

## Series TY-FRB – 5.6 K-factor Conventional (Old Style) Sprinklers Quick Response

### General Description

The TYCO Series TY-FRB, 5.6 K-factor, Conventional Sprinklers, Quick Response described in this technical data sheet are quick response, standard coverage, decorative 3 mm glass bulb type spray sprinklers. These sprinklers are intended to be installed either pendent or upright, and in either position, they produce a spherical water discharge pattern with approximately 50% of the discharge directed upwards and approximately 50% of the discharge directed downwards.

Conventional sprinklers are generally used with Ordinary and Extra High Hazard Class Systems, as defined by the automatic sprinkler system installation rules of the country and authority having jurisdiction. The NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) permits the use of "Old Style Sprinklers" where special construction features require a unique water distribution; for the protection of fur vaults; or, the replacement of similar sprinklers that had been installed prior to 1955.

#### NOTICE

The Series TY-FRB 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, in addition to the standards of any other

#### 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.

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 product manufacturer with any questions.

### Sprinkler Identification Numbers (SINs)

TY363  
TY3630 (LPCB Approved only)

### Technical Data

**Approvals**  
UL and C-UL Listed  
VdS Approved  
LPCB Approved (TY3630 only)

Sprinklers with Polyester Finish are UL and C-UL Listed as Corrosion-Resistant Sprinklers.

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

**Discharge Coefficient**  
K=5.6 GPM/psi<sup>1/2</sup> (80,6 LPM/bar<sup>1/2</sup>)

**Temperature Ratings**  
135°F (57°C)  
155°F (68°C)  
175°F (79°C)  
200°F (93°C)  
286°F (141°C)

**Finishes**  
Sprinkler: Refer to Table A.

**Physical Characteristics**

Frame	.....	Bronze
Button	.....	Brass/Copper
Sealing Assembly	...	Stainless Steel w/TEFLON
Bulb	.....	Glass
Compression Screw	.....	Bronze
Deflector	.....	Bronze

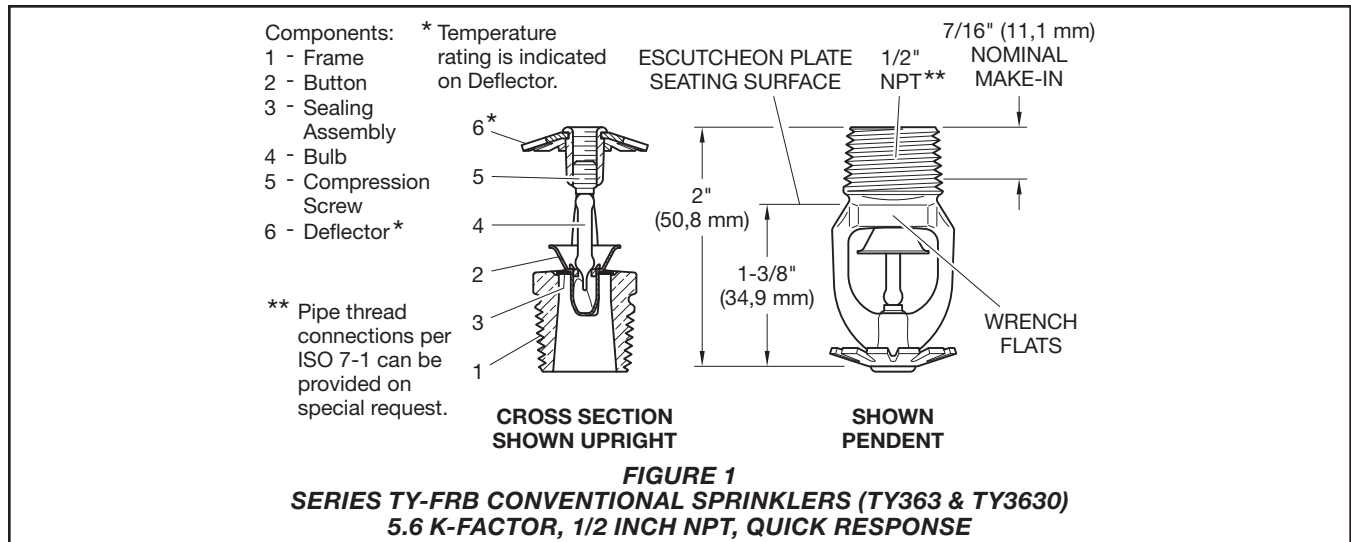


### Operation

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.

### Design Criteria

The TYCO Series TY-FRB, 5.6 K-factor, Conventional Sprinklers, Quick Response are intended for fire protection systems designed in accordance with the standard installation rules recognized by the applicable Listing or Approval agency (e.g., UL Listing is based on NFPA 13 requirements). The Series TY-FRB Conventional Sprinklers are only for non-recessed applications.



## Installation

The TYCO Series TY-FRB, 5.6 K-factor, Conventional Sprinklers, Quick Response must be installed in accordance with this section.

### General Instructions

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 1/16 in. (1,6 mm) for the 135°F (57°C) to 3/32 in. (2,4 mm) for the 286°F (141°C) temperature ratings.

A leak-tight 1/2 in. NPT sprinkler joint should be obtained with a torque of 7 to 14 lb-ft (9,5 to 19,0 N·m). Higher levels of torque may distort the sprinkler inlet and cause leakage or impairment of the sprinkler.

**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 only the W-Type 6 Sprinkler Wrench (Ref. Figure 2). With reference to Figure 1, the W-Type 6 Sprinkler Wrench is to be applied to the wrench flats.

## Care and Maintenance

The TYCO Series TY-FRB, 5.6 K-factor, Conventional Sprinklers, Quick Response must be maintained and serviced in accordance with this section.

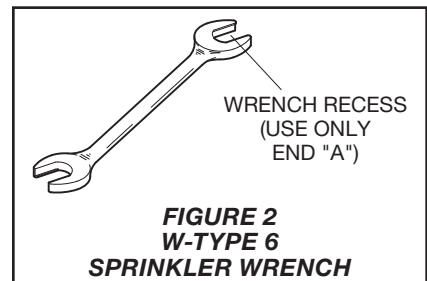
Before closing a fire protection system main control valve for maintenance work on the fire protection system that it controls, obtain permission to shut down the affected fire protection systems from the proper authorities and notify all personnel who may be affected by this action.

Sprinklers which are found to be leaking 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. Refer to the Installation section for additional information.

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. Contact the installing contractor or product manufacturer with 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 codes.

P/N\* 77 - XXX - X - XXX

		SIN	SPRINKLER FINISH		TEMPERATURE RATINGS	
373	5.6K CONVENTIONAL	TY363	1	NATURAL BRASS	135	135°F (57°C)
373	5.6K CONVENTIONAL	TY3630**	3	PURE WHITE (RAL9010)***	155	155°F (68°C)
			4	SIGNAL WHITE (RAL9003)	175	175°F (79°C)
			9	CHROME PLATED	200	200°F (93°C)
					286	286°F (141°C)

**Notes:**  
\* Use suffix "I" for ISO 7-1 connection (e.g., 77-373-4-175-I)  
\*\* LPCB Approved Series TY-B Conventional Sprinkler assemblies only; Use suffix "L" for LPCB Approved assemblies (e.g., 77-373-4-175-L or 77-373-4-175-IL for LPCB Approved and ISO 7-1 connection)  
\*\*\* Eastern Hemisphere sales only

**TABLE A**  
**PART NUMBER SELECTION**  
**SERIES TY-FRB CONVENTIONAL SPRINKLERS**

## Limited Warranty

For warranty terms and conditions, visit [www.tyco-fire.com](http://www.tyco-fire.com).

## Ordering Procedure

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

### Sprinkler Assemblies with NPT Thread Connections

Specify: Series TY-FRB Conventional Sprinkler, (specify) SIN, K=5.6, Quick Response, (specify) temperature rating), (specify) finish, P/N (specify, refer to Table A)

### Sprinkler Wrench

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

