

## Series TY-B — 57, 80, and 115 K-factor Upright and Pendent Sprinklers Special Response, Standard Coverage

### General Description

The Series TY-B, 57, 80, and 115 K-factor, Upright and Pendent Sprinklers described in this data sheet are special response - standard coverage, decorative 4 mm glass bulb type spray sprinklers designed for use in accordance with the installation rules recognized by the applicable Approval agency (e.g., VdS).

#### WARNINGS

*The Series TY-B Sprinklers described herein must be installed and maintained in compliance with this document, as well as with the applicable standards recognized by the Approval agency, 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. The installing contractor or sprinkler manufacturer should be contacted with any questions.*

#### IMPORTANT

*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.*

### Model/Sprinkler Identification Numbers

TY2149 - Upright 57K  
TY2249 - Pendent 57K  
TY3141 - Upright 80K  
TY3241 - Pendent 80K  
TY4141 - Upright 115K  
TY4241 - Pendent 115K

### Technical Data

#### Approvals

VdS Approved (CEA 4001)

#### Maximum Working Pressure

12,1 bar

#### Discharge Coefficient

K = 57 LPM/bar<sup>1/2</sup>  
K = 80 LPM/bar<sup>1/2</sup>  
K = 115 LPM/bar<sup>1/2</sup>

#### Temperature Ratings

57°C, 68°C, 79°C, 93°C, 141°C, and 182°C

#### Finishes

Natural Brass, Chrome Plated, and Polyester Coated

#### Physical Characteristics

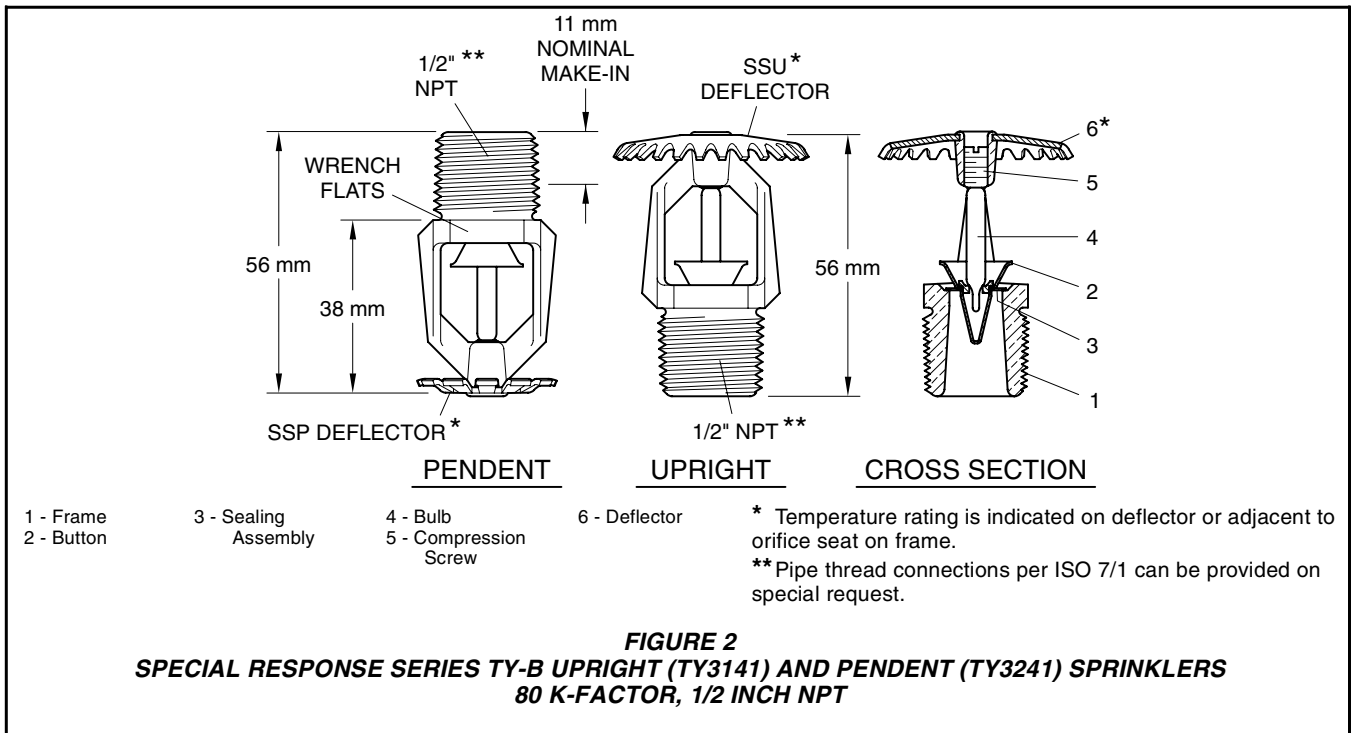
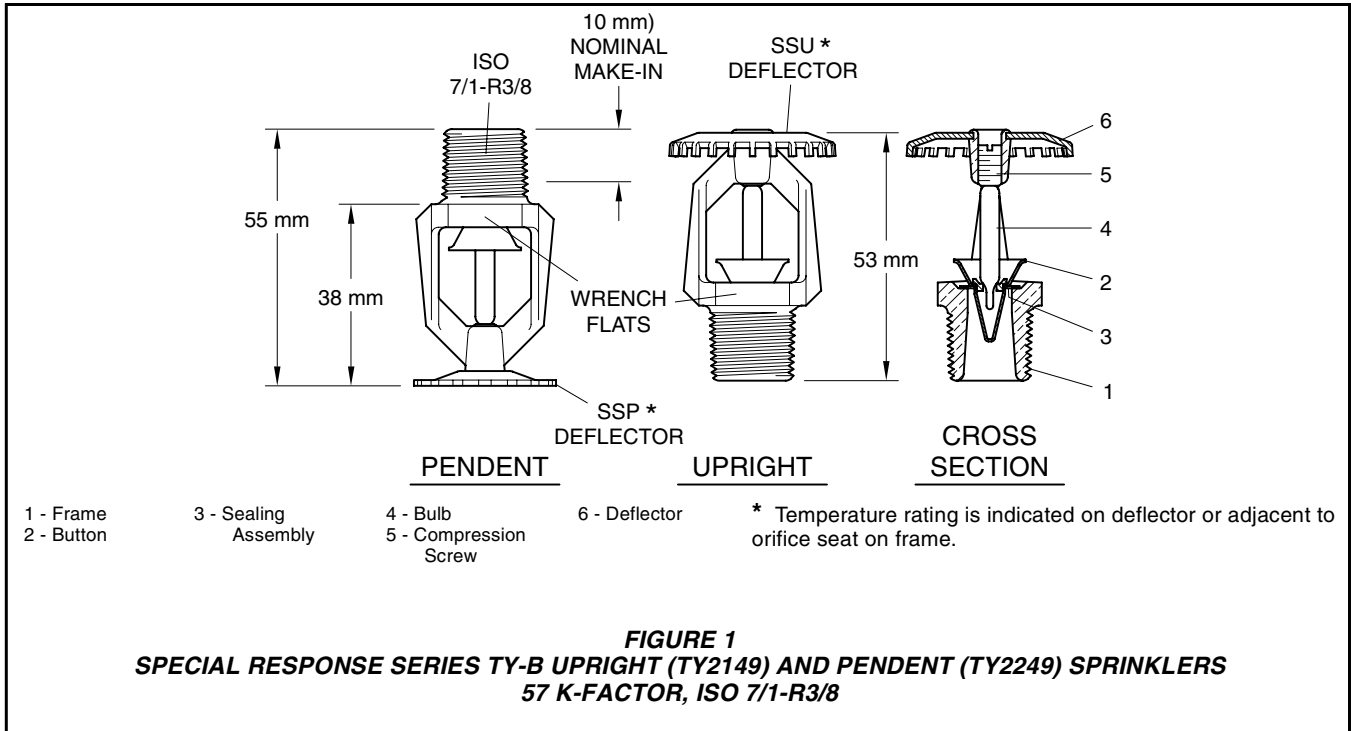
Frame . . . . . Bronze  
Button . . . . . Brass/Copper  
Sealing Assembly . . . . .  
. . . . . Beryllium Nickel w/Teflon\*  
Bulb . . . . . Glass  
Compression Screw . . . . . Bronze  
Deflector . . . . . Copper

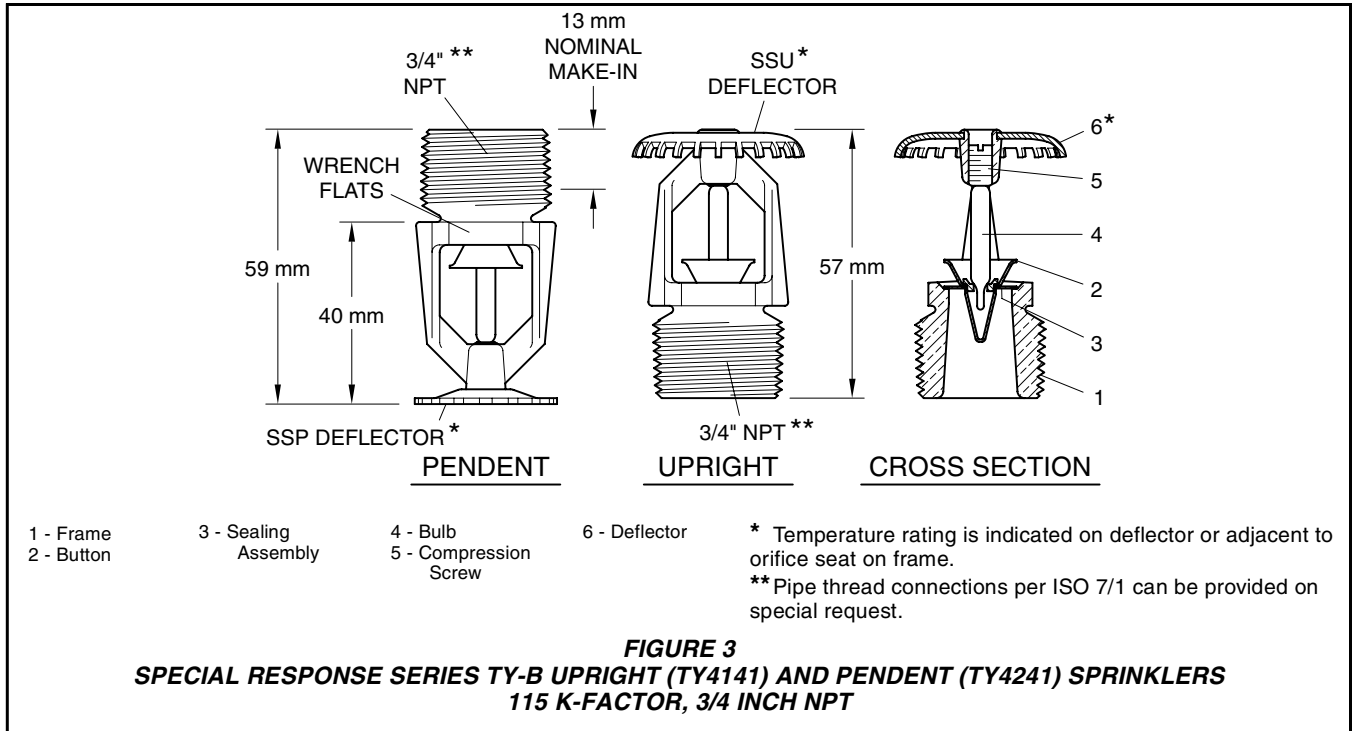
\* DuPont Registered Trademark



### Operation

The glass Bulb contains a fluid which expands when exposed to heat. When the rated temperature is reached, the fluid expands sufficiently to shatter the glass Bulb, allowing the sprinkler to activate and water to flow.





## Installation

The Series TY-B Sprinklers must be installed in accordance with the following instructions:

### NOTES

Do not install any bulb type sprinkler if the bulb is cracked or there is a loss of liquid from the bulb. With the sprinkler held horizontally, a small air bubble should be present. The diameter of the air bubble is approximately 1,6 mm for the 57°C to 2,4 mm for the 182°C temperature ratings.

A leak tight ISO 7/1-R3/8 sprinkler joint should be obtained with a torque of 8 to 16 Nm. A maximum of 25 Nm of torque may be used to install sprinklers with ISO 7/1-R3/8 connections. A leak tight 1/2 inch NPT sprinkler joint should be obtained with a torque of 9 to 19 Nm. A maximum of 28 Nm of torque may be used to install sprinklers with 1/2 NPT connections. A leak tight 3/4 inch NPT sprinkler joint should be obtained with a torque of 13 to 27 Nm. A maximum of 40 Nm of torque is to 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 sprinkler.

Do not attempt to make-up for insufficient adjustment in the escutcheon plate by under- or over-tightening the sprinkler. Readjust the position of the sprinkler fitting to suit.

The Series TY-B Pendent and Upright Sprinklers must be installed in accordance with the following instructions.

**Step 1.** Pendent sprinklers are to be installed in the pendent position, and upright sprinklers are to be installed in the upright position.

**Step 2.** With pipe thread sealant applied to the pipe threads, hand tighten the sprinkler into the sprinkler fitting.

**Step 3.** Tighten the sprinkler into the sprinkler fitting using only the W-Type 6 Sprinkler Wrench (Ref. Figure 4) or W-Type 7 Sprinkler Wrench (Ref. Figure 5). With reference to Figures 1, 2, and 3, the W-Type 6 or W-Type 7 Sprinkler Wrench is to be applied to the wrench flats.

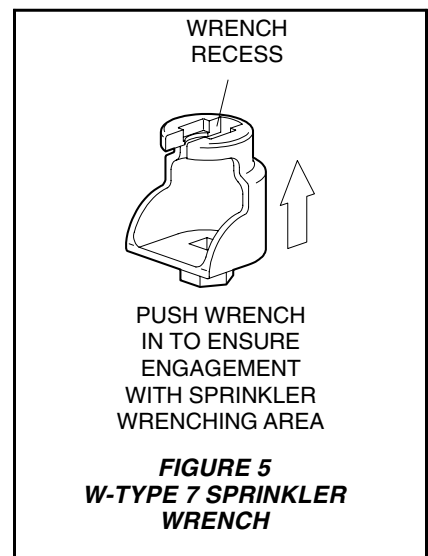
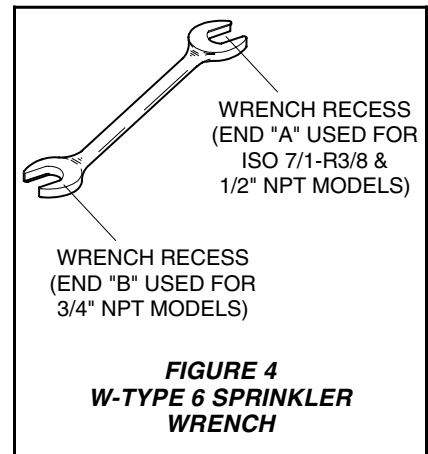
## Care and Maintenance

The Series TY-B Sprinklers must be maintained and serviced in accordance with the following instructions:

### NOTE

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.

Sprinklers that are found to be leaking



P/N 57 — XXX — X — XXX

		MODEL/SIN			TEMPERATURE RATING		
480	57K UPRIGHT (ISO 7/1-R3/8)	TY2149	SPRINKLER	1	NATURAL BRASS	135	57°C
481	57K PENDENT (ISO 7/1-R3/8)	TY2249		4	WHITE POLYESTER	155	68°C
470	80K UPRIGHT (1/2"NPT)	TY3141		3	WHITE (RAL9010)*	175	79°C
471	80K PENDENT (1/2"NPT)	TY3241		9	CHROME PLATED	200	93°C
490	115K UPRIGHT (3/4"NPT)	TY4141				286	141°C
491	115K PENDENT (3/4"NPT)	TY4241				360	182°C

\* Eastern Hemisphere sales only.

**TABLE B**  
**PART NUMBER SELECTION**  
**SERIES TY-B SPECIAL RESPONSE PENDENT AND UPRIGHT SPRINKLERS**

or exhibiting visible signs of corrosion must be replaced.

Automatic sprinklers must never be painted, plated, coated or otherwise altered after leaving the factory. Modified sprinklers must be replaced. Sprinklers that have been exposed to corrosive products of combustion, but have not operated, should be replaced if they cannot be completely cleaned by wiping the sprinkler with a cloth or by brushing it with a soft bristle brush.

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. Also, replace any sprinkler that has a cracked bulb or that has lost liquid from its bulb. (Ref. Installation Section).

The owner is responsible for the inspection, testing, and maintenance of their fire 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. The installing contractor or sprinkler manufacturer should be contacted relative to any questions.

It is recommended that automatic sprinkler systems be inspected, tested, and maintained by a qualified Inspection Service in accordance with local requirements and/or national code.

## Limited Warranty

Products manufactured by Tyco Fire Products are warranted solely to the original Buyer for ten (10) years against defects in material and workmanship when paid for and properly installed and maintained under normal use and service. This warranty will expire ten (10) years from date of shipment by Tyco Fire Products. No warranty is given for products or components manufactured by companies not affiliated by ownership with Tyco Fire Products or for products and components which have been subject to misuse, improper installation, corrosion, or which have not been installed, maintained, modified or repaired in accordance with applicable Standards of the National Fire Protection Association, and/or the standards of any other Authorities Having Jurisdiction. Materials found by Tyco Fire Products to be defective shall be either repaired or replaced, at Tyco Fire Products' sole option. Tyco Fire Products neither assumes, nor authorizes any person to assume for it, any other obligation in connection with the sale of products or parts of products. Tyco Fire Products shall not be responsible for sprinkler system design errors or inaccurate or incomplete information supplied by Buyer or Buyer's representatives.

IN NO EVENT SHALL TYCO FIRE PRODUCTS BE LIABLE, IN CONTRACT, TORT, STRICT LIABILITY OR UNDER ANY OTHER LEGAL THEORY, FOR INCIDENTAL, INDIRECT, SPECIAL OR CONSEQUENTIAL DAMAGES, INCLUDING BUT NOT

LIMITED TO LABOR CHARGES, REGARDLESS OF WHETHER TYCO FIRE PRODUCTS WAS INFORMED ABOUT THE POSSIBILITY OF SUCH DAMAGES, AND IN NO EVENT SHALL TYCO FIRE PRODUCTS' LIABILITY EXCEED AN AMOUNT EQUAL TO THE SALES PRICE.

**THE FOREGOING WARRANTY IS MADE IN LIEU OF ANY AND ALL OTHER WARRANTIES EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.**

## Ordering Procedure

When placing an order, indicate the full product name. Refer to the Price List for complete listing of Part Numbers.

Contact your local distributor for availability.

### Sprinkler Assemblies:

Specify: (Specify Model/SIN), Special Response, (specify K-factor), (specify temperature rating), Series TY-B (specify Pendent or Upright) Sprinkler with (specify type of finish), P/N (specify from Table A).

### Sprinkler Wrench:

Specify: W-Type 6 Sprinkler Wrench, P/N 56-000-6-387, or

W-Type 7 Sprinkler Wrench, P/N 56-850-4-001.