Series TY-B — 5.6 K-factor Conventional (Old Style) Sprinklers Standard Response

General Description

The TYCO Series TY-B, 5.6 K-factor, Conventional Sprinklers (TY365) described in this data sheet are standard response -standard coverage, decorative 5 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 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 TYCO Series TY-B 5.6 K-factor Conventional 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.

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.

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)

TY365

Technical Data

Approvals
UL Listed
VdS Approved

Maximum Working Pressure
175 psi (12,1 bar)

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

Temperature Ratings
135°F (57°C)
155°F (68°C)
175°F (79°C)
200°F (93°C)
286°F (141°C)
360°F (182°C)

Finishes
Sprinkler: Natural Brass, Chrome Plated, Pure White (RAL 9010) and Signal White (RAL 9003)

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-B, 5.6 K-factor, Conventional Sprinklers (TY365) 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-B Conventional Sprinklers are only for non-recessed applications.

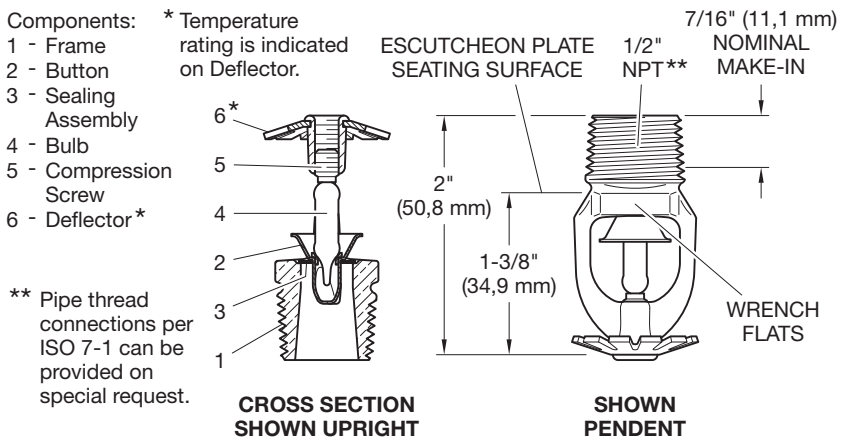


FIGURE 1
SERIES TY-B CONVENTIONAL SPRINKLERS (TY365)
5.6 K-FACTOR, 1/2 INCH NPT, STANDARD RESPONSE

Installation

The TYCO Series TY-B, 5.6 K-factor, Conventional Sprinklers (TY365) 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) to 3/32 inch (2,4 mm) for the 360°F (182°C) temperature ratings.

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.

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 (Figure 2), except that an 8 or 10 inch adjustable Crescent wrench is to be used for wax coated sprinklers. With reference to Figure 1, the W-Type 6 Sprinkler Wrench or the Crescent wrench, as applicable, is to be applied to the wrench flats.

Care and Maintenance

The TYCO Series TY-B, 5.6 K-factor, Conventional Sprinklers (TY365) 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. (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.

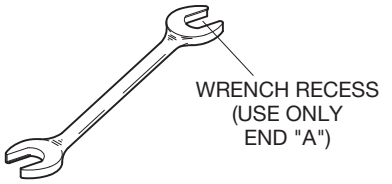


FIGURE 2
W-TYPE 6
SPRINKLER WRENCH

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.

Series TY-B – 5.6 K-factor Horizontal and Vertical Sidewall Sprinklers Standard Response, Standard Coverage

General Description

The TYCO Series TY-B, 5.6 K-factor, Horizontal and Vertical Sidewall Sprinklers described in this technical data sheet are standard response, standard coverage decorative 5 mm glass bulb type spray sprinklers designed for use in light and ordinary hazard, commercial occupancies such as banks, hotels, and shopping malls.

They are designed for installation along a wall or the side of a beam and just beneath a smooth ceiling. Sidewall sprinklers are commonly used instead of pendent or upright sprinklers due to aesthetics or building construction considerations, where piping across the ceiling is not desirable.

The recessed version of the Series TY-B Horizontal Sidewall Sprinkler is intended for use in areas with a finished wall. It uses a two-piece Style 10 Recessed Escutcheon. The Recessed Escutcheon provides 1/2 in. (12,7 mm) of recessed adjustment or up to 3/4 in. (19,1 mm) of total adjustment from the flush sidewall position. The adjustment provided by the Recessed Escutcheon reduces the accuracy to which the fixed pipe nipples to the sprinklers must be cut.

Corrosion-resistant coatings, where applicable, are utilized to extend the life of copper alloy sprinklers beyond that which would otherwise be obtained when exposed to corrosive atmospheres. Although corrosion resistant coated sprinklers have passed the standard corrosion tests of the applicable approval agencies, the testing is not representative of all possible corrosive atmospheres. Consequently, it is recommended that the end user be consulted with respect to the suitability of these coatings for any given corrosive environment. The effects of ambient temperature, concentration of chemicals, and gas/chemical velocity, should be considered, as a minimum, along with the corrosive nature of the chemical to which the sprinklers will be exposed.

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.

NOTICE

The Series TY-B 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. Contact the installing contractor or product manufacturer with any questions.

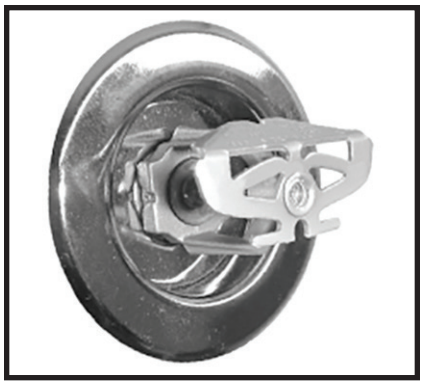
Sprinkler Identification Numbers

TY3351. . . . . Horizontal Sidewall
TY3451. . . . . .Vertical Sidewall

Technical Data

Approvals
UL and C-UL Listed
FM Approved
LPCB Certified
NYC Approved

(See Table A for complete approval information, including corrosion-resistant status.)



Maximum Working Pressure
See Table B

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

Temperature Ratings
See Table A

Finishes
Sprinkler: See Table C

Recessed Escutcheon: Signal or Pure White, Grey Aluminum, Jet Black, Chrome Plated, or Natural Brass

Physical Characteristics

Frame	Bronze
Button	Brass/Copper
Sealing Assembly	Beryllium Nickel w/TEFLON
Bulb	Glass
Compression Screw	Bronze
HSW Deflector	Bronze
VSW Deflector	Copper

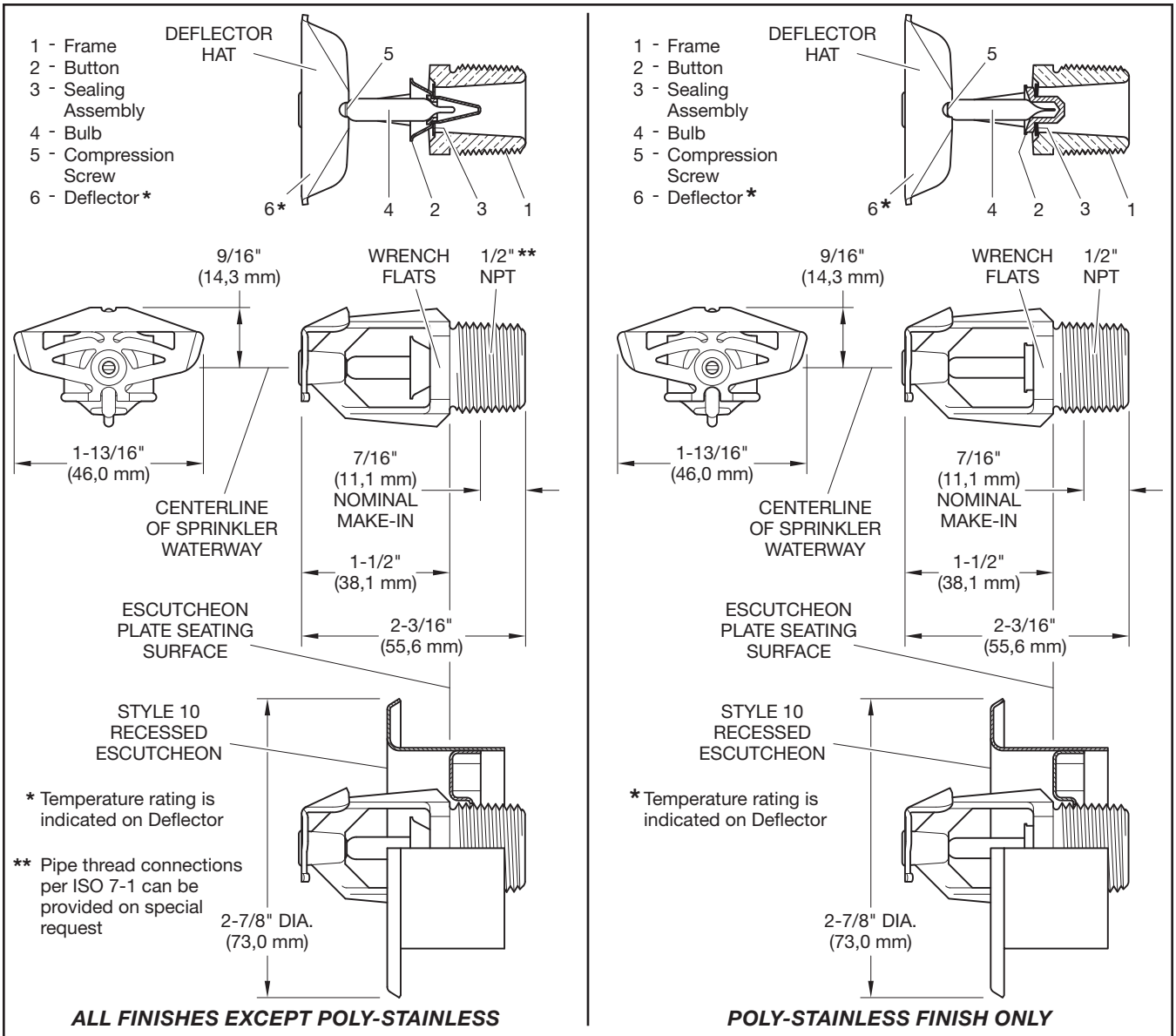


FIGURE 1
SERIES TY-B TY3351 HORIZONTAL SIDEWALL SPRINKLER
5.6 K-FACTOR STANDARD RESPONSE

Poly-Stainless
Physical Characteristics

Frame	Bronze
Button	L316 Stainless Steel*
Bulb	Glass
Compression Screw	L316 Stainless Steel*
HSW Deflector	Copper/Bronze
Sealing Assembly	Gold Plated Beryllium Nickel w/TEFLON

*Type L316 stainless steel (UNS 31603) per ASTM A479/479M or BS EN 1008 WN1.4404.

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-B, 5.6 K-factor, Horizontal and Vertical Sidewall Sprinklers are intended for fire protection systems designed in accordance with the standard installation rules recognized by the applicable Listing or Approval agency (for example, UL Listing is based on the requirements of NFPA 13, and FM Approval is based on the requirements of the FM Loss Prevention Data Sheets). Only the Style 10 Recessed Escutcheon, as applicable, is to be used for recessed horizontal installations.

Installation

The TYCO Series TY-B, 5.6 K-factor, Horizontal and Vertical Sidewall 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 in. (1,6 mm) for the 135°F (57°C) to 3/32 in. (2,4 mm) for the 360°F (182°C) temperature ratings.

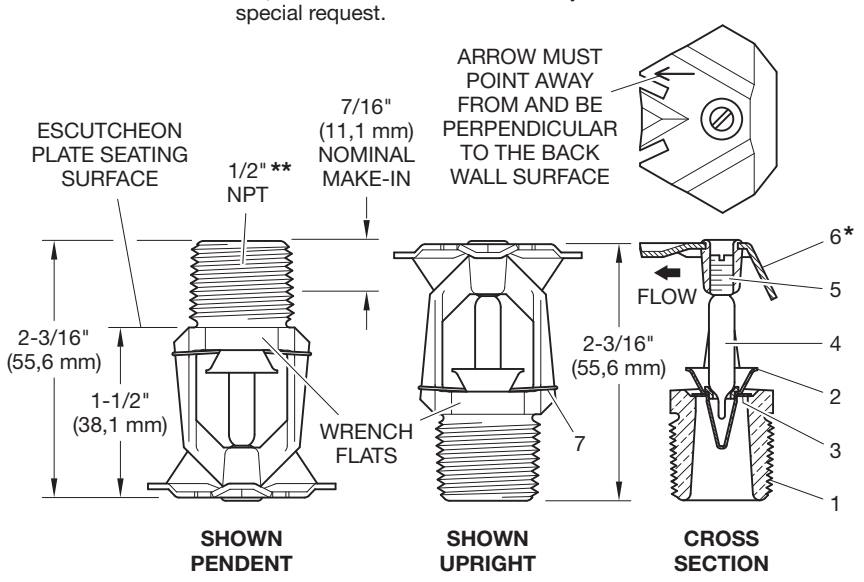


FIGURE 2
SERIES TY-B VERTICAL SIDEWALL (TY3451) SPRINKLER
5.6 K-FACTOR, STANDARD RESPONSE

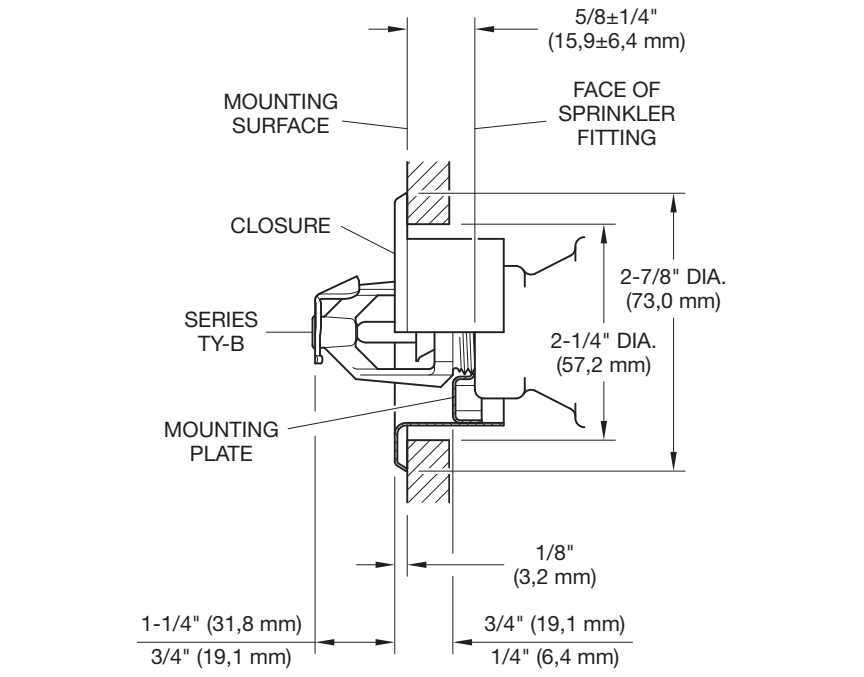


FIGURE 3
SERIES TY-B RECESSED PENDENT SPRINKLER ASSEMBLY
WITH TWO-PIECE 3/4 IN. TOTAL ADJUSTMENT
STYLE 10 RECESSED ESCUTCHEON, 5.6 K-FACTOR, 1/2 IN. NPT

A leak-tight 1/2 in. NPT sprinkler joint should be obtained by applying a minimum-to-maximum 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. 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.

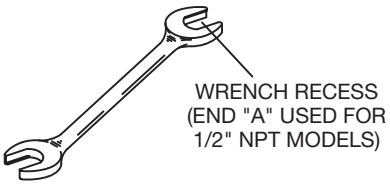


FIGURE 4
W-TYPE 6
SPRINKLER WRENCH

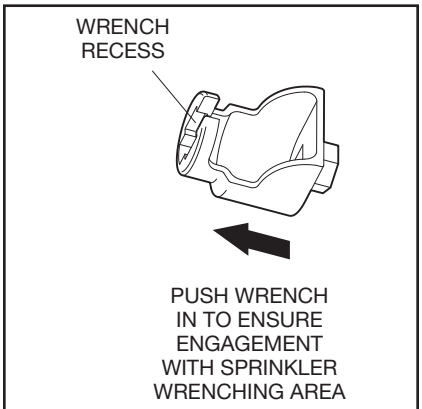


FIGURE 5
W-TYPE 7 RECESSED
SPRINKLER WRENCH

Horizontal Sidewall Sprinkler Installation

The TYCO Series TY-B Recessed Horizontal Sidewall Sprinklers must be installed in accordance with the following instructions. Install recessed horizontal sidewall sprinklers in the horizontal position with the centerline of waterway perpendicular to the back wall and parallel to the ceiling. The word “TOP” on the Deflector is to face towards the ceiling.

Step A. After installing the Style 10 Mounting Plate over the sprinkler 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, see Figure 5. Apply the W-Type 7 Recessed Sprinkler Wrench to the sprinkler wrench flats, see Figure 1.

Step C. After the ceiling is installed or the finish coat is applied, slide on the Style 10 Closure over the Series TY-B Sprinkler and push the Closure over the Mounting Plate until its flange comes in contact with the ceiling.

K-Factor	Sprinkler Type	Temperature Rating	Bulb Liquid Color	Sprinkler Finish (10)						
				Natural Brass	Chrome Plated	Polyester[c]	Poly-Stainless[c]	Lead Coated	Wax Coated	Wax-Over-Lead Coated
5.6 1/2 in. NPT	Horizontal Sidewall (TY3351) Figure 1	135°F (57°C)	Orange	1, 2, 3, 4, 9		1, 2, 3, 9	1, 2	1, 2, 3, 9	1, 2, 3, 9	
		155°F (68°C)	Red							
		175°F (79°C)	Yellow							
		200°F (93°C)	Green							
		286°F (141°C)	Blue						1[b], 2[b], 3[b], 9[b]	
		360°F (182°C)	Mauve	1, 2, 4, 9		1, 2, 9			N/A	
	Recessed Horizontal Sidewall (TY3351)[a] Figure 3	135°F (57°C)	Orange	1, 2, 3, 9			1, 2	N/A		
		155°F (68°C)	Red							
		175°F (79°C)	Yellow							
		200°F (93°C)	Green							
5.6 1/2 in. NPT	Vertical Sidewall (TY3451) Pendent or Upright Figure 2	135°F (57°C)	Orange	5, 6, 7, 9			N/A	5, 6, 7, 9	5, 6, 7, 9	
		155°F (68°C)	Red							
		175°F (79°C)	Yellow							
		200°F (93°C)	Green							
		286°F (141°C)	Blue						5[b], 6[b], 7[b], 9[b]	
		360°F (182°C)	Mauve	5, 6, 9			N/A		N/A	

Notes:
1. UL Listed for use in Light and Ordinary Hazard Occupancies at a 4 to 12 in. (100 to 300 mm) top of deflector-to-ceiling distance
2. C-UL Listed for use in Light and Ordinary Hazard Occupancies at a 4 to 12 in. (100 to 300 mm) top of deflector-to-ceiling distance
3. FM Approved for use in Light Hazard Occupancies at a 4 to 12 IN. (100 to 300 mm) top of deflector-to-ceiling distance
4. LPCB Approved (Ref. No. 094a & 007k) at a 4 to 6 in. (100 to 150 mm) deflector-to-ceiling distance
5. UL Listed for use in Light and Ordinary Hazard Occupancies
6. C-UL Listed for use in Light and Ordinary Hazard Occupancies
7. FM Approved for use in Light Hazard Occupancies
8. LPCB Approved (Ref. No. 094a & 007k)
9. Approved by the City of New York under MEA 354-01-E
10. Where Polyester Coated, Lead Coated, Wax Coated, and Wax-over-Lead Coated Sprinklers are noted to be UL and C-UL Listed, the sprinklers are UL and C-UL Listed as corrosion-resistant sprinklers. Where Lead Coated, Wax Coated, and Wax-over-Lead Coated Sprinklers are noted to be FM Approved, the sprinklers are FM Approved as corrosion-resistant sprinklers.

a. Installed with Style 10 (1/2 in. NPT) or Style 40 (3/4 in. NPT) 3/4 in. Total Adjustment Recessed Escutcheon, as applicable
b. 150°F (66°C) maximum ceiling temperature
c. Frame and deflector only
N/A – Not Applicable

TABLE A
SERIES TY-B 5.6 K-FACTOR HORIZONTAL AND VERTICAL SPRINKLERS
LABORATORY LISTINGS AND APPROVALS

K-Factor	Sprinkler Type	Sprinkler Finish					
		Natural Brass	Chrome Plated	Polyester[1]	Lead Coated	Wax Coated	Wax-Over-Lead Coated
5.6 1/2 in. NPT	Horizontal Sidewall (TY3351)	250 psi (17,2 bar)[2] OR 175 psi (12,1 bar)					
	Recessed Horizontal Sidewall (TY3351)						
	Vertical Sidewall (TY3451)	175 psi (12,1 bar)					

Notes:
1. Frame and deflector only
2. The maximum working pressure of 250 psi (17,2 bar) only applies to UL Listing, C-UL Listing and Approval by the City of New York

TABLE B
SERIES TY-B 5.6 K-FACTOR HORIZONTAL AND VERTICAL SPRINKLERS
MAXIMUM WORKING PRESSURE

Model SW-20 and SW-24 — 11.2 K-factor Extended Coverage Ordinary Hazard Horizontal Sidewall Sprinklers (Standard Response)

General Description

The TYCO Model SW-20 and SW-24, 11.2 K-factor, Extended Coverage Ordinary Hazard (ECOH) Horizontal Sidewall Sprinklers, Standard Response are decorative glass bulb sprinklers designed for use in ordinary hazard occupancies per NFPA 13.

The SW-20 provides protection of coverage areas up to 16 ft x 20 ft (320 ft^2), whereas the SW-24 provides protection of coverage areas up to 16 ft x 24 ft (384 ft^2), as compared to standard coverage horizontal sidewall sprinklers having a maximum coverage area of 10 ft x 10 ft (100 ft^2) for ordinary hazard occupancies.

Horizontal sidewall sprinklers are designed for installation along a wall or the side of a beam and are commonly used instead of pendent or upright sprinklers due to aesthetics or building construction considerations, where piping across the ceiling is not desirable.

Corrosion resistant coatings, where applicable, are utilized to extend the life of copper alloy sprinklers beyond that which would otherwise be obtained when exposed to corrosive atmospheres. Although corrosion resistant coated sprinklers have passed the standard corrosion tests of the applicable approval agencies, the testing is not representative of all possible corrosive atmospheres. Consequently, it is recommended that the end user be consulted with respect to the suitability of these corrosion resistant coatings for any given corrosive environment. The effects of ambient temperature, concentration of chemicals, and gas/chemical velocity, should be considered, as a minimum, along with the corrosive nature of the chemical to which the sprinklers will be exposed.

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.

NOTICE

The Model SW-20 and SW-24 Sprinklers described herein must be installed and maintained in compliance with this document and with the applicable standards of the National Fire Protection Association, in addition to the standards of any 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.

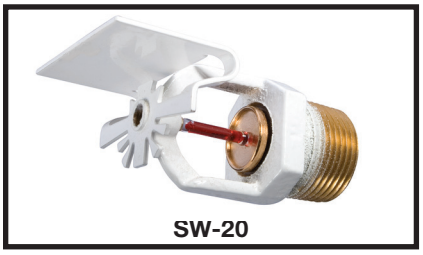
Sprinkler Identification Number (SIN)

TY5332 - SW-20
TY5337 - SW-24
TY5332 is a re-designation for C5332
TY5337 is a re-designation for C5337

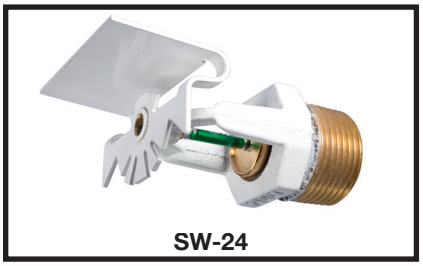
Technical Data

Approvals
UL and C-UL Listed
(Refer to the Design Criteria Section)
Polyester coated sprinklers are UL and C-UL Listed as Corrosion Resistant Sprinklers

NYC under MEA 177-03-E



SW-20



SW-24

Maximum Working Pressure
175 psi (12,1 bar)

Discharge Coefficient
K= 11.2 GPM/$psi^{½}$ (161,3 LPM/$bar^{½}$)

Temperature Rating
SW-20: 155°F (68°C) & 200°F (93°C)
SW-24: 200°F (93°C)

Finishes
Refer to Table B

Physical Characteristics:

Frame	Bronze
Button	Bronze
Sealing Assembly	Beryllium Nickel w/ TEFLON
Bulb	Glass
Compression Screw	Brass
Deflector	Bronze

Components:

1 - Frame
2 - Button
3 - Bulb
4 - Compression Screw
5 - Sealing Assembly
6 - Deflector*

* Temperature rating is indicated on Deflector.

** Pipe thread connections per ISO 7-1 can be provided on special request.

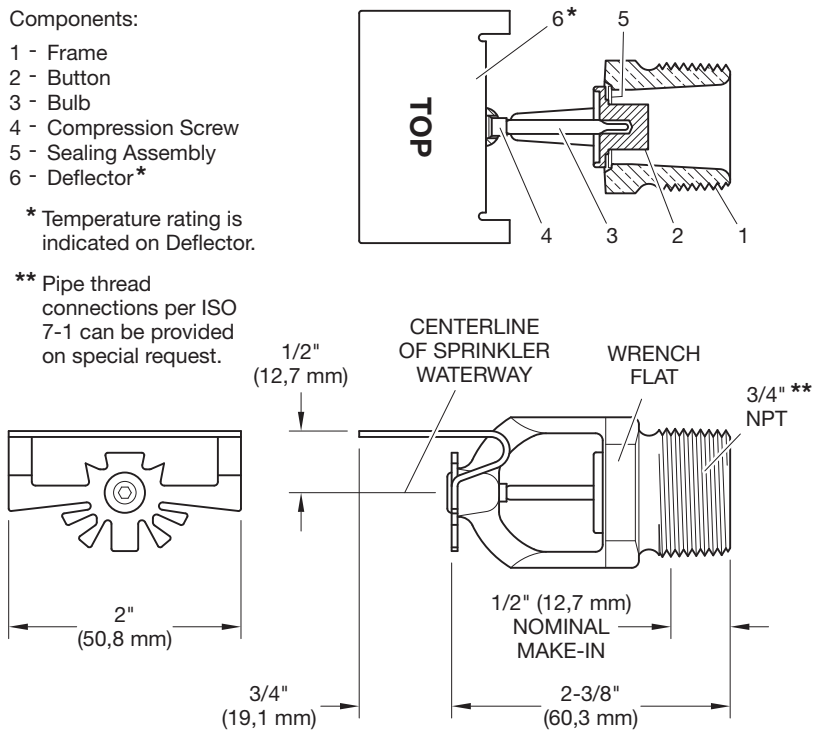


FIGURE 1
MODEL SW-20 (TY5332)
EXTENDED COVERAGE ORDINARY HAZARD
HORIZONTAL SIDEWALL SPRINKLER
11.2 K-FACTOR, 3/4 INCH NPT

Components:

1 - Frame
2 - Button
3 - Bulb
4 - Compression Screw
5 - Sealing Assembly
6 - Deflector*

* Temperature rating is indicated on Deflector.

** Pipe thread connections per ISO 7-1 can be provided on special request.

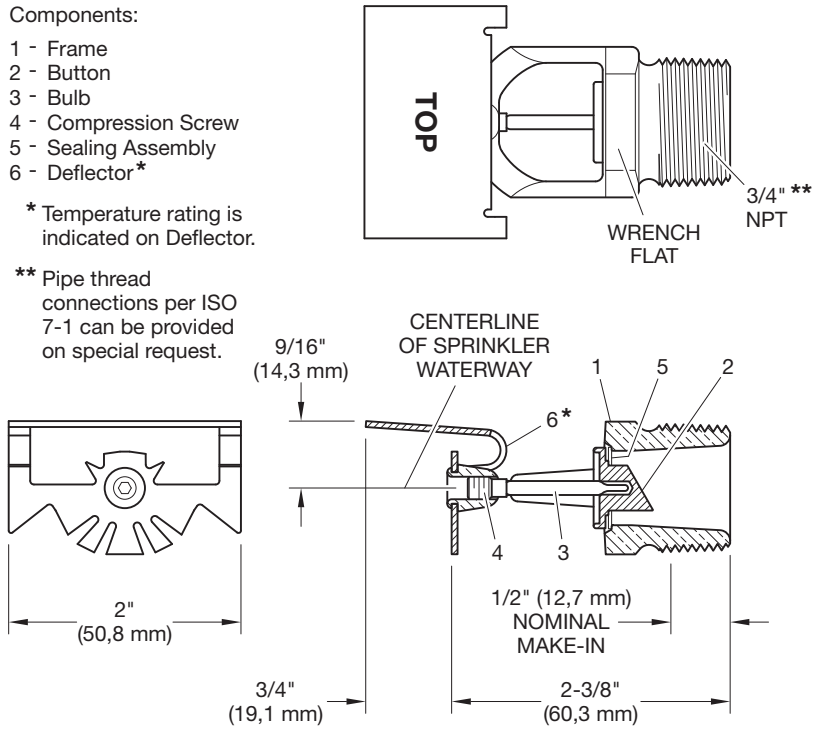


FIGURE 2
MODEL SW-24 (TY5337)
EXTENDED COVERAGE ORDINARY HAZARD
HORIZONTAL SIDEWALL SPRINKLER
11.2 K-FACTOR, 3/4 INCH NPT

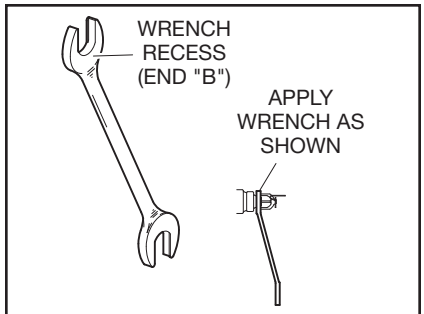


FIGURE 3
W-TYPE 3 SPRINKLER WRENCH

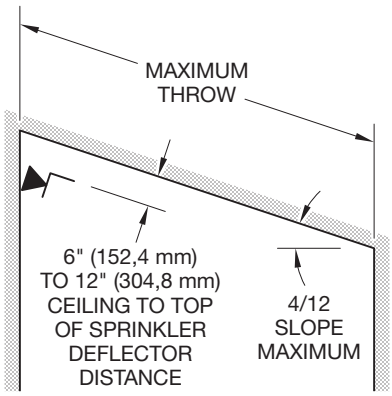


FIGURE 4
SPRINKLER PLACEMENT UNDER SLOPED CEILINGS IN LOADING DOCKS

Operation

The glass bulb contains a fluid that 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.

MODEL SW-20 ECOH HORIZONTAL SIDEWALL SPRINKLER (TY5332) OH Group 1 (0.15 gpm/sq-ft)						
Response Rating	**Coverage Area[1], Ft x Ft (m x m)**	**Minimum Flow[2], GPM (LPM)**	**Minimum Pressure[2], PSI (BAR)**	**Deflector-To-Ceiling Distance[3], In. (mm)**	**Sprinkler Temperature Rating, °F**	**Minimum Spacing[4], Ft (m)**
Standard	16 x 16 (4,9 x 4,9	38 (144)	11.5 (0,79)	6 to 12 (150 to 300)	155, 200	8 (2,4)
Standard	16 x 18 (4,9 x 5,5)	43 (163)	14.7 (1,01)	6 to 12 (150 to 300)	155, 200	8 (2,4)
Standard	16 x 20 (4,9 x 6,1)	48 (182)	18.4 (1,27)	6 to 12 (150 to 300)	155, 200	8 (2,4)

MODEL SW-20 ECOH HORIZONTAL SIDEWALL SPRINKLER (TY5332) OH Group 2 (0.20 gpm/sq.-ft.)						
Response Rating	**Coverage Area[1], Ft x Ft (m x m)**	**Minimum Flow[2], GPM (LPM)**	**Minimum Pressure[2], PSI (BAR)**	**Deflector-To-Ceiling Distance[3], In. (mm)**	**Sprinkler Temperature Rating, °F**	**Minimum Spacing[4], Ft (m)**
Standard	16 x 16 (4,9 x 4,9	51 (193)	20.7 (1,43)	6 to 12 (150 to 300)	155, 200	8 (2,4)
Standard	16 x 18 (4,9 x 5,5)	58 (220)	26.8 (1,85)	6 to 12 (150 to 300)	155, 200	8 (2,4)
Standard	16 x 20 (4,9 x 6,1)	64 (242)	32.7 (2,25)	6 to 12 (150 to 300)	155, 200	8 (2,4)

MODEL SW-24 ECOH HORIZONTAL SIDEWALL SPRINKLER (TY5337) OH Group 1 (0.15 gpm/sq.-ft.)						
Response Rating	**Coverage Area[1], Ft x Ft (m x m)**	**Minimum Flow[2], GPM (LPM)**	**Minimum Pressure[2], PSI (BAR)**	**Deflector-To-Ceiling Distance[3], In. (mm)**	**Sprinkler Temperature Rating, °F**	**Minimum Spacing[4], Ft (m)**
Standard	16 x 22 (4,9 x 6,7)	53 (200)	22.4 (1,54)	6 to 12 (150 to 300)	200	8 (2,4)
Standard	16 x 24 (4,9 x 7,3)	58 (220)	26.8 (1,85)	6 to 12 (150 to 300)	200	8 (2,4)

MODEL SW-24 ECOH HORIZONTAL SIDEWALL SPRINKLER (TY5337) OH Group 2 (0.20 gpm/sq.-ft.)						
Response Rating	**Coverage Area[1], Ft x Ft (m x m)**	**Minimum Flow[2], GPM (LPM)**	**Minimum Pressure[2], PSI (BAR)**	**Deflector-To-Ceiling Distance[3], In. (mm)**	**Sprinkler Temperature Rating, °F**	**Minimum Spacing[4], Ft (m)**
Standard	16 x 22 (4,9 x 6,7)	71 (269)	40.2 (2,77)	6 to 12 (150 to 300)	200	8 (2,4)
Standard	16 x 24 (4,9 x 7,3)	77 (291)	47,3 (3,26)	6 to 12 (150 to 300)	200	8 (2,4)

NOTES
1. Backwall (where sprinkler is located) by sidewall (length of throw).
2. Requirement is based on minimum flow in GPM from each sprinkler. The indicted residual pressures are based on the nominal K-factor.
3. The centerline of the sprinkler waterway is located below the deflector as shown in Figures 1 and 2.
4. Minimum spacing is for lateral distance between sprinklers located along a single wall. Otherwise adjacent sprinklers (i.e., sidewall sprinklers on an adjacent wall, on an opposite wall, or pendent sprinklers) must be located outside of the maximum listed protection area of the extended coverage sidewall sprinkler being utilized.

TABLE A
UL AND C-UL LISTING COVERAGE AND FLOW RATE CRITERIA

tyco
Fire & Building Products

Tyco Fire and Building Products Asia Pte. Ltd.
No. 2 Serangoon North Ave 5
#07-01 Fu Yu Building
Singapore 554911

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PROJECT REFERENCES (SINGAPORE ONLY)
FIRE PROTECTION SYSTEM

Since we established in 1972, our fire protection equipments have been installed in over few hundred thousand buildings worldwide. As a supplier for sprinkler products, we do not normally keep track of where our products were installed as they are all done by fire contractors. We have now compiled to the best of our knowledge the following project reference list in Singapore.

1. Changi Terminal 3
2. Changi Terminal 2 Upgrading
3. Budget Terminal @ Changi
4. Republic Polytechnic @ Woodland
5. Nanyang Polytechnic @ Ang Mo Kio
6. Vivo City Mall @ Keppel Road
7. One Raffles Quay (ORQ), Shenton Way
8. National Library @ Brass Basah
9. New Supreme Court
10. Singapore North-East Line MRT
11. Circle Line Stage 1 (Contract 833)
12. Circle Line Stage 2 (Contract 833B)
13. Circle Line Stage 3 (C852A)
14. Circle Line Stage 4 & 5
15. Changi MRT Depot
16. Changi Water Reclamation (C2B)
17. Changi Water Reclamation (C3D)
18. Changi Water Reclamation (C4A)
19. Changi Water Reclamation (C4B)
20. Changi Water Reclamation (C4C)
21. Capital Tower @ Robinson Road
22. Esplanade Art Centre @ Marina
23. Singapore Indoor Stadium
24. Tuas Custom Checkpoint
25. Singapore Expo (Hall 7 to 10)
26. Biopolis phase 2 @ Buona Vista
27. Fusion Polis @ Buona Vista
28. Suntec City
29. New Parliament House
30. Singapore Arm Forces (SAFTI) Military Camp, Jurong
31. Chartered Semi-Conductor FAB II
32. Chartered Semi-Conductor FAB VI
33. Chartered Semi-Conductor FAB VII
34. Wackers Wafer Fab Plant @ Tampines
35. Ikea @ Tampines Ave 10
36. Ang Mo Kio Hub, Retail mall
37. SOHO Central @ Bugis
38. Republic Plaza @ Raffles Place
39. Marina Square (Upgrading A & A)
40. HDB @ Jln Bukit Merah (A & A)
41. Ciba Vision factory @ Tuas
42. Icon Condo @ Tanjong Pagar
43. Singapore Immigration Building
44. Senoko Power Station
45. IBM @ Changi Business Park
46. Invensys @ Changi Business Park
47. Schenker Pharmaceutical Plant
48. NUS Data Storage
49. Pulau Seraya Power Station
50. AIA Building @ Alexandra
51. Burlington Square
52. UOB Plaza @ Raffles Place
53. Royal Holiday Inn Crown Plaza
54. YWCA Hotel @ Somerset Road
55. Tampines Junction Shopping Complex
56. JTC @ Ayer Rajah
57. JTC @ Woodland
58. JTC @ Ubi
59. JTC @ Kallang Avenue
60. JTC @ Depot Road
61. JTC @ Toa Payoh North
62. JTC @ Lower Delta Road