FIRE PROTECTION PRODUCTS

tyco

Fire & Building Products

Tyco Fire & Building Products is a leading manufacturer and distributor of water-based fire suppression systems and components, offering one of the broadest lines of fire protection system equipment worldwide.

Continually expanding its capabilities through aggressive research and product development, it provides its customers effective fire protection and construction solutions for residential, commercial, industrial, and institutional buildings. Tyco Fire & Building Products serves a diverse group of specifiers, including architects, engineers, contractors, and associated industries with a nationwide network of distribution and manufacturing facilities. The introduction of new innovative products, technologies and product application extensions have positioned the company well for continued growth.

Tyco Fire & Building Products is available worldwide under the leading brand names: CENTRAL*, GEM*, STAR*, CENTRAL* Grooved Products and BLAZEMASTER**.

Tyco Fire & Building Products also offers the industry's most complete fire protection software package through its SprinkCAD* programs.

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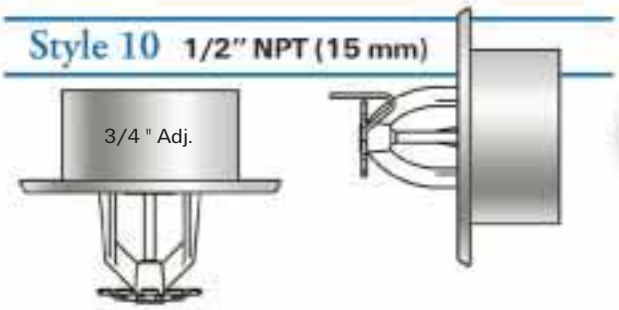
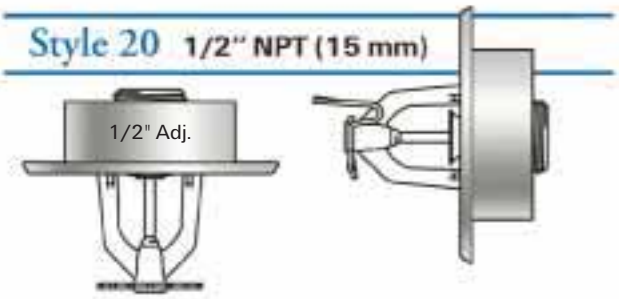
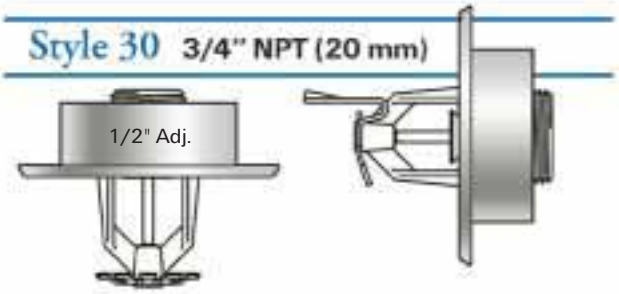
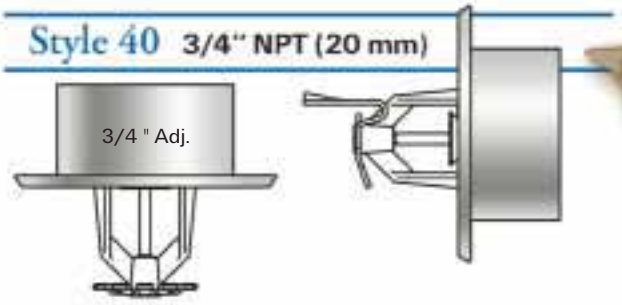
Escutcheon Style Reference Guide

Escutcheons in this catalog are referenced by a style number and are available in brass, chrome or white finish. Below is a visual key to distinguish individual escutcheon styles.









All metric measurements throughout this catalog are based on U.S. standard-to-metric conversions. Metric specifications may vary from country to country.

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Fire & Building Products

Breadth of Line

Tyco Fire & Building Products (TFBP) offers more than 250 fire protection products and over 1,200 items used in the fabrication of fire protection systems, including sprinklers, nozzles, valves, devices, CPVC, pipe fittings and hangers, and sprinkler system accessories.

Research and Development

TFBP is backed by the largest research, design, and development group and facilities in the industry. Our experienced staff of engineers is continually working to develop new types of sprinklers and valves, as well as special hazard fire protection devices to fill present and future market needs.

Listings & Approvals

Products offered by TFBP are listed and approved by various fire protection product approval laboratories and organizations. General listing and approval information for the following organizations is provided for each product in the specification charts. Refer to the application Technical Data Sheets for specific listing and approval information.

Underwriters Laboratories Inc.

Underwriters Laboratories Inc. for use in Canada

Underwriters Laboratories Inc. of Canada

Scientific Services Laboratory

Verband der Schadenversicherer

Factory Mutual Research Corporation

Loss Prevention Council

Customer Service

TFBP distributes its manufactured products through TFBP locations or independent distributors that are strategically located to provide our customers with the quickest delivery possible of their complete order.

Standard Spray Sprinklers

are comprised of two types of sprinklers: standard and quick response sprinklers. Together they offer a wide range of sprinklers from which to choose when designing a standard coverage fire sprinkler system.

Standard Response Sprinklers are intended for use in fire sprinkler systems designed in accordance with the standard installation rules recognized by the applicable Listing or Approval agency. There are two types of standard response sprinklers – bulb type and solder type.

Series TY-B bulb type sprinklers are available in a variety of attractive finishes that blend well with their surroundings. When in service, a small bubble in the fluid contained in the bulb compensates for normal temperature changes. When heated, the fluid in the bulb expands and shatters the bulb allowing water to be discharged.

Series TY-L solder type sprinklers employ a link whose two sections are joined by solder with a predetermined temperature rating. Heat absorbed by the link is conducted directly to the soldered joint. When the solder melts, the link springs apart, releasing water that strikes the sprinkler deflector.

Quick Response Sprinklers are designed with a 3mm bulb or small nickel link to react more quickly at the specified temperature. They are available in pendent, upright, recessed, concealed, vertical sidewall, and horizontal sidewall styles.

The narrow profile bulbs and attractive finishes of the Series TY-FRB provide specifiers with a wide variety of sprinklers for use in quick response applications. The versatile Quick Response TY-FRL Series provides the specifier with a solder type sprinkler for most commercial and industrial applications.

Applications

- Office Buildings
- Banks
- Factories
- Libraries
- Theaters
- Warehouses
- Light & Ordinary Hazard Occupancies

TY-L

Upright, Pendent & Recessed Pendent

- Standard response
- All hazards
- Solder type
- Discharges a hemispherical water spray pattern in the area under the sprinkler

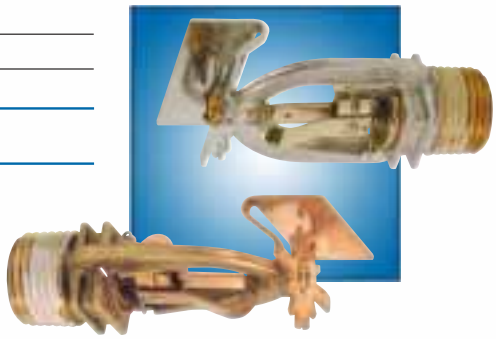
K Factor	K=5.6 (80,6) · K=8.0 (115,2)
Thread Size	1/2" (15 mm) · 3/4" (20 mm)
Escutcheon	Style 20 · Style 30
Finish	Brass, Chrome
Tech Data	**TFP110**

TY-L

Horizontal Sidewall

- Standard response
- Light hazard
- Solder type
- Suited for hotels, nursing homes and hospitals
- Design allows piping to be confined to corridors, closets or service areas

K Factor	K=5.6 (80,6)
Thread Size	1/2" (15 mm)
Finish	Brass, Chrome
Tech Data	**TFP120**

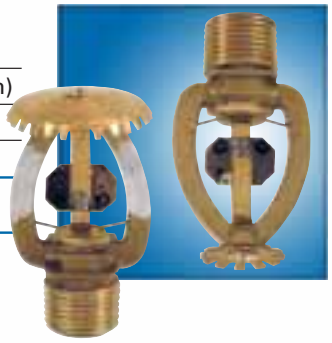


TY-FRL

Upright, Pendent & Recessed Pendent

- Quick response
- Light hazard/ordinary hazard *light hazard K=2.8 (40,3)*
- Solder type
- Typically used in hotels, motels, office buildings and other commercial and industrial applications

K Factor	K=2.8 (40,3) · K=5.6 (80,6) K=8.0 (115,2)
Thread Size	1/2" (15 mm) · 3/4" (20 mm)
Escutcheon	Style 20
Finish	Brass, Chrome
Tech Data	**TFP130**



TY-FRL

Horizontal Sidewal

- Quick response
- Solder type
- Light hazard/ordinary hazard
- Designed for compact installation along a wall or on the side of a beam just beneath a smooth ceiling
- Generally used in lieu of pendent or upright sprinklers because of aesthetics, building construction or economic considerations

K Factor	K=5.6 (80,6)
Thread Size	1/2" (15 mm)
Finish	Brass, Chrome
Tech Data	**TFP140**

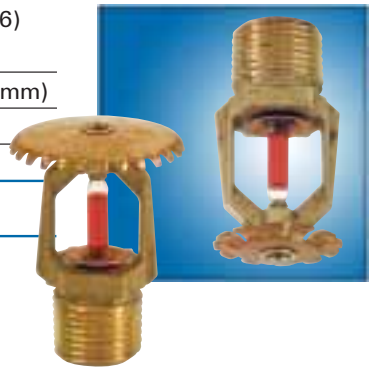
SPRINKLERS

TY-B

Upright, Pendent & Recessed Pendent

- Standard response
- All hazard
  light hazard K=2.8 (40,3)
- 5 mm bulb
- Discharges a hemispherical water spray pattern in the area under the sprinkler
- Small frame, narrow profile bulb

K Factor	K=2.8 (40,3) · K=5.6 (80,6) K=8.0 (115,2)
Thread Size	1/2" (15 mm) · 3/4" (20 mm)
Escutcheon	Style 10 · Style 40
Finish	Brass, Chrome, White
Tech Data	**TFP151**

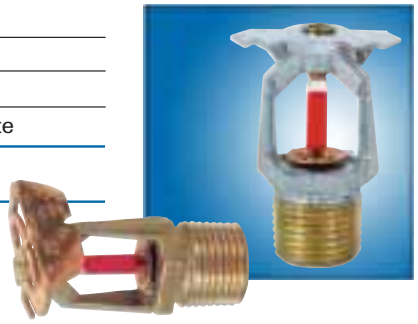


TY-B

Horizontal, Recessed Horizontal & Vertical Sidewall

- Standard response
- Light hazard/ordinary hazard
- 5 mm bulb
- Small frame
- Unique deflector design of the horizontal sidewall sprinkler results in smaller profile
- Designed for installation along a wall or on the side of a beam just beneath a smooth ceiling
- Water discharge is directed primarily outward and downward in a quarter spherical pattern
- Special deflector on the vertical sidewall sprinkler allows it to be installed in either a pendent or upright position
- Sidewall sprinklers are often used in lieu of standard pendent or upright sprinklers due to building construction, economic considerations, or aesthetics

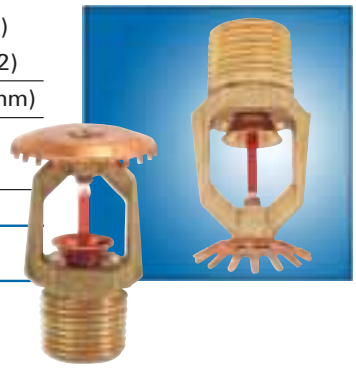
K Factor	K=5.6 (80,6)
Thread Size	1/2" (15 mm)
Escutcheon	Style 10
Finish	Brass, Chrome, White
Tech Data	**TFP161**



TY-FRB — Upright, Pendent & Recessed Pendent

- Quick response
- Light hazard/ordinary hazard *light hazard K=2.8 (40,3)*
- 3 mm bulb
- Hemispherical water spray pattern in the area under the sprinkler
- Small frame and narrow profile bulb enhance appearance

K Factor	K=2.8 (40,3) · K=4.2 (60,5) K=5.6(80,6) · K=8.0 (115,2)
Thread Size	1/2" (15 mm) · 3/4" (20 mm)
Escutcheon	Style 10 · Style 20 Style 30 · Style 40
Finish	Brass, Chrome, White
Tech Data	**TFP171**



TY-FRB — Horizontal, Recessed Horizontal Sidewall & Vertical Sidewall

- Quick response
- Light hazard/ordinary hazard
- 3 mm bulb
- Designed for use in applications where aesthetics must be considered or where building construction makes the installation of standard pendent or upright sprinklers impractical
- Vertical sidewall sprinkler can be installed in either the pendent or upright position along a wall or the side of a beam and just below a smooth ceiling

K Factor	K=5.6 (80,6)
Thread Size	1/2" (15 mm)
Escutcheon	Style 10 · Style 20
Finish	Brass, Chrome, White
Tech Data	**TFP176**

RFII *"Royal Flush II"* — Concealed Pendent

- Standard response/quick response
- Light hazard/ordinary hazard
- 5 mm bulb *(standard)*
  3 mm bulb *(quick)*
- Concealed in an enclosed escutcheon plate with flat cover for use in those applications where aesthetics is a primary consideration
- Separable, two-piece design of the mounting cup and cover plate allows installation of the sprinklers and pressure testing of the fire protection system prior to installation of a suspended ceiling or application of the finish coating to a fixed ceiling
- Internally threaded closure with 1/2" (12,7 mm) of adjustment
- Available with optional dust and air seal

K Factor	K=5.6 (80,6)
Thread Size	1/2" (15 mm)
Finish	Cover Plate: Chrome Plated, Brass Plated, or White Painted. (Custom paint matches & colors available on request.)
Tech Data	**TFP181**

SPRINKLERS

Extended Coverage Sprinklers

are intended for the protection of areas larger than those specified in standard installation rules and for specific light, ordinary, or extra hazard occupancies, where needed. Extended coverage sprinklers are available in both standard response (EC) and quick response (QR-EC). They are available in upright, pendent, horizontal sidewall and recessed horizontal sidewall. These sprinklers are typically used in hotels, restaurants, office buildings, warehouses, and other areas where it is desirable to reduce the overall number of required sprinklers.

Applications
- Office Buildings
- Hotels
- Hospitals
- High-Piled Storage
- 'Big Box' Retailing

Always refer to the Technical Data Sh[illegible] for complete design [illegible] and Approval criteria, design parameters, installation instructions, care and maintenance guidelines, and our limited warranty.

EC-25

Upright

- Standard response
- All hazard
- Solder type
- Extended coverage area/density
- Deflector design expands maximum coverage area to 14' x 14' (4,3 m x 4,3 m)
- For use in high density applications such as "big box" retailing, extra hazard, and high-piled storage occupancies
- Minimum operating pressure of 7 psi (0,48 bar)

K Factor	K=25.2 (362,9)
Thread Size	1" (30 mm)
Finish	Brass
Tech Data	**TFP213**

EC-11 & EC-14

Upright, Pendent, & Recessed Pendent

- Standard response/Quick response
- Light hazard/Ordinary hazard
- 3 mm bulb
- Nominal K=11.2 designed for coverage applications of 14' x 14' (4,3 m x 4,3 m) up to 20' x 20' (6,1 m x 6,1 m)
- Nominal K=14.0 designed for coverage applications of 16' x 16' (4,9 m x 4,9 m) up to 20' x 20' (6,1 m x 6,1 m)
- Low profile glass bulb spray sprinklers

K Factor	K=11.2 (161,3) · K=14.0 (201,6)
Thread Size	3/4" (20 mm)
Escutcheon	Style 30 · Style 40
Finish	Brass, Chrome, White
Tech Data	**TFP220**

TY-FRB

Horizontal & Recessed Horizontal Sidewall

- Standard response/Quick response
- Light hazard
- 3 mm bulb
- Two-piece escutcheon converts sidewall sprinklers into low profile sprinkler assemblies with coverage areas up to 16' x 22' (4,9 m x 6,7 m) for K=5.6 and 16' x 24' (4,9 m x 7,3 m) for K=8.0
- Provides 3/4" (19,1 mm) of horizontal adjustment from the flush sidewall position

K Factor	K=5.6 (80,6) · K=8.0 (115,2)
Thread Size	1/2" (15 mm) · 3/4" (20 mm)
Escutcheon	Style 10 · Style 20 Style 30 · Style 40
Finish	Brass, Chrome, White
Tech Data	**TFP296**

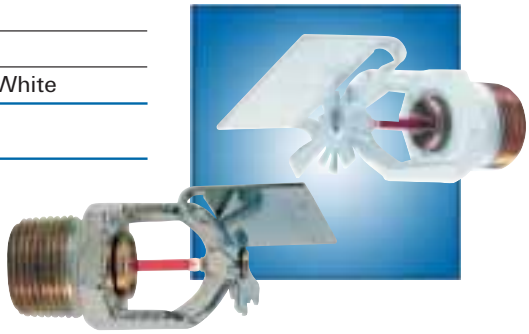
SPRINKLERS

SW-20/SW-24

Horizontal Sidewall

- Standard response
- Ordinary hazard
- 3 mm bulb
- Utilizes an extra large orifice that allows low water pressure requirements, while providing the flow required for extended coverage
- SW-20 Listed to a 16'-0" (4,9 m) wide and a 20'-0" (6,1 m) throw maximum coverage area
- SW-24 Listed to a 16'-0" (4,9 m) wide and a 24'-0" (7,3 m) throw maximum coverage area

K Factor	K=11.2 (161,3)
Thread Size	3/4" (20 mm)
Finish	Brass, Chrome, White
Tech Data	**TFP230**



ELOC

Concealed Pendent

- Standard response/quick response
- Light hazard
- Covers 400 sq. ft. (37,2 m^2) using less pressure than a standard 1/2" (12,7 mm) sprinkler at 225 sq. ft. (20,3 mm)
- Available with optional dust and air seal

K Factor	K=11.2 (161,3)
Thread Size	3/4" (20 mm)
Finish	Brass, Chrome, Brushed Chrome, White, Bright White, Custom
Tech Data	**TFP250**

RFII

Concealed Pendent

- Quick response
- Light hazard
- 3 mm bulb
- Maximum 18' x 18' (5,5 m x 5,5 m) QR Listing
- Concealed in an enclosed escutcheon plate with flat cover for use in those applications where aesthetics is a primary consideration
- Separable, two-piece design of the mounting cup and cover allows installation of the sprinklers and pressure testing of the fire protection system prior to installation of a suspended ceiling or application of the finish coating to a fixed ceiling
- Internally threaded closure with 1/2" (12,7 mm) of adjustment

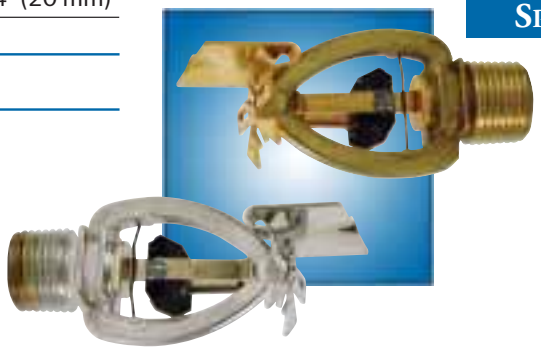
K Factor	K=5.6 (80,6)
Thread Size	1/2" (15 mm)
Finish	Cover Plate: Chrome Plated, Brass Plated, or White Painted. (Custom paint matches & colors available on request.)
Tech Data	**TFP260**

TY-FRL

Horizontal Sidewall

- Standard response/quick response
- Light hazard
- Solder type
- K=5.6 for QR-EC coverage areas up to 16' x 20' (4,9 m x 6,1 m) and 18' x 16' (5,5 m x 4,9 m)
- K=8.0 for EC and QR-EC coverage areas up to 16' x 24' (4,9 m x 7,3 m)
- QR-EC coverage areas up to 20' x 16' (6,1 m x 4,9 m)

K Factor	K=5.6 (80,6) · K=8.0 (115,2)
Thread Size	1/2" (15 mm) · 3/4" (20 mm)
Finish	Brass, Chrome
Tech Data	**TFP280**



CHEC

Concealed Horizontal Extended Coverage Sidewall

- Quick response
- Light hazard
- 3 mm bulb
- Attractive concealed contour
- Coverage up to 16' x 22' (4,9 m x 6,7 m)
- Lowest flows & pressures allowed by NFPA 13
- 1/2" adjustment

K Factor	K=8.0 (115,2)
Thread Size	3/4" (20 mm)
Finish	Bright White, Chrome Plated
Tech Data	**TFP265**

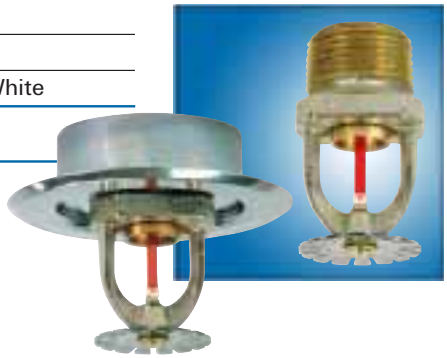
- Push on / thread off option
- 12" maximum deflector distance from ceiling
- No *"Slots"* in cover plate

BV-20 QR *(EC-8)*

Pendent & Recessed Pendent

- Quick response
- Light hazard
- 3 mm bulb
- Covers areas as large as 20' x 20' (6,1 m x 6,1 m)

K Factor	K=8.0 (115,2)
Thread Size	3/4" (20 mm)
Finish	Brass, Chrome, White
Tech Data	**2-10.0**



BV-EC QR *(EC-5)*

Pendent , Recessed Pendent, Horizontal Sidewall

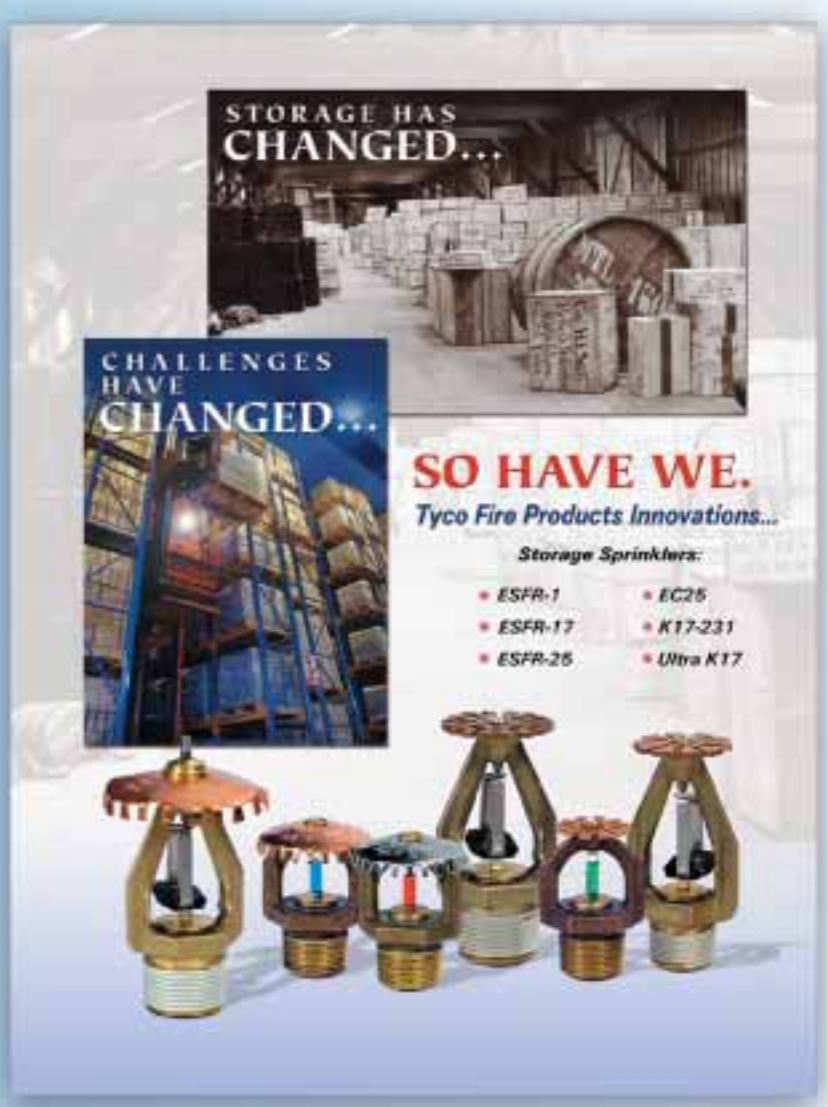
- Quick response
- Light hazard
- 3 mm bulb
- Pendent coverage up to 20' x 20' (6,1 m x 6,1 m)
- HSW coverage up to 16' x 24' (4,9 m x 7,3 m)

K Factor	K=5.6 (80.6)
Thread Size	1/2" (15 mm)
Finish	Brass, Chrome, White
Tech Data	**2-11.0**

SPRINKLERS

Storage Sprinklers are intended for use in specific applications, including the protection of high-piled and rack storage of a variety of finished goods. These sprinklers can provide more water at lower pressures or more water over a greater area of coverage. In many instances, use of the storage sprinklers can eliminate the need for additional in-rack sprinklers.

Intermediate level (in-rack) sprinklers are designed for use in rack storage sprinkler systems, where their thermally sensitive elements must be shielded from the water spray of higher elevation sprinklers that could operate during a fire. Intermediate Level Sprinklers are also used in applications such as beneath open gridded catwalks. These sprinklers are intended for use in fire sprinkler systems designed in accordance with the standard installation rules recognized by the applicable Listing or Approval agency (e.g., FM approval and UL Listing is based on NFPA requirements).



Applications

- High-Piled Storage
- In-Rack Storage
- Warehouse
- High Challenge Occupancies

ESFR-25™

Pendent

- Fast response, early suppression
- Solder type
- Designed for use in the protection of high-piled storage
- Eliminates many of the requirements for in-rack sprinklers
- Materials may be stored up to 40' (12,2 m) high, in buildings up to 45' (13,7 m)
- Direct attack on burning fuel by improved heavy sprinkler discharge
- Patented frame design substantially reduces the frame shadow effects that often produce non-uniformity in spray pattern
- Novel orifice seal and unique fast response link design are the very latest in sprinkler technology

K Factor	K=25.2 (362,9)
Thread Size	1" (30 mm)
Finish	Brass
Tech Data	**TFP312**

ESFR-17

Upright

- Fast response, early suppression
- Solder type
- Primarily designed for use in ceiling only sprinkler systems
- Use of this sprinkler is especially advantageous as a means of eliminating the use of in-rack sprinklers when protecting high piled storage
- Unique, upright design and large K Factor overcome many pendent obstruction problems

K Factor	K=16.8 (241,9)
Thread Size	3/4" (20 mm)
Finish	Brass
Tech Data	**TFP316**

SPRINKLERS

ESFR-17

Pendent

- Fast response, early suppression
- Solder type
- Primarily designed for use in ceiling only sprinkler systems
- Use of this sprinkler is especially advantageous as a means of eliminating the use of in-rack sprinklers when protecting high piled storage
- Operates at lower pressure than ESFR-1

K Factor	K=16.8 (241,9)
Thread Size	3/4" (20 mm)
Finish	Brass
Tech Data	**TFP315**

ESFR-1

Pendent

- Fast response, early suppression
- Solder type
- Designed for use in the protection of high-piled storage
- Eliminates many of the requirements for in-rack sprinklers
- Direct attack on burning fuel by improved heavy sprinkler discharge
- Patented frame design substantially reduces the frame shadow effects that often produce non-uniformity in spray pattern
- Novel orifice seal and unique fast response link design are the very latest in sprinkler technology

K Factor	K=14.0 (201,6)
Thread Size	3/4" (20 mm)
Finish	Brass
Tech Data	**TFP318**

Ultra K17

Upright, Specific Application

- Standard response
- 5 mm bulb
- Control mode sprinkler
- 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
- Reduced end head pressures often eliminate the need for a fire pump
- Approved for storage heights of 25' (7,6 m) and building heights to 30' (9,1 m)

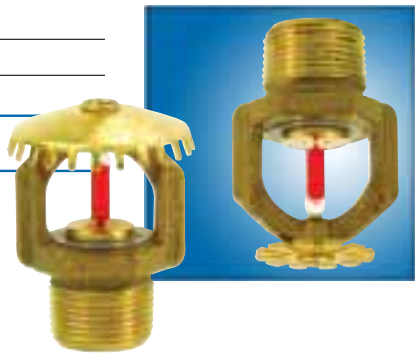
K Factor	K=16.8 (241,9)
Thread Size	3/4" (20 mm)
Finish	Brass
Tech Data	**TFP330**

K17-231

Pendent & Upright

- Standard response
- 5 mm bulb
- Very large orifice sprinkler for use in high challenge storage occupancies
- Low-pressure requirement can save cost by reducing branchline size, taking advantage of maximized spacing, and upgrading existing densities
- Can operate at pressures as low as 7 psi (0,48 bar)

K Factor	K=16.8 (241,9)
Thread Size	3/4" (20 mm)
Finish	Brass
Tech Data	**TFP332**



ELO-231

Pendent & Upright

- Standard response
- Solder type
- Extra large orifice sprinklers proven for storage occupancies through full-scale fire testing
- Designed to control high challenge fires with relatively low required pressures

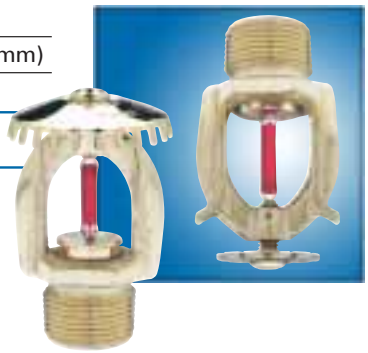
K Factor	K=11.2 (161,3)
Thread Size	1/2" (15 mm) · 3/4" (20 mm)
Finish	Brass, Chrome
Tech Data	**TFP340**

ELO-231B

Pendent & Upright

- Standard response
- 5 mm bulb
- Extra large orifice sprinklers proven for storage occupancies through full-scale fire testing
- Designed to control high challenge fires with relatively low required pressures

K Factor	K=11.2 (161,3)
Thread Size	1/2" (15 mm) · 3/4" (20 mm)
Finish	Brass, Chrome
Tech Data	**TFP342**



ELO-231 FRB

Pendent & Upright

- Quick response
- 3 mm bulb
- Extra large orifice sprinklers proven for storage occupancies through full-scale fire testing
- Designed to control high challenge fires with relatively low required pressures

K Factor	K=11.2 (161,3)
Thread Size	3/4" (20 mm)
Finish	Brass, Chrome, White
Tech Data	**TFP344**

SPRINKLERS

LD *"Large Drop"*

Upright

- Standard response
- 5 mm bulb
- Control mode sprinkler
- Designed for the protection of high-piled storage
- Can provide a higher level of protection than standard spray sprinklers
- Can provide an advantage by eliminating in-rack sprinklers

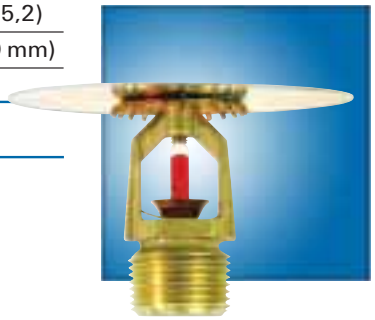
K Factor	K=11.2 (161,3)
Thread Size	3/4" (20 mm)
Finish	Brass
Tech Data	**TFP335**

TY-B

Pendent & Upright

- Standard response
- 5 mm bulb
- Intermediate level (in-rack) with shield
- Factory assembled unit having an integral water shield.
- Used where sprinkler guards are not required.
- Eliminates the necessity of a separate guard/shield combination.

K Factor	K=5.6 (80,6) · K=8.0 (115,2)
Thread Size	1/2" (15 mm) · 3/4" (20 mm)
Finish	Brass
Tech Data	**TFP351**

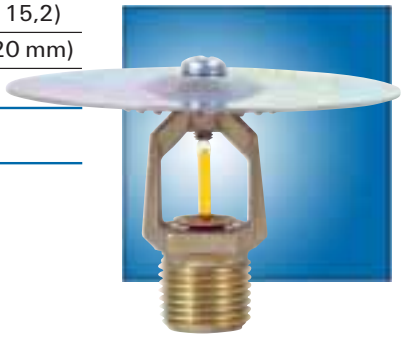


TY-FRB

Pendent & Upright

- Quick response
- 3 mm bulb
- Intermediate level with shield

K Factor	K=5.6 (80,6) · K=8.0 (115,2)
Thread Size	1/2" (15 mm) · 3/4" (20 mm)
Finish	Brass
Tech Data	**TFP356**



TY-L

Pendent & Upright

- Standard response
- Solder type
- Intermediate level with shield

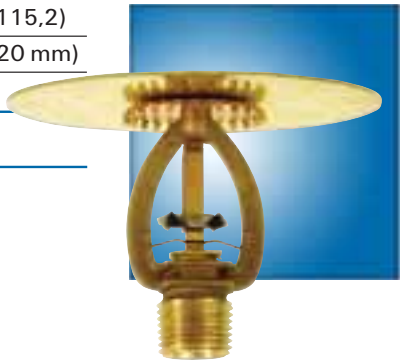
K Factor	K=5.6 (80,6) · K=8.0 (115,2)
Thread Size	1/2" (15 mm) · 3/4" (20 mm)
Finish	Brass
Tech Data	**TFP350**

TY-FRL

Pendent & Upright

- Quick response
- Solder type
- Intermediate level with shield

K Factor	K=5.6 (80,6) · K=8.0 (115,2)
Thread Size	1/2" (15 mm) · 3/4" (20 mm)
Finish	Brass
Tech Data	**TFP355**



SG & SGQR

Upright & Pendent

- Standard response (5mm bulb)
- Quick response (3mm bulb)
- Unique patented sprinkler with six-ribbed, pre-installed zinc-plated cage saves labor costs
- Available in standard or quick response, upright or pendent, with or without water shield for rack applications
- Exclusive “double wrench boss” allows sprinkler wrench access below guard

K Factor	K=5.6 (80,6)
Thread Size	1/2" (15 mm)
Finish	Brass
Tech Data	**1-4.2.11**

SG & SGQR

Upright & Pendent

- Standard response (5mm bulb)
- Quick response (3mm bulb)
- Large orifice
- Unique patented sprinkler with six-ribbed, pre-installed zinc-plated cage saves labor costs
- Available in standard or quick response, upright or pendent, with or without water shield for rack applications
- Exclusive “double wrench boss” allows sprinkler wrench access below guard

K Factor	K=8.0 (115,2)
Thread Size	3/4" (20 mm)
Finish	Brass
Tech Data	**1-4.2.12**

SPRINKLERS

Residential Sprinklers offer the optimum design and flow characteristics for all residential applications. With K Factors as low as 4.2, the flow requirements are the lowest in the industry. Other advantages are listings for beam ceilings and for sloped ceilings to an 8:12 pitch. These unique features avoid obstruction to the sprinklers' discharge pattern without adding additional sprinklers.

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

LFII — Pendent & Recessed Pendent

- Fast response
- 3 mm bulb
- Approved for special applications with beamed ceilings
- Used in wet pipe residential sprinkler systems for one/two–family dwellings and mobile homes per NFPA 13D
- Used in wet pipe residential occupancies up to and including four stories in height per NFPA 13R
- Used in wet pipe sprinkler systems for the residential portions of any occupancy per NFPA 13

K Factor	K=4.9 (70,6)
Thread Size	1/2" (15 mm)
Escutcheon	Style 20
Finish	Brass, Chrome, White
Tech Data	**TFP400**

LFII — Horizontal & Recessed Horizontal Sidewall

- Fast response
- 3 mm bulb
- Used in wet pipe residential sprinkler systems for one/two–family dwellings and mobile homes per NFPA 13D
- Used in wet pipe residential occupancies up to and including four stories in height per NFPA 13R
- Used in wet pipe sprinkler systems for the residential portions of any occupancy per NFPA 13

K Factor	K=4.2 (60,5)
Thread Size	1/2" (15 mm)
Escutcheon	Style 20
Finish	Brass, Chrome, White
Tech Data	**TFP410**

LFII — Concealed Pendent

- Fast response
- Solder type
- Can be used for horizontal and sloped ceilings
- Used in wet pipe residential sprinkler systems for one- and two-family dwellings and mobile homes per NFPA 13D
- Used in wet pipe residential sprinkler systems for residential occupancies up to and including four stories in height per NFPA 13R
- Used in wet pipe sprinkler systems for the residential portions of any occupancy per NFPA 13

K Factor	K=4.2 (60,5)
Thread Size	1/2" (15 mm)
Finish	Chrome, White, Custom
Tech Data	**TFP440**

LFII — Flush Pendent

- Fast response
- Solder type
- Approved for special applications with beamed ceilings
- Aesthetically pleasing
- Used in wet pipe residential sprinkler systems for one- and two-family dwellings and mobile homes per NFPA 13D
- Used in wet pipe residential sprinkler systems for residential occupancies up to and including four stories in height per NFPA 13R
- Used in wet pipe sprinkler systems for the residential portions of any occupancy per NFPA 13

K Factor	K=4.2 (60,5)
Thread Size	1/2" (15 mm)
Finish	Chrome, White, Black
Tech Data	**TFP420**

SPRINKLERS

Dry Sprinklers have been specifically designed for areas in which the sprinkler may be subjected to freezing conditions. These sprinklers have been developed for use in all standard applications, as well as multiple unique scenarios. TFBP Dry Sprinklers are available in both quick and standard response, and come in a variety of finishes. These features and the advanced engineering in the development of these sprinklers offer the industry the most complete line of dry sprinklers on the market. Most models are listed in lengths up to 4'-0". The extended escutcheon option has up to 3" of adjustment.

Applications

- Unheated Warehouse
- Freezing Conditions

DS-1 *(Standard Response)*

Pendent, Upright & Horizontal Sidewall

K Factor	K=5.6 (80,6)
Tech Data	**TFP500**

- Standard response, standard coverage
- All hazards *(light hazards, horizontal sidewall)*
- 5 mm bulb
- Lengths to 48" (1220 mm)
- Designed for use in applications where sprinklers and/or connecting piping may be exposed to freezing conditions, or the sprinkler system is seasonally drained
- Designed for use in applications requiring dry sprinklers, or where building construction or aesthetic considerations make the installation of dry horizontal sidewall sprinklers more desirable than the dry pendent type
- Special assembly provides a seal at the main pipe to prevent water from entering the sprinkler assembly until the sprinkler operates

DS-1 *(Quick Response)*

Pendent, Upright & Horizontal Sidewall

K Factor	K=5.6 (80,6)
Tech Data	**TFP510**

- Quick response, standard coverage
- Light hazard/ordinary hazard
- 3 mm bulb
- Lengths to 48" (1220 mm)
- Designed for use in applications where sprinklers and/or connecting piping may be exposed to freezing conditions, or the sprinkler system is seasonally drained
- Designed for use in applications requiring dry sprinklers, or where building construction or aesthetic considerations make the installation of dry horizontal sidewall sprinklers more desirable than the dry pendent type
- Special assembly provides a seal at the main pipe to prevent water from entering the sprinkler assembly until the sprinkler operates

DS-1

Extended Coverage Horizontal Sidewall

K Factor	K=5.6 (80,6)
Tech Data	**TFP520**

- Standard response or quick response, standard coverage
- EC light hazard
- 3 mm bulb
- Lengths up to 48" (1220 mm)
- Designed for use in light hazard occupancy applications requiring a dry sprinkler to cover areas up to 16' x 20' (4,9 m x 6,1 m) or 18' x 16' (5,5 m x 4,9 m)
- Special assembly provides a seal at the main pipe to prevent water from entering the sprinkler assembly until the sprinkler operates

DS-C

Concealed Pendent

K Factor	K=5.6 (80,6)
Tech Data	TFP515

- Standard response or quick response, standard coverage
- All hazard *(standard response)*
  Light hazard/ordinary hazard *(quick response)*
- 3 mm and 5 mm bulb
- Lengths to 48" (1220 mm)
- Designed for use in applications where sprinklers and/or connecting piping may be exposed to freezing conditions, or the sprinkler system is seasonally drained
- Special assembly provides a seal at the main pipe to prevent water from entering the sprinkler assembly until the sprinkler operates

DS-CEC

Extended Coverage Concealed Pendent

K Factor	K=5.6 (80,6)
Tech Data	TFP518

- Standard response/quick response
- EC light hazard/EC ordinary hazard
- 3 mm bulb
- Lengths to 48" (1220 mm)
- Designed for use in applications where sprinklers and/or connecting piping may be exposed to freezing conditions, or the sprinkler system is seasonally drained
- Special assembly provides a seal at the main pipe to prevent water from entering the sprinkler assembly until the sprinkler operates

DS-2

Pendent

K Factor	K=11.2 (161,3)
Tech Data	TFP530

- Standard response or quick response, standard coverage
- All hazard *(standard response)*
  Light hazard/ordinary hazard *(quick response)*
- 3 mm and 5 mm bulb
- Extra large orifice
- Lengths to 48" (1220 mm)
- Designed for use in applications where sprinklers and/or connecting piping may be exposed to freezing conditions, or the sprinkler system is seasonally drained
- Special assembly provides a seal at the main pipe to prevent water from entering the sprinkler assembly until the sprinkler operates

DS-2

Extended Coverage Pendent

K Factor	K=11.2 (161,3)
Tech Data	TFP540

- Standard response/quick response, standard coverage
- EC light hazard/EC ordinary hazard
- 3 mm bulb
- Extra large orifice
- Lengths to 48" (1220 mm)
- Designed for use in applications where sprinklers and/or connecting piping may be exposed to freezing conditions, or the sprinkler system is seasonally drained
- Special assembly provides a seal at the main pipe to prevent water from entering the sprinkler assembly until the sprinkler operates

Special Sprinklers are intended for use in specific applications, including the protection of combustible concealed spaces and areas subject to corrosion. Also, these installations may need consideration for more water at lower pressures, or more water over a greater area.

Applications

- Attic Space
- Retail Windows
- High Security Institutions
- Minimal Water Damage Conditions
- High Temperature Conditions
- Corrosive Conditions

Attic

Back-to-Back, Hip, Single Directional

K Factor	K=5.6 (80,60) K=8.0 (115,2)
Tech Data	6-1.0

- Fast response
- 3 mm bulb or solder type
- Provides a tested method of protecting an attic
- Provides a specific cost advantage by reducing the amount of piping required
- Cover attics to 60'-0" wide with a single line of piping, eliminating the need for as many as five branch lines
- Saves up to 80% of the piping that would be required with standard sprinklers while providing a higher level of protection

Window

Horizontal & Vertical

K Factor	K=5.6 (80,6)
Tech Data	6-2.0

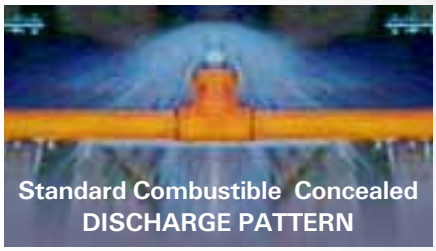
- Fast response
- 3 mm bulb
- Only UL tested sprinklers that can protect glazing in a wall or window and allow it to maintain its mechanical equivalent rating up to two hours
- First sprinklers to be UL/C-UL Listed, ICC-ES, and ULC Listed & Approved for maintaining a rated assembly
- Pendent allows installation farther away from the glass than the sidewall
- Sidewall permits the window mullion to act as a baffle, allowing the sprinklers to be spaced closely together, if necessary
- Provides the only UL tested option when seeking wall fire ratings when using tempered or heat strengthened glass

CC1

Combustible Concealed Space Upright

K Factor	K=2.8 (40,3)
Tech Data	6-3.0

- Fast response
- 3 mm bulb
- Allows the use of BLAZEMASTER** CPVC pipe in combustible concealed areas with the benefit of superior sprinkler protection for Wood truss spaces
- UL Listed
- Unique spray pattern and design characteristics
- Remote design area has been reduced to 1000 sq. ft. when using the CC1 sprinkler



SPRINKLERS

TY300-B

Upright, Pendent & Sidewall

K Factor	K=5.6 (80,6)
Tech Data	**TFP640**

- Standard response
- All hazards, *(light/ordinary hazards, horizontal sidewall)*
- 5mm Bulb
- Sidewall sprinklers are designed for installation along a wall or on the side of a beam just beneath a smooth ceiling
- Upright and pendent discharge a hemispherical water spray pattern in the area under the sprinkler
- Sidewall sprinkler water discharge is directed primarily outward and downward in a quarter spherical pattern
- Small frame, narrow profile bulb
- Listed to 300 psi (20,7 bar) service pressure

TY300-FRB

Upright, Pendent & E/C Sidewall

K Factor	K=5.6 (80,6)
Tech Data	**TFP642**

- Quick response, *(standard/quick response E/C horizontal sidewall)*
- Light/ordinary hazard, *(light hazards, E/C horizontal sidewall)*
- 3mm Bulb
- Sidewall sprinklers are designed for installation along a wall or on the side of a beam just beneath a smooth ceiling
- Upright and pendent discharge a hemispherical water spray pattern in the area under the sprinkler
- Small frame, narrow profile bulb
- Sidewall sprinkler water discharge is directed primarily outward and downward in a quarter spherical pattern
- EC horizontal sidewall covers areas up to 16' x 22' (4,9 m x 6,7 m)
- Listed to 300 psi (20,7 bar) service pressure

TFP PH2

Institutional Pendent

K Factor	K=5.6 (80,6)
Thread Size	1/2" (15 mm)
Tech Data	**TFP650**

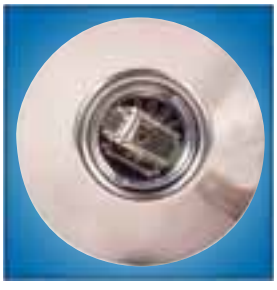
- Standard response
- All hazard
- Solder type
- Low breakaway weight
- Flush mount escutcheons
- 175 psi (12,1 bar)

TFP PH5

Institutional Horizontal Sidewall

K Factor	K=5.6 (80,6)
Thread Size	1/2" (15 mm)
Tech Data	**TFP654**

- Standard response
- Light hazard/ordinary hazard
- Solder type
- Low breakaway weight
- Flush mount escutcheons
- 175 psi (12,1 bar)



TFP MAX

Institutional Pendent

K Factor	K=5.6 (80,6)
Thread Size	1/2" (15 mm)
Tech Data	**TFP652**

- Quick response
- Light hazard/ordinary hazard
- 2.5 mm bulb
- Designed to provide maximum solutions to the unique fire protection needs of institutional facilities
- For use in correctional, detention, and mental health care facilities
- Vandalizing, moving, or disassembling the sprinkler results in activation and a water flow alarm
- Low breakaway weight
- Flush mount escutcheons
- 175 psi (12,1 bar)

TFP MAX

Institutional Horizontal Sidewall

K Factor	K=5.6 (80,6)
Thread Size	1/2" (15 mm)
Tech Data	**TFP656**

- Quick response
- Light hazard/ordinary hazard
- 2.5 mm bulb
- Designed to provide maximum solutions to the unique fire protection needs of institutional facilities
- For use in correctional, detention, and mental health care facilities
- Vandalizing, moving, or disassembling the sprinkler results in activation and a water flow alarm
- Low breakaway weight
- Flush mount escutcheons
- Aesthetics same as pendent model
- 175 psi (12,1 bar)

TY-B

Conventional (Old Style)

K Factor	K=5.6 (80,6) · K=8.0 (115,2)
Thread Size	1/2" (15 mm) · 3/4" (20 mm)
Tech Data	**TFP661**

- Standard response
- Light hazard/All hazard
- 5 mm bulb

SPRINKLERS

TY-FRB

Conventional (Old Style)

K Factor	K=5.6 (80,6) · K=8.0 (115,2)
Thread Size	1/2" (15 mm) · 3/4" (20 mm)
Tech Data	**TFP666**

- Quick response
- Light hazard/Ordinary hazard
- 3 mm bulb

Issue "D" Quartzoid* *(High Temperature)*

Pendent & Upright

K Factor	K=5.6 (80,6)
Thread Size	1/2" (15 mm)
Tech Data	**TD525M**

- Standard response
- All hazard
- 11 mm bulb
- Extra-high and ultra-high temperature ratings and corrosion resistant coatings
- Up to 650°F (343°C)

Issue "D" Quartzoid* *(High Temperature)*

Pendent & Upright

K Factor	K=8.0 (115,2)
Thread Size	3/4" (20 mm)
Tech Data	**TD527Q**

- Standard response
- All hazard
- 11 mm bulb
- Extra-high and ultra-high temperature ratings and corrosion resistant coatings
- Up to 650°F (343°C)

Issue "D" *(Stainless Steel)*

Pendent & Upright

K Factor	K=5.6 (80,6)
Thread Size	1/2" (15 mm)
Tech Data	**TD581M**

- Standard response
- All hazard
- 11 mm bulb
- Designed for use in applicable corrosive environments (Refer questions on applicable corrosive environments to the TFBP Technical Data department)
- Features Type 316 stainless steel metallic components and a frangible bulb element

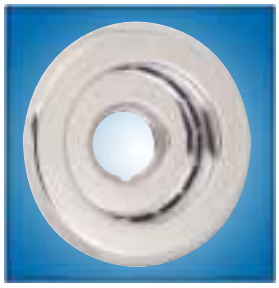
Sprinkler Accessories are for use with the sprinklers and nozzles described in this catalog. For complete specifications, installation instructions, and ratings (where applicable), please refer to the TFBP Technical Data Sheet listed after each product description.

Escutcheon Plates

Pendent & Sidewall Recessed Escutcheons

Tech Data **TFP770**

- Consists of a mounting plate and closure for finished appearance in ceilings or soffits
- Maximum 1/2" (15 mm) to 3/4" (20 mm) adjustment
- Primarily designed for use with standard spray, quick response sprinklers and the Designer residential sidewall sprinklers
- Available for use with 1/2"(15 mm) or 3/4" (20 mm) NPT sprinkler heads



65

One-Piece Flat Escutcheon

Tech Data **28-2.0**

- Used to improve the overall appearance of the sprinkler installation by concealing the clearance holes required for wall or ceiling installation
- Available for 1/2"(15 mm) and 3/4" (20 mm) NPT

401

Two-Piece Adjustable Escutcheon

Tech Data **28-3.0**

- Used to improve the overall appearance of the sprinkler installation by concealing the clearance holes required for wall or ceiling installation
- Deep, two-piece, adjustable
- Available for 1/2"(15 mm) and 3/4" (20 mm) NPT

Sprinkler Head Cabinet

3, 6 or 12 capacity

Tech Data **28-6.0**

- 3, 6 or 12 capacity
- Provides storage for spare sprinklers and sprinkler wrench
- Space sprinklers facilitate the prompt replacement of operated or damaged sprinklers and return of fire protection system to service as soon as possible

Guards / Shields

Model G1 & G2 Guards, G1/S1 & G4/S3 Guards w/ Shields

K Factor	K=5.6 (80,6) · K=8.0 (115,2) K=11.2 (000,0) (Sprinklers)
Tech Data	**TFP780 & TFP782**

- Low profile design for use with Series TY-B, TY-FRB, TY-L and TY-FRL and ELO-231upright and pendent sprinklers
- Shields are for use in storage racks or beneath grated mezzanine or other areas requiring the sprinklers to be shielded from possible discharge from sprinklers above
- Can be used with either 1/2" (15 mm) or 3/4" (20 mm) NPT sprinklers
- Rugged guard design to minimize possible damage to sprinklers

SPRINKLER ACCESSORIES

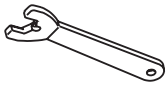
Sprinkler Wrenches

Contact a TFBP distributor for details

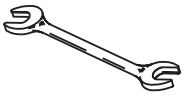
- Available in different models for use with the various types of sprinklers: refer to the individual sprinkler data sheet for the correct sprinkler wrench.

W-Type 1

W-Type 2



W-Type 3



W-Type 4

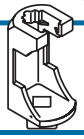
W-Type 6

W-Type 7

W-Type 8

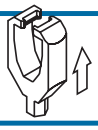
W-Type 9

W-Type 10



W-Type 11

W-Type 12

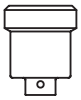


W-Type 13

W-Type 17

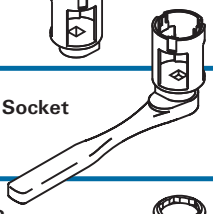
1509-3

RFII



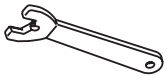
Socket

Wrench & Socket



W-Type 18

W-Type 21



1106

Nozzles & Nozzle Accessories

are designed for use in a variety of special hazards applications. Their uses include, but are not limited to, exposure protection, fire control, fire extinguishment, and explosion prevention.

Many types of nozzles may be required to provide a properly designed special hazard fire protection system.

D-3 — Protectospray* Nozzle

K Factor	K=1.2 (17,3) · K=1.8 (25,9) K=2.3 (33,1) · K=3.0 (43,2) K=4.1 (59,0) · K=5.6 (80,6) K=7.2 (108,7)
Thread Size	1/2" (15 mm)
Finish	Natural brass, chrome plated, electroless nickel plated, lead coated or Teflon coated. Stainless steel, plain only.
Tech Data	**TD620A**

- Open orifice design type for use in deluge systems
- Nozzles are external deflector types that discharge a filled cone of water droplets at relatively low velocity
- Spray angles available: 65°, 80°, 95°, 110°, 125°, 140°, 160°, and 180°

EA-1 — Automatic Protectospray* Nozzle

K Factor	K=1.4 (20,2) · K=2.8 (40,3) K=5.6 (80,6)
Thread Size	1/2" (15 mm)
Finish	Natural brass finish or chrome plated finish in 135˚F/57˚C through 500˚F/57˚C; Corroproof or lead coated in 135˚F/57˚C and 175˚F/79˚C
Tech Data	**TD610A**

- Bulb type frangible element for use in closed head systems
- Discharges a filled cone of water droplets at relatively low velocity
- Spray angles available: 65°, 80°, 95°, 110°, 125°, 140°, 160°, and 180°

HV *"High Velocity"* — Spray Nozzles

K Factor	K=1.6 (23,0) · K=1.8 (26,0) K=2.9 (41,8) · K=4.3 (62,0) K=5.5 (79,2) · K=6.0 (86,4)
Thread Size	1" (30 mm) 1 1/4" (38 mm) *only K=6.0*
Finish	Natural brass or stainless steel
Tech Data	**TD680**

- Open, directional spray nozzles
- Designed for use in fixed water spray fire protection systems where a high velocity water application is needed, such as the protection of flammable liquids, electrical transformers, circuit breakers, oil-fired boilers and lube oil systems
- Available in six different orifice sizes
- Produces a solid conical spray pattern
- Available in six angle spray patterns

B-1

1/2" Foam-Water Sprinkler

K Factor	K=5.6 (80,6)
Thread Size	1/2" (15 mm)
Finish	Brass
Tech Data	**TD760**

- Air aspirating foam-water nozzles
- For use with all types of foam (required for Non-AFFF type foams)
- Pendent & upright designs
- Open nozzle for use on deluge systems

AM10 AQUAMIST*

Open Type

K Factor	K=0.24 (3,5)
Thread Size	1/2" (15 mm)
Finish	Stainless Steel
Tech Data	**TD1174**

- Open spray nozzles
- Designed for use in water mist protection systems protecting flammable liquids and turbine bearings
- Minimal water demand, approximately 3.1 GPM/nozzle at 170psi (11,73 lpm at 11,6 bar)
- Mist represents latest in fire protection technology
- For use in "low pressure" mist applications
- Minimum operating pressure is 170 psi (11,6 bar)

AM4 AQUAMIST*

Open Type

K Factor	K=0.24 (3,5)
Thread Size	1/2" (15 mm)
Finish	Stainless Steel
Tech Data	**TD1173**

- Open, directional spray nozzles
- Listed & Approved for the protection of flammable liquid hazards (UL/FM)
- Approved for protection of gas turbines (FM)
- Maximum ceiling height, 26' 3" (8 m)
- Compartment volume
  - UL - 56,500 ft^3 (1,600 m^3)
  - FM - 45,203 ft^3 (1,280 m^3)
- Maximum utilization of water for flammable liquid fire protection
- Nozzle coverage: maximum 172 ft^2 (16 m^2)
- Nozzle pressure: 185 to 250 psi (12,8 to 17,2 bar)

AM24 AQUAMIST*

Bulb Type

K Factor	K=0.64 (9,2)
Thread Size	1/2" (15 mm)
Finish	Brass, Chrome Plated, White Polyester
Tech Data	**TD1172**

- Closed spray nozzles
- Designed for use in ordinary hazard occupancies
- Maximum ceiling height of 8' 2" (2,5 m)
- For the protection of sensitive occupancies while minimizing potential water damage
- Minimum 102 psi (6,14 bar) nozzle pressure

F822 through F834

MULSIFYRE* Nozzles

K Factor	K=2.3 (33,12) · K=2.6 (37,44) K=2.7 (38,88) · K=4.6 (66,24) K=5.1 (73,44) ·
Thread Size	3/4" (20 mm)
Finish	Natural Brass, Chrome Plated
Tech Data	**TD675**

- Open, internal scroll type nozzles
- Six different orifice sizes and spray angles afford a variety of design options
- Designed to discharge a filled cone of water droplets at a relatively high velocity
- Used in either open or water primed systems
- A blow-off cap is available with the nozzle for a primed system (chrome plated finish only)

Cooling Tower Nozzles

Type 1 and 2

K Factor	K=2.9 (41,76)
Thread Size	3/4" (20 mm)
Tech Data	**TD730**

- Intended for use in fire protection systems for cross flow cooling towers with combustible fill sections
- Open nozzle design for use in water spray deluge system
- Installed under the distribution basin, they discharge water in a relatively narrow, elongated spray pattern
- Type 1 has a waterway designed for use in towers with diffusion decks, Type 2 for those without diffusion decks

TI-MAX*

Nozzles & Sprinklers

Contact a TFBP distributor for details

- Unique discharge devices are made from titanium and can be used in offshore and other marine applications
- Designed for use where strength, low weight, and salt water corrosion resistance are required
- Medium and high velocity type nozzles are available in various orifice sizes and spray angles
- Standard spray sprinklers are available in upright and pendent configurations

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

Standard Spray Sprinklers

Model	SIN	Type	Response	Hazard	K Factor	Element	Thread Size inch	Temperature, °F	Maximum Pressure (PSI)
TY-L	TY3111	Upright	SR	All	5.6	Solder	1/2	165, 212, 280	175
TY-L	TY3211	Pendent	SR	All	5.6	Solder	1/2	165, 212, 280	175
TY-L	TY3311	Horizontal Sidewall	SR	LH	5.6	Solder	1/2	165, 212, 280	175
TY-L	TY4111	Upright	SR	All	8.0	Solder	3/4	165, 212, 280	175
TY-L	TY4211	Pendent	SR	All	8.0	Solder	3/4	165, 212, 280	175
TY-L	TY4811	Upright	SR	All	8.0	Solder	1/2	165, 212, 280	175
TY-L	TY4911	Pendent	SR	All	8.0	Solder	1/2	165, 212, 280	175
TY-FRL	TY1121	Upright	QR	LH	2.8	Solder	1/2	165, 212	175
TY-FRL	TY1221	Pendent	QR	LH	2.8	Solder	1/2	165, 212	175
TY-FRL	TY3121	Upright	QR	LH/OH	5.6	Solder	1/2	165, 212	175
TY-FRL	TY3221	Pendent	QR	LH/OH	5.6	Solder	1/2	165, 212	175
TY-FRL	TY3321	Horizontal Sidewall	QR	LH/OH	5.6	Solder	1/2	165, 212	175
TY-FRL	TY4121	Upright	QR	LH/OH	8.0	Solder	3/4	165, 212	175
TY-FRL	TY4221	Pendent	QR	LH/OH	8.0	Solder	3/4	165, 212	175
TY-B	TY1151	Upright	SR	LH	2.8	5 mm Bulb	1/2	135, 155, 175, 200, 286, 360	175
TY-B	TY1251	Pendent	SR	LH	2.8	5 mm Bulb	1/2	135, 155, 175, 200, 286, 360	175
TY-B	TY3151	Upright	SR	All	5.6	5 mm Bulb	1/2	135, 155, 175, 200, 286, 360	175
TY-B	TY3251	Pendent	SR	All	5.6	5 mm Bulb	1/2	135, 155, 175, 200, 286, 360	175
TY-B	TY3451	Vertical Sidewall	SR	LH/OH	5.6	5 mm Bulb	1/2	135, 155, 175, 200, 286, 360	175
TY-B	TY3351	Horizontal Sidewall	SR	LH/OH	5.6	5 mm Bulb	1/2	135, 155, 175, 200, 286, 360	175
TY-B	TY4851	Upright	SR	All	8.0	5 mm Bulb	1/2	135, 155, 175, 200, 286, 360	175
TY-B	TY4951	Pendent	SR	All	8.0	5 mm Bulb	1/2	135, 155, 175, 200, 286, 360	175
TY-B	TY4151	Upright	SR	All	8.0	5 mm Bulb	3/4	135, 155, 175, 200, 286, 360	175
TY-B	TY4251	Pendent	SR	All	8.0	5 mm Bulb	3/4	135, 155, 175, 200, 286, 360	175
TY-FRB	TY1131	Upright	QR	LH	2.8	3 mm Bulb	1/2	135, 155, 175, 200, 286	175
TY-FRB	TY1231	Pendent	QR	LH	2.8	3 mm Bulb	1/2	135, 155, 175, 200, 286	175
TY-FRB	TY2131	Upright	QR	LH	4.2	3 mm Bulb	1/2	135, 155, 175, 200, 286	175
TY-FRB	TY2231	Pendent	QR	LH	4.2	3 mm Bulb	1/2	135, 155, 175, 200, 286	175
TY-FRB	TY3131	Upright	QR	LH/OH	5.6	3 mm Bulb	1/2	135, 155, 175, 200, 286	175
TY-FRB	TY3231	Pendent	QR	LH/OH	5.6	3 mm Bulb	1/2	135, 155, 175, 200, 286	175
TY-FRB	TY3431	Vertical Sidewall	QR	LH/OH	5.6	3 mm Bulb	1/2	135, 155, 175, 200, 286	175
TY-FRB	TY3331	Horizontal Sidewall	QR	LH/OH	5.6	3 mm Bulb	1/2	135, 155, 175, 200, 286	175
TY-FRB	TY4131	Upright	QR	LH/OH	8.0	3 mm Bulb	3/4	135, 155, 175, 200, 286	175
TY-FRB	TY4231	Pendent	QR	LH/OH	8.0	3 mm Bulb	3/4	135, 155, 175, 200, 286	175
RFII	TY3531	Concealed Pendent	QR	LH/OH	5.6	3 mm Bulb	1/2	155, 200	175
RFII	TY3505	Concealed Pendent	QR	LH/OH	5.6	3 mm Bulb	1/2	155, 200	250
RFII	TY3551	Concealed Pendent	SR	All	5.6	5 mm Bulb	1/2	155, 200	175
RFII	TY3504	Concealed Pendent	SR	All	5.6	5 mm Bulb	1/2	155, 200	250

Maximum Spacing	Minimum Spacing	Sprinkler Finish	Approvals	Wrench	Recessed Wrench	Recessed Escutcheon Availability	Data Sheet
Per NFPA	6′-0″	B, C, W, L, WOL	UL, C-UL, FM, LPC	W9	–	–	TFP110
Per NFPA	6′-0″	B, C, W, L, WOL	UL, C-UL, FM, LPC	W9	W10	YES	TFP110
Per NFPA	6′-0″	B, C	UL, C-UL, FM	W9	–	–	TFP120
Per NFPA	6′-0″	B, C, P, W, L, WOL	UL, C-UL, FM, LPC	W9	–	–	TFP110
Per NFPA	6′-0″	B, C, P, W, L, WOL	UL, C-UL, FM, LPC	W9	W10	YES	TFP110
Per NFPA	6′-0″	B, C, P, W, L, WOL	UL, C-UL, FM	W9	–	–	TFP110
Per NFPA	6′-0″	B, C, P, W, L, WOL	UL, C-UL, FM	W9	W10	YES	TFP110
Per NFPA	6′-0″	B, C	UL, C-UL	W9	–	–	TFP130
Per NFPA	6′-0″	B, C	UL, C-UL	W9	W12	YES	TFP130
Per NFPA	6′-0″	B, C	UL, C-UL, FM, LPC	W9	–	–	TFP130
Per NFPA	6′-0″	B, C	UL, C-UL, FM, LPC	W9	W12	YES	TFP130
Per NFPA	6′-0″	B, C	UL, C-UL, FM	W9	–	–	TFP140
Per NFPA	6′-0″	B, C	UL, C-UL	W9	–	–	TFP130
Per NFPA	6′-0″	B, C	UL, C-UL	W9	–	–	TFP130
Per NFPA	6′-0″	B, C, P	UL, C-UL, FM, NYC	W6	–	–	TFP151
Per NFPA	6′-0″	B, C, P	UL, C-UL, FM, NYC	W6	–	–	TFP151
Per NFPA	6′-0″	B, C, P, W, L, WOL	UL, C-UL, FM, LPC, NYC, VdS	W6	–	–	TFP151
Per NFPA	6′-0″	B, C, P, W, L, WOL	UL, C-UL, FM, LPC, VdS, NYC	W6	W7	YES	TFP151
Per NFPA	6′-0″	B, C, P, W, L, WOL	UL, C-UL, FM, LPC, NYC	W6	W7	YES	TFP161
Per NFPA	6′-0″	B, C, P, W, L, WOL	UL, C-UL, FM, LPC, NYC	W6	W7	YES	TFP161
Per NFPA	6′-0″	B, C, P	UL, C-UL, FM, NYC	W6	–	–	TFP151
Per NFPA	6′-0″	B, C, P	UL, C-UL, FM, NYC	W6	–	–	TFP151
Per NFPA	6′-0″	B, C, P, W, L, WOL	UL, C-UL, FM, LPC, VdS, NYC	W6	–	–	TFP151
Per NFPA	6′-0″	B, C, P, W, L, WOL	UL, C-UL, FM, LPC, VdS, NYC	W6	W7	YES	TFP151
Per NFPA	6′-0″	B, C, P	UL, C-UL, FM, NYC	W6	–	–	TFP171
Per NFPA	6′-0″	B, C, P	UL, C-UL, FM, NYC	W6	W7	YES	TFP171
Per NFPA	6′-0″	B, C, P	UL, C-UL	W6	–	–	TFP171
Per NFPA	6′-0″	B, C, P	UL, C-UL	W6	W7	YES	TFP171
Per NFPA	6′-0″	B, C, P, L	UL, C-UL, FM, NYC, LPC, VdS	W6	–	–	TFP171
Per NFPA	6′-0″	B, C, P, L	UL, C-UL, FM, NYC, LPC, VdS	W6	W7	YES	TFP171
Per NFPA	6′-0″	B, C, P, L	UL, C-UL, FM, NYC, LPC	W6	–	–	TFP176
Per NFPA	6′-0″	B, C, P, L	UL, C-UL, FM, NYC, LPC	W6	W7	YES	TFP176
Per NFPA	6′-0″	B, C, P, L	UL, C-UL, FM, NYC, LPC, VdS	W6	–	–	TFP171
Per NFPA	6′-0″	B, C, P, L	UL, C-UL, FM, NYC, LPC, VdS	W6	W7	YES	TFP171
Per NFPA	6′-0″	C, Wh	UL, C-UL, FM, NYC	RFII	–	–	TFP181
Per NFPA	6′-0″	C, Wh	UL, C-UL, NYC	RFII	–	–	TFP181
Per NFPA	6′-0″	C, Wh	UL, C-UL, FM, NYC	RFII	–	–	TFP181
Per NFPA	6′-0″	C, Wh	UL, C-UL, NYC	RFII	–	–	TFP181

SPECIFICATIONS

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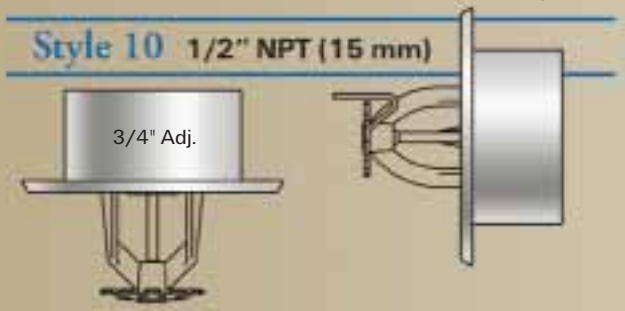
Sprinkler Finish Legend: **B** = Brass • **BB** = Bright Brass • **C** = Chrome • **L** = Lead Coating
P = Polyester Coating (White is standard) • **Wh** = White • **W** = Wax Coating (for 135° to 212°)
WOL = Wax Coating over Lead (135° to 212°)
Hazard Legend: **LH** = Light Hazard • **OH** = Ordinary Hazard • **All** = Any Hazard
Response Legend: **SR** = Standard Response • **QR** = Quick Response • **FR** = Fast Response

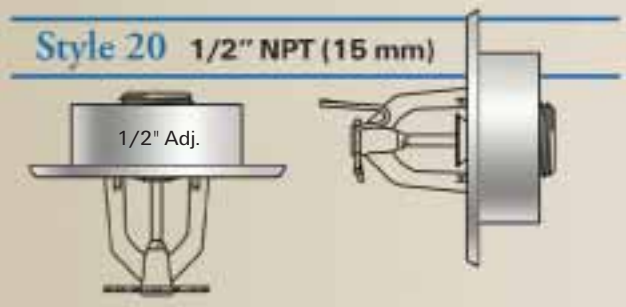
Extended Coverage Sprinklers

Model	SIN	Type	Response	Hazard	K Factor	Element	Thread Size inch	Temperature, °F
EC-25	TY9128	Upright	SR	All	25.2	Solder	1	165, 214
EC-14	TY6137	Upright	QR/SR	LH/OH	14.0	3 mm Bulb	3/4	135, 155, 175, 200, 286
EC-14	TY6237	Pendent	QR/SR	LH/OH	14.0	3 mm Bulb	3/4	135, 155, 175, 200, 286
EC-11	TY5137	Upright	QR/SR	LH/OH	11.2	3 mm Bulb	3/4	135, 155, 175, 200, 286
EC-11	TY5237	Pendent	QR/SR	LH/OH	11.2	3 mm Bulb	3/4	135, 155, 175, 200, 286
TY-FRB	TY3332	Horizontal Sidewall	QR/SR	LH	5.6	3 mm Bulb	1/2	135, 155, 175
TY-FRB	TY4332	Horizontal Sidewall	QR/SR	LH	8.0	3 mm Bulb	3/4	135, 155, 175
ELO SW-20	TY5332	Horizontal Sidewall	SR	OH	11.2	3 mm Bulb	3/4	155, 200
ELO SW-24	TY5337	Horizontal Sidewall	SR	OH	11.2	3 mm Bulb	3/4	200
TY-FRL	TY3322	Horizontal Sidewall	QR/SR	LH	5.6	Solder	1/2	165
TY-FRL	TY4322	Horizontal Sidewall	QR/SR	LH	8.0	Solder	3/4	140, 165
CHEC	TY4332	Concealed Horizontal Sidewall	QR	LH	8.0	3 mm Bulb	3/4	135, 155
ELOC	TY5522	Concealed Pendent	QR	LH	11.2	Solder	3/4	160, 212
RFII	TY3532	Concealed Pendent	QR	LH	5.6	3 mm Bulb	1/2	155, 200
BV-EC	C3232	Pendent	QR	LH	5.6	3 mm Bulb	1/2	135, 155
BV-EC	C3302	Horizontal Sidewall	QR	LH	5.6	3 mm Bulb	1/2	135, 155, 200
BV-20 QR	C4232	Pendent	QR	LH	8.0	3 mm Bulb	3/4	135, 155

Escutcheon Style Reference Guide

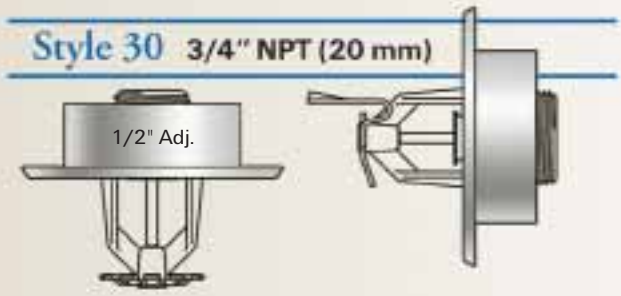
Escutcheons in this catalog are referenced by a style number and are available in brass, chrome or white finish. Below is a visual key to distinguish individual escutcheon styles.

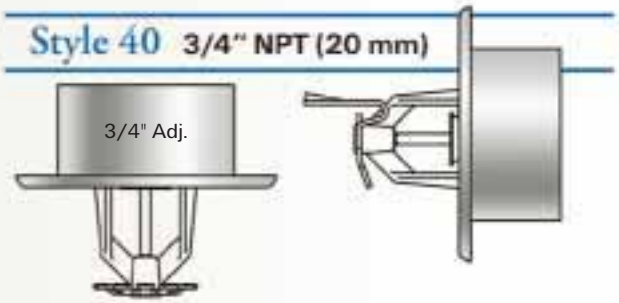




Maximum Pressure (PSI)	Maximum Spacing	Minimum Spacing	Sprinkler Finish	Approvals	Wrench	Recessed Wrench	Recessed Escutcheon Availability	Data Sheet
175	14′ x 14′	10′-0″	B	UL, C-UL, FM, NYC	W1	–	–	TFP213
175	20′ x 20′	8′-0″	B, C, P, L	UL, C-UL, FM	W3	–	–	TFP220
175	20′ x 20′	9′-0″	B, C, P, L	UL, C-UL, FM	W3	W4	YES	TFP220
175	20′ x 20′	8′-0″	B, C, P, L	UL, C-UL, FM	W3	–	–	TFP220
175	20′ x 20′	9′-0″	B, C, P, L	UL, C-UL, FM	W3	W4	YES	TFP220
175	16′ x 22′	10′-0″	B, C, P	UL, C-UL, FM, NYC	W6	W7	YES	TFP296
175	16′ x 24′	10′-0″	B, C, P	UL, C-UL, FM, NYC	W6	W7	YES	TFP296
175	16′ x 20′	8′-0″	B, C, P	UL, C-UL	W3	–	–	TFP230
175	16′ x 24′	8′-0″	B, C, P	UL, C-UL	W3	–	–	TFP230
175	16′ x 20′	8′-0″	B, C	UL, C-UL, FM	W9	–	–	TFP280
175	16′ x 24′	10′-0″	B, C	UL, C-UL, FM	W9	–	–	TFP280
175	16′ x 22′	8′-0″	C, Wh	UL, C-UL	W7	–	–	TFP265
175	18′ x 18′	8′-0″	B, C, Wh	UL, C-UL	W18	–	–	TFP250
175	18′ x 18′	8′-0″	C, Wh	UL, C-UL, NYC	RFII	–	–	TFP260
175	20′ x 20′	8′-0″	B, C, P	UL, C-UL, FM, NYC	1099	–	YES	2-11.0
175	16′ x 24′	8′-0″	B, C, P	UL, C-UL, FM, NYC	1106	1099	YES	2-11.0
175	20′ x 20′	8′-0″	B, C, P	UL, ULC, NYC	W3	1093	YES	2-10.0

SPECIFICATIONS





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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

Storage Sprinklers

Model	SIN	Type	Response	Hazard	K Factor	Element	Thread Size inch	Temperature, °F
ESFR-25	TY9226	ESFR Pendent	FR	Storage	25.2	Solder	1	165, 214
ESFR-17	TY7126	ESFR Upright	FR	Storage	16.8	Solder	3/4	165, 214
ESFR-17	TY7226	ESFR Pendent	FR	Storage	16.8	Solder	3/4	165, 214
ESFR-1	TY6226	ESFR Pendent	FR	Storage	14.0	Solder	3/4	165, 214
Ultra K17	TY7153	Upright	SR	Storage	16.8	5 mm Bulb	3/4	155, 200
K17-231	TY7151	Upright	SR	Storage	16.8	5 mm Bulb	3/4	155, 200, 286
K17-231	TY7251	Pendent	SR	Storage	16.8	5 mm Bulb	3/4	155, 200, 286
LD	TY5153	Large Drop Upright	SR	Storage	11.2	5 mm Bulb	3/4	155, 200, 286
ELO-231	TY5811	Upright	SR	Storage	11.2	Solder	1/2	165, 212, 286
ELO-231	TY5111	Upright	SR	Storage	11.2	Solder	3/4	165, 212, 286
ELO-231	TY5211	Pendent	SR	Storage	11.2	Solder	3/4	165, 212, 286
ELO-231 B	TY5851	Upright	SR	Storage	11.2	5 mm Bulb	1/2	155, 200, 286
ELO-231 B	TY5151	Upright	SR	Storage	11.2	5 mm Bulb	3/4	155, 200, 286
ELO-231 B	TY5251	Pendent	SR	Storage	11.2	5 mm Bulb	3/4	155, 200, 286
ELO-231 FRB	TY5131	Upright	QR	Storage	11.2	3 mm Bulb	3/4	155, 200, 286
ELO-231 FRB	TY5231	Pendent	QR	Storage	11.2	3 mm Bulb	3/4	155, 200, 286
TY-L	TY3113	Intermediate Level Upright	SR	Storage	5.6	Solder	1/2	165, 212, 280
TY-L	TY4113	Intermediate Level Upright	SR	Storage	8.0	Solder	3/4	165, 212, 280
TY-FRL	TY3123	Intermediate Level Upright	QR	Storage	5.6	Solder	1/2	165
TY-FRL	TY4123	Intermediate Level Upright	QR	Storage	8.0	Solder	3/4	165
TY-B	TY3153	Intermediate Level Upright	SR	Storage	5.6	5 mm Bulb	1/2	135, 155, 175, 200, 286, 360
TY-B	TY4153	Intermediate Level Upright	SR	Storage	8.0	5 mm Bulb	3/4	135, 155, 175, 200, 286, 360
TY-FRB	TY3133	Intermediate Level Upright	QR	Storage	5.6	3 mm Bulb	1/2	135, 155, 175, 200, 286
TY-FRB	TY4133	Intermediate Level Upright	QR	Storage	8.0	3 mm Bulb	3/4	135, 155, 175, 200, 286
ELO-231	TY5811	Intermediate Level Upright	SR	Storage	11.2	Solder	1/2	165, 212, 286
ELO-231	TY5111	Intermediate Level Upright	SR	Storage	11.2	Solder	3/4	165, 212, 286
ELO-231 B	TY5851	Intermediate Level Upright	SR	Storage	11.2	5 mm Bulb	1/2	155, 200, 286
ELO-231 B	TY5151	Intermediate Level Upright	SR	Storage	11.2	5 mm Bulb	3/4	155, 200, 286
ELO-231 FRB	TY5131	Intermediate Level Upright	QR	Storage	11.2	3 mm Bulb	3/4	155, 200, 286
Easy Guard SG	S3400	Upright with Guard	SR	Storage	5.6	5 mm Bulb	1/2	135, 155, 175, 200, 286, 360
Easy Guard SG	S3401	Pendent with Guard	SR	Storage	5.6	5 mm Bulb	1/2	135, 155, 175, 200, 286, 360
Easy Guard SG	S3410	Upright with Guard	SR	Storage	8.0	5 mm Bulb	3/4	135, 155, 175, 200, 286, 360
Easy Guard SG	S3411	Pendent with Guard	SR	Storage	8.0	5 mm Bulb	3/4	135, 155, 175, 200, 286, 360
Easy Guard SG-QR	S3472	Upright with Guard	QR	Storage	5.6	3 mm Bulb	1/2	135, 155, 175, 200, 286
Easy Guard SG-QR	S3471	Pendent with Guard	QR	Storage	5.6	3 mm Bulb	1/2	135, 155, 175, 200, 286
Easy Guard SG-QR	S3479	Upright with Guard	QR	Storage	8.0	3 mm Bulb	3/4	135, 155, 175, 200, 286
Easy Guard SG-QR	S3480	Pendent with Guard	QR	Storage	8.0	3 mm Bulb	3/4	135, 155, 175, 200, 286
Easy Guard SG w/ Shield	S3500	Intermediate Level Upright	SR	Storage	5.6	5 mm Bulb	1/2	135, 155, 175, 200, 286, 360
Easy Guard SG w/ Shield	S3510	Intermediate Level Upright	SR	Storage	8.0	5 mm Bulb	3/4	135, 155, 175, 200, 286, 360
Easy Guard SG-QR w/ Shield	S3572	Intermediate Level Upright	QR	Storage	5.6	3 mm Bulb	1/2	135, 155, 175, 200, 286
Easy Guard SG-QR w/ Shield	S3579	Intermediate Level Upright	QR	Storage	8.0	3 mm Bulb	3/4	135, 155, 175, 200, 286

Maximum Pressure (PSI)	Maximum Spacing	Minimum Spacing	Sprinkler Finish	Approvals	Wrench	Recessed Wrench	Recessed Escutcheon Availability	Data Sheet
175	Per NFPA	8′-0″	B	UL, C-UL, FM, NYC, China, HK, VdS	W1	–	–	TFP312
175	Per NFPA	8′-0″	B	FM	W21	–	–	TFP316
175	Per NFPA	8′-0″	B	UL, C-UL, FM, VdS	W21	–	–	TFP315
175	Per NFPA	8′-0″	B	UL, C-UL, FM, NYC, LPC, VdS, HK	W2	–	–	TFP318
175	Per NFPA	8′-0″	B	UL, C-UL, FM	W8	–	–	TFP330
175	Per NFPA	6′-0″	B	UL, C-UL, FM	W8	–	–	TFP332
175	Per NFPA	6′-0″	B	UL, C-UL	W8	–	–	TFP332
175	Per NFPA	8′-0″	B	UL, C-UL, FM	W3	–	–	TFP335
175	Per NFPA	6′-0″	B, C, L, W, WOL	UL, C-UL, FM	W3	–	–	TFP340
175	Per NFPA	6′-0″	B, C, L, W, WOL	UL, C-UL, FM	W3	–	–	TFP340
175	Per NFPA	6′-0″	B, C, L, W, WOL	UL, C-UL, FM	W3	–	–	TFP340
175	Per NFPA	6′-0″	B, C, L, P, W, WOL	UL, C-UL, FM	W3	–	–	TFP342
175	Per NFPA	6′-0″	B, C, L, P, W, WOL	UL, C-UL, FM	W3	–	–	TFP342
175	Per NFPA	6′-0″	B, C, L, P, W, WOL	UL, C-UL, FM	W3	–	–	TFP342
175	Per NFPA	6′-0″	B, C, P	UL, C-UL, FM	W3	–	–	TFP344
175	Per NFPA	6′-0″	B, C, P	UL, C-UL, FM	W3	1093	YES	TFP344
175	Per NFPA	6′-0″	B	UL, C-UL, FM	W9	–	–	TFP350
175	Per NFPA	6′-0″	B	UL, C-UL, FM	W9	–	–	TFP350
175	Per NFPA	6′-0″	B, C	UL, C-UL, FM	W9	–	–	TFP355
175	Per NFPA	6′-0″	B, C	UL, C-UL, FM	W9	–	–	TFP355
175	Per NFPA	6′-0″	B, C, W, L, WOL	UL, C-UL, FM, NYC	W6	–	–	TFP351
175	Per NFPA	6′-0″	B, C, L, W, WOL	UL, C-UL, FM, NYC	W6	–	–	TFP351
175	Per NFPA	6′-0″	B, C, L	UL, C-UL, FM, NYC	W6	–	–	TFP356
175	Per NFPA	6′-0″	B, C, L	UL, C-UL, FM, NYC	W6	–	–	TFP356
175	Per NFPA	6′-0″	B, C, L, W, WOL	UL, C-UL, FM	W3	–	–	TFP340
175	Per NFPA	6′-0″	B, C, L, W, WOL	UL, C-UL, FM	W3	–	–	TFP340
175	Per NFPA	6′-0″	B, C, L, P, W, WOL	UL, C-UL, FM	W3	–	–	TFP342
175	Per NFPA	6′-0″	B, C, L, P, W, WOL	UL, C-UL, FM	W3	–	–	TFP342
175	Per NFPA	6′-0″	B, C, P	UL, C-UL, FM	W3	–	–	TFP344
175	Per NFPA	6′-0″	B	UL, FM	W9	–	–	1-4.2.11
175	Per NFPA	6′-0″	B	UL, FM	W9	–	–	1-4.2.11
175	Per NFPA	6′-0″	B	UL, FM	W9	–	–	1-4.2.12
175	Per NFPA	6′-0″	B	UL, FM	W9	–	–	1-4.2.12
175	Per NFPA	6′-0″	B	UL, FM	W9	–	–	1-4.2.11
175	Per NFPA	6′-0″	B	UL, FM	W9	–	–	1-4.2.11
175	Per NFPA	6′-0″	B	UL, FM	W9	–	–	1-4.2.12
175	Per NFPA	6′-0″	B	UL, FM	W9	–	–	1-4.2.12
175	Per NFPA	6′-0″	B	UL, FM	W9	–	–	1-4.2.11
175	Per NFPA	6′-0″	B	UL, FM	W9	–	–	1-4.2.12
175	Per NFPA	6′-0″	B	UL, FM	W9	–	–	1-4.2.11
175	Per NFPA	6′-0″	B	UL, FM	W9	–	–	1-4.2.12

SPECIFICATIONS

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

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

Residential Sprinklers

Model	SIN	Type	Response	Hazard	K Factor	Element	Thread Size inch	Temperature, °F	Maximum Pressure (PSI)
LFII	TY2234	Pendent	FR	Residential	4.9	3 mm Bulb	1/2	155, 175	175
LFII	TY1334	Horizontal Sidewall	FR	Residential	4.2	3 mm Bulb	1/2	155, 175	175
LFII	TY2284	Flush Pendent	FR	Residential	4.2	Solder	1/2	162	175
LFII	TY2596	Concealed Pendent	FR	Residential	4.2	Solder	1/2	160	175

Dry Sprinklers

Model	SIN	Type	Response	Hazard	K Factor	Element	Thread Size inch	Temperature, °F	Maximum Pressure (PSI)
DS-1	TY3155	Upright	SR	All	5.6	5 mm Bulb	1	135, 155, 175, 200, 286, 360	175
DS-1	TY3255	Pendent	SR	All	5.6	5 mm Bulb	1	135, 155, 175, 200, 286, 360	175
DS-1	TY3355	Horizontal Sidewall	SR	LH/OH	5.6	5 mm Bulb	1	135, 155, 175, 200, 286, 360	175
DS-1	TY3358	EC Horizontal Sidewall	SR	LH	5.6	5 mm Bulb	1	135, 155	175
DS-1	TY3135	Upright	QR	LH/OH	5.6	3 mm Bulb	1	135, 155, 175, 200, 286	175
DS-1	TY3235	Pendent	QR	LH/OH	5.6	3 mm Bulb	1	135, 155, 175, 200, 286	175
DS-1	TY3335	Horizontal Sidewall	QR	LH/OH	5.6	3 mm Bulb	1	135, 155, 175, 200, 286	175
DS-1	TY3338	EC Horizontal Sidewall	QR	LH	5.6	3 mm Bulb	1	135, 155	175
DS-2	TY5255	Pendent	SR	All	11.2	5 mm Bulb	1	135, 155, 175, 200, 286	175
DS-2	TY5235	Pendent	QR	LH/OH	11.2	3 mm Bulb	1	135, 155, 175, 200, 286	175
DS-2	TY5238	EC Pendent	QR/SR	LH/OH	11.2	3 mm Bulb	1	135, 155, 175, 200, 286	175

Maximum Spacing	Minimum Spacing	Sprinkler Finish	Approvals	Wrench	Recessed Wrench	Recessed Escutcheon Availability	Data Sheet
20′ x 20′	8′-0″	B, C, P	UL, C-UL, NYC	W6	W7	YES	TFP400
16′ x 20′	8′-0″	B, C, P	UL, C-UL, NYC	W6	W7	YES	TFP410
20′ x 20′	8′-0″	C, Wh	UL, C-UL	4947	–	–	TFP420
20′ x 20′	8′-0″	C, Wh	UL, C-UL, NYC	W18	–	–	TFP440

Maximum Spacing	Minimum Spacing	Sprinkler Finish	Approvals	Wrench	Recessed Wrench	Recessed Escutcheon Availability	Data Sheet
Per NFPA	6′-0″	B, C, Wh	UL, C-UL, FM, NYC	Pipe Wrench	–	–	TFP500
Per NFPA	6′-0″	B, C, Wh	UL, C-UL, FM, NYC	Pipe Wrench	W7	YES	TFP500
Per NFPA	6′-0″	B, C, Wh	UL, C-UL, FM, NYC	Pipe Wrench	–	–	TFP510
16′ x 20′	10′-0″	B, C, Wh	UL, C-UL, NYC	Pipe Wrench	W7	–	TFP520
Per NFPA	6′-0″	B, C, Wh	UL, C-UL, FM, NYC	Pipe Wrench	–	–	TFP510
Per NFPA	6′-0″	B, C, Wh	UL, C-UL, FM, NYC	Pipe Wrench	W7	YES	TFP510
Per NFPA	6′-0″	B, C, Wh	UL, C-UL, FM, NYC	Pipe Wrench	–	–	TFP500
16′ x 20′	10′-0″	B, C, Wh	UL, C-UL, NYC	Pipe Wrench	W7	–	TFP520
Per NFPA	6′-0″	B, C, Wh	UL, C-UL, NYC	Pipe Wrench	W17	YES	TFP530
Per NFPA	6′-0″	B, C, Wh	UL, C-UL, NYC	Pipe Wrench	W17	YES	TFP530
20′ x 20′	12′-6″	B, C, Wh	UL, C-UL, NYC	Pipe Wrench	W17	YES	TFP540

SPECIFICATIONS

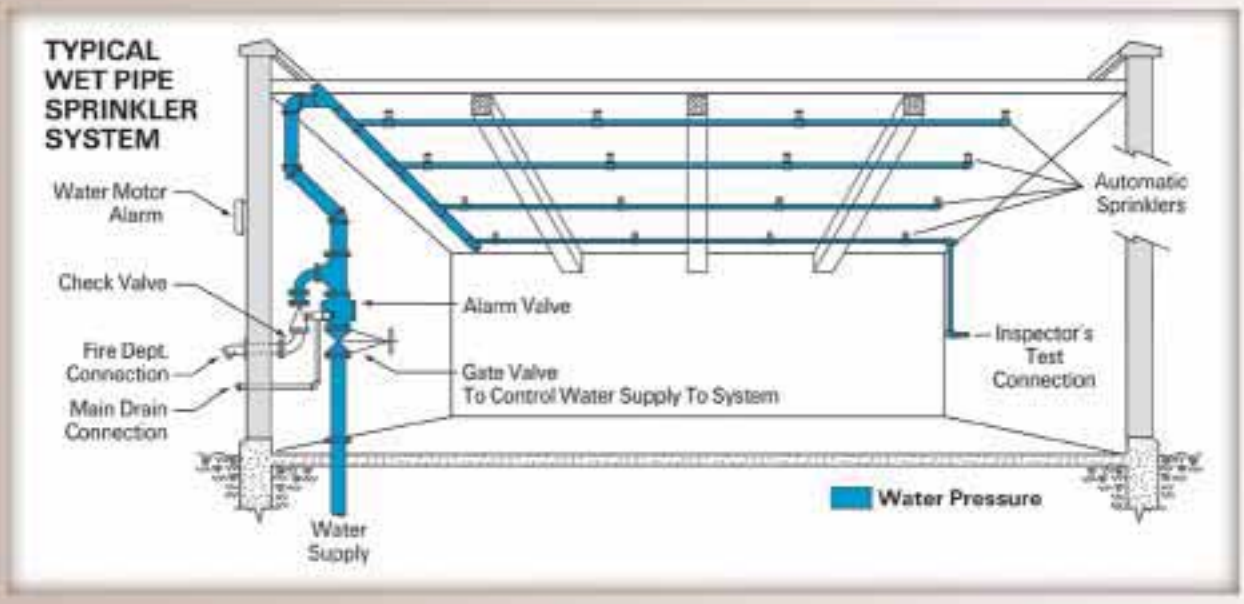
Always refer to the Technical Data Sheet for specific information.
All versions of a sprinkler may not be listed or approved.
Sprinkler Finish Legend: **B** = Brass • **BB** = Bright Brass • **C** = Chrome • **L** = Lead Coating
P = Polyester Coating (White is standard) • **Wh** = White • **W** = Wax 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

Special Sprinklers

Model	SIN	Type	Response	Hazard	K Factor	Element	Thread Size inch	Temperature, °F	Maximum Pressure (PSI)
BB1 17/32	C4180	Attic Back to Back	FR		8.0	3 mm Bulb	3/4	200	175
BB2 17/32	C4181	Attic Back to Back	FR		8.0	3 mm Bulb	3/4	200	175
BB3 17/32	C4182	Attic Back to Back	FR		8.0	3 mm Bulb	3/4	200	175
BB1	C3180	Attic Back to Back	FR		5.6	Solder	1/2	212	175
BB2	C3181	Attic Back to Back	FR		5.6	Solder	1/2	212	175
BB3	C3182	Attic Back to Back	FR		5.6	Solder	1/2	212	175
SD1	C3183	Attic Single Directional	FR		5.6	Solder	1/2	212	175
SD2	C3184	Attic Single Directional	FR		5.6	Solder	1/2	212	175
SD3	C3185	Attic Single Directional	FR		5.6	Solder	1/2	212	175
HIP	C3187	Attic Hip	FR		5.6	3 mm Bulb	1/2	200	175
WS	C3388	Window Horizontal Sidewall	FR		5.6	3 mm Bulb	1/2	155, 200	175
WS	C3488	Window Vertical Sidewall	FR		5.6	3 mm Bulb	1/2	155, 200	175
CC1	C1189	Combustible Concealed Upright	FR		2.8	3 mm Bulb	1/2	175	175
TY300-B	TY3104	High Pressure Upright	SR	All	5.6	5 mm Bulb	1/2	135, 155, 175, 200, 286, 360	300
TY300-B	TY3204	High Pressure Pendent	SR	All	5.6	5 mm Bulb	1/2	135, 155, 175, 200, 286, 360	300
TY300-B	TY3304	High Pressure Horizontal Sidewall	SR	LH/OH	5.6	5 mm Bulb	1/2	135, 155, 175, 200, 286, 360	300
TY300-FRB	TY3105	High Pressure Upright	QR	LH/OH	5.6	3 mm Bulb	1/2	135, 155, 175, 200, 286	300
TY300-FRB	TY3205	High Pressure Pendent	QR	LH/OH	5.6	3 mm Bulb	1/2	135, 155, 175, 200, 286	300
TY300-FRB	TY3305	High Pressure Horizontal Sidewall	QR	LH/OH	5.6	3 mm Bulb	1/2	135, 155, 175, 200, 286	300
TY300-FRB	TY3307	High Pressure EC Horizontal Sidewall	QR/SR	LH	5.6	3 mm Bulb	1/2	135, 155, 175	300
TFP PH2	TY3290	Institutional Pendent	SR	All	5.6	Solder	1/2	135, 165, 212	175
TFP PH5	TY3390	Institutional Horizontal Sidewall	SR	LH/OH	5.6	Solder	1/2	135	175
TFP MAX	TY3291	Institutional Pendent	QR	LH/OH	5.6	2.5 mm Bulb	1/2	135, 155, 175, 200	175
TFP MAX	TY3391	Institutional Horizontal Sidewall	QR	LH/OH	5.6	2.5 mm Bulb	1/2	135, 155, 175, 200	175
D	G1036	Upright (High Temperature)	SR	All	5.6	11 mm Bulb	1/2	400, 500, 650	175
D	G1040	Pendent (High Temperature)	SR	All	5.6	11 mm Bulb	1/2	400, 500, 650	175
D	G1136	Upright (High Temperature)	SR	All	8.0	11 mm Bulb	3/4	400, 500	175
D	G1140	Pendent (High Temperature)	SR	All	8.0	11 mm Bulb	3/4	400, 500	175
S.S.		Upright (Stainless Steel)	SR	All	5.6	11 mm Bulb	1/2	135, 155, 175, 200	175
S.S.		Pendent (Stainless Steel)	SR	All	5.6	11 mm Bulb	1/2	135, 155, 175, 200	175
TY-B	TY3641	Conventional (Old Style)	Special	All	80	4 mm Bulb	1/2	135, 155, 175, 200, 286, 360	175
TY-B	TY4641	Conventional (Old Style)	Special	All	115	4 mm Bulb	3/4	135, 155, 175, 200, 286, 360	175
TY-B	TY2149	Upright	Special	LH	57	4 mm Bulb	ISO 3/8	135, 155, 175, 200, 286, 360	175
TY-B	TY3141	Upright	Special	All	80	4 mm Bulb	1/2	135, 155, 175, 200, 286, 360	175
TY-B	TY4141	Upright	Special	All	115	4 mm Bulb	3/4	135, 155, 175, 200, 286, 360	175
TY-B	TY2249	Pendent	Special	LH	57	4 mm Bulb	ISO 3/8	135, 155, 175, 200, 286, 360	175
TY-B	TY3241	Pendent	Special	All	80	4 mm Bulb	1/2	135, 155, 175, 200, 286, 360	175
TY-B	TY4241	Pendent	Special	All	115	4 mm Bulb	3/4	135, 155, 175, 200, 286, 360	175
TY-B	TY3651	Conventional (Old Style)	SR	All	5.6	5 mm Bulb	1/2	135, 155, 175, 200, 286, 360	175
TY-B	TY4651	Conventional (Old Style)	SR	All	8.0	5 mm Bulb	3/4	135, 155, 175, 200, 286, 360	175
TY-FRB	TY3631	Conventional (Old Style)	QR	LH/OH	5.6	3 mm Bulb	1/2	135, 155, 175, 200, 286	175
TY-FRB	TY4631	Conventional (Old Style)	QR	LH/OH	8.0	3 mm Bulb	3/4	135, 155, 175, 200, 286	175

Maximum Spacing	Minimum Spacing	Sprinkler Finish	Approvals	Wrench	Recessed Wrench	Recessed Escutcheon Availability	Data Sheet
400 sq. ft.	4′-0″	B	UL, ULC	W3	–	–	6-1.0
400 sq. ft.	4′-0″	B	UL, ULC	W3	–	–	6-1.0
400 sq. ft.	4′-0″	B	UL, ULC	W3	–	–	6-1.0
400 sq. ft.	4′-0″	B	UL, ULC	Adjustable Wrench	–	–	6-1.0
400 sq. ft.	4′-0″	B	UL, ULC	Adjustable Wrench	–	–	6-1.0
400 sq. ft.	4′-0″	B	UL, ULC	Adjustable Wrench	–	–	6-1.0
-	4′-0″	B	UL, ULC	Adjustable Wrench	–	–	6-1.0
-	4′-0″	B	UL, ULC	Adjustable Wrench	–	–	6-1.0
-	4′-0″	B	UL, ULC	Adjustable Wrench	–	–	6-1.0
-	4′-0″	B	UL, ULC	1106	–	–	6-1.0
-	6′-0″	B, C, P	UL, C-UL, ULC, NYC	1106	–	–	6-2.0
-	6′-0″	B, C, P	UL, C-UL, ULC, NYC	1106	–	–	6-2.0
100 sq. ft.	6′-0″	B	UL, C-UL, NYC	1106	–	–	6-3.0
Per NFPA	6′-0″	B, C, P	UL, C-UL, NYC	W6	–	–	TFP640
Per NFPA	6′-0″	B, C, P	UL, C-UL, NYC	W6	W7	YES	TFP640
16′ x 22′	10′-0″	B, C, P	UL, C-UL, NYC	W6	–	–	TFP640
Per NFPA	6′-0″	B, C, P	UL, C-UL, NYC	W6	–	–	TFP642
Per NFPA	6′-0″	B, C, P	UL, C-UL, NYC	W6	W7	YES	TFP642
Per NFPA	6′-0″	B, C, P	UL, C-UL, NYC	W6	W7	YES	TFP642
16′ x 22′	10′-0″	B, C, P	UL, C-UL, NYC	W6	W7	YES	TFP642
Per NFPA	6′-0″	C	UL, C-UL, NYC	1509-3	–	–	TFP650
Per NFPA	6′-0″	C	UL, C-UL, NYC	1509-3	–	–	TFP654
Per NFPA	6′-0″	C	UL, C-UL, NYC	1509-3	–	–	TFP652
Per NFPA	6′-0″	C	UL, C-UL, NYC	1509-3	–	–	TFP656
Per NFPA	6′-0″	B, C, L	UL, ULC, FM, NYC, LPC	W11	–	–	TD525M
Per NFPA	6′-0″	B, C, L	UL, ULC, NYC	W11	–	–	TD525M
Per NFPA	6′-0″	B, C, L	UL, ULC, NYC	W11	–	–	TD527Q
Per NFPA	6′-0″	B, C, L	UL, ULC, NYC	W11	–	–	TD527Q
Per NFPA	6′-0″	Stainless Steel	–	W11	–	–	TD581M
Per NFPA	6′-0″	Stainless Steel	–	W11	–	–	TD581M
Per VdS		B, C, P	VdS	W6 or W7	–	–	TFP663
Per VdS		B, C, P	VdS	W6 or W7	–	–	TFP663
Per VdS		B, C, P	VdS	W6 or W7	–	–	TFP672
Per VdS		B, C, P	VdS	W6 or W7	–	–	TFP672
Per VdS		B, C, P	VdS	W6 or W7	–	–	TFP672
Per VdS		B, C, P	VdS	W6 or W7	–	–	TFP672
Per VdS		B, C, P	VdS	W6 or W7	–	–	TFP672
Per VdS		B, C, P	VdS	W6 or W7	–	–	TFP672
Per NFPA	6′-0″	B, C, P, W, L, WOL	UL, C-UL, LPC, VdS, NYC	W6	–	–	TFP661
Per NFPA	6′-0″	B, C, P, W, L, WOL	UL, C-UL, LPC, VdS, NYC	W6	–	–	TFP661
Per NFPA	6′-0″	B, C, P, L	UL, C-UL, LPC, VdS, NYC	W6	–	–	TFP666
Per NFPA	6′-0″	B, C, P, L	UL, C-UL, LPC, VdS, NYC	W6	–	–	TFP666

SPECIFICATIONS



Wet Pipe Sprinkler Systems are designed for use in applications where the temperature is maintained above freezing. In such systems each line is fully pressurized so that water is discharged from a sprinkler head immediately after actuation.

Alarm check valves or water flow detectors are used to actuate local and remote alarms. Typical applications include heated warehouses, factories, hospitals, stores, shopping centers and residential settings such as apartment or condominium complexes, and single family residences.

F20, F200 & F2001

Alarm Valve

Tech Data **TD100 & TD102**

- 2-1/2" (65 mm) Alarm Valves may be installed vertically
- 4", 6", and 8" (100mm, 150mm, and 200mm) Alarm Valves may be installed vertically or horizontally
- F20 (Groove x Groove), F200 (Flange x Flange), and F2001 (Flange x Groove) Alarm Valves are divided seat ring, rubber-faced clapper, check type, water flow alarm valves
- For use in wet pipe (automatic sprinkler) fire protection system
- Automatically actuates electrically and/or hydraulically operated alarms when there is a steady flow equivalent to the discharge rate for one or more sprinklers
- Optional Retard Chamber used in installations subject to variable pressure (generally associated with public water supplies) to help prevent false alarms

Alarm Valve Trim

Contact a TFBP distributor for details

- Semi-preassembled trim provides a quick and convenient method for trimming valve risers
- Modular pre-assembly minimizes time required to complete the valve trim

Model F & G

Alarm Valves

Contact a TFBP distributor for details

- Available sizes: 2-1/2" through 8"
- Wet pipe sprinkler system installations utilize a water supply check valve in buildings not subject to freezing temperatures and where a water motor alarm is desirable
- Designed so that water pressure is isolated from the alarm devices such as pressure alarm switches and water motor alarms
- Once activated, water flowing through the alarm valve trim piping will activate an alarm

590FR

Riser Check Valve

Tech Data 14-1.0

- Available sizes: 2-1/2" through 8"
- Intended for use in a wet type automatic sprinkler system riser
- Furnished with grooved ends that are compatible with grooved pipe and couplings
- Can be installed with ANSI class 150 or 300 Flanges utilizing flange adapters
- Designed with a removable cover for ease of field maintenance
- Standard seal is grade "E" EPDM
- Maximum rated working pressure is 300 psi (20,68 bar)

F540

Residential Domestic Shutoff Valve – 1" & 2"

Tech Data TD195 & TD196

- 1" size is designed for most single family homes (NFPA 13D)
- 2" size is designed for multi-family demand (NFPA 13R)
- During the design of a residential sprinkler system, domestic water use should be taken into consideration unless the domestic supply can be stopped when a sprinkler operates
- When a sprinkler operates, water supply is automatically diverted from the domestic system to the sprinkler system
- Eliminates the need for pumps, pressurized storage tanks, or electrically operated domestic shutoff valves
- Valve automatically resets after the fire protection system is returned to normal service

513/513D/513R

Riser Manifold

Tech Data 28-1.0

- Available sizes: 1" & 1-1/2" (threaded) and 1-1/2" through 6" (grooved)
- Provides all of the accessory equipment for a system riser in a single assembly
- Availability in different configrations allows cost-effective riser installation in commercial (NFPA 13) systems, high rises requiring floor control assemblies, and residential systems (NFPA 13R/13D)

SYSTEMS

Resi-Riser

Contact a TFBP distributor for details

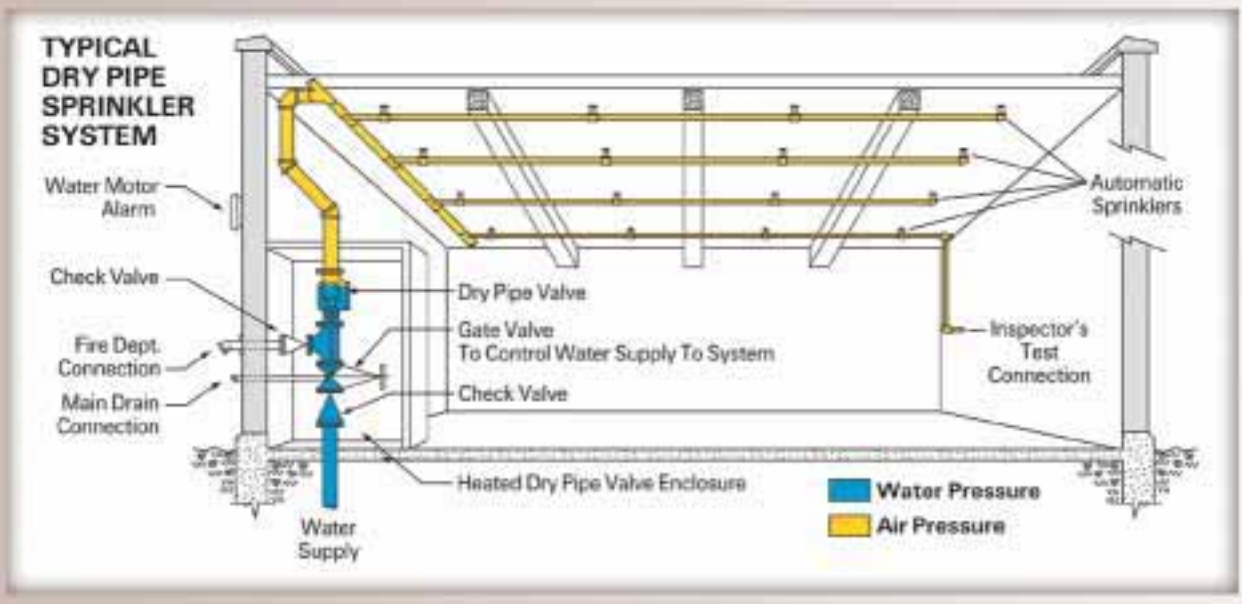
- Available sizes: 1"- 2" (25-50 mm)
- Compact, pre-assembled, ready to install sprinkler riser
- Brass construction for use in potable water supply
- Integral test and drain assembly, flow switch with retard mechanism, 300 psi gauge, and check valve
- Compact size allows for easy installation between 2" x 4" studs in wall
- Molded mounting points allow for fast and easy left or right hand installation
- Available with or without pressure relief valve or flow switch retard mechanism features

WMA-1

Water Motor Alarm

Tech Data **TFP921**

- Hydraulically operated outdoor alarm designed for use with appropriate fire protection system valves (alarm, dry, deluge)
- Supplied by dedicated outlet in valve trim line or retard chamber
- Uses energy-efficient lightweight impeller design capable of producing very high sound level
- Other features: corrosion-resistant aluminum alloy gong, gong-mount, water motor housing and Delrin bearings - which do not require lubrication - for long life
- May be mounted on any type of wall
- Can accommodate range of wall thicknesses from 2" to 18" (50 to 450 mm)
- Furnished with approved 3/4" (20 mm) Y-strainer for use in alarm line



Dry Pipe Sprinkler Systems are designed for use in applications where the piping and sprinklers can be subjected to freezing temperatures. Valving for the system, however, must be installed in areas that are not subject to freezing, as this portion of the system does contain water. In most dry pipe systems, pipe lines

to the sprinklers are pressurized with air, but nitrogen can also be used. When pressure in the system is lost through the actuation of a sprinkler head, the dry pipe valve trips and releases water into the system and activates alarms. The system may be equipped with automatic or manual air supply controls and air supervisory devices with appropriate trouble alarms. Accessory items, such as dry pipe valve accelerators that increase the speed of system operation, and pressure switches that are used to activate electric alarms, may be used to enhance the system. Typical applications for dry pipe sprinkler systems include unheated warehouses, parking garages, store windows, attic spaces, loading docks, and other areas exposed to freezing temperatures.

F3061

Dry Pipe Valves – 2" & 3"

Tech Data TD106

- Available sizes: 2" (50 mm) and 3" (80 mm)
- Flange x Groove body style
- Differential dry valves
- Valve operates when the system air pressure is reduced to approximately one-sixth of the system water pressure
- Used to supply sprinkler installations in which sprinklers are subjected to freezing conditions (40°F / 4°C or less)
- Trim and valve are rated for use at a maximum service pressure of 175 psi (12,1 bar)
- Listings and Approvals: UL, ULC, and FM

DPV-1

Dry Pipe Valve – 4" & 6"

Tech Data TFP1041

- Available sizes: 4" (100 mm) and 6" (150 mm)
- External reset differential dry pipe valves
- Used in larger dry pipe sprinkler systems
- Available as Flange x Flange, Flange x Groove, or Groove x Groove
- Unique, offset clapper design minimizes external valve size
- Used to supply sprinkler installations in which sprinklers are subjected to freezing conditions (40°F / 4°C or less)
- Rated for use at a maximum service pressure of 250 psi (17.2 bar)
- Listings and Approvals: UL, C-UL, and FM

Dry Pipe Valve Trim

Contact a TFBP distributor for details

- Semi-preassembled trim provides a quick and convenient method for trimming valve risers
- Modular pre-assembly minimizes field time installation

SYSTEMS

QRS — Electronic Dry Pipe Valve Accelerator

Tech Data TFP1100

- Maximum Working Air Pressure 70 psi (4,8 bar)
- Quick opening device intended to reduce the time for dry pipe valve operation following the operation of one or more automatic sprinklers
- Automatically adjusts to both small and slow changes in system pressure, but trips with a steady drop in pressure (as in the case of sprinkler operation)
- For retro-fit of existing mechanical accelerators
- Fully assembled package includes switch, solenoid, control panel, and accelerator trim pipe and fittings
- Operation of the dry pipe valve within four seconds -independent of various combinations of system initial air pressures, system volumes, or sprinkler K Factors
- Built-in low pressure and high pressure alarm supervision
- Proven electronic release technology as used for electrically operated deluge and preaction systems
- Battery back-up in the event of primary power failure
- Eliminates re-setting problems often incurred with traditional mechanical accelerators
- Listings and Approvals: UL, FM

ACC-1 — Dry Pipe Valve Accelerator

Tech Data TFP1112

- Designed for use with Model DPV-1 dry pipe valves
- Hastens operation of the dry pipe valve upon loss of air pressure
- Automatically adjusts to small or slow changes in system pressure but trips upon a rapid and steady drop in pressure
- Upon tripping, it transmits system air pressure to the intermediate chamber of the dry pipe valve which neutralizes the differential pressure holding the valve closed and opens the waterway clapper
- Designed to trip when system air pressure drops at a rate exceeding approximately 1 psi/minute (0.07 bar/min)
- Rated for use at a maximum water supply pressure of 250 psi (17,2 bar) and a maximum system air (or nitrogen) pressure of 70 psi (4,8 bar)
- Listings and Approvals: UL, ULC, FM, LPC, SSL, and VdS

BB — Exhauster – 2"

Tech Data 2-5.2.10

- Attaches to a dry pipe system to quickly exhaust air from the system and reduce the amount of time required for water to fill the system
- In the event of a fire, one or more sprinklers open, resulting in a drop in air pressure that causes the exhauster to open
- Operation of the exhauster discharges air equaling approximately 15 sprinklers
- Listings and Approvals: UL, ULC, FM, LPC

AMD-1 Air Maintenance Device, Pressure Reducing Type

Tech Data TFP1221

- Field adjustable
- Used in systems where compressed air or nitrogen source is available
- Used in systems in which the air or nitrogen supply is at a higher pressure than is desired for a sprinkler system or dry pilot line system
- Listings and Approvals: UL, ULC, and FM

QUICK OPENING DEVICES PAGE 48

AIR MAINTENANCE DEVICES PAGE 49

AMD-2 Air Maintenance Device, Compressor (small w/o tank) Control Type

Tech Data TFP1231

- Field adjustable
- Used in conjunction with a small, non-tank-mounted air compressor
- Monitors sprinkler system or dry pilot line system air pressure and automatically cycles the compressor to maintain system pressure within preset limits
- Listings and Approvals: UL, ULC, and FM

AMD-3 Nitrogen Maintenance Device, High Pressure (Cylinder) Reducing Type

Tech Data TFP1241

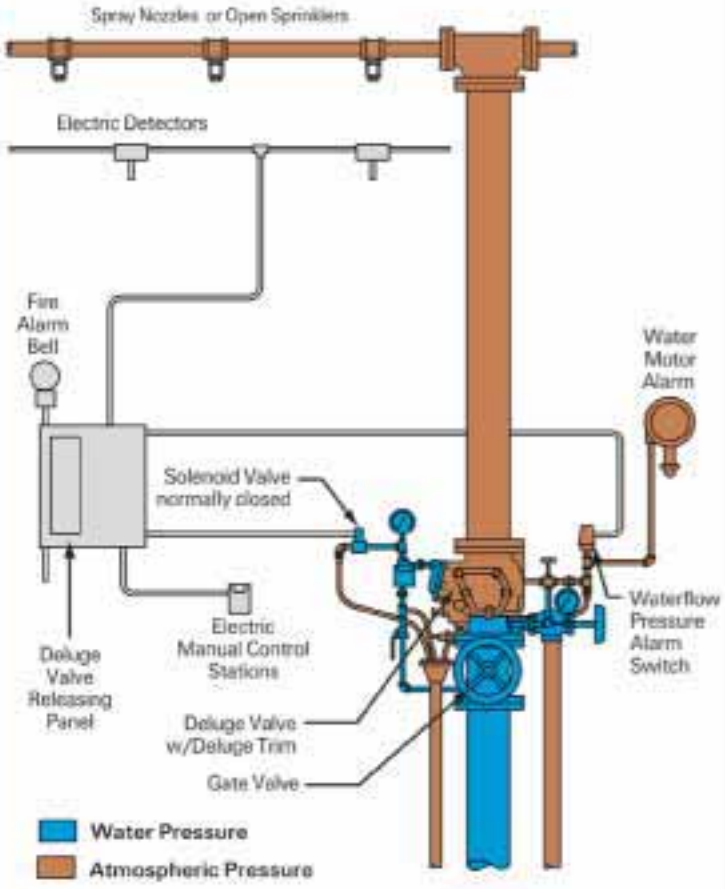
- Field adjustable
- Used in conjunction with a cylinder of high pressure nitrogen to control the nitrogen pressure in a sprinkler system or a dry pilot line system
- Listings and Approvals: UL, ULC, and FM

Deluge Valve & Deluge Systems

The “deluge valve” is the automatic water control valve that is used to control water flow into deluge, preaction, and special types of fire protection systems in response to a fire.

Deluge fire protection systems are normally used in special hazard installations where an entire area application of water is required for protection. Typical applications may include flammable liquid handling and storage areas, aircraft hangars, and other high-hazard installations where water is the most effective extinguishing agent. Deluge systems employ open sprinklers or spray nozzles attached to a piping system. The system is connected to a water supply through the deluge valve. This valve is opened by the operation of a fire detection system installed in the same areas as the open sprinklers or nozzles. Deluge systems may be activated by wet or dry pilot sprinklers, or electric detectors. When the deluge valve opens, water flows into the piping system and discharges from all open sprinklers and nozzles.

Electric Detection Shown



Single Interlock Preaction Systems

Single interlock preaction systems are used to protect areas where there is danger of serious water damage that might result from damaged automatic sprinklers or piping. Typically, such areas include computer rooms, storage areas for valuable artifacts, libraries and archives. Also, preaction systems are effectively used to protect properties where a prealarm of a possible fire condition may allow time for fire extinguishment by alternate suppression means, prior to a sprinkler discharge. In the event the fire cannot otherwise be extinguished, the preaction sprinkler system will then perform as the primary fire protection system.

Single interlock preaction systems employ automatic sprinklers attached to a piping system containing 10 psi (0,7 bar) supervisory pressure, with a supplemental electric fire detection system installed in the same area as the sprinklers. Preaction systems with 10 psi (0,7 bar) supervisory pressure may also be

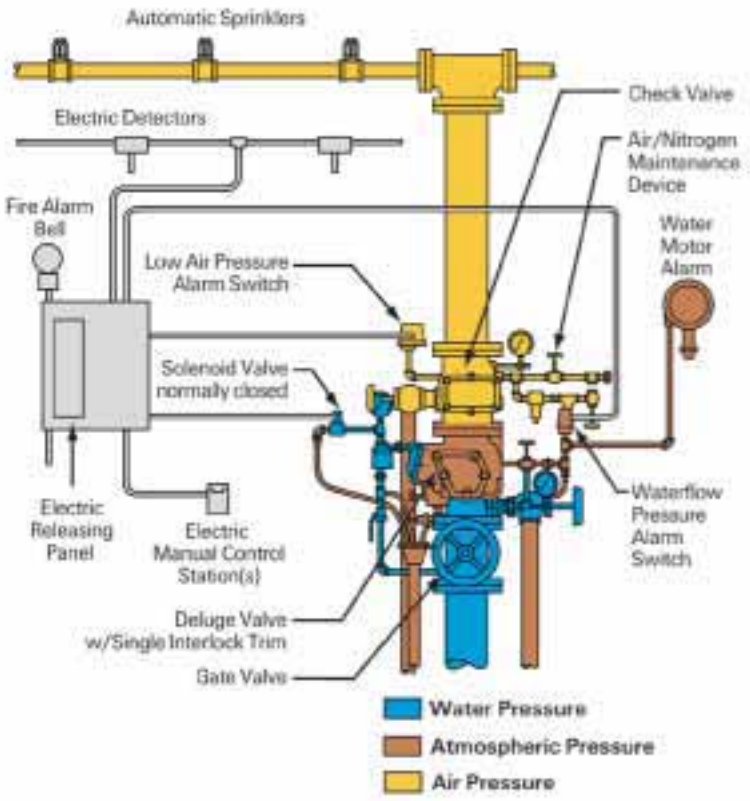
Double Interlock Preaction Systems

Double interlock preaction systems are designed for applications such as refrigerated areas that require the maximum degree of protection against an inadvertent operation that could result in unnecessary flooding of the sprinkler system piping.

The double interlock system consists of a deluge valve and swing check valve with releasing trim featuring both a solenoid valve and a dry pilot actuator in a series configuration. The swing check valve isolates the body of the deluge valve from the system air or nitrogen pressure that holds the dry pilot actuator closed. The solenoid valve remains closed until it is electrically energized by a deluge releasing panel that responds to the operation of a fire detection device.

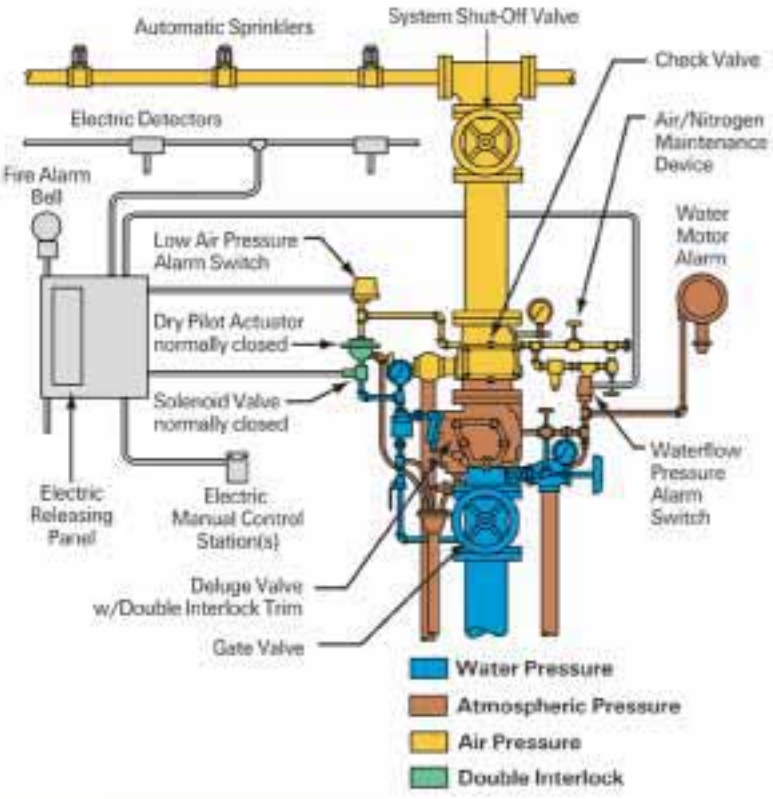
In order to actuate the double interlock preaction system, two independent events, caused by a fire condition, must occur. The sprinkler system piping must lose air or nitrogen pressure due to the operation of one

Electric Shown



activated by either wet or dry pilot sprinklers instead of electric detectors. Actuation of the fire detection system from a fire opens the deluge valve, allowing water to flow into the sprinkler piping system and to be discharged only from those sprinklers that have been operated by heat over the fire. Loss of supervisory pressure from the system piping as a result of damaged sprinklers or broken piping will activate a trouble alarm to indicate impairment of the system. The deluge valve will not open due to loss of supervisory pressure.

Pneumatic/Electric Shown



or more sprinklers, and the deluge releasing panel must energize and open the solenoid valve upon the operation of a fire detection device.

The double interlock system will operate only when both the dry pilot actuator and the solenoid valve are open at the same time. Opening of the dry pilot actuator only (for example: a forklift truck accidentally dislodges a sprinkler) or of the solenoid valve only (for example: accidental operation of an electric manual pull station) will cause an alarm, and will not trip the system or flood the sprinkler system piping.

DV-5 Deluge Valve, External Resetting Diaphragm Style – 1-1/2" through 8"

Tech Data TFP1305

- Available sizes: 1-½", 2", 3", 4", 6", and 8"
- Vertical or horizontal installation
- One internal working part
- No linkage or clapper assembly
- Light weight ductile iron body
- Available with deluge and single & double interlock preaction trim
- Internally & externally coated
- Features external resetting
- Diaphragm operation
- For most seawater & brackish water supplies
- For deluge, preaction & foam systems
- Available as Flange x Flange, Flange x Groove, or Groove x Groove body styles
- Rated for 250 psi service
- Listings and Approvals: UL, C-UL, and FM

DV-1 External Resetting Deluge Valve – 4" & 6"

Tech Data TFP1330

- Available sizes: 4" (100 mm) and 6" (150 mm)
- Used as a system control valve in deluge, and single and double interlock preaction systems
- Can be reset externally without having to remove the hand-hole cover and unlatch the waterway clapper
- Positive mechanical latching style valve
- Available with three actuation trim arrangements: wet pilot, dry pilot, and electric
- Single and double interlock preaction trims available
- Rated for 175 psi (12.1 bar) maximum service pressure
- Listings and Approvals: UL, ULC, FM, LPC, and SSL

F445/F446 Deluge Valve, Automatic Resetting – 2-1/2"

Tech Data TD114 & TD114M

- 2-½" (65 mm), right angle type deluge valves
- Available with either a grooved or threaded inlet and outlet
- For use as a control valve in deluge, or single or double interlock preaction systems
- Can be reset externally without having to open a hand-hole cover to manually unlatch and set the center valve
- Trim arrangements provide wet pilot, dry pilot, and electric actuation
- Valves may be installed with the outlet facing either left or right
- F445 – 175 psi, F446 – 250 psi
- Listings and Approvals: UL, ULC, FM, LPC, and SSL.

B Flooding

Deluge Valve – 2"

Tech Data TD117A

- 2" NPT (50 mm) deluge valve
- Used as the system control valve in deluge, and single and double interlock preaction systems
- Actuates fire alarms when the system operates
- Can be equipped with various trim arrangements for actuation by manual, pneumatic, electric, and hydraulic devices such as break-glass control station, electric detectors, and dry pilot or wet pilot sprinklers
- Trip ratio of approximately two and one half to one
- Rated for use at 175 psi (12,1 bar) maximum service pressure
- Listings and Approvals: UL, ULC, FM, LPC, and SSL

F430

Thermal Control Valves

Tech Data TD150

- 1" and 1-1/2"
- Valve is actuated by a thermally sensitive solder link that is mounted to the valve body
- Rated for use at 175 psi (12,1 bar) maximum service pressure
- Listings and Approvals: UL, ULC, FM, LPC, and SSL

RED-E CABINET*

Integrated Fire Protection Packages

Tech Data TD1110

- Complete riser assembly enclosed within a free-standing cabinet
- Package is preassembled with all trim installed and electric switches prewired, making the connections for power, local, remote alarms, and other external electrical functions the only electrical connections needed to complete the installation
- Cabinet is constructed from 14 gauge steel
- Door is hinged for easy access
- Windows are provided for viewing system gauges and other functions
- Grooved connections are provided on the supply and discharge sides of the valve assembly for easy connections to the supply and system piping
- Available in deluge, single, and double interlocked preaction system configurations in a variety of valve sizes
- The electrical control panel for the systems is normally a Potter 4410 releasing panel, but other controls are available upon request
- Can be piped from either side for supply and drain functions
- Discharge is vertical
- Listings and Approvals: All components - UL, C-UC, ULC, and FM

General Purpose Valves are for use in fire protection service applications where it is necessary to prevent reverse flow, or where system shut-off or sectional control is desired for closing a fire protection system after operation, or to facilitate testing.

590F

Check Valve – 2-1/2" through 8"

Tech Data 14-2.0

- 2-1/2" through 8" check valves
- Can be installed either vertically or horizontally
- Cut groove inlet and outlet connections
- Suitable for use with grooved pipe couplings that are listed or approved for fire protection service
- Rated for use at a maximum pressure of 300 psi (20,7 bar)
- Listings and Approvals: UL, ULC, FM

570/580

Butterfly Valve – 2-1/2" through 12"

Tech Data 15-3.0

- 2-1/2" through 12" butterfly valves
- Gear operator standard
- Used when visual indication of whether valve is open or closed is required
- Cut groove inlet and outlet connections
- Provided with or without internal supervisory switches
- 570 – 175 psi (12,1 bar)
  580 – 300 psi (20,7 bar)
- Listings and Approvals: UL, ULC, and FM

F52, F520 & F5201

Check Valves – 4", 6" & 8"

Tech Data **TD320**

- Rubber faced swing check valves
- May be installed vertically or horizontally
- Can be used for gravity and pressure tank connections, connections from public water supplies to automatic sprinkler systems, fire pump discharge and by-pass connections and in preaction systems having a nominal supervisory pressure of 1.5 psi (0.10 bar) or greater
- Listings and Approvals: UL, ULC, and FM

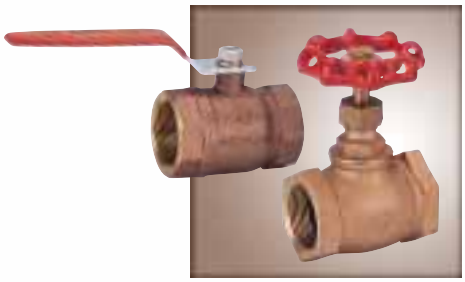
SIZE	MODEL F52 GROOVE X GROOVE	MODEL F520 FLANGE X FLANGE	MODEL F5201 FLANGE X GROOVE
4" (100 mm)	■	■	■
6" (150 mm)	■	■	■
8" (200 mm)	–	■	■

■ = available

Trim Valves

Contact a TFBP distributor for details

- Designed for general service as shut-off, throttling, or drain valves
- Provide positive shut-off under normal operating conditions



Butterfly Valves *"Butterball"*

Contact a TFBP distributor for details

- Bronze body butterfly valves are designed specifically for fire protection applications
- Feature slow closure which substantially minimizes water hammer
- May be used as sectional or small system control valves where a distinct visual indication of the valve status is required
- BB-SCS01 has built in tamper resistant SPDT switch for use where proprietary or central station supervision of open position of valve is required
- Both models available in 2" and 2-½" NPT
- Rated for use at a maximum service pressure of 175 psi (12.1 bar)
- Listings and Approvals: UL, ULC, and FM

Issue C

Fusible Links – 50 lb.

Tech Data **TD431**

- Heat-activated releasing device designed for installation in mechanically operated systems requiring a positive acting release mechanism
- Used extensively as releasing devices in restaurants and industrial fire protection systems, as well as in heat-activated counterbalanced systems such as fire doors, dampers and kitchen chemical systems
- Consists of fusible alloy sealed in the center of a bronze tube by a stainless steel ball
- When the alloy melts, the fusible assembly compresses, allowing it to eject from between the two-piece strut, strut assembly separates, activating the intended fire protection system or device
- Releasing mechanism rated for 5-lb. to 50-lb. loads
- Listings and Approvals: UL and FM

Model A & B

Pipe Line Strainers

Tech Data **TD401 (Model A)**
TD402 (Model B)

- Model A available sizes: 3" through 10" (80mm through 250 mm)
  - Bodies are welded steel
  - 150 lb. flanges.
  - Cast iron reducing inlet flanges and blind flanges complete the assembly
  - Entire assembly is hot dipped galvanized
- Model B available sizes: 3" - 8" (80mm through 200 mm)
  - Bodies of 3", 4" and 6" B-1 strainers are cast iron flanged tees
  - 8" B-1 strainers are pieces of welded Schedule 30 steel pipe and Class 150 steel flanges
- Both are rated for use in services up to 175 psi (12.1 bar)
- Both have Listings and Approvals: UL and FM

Model B shown

Model C

Pipe Line Strainers

Tech Data **TD402M**

- Available sizes:
  - 6" x 6" (150 mm x 150 mm)
  - 8" x 8" (200 mm x 200 mm)
  - 8" with 2 - 6" outlets (200 mm with 2 - 150 mm outlets)
  - 10" x 8" with 2 - 8" outlets (250 mm with 2 - 200 mm outlets)
- Compact lightweight welded hot dipped galvanized assembly with flanged inlet, outlet and flushing connection
- Corrosion resistant Type 304 stainless steel screen especially designed for low pressure loss
- Rated for use in services up to 250 psi (17.2 bar)
- Listings and Approvals: UL, C-UL and FM

Signs

Identification Signs

Tech Data **28-9.0**

- Designed to provide information to the end user about the sprinkler system and its components
- Available with a variety of wording combinations to meet the signing requirements of NFPA 13

86

Straight 90 Degree, Fire Department Connections

Tech Data **28-7.0**

- Designed for fire department use to increase pressure and volume to automatic sprinkler system or standard-pipe system
- Available in both 90° side outlet pattern and the straight through siamese pattern

F789

Automatic Drain (Ball Drip) Valve

Tech Data **TD425**

- Automatically drains water from fire protection equipment *(under low pressure)*
- Provides visual indication of leakage past a check valve
- Automatically drains off condensate in fire protection systems
- Listings and Approvals: UL and FM

F350

Sectional Test & Drain

Tech Data **TD455**

- Integral sight-glass assembly
- Simplified method of testing waterflow alarms and draining sections of fire protection systems
- Listings and Approvals: UL and FM

Hangers

Pipe Hangers

Contact a TFBP distributor for details

- A full-line of pipe hangers for every fire protection need
- Manufactured to meet the quality standards that the industry demands
- Meet the requirements of NFPA 13

SPECIALTY ITEMS

40-5 Strap

Tech Data 21-2.0

- An economical alternative to welded pipe outlets on steel pipe. It may be used with full lengths of pipe and eliminates threading and welding, decreasing installation time
- May be used on 175 psi in fire protection wet, dry pipe, deluge and preaction systems

Ductile Iron Thread Fittings

Tech Data 21-3.0

- Ductile Iron provides 300 psi (standard) rated fittings
- Full complement of sizes in tee & elbows, and reducing tees & elbows

Details of Tyco's Limited 10 Year Warranty are available in the CENTRAL*, GEM*, & STAR* Pricebooks.

Visit www.tyco-fire.com or any of the brand websites for more information.

Grooved Piping Products are ISO 9001 Certified and are manufactured in our state-of-the-art domestic ductile iron foundry and manufacturing facilities. Our Disamatic molding centers have the ability to cast ductile iron products to extremely close tolerances. Computer controlled data systems in the foundry ensure that all equipment and processes are operating within specified guidelines. Rubber gaskets and components are injection molded at our facility using innovative processes to ensure compliance with exacting tolerances and specifications.

ISO 9001 Your Technology Partner

Tyco Fire & Building Products is committed to maintaining its leadership role in the grooved piping industry through aggressive research and development. The products that will improve our industry tomorrow are being designed today. With this level of investment and commitment, TFBP Grooved Piping Products is becoming the industry standard.

Grooved Fittings

Tech Data 18-1.0

- Provide an economical and efficient method of changing direction, adding an outlet, reducing or capping grooved piping systems
- Increased internal diameter resulting in increased flow characteristics
- Full back stop behind the groove to ensure proper coupling engagement and rigidity versus serrated back stop found on competitors' fittings
- Full flow standard end-to-end dimensions
- Specifically engineered for the fire protection industry
- 300 psi pressure rated

Figure 730

Mechanical Tees

Tech Data 18-6.0

- Mechanical outlet tees may be used for any tee connection where a threaded or grooved outlet is needed. They may be converted to a cross when necessary

GROOVED

Figure 705 — Flexible Coupling

Tech Data 18-2.0

- Used with 1-1/2" through 12" piping to provide ease of installation
- Provides the needed flexibility to accommodate differential movement

Figure 772 — Rigid Coupling

Tech Data 18-5.0

- Available sizes: 1-1/2" through 12"
- Specifically designed to give secure rigidity in grooved piping systems

Figure 707 — Heavy Duty Flexible Coupling

Tech Data 18-4.0

- Used with 1-1/2" - 24" piping to provide ease of installation
- Provides needed flexibility for movement

Figure 716 — Flexible Reducing Coupling

Tech Data 18-3.0

- Reducing coupling allows easy transition between two different size pipes
- Faster and easier than threading, welding or using flanges

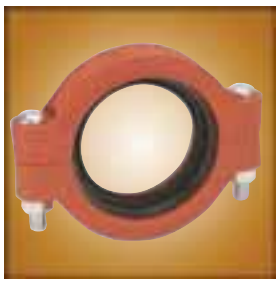


Figure 71 — Flange Adapter

Tech Data 18.8.0

- Allows a direct transition from flanged components to a grooved piping system
- Bolt patterns conform to ANSI Class 125 and 150 standards

ADACAP*

Tech Data 18-1.0

- Used to install the last sprinkler head on grooved branch line piping or as a drain fitting
- End-of-the-line sprinkler fittings inclusive of an end cap and female outlet
- Can be turned down for end of line drain
- Available in 1/2", 3/4" and 1" outlets

Galvanized Products

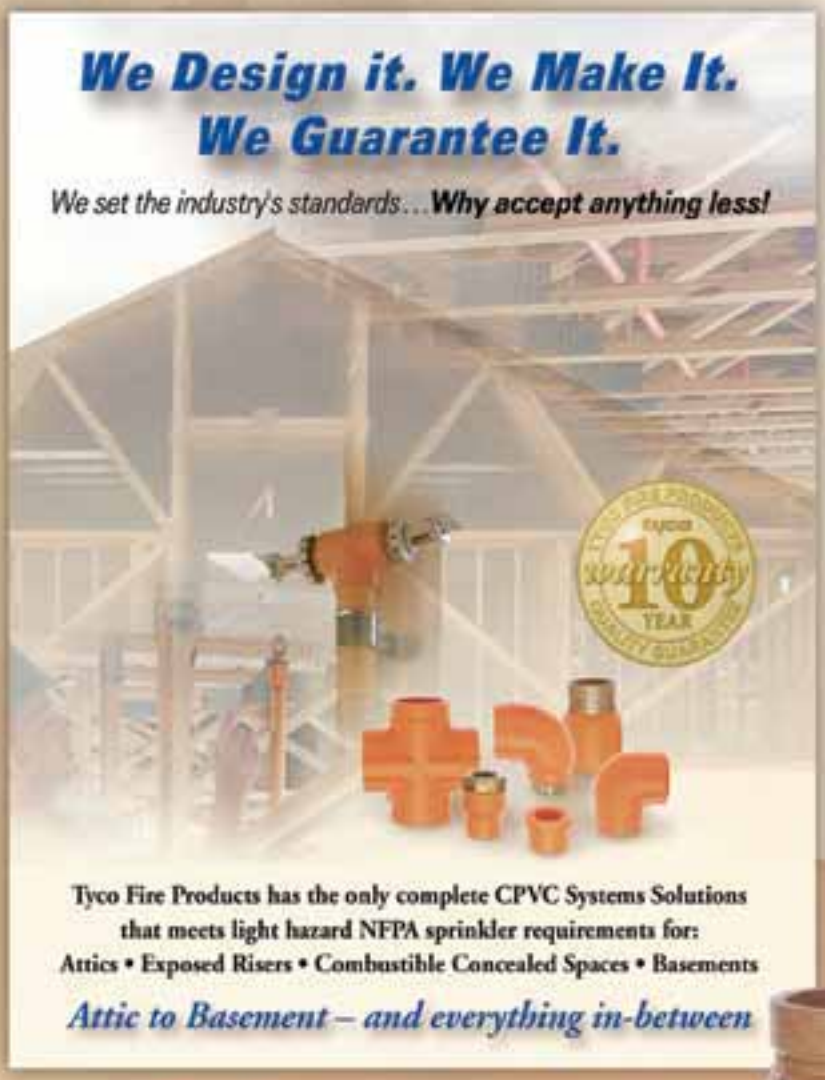
Contact a TFBP distributor for details

- Grooved piping products are also available galvanized

GROOVED

TFBP CPVC Pipe & Fittings manufactured with Noveon's BLAZEMASTER** compound are Listed by Underwriters Laboratories, Inc. for use in:

- Light hazard occupancies as defined in the Standard for Installation of Fire Sprinkler Systems, NFPA 13
- Residential occupancies as defined in the Standard for Installation of Fire Sprinkler Systems in Residential Occupancies to Four Stories in Height, NFPA 13R
- Residential occupancies as defined in the Standard for Fire Sprinkler Systems In One and Two Family Dwellings and Manufactured Homes, NFPA 13D
- Air plenums, as defined by the installation of Air Conditioning and Ventilating Systems, NFPA 90A and model mechanical codes
- Underground Water Pressure Service, NFPA 24
- Unfinished Basements



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

Back-to-Back Fitting

Contact a TFBP distributor for details

- Included in the TFBP line of BLAZEMASTER** CPVC products
- Allows two sidewall sprinklers to be piped into one fitting
- Ideal when the CPVC piping is located in a 3-1/2" (2" x 4") vertical wall, eliminating the need for extra nipples, fittings and sprinkler head adapters typically associated with supplying two rooms with the same pipe
- Specially designed and dimensioned to enable the sidewall sprinklers to be recessed with 1/2" or 5/8" sheet-rock wall covering

CPVC to Copper Fitting

Contact a TFBP distributor for details

- Available sizes: 3/4" through 2"
- Makes transition from one piping material to another
- Transition to steel or BLAZEMASTER** CPVC Fire Sprinkler System piping from traditional copper tube for plumbing services is fast, easy, and readily available in the most complete fire sprinkler package in the industry

"No Block" Hanger

Tech Data **19-2.0**

- Simple two-hole strap eliminates "blocking" to the beam when hanging CPVC
- Positions the face of the CPVC pipe 1-1/2" off the face of the joist or stud

CPVC Installation Supplies

Contact a TFBP distributor for details

- BLAZEMASTER** CAULK & WALK*** Firestop
- One-Step CPVC Cement & Daubers

PIPE & FITTINGS

Solenoid Valves

For Releasing Service – 1/2"

Tech Data TFP2180

- Used in conjunction with an electric releasing panel that is listed or approved (as appropriate) for fire protection releasing service, and where the releasing panel is operated by listed or approved (as appropriate) electric fire detectors
- Available in a variety of voltages for both normal and hazardous locations

VSR Waterflow Alarm Switch with Retard

Flow & Pressure Switch

Contact a TFBP distributor for details

- Available sizes: 2" through 8" (15 - 200mm)
- Vane type waterflow switch for use on wet sprinkler systems
- Actuated with a minimum flow of 10 gallons per minute
- Flow condition must exist for the period of time necessary to overcome the selected retard period
- Retard time is an adjustable delay feature and can be set from 0 to 90 seconds

VSR Waterflow Alarm Switch for Small Pipe

Flow & Pressure Switch

Contact a TFBP distributor for details

- Available pipe sizes: 1", 1-1/4", 1-1/2" or 2"
- Vane type waterflow switch for use on wet sprinkler systems
- May also be used as a sectional waterflow detector on large systems
- Installs directly into a tee fitting

Model PS40/PS10 High/Low Pressure Switch

Flow & Pressure Switch

Contact a TFBP distributor for details

- Designed to detect a pressure increase or decrease in fire sprinkler systems
- PS40 switches are primarily used to monitor low air pressure conditions in dry systems
- PS10 switch is appropriate for water flow detection

Ball valve with Supervisory Switch

Tamper & Alarm Switch

Contact a TFBP distributor for details

- Utilizes a 1/2" ball valve in conjunction with a switch assembly
- Switch assembly enclosed in a tamper resistant NEMA 4 (water resistant) enclosure

PCVS Control Valve Supervisory Switch

Tamper & Alarm Switch

Contact a TFBP distributor for details

- Weather proof and tamper resistant switch for monitoring the open position of post indicator, butterfly and other types of fire sprinkler/control valves

OSYSU

Tamper & Alarm Switch

Contact a TFBP distributor for details

- Used to monitor the open position of an OS&Y (outside screw and yoke) type gate valve
- Mounts conveniently to most OS&Y valves ranging in size from 2" to 12"
- Also, mounts on some valves as small as 1/2"

PFC Series 100RC & 4410

Fire Control Panel

Contact a TFBP distributor for details

- Provide the interface between detection system, deluge or single or double interlocked preaction valve, and signaling circuit and devices in electrically actuated fire protection systems
- Separate supervisory zone provided for electronic supervision of valve position, low pressure, and other critical fire protection functions
- Series 100RC is single-zone fire control panel
- Series 4410 can be used in single zone, cross zone, sequential or cross/sequential electric deduction systems
- Series 4410 has programming capability
- Listings and Approvals: UL and FM

Tank Mounted Air Compressor

For Dry Pipe Sprinkler Systems

Contact a TFBP distributor for details

- Designed for the same high-performance as base mounted units
- Compressor is mounted on an air receiver to offer further ease of installation and availability
- Automatic and safety features are built into the unit, reducing installation costs
- Multiple dry systems may be supplied from a single compressor tank that is a constant source of air
- This is the recommended air supply method for all dry pipe sprinkler systems

Base Mounted Air Compressor

For Dry Pipe Sprinkler Systems

Contact a TFBP distributor for details

- Designed for high volume (cubic feet of air per minute) at the moderate pressures required for the system
- Sized properly, these will fill the system to 40 PSIG of air pressure in approximately 30 minutes as required in NFPA 13

Riser Mounted Air Compressor

Fully Automatic

Contact a TFBP distributor for details

- Fully automatic and are designed for easy installation
- Special mounting kits with U-bolts are available to facilitate riser mounting
- Sized properly, these compressors will fill a system to 40 PSIG within 30 minutes as required in NFPA 13

G16AC812

Automatic Supervisory Air Supply

Tech Data **TD126**

- Supplies and maintains air in single interlock preaction fire protection systems having a nominal supervisory air pressure of 10 psi (0.7 bar)
- Can be mounted on the floor, on a wall, or to the system riser using optional brackets
- Listings and Approvals: UL

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** BLAZEMASTER is a trademark of Noveon, Inc.

*** CAULK & WALK is a trademark of B.F. Goodrich.

SOFTWARE FOR THE FIRE PROTECTION DESIGN PROFESSIONAL

SprinkCAD®
COMPLETE FIRE SPRINKLER SYSTEM DESIGN

SprinkCALC®
ADVANCED HYDRAULIC CALCULATIONS

SprinkCODE®
INTERACTIVE NFPA 13® CODE SELECTOR

SprinkSLIC®
COMPLETE FIRE SPRINKLER STOCK LISTING

SprinkFDT®
DRY PIPE SYSTEM WATER DELIVERY CALCULATIONS

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