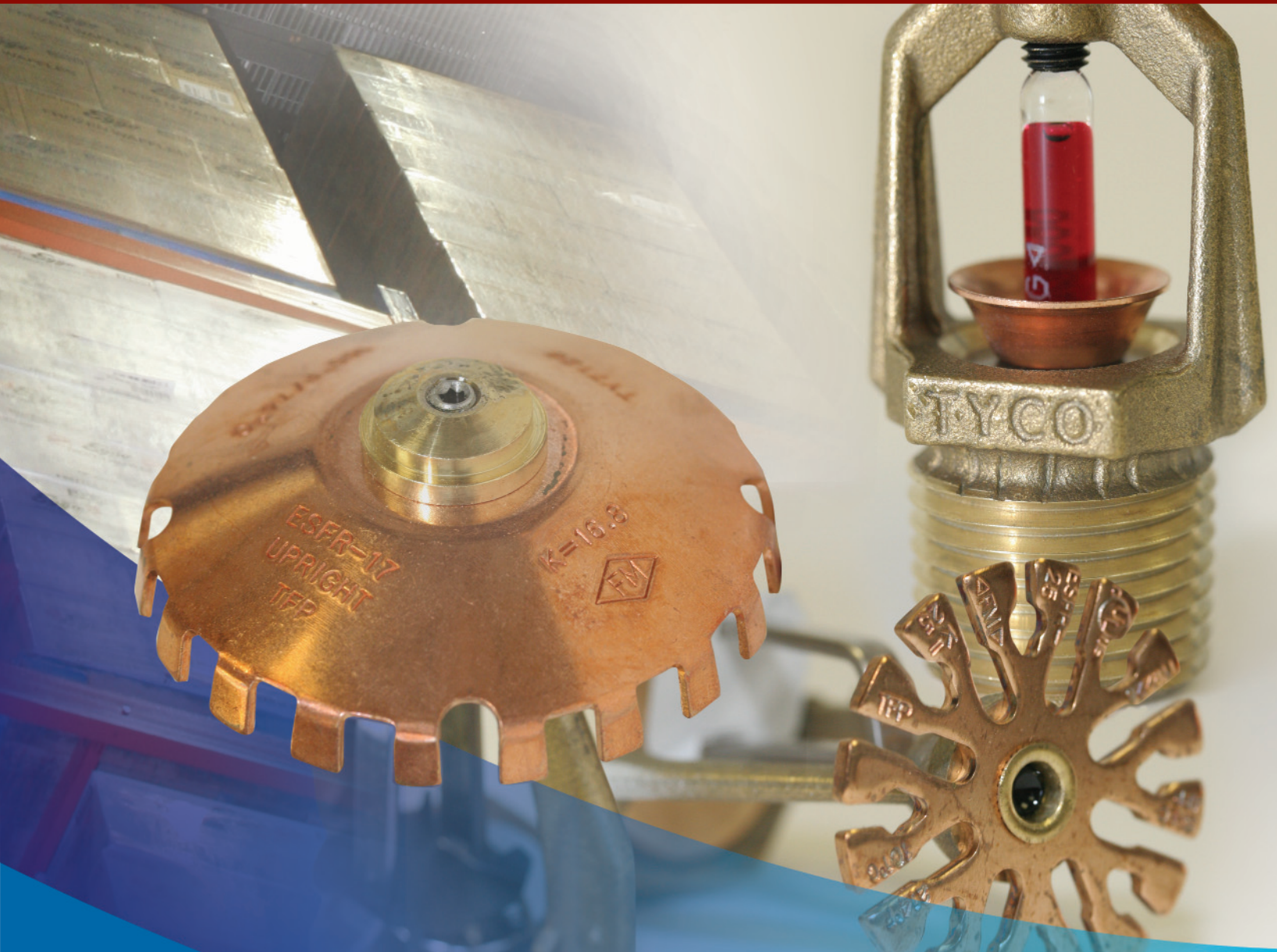


tyco | Fire & Building
Products



STORAGE

FIRE PROTECTION SPRINKLERS

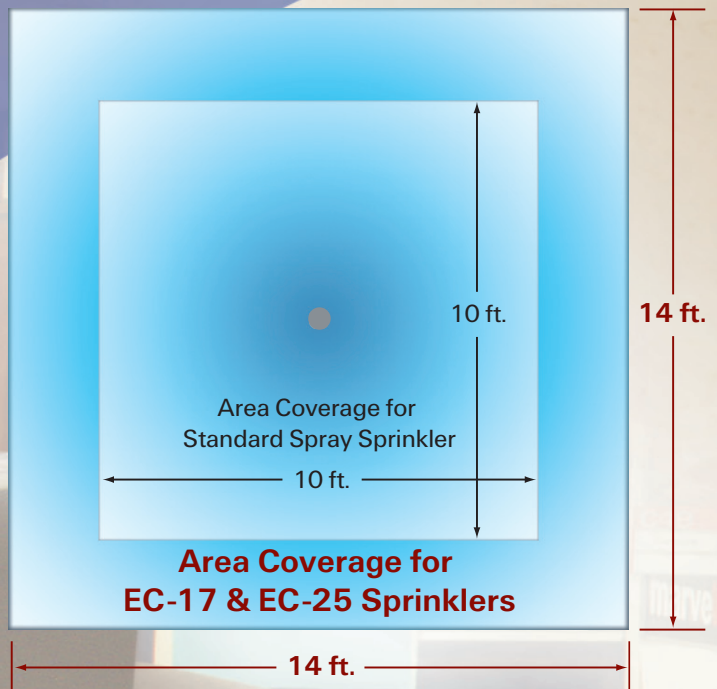
HOW CAN YOU REDUCE YOUR FIRE SPRINKLER INSTALLATION COSTS?

Tyco® Storage Sprinklers are intended for use in storage applications such as big box retail, extra hazard, high-piled and rack storage situations. These sprinklers can provide more water at lower pressures, and the extended coverage (EC) versions protect a larger area than standard sprinklers.

Frequently, specially designed ceiling sprinklers can eliminate the need for in-rack sprinklers increasing your rack design options and mobility. Installing larger orifice, extended coverage sprinklers can be cost-effective by reducing the overall number of sprinklers needed to protect a large area, getting stores opened *faster* and installers on to the next job quicker.

Tyco Fire & Building Products Storage Sprinklers are the solution to save you time and money.

When compared to a standard sprinkler EC-17 and EC-25 sprinklers reduce the number of sprinklers needed in an area by approximately half and consistently performs better in a retail application.



SAVES YOU MONEY

CONTRACTORS:

- ◆ FASTER INSTALLS TO GET YOU TO THE NEXT JOB SOONER
- ◆ LESS DESIGN TIME (WITHOUT IN-RACKS)

OWNERS:

- ◆ INCREASE YOUR STORE RACKING FLEXIBILITY
- ◆ OPEN YOUR STORE SOONER WITH FASTER INSTALLS

EC SERIES

EXTENDED COVERAGE STORAGE SPRINKLERS

MODEL EC-17 16.8 K-FACTOR

RECESSED & PENDENT

Applications: Big Box Retail/Extra Hazard/High-Pile Storage

SIN TY7228

Tech Data Sheet TFP215

- ◆ Reduces Number Of Sprinklers Installed
- ◆ Extended Coverage - Maximum 196 ft.² (14 ft. x 14 ft.) Spacing
- ◆ Designed For Area/Density Applications Of 0.25 GPM/ft.². High
- ◆ Hydraulic Calculations Based On Actual Spacing – Can Be Spaced At 15' x 9'7" (144 ft.² Max Per NFPA 13)
- ◆ Pendent Design Is Ideal For Retail Applications

TECHNICAL DATA

Approvals: UL & C-UL Listed

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

Minimum Pressure: 7 psi (0,5 bar)

Pipe Thread Connection: 3/4" NPT

Discharge Coefficient: $K = 16.8 \text{ GPM/psi}^{1/2}$
 $K = (241,9 \text{ LPM/bar}^{1/2})$

Temperature Ratings: 160°F (71°C) or 212°F (100°C)

Finish: Natural Brass, Chrome, or White



MODEL EC-25 25.2 K-FACTOR

UPRIGHT

Applications: Big Box Retail/Extra Hazard/High-Pile Storage

SIN TY9128

Tech Data Sheet TFP213

- ◆ Standard Response For Use In Obstructed Ceiling Conditions
- ◆ Control-Mode Extended Coverage For High Density Applications
- ◆ Applications Requiring An Area/Density Application Of Water
- ◆ 196 ft.²/Sprinkler Spacing (14 ft. X 14 ft. Spacing)
- ◆ Reduces Number Of Installed Sprinklers By Nearly Half
- ◆ Hydraulic Calculations Based On Actual Spacing (SxL Rule)

TECHNICAL DATA

Approvals: FM Approved, UL & C-UL Listed

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

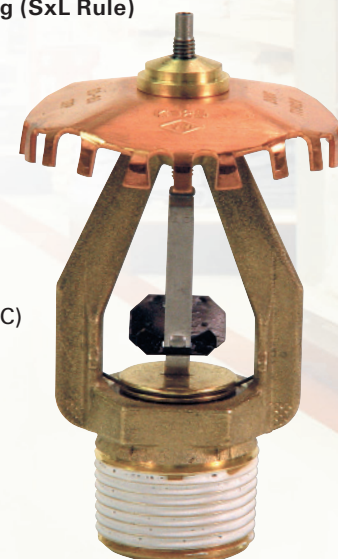
Minimum Pressure: 7 psi (0,5 bar)

Pipe Thread Connection: 1" NPT or ISO 7-R1

Discharge Coefficient: $K = 25.2 \text{ GPM/psi}^{1/2}$
 $K = (362,9 \text{ LPM/bar}^{1/2})$

Temperature Ratings: 165°F (74°C) or 214°F (101°C)

Finish: Natural Brass



ESFR SERIES

EARLY SUPPRESSION FAST RESPONSE SPRINKLERS

MODEL ESFR-25™ 25.2 K-FACTOR

PENDENT

SIN TY9226

Tech Data Sheet TFP312

Application: High-Pile Storage

- ◆ Designed For Use With Storage Heights Up To 40 ft. (12,2 m) And Maximum Ceiling Heights Of 45 ft. (13,7 m)
- ◆ Operates At A Lower-End Head Pressure Providing Hydraulic And Sprinkler Placement Options Not Available With Traditional ESFR Sprinklers
- ◆ Flexibility When Sizing The System Piping
- ◆ Reduces Or Eliminates The Need For A System Fire Pump

TECHNICAL DATA

Approvals: FM Approved, UL & C-UL Listed, VdS, LPCB & NYC Approved

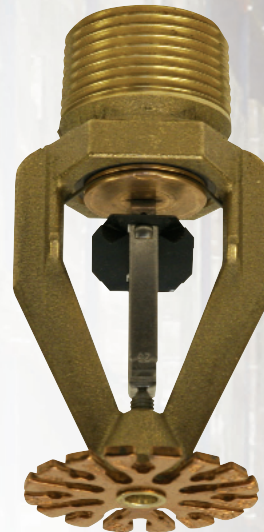
Maximum Working Pressure: 175 psi (12,1 bar)

Pipe Thread Connection: 1" NPT or ISO 7-R1

Discharge Coefficient: $K = 25.2 \text{ GPM}/\text{psi}^{1/2}$
 $K = (362,9 \text{ LPM}/\text{bar}^{1/2})$

Temperature Ratings: 165°F (74°C) or 214°F (101°C)

Finish: Natural Brass



MODEL ESFR-1 14.0 K-FACTOR

PENDENT

SIN TY6226

Tech Data Sheet TFP318

Application: High-Pile Storage

- ◆ Designed For Use With Storage Heights Up To 35 ft. (10,7 m) And Maximum Ceiling Heights Of 40 ft. (12,2 m)
- ◆ Protects Group A Plastics, Class I-IV Commodities, Some Rubber Tires, Roll Paper, Flammable Liquids And Aerosols In Some Storage Arrangements

TECHNICAL DATA

Approvals: FM Approved, UL & C-UL Listed, VdS, LPCB & NYC Approved

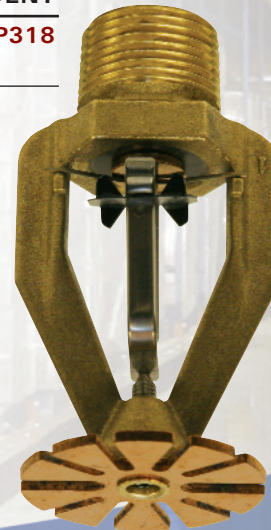
Maximum Working Pressure: 175 psi (12,1 bar)

Pipe Thread Connection: 3/4" NPT or ISO 7-R 3/4

Discharge Coefficient: $K = 14.0 \text{ GPM}/\text{psi}^{1/2}$
 $K = (201,6 \text{ LPM}/\text{bar}^{1/2})$

Temperature Ratings: 165°F (74°C) or 214°F (101°C)

Finish: Natural Brass



† Requires one level of in-rack sprinklers.

COMPARE ESFR PENDENT SPRINKLER PRESSURE FOR RACK STORAGE

Max. Ceiling Height ft. (m)	Max. Storage Height ft. (m)	ESFR-25 Min. Pressure psi (bar)	ESFR-17 Pendent Min. Pressure psi (bar)	ESFR-1 Min. Pressure psi (bar)
45 (13,7)	40 (12,2)	40 (2,8)	63 (4,3)†	90 (6,2)†
40 (12,2)	35 (10,7)	25 (1,7)	52 (3,6)	75 (5,2)
35 (10,7)	30 (9,1)	20 (1,4)	52 (3,6)	75 (5,2)
30 (9,1)	25 (7,6)	15 (1,0)	35 (2,4)	50 (3,4)

Always refer to the Technical Data Sheet for complete description of all Listing & Approval criteria, design parameters installation instructions, care and maintenance guidelines, and our limited warranty.

ELIMINATES THE NEED FOR IN-RACK SPRINKLERS

MODEL ESFR-17 16.8 K-FACTOR

PENDENT

SIN TY7226

Tech Data Sheet TFP315

Application: High-Pile Storage



- ◆ Designed To Protect Most Encapsulated Or Non-Encapsulated Common Materials Up To 35 ft. (10,7 m) And Maximum Ceiling Heights Of 40 ft. (12,2 m)
- ◆ Protects Cartoned Expanded Plastics Up To 25 ft. (7,6 m) With Ceiling Heights Up To 30 ft. (9,1 m)
- ◆ Provides Hydraulic And Sprinkler Placement Options That Are Not Available With The ESFR-1 Sprinkler
- ◆ Operates At A Lower-End Head Pressure Providing Flexibility When Sizing The System Piping And Reducing Or Eliminating The Need For A System Fire Pump

TECHNICAL DATA

Approvals: FM Approved, UL & C-UL Listed, VdS, LPCB & NYC Approved

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

Pipe Thread Connection: 3/4" NPT or ISO 7-R3/4

Discharge Coefficient: $K = 16.8 \text{ GPM}/\text{psi}^{1/2}$
 $K = (241,9 \text{ LPM}/\text{bar}^{1/2})$

Temperature Ratings: 165°F (74°C) or 214°F (101°C)

Finish: Natural Brass

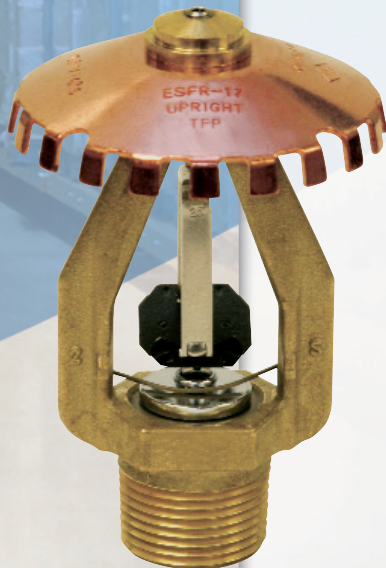
MODEL ESFR-17 16.8 K-FACTOR

UPRIGHT

SIN TY7126

Tech Data Sheet TFP316

Application: High-Pile Storage



- ◆ Designed To Protect Most Encapsulated Or Non-Encapsulated Common Materials Up To 30 ft. (9,1 m) And Maximum Ceiling Heights Of 35 ft. (10,7 m)
- ◆ Protects Carton Expanded Plastics Up To 25 ft. (7,6 m) With Ceiling Heights Up To 30 ft. (9,1 m)

TECHNICAL DATA

Approvals: FM Approved

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

Pipe Thread Connection: 3/4" NPT or ISO 7-R3/4

Discharge Coefficient: $K = 16.8 \text{ GPM}/\text{psi}^{1/2}$
 $K = (241,9 \text{ LPM}/\text{bar}^{1/2})$

Temperature Ratings: 165°F (74°C) or 214°F (101°C)

Finish: Natural Brass

ELO SERIES

EXTRA LARGE ORIFICE SPRINKLERS

Designed for high-density, high-piled storage applications with storage heights up to 20 ft. (6,1 m) and a maximum ceiling height of 27 ft. (8,2 m). Higher flow rate can be achieved at much lower pressure with the ELO Series Sprinklers.

MODEL ELO-231B 11.2 K-FACTOR PENDENT & UPRIGHT

SIN TY5151 Upright 3/4" NPT
SIN TY5251 Pendent 3/4" NPT
SIN TY5851 Upright 1/2" NPT

Tech Data Sheet TFP342

◆ Standard Response, Standard Coverage

◆ 5 mm Bulb

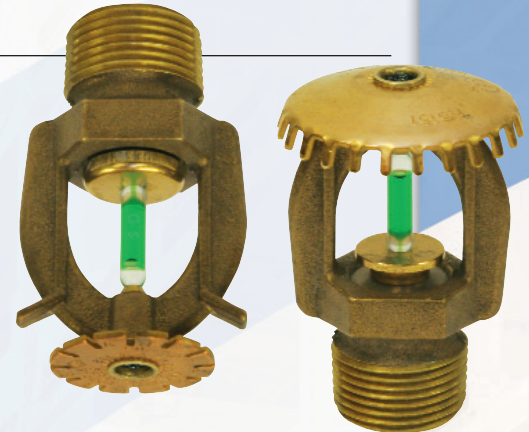
TECHNICAL DATA

Approvals: FM Approved, UL & C-UL Listed, NYC Approved

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

Discharge Coefficient: $K = 11.2 \text{ GPM}/\text{psi}^{1/2}$
 $K = (161,4 \text{ LPM}/\text{bar}^{1/2})$

Refer to TFP342 for temperature rating and sprinkler finishes for the ELO-231B.



MODEL ELO-231FRB 11.2 K-FACTOR PENDENT & UPRIGHT

SIN TY5131 Upright 3/4" NPT
SIN TY5211 Pendent 3/4" NPT

Tech Data Sheet TFP344

◆ Quick Response, Standard Coverage

◆ 3 mm Bulb

TECHNICAL DATA

Approvals: FM Approved, UL & C-UL Listed, NYC Approved

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

Discharge Coefficient: $K = 11.2 \text{ GPM}/\text{psi}^{1/2}$
 $K = (161,4 \text{ LPM}/\text{bar}^{1/2})$

Refer to TFP344 for temperature rating and sprinkler finishes for the ELO-231FRB.



MODEL ELO-231 11.2 K-FACTOR PENDENT & UPRIGHT

SIN TY5111 Upright 3/4" NPT
SIN TY5211 Pendent 3/4" NPT
SIN TY5811 Upright 1/2" NPT

Tech Data Sheet TFP340

◆ Standard Response, Standard Coverage

◆ Solder Type.

TECHNICAL DATA

Approvals: FM Approved, UL & C-UL Listed, NYC Approved

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

Discharge Coefficient: $K = 11.2 \text{ GPM}/\text{psi}^{1/2}$
 $K = (161,4 \text{ LPM}/\text{bar}^{1/2})$

Refer to TFP340 for temperature rating and sprinkler finishes for the ELO-231.



MODEL LD

LARGE DROP SPRINKLER

SPRINKLER GUARDS & GUARDS WITH SHIELDS

Tech Data Sheet TFP782

G2 SPRINKLER GUARD

- ◆ Helps Provide Protection For The Sprinklers From Accidental Abuse



WS-2 SPRINKLER SHIELD

- ◆ Designed To Shield Sprinklers From Water Spray From Higher Elevation Sprinklers



WSG-2 SPRINKLER GUARD & SHIELD

- ◆ Helps Provide Protection For The Sprinklers From Accidental Abuse
- ◆ Shields Upright Sprinklers From Water Spray From Higher Elevation Sprinklers



TECHNICAL DATA

Approvals: UL & C-UL Listed

Finish: Red Paint or Zinc Coated

Physical Characteristics:
Welded Assembly Fabrication
From Carbon Steel.

MODEL LD 11.2 K-FACTOR

UPRIGHT

SIN TY5153

Tech Data Sheet TFP335

Application: High-Pile Storage

- ◆ Standard Response
- ◆ 5 mm Bulb
- ◆ Specific Application Control Mode Sprinkler
- ◆ Designed For The Protection Of High-Piled Storage That Meets "Large Drop Sprinkler" Installation And Design Criteria
- ◆ Provides A Higher Level Of Protection Than Standard Spray Sprinklers
- ◆ Offers An Economical Alternative By Eliminating In-Rack Sprinklers

TECHNICAL DATA

Approvals: UL & C-UL Listed, NYC Approved

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

Pipe Thread Connection: 3/4" NPT or ISO 7-R1

Discharge Coefficient: $K = 11.2 \text{ GPM}/\text{psi}^{1/2}$
 $K = (161,3 \text{ LPM}/\text{bar}^{1/2})$

Temperature Ratings: 155°F (68°C)
200°F (93°C)

Finish: Natural Brass



TY SERIES

INTERMEDIATE LEVEL SPRINKLERS

For use in rack storage sprinkler systems where thermally sensitive elements must be shielded from the water spray of higher elevation sprinklers that could operate earlier during a fire. Also used in other applications such as beneath open-gridded catwalks.

MODEL TY-B 5.6 / 8.0 K-FACTOR

PENDENT & UPRIGHT

SIN TY3153 Upright 1/2" NPT
SIN TY3251 Pendent 1/2" NPT
SIN TY4153 Upright 3/4" NPT
SIN TY4251 Pendent 3/4" NPT

Tech Data Sheet TFP351

- ◆ Standard Response
- ◆ 5 mm Bulb

TECHNICAL DATA

Approvals: FM Approved, UL & C-UL Listed, NYC Approved

Maximum Working Pressure:

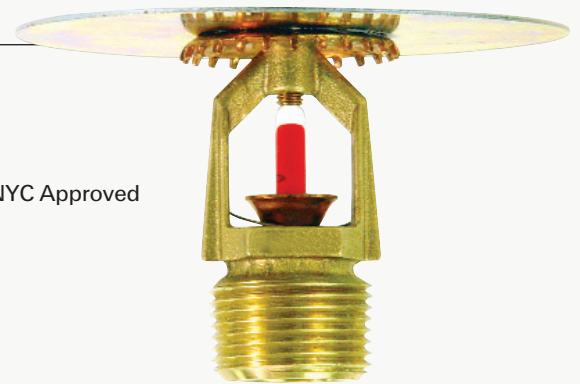
175 psi (12,1 bar)

Discharge Coefficient:

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

K = 8.0 GPM/psi^{1/2} (115,2 LPM/bar^{1/2})

Refer to TFP351 for temperature ratings and sprinkler finishes for the TY-B.



MODEL TY-FRB 5.6 / 8.0 K-FACTOR

PENDENT & UPRIGHT

SIN TY3133 Upright 1/2" NPT
SIN TY3231 Pendent 1/2" NPT
SIN TY4133 Upright 3/4" NPT
SIN TY4231 Pendent 3/4" NPT

Tech Data Sheet TFP356

- ◆ Quick Response
- ◆ 3 mm Bulb
- ◆ Corrosion Resistant Coating

TECHNICAL DATA

Approvals: FM Approved, UL & C-UL Listed, NYC Approved

Maximum Working Pressure:

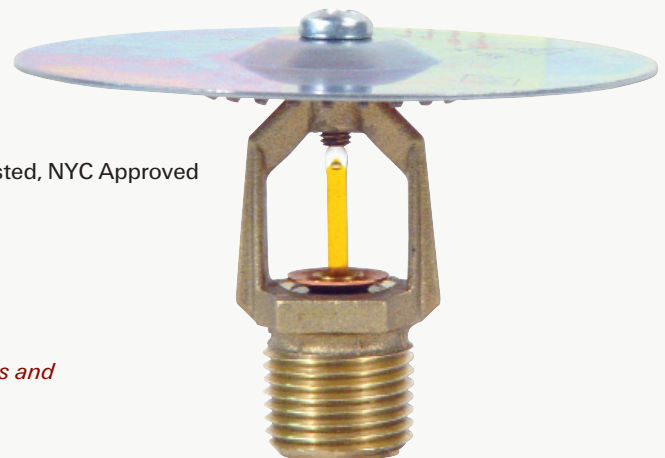
175 psi (12,1 bar)

Discharge Coefficient:

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

K = 8.0 GPM/psi^{1/2} (115,2 LPM/bar^{1/2})

Refer to TFP356 for temperature ratings and sprinkler finishes for the TY-FRB.



MODEL TY-L 5.6 / 8.0 K-FACTOR

PENDENT & UPRIGHT

SIN TY3113 Upright 1/2" NPT
SIN TY3211 Pendant 1/2" NPT
SIN TY4113 Upright 3/4" NPT
SIN TY4211 Pendant 3/4" NPT

Tech Data Sheet TFP350

- ◆ Standard Response
- ◆ Solder Type

TECHNICAL DATA

Approvals: FM Approved, UL & C-UL Listed

Maximum Working Pressure:

175 psi (12,1 bar)

Discharge Coefficient:

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

K = 8.0 GPM/psi^{1/2} (115,2 LPM/bar^{1/2})

Finish: Natural Brass

Refer to TFP350 for temperature ratings for the TY-L.



MODEL TY-FRL 5.6 / 8.0 K-FACTOR

PENDENT & UPRIGHT

SIN TY3123 Upright 1/2" NPT
SIN TY3221 Pendant 1/2" NPT
SIN TY4123 Upright 3/4" NPT
SIN TY4221 Pendant 3/4" NPT

Tech Data Sheet TFP355

- ◆ Quick Response
- ◆ Solder Type

TECHNICAL DATA

Approvals: FM Approved, UL & C-UL Listed,
NYC Approved

Maximum Working Pressure:

175 psi (12,1 bar)

Discharge Coefficient:

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

K = 8.0 GPM/psi^{1/2} (115,2 LPM/bar^{1/2})

Finish: Natural Brass, Chrome Plated

Refer to TFP355 for temperature ratings for the TY-FRL.

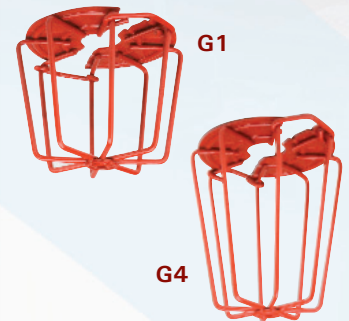


TY SERIES SPRINKLER GUARDS & GUARDS WITH SHIELDS

Tech Data Sheet TFP780

G1 & G4 SPRINKLER GUARD

- ◆ Helps Provide Protection For The Sprinklers From Accidental Abuse



G1/S1 & G4/S3 SPRINKLER GUARD & SHIELD

- ◆ Helps Provide Protection For The Sprinklers From Accidental Abuse
- ◆ Shields Upright Sprinklers From Water Spray From Higher Elevation Sprinklers



TECHNICAL DATA

Approvals: UL & C-UL Listed

Finish: Red Paint or Zinc Coated

Physical Characteristics:

Welded Assembly Fabrication
From Carbon Steel.

ULTRA K17

SPECIAL APPLICATION SPRINKLERS

MODEL ULTRA K17 16.8 K-FACTOR SPECIAL APPLICATION CONTROL-MODE UPRIGHT

Applications: High-Pile Storage

SIN TY7153

Tech Data Sheet TFP330

- ◆ Standard Response
- ◆ 5 mm Bulb
- ◆ Meets NFPA 13 Specific Application Control-Mode Requirement For High-Pile Storage
- ◆ Approved For Storage Heights Of 25 ft. (7,6 m) And Building Heights Up To 30 ft. (9,1 m)
- ◆ Full-Scale Fire Testing Has Shown That The Ultra K17 Can Control Fires With Commodities Up To Group A Plastics, And Eliminate The Need For In-Rack Sprinklers
- ◆ Reduces End Head Pressure Which Often Eliminates The Need For A Fire Pump

TECHNICAL DATA

Approvals: FM Approved, UL & C-UL Listed, NYC Approved

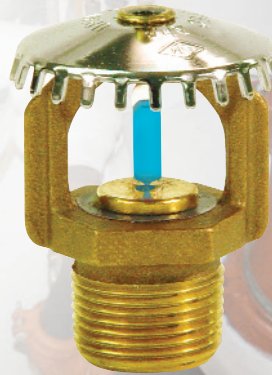
Maximum Working Pressure: 175 psi (12,1 bar)

Pipe Thread Connection: 3/4" NPT or ISO 7-R3/4

Discharge Coefficient: $K = 16.8 \text{ GPM/psi}^{1/2}$
 $K = (241,9 \text{ LPM/bar}^{1/2})$

Temperature Ratings: 155°F (68°C)
 200°F (93°C)

Finish: Natural Brass



K17 SERIES

MODEL K17-231 11.2 K-FACTOR

Application: High-Pile Storage

SIN TY7151 Upright
 SIN TY7251 Pendant

PENDENT & UPRIGHT

Tech Data Sheet TFP335

- ◆ Standard Response
- ◆ 5 mm bulb
- ◆ Very Large Orifice Sprinkler For Use In High Challenge Storage Occupancies
- ◆ Meets The NFPA Requirements For Ordinary And Extra Hazard Occupancies.
- ◆ Low-Pressure Requirement Can Save Cost By Reducing Branchline Size, Taking Advantage Of Maximized Spacing, And Upgrading Existing Densities

TECHNICAL DATA

Approvals: FM Approved, UL & C-UL Listed, NYC Approved

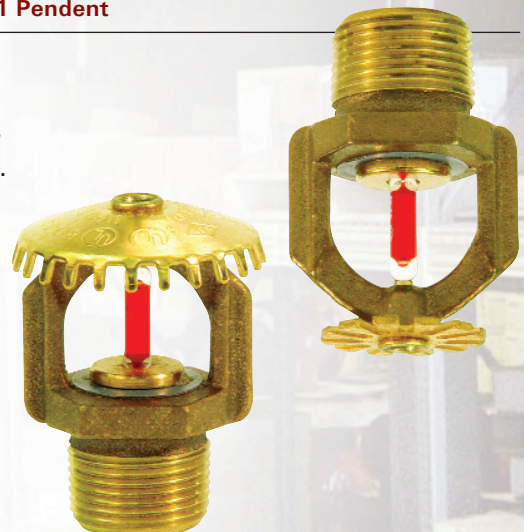
Maximum Working Pressure: 175 psi (12,1 bar)

Pipe Thread Connection: 3/4" NPT or ISO 7-R3/4

Discharge Coefficient: $K = 16.8 \text{ GPM/psi}^{1/2}$
 $K = (241,9 \text{ LPM/bar}^{1/2})$

Finish: Natural Brass

Refer to TFP335 for temperature rating for the Model K17-231.



STORAGE SPRINKLER SPECIFICATIONS

Storage Sprinklers Listed Have A Maximum Pressure Of 175 psi & Maximum Spacing Per NFPA.

Refer to the Technical Data Sheet for specific information. All versions of a sprinkler may not be listed or approved.

Model	SIN	Sprinkler Style	Thread Size	Element	K-factor Discharge	Response	Finish	Temperature Rating	Listings & Approvals	Technical Data Sheet
EC-SERIES										
EC-17	TY7228	Pendent	3/4"	Solder	16.8 GPM/psi ^{1/2}	SR	B, C, W	160°F, 212°F	UL, C-UL	TFP215
EC-25	TY9128	Upright	1"	Solder	25.2 GPM/psi ^{1/2}	SR	B	165°F, 214°F	FM, UL, C-UL	TFP213
ESFR-SERIES										
ESFR-25	TY9226	Pendent	1"	Solder	25.2 GPM/psi ^{1/2}	FR	B	165°F, 214°F	UL, C-UL, FM, VdS, LPCB, NYC	TFP312
ESFR-1	TY6226	Upright	3/4"	Solder	14.0 GPM/psi ^{1/2}	FR	B	165°F, 214°F	UL, C-UL, FM, VdS, LPCB, NYC	TFP318
ESFR-17	TY7226	Pendent	3/4"	Solder	16.8 GPM/psi ^{1/2}	FR	B	165°F, 214°F	UL, C-UL, FM, VdS, LPCB, NYC	TFP315
ESFR-17	TY7126	Upright	3/4"	Solder	16.8 GPM/psi ^{1/2}	FR	B	165°F, 214°F	FM	TFP316
K17 SERIES										
Ultra K17	TY7153	Upright	3/4"	5 mm Bulb	16.8 GPM/psi ^{1/2}	SR	B	155°F, 200°F	UL, C-UL, FM, NYC	TFP330
K17-231	TY7151	Upright	3/4"	5 mm Bulb	16.8 GPM/psi ^{1/2}	SR	B	155°F, 200°F, 286°F	UL, C-UL, FM, NYC	TFP332
K17-231	TY7251	Pendent	3/4"	5 mm Bulb	16.8 GPM/psi ^{1/2}	SR	B	155°F, 200°F, 286°F	UL, C-UL, FM, NYC	TFP332
LD LARGE DROP										
LD	TY5153	Upright	3/4"	5 mm Bulb	11.2 GPM/psi ^{1/2}	SR	B	155°F, 200°F, 286°F	UL, C-UL, NYC	TFP335
ELO-SERIES										
ELO-231	TY5811	Upright*	1/2"	Solder	11.2 GPM/psi ^{1/2}	SR	B, C, L, W, WOL	165°F, 212°F, 286°F	UL, C-UL, FM, NYC	TFP340
ELO-231	TY5111	Upright*	3/4"	Solder	11.2 GPM/psi ^{1/2}	SR	B, C, L, W, WOL	165°F, 212°F, 286°F	UL, C-UL, FM, NYC	TFP340
ELO-231	TY5211	Pendent*	3/4"	Solder	11.2 GPM/psi ^{1/2}	SR	B, C, L, W, WOL	165°F, 212°F, 286°F	UL, C-UL, FM, NYC	TFP340
ELO-231B	TY5851	Upright*	1/2"	5 mm Bulb	11.2 GPM/psi ^{1/2}	SR	B, C, L, W, WOL	155°F, 200°F, 286°F	UL, C-UL, FM, NYC	TFP342
ELO-231B	TY5151	Upright*	3/4"	5 mm Bulb	11.2 GPM/psi ^{1/2}	SR	B, C, L, W, WOL	155°F, 200°F, 286°F	UL, C-UL, FM, NYC	TFP342
ELO-231B	TY5251	Pendent*	3/4"	5 mm Bulb	11.2 GPM/psi ^{1/2}	SR	B, C, L, W, WOL	155°F, 200°F, 286°F	UL, C-UL, FM, NYC	TFP342
ELO-231FRB	TY5131	Upright*	3/4"	3 mm Bulb	11.2 GPM/psi ^{1/2}	QR	B, C	155°F, 200°F, 286°F	UL, C-UL, FM, NYC	TFP344
ELO-231FRB	TY5231	Pendent*	3/4"	3 mm Bulb	11.2 GPM/psi ^{1/2}	QR	B, C	155°F, 200°F, 286°F	UL, C-UL, FM, NYC	TFP344
TY-SERIES										
TY-B	TY3153	(1) Upright	1/2"	5 mm Bulb	5.6 GPM/psi ^{1/2}	SR	B, C, L, W, WOL	135°F, 155°F, 175°F, 200°F, 286°F, 360°F	UL, C-UL, FM, NYC	TFP351
TY-B	TY3251	(1) Pendent	1/2"	5 mm Bulb	5.6 GPM/psi ^{1/2}	SR	B, C, L, W, WOL	135°F, 155°F, 175°F, 200°F, 286°F, 360°F	UL, C-UL, FM, NYC	TFP351
TY-B	TY4153	(1) Upright	3/4"	5 mm Bulb	8.0 GPM/psi ^{1/2}	SR	B, C, L, W, WOL	135°F, 155°F, 175°F, 200°F, 286°F, 360°F	UL, C-UL, FM, NYC	TFP351
TY-B	TY4251	(1) Pendent	3/4"	5 mm Bulb	8.0 GPM/psi ^{1/2}	SR	B, C, L, W, WOL	135°F, 155°F, 175°F, 200°F, 286°F, 360°F	UL, C-UL, FM, NYC	TFP351
TY-FRB	TY3133	(1) Upright	1/2"	3 mm Bulb	5.6 GPM/psi ^{1/2}	QR	B, C, L	135°F, 155°F, 175°F, 200°F, 286°F	UL, C-UL, FM, NYC	TFP356
TY-FRB	TY3231	(1) Pendent	1/2"	3 mm Bulb	5.6 GPM/psi ^{1/2}	QR	B, C, L	135°F, 155°F, 175°F, 200°F, 286°F	UL, C-UL, FM, NYC	TFP356
TY-FRB	TY4133	(1) Upright	3/4"	3 mm Bulb	8.0 GPM/psi ^{1/2}	QR	B, C, L	135°F, 155°F, 175°F, 200°F, 286°F	UL, C-UL, FM, NYC	TFP356
TY-FRB	TY4231	(1) Pendent	3/4"	3 mm Bulb	8.0 GPM/psi ^{1/2}	QR	B, C, L	135°F, 155°F, 175°F, 200°F, 286°F	UL, C-UL, FM, NYC	TFP356
TY-L	TY3113	(1) Upright	1/2"	Solder	5.6 GPM/psi ^{1/2}	SR	B	165°F, 212°F, 280°F	UL, C-UL, FM	TFP350
TY-L	TY3211	(1) Pendent	1/2"	Solder	5.6 GPM/psi ^{1/2}	SR	B	165°F, 212°F, 280°F	UL, C-UL, FM	TFP350
TY-L	TY4113	(1) Upright	3/4"	Solder	8.0 GPM/psi ^{1/2}	SR	B	165°F, 212°F, 280°F	UL, C-UL, FM	TFP350
TY-L	TY4211	(1) Pendent	3/4"	Solder	8.0 GPM/psi ^{1/2}	SR	B	165°F, 212°F, 280°F	UL, C-UL, FM	TFP350
TY-FRL	TY3123	(1) Upright	1/2"	Solder	5.6 GPM/psi ^{1/2}	QR	B, C	165°F	UL, C-UL, FM, NYC	TFP355
TY-FRL	TY3221	(1) Pendent	1/2"	Solder	5.6 GPM/psi ^{1/2}	QR	B, C	165°F	UL, C-UL, FM, NYC	TFP355
TY-FRL	TY4123	(1) Upright	3/4"	Solder	8.0 GPM/psi ^{1/2}	QR	B, C	165°F	UL, C-UL, FM, NYC	TFP355
TY-FRL	TY4221	(1) Pendent	3/4"	Solder	8.0 GPM/psi ^{1/2}	QR	B, C	165°F	UL, C-UL, FM, NYC	TFP355

Sprinkler Finish Legend: B = Brass; BB = Bright Brass; C = Chrome; L = Lead Coating; P = Polyester Coating (White is standard); Wh = White; W = Wax Coating (for 135° to 212°); WOL = Wax Coating over Lead (135° to 212°)

Hazard Legend: LH = Light Hazard; OH = Ordinary Hazard; All = Any Hazard

Response Legend: SR = Standard Response; QR = Quick Response; FR = Fast Response

(1) Intermediate Level with Shield

* Separately ordered Shields/Guards.

WORLD HEADQUARTERS

Tyco Fire & Building Products

451 N. Cannon Avenue
Lansdale, PA 19446 USA
Phone: 215-362-0700
Toll-free: 800-523-6512
Fax: 215-362-5385

Technical Services

Toll-free: 800-381-9312
Fax: 800-791-5500

REGIONAL HEADQUARTERS

Tyco Fire & Building Products

Europe & Middle East

Kopersteden 1
P.O. Box 198
7500 AD Enschede
The Netherlands
Phone: 31-53-428-4444
Fax: 31-53-428-3377

Asia & Australia

No.45 Tuas Avenue 9
Singapore 639189
Phone: 65- 6743-3212
Fax: 65-6743-9181

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