



# Issue A and B Exposure Protection Sprinklers Window Type

## General Description

Exposure (Outside) Protection Sprinklers are utilized to provide protection from exposure fires on the outside of buildings. The Issue A and B Window Type Exposure Protection Sprinklers are intended for spraying water on window glazing at prescribed spacings and sprinkler locations at a minimum discharge pressure of 7 psi (0,48 bar).

The smaller orifice Issue A Sprinklers are normally used where exposure is light or moderate, the area of coverage is small, or where one horizontal line of window sprinklers is installed at each floor. The larger orifice Issue B Sprinklers are normally used where exposure is severe, or where one horizontal line of sprinklers is used to protect windows at more than one floor level.

It is recommended that the end user be consulted with respect to the suitability of the materials of construction and finish for any given corrosive environment. The effects of ambient temperature, concentration of chemicals, and gas/chemical velocity, should be considered, at a minimum, along with the corrosive nature to which the sprinklers may be exposed.

The Issue A and B Window Type Exposure Protection Sprinklers are a redesignation for the Gem Issue A and B.

### NOTICE

The Issue A and B Window Type Exposure Protection Sprinklers described herein must be installed and maintained in compliance with this document, as well as with the applicable standards of the NATIONAL FIRE PROTECTION ASSOCIATION (NFPA), in addition to the standards of any other authorities having jurisdiction. Failure to do so may impair the performance of these devices.

The owner is responsible for maintaining their fire protection system and devices in proper operating condition. Contact the installing contractor or sprinkler manufacturer with any questions.

## Technical Data

**Approvals**  
UL Listed, FM Approved

**Maximum Working Pressure**  
175 psi (12,1 bar)

**Discharge Coefficient**  
See Table A

**Thread Connection**  
See Table A

**Physical Characteristics**  
Body..... Bronze



**IMPORTANT**  
Refer to Technical Data Sheet TFP2300 for warnings pertaining to regulatory and health information.  
Always refer to Technical Data Sheet TFP700 for the "INSTALLER WARNING" that provides cautions with respect to handling and installation of sprinkler systems and components. Improper handling and installation can permanently damage a sprinkler system or its components and cause the sprinkler to fail to operate in a fire situation or cause it to operate prematurely.

NOZZLE TYPE	ORIFICE SIZE	THREAD SIZE NPT	K-FACTOR	
			GPM/psi <sup>1/2</sup>	LPM/bar <sup>1/2</sup>
ISSUE A	1/4 in.	1/2 in.	1.83	26,33
	5/16 in.	1/2 in.	2.62	37,72
	3/8 in.	1/2 in.	4.08	58,73
ISSUE B	1/2 in.	1/2 in.	5.76	82,93
	5/8 in.	3/4 in.	8.64	124,39
	3/4 in.	3/4 in.	12.39	178,39

**TABLE A**  
**ISSUE A & B WINDOW TYPE EXPOSURE PROTECTION SPRINKLERS**  
**ORIFICE SIZES AND K-FACTORS**

## Design Criteria

**Nozzle Placement.** Exposure Protection Sprinkler Systems must be designed, installed, and calculated in accordance with NFPA 13. Figures 2 and 3 provide nominal spray patterns.

**Main Pipeline Strainers.** The use of a main pipeline strainer per NFPA 13 is required for sprinklers having a nominal K-factor less than 2.8 (40,3).

## Installation

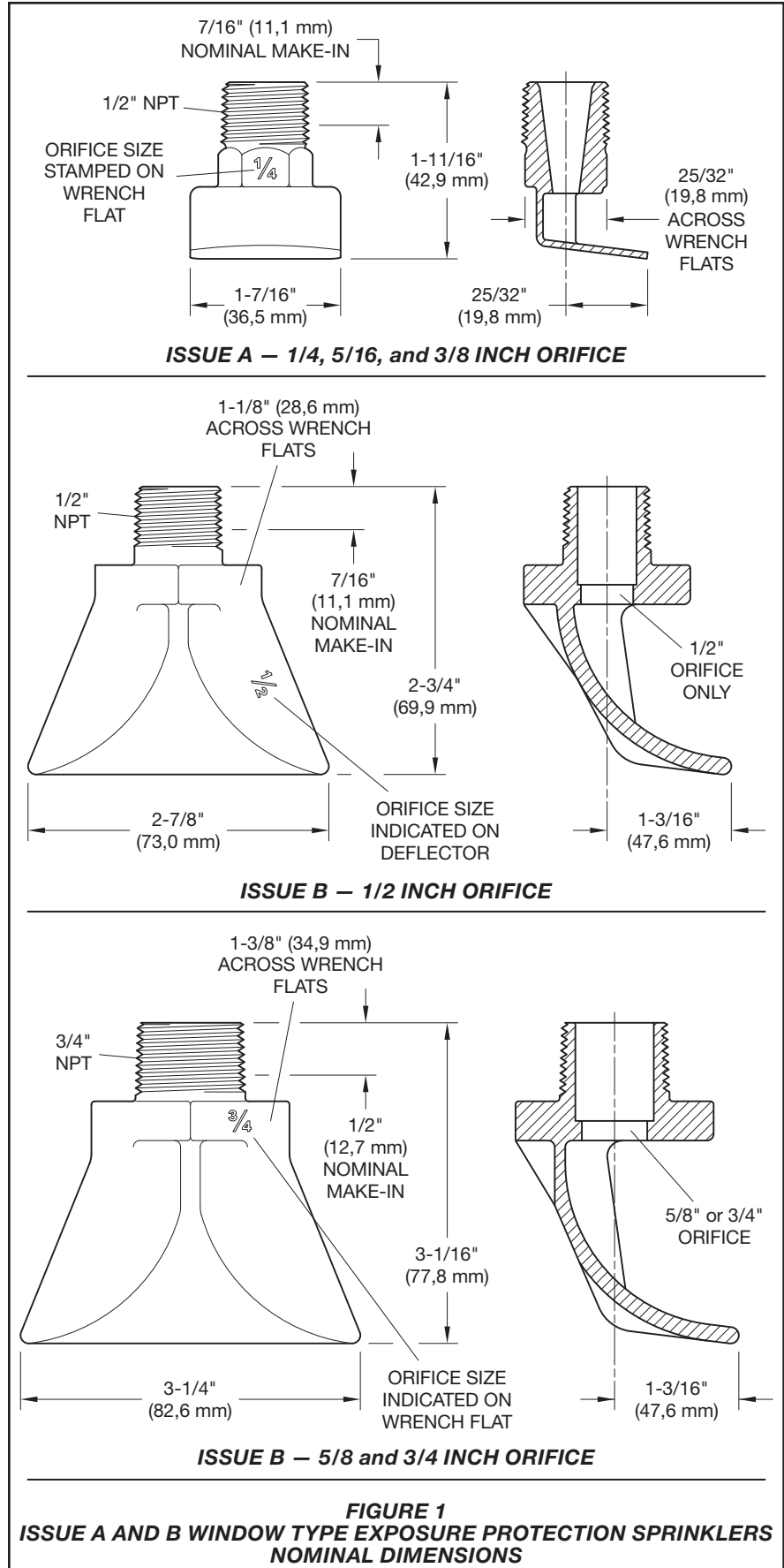
Issue A and B Window Type Exposure Protection Window Sprinklers must be installed in accordance with this section:

### General Instructions

A leak tight 1/2 inch NPT sprinkler joint should be obtained with a torque of 7 to 14 ft.-lbs. (9,5 to 19,0 Nm). A maximum of 21 ft.-lbs. (28,5 Nm) of torque may be used to install sprinklers with 1/2 NPT connections. A leak tight 3/4 inch NPT nozzle joint should be obtained with a torque of 10 to 20 ft.-lbs. (13,4 to 26,8 Nm). A maximum of 30 ft.-lbs. (40,7 Nm) of torque may be used to install sprinklers with 3/4 NPT connections. Higher levels of torque may distort the sprinkler inlet and cause leakage or impairment of the sprinklers.

**Step 1.** With pipe thread sealant applied to the pipe threads, hand tighten the sprinkler into the sprinkler fitting.

**Step 2.** Tighten the sprinkler into the sprinkler fitting using an adjustable crescent wrench. With reference to Figure 1, apply the adjustable crescent wrench to the wrench flats.



## Care and Maintenance

The Issue A and B Window Type Exposure Protection Sprinklers must be maintained and serviced in accordance with this section:

Before closing a fire protection system main control valve for maintenance work on the fire protection system that it controls, permission to shut down the affected fire protection system must be obtained from the proper authorities and all personnel who may be affected by this action must be notified.

Issue A and B Window Type Exposure Protection Sprinklers must never be painted, plated, coated or altered in any way after leaving the factory; otherwise, the spray performance may be impaired.

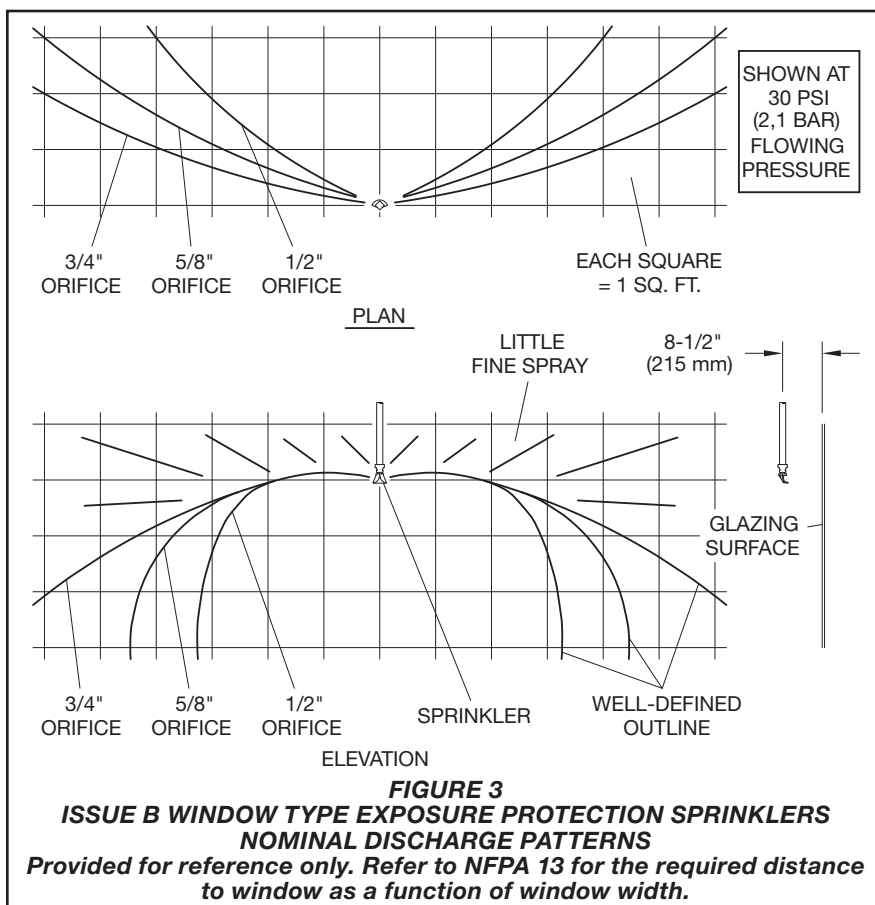
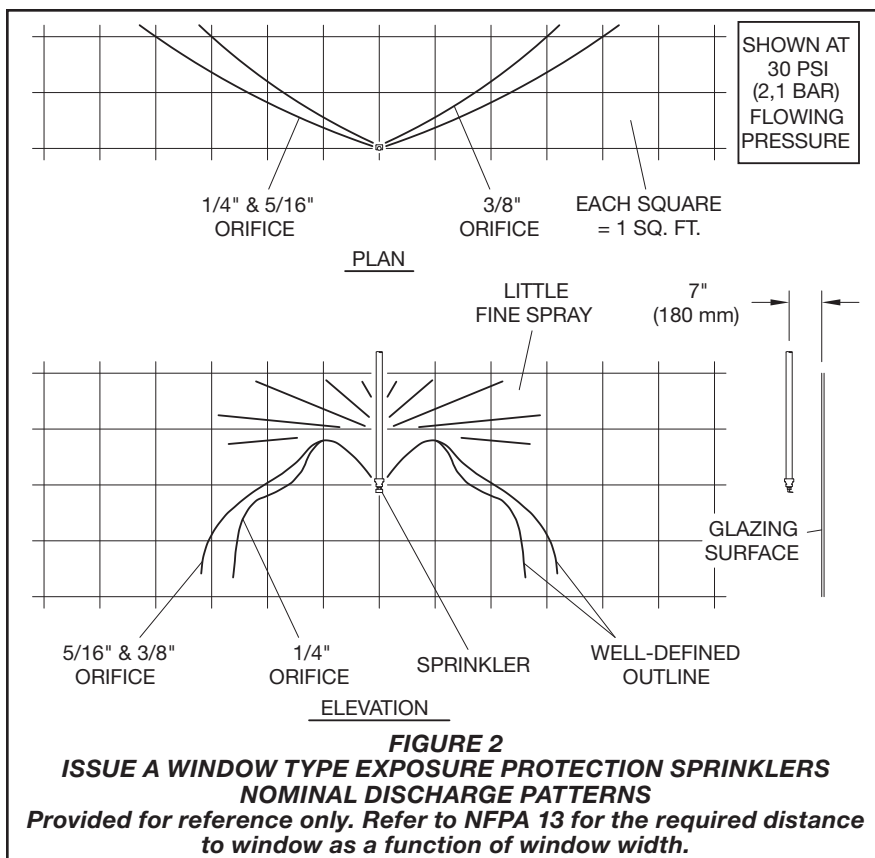
Care must be exercised to avoid damage to the sprinklers before, during, and after installation. Sprinklers damaged by dropping, striking, wrench twist/slippage, or the like, must be replaced.

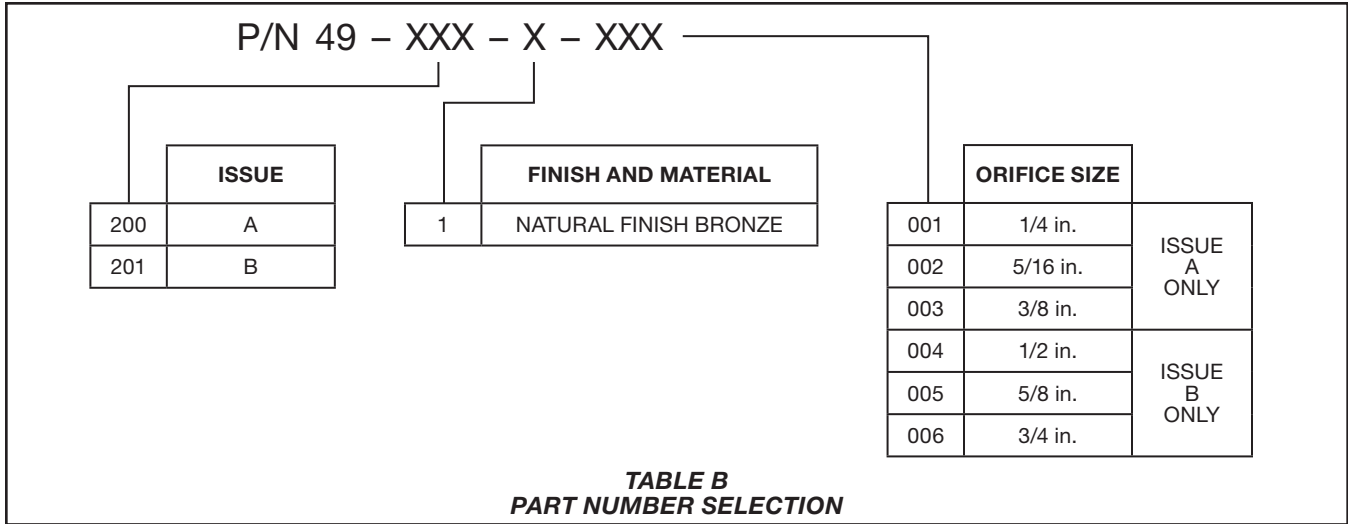
Frequent visual inspections are recommended to be initially performed for nozzles installed in potentially corrosive atmospheres to verify the integrity of the materials of construction as they may be affected by the corrosive conditions present for a given installation. Thereafter, annual inspections per NFPA 25 are required.

Exposure protection systems for the outside of buildings require regularly scheduled care and maintenance by trained personnel. In addition to inspecting sprinklers for proper spray performance during water flow trip tests of the system, it is recommended that sprinklers be periodically inspected for loading/obstructions, or other evidence of impaired protection. The inspections should be scheduled weekly or as frequently as may be necessary, and corrective action must be taken to ensure that the sprinkler will perform as intended in the event of a fire.

The owner is responsible for the inspection, testing, and maintenance of their exposure protection system and devices in compliance with this document, as well as with the applicable standards of the NATIONAL FIRE PROTECTION ASSOCIATION (e.g., NFPA 25), in addition to the standards of any other authorities having jurisdiction. Contact the installing contractor or sprinkler manufacturer with any questions.

It is recommended that exposure protection systems for the outside of





buildings be inspected, tested, and maintained by a qualified Inspection Service in accordance with local requirements and/or national codes.

## **Ordering Procedure**

When placing an order, indicate the full product name and Part Number (P/N). Contact your local distributor for availability.

### **Window Type Exposure Protection Sprinklers**

Specify: Issue (A or B) Window Type Exposure Protection Sprinkler with (specify finish and material), P/N (Ref. Table B).