Product Description

Model KFR56 series sprinklers are standard spray, quick-response sprinklers with a fusible link operating element. The sprinklers are cULus Listed, FM Approved, VdS Approved, and CE Certified. See Table C for available finishes. All KFR56 sprinklers have a nominal K-factor of 5.6 (80 metric).

Model KFR56 series sprinklers are available in Ordinary (165°F [74°C]) or Intermediate (212°F [100°C]) temperature classification. Model KFR56 Pendent sprinklers are available with Model F1, Model F2, or Model FP recessed escutcheons.

Application

Model KFR56 series sprinklers are listed and approved for installation in accordance with NFPA 13 and FM Loss Prevention Data Sheets. Follow requirements of NFPA 13 for Quick-response Standard Spray Sprinklers when installing Model KFR56 series sprinklers. FM Approvals classifies Model KFR56 sprinklers as K5.6 QR Non-storage and K5.6 QR In-rack Storage sprinklers.

Installation

Model KFR56 series sprinklers must be installed in accordance with the requirements of NFPA 13 or FM Property Loss Prevention Data Sheets. The Model F1, F2, and FP escutcheons are the only recessed escutcheons listed and approved for use with Model KFR56 Pendent sprinklers. The use of any other recessed escutcheon will void all approvals and warranties. Do not install Model FP escutcheons in ceilings that are positively pressurized with respect to the occupied space below.

Use only the Model W2 sprinkler wrench for installing Model KFR56 series pendent, upright, and horizontal sidewall sprinklers, and use only the Model W1 wrench for installing Model KFR56 series recessed pendent, conical concealed pendent (CCP), and recessed horizontal sidewall sprinklers. The use of wrenches other than those specified may damage these sprinklers.

Recommended installation torque is 14-20 ft-lbs (19 – 27 N-m). Do not tighten sprinklers over the maximum recommended torque. Exceeding the maximum recommended torque may cause leakage or impairment of the sprinklers.

Listings & Approvals

Listed by Underwriters Laboratories, Inc. and UL Certified for Canada (cULus)
- Sprinklers, Automatic and Open (VNIV)

FM Approved (FM)
- K5.6 QR Non-storage
- K5.6 QR In-rack Storage

VdS Approved and CE Certified to EN12259

<table>
<thead>
<tr>
<th>Sprinkler Model</th>
<th>Orientation</th>
<th>Listing or Approval</th>
<th>Max. Working Pressure psi (bar)</th>
<th>Sprinkler Identification Number (SIN)</th>
</tr>
</thead>
<tbody>
<tr>
<td>KFR56 Pendent</td>
<td>Pendent</td>
<td>cULus</td>
<td>250 (17.2)</td>
<td>RA3614</td>
</tr>
<tr>
<td></td>
<td></td>
<td>FM, VdS, CE</td>
<td>175 (12)</td>
<td>RA3624</td>
</tr>
<tr>
<td>KFR56 Upright</td>
<td>Upright</td>
<td>cULus</td>
<td>250 (17.2)</td>
<td>RA3634</td>
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<tr>
<td></td>
<td></td>
<td>FM, VdS, CE</td>
<td>175 (12)</td>
<td></td>
</tr>
<tr>
<td>KFR56 HSW</td>
<td>HSW</td>
<td>cULus</td>
<td>250 (17.2)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>FM, VdS, CE</td>
<td>175 (12)</td>
<td></td>
</tr>
</tbody>
</table>
Model KFR56 Pendent sprinkler

Technical Specifications
- Style: Pendent, Recessed Pendent, or Conical Concealed Pendent
- Threads: 1/2" NPT or ISO7-1R1/2
- Nominal K-Factor: 5.6 (80 metric)
- Max. Working Pressure:
  - cULus: 250 psi (17.2 bar)
  - FM, VdS, CE: 175 psi (12 bar)

Material Specifications
- Thermal Sensor: Beryllium Nickel
- Strut and Lever: Stainless Steel
- Roto-clip: Stainless Steel
- Sprinkler Frame: Brass Alloy
- Cap: Bronze Alloy
- Sealing Washer: Nickel with PTFE
- Load Screw: Copper Alloy
- Deflector: Brass Alloy

Sprinkler Wrenches
- Model W2 (pendent)
- Model W1 (recessed)
- Model J (with guard installed)

Listings and Approvals
- cULus Listed
- FM Approved
- VdS Approved
- CE Certificate of constancy of performance
  0786-CPR40313

Sprinkler Finishes
- (See Table C)

Sensitivity
- Quick-response

Temperature Ratings
- 165°F (74°C)
- 212°F (100°C)

Recessed Escutcheons/Cover Plates
- Model F1 escutcheon (cULus only)
- Model F2 escutcheon
- Model FP escutcheon (cULus only)
- Model CCP cover plate (cULus only)

Guards/Water Shields
- F-7 Guard (cULus)
- F-1 Guard (FM)
- F-8 Guard/Water Shield (cULus)
- F-5 Guard/Water Shield (FM)
- S-1 Water Shield (cULus, FM)

Sprinkler Wrenches
- Model W2 (pendent)
- Model W1 (recessed)
- Model J (with guard installed)

Listings and Approvals
- cULus Listed
- FM Approved
- VdS Approved
- CE Certificate of constancy of performance
  0786-CPR40313

Sprinkler Finishes
- (See Table C)

Sensitivity
- Quick-response

Temperature Ratings
- 165°F (74°C)
- 212°F (100°C)

Recessed Escutcheons/Cover Plates
- Model F1 escutcheon (cULus only)
- Model F2 escutcheon
- Model FP escutcheon (cULus only)
- Model CCP cover plate (cULus only)

Guards/Water Shields
- F-7 Guard (cULus)
- F-1 Guard (FM)
- F-8 Guard/Water Shield (cULus)
- F-5 Guard/Water Shield (FM)
- S-1 Water Shield (cULus, FM)
Model KFR56 Upright Sprinkler

Technical Specifications
Style: Upright
Threads: 1/2" NPT or ISO7-1R1/2
Nominal K-Factor: 5.6 (80 metric)
Max. Working Pressure:
cULus: 250 psi (17.2 bar)
FM, VdS, CE: 175 psi (12 bar)

Material Specifications
Thermal Sensor: Beryllium Nickel
Strut and Lever: Stainless Steel
Roto-clip: Stainless Steel
Sprinkler Frame: Brass Alloy
Cap: Bronze Alloy
Sealing Washer: Nickel with PTFE
Load Screw: Copper Alloy
Deflector: Brass Alloy

Sprinkler Wrench
Model W2
Model J (with guard installed)

Listings and Approvals
- cULus Listed
- FM Approved
- VdS Approved
- CE Certificate of constancy of performance 0786-CPR40314

Sprinkler Finishes
(See Table C)

Sensitivity
Quick-response

Temperature Ratings
165°F (74°C)
212°F (100°C)

Guards/Water Shields
- F-1 Guard (cULus, FM)
- F-3 Guard/Water Shield (cULus, FM)

Model KFR56 Upright Sprinkler Components and Dimensions

![Components Diagram]

**COMPONENTS**

- Deflector
- Compression Screw
- Fusible Link
- Sealing Assembly
- Wrench Flats
- Frame

**DIMENSIONS**

1 5/16" (33 mm)

2 1/4" (57 mm)
Model KFR56 HSW Horizontal Sidewall Sprinkler

Technical Specifications
Style: HSW or Recessed HSW
Threads: 1/2” NPT or ISO7-1R1/2
Nominal K-Factor: 5.6 (80 metric)
Max. Working Pressure:
- cULus: 250 psi (17.2 bar)
- FM, VdS, CE: 175 psi (12 bar)

Material Specifications
Thermal Sensor: Beryllium Nickel
Strut and Lever: Stainless Steel
Roto-clip: Stainless Steel
Sprinkler Frame: Brass Alloy
Cap: Bronze Alloy
Sealing Washer: Nickel with PTFE
Load Screw: Copper Alloy
Deflector: Brass Alloy

Sprinkler Wrenches
- Model W2 (HSW)
- Model W1 (recessed)
- Model J (with guard installed)

Listings and Approvals
- cULus Listed
- FM Approved
- VdS Approved
- CE Certificate of constancy of performance 0786-CPR40312

Sprinkler Finishes
(See Table C)

Sensitivity
- Quick-response

Temperature Ratings
- 165°F (74°C)
- 212°F (100°C)

Recessed Escutcheons
- Model F1 escutcheon (cULus only)
- Model F2 escutcheon
- Model FP escutcheon (cULus only)

Guards
- F-7 Guard (cULus)
- F-4 Guard (FM)

Model KFR56 HSW Sprinkler Components and Dimensions

<table>
<thead>
<tr>
<th>COMPONENTS</th>
<th>DIMENSIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>DEFLECTOR</td>
<td>1 1/4&quot; (32 mm)</td>
</tr>
<tr>
<td>COMPRESSION SCREW</td>
<td></td>
</tr>
<tr>
<td>FUSIBLE LINK</td>
<td></td>
</tr>
<tr>
<td>SEALING ASSEMBLY</td>
<td></td>
</tr>
<tr>
<td>WRENCH FLATS</td>
<td></td>
</tr>
<tr>
<td>FRAME</td>
<td></td>
</tr>
<tr>
<td>2 11/16&quot; (68 mm)</td>
<td></td>
</tr>
<tr>
<td>5/8&quot; (16 mm)</td>
<td></td>
</tr>
</tbody>
</table>
## Recessed Escutcheon and Conical Concealed Cover Plate Dimensions

### Table B

<table>
<thead>
<tr>
<th>Type</th>
<th>Adjustment Inch (mm)</th>
<th>Maximum Face of Fitting to Ceiling* Inch (mm)</th>
<th>Minimum Face of Fitting to Ceiling* Inch (mm)</th>
<th>Maximum Deflector Distance Below Ceiling Inch (mm)</th>
<th>Minimum Deflector Distance Below Ceiling Inch (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>F1</td>
<td>3/4 (19)</td>
<td>7/8 (24)</td>
<td>1/8 (3)</td>
<td>1-3/4 (44)</td>
<td>1 (25)</td>
</tr>
<tr>
<td>F2</td>
<td>1/2 (12)</td>
<td>5/8 (16)</td>
<td>1/8 (3)</td>
<td>1-3/4 (44)</td>
<td>1-1/4 (32)</td>
</tr>
<tr>
<td>FP</td>
<td>1/2 (12)</td>
<td>1-1/2 (38)</td>
<td>1 (25)</td>
<td>1 (25)</td>
<td>1/2 (12)</td>
</tr>
<tr>
<td>CCP</td>
<td>1/2 (12)</td>
<td>1-1/2 (38)</td>
<td>1 (25)</td>
<td>1 (25)</td>
<td>1/2 (12)</td>
</tr>
</tbody>
</table>

*Note: Face of fitting to ceiling dimensions are based on nominal thread make up. Verify dimensions based on fitting and thread sealing method prior to installation.

## Recessed Escutcheon and Conical Concealed Cover Plate Diagrams

### F1 Recessed Escutcheon
- **F1 RECESSED ESCUTCHEON**
- **3/4" (19 mm) ADJUSTMENT**
- **2 1/4" (57 mm) DIA.**
- **7/8" (24 mm) MAX. FACE OF FITTING TO FACE OF CEILING**
- **1 1/8" (24 mm) MINIMUM RECESS**
- **2 7/8" (72 mm) DIA.**

### F2 Recessed Escutcheon
- **F2 RECESSED ESCUTCHEON**
- **1/2" (12 mm) ADJUSTMENT**
- **2 1/4" (57 mm) DIA.**
- **5/8" (16 mm) MAX. FACE OF FITTING TO FACE OF CEILING**
- **1 1/4" (32 mm) MINIMUM RECESS**
- **2 7/8" (72 mm) DIA.**

### CCP Cover Plate
- **CCP COVER PLATE**
- **1/2" (13 mm) ADJUSTMENT**
- **2 5/8" (67 mm) DIA.**
- **1 1/4" (32 mm) MAX. FACE OF FITTING TO FACE OF CEILING**
- **2 5/8" (67 mm) DIA.**

### FP Recessed Escutcheon
- **FP RECESSED ESCUTCHEON**
- **1/2" (13 mm) ADJUSTMENT**
- **2 5/8" (67 mm) DIA.**
- **1 1/4" (32 mm) MAX. FACE OF FITTING TO FACE OF CEILING**
- **2 5/8" (67 mm) DIA.**
Model KFR56 HSW Recessed Escutcheon Diagrams

F1 RECESSED ESCUTCHEON INSTALLATION

F2 RECESSED ESCUTCHEON INSTALLATION

FP RECESSED ESCUTCHEON INSTALLATION
Sprinkler, Escutcheon, and Cover Plate Finishes

<table>
<thead>
<tr>
<th>Standard Finishes</th>
<th>Special Application Finishes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sprinkler</strong></td>
<td><strong>F1, F2, and FP Escutcheons</strong></td>
</tr>
<tr>
<td>Bronze</td>
<td>Bright Brass</td>
</tr>
<tr>
<td>Chrome Plated</td>
<td>Camera Plated</td>
</tr>
<tr>
<td>White Polyester</td>
<td>Black Polyester</td>
</tr>
<tr>
<td></td>
<td>Custom Color Polyester</td>
</tr>
</tbody>
</table>

**Notes:**

(1) Paint or any other coating applied over the factory finish will void all approvals and warranties.

(2) The Model FP escutcheon assembly consists of an unfinished galvanized cup with a finished escutcheon ring.

**Maintenance**

Reliable Model KFR56 series sprinklers should be inspected and the sprinkler system maintained in accordance with NFPA 25, as well as the requirements of any Authorities Having Jurisdiction.

Prior to installation, sprinklers should remain in the original cartons and packaging until used. This will minimize the potential for damage to sprinklers that could cause improper operation or non-operation.

Do not clean sprinklers with soap and water, ammonia liquid or any other cleaning fluids. Remove dust by gentle vacuuming without touching the sprinkler.

Replace any sprinkler which has been painted (other than factory applied). A stock of spare sprinklers should be maintained to allow quick replacement of damaged or operated sprinklers.

Failure to properly maintain sprinklers may result in inadvertent operation or non-operation during a fire event.

**Guarantee**

For the Reliable Automatic Sprinkler Co., Inc. guarantee, terms, and conditions, visit www.reliablesprinkler.com.

**Ordering Information**

Specify the following when ordering.

**Sprinkler**

- Model (KFR56 Pendent, KFR56 Upright, or KFR56 HSW)
- Temperature Rating [165°F (74°C) or 212°F (100°C)]
- Threads (1/2" NPT or ISO 7-1 R3/4)
- Finish (See Table C)

**Escutcheon or Coverplate**

- Type (None, F1, F2, FP, or CCP)
- Finish (See Table C)

**Guards/Water Shields**

- See sprinkler information pages in this bulletin

**Sprinkler Wrench**

- W2 (Pendent, Upright, & HSW)
- W1 (Recessed Pendent & HSW, CCP)
- J (with guard installed)