Harnett COUNTY NORTH CAROLINA

Emergency Services Department
www.harnett.org

Plan Review, Inspection, and Permit Fees

Application Number : **18-50044460**

$200.00		☐	Explosive Material (90 Days)	$	-
$100.00		☐	Explosive Materials (72 Hours)	$	-
$100.00		☐	Fireworks Public Display	$	-
$50.00		☐	Final Inspection	$	-
$35.00	**+ $2.00 per device**	☐	Fire Alarm Testing	$	-
$35.00	**+ $2.00 per nozzle**	☐	Fixed Fire Suppression	$	-
$75.00		☐	Insecticide Fog/Fumigation	$	-
$100.00		☐	Pipe Test/UST/AGST	$	-
$50.00		☐	Plans up to 5000 sq ft	$	-
$100.00		☐	Plans 5001 sq ft to 10,000 sq ft	$	-
$150.00		☐	Plans 10,001 sq ft to 25,000 sq ft	$	-
$250.00		☐	Plans 25,001 sq ft and over	$	-
$35.00	**+ 2.00 per head**	☑	Sprinkler Certification Test	$	35.00
$50.00		☐	Standpipe Testing	$	-
$50.00		☐	Special Assembly **(ie. amusement buildings, carnivals, fairs)**	$	-
$75.00		☐	Tents/Canopies/Air Supported Structure	$	-
$100.00		☐	Tank Installation (charge for each tank)	$	-
$100.00		☐	Tank Removal (charge for each tank)	$	-
		4	Total Devices/Heads	$	8.00
			Total Cost	**$**	**43.00**

Code Enforcement Official D. Banks Wallace 7/20/2018

Fire Marshal Division

July 18, 2018

Brett Strickland
P.O. Box 4200
Buies Creek, N.C. 27506

Re: CU Football Storage Room
180 Wade Stewart Circle
Lillington, NC

Application Number 18-50044460

Mr. Strickland,

Thank you for submitting the sprinkler system plans for the sprinkler alterations. The plans have been carefully reviewed by a qualified code enforcement official to examine for compliance with the North Carolina Fire Prevention Code and all other fire protection regulatory documents. There are some items that were found during the plan review process that need to be addressed before a final inspection of the new facility can be given. These items are outlined and described below.

- **Plan Review Comments to Contractor.**
  - Installation of the sprinkler system shall be per contract specifications and NFPA 20013 edition.
  - Provide an FDC detail on the plans, also, the type and size indicated.
  - Provide hydraulic design data plate, spare sprinklers and wrench cabinet, and approved signage at final inspection per NFPA 13.

- **901.2.1 Statement of Compliance.**
  - Before requesting final approval of the installation, where required by the fire code official, the installing contactor shall furnish a written statement to the fire code official that the subject fire protection system has been installed in accordance with the manufacture's specifications and the appropriate installation standard. Any deviations from the design standards shall be noted and copies of the approvals for such deviations shall be attached to the written statement.

- **903.4 Sprinkler system monitoring and alarms.**
  - All valves controlling the water supply for automatic sprinkler systems and water-flow switches on all sprinkler systems shall be electrically supervised according to the NC State Fire Code.

- **901.5 Installation acceptance testing.**
  - All piping and attached appurtenances subjected to system working pressure shall be hydrostatically tested at 200 psi or 50 psi in excess of the system working pressure, whichever is greater, and shall maintain that pressure without loss for 2 hours. This test is required to be witnessed by a representative from the Harnett County Fire Marshal's Office.
  - A contractor's material and test certificate shall be furnished by the trained representative of VSC Fire & Security before approval.
  - A piping and hanger inspection is required before closure of ceiling system(s).
  - A sprinkler final inspection is required at completion of project.
  - **Schedule all inspections with the Fire Marshal's Office.**
  - **(910) 984-4003**

- **912.4 Fire Department Connection Signage.**
  - Automatic sprinkler, test connection and standpipe signs to be properly installed.

Thank you again for submitting the plans for the sprinkler upfits. Please review the plans and adhere to any notes and alterations that were made in addition to the original drawings. These remarks are for the plans that were submitted and its original intent. These remarks do not apply if the original intent changes or what was submitted on the above date changes. If you have any questions, please do not hesitate to call this office.

Sincerely,

D. Banks Wallace

D. Banks Wallace
Chief Deputy Fire Marshal

Harnett COUNTY NORTH CAROLINA

Emergency Services Department
www.harnett.org

HARNETT COUNTY EMERGENCY SERVICES
REVIEWED FOR CODE COMPLIANCE
D.B. WALLACE
CODE COMPLIANCE OFFICER
7-18-18
DATE

SCANNED
DATE

Application for Plan Review

XU

Application # 18 - 50044460

Date Received: 7/11/18 Received By: LL

Name of Project: CU Football Storage Room Addition

Physical Address of Project: 160 Wade Stewart Circle

Buies Creek, NC 27506

Plans Submitted By: SEC, LLC

Project Phone: (919)-805-0664

Contact Person/Address: Brett Strickland

PO Box 4200

Buies Creek, NC 27506

Contact Email: bretts@si-nc.com

Contact Phone: (919)-805-0664 (___)-___-___

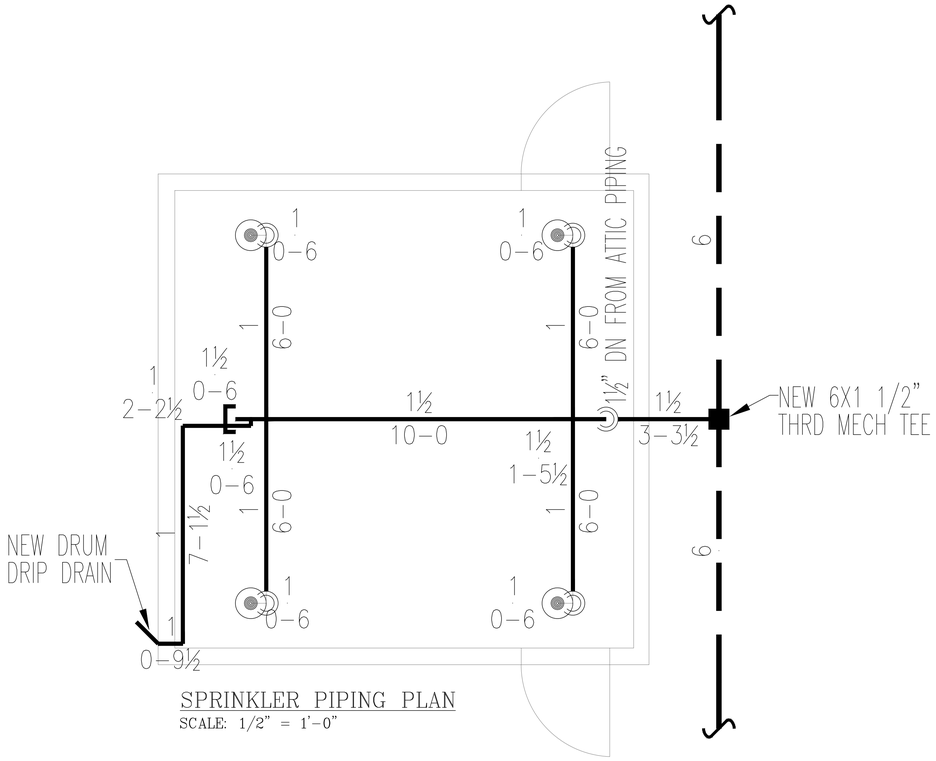
Contractor's Name/Info: SEC, LLC

PO Box 4200

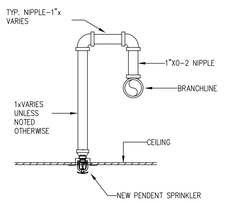
Buies Creek, NC 27506

Contractor's Phone: (910)-893-8486

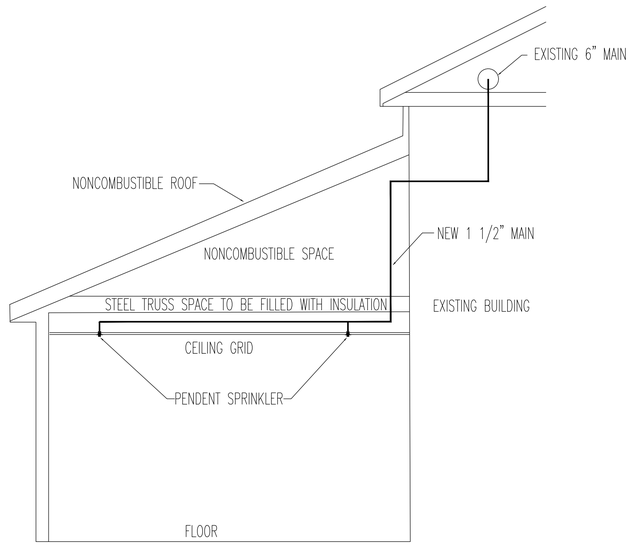
- Plans that are submitted will be reviewed as quickly as possible with an average time of review between 7-10 working days.
- Status checks may be conducted on plan reviews by visiting the website http://hteweb.harnett.org/Click2GovBP/Index.jsp or by calling the Harnett County Central Permitting Office (910-893-7525, Option #2), or the Harnett County Fire Marshal's Office (910-893-7580).
- Approved plans must be picked up from the Central Permitting Office and all fees paid before any required inspections can be conducted.



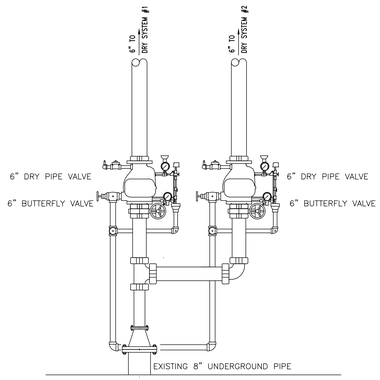
SPRINKLER PIPING PLAN
SCALE: 1/2" = 1'-0"



ARMOVER DETAIL
SCALE: N.T.S.



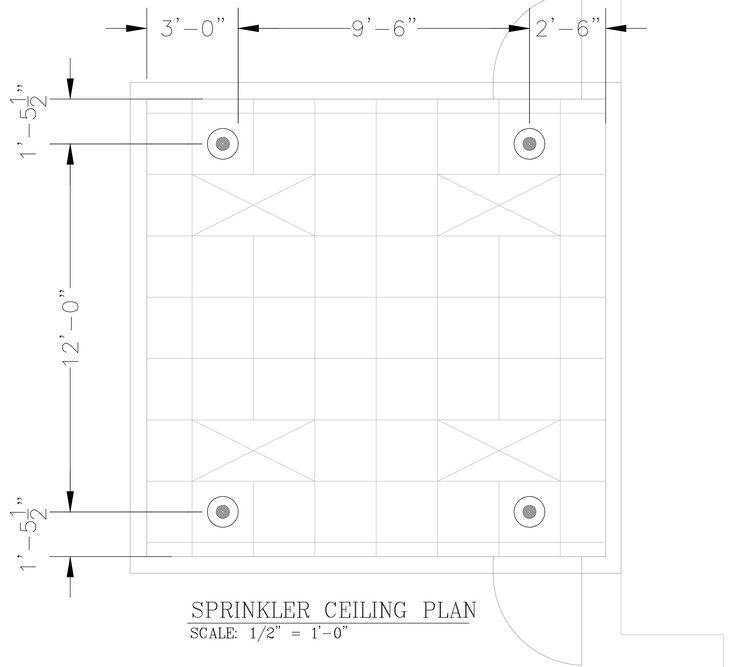
ELEVATION DRAWING DETAIL
SCALE: N.T.S.



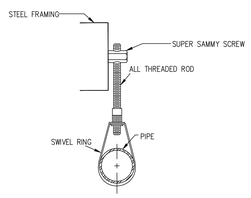
EXISTING RISER DETAIL
SCALE: N.T.S.

LEGEND
- EXISTING FIRE PROTECTION PIPING
- NEW FIRE PROTECTION PIPING
- DENOTES RISE IN PIPE
- DENOTES RECESSED PENDENT SPRINKLER 155DEG. (4)

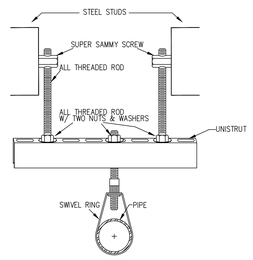
GENERAL NOTES
1. ALL WORK SHALL BE IN FULL COMPLIANCE WITH NFPA 13, 2013 Ed., AND THE NORTH CAROLINA STATE BUILDING CODE.
2. ALL LABOR AND MATERIALS REQUIRED SHALL BE FOR ONE COMPLETE WORKING SYSTEM WHICH MEETS ALL REQUIREMENTS OF NFPA 13 2013 Ed., AND THE NORTH CAROLINA STATE BUILDING CODE.
3. ALL MATERIALS AND EQUIPMENT SHALL BE NEW, UL LISTED AND FM APPROVED FOR THE INTENDED USE AND SHALL BE INSTALLED IN FULL COMPLIANCE WITH MANUFACTURER'S RECOMMENDATIONS.
4. SPRINKLER HEADS ARE SPACED PER ORDINARY HAZARD I IN STORAGE ROOM SPACING NOT TO EXCEED 130 SQ. FT.
5. ALL NEW PIPE 1½" AND SMALLER TO BE BLACK STL., SCH. 40 WITH THREADED ENDS AND JOINED BY BLK. DUCTULE IRON THREADED FITTINGS.
6. PIPE HANGERS TO BE INSTALLED PER NFPA 13.
7. NO HYDRAULIC CALCULATIONS WERE PERFORMED. THE AREA OF WORK DOES NOT EXCEED THE ORGINAL DESIGN DEMAND



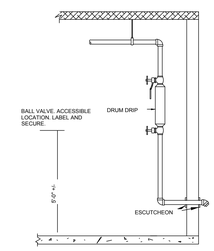
SPRINKLER CEILING PLAN
SCALE: 1/2" = 1'-0"



HANGER DETAIL
SCALE: N.T.S.



TRAPEZE HANGER DETAIL
SCALE: N.T.S.



DRUM DRIP DRAIN DETAIL
SCALE: N.T.S.

Approved By: Banks Wallace, Chief Deputy Fire Marshal 07/20/2018 3:27:14 PM

N W E S
2' 4' 6' 8' 10' 12' 14' 16' 18'

IMPORTANT
Building areas subject to freezing conditions it is the owner's responsibility to provide heat throughout the wet pipe sprinkler system areas and in enclosures for dry pipe, deluge, and other types of valves controlling water supplies to sprinkler systems.

REVISIONS

DATE	DESCRIPTION	BY

SPRINKLER SYMBOLS DESCRIPTION

SYMBOL	SIZE	TEMP	STYLE	MAKE	MODEL/SIN	FINISH	ESCUTCHEON	K-FACTOR	RESPONSE	QUANTITY
⊕	1/2"	155	SSP	TYCO	TY-323	WHITE	RECESSED	5.6K	QR	4
TOTAL SPRINKLERS THIS SHEET										4
TOTAL SPRINKLERS ON JOB										4

CHECKED BY:
JOHN PITCHER: NORTH CAROLINA LICENSED SPRINKLER CONTRACTOR NC# 16330 SC# CROSSROADS FIRE PROTECTION, INC
DOUGLAS JOHNSTON II: NORTH CAROLINA LICENSED SPRINKLER CONTRACTOR NC# 16330 SC# CROSSROADS FIRE PROTECTION, INC
NICET LEVEL III #117811

NC LICENSE NUMBER: 16330

CROSSROADS FIRE PROTECTION

Crossroads Fire Protection, Inc
809 S. Market Street
P.O. Box 926
Benson, NC 27504
919-207-3855 PH

CAMPBELL FIELD HOUSE ADDITION
180 WADE STEWART CIRCLE
BUIES CREEK, NC 27506

CONTRACTOR: SOUTH EASTERN INTERIORS

Fire Protection Plan

PERMIT NO.	
CONTRACT NO.	CC-5842
APPROVAL	HARNET COUNTY
DRAWN BY	DOUGLAS JOHNSTON II
SCALE	1/8" = 1'-0"
DATE	7/18/18
REVISED	
PLOTTED	FP1 of 1

tyco Fire Protection Products

Worldwide Contacts
www.tyco-fire.com

Gem

Series TY-FRB, 5.6 K-factor Upright, Pendent, and Recessed Pendent Sprinklers Quick Response, Standard Coverage

General Description

The TYCO Series TY-FRB, 5.6 K-factor, Upright (TY313) and Pendent (TY323) Sprinklers described in this data sheet are quick response, standard coverage, decorative 3 mm glass bulb-type spray sprinklers designed for use in light or ordinary hazard, commercial occupancies such as banks, hotels, and shopping malls.

The recessed version of the Series TY-FRB Pendent Sprinkler, where applicable, is intended for use in areas with a finished ceiling. This recessed pendent sprinkler uses one of the following:

- A two-piece Style 15 Recessed Escutcheon with recessed adjustment up to 5/8 inch (15,9 mm) from the flush pendent position.
- A two-piece Style 20 Recessed Escutcheon with recessed adjustment up to 1/2 inch (12,7 mm) from the flush pendent position.

The adjustment provided by the Recessed Escutcheon reduces the accuracy to which the fixed pipe drops to the sprinklers must be cut.

Intermediate level versions of Series TY-FRB Sprinklers are described in Technical Data Sheet TFP357. Sprinkler guards and shields are described in Technical Data Sheet TFP780.

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.

NOTICE

The TYCO 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 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.

Sprinkler Identification Number (SIN)

TY313 . . . . . Upright 5.6K, 1/2" NPT
TY323 . . . . . Pendent 5.6K, 1/2" NPT

Technical Data

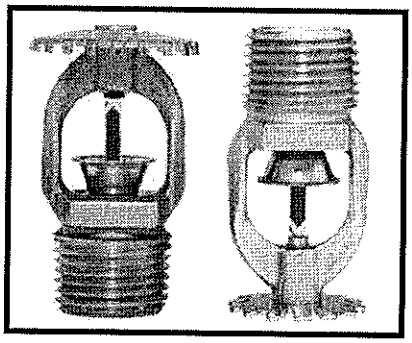
Approvals
UL and C-UL Listed
FM, LPCB, and VdS Approved
CE Certified

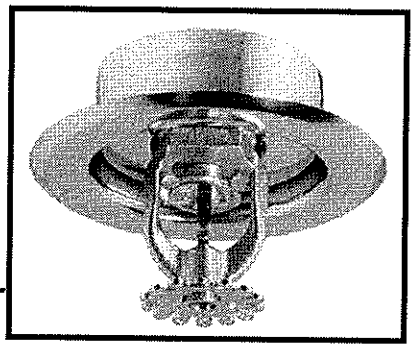
Sprinklers with Polyester Finish are UL and C-UL Listed as Corrosion-Resistant Sprinklers.

Maximum Working Pressure
175 psi (12.1 bar)
250 psi (17.2 bar)*

* The maximum working pressure of 250 psi (17.2 bar) only applies to the listing by Underwriters Laboratories, Inc. (UL).

Discharge Coefficient
K=5.6 GPM/psi$^{1/2}$ (80,6 LPM/bar$^{1/2}$)





Temperature Rating
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

Recessed Escutcheon: White Coated, Chrome Plated, or Brass Plated

Physical Characteristics

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

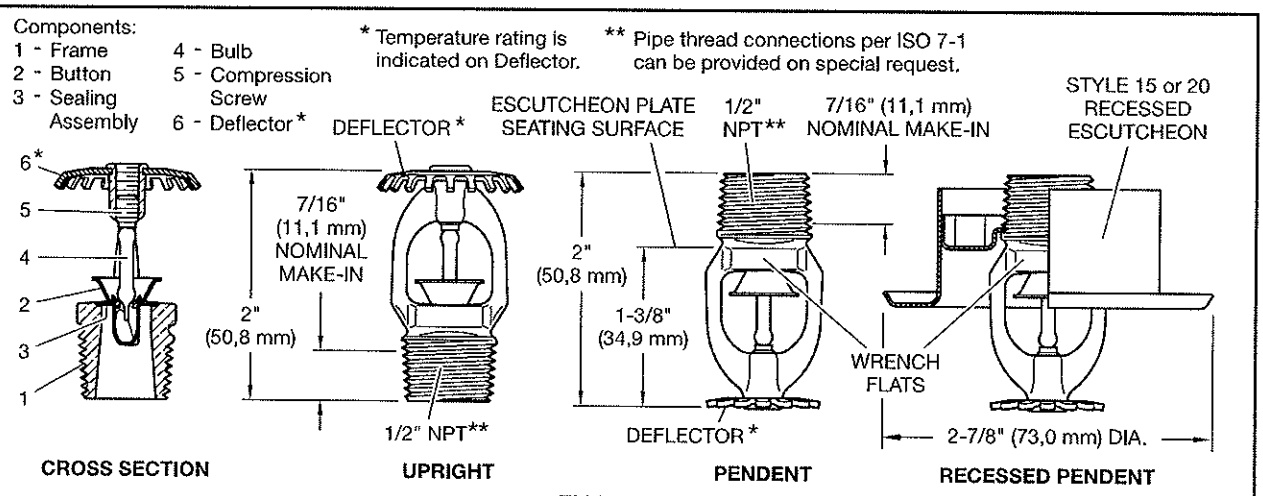


FIGURE 1
SERIES TY-FRB UPRIGHT (TY313) AND PENDENT (TY323) SPRINKLERS
5.6 K-FACTOR, 1/2 INCH NPT, QUICK RESPONSE

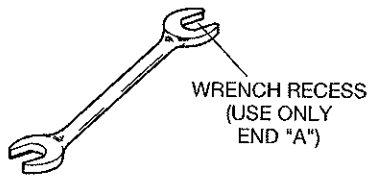


FIGURE 2
W-TYPE 6
SPRINKLER WRENCH

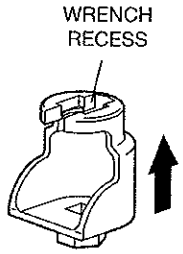


FIGURE 3
W-TYPE 7 RECESSED
SPRINKLER WRENCH

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, Upright (TY313) and Pendent (TY323) Sprinklers are intended for fire protection systems designed in accordance with the standard installation rules recognized by the applicable Listing or Approval agency (such as, UL Listing is based on the requirements of NFPA 13, and FM Approval is based on the requirements of FM's Loss Prevention Data Sheets). Only the Style 15 or Style 20 Recessed Escutcheon is to be used for recessed pendent installations.

Installation

The TYCO Series TY-FRB, 5.6 K-factor, Upright (TY313) and Pendent (TY323) Sprinklers 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 inch (1,6 mm) for the 135°F (57°C) and 3/32 inch (2,4 mm) for the 286°F (141°C) temperature ratings.

A leak-tight 1/2 inch NPT sprinkler joint should be obtained by applying a minimum to maximum torque of 7 to 14 ft.-lbs. (9,5 to 19,0 Nm). Higher levels of torque can distort the sprinkler inlet with consequent leakage or impairment of the sprinkler.

Do not attempt to compensate for insufficient adjustment in the Escutcheon Plate by under- or over-tightening the sprinkler. Re-adjust the position of the sprinkler fitting to suit.

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

Step 1. Install Pendent sprinklers in the pendent position. Install upright sprinklers 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 (Figure 2). With reference to Figure 1, apply the W-Type 6 Sprinkler Wrench to the wrench flats. Torque sprinklers 7 to 14 ft.-lbs. (9,5 to 19,0 Nm).

Recessed Pendent Sprinklers
The Series TY-FRB Recessed Pendent Sprinklers must be installed in accordance with the following instructions.

Step A. After installing the Style 15 or Style 20 Mounting Plate over the sprinkler threads, and with pipe-thread sealant applied to the pipe threads, hand-tighten the sprinkler into the sprinkler fitting.

Step B. Tighten the sprinkler into the sprinkler fitting using only the W-Type 7 Recessed Sprinkler Wrench (Figure 3). With reference to Figure 1, apply the W-Type 7 Recessed Sprinkler Wrench to the sprinkler wrench flats. Torque sprinklers 7 to 14 ft.-lbs. (9,5 to 19,0 Nm).

Step C. After ceiling installation and finishing, slide on the Style 15 or Style 20 Closure over the Series TY-FRB Sprinkler and push the Closure over the Mounting Plate until its flange comes in contact with the ceiling.

Care and Maintenance

The TYCO Series TY-FRB, 5.6 K-factor, Upright (TY313) and Pendent (TY323) 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, 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.

Absence of the outer piece of an escutcheon, which is used to cover a clearance hole, can delay sprinkler operation in a fire situation.

The owner must assure that the sprinklers are not used for hanging any objects and that the sprinklers are only cleaned by means of gently dusting with a feather duster; otherwise, non-operation in the event of a fire or inadvertent operation may result.

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.

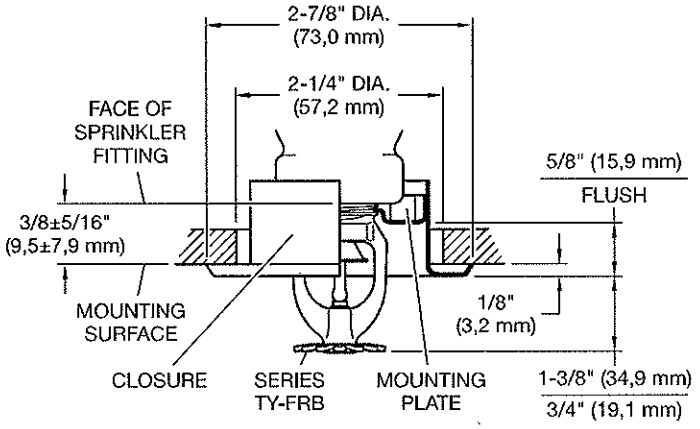


FIGURE 4
SERIES TY-FRB RECESSED PENDENT SPRINKLER ASSEMBLY (TY323) WITH TWO PIECE 5/8 INCH TOTAL ADJUSTMENT STYLE 15 RECESSED ESCUTCHEON

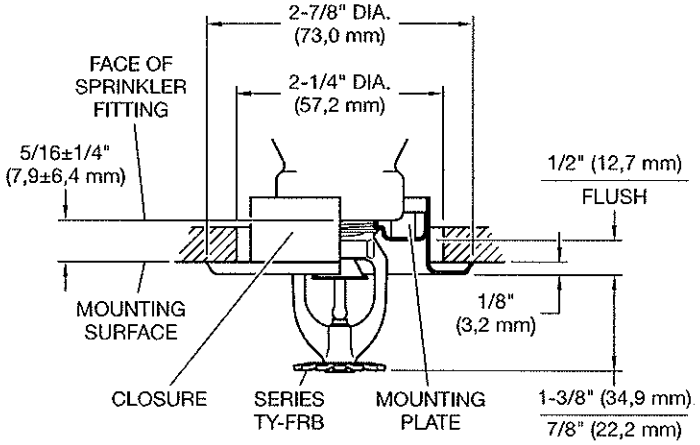


FIGURE 5
SERIES TY-FRB RECESSED PENDENT SPRINKLER ASSEMBLY (TY323) WITH TWO PIECE 1/2 INCH TOTAL ADJUSTMENT STYLE 20 RECESSED ESCUTCHEON

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. Contact the installing contractor or sprinkler manufacturer regarding any questions.

Automatic sprinkler systems are recommended to 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
370	5.6K UPRIGHT (1/2" NPT)	TY313
371	5.6K PENDENT (1/2" NPT)	TY323

* Use suffix "I" for ISO 7-1 connection; for example, 77-370-4-175-I

	SPRINKLER FINISH
1	NATURAL BRASS
3	PURE WHITE (RAL9010)** POLYESTER
4	SIGNAL WHITE (RAL9003) POLYESTER
9	CHROME PLATED

** Eastern Hemisphere sales only

	TEMPERATURE RATINGS
135	135°F (57°C)
155	155°F (68°C)
175	175°F (79°C)
200	200°F (93°C)
286	286°F (141°C)

TABLE A
SERIES TY-FRB UPRIGHT AND PENDENT SPRINKLERS
PART NUMBER SELECTION

Limited Warranty

For warranty terms and conditions, visit 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 Upright or Pendent (specify) Sprinkler, SIN (specify), K=5.6, Quick Response, (specify) temperature rating, (specify) finish, P/N (specify, refer to Table A).

Recessed Escutcheon
Specify: Style 15 Recessed Escutcheon with (specify*) finish, P/N (specify*)

Specify: Style 20 Recessed Escutcheon with (specify*) finish, P/N (specify*)

* Refer to Technical Data Sheet TFP770

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

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

tyco Fire Protection Products