



## Test Certificate for Alternative Extinguishing Systems

Use this form to provide test results and certify the installation of fire extinguishing systems. Submit one certification for each system.

Check which type of system tested:  NFPA 12    NFPA 12A    NFPA 17    NFPA 17A    NFPA 2001

**Permit Information**

1

Address: \_\_\_\_\_ Building/Suite: \_\_\_\_\_

Permit No.: \_\_\_\_\_

**Building Owner / Owner's Agent**

2

Provide the contact information for the building owner/owner's agent

Name: \_\_\_\_\_

Address: \_\_\_\_\_

Email: \_\_\_\_\_ Phone: \_\_\_\_\_

**Contractor Information**

3

Individual performing inspection and tests shall possess a valid FSSW license.

**(a) Fire Suppression Systems (FSS) Contractor Information**

Contractor Name: \_\_\_\_\_ FSS Contractor License #: \_\_\_\_\_

Email: \_\_\_\_\_ Phone: \_\_\_\_\_

**(b) Fire Suppression Systems Worker (FSSW) Information**

FSSW Name: \_\_\_\_\_ FSSW License #: \_\_\_\_\_

**Instructions**

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- Installation conforms to accepted plans:  Yes
- Equipment used is approved:  Yes
- The owner or owner's agent has been instructed as to the location of the control valves and the maintenance of this new equipment:  Yes

**System Information**

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**For NFPA 12 Systems, Carbon Dioxide (CO<sub>2</sub>) Systems:**

High Pressure    Low Pressure    Local Application    High Pressure    Total Flooding    Pre-Engineered

**For NFPA 12A Systems, Halon 1301 Systems:**

- All wiring systems are properly installed in compliance with system drawings:  Yes

**For NFPA 17 Systems, Dry Chemical Systems:**

- All wiring systems are properly installed in compliance with system drawings:  Yes

**For NFPA 2001 Systems, Clean Agent Systems:**

- Clean Agency enclosure integrity test report received confirming enclosure effectively sealed against all leaks that could result in failure of the enclosure to hold the specified Agent concentration level for the necessary holding period?  Yes
- All wiring systems are properly installed in compliance with system drawings:  Yes

**For ALL Extinguishing Systems:**

- Detection devices are of proper type and location as specified on system drawings:  Yes
- Where the system is connected to a building alarm system, the alarm, annunciator, air handling shutdown, and power shutdowns are operating properly:  Yes
- Where a releasing control panel is provided, the panel is readily accessible and protected from use by unauthorized personnel:  Yes
- All manual release and abort stations, if applicable, are properly identified and accessible:  Yes
- Alarm, annunciator, air handling shutdown, and power shutdowns are operating properly:  Yes



**System Installation  
& Testing**

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**Test Description(s)**

**For NFPA 12 Systems, Carbon Dioxide (CO<sub>2</sub>) Systems:**

- A full discharge of the design quantity of carbon dioxide through system piping shall be conducted to ensure that carbon dioxide effectively covers the hazard for the full period of time, for Local Application systems, or that the concentration is achieved and maintained for the full period of time, for Total Flooding Systems, as required by the design specifications and that all pressure-operated devices function as intended.

**For NFPA 12A Systems, Halon 1301 Systems:**

- The piping shall be pneumatically tested in a closed circuit for a period of 10 minutes at a gauge pressure of 150 psi (1034 kPa). When pressurizing the piping, pressure shall be increased in 50 psi (3.5 bar) increments. At the end of 10 minutes, the pressure drop shall not exceed 20 percent of the test pressure. A puff test with nitrogen shall be performed to check for continuous piping
- System functional operational test shall include the following:
  1. Operate detection initiating circuit(s). All alarm functions shall occur according to the design specification.
  2. Operate the necessary circuit(s) to initiate halon release.
  3. Operate manual release. Verify that manual release functions occur according to design specifications.
  4. If supplied, operate abort switch circuit. Verify that abort functions occur according to this standard (see 4.3.5.3). Confirm that visual and audible supervisory signals are received at the control panel.
  5. All automatic valves shall be tested unless testing the valve will release halon or damage the valve (destructive testing).
  6. Where required, pneumatic equipment shall be checked for integrity to ensure proper operation.

**For NFPA 17 Systems, Dry Chemical Systems:**

- A test using nitrogen or dry air shall be performed on the piping network at a pressure not to exceed the normal operating pressure of the extinguishing system and to verify that nitrogen or dry air has discharged out of each nozzle in the system.
- System operational tests shall be performed in accordance with the manufacturer's design, installation, and maintenance manual and shall include functional tests of the automatic detection system, the manual release devices, and shutdown devices, where provided.

**For NFPA 17A Systems, Wet Chemical Systems:**

- A test using nitrogen or dry air shall be performed on the piping network at a pressure not to exceed the normal operating pressure of the extinguishing system. The test shall verify that nitrogen or dry air has discharged out of each nozzle in the system.
- System operational tests shall be performed in accordance with the manufacturer's design, installation, and maintenance manual and include functional tests of the automatic detection system, the manual release devices, the gas shutoff, the shutoff of makeup air supplied internally to a hood, and the electrical power shutdown.

**For NFPA 2001 Systems, Clean Agent Systems:**

- The completed system shall be reviewed and tested by qualified personnel to meet the approval of the authority having jurisdiction. Only listed equipment and devices shall be used in the systems. To determine that the system has been properly installed and will function as specified, the following tests shall be performed.
- The pipe system shall be pressure- tested in a closed-circuit using nitrogen or other dry gas. The pipe shall be pressurized to at least 40 psi (276 kPa). After removing the source of pressurizing gas, the pressure in the pipe shall not be less than 80 percent of the test pressure after 10 minutes. A flow test using nitrogen, or an inert gas shall be performed on the piping network to verify that flow is continuous and that the piping and nozzles are unobstructed.
- The following system functional operational tests shall be performed:
  1. Operate detection initiating circuit(s). Verify that all alarm functions occur according to design specifications.
  2. Operate the necessary circuit to initiate a second alarm circuit, if present. Verify that all second alarm functions occur according to design specifications.
  3. Operate manual release. Verify that manual release functions occur according to design specifications.
  4. Operate abort switch circuit, if supplied. Verify that abort functions occur according to design specifications. Confirm that visual and audible supervisory signals are received at the control panel.
  5. Test all automatic valves, unless testing the valve will release agent or damage the valve (destructive testing).
  6. Check pneumatic equipment, where required, for integrity to ensure proper operation.



Department of  
**Licenses and Inspections**  
CITY OF PHILADELPHIA

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**Confirmation of Testing**

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- System is functional, operational testing is completed, and system is confirmed in compliance with the applicable standards, approved plans, where required, and the manufacturer's design, installation, and maintenance manual.  Yes
- After completion of all testing, the system(s) is properly charged and left in normal "set" condition:  Yes
- Date certified: \_\_\_\_\_

**Additional Explanations and Notes**

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**Declaration & Signatures**

*By accepting this statement, I, the certified technician shown on this form, certify that this fire protection system(s) has been properly inspected for functional operation in accordance with current NFPA standards for this system. The certification must be presented by the Contractor to the building owner/owner's agent upon completion and shall be uploaded to the Fire Suppression Permit.*

Signature of Contractor : \_\_\_\_\_ Date: \_\_\_\_\_

Signature of Property Owner / Owners Agent: \_\_\_\_\_ Date: \_\_\_\_\_