

# **Reliable<sup>®</sup>**

## **PRODUCT BROCHURE**



**MANUFACTURER & DISTRIBUTOR  
OF FIRE PROTECTION EQUIPMENT**

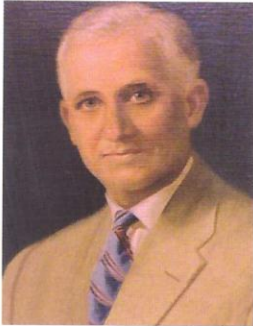
Volume II



# Company Profile



*Our state-of-the-art manufacturing facility in Liberty, SC*



Frank J. Fee



Frank J. Fee, Jr.

## COMPANY

The Reliable Automatic Sprinkler Co., Inc. is one of the world's largest producers of automatic fire sprinklers and sprinkler system control equipment.

Reliable has undertaken a major expansion of its manufacturing capability with the construction of a new state-of-the-art plant located in Liberty, South Carolina, a short distance from Greenville. This new 300,000 square foot facility has been fully operational since summer 2006 and is ISO9001 certified.

In mid 2006 the company relocated its corporate headquarters to Elmsford, NY, which is also the Northeast regional sales and distribution center. Reliable also maintains sales and regional distribution centers in Washington, D.C., Atlanta, Orlando, Chicago, Minneapolis, Denver, Dallas, Houston, Los Angeles, Seattle, and Toronto Canada. Reliable has sales offices in Boston, Philadelphia, Richmond, San Francisco, and Vancouver B.C. Reliable ships products to more than 50 countries worldwide, with international sales conducted from its offices in London, England, Hamburg, Germany, Shanghai, Hong Kong, China, Adelaide, Australia and Dubai, United Arab Emirates.

Reliable offers fabrication in local areas. Reliable Fabrication is operated and managed by individuals with over 30 years of fabrication experience. Fabrication facilities are now located in Grand Prairie, Portland, and Denver, and soon to be in many other locations.

## HISTORY

Reliable was founded in 1918 by Frank J. Fee, a mechanical contractor who began manufacturing sprinklers when he had trouble securing them for his own jobs. Frank J. Fee, Jr., succeeded his father as company President in 1945, and his son, Frank J. Fee III, became President in 1976. This puts Reliable today in its third generation of Fee family leadership. As part of senior management with Frank J. Fee III are his two brothers, Kevin T. Fee, Executive Vice President, and Michael R. Fee, Vice President, Marketing and Sales Operations. The family-run company also has many employees who have served in excess of 25 years, enhancing its team-family tradition.

## PRODUCT OFFERINGS

The company is a manufacturer of automatic fire sprinklers, valve and accessory products, and a major distributor of sprinkler system components. Reliable produces both of the industry's two basic types of sprinklers, the solder type and the frangible bulb, which can be used for virtually every type of building applications. Reliable also produces a broad range of valves including alarm, dry, deluge, preaction, and check valves that control water flow to sprinkler systems and actuate alarm signaling.

## FIRE PROTECTION INDUSTRY

Reliable has always been an industry-minded company. Reliable is an active participant in the following industry associations: American Fire Sprinkler Association, American Society of



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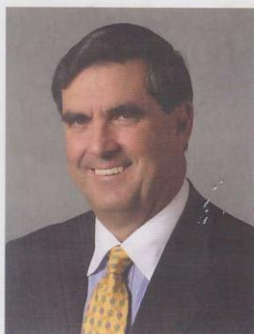


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# THE RELIABLE AUTOMATIC SPRINKLER CO., INC.



Frank J. Fee III

Plumbing Engineers, British Automatic Fire Sprinkler Association, bvfa Bundesverband Technischer Brandschutz, Canadian Automatic Sprinkler Association, European Fire Sprinkler Network, Factory Mutual Advisory Board, Home Fire Sprinkler Coalition, International Fire Sprinkler Association, National Fire Protection Association, National Fire Sprinkler Association, National Fire Sprinkler Network, and Society of Fire Protection Engineers.

Past President Frank J. Fee, Jr., attained many notable positions in the fire protection community, including Chairman of the National Fire Protection Association and Chairman of the National Automatic Sprinkler and Fire Control Association.

Frank J. Fee III is currently serving on the National Fire Protection Association's International Advisory Board and has held several Board of Directors positions for NFPA including Treasurer, Secretary, and Director. He was past Chairman of the Board and Director of the National Fire Sprinkler Association. Frank has been the recipient of the AFSA's "Henry S. Parmelee Award" (1990), the NFPA's "Distinguished Service Award" (1998), and the NFSA's "Golden Sprinkler Award" (1998), in recognition of his outstanding contributions to the fire sprinkler industry.



Kevin T. Fee

Kevin T. Fee is currently serving on the Board of Directors of the National Fire Sprinkler Association and has recently completed a term as Treasurer (2008-2012). Kevin has been the recipient of NFSA's "Golden Sprinkler Award" (2008). He was Vice Chairman (1986-1990) and Chairman (1990 - 1994). Kevin has been a Board member since 1981 and with over thirty years is the longest tenured Board member in the history of NFSA. Kevin was a founding member of the International Fire Sprinkler Association and served as its first Chairman (2000 - 2003) and is presently a Board member. Kevin was also past Chairman of the American Fire Sprinkler Association's Manufacturer and Supplier Council and is a member of the National Fire Protection Association.



Michael R. Fee

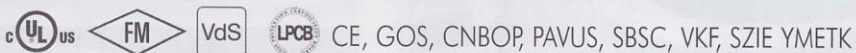
Michael R. Fee is currently serving on the American Fire Sprinkler Association's Manufacturer and Supplier Council, Legislative Committee, and Membership Committee. For many years, Michael has been on the Membership Committee and helped establish the local chapter development programs. Michael has been Chairman (2000-2004) of AFSA's Manufacturer and Supplier Council.

## MISSION

Three goals are at the heart of the mission that the Fee family established long ago: first to be the leading worldwide manufacturer of innovative, quality-oriented fire sprinklers and systems devices; second, to be a leading supplier of fire sprinkler system components; and third, to be the leader in providing the highest level of operational excellence in customer service, exceeding all customer expectations. It is this mission that propels Reliable through the 21st Century and beyond in its service to the fire sprinkler industry.

## LISTING AND APPROVALS

Reliable products are listed and approved by various fire protection product approval laboratories and organizations such as:



Refer to the product's Technical Bulletin for specific listing and approval information.

## ENVIRONMENT

Reliable is pursuing a **GREEN POLICY** and is committed to protecting our environment by developing products that use recycled materials that reduce the use of natural resources.



# THE RELIABLE AUTOMATIC SPRINKLER CO., INC.

Reliable products have been installed throughout the world. Our products can be found in renowned projects such as:

## AIRPORT HANGARS AND TERMINALS

American Airlines Terminal at John F. Kennedy Airport – NYC  
Delta Airlines at LaGuardia Airport – NYC  
Dubai International Airport – Dubai  
Frankfurt (B), Germany Frankfurt Hahn – Germany  
Jet Blue Terminal at LaGuardia Airport – NYC  
London Gatwick (N) – UK  
London Heathrow (BA World Cargo Centre) – UK  
London Heathrow (Terminal 5) – UK  
Orlando International Airport Baggage Claim – FL  
Philadelphia International – PA  
Prince George Regional Airport – BC Canada

## DATA AND DISTRIBUTION CENTERS

Amazon Distribution Centers – SC, TN & France  
AmeriCold – WA  
Bristol-Meyers Squibb – Japan  
Google - NC & SC  
IKEA Distribution Center – WA  
John Deere Warehouse – Sweden  
Johnson & Johnson Pharmaceuticals – NJ  
Mattel Toys Factory – China

Microsoft Data Systems – TX  
Pfizer Nagoya Facility – Japan  
Target Distribution Centers – VA  
Tupperware Warehouse – Indonesia  
Walmart Distribution Centers – PA, MA & KY

## HOSPITALS

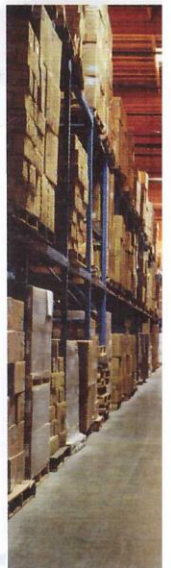
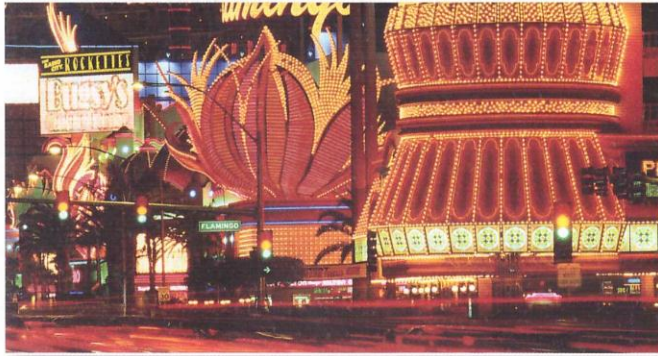
Arnold Palmer Hospital – FL  
Children's Hospital – PA  
Wichard Hospital – IN

## HOTELS AND RESORTS

Trump Taj Mahal – NJ  
MGM City Center – Pelli Tower – NV  
Ritz-Carlton – MD & TX  
St. Regis Beach Resort – UAE  
St. Regis Hotel – NYC

## MANUFACTURING FACILITIES

Abbott Pharmaceutical – Singapore  
Airbus – France  
BMW – Germany  
Ford Motor Company – UK  
Goodyear Tyres – Germany  
Kraft-Cheese – Germany





Pirelli Cables – Turkey  
Porsche Car Painting – Germany  
Rolex Watches – Switzerland  
Texas Instruments – TX  
Toyota Plant – TX, WV & KY  
Volkswagen – France

### SCHOOLS AND DORMITORIES

University of Pennsylvania – PA  
Boston College – MA  
Notre Dame – IN

### OFFICE BUILDINGS

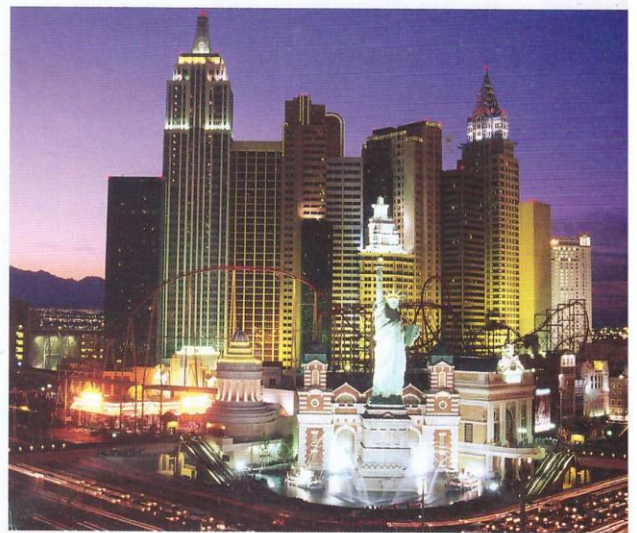
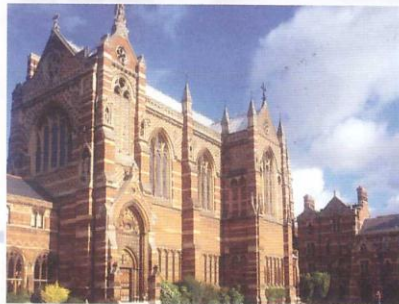
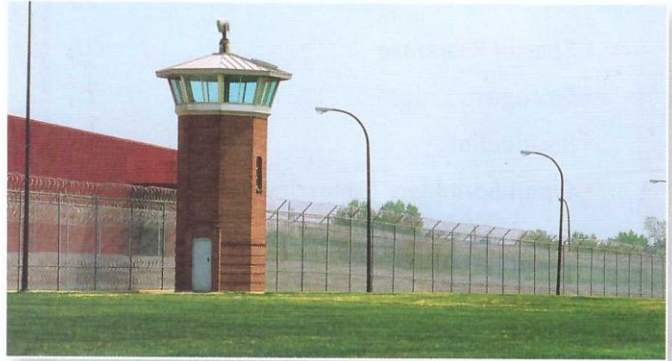
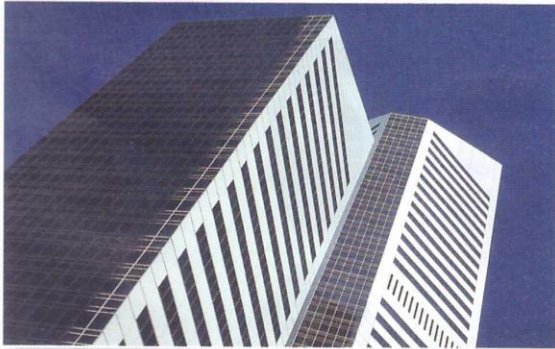
Bank of America – UK, VA & NYC  
Bristol Meyers – NYC  
Comcast Center – PA  
Daimler-Chrysler – Germany  
Goldman Saks – NYC  
Is Bank – Turkey  
Nike Headquarters – Germany  
Philip Morris – NYC  
SAP – Germany  
Time Warner – NYC  
Trump Towers – NYC

### STADIUMS

Air Canada Center – Canada  
Budweiser Event Center – CO  
Arsenal FC (Emirates Stadium) – UK  
Coors Field – CO  
Fenway Park – MA  
NY Met's Stadium – NYC  
Pepsi Center – CO  
Philadelphia Phillies Stadium – PA  
Soldier Field – IL  
Toyota Stadium – IL  
Yankee Stadium – NY

### OTHER NOTABLE PROJECTS

Freedom Tower – NYC  
George W. Bush Library – TX  
Harrods – UK  
National Library of Scotland – Scotland  
Riker's Island Prison – NYC  
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United Nations HQ – Lebanon  
World Trade Center Transportation Hub – NYC





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# all your fire protection needs.



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# Sprinklers COMMERCIAL QUICK RESPONSE

## BASIC

**NEW** F1FR Series



Technical Bulletin: 014

**Features:**

- Includes: F1FR56, F1FR56LL, F1FR42, F1FR42LL, F1FRXLH and F1FR28
- Combines the durability of standard sprinklers with the attractive low profile of a decorative sprinkler
- 3 mm glass bulb

<b>Style:</b>	Upright, Pendent, Conventional, Recessed Pendent, Horizontal Sidewall, Recessed HSW, Conical Concealed (CCP), Vertical Sidewall
<b>K-Factor:</b>	2.8 (40), 4.2 (60), 5.6 (80)
<b>Temp:</b>	135°F (57°C), 155°F (68°C), 175°F (79°C), 200°F (93°C), 286°F (141°C) For CCP: Sprinkler: 135°F (57°C), 155°F (68°C), 175°F (79°C), 200°F (93°C) Cover Plate: 135°F (57°C), 165°F (74°C) Low Lead Sprinklers: 200°F (93°C)
<b>Thread Size:</b>	1/2" NPT (R1/2)
<b>Escutcheon:</b>	F1, F2, FP Push-on/Thread-off, FT
<b>Cover Plate:</b>	CCP
<b>Finish:</b>	Sprinkler: Bronze, Chrome, White Poly Coated, Custom Escutcheon: Brass, Chrome, White, Custom Cover Plate: White, Chrome, Custom

F1FR LO



Technical Bulletin: 136

**Features:**

- Light and Ordinary Hazard Applications
- 3 mm glass bulb
- Push-on/Thread-off FP escutcheon available for low profile aesthetics

<b>Style:</b>	Upright, Pendent, Conventional, Vertical Sidewall, Horizontal Sidewall, Recessed Pendent, Recessed HSW
<b>K-Factor:</b>	8.0 (115)
<b>Temp:</b>	135°F (57°C), 155°F (68°C), 175°F (79°C), 200°F (93°C), 286°F (141°C)
<b>Thread Size:</b>	1/2" NPT (R1/2), 3/4" NPT (R3/4)
<b>Escutcheon:</b>	F1, F2, FP Push-on/Thread-off
<b>Finish:</b>	Brass, Chrome, White Poly Coated, Custom

**NEW** KFR56



Technical Bulletin: 036

**Features:**

- Combines the durability of a standard sprinkler with the attractive low profile of a decorative sprinkler
- Utilizes a soldered link

<b>Style:</b>	Upright, Pendent, Recessed Pendent, Horizontal Sidewall, Recessed Horizontal Sidewall, Conical Concealed (CCP)
<b>K-Factor:</b>	5.6 (80)
<b>Temp:</b>	165°F (74°C), 212°F (100°C) For CCP: Sprinkler: 165°F (74°C), 212°F (100°C) Cover Plate: 135°F (57°C), 165°F (74°C)
<b>Thread Size:</b>	1/2" NPT (R1/2)
<b>Escutcheon:</b>	F1, F2, FP Push-on/Thread-off, FT
<b>Finish:</b>	Sprinkler: Bronze, Chrome, Black or White Poly Coated, Custom Escutcheon: Brass, Chrome, White, Custom Cover Plate: White, Chrome, Custom



# Sprinklers COMMERCIAL QUICK RESPONSE cont.

## BASIC cont.

### F1FR56-300



Technical Bulletin: 026

#### Features:

- High pressure rated automatic sprinkler having a maximum service pressure of 300 psi (20.7 bar)
- 3 mm glass bulb
- For high rise buildings where a quick response rating is required and pressure entering the sprinkler system is in excess of 175 psi (12 bar)

**Style:** Upright, Pendent, Recessed Pendent, Horizontal Sidewall, Recessed HSW, Conical Concealed (CCP)

**K-Factor:** 5.6 (80)

**Temp:** 135°F (57°C), 155°F (68°C), 175°F (79°C), 200°F (93°C), 286°F (141°C)  
For CCP: Sprinkler: 135°F (57°C), 155°F (68°C), 175°F (79°C), 200°F (93°C)  
Cover Plate: 135°F (57°C), 165°F (74°C)

**Thread Size:** 1/2" NPT (R1/2)

**Escutcheon:** F1, F2, FP Push-on/Thread-off

**Cover Plate:** CCP

**Finish:** Sprinkler: Bronze, Chrome, White Poly Coated, Custom  
Escutcheon: Brass, Chrome, White, Custom  
Cover Plate: White, Chrome, Custom

### F1FR-300



Technical Bulletin: 156

#### Features:

- High pressure rated automatic sprinklers having a maximum service pressure of 300 psi (20.7 bar)
- 3 mm glass bulb
- Sturdy brass machined cup

**Style:** Upright, Pendent, Recessed Pendent

**K-Factor:** 8.0 (115)

**Temp:** 135°F (57°C), 155°F (68°C), 175°F (79°C), 200°F (93°C), 286°F (141°C)

**Thread Size:** 3/4" NPT (R3/4)

**Escutcheon:** F1

**Finish:** Brass, Chrome, White Poly Coated, Custom

### NEW KFR56-300



Technical Bulletin: 039

#### Features:

- High pressure rated automatic sprinkler having a maximum service pressure of 300 psi (20.7 bar)
- Utilizes a soldered link
- For high rise buildings where a quick response rating is required and pressure entering the sprinkler system is in excess of 175 psi (12 bar)

**Style:** Upright, Pendent, Recessed Pendent, Horizontal Sidewall, Recessed Horizontal Sidewall, Conical Concealed (CCP)

**K-Factor:** 5.6 (80)

**Temp:** 165°F (74°C), 212°F (100°C)  
For CCP: Sprinkler: 165°F (74°C), 212°F (100°C)  
Cover Plate: 135°F (57°C), 165°F (74°C)

**Thread Size:** 1/2" NPT (R1/2)

**Escutcheon:** F1, F2, FP Push-on/Thread-off

**Finish:** Sprinkler: Bronze, Chrome, Black or White Poly Coated, Custom  
Escutcheon: Brass, Chrome, White, Custom  
Cover Plate: White, Chrome, Custom

For more detailed information including approval data, please refer to the technical bulletin specified.



# Sprinklers COMMERCIAL QUICK RESPONSE cont.

## BASIC cont.

### GFR



Technical Bulletin: 131

#### Features:

- Solder type fusible link
- Light and Ordinary Hazard Applications per NFPA 13 (2.8 and 4.2 K-Factor - light hazard only)
- Intermediate Level with shield approved for in-rack installations (5.6K & 8.0K)

**Style:** Upright, Pendent, Horizontal Sidewall, Intermediate Level Upright, Intermediate Level Pendent, Conventional, Recessed Pendent, Recessed Horizontal Sidewall

**K-Factor:** 2.8 (40), 4.2 (60), 5.6 (80), 8.0 (115)

**Temp:** 165°F (74°C), 212°F (100°C)

**Thread Size:** 1/2" NPT (R1/2), 3/4" NPT (R3/4)

**Escutcheon:** F1, F2, FT

**Finish:** Brass, Chrome, Custom

### F1FR-FS56 Flat Spray



Technical Bulletin: 022

#### Features:

- VdS Approved and CE Certified – for International market only
- Excellent choice for applications with lower clearance above the suspended open ceilings and in racks
- 3 mm glass bulb

**Style:** Pendent, Pendent with shield

**K-Factor:** 80 metric (5.6 US)

**Temp:** 57°C (135°F), 68°C (155°F), 79°C (175°F), 93°C (200°F), 141°C (286°F)

**Thread Size:** R1/2 BSPT (1/2" NPT)

**Finish:** Sprinkler: Bronze Shield: Galvanized

### F1FR-FS LO Large Orifice Flat Spray



Technical Bulletin: 037

#### Features:

- VdS Approved and CE Certified – for International market only
- Excellent choice for applications with lower clearance above the suspended open ceilings and in racks
- 3 mm glass bulb

**Style:** Pendent, Pendent with shield

**K-Factor:** 115 metric (8.0 US)

**Temp:** 57°C (135°F), 68°C (155°F), 79°C (175°F), 93°C (200°F), 141°C (286°F)

**Thread Size:** R1/2 BSPT (1/2" NPT)

**Finish:** Sprinkler: Bronze Shield: Galvanized

### F1FR LO Large Orifice Flat Spray



Technical Bulletin: 038

#### Features:

- VdS Approved and CE Certified – for International market only
- Combines the durability of standard sprinklers with the attractive low profile of a decorative sprinkler
- 3 mm glass bulb

**Style:** Upright, Pendent, Recessed Pendent

**K-Factor:** 115 metric (8.0 US)

**Temp:** 57°C (135°F), 68°C (155°F), 79°C (175°F), 93°C (200°F), 141°C (286°F)

**Thread Size:** R1/2 BSPT (1/2" NPT)

**Escutcheon:** F1, F2, FP Push-on/Thread-off

**Finish:** Brass, Chrome, White Poly Coated, Custom



# Sprinklers COMMERCIAL QUICK RESPONSE cont.

## DECORATIVE

**NEW** G5-80, G5-56,  
G5-42 and G5-28



Technical Bulletin: 034

**Features:**

- Smooth, aesthetic ceiling profile
- Same Thread-on cover plate attachment as G4 Models with 3/4" (19 mm) assembly adjustment
- Factory installed protective cap
- Ordinary and Intermediate temperature rating available

<b>Style:</b>	Flat Concealed
<b>K-Factor:</b>	2.8 (40), 4.2 (60), 5.6 (80), 8.0 (115)
<b>Temp:</b>	Sprinkler: 165°F (74°C), 212°F (100°C), Cover Plate: 135°F (57°C), 165°F (74°C)
<b>Thread Size:</b>	Non-Adjustable: 1/2 NPT (R1/2), 3/4 NPT (R3/4), Adjustable: 1" NPT Male or Female
<b>Cover Plate:</b>	Solid Flat or Perforated
<b>Finish:</b>	Chrome, White, Custom

**NEW** G5-80, G5-56,  
G5-42 and G5-28 QR  
"Sealing" Concealed



Technical Bulletin: 043

**Features:**

- Cover plate with gasket seal for Quick Response may be assembled to a G5-80, G5-56, G5-42, and G5-28 Sprinklers for dust free environments
- Same Thread-on cover plate attachment as G4 Models with 3/4" (19 mm) assembly adjustment
- Ordinary and intermediate temperature rating available
- Cover plate and gasket are only sold as an assembly. The gasket cannot be purchased separately.

<b>Style:</b>	Flat Concealed
<b>K-Factor:</b>	2.8 (40), 4.2 (60), 5.6 (80), 8.0 (115)
<b>Temp:</b>	Sprinkler: 165°F (74°C), 212°F (100°C), Cover Plate: 135°F (57°C), 165°F (74°C)
<b>Thread Size:</b>	Non-Adjustable: 1/2 NPT (R1/2), 3/4 NPT (R3/4)
<b>Cover Plate:</b>	Solid Flat
<b>Finish:</b>	White, Custom

**NEW** G5-56 300 QR  
"Sealing" Concealed



Technical Bulletin: 046

**Features:**

- Cover plate with gasket seal for Quick Response may be assembled to a G5-56 300 Sprinkler for dust free environments
- Same Thread-on cover plate attachment as G4 Models with 3/4" (19 mm) assembly adjustment
- Ordinary and intermediate temperature rating available
- Cover plate and gasket are only sold as an assembly. The gasket cannot be purchased separately.

<b>Style:</b>	Flat Concealed
<b>K-Factor:</b>	5.6 (80)
<b>Temp:</b>	Sprinkler: 165°F (74°C), Cover Plate: 135°F (57°C)
<b>Thread Size:</b>	Non-Adjustable: 1/2 NPT (R1/2)
<b>Cover Plate:</b>	Solid Flat
<b>Finish:</b>	White, Custom

For more detailed information including approval data, please refer to the technical bulletin specified.



# Sprinklers COMMERCIAL QUICK RESPONSE cont.

## DECORATIVE cont.

NEW

### G5-56 300 Concealer



Technical Bulletin: 040

#### Features:

- Smooth, aesthetic ceiling profile
- Cover plate attachment (Plain or Perforated) with 3/4" (19 mm) total adjustment. Does not require clips or springs
- Factory installed protective cap
- 300 psi (20.7 bar) maximum pressure rating

**Style:** Flat Concealed

**K-Factor:** 5.6 (80)

**Temp:** Sprinkler: 165°F (74°C), Cover Plate: 135°F (57°C)

**Thread Size:** Non-Adjustable: 1/2 NPT (R1/2)

**Cover Plate:** Solid Flat or Perforated

**Finish:** Chrome, White, Custom

### G4A Adjustable Concealed



Technical Bulletin: 154

#### Features:

- Quick Response
- Solder type fusible link
- Smooth, aesthetic ceiling profile
- 1/2" (13 mm) total adjustment provided by economical standard inlet version; 1-1/2" (38 mm) total adjustment provided by adjustable inlet versions
- Factory installed protective cap
- Light and Ordinary Hazard Applications (2.8 and 4.2 K-Factor - Light Hazard only)
- G4A is also Factory Mutual Approved as Standard Response

**Style:** Flat Concealed

**K-Factor:** 2.8 (40), 4.2 (60), 5.6 (80)

**Temp:** Sprinkler: 165°F (74°C), 212°F (100°C), Cover Plate: 135°F (57°C), 165°F (74°C)

**Thread Size:** Adjustable only: 1" NPT Male or Female

**Cover Plate:** Flat Cover Plate

**Finish:** Brass, Chrome, White, Custom

### F4FR-NF



Technical Bulletin: 002

#### Features:

- Constructed of non-ferrous material designed for MRI rooms, swimming pools, and corrosive environments
- Laboratory tested in an MRI room environment
- Cup and skirt fabricated from corrosion resistant brass
- Cover plate attachment provides 1/2" (13 mm) adjustment
- Smooth aesthetic ceiling profile
- Ordinary temperature rating
- Threaded cover plate for secure attachment

**Style:** Concealed Pendant

**K-Factor:** 5.6 (80)

**Temp:** Sprinkler: 135°F (57°C), 155°F (68°C), Cover Plate: 135°F (57°C), 155°F (68°C)

**Thread Size:** 1/2" NPT (R1/2)

**Cover Plate:** Solid Flat or Perforated

**Finish:** Bronze, Brass, Chrome, Black, White, Custom



# Sprinklers COMMERCIAL QUICK RESPONSE cont.

## DECORATIVE cont.

### XL Commercial



Technical Bulletin: 145

#### Features:

- Solder type fusible link
- Light and Ordinary Hazard applications per NFPA 13
- Standard coverage for Light and Ordinary Hazard as per NFPA 13
- 4" (102 mm) - 12" (305 mm) ceiling-to-deflector distance for horizontal sidewall

**Style:** Flush Style Pendent, Horizontal Sidewall

**K-Factor:** 5.6 (80)

**Temp:** 165°F (74°C)

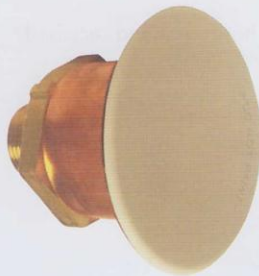
**Thread Size:** 1/2" NPT (R1/2)

**Escutcheon:** ZXFP, ZXCP, ZX2P, (Pendent); ZXCH, ZX2H (Sidewall)

**Finish:** Sprinkler: Silver, White Custom, Escutcheon: Bright Chrome, Dull Chrome, White

## EXTENDED COVERAGE

### NEW G6-80 HSW QR EC



Technical Bulletin: 047

#### Features:

- With the largest listed spacing – up to 16' x 24'
- UL Listed as Quick Response Extended Coverage for Light Hazard Applications
- Sprinkler is listed for 175 psi (12.0 bar) applications
- Push-on/pull-off, sturdy convenient flat cover plate
- Shipped complete with factory installed protective cap
- Sprinkler assembly and cover plate packaged separately
- 1/4" (6.3 mm) adjustment

**Style:** Flat Concealed

**K-Factor:** 8.0 (115)

**Temp:** Sprinkler: 165°F (74°C), Cover Plate: 135°F (57°C)

**Thread Size:** 3/4" NPT (R3/4)

**Cover Plate:** Solid Flat or Perforated

**Finish:** White, Custom

### JL112 and J112 Upright



Technical Bulletin: 173

#### Features:

- Extended Coverage for both Light and Ordinary Hazard occupancies for coverage areas from 144 ft<sup>2</sup> to 400 ft<sup>2</sup>
- Quick Response for Light Hazard - 16' x 16' to 20' x 20' sprinkler spacing
- Quick Response for Ordinary Hazard - 12' x 12' & 14' x 14' sprinkler spacing
- Standard Response for Ordinary Hazard - 16' x 16' to 20' x 20' sprinkler spacing
- Available with solder link (JL112) or 3 mm glass bulb (J112)

**Style:** Upright

**K-Factor:** 11.2 (160)

**Temp:** JL112 Upright: 165°F (74°C), JL112 Upright: 212°F (100°C)  
J112 Upright: 155°F (68°C), J112 Upright: 200°F (93°C)

**Thread Size:** 3/4" NPT (R3/4)

**Finish:** Bronze, Chrome, White Polyester

For more detailed information including approval data, please refer to the technical bulletin specified.



# Sprinklers COMMERCIAL QUICK RESPONSE cont.

## EXTENDED COVERAGE cont.

### JL112 and J112 Pendent & Recessed Pendent



Technical Bulletin: 172

#### Features:

- Extended Coverage for both Light and Ordinary Hazard occupancies for coverage areas from 144 ft<sup>2</sup> to 400 ft<sup>2</sup>
- Quick Response for Light Hazard - 16' x 16' to 20' x 20' sprinkler spacing
- Quick Response for Ordinary Hazard - 12' x 12' & 14' x 14' sprinkler spacing
- Standard Response for Ordinary Hazard - 16' x 16' to 20' x 20' sprinkler spacing
- Available with solder link (JL112) or 3 mm glass bulb (J112)

**Style:** Pendent, Recessed Pendent

**K-Factor:** 11.2 (160)

**Temp:** JL112 Pendent: 165°F (74°C), JL112 Recessed Pendent: 212°F (100°C),  
J112 Pendent: 155°F (68°C), J112 Recessed Pendent: 200°F (93°C)

**Thread Size:** 3/4" NPT (R3/4)

**Escutcheon:** F1, F2, FP Push-on/Thread-off

**Finish:** Bronze, Chrome, White Polyester

### F1FR56 QREC



Technical Bulletin: 028

#### Features:

- 3 mm glass bulb
- Covers areas up to 20' x 20' (6.1 m x 6.1 m) for pendent and recessed pendent; covers areas up to 16' x 20' (4.9 m x 6.1 m) horizontal sidewall and recessed horizontal sidewall
- 4" (102 mm) - 12" (305 mm) ceiling-to-deflector distance for horizontal and recessed horizontal sidewall

**Style:** Pendent, Recessed Pendent, Conical Concealed (CCP), Horizontal Sidewall, Recessed Horizontal Sidewall

**K-Factor:** 5.6 (80)

**Temp:** 135°F (57°C), 155°F (68°C), 175°F (79°C)  
For CCP: Sprinkler: 135°F (57°C), 155°F (68°C)  
Cover Plate: 135°F (57°C)

**Thread Size:** 1/2" NPT (R1/2)

**Escutcheon:** F1, F2, FT

**Cover Plate:** CCP

**Finish:** Sprinkler: Bronze, Chrome, White Poly Coated, Custom  
Escutcheon: Brass, Chrome, White, Custom  
Cover Plate: White, Chrome, Custom

### F1FR, F1FR Recessed



Technical Bulletin: 148

#### Features:

- 3 mm glass bulb
- Covers areas up to 20' x 20' (6.1 m x 6.1 m) for pendent and recessed pendent; covers areas up to 16' x 20' (4.9 m x 6.1 m) and 16' x 24' (4.9 m x 7.3 m) for horizontal sidewall and recessed horizontal sidewall
- 4" (102 mm) - 12" (305 mm) ceiling-to-deflector distance for horizontal and recessed horizontal sidewall

**Style:** Pendent, Horizontal Sidewall, Recessed Pendent, Recessed Horizontal Sidewall

**K-Factor:** 8.0 (115)

**Temp:** 135°F (57°C), 155°F (68°C), 175°F (79°C)

**Thread Size:** 3/4" NPT (R3/4)

**Escutcheon:** F1, F2

**Finish:** Brass, Chrome, White Poly Coated, Custom



### F1FR EPEC



Technical Bulletin: 012

#### Features:

- LPCB Approved - for International market only
- Maximum coverage area up to 17.64 m<sup>2</sup> compared to traditional 12 m<sup>2</sup>
- Maximum sprinkler spacing up to 4.2 m compared to traditional 3.5 m
- Reduced installation cost by using less sprinklers and system branch pipes
- Reduced water storage volume to 30 minutes instead of 60 minutes

**Style:** Pendant, Recessed Pendant

**K-Factor:** 115 metric (8.0 US)

**Temp:** 135°F (57°C), 155°F (68°C), 175°F (79°C)

**Thread Size:** 3/4-14 BSPT per ISO R7-1

**Finish:** Bronze, Chrome, White

### F1FR56-300 QREC



Technical Bulletin: 030

#### Features:

- 300 psi (20.7 bar) maximum high pressure rating
- 3 mm glass bulb
- Covers areas up to 20' x 20' (6.1 m x 6.1 m)

**Style:** Pendant, Recessed Pendant, Conical Concealed (CCP)

**K-Factor:** 5.6 (80)

**Temp:** 135°F (57°C), 155°F (68°C), 175°F (79°C)  
For CCP: Sprinkler: 135°F (57°C), 155°F (68°C)  
Cover Plate: 135°F (57°C)

**Thread Size:** 1/2" NPT (R1/2)

**Escutcheon:** F1, F2, FP

**Cover Plate:** CCP

**Finish:** Sprinkler: Bronze, Chrome, White Poly Coated, Custom  
Escutcheon: Brass, Chrome, White, Custom  
Cover Plate: White, Chrome, Custom

### F1FR-300 QREC



Technical Bulletin: 159

#### Features:

- 300 psi (20.7 bar) maximum high pressure rating
- 3 mm glass bulb
- Covers areas up to 20' x 20' (6.1 m x 6.1 m) for pendant and recessed pendant; covers areas up to 16' x 20' (4.9 m x 6.1 m) and 16' x 24' (4.9 m x 7.3 m) for horizontal sidewall and recessed horizontal sidewall
- 4" (102 mm) - 12" (305 mm) ceiling-to-deflector distance for horizontal and recessed horizontal sidewall

**Style:** Pendant, Horizontal Sidewall, Recessed Pendant, Recessed Horizontal Sidewall

**K-Factor:** 8.0 (115)

**Temp:** 135°F (57°C), 155°F (68°C), 175°F (79°C)

**Thread Size:** 3/4" NPT (R3/4)

**Escutcheon:** F1, F2

**Finish:** Brass, Chrome, White Poly Coated, Custom



# Sprinklers COMMERCIAL QUICK RESPONSE cont.

## EXTENDED COVERAGE cont.

### F1FR QREC CCP



Technical Bulletin: 151

#### Features:

- Utilizes Model F1FR QREC Pendant Sprinkler
- Provides quick response, extended coverage protection up to 20' x 20' coverage
- Push-on/Thread-off, sturdy convenient cover plate
- Factory assembled sprinkler and cup, shipped complete with protective cap
- Sprinkler assembly and cover plate packaged separately
- Two versions: 1/2" (13 mm) and 5/16" (8 mm) adjustments
- Attractive, low cost, conical concealed profile

<b>Style:</b>	Conical Concealed (CCP)
<b>K-Factor:</b>	8.0 (115)
<b>Temp:</b>	Sprinkler: 135°F (57°C), 155°F (68°C), Cover Plate: 135°F (57°C)
<b>Thread Size:</b>	3/4" NPT (R3/4)
<b>Cover Plate:</b>	CCP
<b>Finish:</b>	Chrome, White, Custom

### F1FR-300 QREC CCP



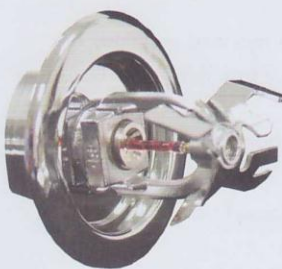
Technical Bulletin: 167

#### Features:

- Utilizes Model F1FR QREC-300 Pendant Sprinkler
- Provides quick response, extended coverage protection up to 20' x 20' (6.1 m x 6.1 m) coverage
- 300 psi (20.7 bar) working pressure rating
- Sturdy brass cup
- Factory assembled sprinkler and cup, shipped complete with protective cap
- Push-on/Thread-off cover plate optional adjustments of 1/2" (13 mm) and 5/16" (8 mm)
- Attractive, low cost conical concealed profile

<b>Style:</b>	Conical Concealed (CCP)
<b>K-Factor:</b>	8.0 (115)
<b>Temp:</b>	Sprinkler: 135°F (57°C), 155°F (68°C), Cover Plate: 135°F (57°C)
<b>Thread Size:</b>	3/4" NPT (R3/4)
<b>Cover Plate:</b>	CCP
<b>Finish:</b>	Chrome, White, Custom

### DH56



Technical Bulletin: 015

#### Features:

- Provides extended coverage for long and narrow spaces such as hallways, corridors, decks and rooms up to 28' (8.5 m) in width with a throw of 8' (2.4 m) or 10' (3.0 m)
- Light Hazard applications
- Low profile, Push-on/Thread-off or standard friction fit escutcheons, or cover plate that provides 1/2" (13 mm) of assembly adjustment
- Factory-assembled sprinkler and cup, shipped complete with protective cap for concealed and FP recessed versions
- 250 psi (17.2 bar) maximum high pressure rating

<b>Style:</b>	Concealed Horizontal Sidewall (SWC), Horizontal Sidewall, Horizontal Sidewall Recessed
<b>K-Factor:</b>	5.6 (80)
<b>Temp:</b>	Sprinkler: 155°F (68°C), 200°F (93°C), Cover Plate: 135°F (57°C), 165°F (24°C)
<b>Thread Size:</b>	1/2" NPT
<b>Escutcheon:</b>	FP, F2, FT
<b>Cover Plate:</b>	SWC/HSW
<b>Finish:</b>	Brass, Chrome, White Poly Coated, Custom, Cover Plate: White



## EXTENDED COVERAGE cont.

### DH80



Technical Bulletin: 003

#### Features:

- Provides coverage for long, narrow applications as well as wide rooms; coverage area up to 28' (8.5 m) wide with a throw of 14' (4.3 m)
- Applications include hallways, decks, balconies, corridors, breezeways
- 4" (102 mm) - 12" (305 mm) ceiling-to-deflector distance
- Minimum spacing between sprinklers 12 feet (3.6 m)
- Light Hazard applications per NFPA 13, 250 psi (17.2 bar) working pressure rating
- Low-profile, Push-on/Thread-off or standard friction fit escutcheons, or cover plate provide 1/2" (13 mm) of horizontal adjustment

**Style:** Horizontal Sidewall, Recessed Horizontal Sidewall, Concealed Horizontal Sidewall (SWC)

**K-Factor:** 8.0 (115)

**Temp:** Sprinkler: 135°F (57°C), 155°F (68°C), Cover Plate: 135°F (57°C)

**Thread Size:** 3/4" NPT (R3/4)

**Escutcheon:** FP, F2

**Cover Plate:** SWC/HSW

**Finish:** Brass, Chrome, White Poly Coated, Custom, Cover Plate: White, Custom

### G4 XLO QREC EC "The Concealer Plus"



Technical Bulletin: 144

#### Features:

- Quick Response (QREC) up to 20' x 20' (6.1 m x 6.1 m) coverage for Light Hazard occupancies
- Push-on/Thread-off cover plate assembly with 1/2" (13 mm) adjustment
- Smooth aesthetic ceiling profile
- Factory installed protective cap

**Style:** Flat Concealed

**K-Factor:** 11.2 (160)

**Temp:** Sprinkler: 165°F (74°C), Cover Plate: 135°F (57°C)

**Thread Size:** 3/4" NPT (R3/4)

**Cover Plate:** Solid Flat or Perforated

**Finish:** Brass, Chrome, White, Custom

### NEW KFR-CCS 56



Technical Bulletin: 044

#### Features:

- With spacing up to a maximum of 16' apart for many applications
- Designed to provide protection for specific light hazard combustible, as well as non-combustible, concealed spaces requiring sprinkler protection
- Complies with NFPA 13 criterion for the protection of combustible concealed spaces
- Utilizes a soldered-link fusible element

**Style:** Upright

**K-Factor:** 5.6 (80)

**Temp:** 212°F (100°C)

**Thread Size:** 1/2" NPT (R1/2)

**Finish:** Bronze

For more detailed information including approval data, please refer to the technical bulletin specified.



# Sprinklers COMMERCIAL QUICK RESPONSE cont.

## DRY

### SWC



Technical Bulletin: 163

#### Features:

- Utilizes the Model F1FR-300 QREC-9 Horizontal Sidewall Sprinkler with 3 mm glass bulb
- Tamper resistant cover plate prevents the sprinkler from being used for unintended purposes
- Sprinkler is approved for both 175 psi (12.0 bar) and 300 psi (20.7 bar) applications
- 4" (102 mm) - 12" (305 mm) ceiling-to-deflector distance
- Sturdy brass cup
- Light hazard applications per NFPA 13, covering areas up to 14' x 26' (4.3 m x 7.9 m)
- Push-on/Thread-off, cover plate provides 1/2" of adjustment

**Style:** Conical Concealed Horizontal Sidewall (CCP)

**K-Factor:** 8.0 (115)

**Temp:** Sprinkler: 135°F (57°C), 155°F (68°C), Cover Plate: 135°F (57°C)

**Thread Size:** 3/4" NPT (R3/4)

**Cover Plate:** CCP/HSW

**Finish:** White, Custom

### F3QR



Technical Bulletin: 157

#### Features:

- Uses Belleville spring closure technology
- 3 mm glass bulb
- Threaded, single-piece machined galvanized 1" (25 mm) pipe with extension inlet
- A variety of escutcheon and cover plate adjustments ranging from 3/8" (9.5 mm) to 1-1/2" (38 mm)
- Meets all of UL and FM compliance requirements for dry sprinklers
- Lengths to 48" (1220 mm)
- Light Hazard/Ordinary Hazard applications as per NFPA 13 and FM Data Sheets

**Style:** Pendent, Recessed Pendent, Horizontal Sidewall, Recessed Horizontal Sidewall, Conical Concealed (CCP)

**K-Factor:** 5.6 (80)

**Temp:** 135°F (57°C), 155°F (68°C), 175°F (79°C), 200°F (93°C), 286°F (141°C)

**Thread Size:** 1" NPT (R1)

**Escutcheon:** Standard for Pendent, F1 or FP for Recessed Pendent & HSW, HB for Pendent & HSW

**Cover Plate:** CCP

**Finish:** Brass, Chrome, White Poly Coated, Custom

### DH56 Dry



Technical Bulletin: 016

#### Features:

- Extended coverage, Light Hazard horizontal sidewall
- Quick response for 28' x 8' (8.5 m x 2.4 m) and 28' x 10' (8.5 m x 3.0 m) coverage
- cULus Listed for 4" to 12" below the ceiling

**Style:** Horizontal Sidewall, Recessed Horizontal Sidewall, Concealed Horizontal Sidewall (SWC)

**K-Factor:** 5.6 (80)

**Temp:** Sprinkler: 155°F (68°C), 175°F (79°C), 200°F (93°C), Cover Plate: 135°F (57°C), 165°F (74°C)

**Thread Size:** 1" NPT (R1)

**Escutcheon:** Standard for Pendent, FP for Recessed Pendent & HSW, HB for Pendent & HSW

**Cover Plate:** SWC/HSW

**Finish:** Brass, Chrome, White Poly Coated



# Sprinklers COMMERCIAL QUICK RESPONSE cont.

## INSTITUTIONAL

### XL Institutional



Technical Bulletin: 113

#### Features:

- Solder type fusible link
- Designed for use in correctional and mental health facilities and in any other type of institution where attempts by an occupant at self-injury might involve the use of a fire sprinkler
- Low breakaway weight
- Tamper resistant escutcheon assembly
- Available in both standard and extended coverage. Extended coverage up to 16' x 16' (4.9 m x 4.9 m) for pendent and horizontal sidewall.
- Industry's only extended coverage horizontal sidewall for institutional occupancies, having a ceiling-to-deflector distance of 4" (102 mm) - 12" (305 mm)

**Style:** Pendent, Horizontal Sidewall, EC Pendent, EC Horizontal Sidewall

**K-Factor:** 5.6 (80)

**Temp:** 165°F (74°C)

**Thread Size:** 1/2" NPT (R1/2)

**Escutcheon:** INST XL, INST, EC

**Finish:** Chrome, Escutcheon: Zinc or Aluminum, White

## COMMERCIAL STANDARD RESPONSE

### BASIC

#### NEW F1 Series



Technical Bulletin: 013

#### Features:

- Includes: F156, F142, F1XLH and F128
- Combines the durability of a standard sprinkler with the attractive low profile of a decorative sprinkler
- 5 mm glass bulb

**Style:** Upright, Pendent, Recessed Pendent, Conventional, Vertical Sidewall, Horizontal Sidewall, Recessed HSW

**K-Factor:** 2.8 (40), 4.2 (60), 5.6 (80)

**Temp:** 135°F (57°C), 155°F (68°C), 175°F (79°C), 200°F (93°C), 286°F (141°C), 360°F (182°C)

**Thread Size:** 1/2" NPT (R1/2)

**Escutcheon:** F1, F2, FP Push-on/Thread-off, FT

**Finish:** Sprinkler: Bronze, Chrome, White Poly Coated, Custom  
Escutcheon: Brass, Chrome, White, Custom

### F1 LO



Technical Bulletin: 117

#### Features:

- All hazards for pendent and recessed pendent; Light Hazard only for EC Pendent and Recessed EC Pendent
- 5 mm glass bulb
- Available in standard coverage and extended coverage
- Extended coverage area up to 20' x 20' (6.0 m x 6.0 m) for EC pendent and recessed EC pendent

**Style:** Upright, Pendent, EC Pendent, Conventional, Vertical Sidewall, Horizontal Sidewall, Recessed Pendent, Recessed EC Pendent

**K-Factor:** 8.0 (115)

**Temp:** 135°F (57°C), 155°F (68°C), 175°F (79°C), 200°F (93°C), 286°F (141°C), 360°F (182°C)

**Thread Size:** 1/2" NPT (R1/2), 3/4" NPT (R3/4), R3/8

**Escutcheon:** F1, FP for F1 Recessed

**Finish:** Bronze, Chrome, White Poly Coated, Custom

For more detailed information including approval data, please refer to the technical bulletin specified.



### F156-300



Technical Bulletin: 025

#### Features:

- 300 psi (20.7 bar) working pressure rating
- 5 mm glass bulb

**Style:** Upright, Pendent, Recessed Pendent

**K-Factor:** 5.6 (80)

**Temp:** 135°F (57°C), 155°F (68°C), 175°F (79°C), 200°F (93°C), 286°F (141°C), 360°F (182°C)

**Thread Size:** 1/2" NPT (R1/2)

**Escutcheon:** F1, F2, FP

**Finish:** Sprinkler: Bronze, Chrome, White Poly Coated, Custom  
Escutcheon: Brass, Chrome, White, Custom

### F1-300



Technical Bulletin: 155

#### Features:

- 300 psi (20.7 bar) working pressure rating
- 5 mm glass bulb
- All occupancy hazards per NFPA 13
- Sturdy machined brass cup

**Style:** Upright, Pendent, Recessed Pendent

**K-Factor:** 8.0 (115)

**Temp:** 135°F (57°C), 155°F (68°C), 175°F (79°C), 200°F (93°C), 286°F (141°C), 360°F (182°C)

**Thread Size:** 3/4" NPT (R3/4)

**Escutcheon:** F1

**Finish:** Brass, Chrome, White Poly Coated, Custom

### G



Technical Bulletin: 110

#### Features:

- Solder-type fusible link
- All occupancy hazards (1.9, 2.8 and 4.2 K-Factor - Light Hazard only)

**Style:** Upright, Pendent, Conventional

**K-Factor:** 1.98 (28.5), 2.82 (40.6), 4.10 (59.1), 4.24 (61), 5.62 (81.0), 7.96 (114.7), 8.20 (118.2)

**Temp:** 135°F (57°C), 165°F (74°C), 212°F (100°C), 286°F (141°C)

**Thread Size:** 1/2" NPT (R1/2), 3/4" NPT (R3/4), 10 mm, 20 mm

**Finish:** Brass, Chrome, White, Custom



# Sprinklers **COMMERCIAL STANDARD RESPONSE** cont.

## **BASIC** cont.

### **G, G/F1 Recessed**



Technical Bulletin: 112

#### **Features:**

- Solder-type fusible link
- G VSW, G HSW-EC4 and G/F1/HSW-EC4- Light Hazard only;  
G HSW-1- Light and Ordinary Hazard
- G HSW-1 (2.8 and 4.2 K-Factor - Light Hazard only)
- K=5.6 for G HSW-EC4 coverage areas up to 16' x 20' (4.9 m to 6.1 m);  
K=8.0 for G/F1/HSW-EC4 coverage areas up to 16' x 24' (4.9 m to 7.3 m)

**Style:** Vertical Sidewall-Upright, Vertical Sidewall-Pendent, Horizontal Sidewall, Recessed Horizontal Sidewall, EC Horizontal Sidewall, Recessed Extended Coverage Sidewall

**K-Factor:** 2.82 (40.6), 4.24 (61), 5.6 (80), 7.96 (114.7), 8.2 (118.2)

**Temp:** 135°F (57°C), 165°F (74°C), 212°F (100°C), 286°F (141°C)

**Thread Size:** 1/2" NPT (R1/2), 3/4" NPT (R3/4)

**Escutcheon:** G/F1

**Finish:** Brass, Chrome, Custom

## **DECORATIVE**

### **G4**



Technical Bulletin: 121

#### **Features:**

- Smooth aesthetic ceiling profile
- 1/2" (13 mm) total adjustment provided by economical standard inlet version;  
1-1/2" (38 mm) total adjustment provided by adjustable inlet versions
- Adjustable inlet version eliminates costly reducing coupling
- Ordinary and intermediate temperature ratings
- Multiple orifices for design flexibility
- Light and Ordinary Hazard Applications (2.8 and 4.2 K-Factor - Light Hazard only)

**Style:** Flat Concealed

**K-Factor:** 2.8 (40), 4.2 (60), 5.6 (80)

**Temp:** Sprinkler: 135°F (57°C), 165°F (74°C), 212°F (100°C), Cover Plate: 135°F (57°C), 165°F (74°C)

**Thread Size:** Non-Adjustable: 1/2 NPT (R1/2), Adjustable: 1" NPT Male or Female

**Cover Plate:** Solid Flat or Perforated

**Finish:** Brass, Chrome, White, Custom

### **G4-300**



Technical Bulletin: 161

#### **Features:**

- 1/2" (13 mm) cover plate adjustment
- Smooth aesthetic ceiling profile
- Factory installed protective cap
- Ordinary and intermediate temperature ratings
- 300 psi (20.7 bar) maximum pressure rating
- Light and Ordinary Hazard Applications (2.8 and 4.2 K-Factor - Light Hazard only)

**Style:** Flat Concealed

**K-Factor:** 5.6 (80)

**Temp:** 135°F (57°C), 165°F (74°C), 212°F (100°C), Cover Plate: 135°F (57°C), 165°F (74°C)

**Thread Size:** Non-Adjustable: 1/2 NPT (R1/2), Adjustable: 1" NPT Male or Female

**Cover Plate:** Solid Flat or Perforated

**Finish:** Brass, Chrome, White, Custom

For more detailed information including approval data, please refer to the technical bulletin specified.



## DECORATIVE cont.

### G Recessed



Technical Bulletin: 111

#### Features:

- Smooth aesthetic ceiling profile
- 1/2" (13 mm) total adjustment provided by economical standard inlet version; 1-1/2" (38 mm) total adjustment provided by adjustable inlet versions
- Adjustable inlet version eliminates costly reducing coupling
- Small diameter escutcheon
- Light and Ordinary Hazard Applications (2.75, 2.82 and 4.24 K-Factor - Light Hazard only)

**Style:** Recessed Pendant

**K-Factor:** 2.75 (39.2) 2.82 (40.6), 4.24 (61), 5.53 (79.7), 5.6 (80), 7.96 (114.7)

**Temp:** 135°F (57°C), 165°F (74°C), 212°F (100°C)

**Thread Size:** Non-Adjustable: 1/2 NPT (R1/2), Adjustable: 1" NPT Male or Female, R1 Male or Female

**Escutcheon:** G Recessed

**Finish:** Brass, Chrome, White Poly Coated, Custom

### NEW G5-80, G5-56, G5-42 and G5-28 SR "Sealing" Concealed



Technical Bulletin: 041

#### Features:

- Cover plate with gasket Seal for standard response may be assembled to a G5-80, G5-56, G5-42, and G5-28 sprinkler for dust free environments
- Total adjustment of 3/4" (19 mm) provided by standard inlet version
- Ordinary and intermediate temperature rating available

**Style:** Flat Concealed

**K-Factor:** 2.8 (40), 4.2 (60), 5.6 (80), 8.0 (115)

**Temp:** Sprinkler: 165°F (74°C), 212°F (100°C), Cover Plate: 135°F (57°C), 165°F (74°C)

**Thread Size:** Non-Adjustable: 1/2 NPT (R1/2), 3/4 NPT (R3/4)

**Cover Plate:** Flat Concealed

**Finish:** Chrome, White, Custom

### NEW G5-56 300 SR "Sealing" Concealed



Technical Bulletin: 045

#### Features:

- Cover plate with gasket Seal for Standard Response may be assembled to a G5-56 300 sprinkler for dust free environments
- Total adjustment of 3/4" (19 mm) provided by standard inlet version
- Ordinary and intermediate temperature rating available
- Cover plate and gasket are only sold as an assembly. The gasket cannot be purchased as an individual part.

**Style:** Flat Concealed

**K-Factor:** 5.6 (80)

**Temp:** Sprinkler: 165°F (74°C), Cover Plate: 135°F (57°C)

**Thread Size:** Non-Adjustable: 1/2 NPT (R1/2)

**Cover Plate:** Flat Concealed

**Finish:** Chrome, White, Custom



# Sprinklers COMMERCIAL STANDARD RESPONSE cont.

## EXTENDED COVERAGE

### G/F1



Technical Bulletin: 120

#### Features:

- Decorative recessed pendent sprinkler
- Rapid and easy installation
- 3/4" (19 mm) adjustment to flush pendent position
- 1/2" (13 mm) adjustment for recessed position with 1/4" (6 mm) minimum recess
- Light and Ordinary Hazard Applications (2.8 and 4.2 K-Factor - Light Hazard only)

Style:	Recessed Pendent
K-Factor:	2.8 (40), 4.2 (60), 5.6 (80), 8.0 (115)
Temp:	135°F (57°C), 165°F (74°C), 212°F (100°C)
Thread Size:	1/2" NPT (R1/2), 3/4" NPT (R3/4)
Escutcheon:	G/F1
Finish:	Brass, Chrome, White Poly Coated, Custom

### JL112 and J112 Upright



Technical Bulletin: 173

#### Features:

- Extended Coverage for both Light and Ordinary Hazard occupancies for coverage areas from 144 ft<sup>2</sup> to 400 ft<sup>2</sup>
- Standard Response for Ordinary Hazard - 16' x 16' to 20' x 20' sprinkler spacing
- Available with solder link (JL112) or 3 mm glass bulb (J112)

Style:	Upright
K-Factor:	11.2 (160)
Temp:	JL112 Upright: 165°F (74°C), JL112 Upright: 212°F (100°C) J112 Upright: 155°F (68°C), J112 Upright: 200°F (93°C)
Thread Size:	3/4" NPT (R3/4)
Finish:	Bronze, Chrome, White Polyester

### JL112 and J112 Pendent & Recessed Pendent



Technical Bulletin: 172

#### Features:

- Extended Coverage for both Light and Ordinary Hazard occupancies for coverage areas from 144 ft<sup>2</sup> to 400 ft<sup>2</sup>
- Standard Response for Ordinary Hazard - 16' x 16' to 20' x 20' sprinkler spacing
- Available with solder link (JL112) or 3 mm glass bulb (J112)

Style:	Pendent, Recessed Pendent
K-Factor:	11.2 (160)
Temp:	JL112 Pendent: 165°F (74°C), JL112 Recessed Pendent: 212°F (100°C), J112 Pendent: 155°F (68°C), J112 Recessed Pendent: 200°F (93°C)
Thread Size:	3/4" NPT (R3/4)
Escutcheon:	F1, F2, FP Push-on/Thread-off
Finish:	Bronze, Chrome, White Polyester

For more detailed information including approval data, please refer to the technical bulletin specified.



# Sprinklers COMMERCIAL STANDARD RESPONSE cont.

## EXTENDED COVERAGE cont.

### GFR VELO-ECOH Pendent



Technical Bulletin: 160

#### Features:

- Provides Extended Coverage Ordinary Hazard and protection to 400 ft<sup>2</sup> (37.2 m<sup>2</sup>) per sprinkler
- Recessed pendent version provides 3/4" (19 mm) adjustment to flush pendent position
- Can be used for all editions of NFPA 13
- Solder fusible link

Style:	Pendent, Recessed Pendent
K-Factor:	14.0 (200)
Temp:	165°F (74°C), 212°F (100°C)
Thread Size:	3/4" NPT (R3/4)
Escutcheon:	F1
Finish:	Brass, Chrome, White Poly Coated, Custom

### GFR VELO-ECOH Upright



Technical Bulletin: 165

#### Features:

- Provides Extended Coverage Ordinary Hazard protection to 400 ft<sup>2</sup> (37.2 m<sup>2</sup>) per sprinkler
- Very extra large orifice of nominal K=14.0 permitting low pressures
- Can be used for all editions of NFPA 13
- Solder fusible link

Style:	Upright
K-Factor:	14.0 (200)
Temp:	165°F (74°C), 212°F (100°C)
Thread Size:	3/4" NPT (R3/4)
Finish:	Bronze, Chrome, Custom

### F156 SREC



Technical Bulletin: 027

#### Features:

- Provides Extended Coverage Light Hazard protection to 400 ft<sup>2</sup> (37.2 m<sup>2</sup>) per sprinkler
- Combines the durability of a standard sprinkler with the attractive low profile of a decorative sprinkler
- 5 mm glass bulb

Style:	Pendent, Recessed Pendent
K-Factor:	5.6 (80)
Temp:	135°F (57°C), 155°F (68°C)
Thread Size:	1/2" NPT (R1/2)
Escutcheon:	F1, F2, FP
Finish:	Sprinkler: Bronze, Chrome, White Poly Coated, Custom Escutcheon: Brass, Chrome, White, Custom



# Sprinklers COMMERCIAL STANDARD RESPONSE cont.

## EXTENDED COVERAGE cont.

### F156-300 SREC



Technical Bulletin: 029

#### Features:

- Provides Extended Coverage Light Hazard protection to 400 ft<sup>2</sup> (37.2 m<sup>2</sup>) per sprinkler
- High pressure rated automatic sprinklers which can handle a maximum service pressure of 300 psi (20.7 bar)
- Combines durability of a standard sprinkler with the attractive low profile of a decorative sprinkler
- 5 mm glass bulb

**Style:** Pendant, Recessed Pendant

**K-Factor:** 5.6 (80)

**Temp:** 135°F (57°C), 155°F (68°C)

**Thread Size:** 1/2" NPT (R1/2)

**Escutcheon:** F1, F2, FP

**Finish:** Sprinkler: Bronze, Chrome, White Poly Coated, Custom  
Escutcheon: Brass, Chrome, White, Custom

### F1-300 SREC



Technical Bulletin: 158

#### Features:

- Provides Extended Coverage Light Hazard protection to 400 ft<sup>2</sup> (37.2 m<sup>2</sup>) per sprinkler
- High pressure rated automatic sprinklers which can handle a maximum service pressure of 300 psi (20.7 bar)
- Combines durability of a standard sprinkler with the attractive low profile of a decorative sprinkler
- 5 mm glass bulb

**Style:** Pendant, Recessed Pendant

**K-Factor:** 8.0 (115)

**Temp:** 135°F (57°C), 155°F (68°C)

**Thread Size:** 3/4" NPT (R3/4)

**Escutcheon:** F1

**Finish:** Brass, Chrome, White, Custom

### MBEC-14 "Metal Building Sprinkler"



Technical Bulletin: 169

#### Features:

- Sprinkler for pre-engineered metal buildings having a maximum bay width of 25 ft (7.6 m) and 32 ft (9.8 m) maximum height at peak
- Designed to be installed on piping that is supported by the primary structure, not the purlins
- Provides Extended Coverage for Ordinary & Extra Hazard protection to 175 ft.<sup>2</sup> (16.3 m<sup>2</sup>) per sprinkler
- Density/Area demand based upon hazard to be protected
- Can be used for all editions of NFPA13 that permit extended coverage sprinklers for wet, dry and preaction sprinkler systems

**Style:** Horizontal Sidewall

**K-Factor:** 14.0 (200)

**Temp:** 165°F (74°C), 212°F (100°C)

**Thread Size:** 3/4" NPT (R3/4)

**Finish:** Bronze, Chrome, Custom

For more detailed information including approval data, please refer to the technical bulletin specified.



# Sprinklers COMMERCIAL STANDARD RESPONSE cont.

## DRY

F3



Technical Bulletin: 153

### Features:

- Utilizes Belleville Spring Closure technology
- 1-1/2" (38 mm) escutcheon adjustment on pendent sprinkler
- 1/2" (13 mm) escutcheon adjustment on recessed sprinkler with push-on/thread-off FP Model escutcheon ring
- 3/8" (9.5 mm) cover plate adjustment on concealed sprinkler with push-on/thread-off CCP cover
- Attractive appearance. Employs 5 mm glass bulb and galvanized nipple
- Lengths available to accommodate installation dimensions from 2" (51 mm) to 48" (1219 mm), in 1/4" (6 mm) increments
- Standard Coverage for Light and Ordinary Hazard (sidewall light hazard only for FM)

<b>Style:</b>	Pendent, Recessed Pendent, Horizontal Sidewall, Recessed Horizontal Sidewall, Conical Concealed (CCP)
<b>K-Factor:</b>	5.6 (80)
<b>Temp:</b>	135°F (57°C), 155°F (68°C), 175°F (79°C), 200°F (93°C), 286°F (141°C)
<b>Thread Size:</b>	1" NPT (R1)
<b>Escutcheon:</b>	Standard for Pendent, FP for Recessed Pendent & HSW, HB for Pendent & HSW
<b>Cover Plate:</b>	CCP
<b>Finish:</b>	Brass, Chrome, White, Custom, Corrosion Resistant finishes available

## SPECIAL RESPONSE

F1S5-FS56  
Flat Spray



Technical Bulletin: 023

### Features:

- VdS Approved and CE Certified – for International market only
- Excellent choice for applications with lower clearance above the suspended open ceilings and in racks
- 5 mm glass bulb

<b>Style:</b>	Pendent, Pendent with shield
<b>K-Factor:</b>	80 metric (5.6 US)
<b>Temp:</b>	57°C (135°F), 68°C (155°F), 79°C (175°F), 93°C (200°F), 141°C (286°F)
<b>Thread Size:</b>	R1/2 BSPT (1/2" NPT)
<b>Finish:</b>	Sprinkler: Bronze    Shield: Galvanized

F1S5  
Standard Spray



Technical Bulletin: 024

### Features:

- VdS Approved – for International market only
- Combines the durability of standard sprinklers with the attractive low profile of a decorative sprinkler
- 5 mm glass bulb

<b>Style:</b>	Upright, Pendent, Conventional, Recessed Pendent
<b>K-Factor:</b>	80 metric (5.6 US)
<b>Temp:</b>	57°C (135°F), 68°C (155°F), 79°C (175°F), 93°C (200°F), 141°C (286°F)
<b>Thread Size:</b>	R1/2 BSPT (1/2" NPT)
<b>Escutcheon:</b>	F1, F2, FP Push-on/Thread-off
<b>Finish:</b>	Bronze, Chrome, Custom



# Sprinklers STORAGE

## JL-14 ESFR



Technical Bulletin: 018

### Features:

- Early suppression, fast response sprinkler for the protection of high-piled storage
- Levered fusible alloy solder link available with a 165°F (74°C) or a 212°F (100°C) temperature rating
- Delivers approximately 100 gpm (378 L/min) of water at 50 psi (3.5 bar)

Style: ESFR Pendent

K-Factor: 14.0 (202)

Temp: 165°F (74°C), 212°F (100°C)

Thread Size: 3/4" NPT (R3/4)

Finish: Bronze

## JL-17 ESFR



Technical Bulletin: 019

### Features:

- Early suppression, fast response sprinkler for the protection of high-piled storage
- Levered fusible alloy solder link available with a 165°F (74°C) or a 212°F (100°C) temperature rating
- Delivers approximately 121 gpm (458 L/min) of water at 52 psi (3.6 bar)

Style: ESFR Pendent

K-Factor: 16.8 (242)

Temp: 165°F (74°C), 212°F (100°C)

Thread Size: 3/4" NPT (R3/4)

Finish: Bronze

## HL-22 ESFR



Technical Bulletin: 010

### Features:

- Early suppression, fast response sprinkler for the protection of high-piled storage
- Levered fusible alloy solder link available with a 165°F (74°C) or a 212°F (100°C) temperature rating
- Eliminates in-rack sprinkler requirements and is optimized for use in buildings over 40' up to 45' in height
- Maximum ceiling-to-deflector distance is 18" (457 mm)
- Lower flow requirements offers opportunities to reduce sizing requirements of system pipe, fire pumps, underground pipe and storage tanks

Style: ESFR Pendent

K-Factor: 22.4 (320)

Temp: 165°F (74°C), 212°F (100°C)

Thread Size: 1" NPT (R1)

Finish: Bronze

For more detailed information including approval data, please refer to the technical bulletin specified.



# Sprinklers STORAGE cont.

## HL-22 Specific Application ESFR



Technical Bulletin: 177

### Features:

- Early suppression, fast response sprinkler for the protection of high-piled storage
- Eliminates in-rack sprinklers for 48' high buildings
- Lower flows offer opportunities to reduce interior piping, fire pump sizes, underground pipe, and tank sizes
- Maximum deflector distance from ceiling (roof) is 14" (356 mm)
- Utilizes fusible alloy solder link
- Delivers approximately 166 gpm (632 L/min) of water at 55 psi (3.8 bar)

Style: ESFR Pendant

K-Factor: 22.4 (320)

Temp: 212°F (100°C)

Thread Size: 1" NPT (R1)

Finish: Bronze\*

\*Sprinkler frame is painted White in order to provide a visual identifier of the temperature rating



## N25 ESFR



Technical Bulletin: 909

### Features:

- Designed to be shorter, and more compact than other ESFR sprinklers, which allows piping to be installed further from the ceiling and obstructions
- Less susceptible to damage due to smaller deflector and frame design
- Utilizes a levered fusible alloy solder link in either a 165°F (74°C) or a 212°F (100°C) rating

Style: Pendant

K-Factor: 25.2 (362)

Temp: 165°F (74°C), 212°F (100°C)

Thread Size: 1 NPT, (R1)

Finish: Bronze

## J168



Technical Bulletin: 011

### Features:

- Control mode, density/area upright sprinkler for extra hazard and storage occupancies per NFPA 13 requirements
- Very large orifice for use in high challenge storage occupancies
- Can operate at pressures as low as 7 psi
- Solder fusible link
- Provides opportunities for reduced design areas, higher storage, reduced ceiling clearance to storage, and other savings in sprinkler system design
- The best choice for densities of 0.44 gpm/ft<sup>2</sup> (15 L/min/m<sup>2</sup>) or larger

Style: Upright

K-Factor: 16.8 (242)

Temp: 165°F (74°C), 212°F (100°C), 286°F (141°C)

Thread Size: 3/4" NPT (R3/4)

Finish: Bronze, Corrosion Resistant finishes available



# Sprinklers STORAGE cont.

## N252 EC



Technical Bulletins:  
008 (CMDA) & 908 (CMSA)

### Features:

- Can be used as a control mode, density/area sprinkler for storage and as a control mode specific application sprinkler
- Extended coverage for density/area design for coverage up to 196 ft<sup>2</sup> (14' x 14') for Extra Hazard, high-piled and rack storage applications
- Solder fusible link
- Can be installed directly on the piping for exposed pipe systems
- Complies with the criteria for protection of retail stores as described in NFPA 2002, section 12-7.2
- Installations for finished ceilings utilize the Push-on/Thread-off FP recessed escutcheon which provides a 1/2" (13 mm) adjustment
- Minimum operating pressure of 7 psi

Style: Pendant, Recessed Pendant

K-Factor: 25.2 (363)

Temp: 165°F (74°C), 212°F (100°C)

Thread Size: 1" NPT (R1)

Escutcheon: FP

Finish: Bronze, Chrome, White Poly Coated

## G XLO



Technical Bulletin: 129

### Features:

- Solder fusible link
- Extra large orifice for use in high challenge storage occupancies
- Can operate at pressures as low as 7 psi
- Lower operating pressure saves cost by reducing branch line sizes, fire pump sizes, fewer sprinklers
- 1/2" NPT (R1/2) available for retrofit installations only

Style: Upright

K-Factor: 11.2 (160)

Temp: 165°F (74°C), 212°F (100°C), 286°F (141°C)

Thread Size: 1/2" NPT (R1/2), 3/4" NPT (R3/4)

Finish: Bronze, Chrome, Custom



## GL 112



Technical Bulletin: 132

### Features:

- Complies with the FM requirements for QR Sprinklers to be used in Racks
- Lower pressure requirements offers opportunities to reduce sizing requirements of system piping, underground piping, fire pumps, and storage tanks
- Provides ability to increase densities of existing systems

Style: Upright

K-Factor: 11.2 (160)

Temp: 165°F (74°C), 212°F (100°C)

Thread Size: 3/4" NPT (R3/4)

Finish: Bronze, Custom

For more detailed information including approval data, please refer to the technical bulletin specified.



# Sprinklers STORAGE cont.

## G VELO



Technical Bulletin: 146

### Features:

- Solder fusible link
- Very extra large orifice for use in high challenge storage occupancies
- Can operate at pressures as low as 7 psi
- Lower operating pressure saves cost by reducing branch line sizes, fire pump sizes, fewer sprinklers
- May be installed in drops or directly into branch line fittings
- The best choice for densities of 0.38 gpm/ft<sup>2</sup> (15 L/min/m<sup>2</sup>) or larger
- Simplifies future ESFR conversions

Style:	Pendent
K-Factor:	14.0 (202)
Temp:	165°F (74°C), 212°F (100°C), 286°F (141°C)
Thread Size:	3/4" NPT (R3/4)
Finish:	Bronze, Chrome, Custom

## F1, F156, F1FR, F1FR56



Technical Bulletin: 031

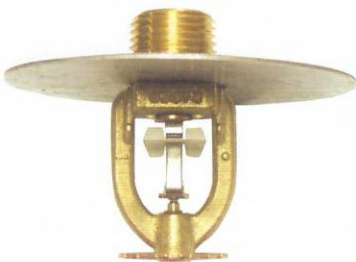
### Features:

- Available in either Standard Response or Quick Response
- Intermediate level sprinklers for fixed fire protection systems

Style:	Upright, Pendent
K-Factor:	5.6 (80), 8.0 (115)
Temp:	F156: 135°F (57°C), 155°F (68°C), 175°F (79°C), 200°F (93°C), 286°F (141°C), 360°F (182°C) F1FR, F1FR56: 135°F (57°C), 155°F (68°C), 175°F (79°C), 200°F (93°C), 286°F (141°C)
Thread Size:	1/2" NPT (R1/2), 3/4" NPT (R3/4)
Finish:	Bronze, Custom

NEW

## KFR56 Intermediate Level



Technical Bulletin: 042

### Features:

- Include shields which protect the glass bulb from water spray impingement caused by sprinklers located at a higher elevation
- Intermediate level sprinklers for fixed fire protection systems

Style:	Upright, Pendent
K-Factor:	5.6 (80)
Temp:	165°F (74°C), 212°F (100°C)
Thread Size:	1/2" NPT (R1/2)
Finish:	Bronze, Custom



# Sprinklers STORAGE cont.

## G Intermediate Level



Technical Bulletin: 114

### Features:

- Solder fusible link
- Can be used whenever there is a danger of inhibiting operation of a sprinkler due to wetting from an overhead sprinkler
- Available with corrosion-resistant finishes
- Multi-level in-rack installations or beneath open-grid catwalks are typical applications

<b>Style:</b>	Upright, Pendent
<b>K-Factor:</b>	5.6 (80), 8.0 (115)
<b>Temp:</b>	165°F (74°C), 212°F (100°C), 286 °F (141°C)
<b>Thread Size:</b>	1/2" NPT (R1/2), 3/4" NPT (R3/4)
<b>Finish:</b>	Bronze, Chrome, Custom, Corrosion Resistant finishes available

For more detailed information including approval data, please refer to the technical bulletin specified.



# Sprinklers RESIDENTIAL

Our Residential Sprinklers are designed for the lowest flows to meet the minimum design density of .05 gpm/ft<sup>2</sup> (Bulletin 135) as well as .10 gpm/ft<sup>2</sup> (Bulletin 176).

For additional information on our Residential Sprinklers, please see

- Technical Bulletin 140 for Design and Installation Guide
- Technical Bulletin 007 for Wall Wetting Patterns

## FIRES 30



Technical Bulletin: 135

### Features:

- Listed for a minimum of .05 gpm/ft<sup>2</sup>
- 3 mm glass bulb
- For use in NFPA 13D installations with limited water supplies or small water meters that limit the available gpm
- Can reduce the size of storage tanks or for systems supplied by wells
- For use in NFPA 13 and NFPA 13R installations where larger K-Factor sprinklers over discharge in small rooms
- Great for retrofit installations
- For use in horizontal ceilings
- Industry's only concealed 3.0 K-Factor sprinkler

**Style:** Pendant, Recessed Pendant, Conical Concealed (CCP) Pendant

**K-Factor:** 3.0 (43)

**Temp:** Sprinkler: 155°F (68°C), 175°F (79°C), CCP Cover Plate: 135°F (57°C)

**Thread Size:** 1/2" NPT (R1/2)

**Escutcheon:** F2, FP, FT

**Cover Plate:** CCP

**Finish:** White, Custom

## FIRES 30 LL



Technical Bulletin: 033

### Features:

- Listed for a minimum of .05 gpm/ft<sup>2</sup>
- 3 mm glass bulb
- For use in NFPA 13D installations with limited water supplies or small water meters that limit the available gpm
- Great for retrofit installations
- For use on flat ceilings

**Style:** Pendant, Recessed Pendant, Conical Concealed (CCP) Pendant

**K-Factor:** 3.0 (43)

**Temp:** Sprinkler: 155°F (68°C), 175°F (79°C), CCP Cover Plate: 135°F (57°C)

**Thread Size:** 1/2" NPT (R1/2)

**Escutcheon:** F2, FP

**Cover Plate:** CCP

**Finish:** White, Custom



# Sprinklers RESIDENTIAL cont.

## F1RES 49



Technical Bulletins: 135 & 176

### Features:

- Listed for a minimum of .05 gpm/ft<sup>2</sup>
- 3 mm glass bulb
- For use in wet pipe systems in accordance with NFPA 13D and 13R, and for use in the residential portions of any occupancy per NFPA 13
- Approved for installation up to 8 inches below the ceiling
- Available with 3/4" (19 mm) adjustable two-piece escutcheon and 1/2" (13 mm) adjustable low profile, Push-on/Thread-off escutcheon
- Listed for use with smooth flat horizontal and sloped ceilings

**Style:** Pendant, Recessed Pendant, Conical Concealed (CCP) Pendant

**K-Factor:** 4.9 (70.6)

**Temp:** Sprinkler: 155°F (68°C), 175°F (79°C), CCP Cover Plate: 135°F (57°C)

**Thread Size:** 1/2" NPT (R1/2)

**Escutcheon:** F1, F2, FP, FT

**Cover Plate:** CCP

**Finish:** White, Custom

## F1RES 49 LL



Technical Bulletin: 033

### Features:

- Listed for a minimum of .05 gpm/ft<sup>2</sup>
- 3 mm glass bulb
- For use in wet pipe systems in accordance with NFPA 13D and 13R, and for use in the residential portions of any occupancy per NFPA 13
- Approved for up to 8 inches below the ceiling
- Available with 3/4" (19 mm) & 1/2" (13 mm) adjustable two-piece escutcheons and 1/2" (13 mm) adjustable low profile, Push-on/Thread-off escutcheon
- Can be used for flat and sloped ceilings

**Style:** Pendant, Recessed Pendant, Conical Concealed (CCP) Pendant

**K-Factor:** 4.9 (70.6)

**Temp:** Sprinkler: 155°F (68°C), 175°F (79°C), CCP Cover Plate: 135°F (57°C)

**Thread Size:** 1/2" NPT (R1/2)

**Escutcheon:** F1, F2, FP

**Cover Plate:** CCP

**Finish:** White, Custom

For more detailed information including approval data, please refer to the technical bulletin specified.



# Sprinklers **RESIDENTIAL** cont.

## FIRES 44



Technical Bulletins: 135 & 176

### Features:

- Listed for a minimum of .05 gpm/ft<sup>2</sup>
- 3 mm glass bulb
- Available with 1/2" (13 mm) adjustable two-piece escutcheon
- For use in wet pipe systems in accordance with NFPA 13D and 13R, and for use in the residential portions of any occupancy per NFPA 13
- Listed for use with smooth flat horizontal and sloped ceilings

<b>Style:</b>	Horizontal Sidewall, Recessed Horizontal Sidewall, Sidewall Concealed (SWC)
<b>K-Factor:</b>	4.4 (63.4)
<b>Temp:</b>	Sprinkler: 155°F (68°C), 175°F (79°C), CCP Cover Plate: 135°F (57°C)
<b>Thread Size:</b>	1/2" NPT (R1/2)
<b>Escutcheon:</b>	F2, FT
<b>Cover Plate:</b>	SWC
<b>Finish:</b>	White, Custom

## F1RES 44 LL



Technical Bulletin: 033

### Features:

- Listed for a minimum of .05 gpm/ft<sup>2</sup>
- 3 mm glass bulb
- Available with 1/2" (13 mm) adjustable two-piece escutcheon
- For use in wet pipe systems in accordance with NFPA 13D and 13R, and for use in the residential portions of any occupancy per NFPA 13
- Can be used for flat and sloped ceilings, specifically for discharging down and across the slope

<b>Style:</b>	Horizontal Sidewall, Recessed Horizontal Sidewall, Sidewall Concealed (SWC)
<b>K-Factor:</b>	4.4 (63.4)
<b>Temp:</b>	Sprinkler: 155°F (68°C), 175°F (79°C), CCP Cover Plate: 135°F (57°C)
<b>Thread Size:</b>	1/2" NPT (R1/2)
<b>Escutcheon:</b>	F2
<b>Cover Plate:</b>	SWC
<b>Finish:</b>	White, Custom

## RFC49



Technical Bulletin: 006

### Features:

- Very low water flow and pressure requirements
- 1/2" (13 mm) Total cover plate adjustment
- Flat cover plate with smooth aesthetic ceiling profile
- cULus Listed

<b>Style:</b>	Flat Concealed
<b>K-Factor:</b>	4.9 (70.6)
<b>Temp:</b>	Sprinkler: 165°F (74°C), Cover Plate: 135°F (57°C)
<b>Thread Size:</b>	1/2" NPT (R1/2)
<b>Cover Plate:</b>	Solid Flat or Perforated
<b>Finish:</b>	White, Chrome, Custom



# Sprinklers RESIDENTIAL cont.

## RFC49 LL



Technical Bulletin: 032

### Features:

- Listed for a minimum of .05 gpm/ft<sup>2</sup>
- Solder fusible link
- Smooth, aesthetic ceiling profile
- For use in wet pipe systems in accordance with NFPA 13D and 13R, and for use in the residential portions of any occupancy per NFPA 13
- Push-on/Thread-off cover plate provides 1/2" (13 mm) of adjustment
- For use on flat and sloped ceilings

<b>Style:</b>	Flat Concealed
<b>K-Factor:</b>	4.9 (70.6)
<b>Temp:</b>	Sprinkler: 165°F (74°C), Cover Plate: 135°F (57°C)
<b>Thread Size:</b>	1/2" NPT (R1/2)
<b>Cover Plate:</b>	Flat Concealed RFC, Solid Flat or Perforated
<b>Finish:</b>	White, Chrome, Custom

## RFC43



Technical Bulletin: 006

### Features:

- Listed for a minimum of .05 gpm/ft<sup>2</sup>
- Solder fusible link
- Smooth, aesthetic ceiling profile
- For use in wet pipe systems in accordance with NFPA 13D and 13R, and for use in the residential portions of any occupancy per NFPA 13
- Cover plate provides 1/2" (13 mm) of adjustment
- Listed for use with smooth flat horizontal and sloped ceilings

<b>Style:</b>	Flat Concealed
<b>K-Factor:</b>	4.3 (62.4)
<b>Temp:</b>	Sprinkler: 165°F (74°C), Cover Plate: 135°F (57°C)
<b>Thread Size:</b>	1/2" NPT (R1/2)
<b>Cover Plate:</b>	Flat Concealed RFC, Solid Flat or Perforated
<b>Finish:</b>	White, Chrome, Custom

## RFC43 LL



Technical Bulletin: 032

### Features:

- Listed for a minimum of .05 gpm/ft<sup>2</sup>
- Solder fusible link
- Smooth, aesthetic ceiling profile
- For use in wet pipe systems in accordance with NFPA 13D and 13R, and for use in the residential portions of any occupancy per NFPA 13
- Push-on/Thread-off cover plate provides 1/2" (13 mm) of adjustment
- Can be used for flat and sloped ceilings

<b>Style:</b>	Flat Concealed
<b>K-Factor:</b>	4.3 (62.4)
<b>Temp:</b>	Sprinkler: 165°F (74°C), Cover Plate: 135°F (57°C)
<b>Thread Size:</b>	1/2" NPT (R1/2)
<b>Cover Plate:</b>	Flat Concealed RFC, Solid Flat or Perforated
<b>Finish:</b>	White, Chrome, Custom

For more detailed information including approval data, please refer to the technical bulletin specified.



# Sprinklers RESIDENTIAL cont.

## RFC30



Technical Bulletin: 006

### Features:

- Very low water flow and pressure requirements
- 1/2" (13 mm) Total cover plate adjustment
- Flat cover plate with smooth aesthetic ceiling profile
- cULus Listed

<b>Style:</b>	Flat Concealed
<b>K-Factor:</b>	3.0 (43)
<b>Temp:</b>	Sprinkler: 165°F (74°C), Cover Plate: 135°F (57°C)
<b>Thread Size:</b>	1/2" NPT (R1/2)
<b>Cover Plate:</b>	Flat Concealed RFC, Solid Flat or Perforated
<b>Finish:</b>	White, Chrome, Custom

## RFC30 LL



Technical Bulletin: 032

### Features:

- Listed for a minimum of .05 gpm/ft<sup>2</sup>
- Solder fusible link
- Smooth, aesthetic ceiling profile
- For use in wet pipe systems in accordance with NFPA 13D and 13R, and for use in the residential portions of any occupancy per NFPA 13
- Push-on/Thread-off cover plate provides 1/2" (13 mm) of adjustment
- Can be used for flat and sloped ceilings

<b>Style:</b>	Flat Concealed
<b>K-Factor:</b>	3.0 (43)
<b>Temp:</b>	Sprinkler: 165°F (74°C), Cover Plate: 135°F (57°C)
<b>Thread Size:</b>	1/2" NPT (R1/2)
<b>Cover Plate:</b>	Flat Concealed RFC, Solid Flat or Perforated
<b>Finish:</b>	White, Chrome, Custom

## FIRES 58



Technical Bulletins: 135 & 176

### Features:

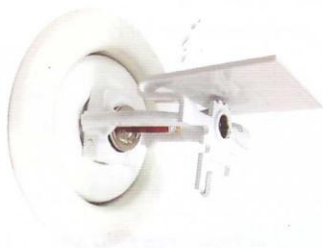
- Listed for a minimum of .05 gpm/ft<sup>2</sup>
- 3 mm glass bulb
- Larger K-Factor provides lower pressure demands for 0.1 densities for NFPA 13 applications
- Approved with F1 escutcheon for a 3/4" (19 mm) adjustment

<b>Style:</b>	Pendent, Recessed Pendent, Conical Concealed (CCP) Pendent, Horizontal Sidewall, Recessed Horizontal
<b>K-Factor:</b>	5.8 (83.5)
<b>Temp:</b>	Sprinkler: 155°F (68°C), 175°F (79°C), CCP Cover Plate: 135°F (57°C)
<b>Thread Size:</b>	1/2" NPT (R1/2)
<b>Escutcheon:</b>	F1, F2, FP, FT
<b>Cover Plate:</b>	CCP
<b>Finish:</b>	White, Custom



# Sprinklers RESIDENTIAL cont.

## **NEW** F1RES 58 HSWX



Technical Bulletin: 135

### Features:

- Low flow residential horizontal sidewall sprinkler engineered to provide a minimum design density of 0.05 gpm/ft<sup>2</sup> over the listed coverage areas
- 3 mm glass bulb
- Recessed model utilizes a steel two piece escutcheon with 1/2" adjustment (F2)
- 14' x 26' maximum coverage area

**Style:** Horizontal Sidewall, Recessed Horizontal Sidewall

**K-Factor:** 5.8 (83.5)

**Temp:** 155°F (68°C), 175°F (79°C)

**Thread Size:** 1/2" NPT (R1/2)

**Escutcheon:** F2

**Finish:** Bronze, Chrome, White, Custom

## **NEW** KRES 58 HSWX



Technical Bulletin: 135

### Features:

- Low flow residential horizontal sidewall sprinkler engineered to provide a minimum design density of 0.05 gpm/ft<sup>2</sup> over the listed coverage areas
- Link version
- Recessed model utilizes a steel two piece escutcheon with 1/2" adjustment (F2)
- 14' x 26' maximum coverage area

**Style:** Horizontal Sidewall, Recessed Horizontal Sidewall

**K-Factor:** 5.8 (83.5)

**Temp:** 165°F (74°C)

**Thread Size:** 1/2" NPT (R1/2)

**Escutcheon:** F2

**Finish:** Bronze, Chrome, White, Custom

## F1RES 58 LL



Technical Bulletin: 033

### Features:

- Listed for a minimum of .05 gpm/ft<sup>2</sup>
- 3 mm glass bulb
- For use in wet pipe systems in accordance with NFPA 13D and 13R, and for use in the residential portions of any occupancy per NFPA13
- Available with 3/4" (19 mm) & 1/2" (13 mm) adjustable two-piece escutcheon and 1/2" (13 mm) adjustable low profile Push-on/Thread-off escutcheon
- Can be used for flat and sloped ceilings

**Style:** Pendant, Recessed Pendant, Conical Concealed (CCP) Pendant, Horizontal Sidewall, Recessed Horizontal Sidewall

**K-Factor:** 5.8 (83.5)

**Temp:** Sprinkler: 155°F (68°C), 175°F (79°C), CCP Cover Plate: 135°F (57°C)

**Thread Size:** 1/2" NPT (R1/2)

**Escutcheon:** F1, F2, FP

**Cover Plate:** CCP

**Finish:** White, Custom

For more detailed information including approval data, please refer to the technical bulletin specified.



# Sprinklers RESIDENTIAL cont.

## F1RES 76



Technical Bulletins: 135 & 176

### Features:

- Listed to provide a minimum density to .05 gpm/ft<sup>2</sup>
- 3 mm glass bulb
- Largest K-Factor on the market today for NFPA 13 Residential Applications
- The larger K-Factor provides lower pressure demands for .10 densities per NFPA 13 requirements

**Style:** Pendant, Recessed Pendant, Conical Concealed (CCP) Pendant

**K-Factor:** 7.6 (108.5)

**Temp:** Sprinkler: 155°F (68°C), 175°F (79°C), CCP Cover Plate: 135°F (57°C)

**Thread Size:** 3/4" NPT (R3/4)

**Escutcheon:** F1, F2, FP

**Cover Plate:** CCP

**Finish:** White, Custom

## RFC56



Technical Bulletin: 009

### Features:

- Listed for a minimum of .05 gpm/ft<sup>2</sup>
- Larger K-Factor provides lower pressure demands for 0.1 densities for NFPA 13 applications
- Solder fusible link
- Smooth, aesthetic ceiling profile
- Cover plate provides 1/2" (13 mm) of adjustment
- For use on horizontal ceilings

**Style:** Flat Concealed

**K-Factor:** 5.6 (80)

**Temp:** Sprinkler: 165°F (74°C), Cover Plate: 135°F (57°C)

**Thread Size:** 1/2" NPT (R1/2)

**Cover Plate:** Flat Concealed, Solid Flat or Perforated

**Finish:** White, Custom



# Sprinklers RESIDENTIAL cont.

## F1RES 76



Technical Bulletins: 135 & 176

### Features:

- Listed to provide a minimum density to .05 gpm/ft<sup>2</sup>
- 3 mm glass bulb
- Largest K-Factor on the market today for NFPA 13 Residential Applications
- The larger K-Factor provides lower pressure demands for .10 densities per NFPA 13 requirements

**Style:** Pendent, Recessed Pendent, Conical Concealed (CCP) Pendent

**K-Factor:** 7.6 (108.5)

**Temp:** Sprinkler: 155°F (68°C), 175°F (79°C), CCP Cover Plate: 135°F (57°C)

**Thread Size:** 3/4" NPT (R3/4)

**Escutcheon:** F1, F2, FP

**Cover Plate:** CCP

**Finish:** White, Custom

## RFC56



Technical Bulletin: 009

### Features:

- Listed for a minimum of .05 gpm/ft<sup>2</sup>
- Larger K-Factor provides lower pressure demands for 0.1 densities for NFPA 13 applications
- Solder fusible link
- Smooth, aesthetic ceiling profile
- Cover plate provides 1/2" (13 mm) of adjustment
- For use on horizontal ceilings

**Style:** Flat Concealed

**K-Factor:** 5.6 (80)

**Temp:** Sprinkler: 165°F (74°C), Cover Plate: 135°F (57°C)

**Thread Size:** 1/2" NPT (R1/2)

**Cover Plate:** Flat Concealed, Solid Flat or Perforated

**Finish:** White, Custom



# Sprinklers OPEN SPRINKLERS & NOZZLES

## HV Spray Nozzles



Technical Bulletin: 105

### High Velocity Spray Nozzles

- Model HV - AS with Strainer

#### Features:

- Dense, high velocity core of water spray
- Solid uniform fixed pattern spray
- Brass housing
- Minimum desired pressure - 50 psi
- Four orifice sizes

Thread Size: 3/4" NPT (R3/4)

Finish: Brass, Chrome-Plated

## Open Sprinklers



Technical Bulletin: 104

### Type

- Model G & F1 - Open Standard (Spray) Upright and Pendent Sprinklers
- Model G & F1 - Conventional Open Style Sprinkler
- Model G & F1 - Open Sidewall Sprinklers

Finish: Bronze, Lead Plated, Wax Coated, Wax Coated over Lead Plated

## B, FM Spray Nozzles



Technical Bulletin: 103

### Features:

- Designed for external use.
- Installed in locations where a blanket of water is desired over a predetermined area
- For use on deluge systems where exposure protection from a nearby hazard is required
- Designed to spray a water discharge pattern on the outside of buildings, over window glazing, or under cornice areas
- Model B Type: Window, Thread Size: 1/2" NPT (R1/2), K-Factor: 1.81 (26), 2.57 (37), 3.45 (50), Installation Position: Pendent
- Model FM - Window Type: Window, Thread Size: 1/2" NPT, 3/4" NPT, K-Factor: 6.6 (95), 10.0 (144), 14.4 (207), Installation Position: Pendent
- Model FM Type: Cornice, Thread Size: 1/2" (NPT), 3/4" (NPT), K-Factor: 6.5 (94), 9.8 (141), Installation Position: Upright

Finish: Bronze, Chrome, Lead

For more detailed information including approval data, please refer to the technical bulletin specified.



# Sprinklers OPEN SPRINKLERS & NOZZLES cont.

## A Spray Nozzle



Technical Bulletin: 106

### Features:

- Non-automatic fixed pattern
- Solid cone discharge of low to medium velocity water droplets
- Effective in covering exposed horizontal, vertical curved and irregular shaped surfaces
- All brass and bronze construction
- No moving parts. No orifice less than 1/4" (6 mm)
- Three orifice sizes and three discharge angles

<b>Model Numbers:</b>	Model R20- 80 - K-Factor = 1.90	Model R60- 110 - K-Factor = 5.80
	Model R30- 80 - K-Factor = 3.05	Model R20- 140 - K-Factor = 1.90
	Model R60- 80 - K-Factor = 5.80	Model R30- 140 - K-Factor = 3.05
	Model R20- 110 - K-Factor = 1.90	Model R60- 140 - K-Factor = 5.80
	Model R30- 110 - K-Factor = 3.05	

**Discharge Angle:** 80°, 110°, 140°

**Thread Size:** 1/2" NPT (R1/2)

**Finish:** Bronze, Chrome, Lead

## PILOT LINE DETECTOR

## F1-FTR (PLD)



Technical Bulletin: 180

### Features:

- Fixed temperature, heat detector
- 2.5 mm glass bulb
- Quick response
- Die cast brass frame
- Coverage area listings permit reduction in the number of pilot line sprinklers
- For use in pilot lines as a listed heat detector for deluge and preaction systems
- May be installed in either the upright or pendent position
- Listed spacings of 40' x 40' and 50' x 50' for unobstructed construction

**Style:** Pendent, Upright

**Temp:** 135°F (57°C), 155°F (60°C), 175°F (79°C), 200°F (93°C)

**Thread Size:** 1/2" NPT (R1/2)

**Finish:** Brass, Chrome, White Poly Coated



# Sprinklers ACCESSORIES

## Cabinets



Technical Bulletin: 204

Sprinkler Emergency Cabinets carry an emergency supply of sprinklers and a sprinkler wrench.

- Options:  
Model A4 - 3, 6, or 12 capacity (standard sprinklers)  
Model A4 Large - 6 capacity (storage sprinklers)  
Model A3 - 6 to 12 capacity (decorative sprinklers)
- Provides storage for spare sprinklers and sprinkler wrench

## Escutcheons



Technical Bulletins:  
204 & 210

Escutcheons enhance the appearance of installations by covering exposed fittings of automatic sprinklers that are visible beyond finished ceilings and walls.

- Model B - One Piece  
Diameter: 2-7/8"; Depth: 11/16"; 1/2" NPT
- Model C - One Piece  
Diameter: 2-7/8"; Depth: 1/8"; 1/2" NPT
- Model HB - Two Piece  
Diameter: 3-1/2"; Depth: 2" Min, 3" Max; 1/2" and 3/4" NPT
- Model FP - Two Piece  
Diameter: 3-7/32"; Depth: 15/16" Min, 1-1/4" Max; 1/2" and 3/4" NPT
- Model F1/F2 - Two Piece  
Diameter: 2-7/8"; Depth: 1-1/8" (F1), 7/8" (F2); 1/2" and 3/4" NPT
- Model FT - Two Piece  
Diameter: 3-3/8"; Depth: 7/8" and 1/2" NPT

## Installation and Service Wrenches



Technical Bulletin: 205

Different wrench models available for our sprinklers and valves. Please refer to the individual Technical Bulletin for the correct wrench.

### Sprinkler Wrenches:

- Model G4
- Model GFR2
- Model RC1
- Model F3
- Model ZX Pendant
- Model XLO EC
- Model XLO2
- Model ZX  
Horizontal Sidewall
- Model FC Flat  
Concealed
- Model D
- Model H
- Model N
- Model J1
- Model RJ
- Model H1

### Valve Wrenches:

- Model A & D Dry  
Pipe Valve Seat
- Model C1 & C2  
Lever Bracket Nut
- Model E Alarm Valve
- Model B/BX Deluge Valve
- Model LDX Valve Seat
- Model DDX Deluge  
Valve Seat

## Sprinkler Guards C & D



Technical Bulletin: 208

Sprinkler Guards Model C Series are designed to be assembled onto installed sprinklers. Guards protect automatic sprinklers in locations where they are subject to physical damage.

Sprinkler Guards Model D Series are supplied as kits to be assembled to the sprinkler at the job site before sprinkler installations. They are also available factory assembled on the sprinkler - ready for immediate sprinkler/guard installation.

Model C-1: Pendant, Upright, HSW, Vertical Sidewall; Model C-2: Dry Pendant; Model C-3: Upright Intermediate; Model C-5: Pendant Intermediate; Model D-1: Pendant, Upright, HSW; Model D-3: Upright Intermediate; Model D-4: Pendant Intermediate (Large Shield); Model D-5: Pendant Intermediate (Small Shield); Model D-6: Upright Intermediate; Model D-7: Upright Intermediate (new GL112 QR Sprinkler).

For more detailed information including approval data, please refer to the technical bulletin specified.



# Smart Guide FOR ALL SPRINKLER APPLICATIONS

MODEL	AVAILABLE STYLES - SPRINKLER IDENTIFICATION NUMBER							
	UPR	PEND	PEND-REC	PEND-CONC	HSW	HSW-REC	HSW-CONC	VSW*
<b>BASIC- STANDARD COVERAGE</b>								
NEW F1FR Series	RA142X	RA141X	RA141X	RA1414	RA1435	RA1435		RA1485
F1FR LO	R3622	R3612	R3612					
NEW KFR56	RA3524	RA3614	RA3614	RA3614	RA3634	RA3634		
F1FR56-300	RA2625	RA2614	RA2614	RA2614	RA2634	RA2634	RA2634	
F1FR-300	R5622	R5612						
NEW KFR56-300	RA3924	RA3914	RA3914	RA3914	RA3934	RA3934		
GFR	R312X	R311X			R313X			
F1FR-FS56 Flat Spray		RA2214						
F1FR-FS LO Flat		RA3712						
F1FR LO		RA3812						
NEW F1 Series	RA132X	RA131X	RA131X		RA1335	RA1335		RA1385
F1 LO	R1722	R1712	R1712					
F156-300	RA2525	RA2514	RA2514					
F1-300	R5522	R5512	R5512					
G	R102X	R101X						
G					R126X			R1285
GXLO	R2921							
GVELO		R4613						
<b>DECORATIVE- STANDARD COVERAGE</b>								
NEW F1FR Series		RA141X	RA141X	RA1414		RA1435		
F1FR LO		R361X	R3612					
NEW KFR56		RA3614	RA3614	RA3614		RA3634		
F1FR56-300		RA2614	RA2614	RA2614		RA2634	RA2634	
F1FR-300 REC		R5612	R5612					
GFR		R311X	R311X					
NEW G5				RA341X				
NEW G5 QR "Sealing" Conc				RA341X				
NEW G5 300 QR "Sealing" Conc				RA4014				
NEW G5-56 300 Concealer				RA4014				
G4A Adjustable Conc				R541X				
F4FR-NF				RA0212				
XL Commercial		R4514			R4534			
NEW F1 Series		RA131X	RA131X			RA1335		
F1 LO			R1742					
F156-300		R2514	R2514					
F1-300		R5512	R5512					
G/F1 HSW1						R123X		
G4				R211X				
G4-300				R6115				
G Recessed			R111X					
NEW G5 SR "Sealing" Conc				RA341X				
NEW G5 300 SR "Sealing" Conc				RA4014				
G/F1			R101X					

SEE KEY ON PAGES 44 & 45





	MAX SPACING	NOMINAL K-FACTOR	THREAD	RESPONSE	APPROVALS *See Note	TECHNICAL BULLETIN	WRENCH
	★	2.8, 4.2, 5.6	1/2"	QUICK	cULus, FM, LPCB, VdS	014	D, GFR2, RC1
	★	8.0	3/4"	QUICK	cULus, FM, LPCB, VdS	136	D & GFR2
	★	5.6	1/2"	QUICK	cULus, FM	036	D, GFR2, RC1
	★	5.6	1/2"	QUICK	cULus	026	D, GFR2, RC1
	★	8.0	3/4"	QUICK	cULus	156	D
	★	5.6	1/2"	QUICK	cULus	039	D, GFR2, RC1
	★	2.8-8.0	1/2", 3/4"	QUICK	cULus	131	D
	12' X 12'	5.6	1/2"	QUICK	VdS	022	D
	10' X 10'	8.0	1/2"	QUICK	VdS	037	D
	10' X 10'	8.0	1/2"	QUICK	VdS	038	D
	★	2.8, 4.2, 5.6	1/2"	STD.	cULus, FM, LPCB, VdS	013	D & GFR2
	★	8.0	3/4"	STD.	cULus, FM, LPCB, VdS	117	D & GFR2
	★	5.6	1/2"	STD.	cULus	025	D & GFR2
	★	8.0	3/4"	STD.	cULus	155	D
	★	2.8-8.0	1/2", 3/4"	STD.	cULus, FM	110	D
	★	2.8-8.0	1/2", 3/4"	STD.	cULus, FM	112	D
	★	11.2	1/2", 3/4"	STD.	cULus, FM	129	H
	★	14.0	3/4"	STD.	cULus, FM	146	H
	★	2.8, 4.2, 5.6	1/2"	QUICK	cULus, FM, LPCB, VdS	014	D, GFR2, RC1
	★	8.0	3/4"	QUICK	cULus, FM, LPCB, VdS	136	D & GFR2
	★	5.6	1/2"	QUICK	cULus, FM	036	D, GFR2, RC1
	★	5.6	1/2"	QUICK	cULus	026	D, GFR2, RC1
	★	8.0	3/4"	QUICK	cULus	156	GFR2
	★	2.8-8.0	1/2", 3/4"	QUICK	cULus	131	D & GFR2
	★	2.8, 4.2, 5.6, 8.0	1/2", 3/4"	QUICK	cULus, FM	034	FC
	★	2.8, 4.2, 5.6, 8.0	1/2", 3/4"	QUICK	cULus	043	FC
	★	5.6	1/2"	QUICK	cULus	046	FC
	★	5.6	1/2"	QUICK	cULus	040	FC
	★	4.2, 5.6	1"	QUICK	cULus, FM	154	G4
	★	5.6	1/2"	QUICK	cULus	002	G4
	★	5.6	1/2"	QUICK	cULus	145	ZX
	★	2.8, 4.2, 5.6	1/2"	STD.	cULus, FM, LPCB, VdS	013	D & GFR2
	★	8.0	3/4"	STD.	cULus, FM, LPCB, VdS	117	GFR2
	★	5.6	1/2"	STD.	cULus	025	D & GFR2
	★	8.0	3/4"	STD.	cULus	155	GFR2
	★	4.2-5.6	1/2"	STD.	cULus	112	GFR2
	★	2.8-5.6	1/2", 1"	STD.	cULus	121	G4
	★	5.6	1/2", 1"	STD.	cULus	161	G4
	★	2.8-8.0	1/2", 1"	STD.	cULus, FM	111	RC1
	★	2.8, 4.2, 5.6, 8.0	1/2", 3/4"	STD.	cULus	041	FC
	★	5.6	1/2"	STD.	cULus	045	FC
	★	2.8-8.0	1/2", 3/4"	STD.	cULus	120	RC1

SEE KEY ON PAGES 44 & 45

For more detailed information including approval data, please refer to the technical bulletin specified.



# Smart Guide FOR ALL SPRINKLER APPLICATIONS cont.

MODEL	AVAILABLE STYLES – SPRINKLER IDENTIFICATION NUMBER						
	UPR	PEND	PEND-REC	PEND-CONC	HSW	HSW-REC	HSW-CONC
<b>LIGHT HAZARD EXTENDED COVERAGE</b>							
JL112	R7326	R7216	R7216				
J112	RA7326	RA7216	RA7216				
F1FR56 QREC		RA2845	RA2845	RA2845			
F1FR56-EC-8					RA2845	RA2845	
F1FR-EC		R4842	R4842				
F1FR-EC9 HSW					R4862	R4862	
F1FR EPEC		RA1212	RA1212				
F1FR56-300 QREC		RA3045	RA3045	RA3045			
F1FR-300 QREC		R5942	R5942				
F1FR-300 QREC-9					R5962	R5962	
F1FR-QREC CCP				R4842			
F1FR-300 QREC CCP				R5942			
DH56					RA1564	RA1564	RA1564
DH80					RA0362	RA0362	RA0362
G4 XLO QREC				R4441			
SWC (300psi) HSW CONC							R5962
 G6-80 HSW QR EC							RA4762
F156 SREC		RA2745	RA2745				
F1 LO		R1742	R1742				
F156-300 SREC		RA2945	RA2945				
F1-300 SREC		R5842	R5842				
G/F1/EC4						R1267	
G-EC4					R126X		
<b>ORDINARY HAZARD EXTENDED COVERAGE</b>							
JL112	R7326	R7216	R7216				
J112	RA7326	RA7216	RA7216				
 MBEC-14					R6932		
GFR VELO ECOH		R6043	R6043				
GFR VELO ECOH	R6553						
<b>EXTRA HAZARD EXTENDED COVERAGE</b>							
N252 EC		RA0842	RA0842				
 MBEC-14 HSW					R6932		
<b>DRY TYPE</b>							
F3QR		R5714	R5714	R5714	R5734	R5734	
DH56 Dry					RA1664	RA1664	RA1664
F3		R5314	R5314	R5314	R5334	R5334	
<b>INSTITUTIONAL</b>							
XL		R1314			R1334		
XL EC		R1344			R1364		
<b>SPECIAL RESPONSE</b>							
F1S5-FS56 Flat Spray		RA2314					
F1S5 Standard Spray	RA2414	RA2414	RA2414				

## KEY

-  New Product
- X = Various K-Factors
-  Per NFPA or FM
-  Provides Extended Coverage Ordinary & Extra Hazard protection to 175 sq. ft. per sprinkler.
-  Extra Hazard Extended Coverage are specific for only Pre-Engineered Metal Buildings.
- Approvals vary based upon K-Factors, Style and Finish. Consult bulletins for specifics.
- \*VSW listed for Light Hazard only

NOTE: Refer to Product Bulletin for limitations on approvals.



	MAX SPACING	NOMINAL K-FACTOR	THREAD	RESPONSE	APPROVALS *See Note	TECHNICAL BULLETIN	WRENCH
	20' X 20'	11.2	3/4"	QUICK	cULus	173 & 172	J1 & RJ
	20' X 20'	11.2	3/4"	QUICK	cULus	173 & 172	J1 & RJ
	16' X 20' & 20' x 20'	5.6	1/2"	QUICK	cULus	028	D, GFR2, RC1
	16' X 20'	5.6	1/2"	QUICK	cULus, FM	028	D & GFR2
	20' X 20'	8.0	3/4"	QUICK	cULus, FM	148	D & GFR2
	14' X 26' & 16' X 24'	8.0	3/4"	QUICK	cULus, FM	148	D & GFR2
	14' X 14'	8.0	3/4"	QUICK	LPCB	012	HW
	20' X 20'	5.6	1/2"	QUICK	cULus	030	D, GFR2, RC1
	20' X 20'	8.0	3/4"	QUICK	cULus	159	D
	14' X 26' & 16' X 24'	8.0	3/4"	QUICK	cULus	159	GFR2
	20' X 20'	8.0	3/4"	QUICK	cULus	151	GFR2
	20' X 20'	8.0	3/4"	QUICK	cULus	167	GFR2
	28' X 10'	5.6	1/2"	QUICK	cULus	015	GFR2
	28' X 14'	8.0	3/4"	QUICK	cULus	003	GFR2
	20' X 20'	11.2	3/4"	QUICK	cULus	144	XLO EC
	14' X 26' & 18' X 22'	8.0	3/4"	QUICK	cULus	163	GFR2
	18' X 22'	8.0	3/4"	QUICK	cULus	047	G6
	20' X 20'	5.6	1/2"	STD.	cULus	027	D & GFR2
	20' X 20'	8.0	3/4"	STD.	cULus, FM	117	D & GFR2
	20' X 20'	5.6	1/2"	STD.	cULus	029	D & GFR2
	20' X 20'	8.0	3/4"	STD.	cULus	158	D & GFR2
	16' X 24'	8.2	3/4"	STD.	cULus	112	GFR2
	16' X 24'	5.6-8.0	1/2", 3/4"	STD.	cULus	112	D
	20' X 20' & 14' X 14'	11.2	3/4"	STD./QUICK	cULus	173 & 172	J1 & RJ
	20' X 20' & 14' X 14'	11.2	3/4"	STD./QUICK	cULus	173 & 172	J1 & RJ
	14' X 12.5'	14.0	3/4"	STD.	cULus	169	H
	20' X 20'	14.0	3/4"	STD.	cULus	160	H & XLO2
	20' X 20'	14.0	3/4"	STD.	cULus	165	H
	14' X 14'	25.2	1"	STD.	cULus, FM	008	N
	14' X 12.5'	14.0	3/4"	STD.	cULus	169	H
	★ 28' X 10'	5.6	1"	QUICK	cULus	157	F3 & XLO2
		5.6	1"	QUICK	cULus, FM	016	F3 & XLO2
	★	5.6	1"	STD.	cULus, FM	153	F3 & XLO2
	★	5.6	1/2"	QUICK	cULus	113	ZX
	16' X 16'	5.6	1/2"	QUICK	cULus	113	ZX
	12' X 12'	5.6	1/2"	SPECIAL	VdS	023	D & GFR2
	12' X 12'	5.6, 8.0	1/2"	SPECIAL	VdS	024	D & GFR2

**Sprinkler Identification Numbers**

Sample Number for F1FR56 HSW **RA 14 3 5**  
 Manufacturer (RASCO) \_\_\_\_\_  
 Tech. Literature (Bulletin 014) \_\_\_\_\_  
 Deflector Type (HSW) \_\_\_\_\_  
 K-Factor (5.6) \_\_\_\_\_







Refer to this table for Deflectors or K-Factors

Deflector Style	K-Factor
1 Pendent	1.10, 2.82, 3.00, 4.00, 5.40, 11.40, 16.00, 22.40
2 Upright	1.98, 2.72, 3.90, 4.30, 5.50, 8.00, 14.20, 25.20
3 Horizontal	1.81, 3.70, 4.24, 5.80, 14.50
4 EC Pendent	2.57, 4.10, 5.60, 16.80
5 EC Upright	3.45, 4.20, 5.62
6 EC Horizontal	4.90, 7.96, 11.21
7 Conventional	2.75, 4.15, 6.40, 8.20
8 Vertical	4.00, 5.53, 7.00, 7.60
9 Other	Reserve


For more detailed information including approval data, please refer to the technical bulletin specified.



# Smart Guide FOR ALL SPRINKLER APPLICATIONS cont.

MODEL	AVAILABLE STYLES – SPRINKLER IDENTIFICATION NUMBER						
	UPR	PEND	PEND-REC	PEND-CONC	HSW	HSW-REC	VSW*
<b>STORAGE</b>							
JL-14		RA1812					
JL-17		RA1914					
HL-22		RA1011					
 N25 ESFR		RA0912					
J168	RA1124						
N252 EC		RA0842	RA0842				
G XLO	R2921						
 GL 112	R3226						
G VELO		R4613					
F1FR56-INT. LEVEL	RA3195	RA1414					
	R7092	R3612					
F156-INT. LEVEL	RA3195	RA1314					
F1-INT. LEVEL	R7092	RA1712					
 KFR56 INT. LEVEL	RA3624	RA3614					
G-INT. LEVEL	R142X	R141X					
GFR-INT. LEVEL	R319X	R311X					
<b>SPECIFIC APPLICATION</b>							
 KFR-CCS 56	RA4454						
HL-22 SPEC. APP.		R7711					
N252 EC		RA0842					
<b>RESIDENTIAL</b>							
F1RES 30		R3511	R3511	R3511			
F1RES 30 LL		RA3311	RA3311	RA3311			
F1RES 49		R3516	R3516	R3516			
F1RES 49 LL		RA3316	RA3316	RA3316			
F1RES 44				R3531	R3531	R3531	
F1RES 44 LL				RA3331	RA3331	RA3331	
RFC49				RA0616			
RFC49 LL				RA3216			
RFC43				RA0612			
RFC43 LL				RA3212			
RFC30				RA0611			
RFC30 LL				RA3211			
F1RES 58		R3513	R3513	R3513	R3533	R3533	
 F1RES 58 HSWX					RA3533		
 KRES 58 HSWX					RA3593		
F1RES 58 LL		RA3313	RA3313	RA3313	RA3333	RA3333	
F1RES 76		R7618	R7618	R7618			
RFC56				RA0914			

## KEY

 New Product

X = Various K-Factors

★ Per NFPA or FM

★ Provides Extended Coverage Ordinary & Extra Hazard protection to 175 sq. ft. per sprinkler.

◆ Extra Hazard Extended Coverage are specific for only Pre-Engineered Metal Buildings.

Approvals vary based upon K-Factors, Style and Finish. Consult bulletins for specifics.

\*VSW listed for Light Hazard only

NOTE: Refer to Product Bulletin for limitations on approvals.



	MAX SPACING	NOMINAL K-FACTOR	THREAD	RESPONSE	APPROVALS *See Note	TECHNICAL BULLETIN	WRENCH
	★	14.0	3/4"	FAST	cULus,FM	018	J1
	★	16.8	3/4"	FAST	cULus,FM	019	J1
	★	22.4	1"	FAST	cULus,FM	010	H1
	★	25.2	1"	FAST	FM	909	N
	★	16.8	3/4"	STD.	cULus,FM	011	J1
	14' X 14'	25.2	1"	STD.	cULus,FM	008	N
	★	11.2	1/2", 3/4"	STD.	cULus,FM	129	H
	★	11.2	3/4"	QUICK	FM	132	H
	★	14.0	3/4"	STD.	cULus,FM	146	H
	★	5.6	1/2"	QUICK	cULus, FM	031	D & GFR2
	★	8.0	3/4"	QUICK	cULus, FM		
	★	5.6	1/2"	STD.	cULus, FM	031	D & GFR2
	★	8.0	1/2"	STD.	cULus, FM	031	D & GFR2
	★	5.6	1/2"	QUICK	cULus, FM	042	D & GFR2
	★	5.6-8.0	1/2", 3/4"	STD.	cULus,FM	114	D & RC1
	★	5.6-8.0	1/2", 3/4"	QUICK	cULus	131	D
	★	5.6	1/2"	QUICK	cULus	044	D
	★	22.4	1"	FAST	cULus	177	H1
	14' X 14'	25.2	1"	QUICK	FM	908	N
	14' X 14'	3.0	1/2"	FAST	cULus	135	D & GFR2
	14' X 14'	3.0	1/2"	FAST	cULus	033	D & GFR2
	20' X 20'	4.9	1/2"	FAST	cULus	135 & 176	D & GFR2
	20' X 20'	4.9	1/2"	FAST	cULus	033	D & GFR2
	16' X 20'	4.4	1/2"	FAST	cULus	135 & 176	D & GFR2
	16' X 20'	4.4	1/2"	FAST	cULus	033	D & GFR2
	20' X 20'	4.9	1/2"	FAST	cULus	006	FC
	20' X 20'	4.9	1/2"	FAST	cULus	032	FC
	20' X 20'	4.3	1/2"	FAST	cULus	006	FC
	20' X 20'	4.3	1/2"	FAST	cULus	032	FC
	14' X 14'	3.0	1/2"	FAST	cULus	006	FC
	14' X 14'	3.0	1/2"	FAST	cULus	032	FC
	20' X 20'	5.8	1/2"	FAST	cULus	135 & 176	D & GFR2
	20' X 20', 14' X 26'	5.8	1/2"	FAST	cULus	135	D & GFR2
	20' X 20', 14' X 26'	5.8	1/2"	FAST	cULus	135	D, GFR2, RC1
	20' X 20'	5.8	1/2"	FAST	cULus	033	D & GFR2
	20' X 20'	7.6	3/4"	FAST	cULus	135 & 176	D, GFR2, RC1
	16' X 16'	5.6	1/2"	FAST	cULus	009	G4

**Sprinkler Identification Numbers**

Sample Number **RA 14 3 5**  
for F1FR56 HSW

Manufacturer (RASCO) \_\_\_\_\_  
Tech. Literature (Bulletin 014) \_\_\_\_\_  
Deflector Type (HSW) \_\_\_\_\_  
K-Factor (5.6) \_\_\_\_\_

Refer to this table for Deflectors or K-Factors

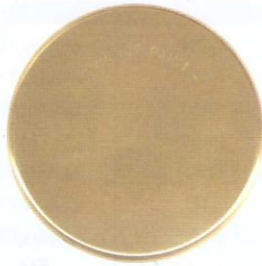
Deflector Style	K-Factor
1 Pendent	1.10, 2.82, 3.00, 4.00, 5.40, 11.40, 16.00, 22.40
2 Upright	1.98, 2.72, 3.90, 4.30, 5.50, 8.00, 14.20, 25.20
3 Horizontal	1.81, 3.70, 4.24, 5.80, 14.50
4 EC Pendent	2.57, 4.10, 5.60, 16.80
5 EC Upright	3.45, 4.20, 5.62
6 EC Horizontal	4.90, 7.96, 11.21
7 Conventional	2.75, 4.15, 6.40, 8.20
8 Vertical	4.00, 5.53, 7.00, 7.60
9 Other	Reserve

For more detailed information including approval data, please refer to the technical bulletin specified.



# Cover Plate Finishes

Reliable cover plates are available in three standard finishes



Bronze



Bright Chrome



White Paint

And in five special application finishes



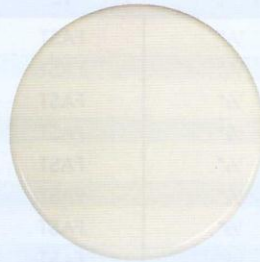
Bright Brass



Black Plating



Black Paint

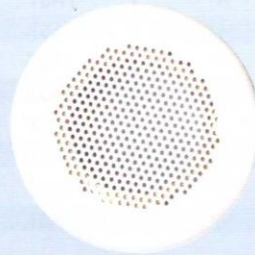


Off White

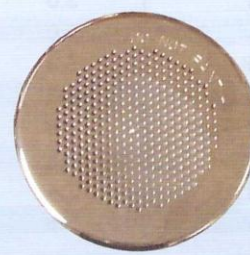


Satin Chrome

Perforated cover plates



White



Chrome



**Custom colors can also be provided.  
Please allow additional time.  
All custom finishes must be done by Reliable.**

Due to variation in printing, we cannot guarantee the colors shown here with actual products. Please check with your local Reliable sales office.



# Valves

## ALARM

### E Alarm Check Valve With E1 Trim



Technical Bulletins:  
418 & 408 (O&M)

#### Features:

- Made expressly for all wet-pipe sprinkler systems
- Grooved seat design insures positive water flow alarm operation
- Precision retarding chamber prevents false alarms under variable pressure conditions
- External by-pass aids prevention of false alarms under all pressure conditions
- Installation in either vertical or horizontal positions
- Three connection styles available: ANSI flanged inlet and outlet, ANSI flanged inlet and grooved outlet, Metric flanged inlet and grooved outlet
- Pressure trim styles available: Individual part trim, Pre-assembled trim, Factory trimmed valve

Available Sizes: 2-1/2" (65 mm) , 3" (80 mm), & 65 mm

### E Alarm Check Valve With E2 Trim



Technical Bulletin: 422

#### Features:

- Designed for the International market
- Rated working pressure 10.0 bar (175 psig)
- Factory hydrostatic test pressure 24.2 bar (350 psig)
- End and trim connections -
  - Metric flanged inlet and outlet
- Metric flange inlet and with US grooved outlet

Available Sizes: DN100, DN150, DN200

### E Alarm Check Valve With E3 Trim



Technical Bulletins:  
417 & 407 (O&M)

#### Features:

- Made expressly for all wet-pipe sprinkler systems
- Grooved seat design insures positive water flow alarm operation
- Precision retarding chamber prevents false alarms under variable pressure conditions
- External by-pass aids prevention of false alarms under all supply pressure conditions
- Installation in either vertical or horizontal positions
- Three connection styles available: ANSI flanged inlet and outlet, ANSI flanged inlet and grooved outlet, Metric flanged inlet and grooved outlet
- Pressure trim styles available: Individual part trim, Pre-assembled trim, Factory trimmed valve
- TestanDrain valve with pressure relief, optional: Exercises the clapper with alarm test. Functions like the Inspector's test port with greater convenience.

Available Sizes: 4" (100 mm), 6" (150 mm), & 8" (200 mm)

For more detailed information including approval data, please refer to the technical bulletin specified.



# Valves

## E3 High Pressure Alarm Check Valve With E3 Trim



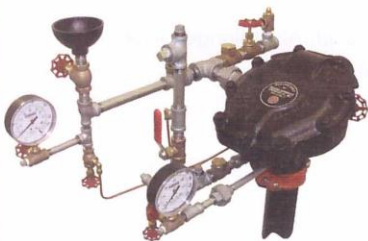
Technical Bulletins:  
410 & 409 (O&M)

## G Riser Check Valve



Technical Bulletin: 806

## A Dry Pipe Valve



Technical Bulletin:  
352 & 353 (O&M)

## ALARM cont.

### Features:

- 300 psi (20.7 bar) ratings. Factory tested hydrostatically to 600 psi (41.4 bar)
- Grooved seat design ensures positive water flow alarm operation
- Precision retard chambers minimizes false alarms under variable pressure conditions
- External by-pass minimizes false alarms under all supply pressure conditions
- Grooved inlet and outlet connections. Less weight than flange valves
- Vertical and horizontal trims available
- Two compact galvanized trim styles available: Individual part trim, Segmentally assembled trim
- TestAnDrain valve with pressure relief, optional: Exercises the clapper with alarm test Functions like the Inspector's test port with greater convenience

Available Sizes: 4" (100 mm), 6" (150 mm), 165 mm, & 8" (200 mm)

## RISER CHECK

### Features:

- Grooved end connections
- Compact, lightweight design
- Non-slamming, spring load clapper to minimize water hammer
- Approved for horizontal and vertical installation
- Stream-lined body design provides very low friction loss
- Elastometer faced clapper provides leak-free, non-stick sealing

Available Sizes: 2-1/2" (65 mm), 76 mm, 3" (80 mm), 4" (100 mm) & 6" (150 mm)

## DRY

### Features:

- Differential type - simple, lightweight construction
- Threaded-in one piece air and water seat - eases maintenance
- Bronze seat with O-ring seals - prevents corrosion and leakage
- Single hinge pin and latch design - no complicated levers
- Simple to reset - no special tools required
- Tapered air and water seats - induces hairline differential operation
- One piece rubber facing - provides more reliable rubber-to-metal water seal
- Furnished in 2-1/2" NPT, 2-1/2" grooved ends or 65 mm threads

Available Sizes: 2-1/2" (65 mm)

For more detailed information including approval data, please refer to the technical bulletin specified.



# Valves

**DRY** cont.

**NEW** **EX Dry Pipe Valve**



Technical Bulletins:  
358 & 359 (O&M)

**Features:**

- Lightweight, low friction loss
- Low air pressure 8 to 22 psi (0.6 to 1.4 bar) reduces size of air compressor or quantity of nitrogen
- Optional: air pressure up to 40 psi (2.8 bar)
- Convenient and safe external reset; no priming water required
- Latching type valve is less susceptible to false trips caused by pressure surges
- Grooved/Grooved, Grooved/Flange, Flange/Flange with pressure rating of 250 psi (17.2 bar) or 300 psi (20.7 bar) for 4", 6", and 165 mm only

**Available Sizes:** 2" (50 mm), 2-1/2" (65 mm), 76 mm, 3" (80 mm), 4" (100 mm), 165 mm, 6" (150 mm) & 8" (200 mm)

**D Dry Pipe Valve**



Technical Bulletins:  
351 & 350 (O&M)

**Features:**

- Differential type - simple, lightweight construction
- Screwed in one piece air and water seat - eases maintenance
- Bronze seat with O-ring seals - prevents corrosion and leakage
- Single hinge pin and latch design - no complicated levers
- Simple to reset - no special tools required
- Tapered air and water seats - induces hairline differential operation
- One piece rubber facing - provides more reliable rubber-to-metal water seal
- Three connection styles available: ANSI flanged inlet and outlet, ANSI flanged inlet and grooved outlet, Metric flanged inlet and grooved outlet

**Available Sizes:** 4" (100 mm) & 6" (150 mm)

**DDX-W/D Wet/Dry Pipe Valve System**



Technical Bulletin:  
399 (O&M)

**Features:**

- Designed for the International market
- Hydraulically operated latch-type valve designed for use as a primary control valve in a low pressure dry pipe valve system, or an alarm valve in a wet system
- Low air pressured system, 0.7 bar to 1.8 bar (10 to 26 psi)
- Reset externally
- One main drain
- No priming water requirement

**Available Sizes:** 100 mm (4"), 150 mm (6"), & 165 mm

For more detailed information including approval data, please refer to the technical bulletin specified.



## LOW PRESSURE DRY SYSTEMS

### DDX-LP Dry Pipe Valve System



Technical Bulletins:  
337 & 338 (O&M)

#### Features:

- Differential latch-type - lightweight, dependable construction
- Low air pressurized system, 10 psi - to - 26 psi (0.7 bar - to - 1.8 bar)
- Reset externally. Cover removal is not required
- No priming water requirement
- Hydrostatic testing with the clapper in the closed position
- No riser check valve required
- One main drain
- Drain valve to drain standing water column
- Valve latches in open position. No pressure operated relief valve is required
- Nitrogen pressurized system optional
- Pressure rating 250 psi (17.2 bar)

Available Sizes: 2" (50 mm), 2 1/2" (65 mm), 3" (80 mm), 76 mm, 4" (100 mm), 6" (150 mm), 165 mm, & 8" (200 mm)

## DELUGE

### H Deluge Riser Assembly



Technical Bulletin: 507

#### Features:

- Incorporates a solenoid operated diaphragm type valve as the primary valve in deluge, preaction, or special types of fire protection systems
- Easily reset by external means which eliminates the need for removing the cover
- Trim is factory assembled

Available Sizes: 1-1/2" (40 mm)

### DDX Deluge Valve



Technical Bulletins:  
518 & 519 (O&M)

#### Features:

- Differential latch-type - lightweight, dependable construction
- Easily trimmed into any of nine releasing configurations
- Drop in seat & clapper assembly simplifies maintenance
- 2", 2-1/2", 3" and 8" have stainless steel clapper and seat assembly
- Pressure-actuated clapping facing provides dependable seal
- Reset externally. Cover removal is not required
- Grooved inlet and outlet connections
- Drain valve to drain standing water column
- Valve latches in open position. No pressure-operated relief valve is required
- Pressure rating of 250 psi (17.2 bar)

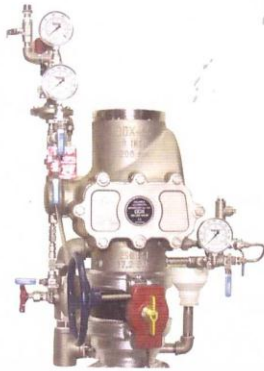
Available Sizes: 2" (50 mm), 2 1/2" (65 mm), 3" (80 mm), 76 mm, 4" (100 mm), 6" (150 mm), 165 mm, & 8" (200 mm)



# Valves

## DELUGE cont.

### DDX-SS Deluge Valve



Technical Bulletins:  
516 & 517 (O&M)

#### Features:

- Designed especially for corrosive environments – mining operations, offshore drilling platforms, chemical facilities, brackish or seawater applications, and most foam products
- Stainless steel construction to resist corrosion and leakage
- Differential latch-type – lightweight, dependable construction
- Easily trimmed for releasing by manual pull stations, wet pilot sprinklers, dry pilot sprinklers and electric solenoid valves
- Screw in seat & clapper assembly simplifies maintenance
- Pressure-actuated clapper facing provides dependable seal
- Reset externally. Cover removal is not required
- Grooved inlet and outlet connections (flanged connections available soon)
- Drain valve to drain standing water column
- Valve latches in open position. No pressure-operated relief valve is required
- Pressure rating of 250 psi (17.2 bar)

Available Sizes: 4" (100 mm), 6" (150 mm), & 8" (200 mm)

## CHECK

### G Swing Check



Technical Bulletin: 807

#### Features:

- Grooved end connections
- Compact, lightweight design
- Non-slamming, spring loaded clapper to minimize water hammer
- Approved for horizontal and vertical installation
- Streamlined body design provides very low friction loss
- Elastomer faced clapper provides leak-free, non-sticking sealing

Available Sizes: 2-1/2" (65 mm), 76 mm, 3" (80 mm), 4" (100 mm), & 6" (150 mm)

### CVE Swing Check & Riser Check



Technical Bulletin: 810

#### Features:

- Grooved end connections
- Valve has removable faceplate
- Approved for horizontal and vertical installation
- 300 psi (20.7 bar) ratings. Factory tested hydrostatically to 600 psi (41.4 bar)
- Elastomer-faced clapper provides leak-free, non-sticking sealing
- Non-slamming, spring loaded clapper to minimize water hammer

Available Sizes: 4" (100 mm), 6" (150 mm), 165 mm, & 8" (200 mm)

For more detailed information including approval data, please refer to the technical bulletin specified.



### CR Commercial Riser



Technical Bulletin: 617

#### Features:

- Cast stainless steel body construction for threaded manifolds
- Painted, cast ductile iron body construction for grooved manifolds
- Brass and galvanized trim
- Factory assembled and pressure tested
- Optional pressure relief valve kit available for all sizes
- Same take-out dimensions for the 2-8 inch grooved sizes
- Approved for installation in horizontal or vertical positions
- Built in drain port allows easy testing and replacing of pressure gauge
- Three-way valve allows easy testing and replacing of pressure gauges
- Dedicated UL Listed waterflow detector assures optimum sensitivity

**Available Sizes:** 1-1/2" (40 mm), 2" (50 mm), 2-1/2" (65 mm), 3" (80 mm), 4" (100 mm), 6" (150 mm), & 8" (200 mm)

### Residential Riser



Technical Bulletin: 425

#### Features:

- Stainless steel body construction
- All brass trim
- Factory assembled
- Factory pressure tested at 200 psi (13.8 bar)
- Choice of trim: Basic Trim, Basic Trim with Pressure Relief Valve, Basic Trim with TESTanDRAIN, Basic Trim with TESTanDRAIN and Pressure Relief Valve
- Choice of mounting options: Supply/system lines support, Support bracket (to stud), Recessed or flush mount (to wood panel)
- NPT (female x female) or tapered metric (female x female) connections
- Slim design allows for easy installation within 2" x 4" on 16" centers wood frame construction
- Dedicated UL Listed water flow detector assures optimum sensitivity

**Available Sizes:** 1" (25 mm), 1-1/2" (40 mm), & 2" (50 mm)

Note: In 2012, Technical Bulletin 425 replaced Bulletin 416

### MP Multipurpose Residential Riser



Technical Bulletin: 414

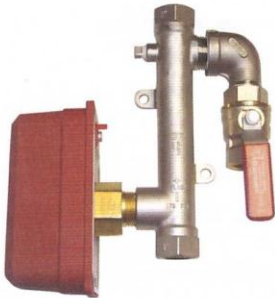
#### Features:

- Designed to alarm on single fire sprinkler operation and not during normal household water usage
- Potable-water safe
- Water flow detector is preset to operate at 12 gpm + -1gpm (45.4 Lpm + -3.8 Lpm), and is factory installed with a weather-proof metal cover
- Dedicated UL Listed water-flow detector assures optimum sensitivity with the adjustable delay device minimizes false alarms caused by pressure surges or short periods of water usage above 12 gpm
- Switch can be wired for 24 VDC or 125/260 VAC operation
- Stainless steel 1" (25 mm) manifold with NPT or Metric Inlet and Outlet Threads.
- Factory assembled and tested
- Rated working pressure not to exceed 175 psi
- UL Listed Assembly, NSF 61 Approved
- To be used in systems where the most remote sprinkler will flow a minimum of 11 gpm (41.6 Lpm)

**Available Sizes:** 1" (25 mm)



### MP LL Multipurpose Residential Riser



Technical Bulletin: 426

#### Features:

- Designed to alarm on single fire sprinkler operation and not during normal household water usage
- Potable-water safe to NSF/ANSI Standard 61 annex G
- Water flow detector is preset to operate at 12 gpm + -1gpm (45.4 Lpm + -3.8 Lpm), and is factory installed with a weather-proof metal cover
- Dedicated UL Listed water-flow detector assures optimum sensitivity with the adjustable delay device minimizes false alarms caused by pressure surges or short periods of water usage above 12 gpm
- Switch can be wired for 24 VDC or 125/260 VAC operation
- Stainless steel 1" (25 mm) manifold with NPT or Metric Inlet and Outlet Threads
- Factory assembled and tested
- Rated working pressure not to exceed 175 psi
- UL Listed Assembly
- When the Model MP LL Riser is utilized in sprinkler systems with sprinklers having K-Factors less than 4.4, there must be a minimum of 15 psi of operating pressure at the system's most remote head

Available Sizes: 1" (25 mm)

### C Mechanical Sprinkler Alarm



Technical Bulletins:  
612 & 613 (O&M)

#### Features:

- Dependable - Pelton wheel type
- Prompt - positive operation
- Nylon bearings - no lubrication needed
- Compact - lightweight, easily installed
- Rust-free cast aluminum gong. No gong cover needed
- Gong available in red and bright metallic finishes
- Self-setting after operation eliminating the need of removing covers, plates, etc. to reset internal mechanisms



### B1 Accelerator with Integral Accelo-Check



Technical Bulletin: 323

#### Features:

- Quickens operation of dry pipe valves
- Increase number of automatic sprinklers controlled by one dry pipe valve
- Equalizes rapidly as dry system is being filled with air to required pressure
- Adjusts without operation for small fluctuations in system air pressure
- Dependable in operation, compact, and light-weight construction
- Accelo-Check prevents water and debris from entering critical areas, minimizing the need of removing cover plates, etc. to reset or clean internal mechanisms
- Tested and approved for use with all Reliable dry pipe valves and dry systems

Note: In 2013, Technical Bulletins 320 & 322 were consolidated into Bulletin 323

### **NEW** Air/Nitrogen Automatic Pressure Maintenance Devices



Technical Bulletins:  
254 & 255 (O&M)

#### Features:

- Includes: Model B-SI & C-SI Air Compressor Panel, Model NS-PaK, Model A2 & B1 Air Maintenance Device, and Nitrogen Device Regulator
- Reliable pressure maintenance devices are used to automatically supply or maintain the correct pressure in dry pipe valve, preaction systems, and in dry pilot lines for deluge systems. When installed in these systems, they eliminate the need for manual filling to overcome small leaks or temperature changes. Reliable pressure maintenance devices do not interfere with the prompt operation of dry pipe valves and deluge valves including when used with quick opening devices

Note: In 2013, Technical Bulletins 254 & 255 replaced Bulletins 250, 251, 252 & 253

### A Air Compressor



Technical Bulletin: 275

#### Features:

- Oilless-permanently lubricated
- May be mounted in any position
- No adjustment necessary
- Motor mounted - no belts or gears
- No need for any other source of air
- Compatible with Reliable Model B1 air maintenance devices having unloader valves
- Thermal protection (single phase)
- Air filter, one per cylinder
- Safety relief valve (50 psi)
- Riser mounting available



### ACD Dry System Auxiliary Condensate Drain with Sight Glass



Technical Bulletin: 441

- Used in Dry Pipe and Preaction sprinkler systems, which meet NFPA 13 Installation Requirements
- Sight Glass optional
- Eliminates field assembly
- Ball valves – quick operation
- No assembly required
- 1" Plug included

### Automatic Ball Drip, Sight Drain, Control Valve Seal



Technical Bulletin: 206

- Model C - Automatic Ball Drip
- Model C - Mechanical Ball Drip Valve
- Model C - 2" (50 mm) Sight Drain
- Model B - Drum Drip
- Model A - Control Valve Seal
- Model A - Fill Cup

#### Inspectors Test Connections

- Model A - Blind Test Connection
- Model B - Sight Test Connection

#### Pressure Gauges

- Model UA - Water Pressure Gauge
- Model UA - Air Pressure Gauge
- Low Air Pressure Diaphragm Gauge



### LP Dry Pilot Actuator



Technical Bulletins:  
337 (DDX-LP)  
518 (DDX Deluge)  
751 (DDX DI-Type F)

#### Features:

- For use on DDX-LP Dry Systems and Type F Double Interlock Preaction Systems
- Separates the water pressure, used in a deluge valve, from the air pressure used in a dry pilot line

### A Hydraulic Manual Emergency Pull Box



Technical Bulletin: 506

- For use with Reliable Deluge Systems utilizing wet or dry pilot line actuation
- Optional Manual Emergency Release for DDX Low Pressure Dry, Deluge, and Preaction Systems



# Special Hazards/Special Systems



## Special Hazards/Special Systems

Special hazards systems are required for the protection of hazards which cannot be adequately protected by a standard sprinkler system. A special hazard can be the protection of an area, a process, a piece of equipment or a building's structural components. Reliable manufactures a complete line of deluge valves and trim configurations for deluge and preaction system applications. Preaction systems are specialized sprinkler systems used for the protection of water sensitive areas that cannot be subjected to inadvertent water discharge from the sprinkler system. Various trim arrangements, combined with a wide variety of detection and actuation devices, provide numerous system design options.

At the heart of our deluge and preaction systems is the light-weight, Reliable Model DDX Deluge Valve. This deluge valve is a hydraulically operated, straight-through-design, differential-type valve with latching clapper.

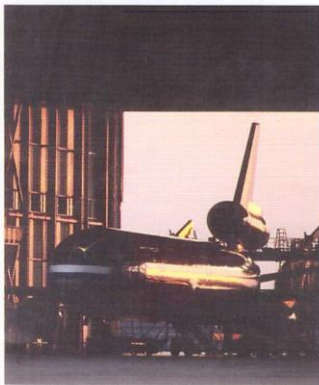
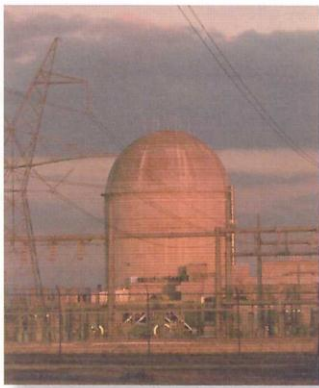
## Deluge Systems

Deluge valves are automatic water control valves that are used in controlling water flow to deluge, preaction and special types of fire protection systems. Deluge sprinkler systems use open sprinklers or nozzles that are connected to a water supply through a deluge valve, which is opened by the operation of a detection system installed in the same area as the spray nozzles or open sprinklers. A deluge system is used to protect special hazards where rapidly developing fires producing high rates of heat release are expected, and an immediate application of water over the entire area is required. All of the sprinklers or nozzles discharge at the same time, which results in a large amount of water flowing at once. Types of deluge systems include ceiling area deluge protection systems, fixed water spray deluge systems for exposure protection, and foam water spray deluge sprinkler systems. Typical installations include aircraft hangars, electrical transformers, chemical plants, cooling towers, tank farms and fuel depot loading/off-loading facilities.

Methods of deluge valve actuation include mechanical wet-pilot and dry-pilot trim assemblies, which use pilot line sprinklers or fixed temperature release pilot line detectors, and electric actuation trim, which utilize an electric detection system and associated releasing control panel.

## Preaction Systems

A preaction system is a sprinkler system that utilizes closed sprinklers connected to a water supply through a deluge valve trimmed for preaction operation. The deluge valve is actuated by the operation of a detection system installed in the same area as the sprinklers, or by both the operation of a detection system and the subsequent operation of a sprinkler. These systems are used to provide fire protection primarily in water sensitive areas where serious water damage would occur as a result of damaged automatic sprinklers or sprinkler piping. Preaction systems also are effectively used to provide an early fire alarm prior to the operation of a sprinkler, providing the opportunity for fire extinguishment by hand-held means before the sprinkler activates, minimizing or eliminating water discharge. Preaction systems differ from dry pipe systems in that the primary control valve (deluge valve) for preaction is activated by a fire detection device, and not by exclusive operation of a sprinkler in the system piping, as is the case when a dry pipe valve is the primary control valve.



For more detailed information including approval data, please refer to the technical bulletin specified.



# Special Hazards/Special Systems



Preaction systems contain no water in the sprinkler piping under normal operating conditions. The piping either contains air at atmospheric pressure (i.e., unsupervised systems) or a low pressure compressed gas, such as air or dry nitrogen, for the purpose of supervising the integrity of the sprinkler piping. Usually, supervision of the sprinkler piping is done at a pressure of either 2 to 10 psi (0.1 to 0.7 bar), or 10 to 26 psi (0.7 to 1.8 bar), depending on the type of preaction system being used. Areas typically protected by preaction systems include computer rooms, museums, libraries, and freezers.

## Single Interlock Preaction Systems

Single interlock preaction systems are designed for water sensitive environments in heated areas that require protection from inadvertent water flow into the sprinkler system piping as a result of damaged sprinklers or sprinkler piping; or, during a fire event, where water is required at the sprinkler as soon as the sprinkler operates. Preaction systems can also replace dry pipe systems, providing cost advantages (except for storage occupancies) in the hydraulic design of the system (i.e., 1500 ft<sup>2</sup> (139.4 m<sup>2</sup>) design area vs. 1950 ft<sup>2</sup> (181.1 m<sup>2</sup>) design area for dry systems) and where dry system piping capacities exceed volume limitations imposed by the applicable standards, where water delivery performance is adversely affected.



Automatic (closed) sprinklers are attached to a piping system containing 2-10 psi (0.1-0.7 bar) supervisory pressure, and a supplemental electric fire detection system is installed in the same area protected by the sprinklers. This detection system is used in conjunction with an approved releasing control panel. Preaction systems may also be activated by mechanical means using either wet pilot or dry pilot line sprinklers or fixed temperature release pilot line detectors.

When one detector activates in the event of a fire, the deluge valve opens allowing water to enter and fill the sprinkler system piping. Water then stands ready at the sprinkler and will immediately discharge once the sprinkler operates, acting like a wet pipe sprinkler system. Water will only discharge from those sprinklers that have been operated by heat over the fire. Loss of supervisory air pressure as a result of damaged sprinklers or damaged system piping will only activate a supervisory alarm and not cause the deluge valve to open.





# Special Hazards/Special Systems

## SINGLE INTERLOCK PREACTION SYSTEMS

### Single Interlock Preaction System Electric Actuation



Technical Bulletins:  
719 & 721

#### Features:

- Utilizes Model H galvanized deluge riser assembly
- cULus Listed
- 175 psi (12.1 bar) pressure rating
- Riser assembly is factory assembled including supervised control valve and water flow pressure switch
- Galvanized trim and brass components
- Piping may be supervised with as little as 2 psi (0.1 bar) or up to a maximum 10 psi (0.7 bar).

Available Sizes: 1-1/2" (40 mm)

### DDX Single Interlock Preaction Systems



Technical Bulletin: 749

#### Features:

- Wet Pilot Line, Dry Pilot Line, and Electric Actuation Trims
- Utilizes lightweight Model DDX deluge valve with galvanized trim
- Electric Release Trim Available with 175 psi (12.1 bar) or 250 psi (17.2 bar) Rated Solenoid Valve
- Electric Release Trim and Wet Pilot Trim Utilize 7 to 10 psi (0.5 to 0.7 bar) Pneumatic Supervising Pressure
- Dry Pilot Trim Utilize 8 psi to 26 psi (0.6 to 1.8 bar) Pneumatic Supervising Pressure
- Externally Resettable Clapper
- One Main Drain

Available Sizes: 2" (50 mm), 2-1/2" (65 mm), 3" (80 mm), 4" (100 mm), 6" (150 mm), 8" (200 mm)

For more detailed information including approval data, please refer to the technical bulletin specified.



# Special Hazards/Special Systems

## SINGLE INTERLOCK PREACTION SYSTEMS cont.

### Single Interlock Preaction System Electric Actuation



Technical Bulletin: 739

#### Features:

- Designed for the International market
- Utilizes lightweight Model DDX deluge valve with galvanized trim
- LPCB Approved
- Redundant Solenoid Valve Release
- Rated to 175 psi (12.1 bar)
- Externally Resettable Clapper
- One Main Drain

Available Sizes: 4" (100 mm), 6" (150 mm), & 165 mm



# Special Hazards/Special Systems

## DOUBLE INTERLOCK PREACTION SYSTEMS



### Double Interlock Preaction Systems

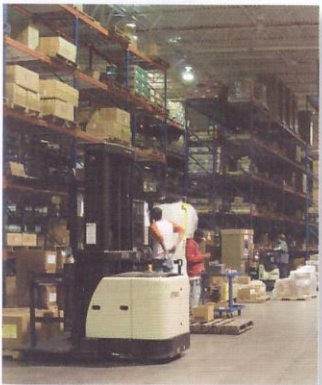
Double interlock preaction systems are designed for water sensitive environments which require maximum protection from inadvertent water flow into the sprinkler system piping. Automatic sprinklers are attached to a piping system containing 10-26 psi (0.7-1.8 bar) pneumatic supervisory pressure, and a supplemental fire detection system is installed in the same area protected by the sprinklers. When the supplemental detection system is electric, it is used in conjunction with an approved releasing control panel. Double interlock systems require two independent events—the operation of both the fire detection system and a sprinkler—to coexist before the deluge valve will allow water to enter the system piping causing an immediate discharge of water from any open sprinkler(s). Water will only discharge from those sprinklers that have been operated by heat over the fire. Loss of supervisory pressure as a result of damaged sprinklers, damaged piping, or failure of the pneumatic system will activate a supervisory alarm, but will not cause the deluge valve to open. In the event that a fire detection device is falsely operated, the control panel or fire alarm panel will announce an alarm condition; however, the deluge valve will not be released to flow water since only one independent event has occurred.

There are three different double interlock trim assemblies available: the electric/electric type (Reliable Type D), the electric/pneumatic type (Reliable Type F), and the pneumatic/pneumatic type (Reliable Type PL). The Type D and Type F systems operate by electric detection and the loss of pneumatic pressure in the system piping. The Type PL system operates by the concurrent loss of pneumatic pressure in a dry pilot line and in the system piping. It is important to note that each system has different trim assemblies and pneumatic pressure requirements.

The Reliable Type D double interlock system is based upon total electric activation, and is recommended for data processing or other conditioned water sensitive areas. It is controlled by a cross-zoned releasing panel and utilizes only one releasing device—a normally closed electric solenoid valve—as part of the trim. A low pressure switch is used to monitor the loss of system pneumatic pressure due to an open sprinkler. The system piping requires 10 psi (0.7 bar) of supervisory pressure. Operation of both a fire detection device and the low pressure switch causes two signals to coexist in the releasing control panel, energizing the solenoid valve and allowing water to flow into the system. Operation of either a detection device or the low pressure switch in the absence of the other will result in an alarm condition but will not result in opening of the deluge valve.

The Reliable Type F double interlock system utilizes an electric detection system and a mechanical release, and is recommended for refrigerated areas where a freeze potential exists. The detection system is connected to a releasing control panel for single zone operation, and the trim utilizes the two releasing devices—a normally closed electric solenoid valve and a low pressure mechanical actuator—arranged in series. The solenoid valve remains closed until energized by the releasing panel which occurs from operation of a fire detection device. The system piping requires 10 to 26 psi (0.7 to 1.8 bar) of supervisory pneumatic pressure that also keeps the low pressure actuator closed. A low pressure switch is used to monitor the loss of system pressure due to a damaged sprinkler, damaged piping, or failure of the pneumatic system. Operation of a fire detection device causes the releasing panel to energize (open) the solenoid valve. Subsequent operation of a sprinkler will cause the system pneumatic pressure to decrease and the mechanical actuator to open. With the coexistence of the two independent events the deluge valve will trip allowing water to flow into the system. Operation of either a detection device or the mechanical actuator in the absence of the other will result in an alarm condition but will not result in opening of the deluge valve.

The Reliable Type PL double interlock system utilizes a Reliable Model LPDI two-chamber low pressure mechanical actuator and does not rely on an electric detection/release system. It is recommended for any water sensitive environment that requires maximum protection against the inadvertent flow of water into the system piping and where loss of power is common. The sprinkler system is pressurized with air or nitrogen that keeps one chamber of the low pressure actuator closed. The other chamber of the low pressure actuator is connected to a dry pilot line with fixed-temperature release detectors or sprinklers in the protected area. The dry pilot line is pressurized with air or nitrogen that keeps the second chamber of the actuator closed. The system requires 8 to 26 psi (0.6 to 1.8 bar) of supervisory pneumatic pressure. Separate low pressure switches are used on the dry pilot line and the system to monitor the loss of pressure due to a damaged pilot device, damaged sprinkler, damaged piping, or failure of the pneumatic system. Operation of a device on the pilot line releases pneumatic pressure on one chamber of the actuator. Subsequent operation of a sprinkler will cause the loss of pneumatic pressure on the system and second chamber of the low pressure actuator, and the mechanical actuator will open. With the coexistence of the two independent events the deluge valve will trip allowing water to flow into the system. Operation of either a pilot line device or loss of system pressure in the absence of the other will result in an alarm condition but will not result in opening of the deluge valve.



For more detailed information including approval data, please refer to the technical bulletin specified.



# Special Hazards/Special Systems

## DOUBLE INTERLOCK PREACTION SYSTEMS cont.

### Double Interlock Preaction System Type D



Technical Bulletin: 720

#### Features:

- Electric/Electric double interlock preaction system
- Utilizes factory assembled Model H galvanized deluge riser assembly
- cULus Listed
- Galvanized trim and brass components
- Trim includes low air pressure switch, alarm pressure switch, supervised water control valve, and Model A-2 regulating air maintenance device
- 175 psi (12.1 bar) pressure rating
- Controlled by cross-zoned releasing panel
- Piping supervised with 10 psi (0.7 bar)

Available Sizes: 1-1/2 (40 mm)

### DDX Double Interlock Preaction System Type D



Technical Bulletin: 750

#### Features:

- 7 to 10 psi (0.5 to 0.7 bar) Pneumatic Supervising Pressure with Electric/Pneumatic Actuation Controlled by a Cross-Zoned Releasing Control Panel
- cULus Listed; FM Approved
- Utilizes lightweight Model DDX deluge valve with galvanized trim
- Available with either 175 psi (12.1 bar) or 250 psi (17.2 bar) rated solenoid valve
- Externally Resettable Clapper
- One Main Drain
- 4", 6" & 165 mm - 300 psi (20.7 bar)

Available Sizes: 2" (50 mm), 2-1/2" (65 mm), 3" (80 mm), 76 mm, 4" (100 mm), 6" (150 mm), 165 mm, & 8" (200 mm)



# Special Hazards/Special Systems

## DOUBLE INTERLOCK PREACTION SYSTEMS cont.

### DDX Double Interlock Preaction System Type F



Technical Bulletin: 751

#### Features:

- 8 - 26 psi (0.6 - 1.8 bar) Pneumatic Supervising Pressure With Electric/Pneumatic Actuation
- cULus Listed; FM Approved
- Utilizes lightweight Model DDX deluge valve with galvanized trim
- Available with 175 psi (12.1 bar) or 250 psi (17.2 bar) rated solenoid valve
- Externally Resettable Clapper
- One Main Drain
- 4", 6" & 165 mm - 300 psi (20.7 bar)

Available Sizes: 2" (50 mm), 2-1/2" (65 mm), 3" (80 mm), 76 mm, 4" (100 mm), 6" (150 mm), 165 mm, & 8" (200 mm)

### NEW Double Interlock Preaction System Type PL



Technical Bulletin: 752

#### Features:

- Pneumatic/Pneumatic double interlock preaction system
- Utilizes lightweight Model DDX deluge valve with galvanized trim
- Trim package includes the Model LPDI Double Interlock Actuator as a releasing device
- Piping supervised with only 8 psi (0.6 bar) to 26 psi (1.8 bar)
- 2", 2-1/2", 3" & 8" - 250 psi (17.2 bar)
- 4", 6" & 165 mm - 300 psi (20.7 bar)
- Completely mechanical actuation - no electric detectors or RCP required
- Externally Resettable Clapper
- One Main Drain

Available Sizes: 2" (50 mm), 2-1/2" (65 mm), 3" (80 mm), 76 mm, 4" (100 mm), 6" (150 mm), 165 mm, & 8" (200 mm)

For more detailed information including approval data, please refer to the technical bulletin specified.



# Special Hazards/Special Systems

## PREPAK SYSTEMS

### PrePaK Systems

The Reliable PrePaK preaction systems are completely self contained and integrated, supervised preaction systems which provide an alternative to site assembled systems, requiring only three piping connections and minimal electrical connections. These factory-assembled, electric actuated systems consist of a supervised water supply control valve, deluge riser assembly with galvanized trim, and all associated hydraulic and electrical components, fittings, gauges, mechanical couplings and supervisory air supply necessary for the operation of an approved automatic preaction system in accordance with NFPA 13 and Factory Mutual Data Sheet requirements. Applications include single interlock, single interlock/cross-zoned, double interlock, and double interlock/cross-zoned.

### Features:

- cULus Listed and FM Approved as factory assembled units.
- Available in 1-1/2" (cULus only), 2", 2-1/2", 3", 4" and 6" sizes; sizes 2" through 6" utilize the lightweight Reliable DDX deluge valve, rated to 250 psi.
- Cabinet enclosure is a 12 gauge steel cabinet having an exterior and interior rust-proof, powder coated painted finish. Several removable access panels are located on the cabinet enclosure to promote ease of access to interior components.
- Tank mounted air compressor with regulating type air maintenance device is provided.
- Available with or without the door-mounted, field-programmable Potter PFC 4410RC releasing control panel, which permits field programming for the specific preaction desired.
- Supervisory signal upon loss of air only for both single interlock and double interlock applications.
- Air compressor and releasing panel are powered independently and come wired for either a 120 VAC/60 Hz or 220 VAC/50 Hz power supply
- Domestically manufactured, assembled and tested at Reliable in Liberty, SC

### PrePaK Preaction System Model H



Technical Bulletin: 723

### Features:

- Utilizes Model H galvanized deluge riser assembly rated to 175 psi (12.1 bar)
- Cabinet size: 24" (609.6 mm) W x 27" (685.8 mm) D x 64" (1625.6 mm) H; 4.5 ft<sup>2</sup> (.42 m<sup>2</sup>)
- 1/6 hp oilless air compressor with 2 gal. (7.6 L) tank

Available Sizes: 1-1/2" (40 mm)



# Special Hazards/Special Systems

## PREPAK SYSTEMS cont.

### PrePaK Preaction System Model DDX



Technical Bulletin: 740

#### Features:

- Utilizes the lightweight Model DDX deluge valve with galvanized trim
- Cabinet size: 24" (609.6 mm) W x 27" (685.8 mm) D x 68" (1727.2 mm) H; 4.5 ft<sup>2</sup> (.42 m<sup>2</sup>)
- 1/6 hp oilless air compressor with 2 gal. (7.6 L) tank for 2" and 2-1/2" sizes; 1/3 hp for 3" size

Available Sizes: 2" (50 mm), 2-1/2" (65 mm), 3" (80 mm), & 76 mm

### PrePaK Preaction System Model DDX



Technical Bulletin: 733

#### Features:

- Utilizes the lightweight Model DDX deluge valve with galvanized trim
- Cabinet size: 25.7" (652.8 mm) W x 28.9" (734 mm) D x 68" (1727.2 mm) H; 5.1 ft<sup>2</sup> (.47 m<sup>2</sup>)
- 3/4 hp oilless air compressor with 8 gal. (30.3 L) tank; optional 1-1/2 hp available for 6" PrePaK only

Available Sizes: 4" (100 mm), & 6" (150 mm)

### PrePaK Preaction System Model DDX Type F



Technical Bulletin: 747

#### Features:

- Utilizes the lightweight DDX deluge valve with Type F (Electric/Pneumatic Galvanized trim
- Available with optional nitrogen installation kit, air compressor and tank, releasing/control panel for a 120 VAC / 60Hz or a 220 VAC / 50Hz power supply
- Two Cabinet sizes:
  - o 24" (0.61 m) W x 27" (06.9 m) D x 68" (1.73 m) H 12-gauge steel enclosure
  - o 25.7" (0.65 m) W x 28.9" (0.73 m) D x 68" (1.73 m) H 12-gauge steel enclosure

Available Sizes: 2" (50 mm), 2-1/2" (65 mm), 3" (80 mm), 4" (100 mm), & 6" (150 mm)

For more detailed information including approval data, please refer to the technical bulletin specified.



# Special Hazards/Special Systems

## DRYPAK SYSTEMS

**NEW** DDX-LP DryPaK System



Technical Bulletin: 748

### Features:

- Utilizes the Model DDX-LP Dry Pipe Valve, which is hydraulically operated, differential-type valve designed for use as a primary control valve in a low pressure dry pipe valve system
- 10 psi – 26 psi (0.7 bar – 1.8 bar)
- Two Cabinet sizes:
  - 24" (0.61 m) W x 27" (0.69 m) D x 68" (1.73 m) H 12-gauge and NEMA 3 rated steel enclosure
  - 25.7" (0.65 m) W x 28.9" (0.73 m) D x 68" (1.73 m) H 12-gauge and NEMA 3 rated steel enclosure
- Optional nitrogen supply feature available

Available Sizes: 2" (50 mm), 2-1/2" (65 mm), 3" (80 mm), 4" (100 mm), & 6" (150 mm)



# System Components

**All your fire protection needs direct from the manufacturer and delivered to your jobsite**

- Steel Pipe
- Grooved & Threaded Fittings
- CPVC Pipe & Fittings
- Hangers & Clamps
- Backflow Preventers
- Valves & Indicators
- Electrical Equipment
- Foam Systems
- Air Compressors
- Fire Department Equipment
- Flexible Products
- Nitrogen Generation Systems
- And More





# System Components

## Grooved Couplings & Fittings



- Couplings, Lightweight & Rigid
- Couplings, Standard & Reducing
- Couplings, Standard & Rigid with Flush Seal
- Elbows, 45° and 90°
- Tees
- Flanges, Short Radius 90° Elbows
- Short Radius 45° Elbows & Tees
- Concentric Reducers
- Tees
- Mechanical Tee-Cross (Threaded & Grooved)
- Replacement Gaskets
- End of Run Fittings
- Mechanical Tees (Threaded & Grooved)

## Cast Iron Fittings - Domestic



- Elbows, 45° and 90°
- Standard Tees
- Reducing Tees
- Bullhead Tees
- Crosses
- Plugs
- Caps (Malleable)
- Couplings (Malleable)
- Unions (Malleable)
- Hex Bushings
- Companion Flanges
- Pipe Dope
- Teflon Tape
- Cutting Oil

## Cast Iron Fittings - Foreign



- Elbows, 45° and 90°
- Reducing 90° Elbows
- Standard Tees
- Reducing Tees
- Bullhead Tees
- Plugs
- Pipe Dope
- Teflon Tape
- Cutting Oil

## Ductile Iron Fittings - Foreign



- Elbows, 45° and 90°
- Reducing 90° Elbows
- Reducing Couplings
- Standard Tees
- Reducing Tees
- Bullhead Tees
- Reducing Crosses
- Caps
- Couplings
- Pipe Dope
- Teflon Tape
- Cutting Oil

## Flanged Fittings - Foreign



- Companion Flange
- Flanged 45° and 90° Elbows
- Flanged Tees
- Flanged Reducing Tees
- Flanged Concentric Reducers



# System Components

## Fireloop



- Thread End
- Grooved End

## CPVC Pipe, Fittings & Hangers



- Pipe
- Antifreeze
- Hangers (Single, Double, Sidemount, & Stand-Off)
- Elbows, 45° and 90°
- Reducing 90° Elbows
- 90° Sprinkler Head Adapters
- Tees (Reducing & Run Reducers)
- Tee Head Adapters
- Head Adapters
- Bushings
- Grooved Adapters
- Crosses
- Cement & Thread Sealant

## Pex



- Pipe
- Adapters
- Couplings
- Elbows
- Tees
- Test Plugs
- Tools

## Tee-lets



- Tee-lets
- Grooved Shaped Nipples

## Hangers



- Ring Hangers
- Beam & Riser Clamps
- Wall Plates
- Eye Sockets
- All Thread Rods
- Hex Nuts
- Washers
- Drop-In Anchors
- Sammy Super Screws



# System Components

## Fire Department Equipment



- Fire Department Connections
- Hose Valves
- Accessories

## Nipples



- Adjustable Wet Drop Nipples
- Steel Nipples (Black & Galvanized)

## Valves



Manufacturing Inc.

- Riser Check
- Grooved Check Valves
- Swing Check Valves
- Flanged Check Valves
- Gasket Kits
- Butterfly Valves
- Butterball Valves
- Foreign Trim Valves
- Domestic Trim Valves
- Detector Check
- In-Building Riser
- Wafer Check
- Test & drains

## Backflows



- Backflow Prevention Valves
- Detector Check
  - Double Check Assembly
  - Double Check Detector Assembly
  - Reduced Pressure Principal Backflow Prevention Assembly
  - Reduced Pressure Detector Assembly



# System Components

## Air Compressors

**GAST**  
A UNIT OF IDEX CORPORATION



- Air Compressors - Bare
- Air Compressors with Check Valve & Pressure Switch
- Air Compressors - Tank Mounted
- Repair Kits

## Electrical Equipment



- Waterflow Detectors
- Tamper Switches
- Accessories
- Electric Alarm Bells

## Flexible Drop



- Commercial & Duct Models

## Steel Pipe



- Schedule 40 & 10
- Flowpipe
- Threadable Lightwall



# System Components

## Residential



- Fire Pumps
- Tanks



## Foam



- Foam
- Tanks
- Proportioners and Valves

## Nitrogen Systems



- N2 Blast Nitrogen Generation System

## Accessories

- Gasket Lube, Pipe Dope, Teflon Tape
- Pipe Dope
- Teflon Tape
- Cutting Oil
- CPVC Cement
- Thread Sealant
- Anti-Freeze
- One-Step

# New Products

## Retro-Fit Fire Protection with the J-Fit System

**PATENTED**

A beautiful solution for providing residential fire sprinkler protection in existing homes



Using the template  
mark the hole locations



Use a hole saw  
to cut two holes



Insert the J-Fit assembly  
with the attached sprinkler



Make the Viega  
PEX connection



Install the crown moulding



Simple, clean, & attractive



The fitting assembly and  
bracket come mounted on  
a hole location template

**For pricing and availability call your Reliable  
sales representative and ask for:**

- 3/4" line pipe size assembly PN 7M99002766
- 1" line pipe size assembly PN 7M99002767

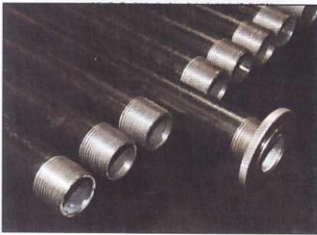
**For more information and to view an  
installation video: [www.j-fitting.com](http://www.j-fitting.com)**



# Fabrication

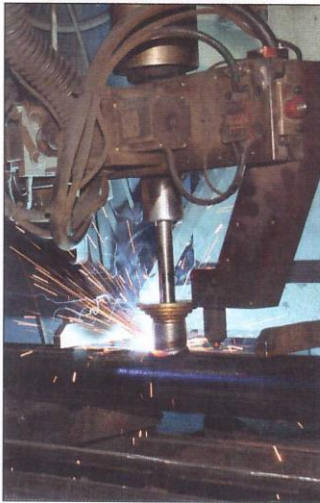
## RELIABLE IS YOUR SOURCE FOR ALL YOUR FABRICATION NEEDS.

### Thread Line Piping



- Pipe is gravity fed into measuring system, then roll cut to length and label is applied
- Pipe is then gravity fed to Landis threading machines
- Threads are cut to ANSI/ASTM B 1.20.1 then checked by ANSI standard ring gauges
- PIPEFit AS anaerobic thread sealant with Teflon is applied
- Thread fittings are assembled to the pipe
- Assembled pipe is gravity fed to the PACE make on machine then hydraulically torqued to ANSI specifications
- Line piping is separated by the number inclusive of all diameters then tied in easy to handle groups
- Master bundles are color coded and marked with the line number contents
- 2'-6" and under bagged pieces contents are marked, palletized, shrink wrapped, identified and color coded

### Welding Piping



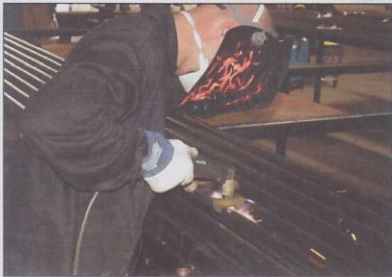
- Pipe is gravity fed into the N.A.P. Quick cut measuring system and cut to length
- Pipe is labeled and color coded
- Cut end is then flapper disc chamfered, then gravity fed to PACE hydraulic roll groove machine
- Groove depth and flare are checked with pipe tape in the case of galvanized pipe, flaking is removed internally by die grinding and external removed by flapper disc
- Galvanized Pipe end is sprayed with cold galvanizing internally and externally
- Pipe is then gravity fed to the N.A.P. Universal Welder
- Outlets welded to galvanized pipe are galvanized cold sprayed
- Weld coupons are removed, bagged and stored
- Blast cannon removes all dust and dirt from inside of pipe
- Welds are die penetrant and developer tested
- Pipe is bundled by identification wrapped and color coded





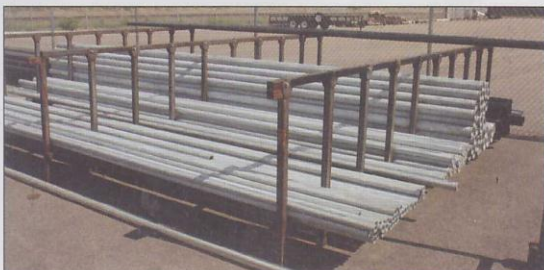
# Fabrication

## Process & Procedure



- Our fabrication shops use Hydralist Software
- Contractors using Hydracad Software can submit a listed HLF file electronically
- Qualify Project Material Specifications
  1. FM Project
  2. Domestic or Import
  3. Schedule of Pipe
  4. Type Black or Galvanized
  5. Threaded Fitting Material
- The Customer prepared fabrication sheet is entered into the Hydralist Software
- The job is printed for shop fabrication inclusive of lists, sketches and labels
- Pipe Label Includes:
 

1. Job Number	5. Type	9. Fitting Size
2. Project Name	6. Diameter	10. System
3. Customer name	7. Length of Pipe	11. Color Code
4. Piece ID	8. End Preparations	



## Hangers

- Plain or plated rod can be cut to length and assembled with fastener and ring
- Hanger assemblies are grouped, tied and tagged by the identification number
- Hangers are bagged, palletized, wrapper identified and color coded

HydraLIST fabrication sheets are provided with the delivered project



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