zone, use the weighing method to check the fire extinguishing dose. When the fire extinguishing dose leaks 10%, it should be considered Replenish fire extinguishing agent and add pressure.

C2. No deformation, corrosion, damage and aging of the fire detection tube.

C3. The maintenance and management of fire extinguishing agent containers should be implemented in accordance with the "Safety Supervision Regulations for Gas Cylinders".

## **Chapter 6、 service commitment**

1. Service content:

1. 1 Pre-sale service

1.1.1 Optimize and improve the design plan, determine the design parameters and equipment specifications and models based on the product characteristics, configure the fire protection engineering system for free, deepen the construction drawing design for the second time, and draw the CAD construction drawings and provide design calculations.

1.1.2 Provide a full set of product information and technical information.

## 1.2 In-sale service

1.2.1 According to the requirements of the contract, appoint professional and technical personnel to provide technical support on site, provide full installation guidance for the equipment provided, and provide installation plans, technical data, and technical specifications.

1.2.2 Can provide system debugging and operation plan.

1.2.3 Actively cooperate with the construction unit to conduct fire inspection.

1.2.4 Actively cooperate with the inspection and acceptance of the fire department organized by the construction unit.

## 1.3 After-sales service

1.3.1 Establish project files: Establish a complete project project file, including equipment list, design drawings, installation and commissioning technical data, maintenance records, etc., to facilitate the subsequent service and data query.

1.3.2 System training service: Flexible and diverse training methods can be provided according to user requirements. ① The project site operation and management personnel training focuses on the daily management, recording, maintenance and use of the system; ② Regular user learning classes, the training location is Shenzhen Hongjiali Fire Protection Technology Co., Ltd. Focus on system design, working principle, on-site operation, maintenance management and factory tour.

1.3.3 Service within the warranty period: Provide users with lifelong and fast maintenance services. The warranty service content will strictly follow the relevant national regulations and the specific requirements of the company's system products, and will be charged at the company's cost price.

1.3.4 Technical update service: Introduce new products and new technologies of our company to users in a timely manner, so that users can keep abreast of the development trends of fire protection products, and select the most advanced and mature products and technologies.

## 2. Technical service response speed

2.1 The technical service response speed is to give a reply within 4 hours after receiving the notice.

### 3. Service specification

During the service, our company's professional service personnel will carry out service work in strict accordance with the "Service Control Procedures" and "Equipment Maintenance Service Standards", and abide by the following code of conduct:

3.1 Work proactive,  
polite and civilized.

3.2 Complete the service work carefully, and explain the cause of the accident, the service process and the solution to avoid the recurrence of similar problems.

3.3 Keep the service work area tidy and minimize the inconvenience to users.

3.4 The service result must be signed by the user in written form and kept in the company service department for record.

### 4. Service contact information and procedures

4.1 When your company has service requirements, you can use any method (telephone, fax, email, etc.) to contact our company's technical service department to enjoy timely and thoughtful service.

4.2 When contacting, please specify the model, quantity, unit and failure situation of the equipment you are using, and leave your contact number, name, unit name, detailed address, and zip code.

4.3 If you have any comments or suggestions on our company's services, you can call our company's technical service department for information feedback.