

Reliable®

Model KFR56 Series Sprinklers

Quick-response, Standard Spray Fusible Link Sprinklers

K5.6 (80 metric)
cULus Listed, FM Approved, VdS Approved, CE Certified

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 Pendant 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 Pendant 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 pendant, upright, and horizontal sidewall sprinklers, and use the Model W1 or W4 wrench for installing Model KFR56 series recessed pendant, conical concealed pendant (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.



Model KFR56 Pendant



Model KFR56 Upright



Model CCP



Model KFR56 HSW

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

UKCA: 0832-UKCA-CPR-S5073, -5074, -5075

Model KFR Series Sprinkler Summary

Table A

Sprinkler Model	Orientation	Listing or Approval	Max. Working Pressure psi (bar)	Sprinkler Identification Number (SIN)
KFR56 Pendant	Pendent	cULus	250 (17.2)	RA3614
		FM, VdS, CE, UKCA	175 (12)	
KFR56 Upright KFR56 Upright Intermediate	Upright	cULus	250 (17.2)	RA3624
		FM, VdS, CE, UKCA	175 (12)	
KFR56 HSW	HSW	cULus	250 (17.2)	RA3634
		FM, VdS, CE, UKCA	175 (12)	

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 (non-recessed)

Model W1 or W4 (recessed & concealed)

Model W14 (with guard installed)

Listings and Approvals

cULus Listed

FM Approved

VdS Approved

CE Certificate of constancy of performance

0786-CPR40313

UKCA: 0832-UKCA-CPR-S5074

Sprinkler Finishes

(See Table C)

Sensitivity

Quick-response

Temperature Ratings

165°F (74°C), Gray Link

212°F (100°C), White Link

Recessed Escutcheons/Cover Plates

Model F1 escutcheon (cULus only)

Model F2 escutcheon (cULus, FM)

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)

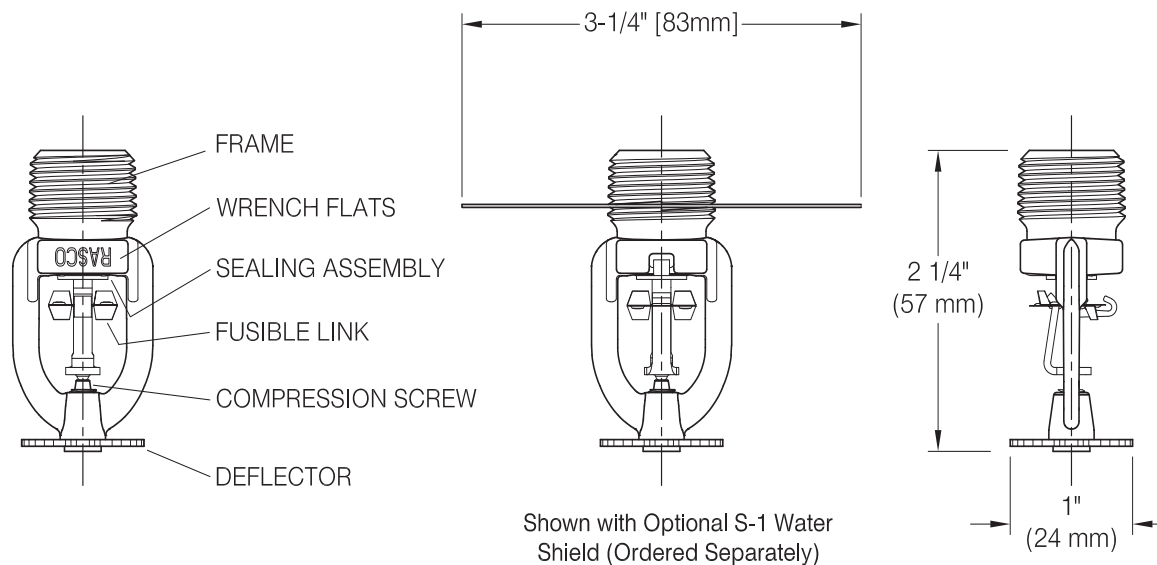
F-5 Guard/Water Shield (FM)

S-1 Water Shield (cULus, FM)



Model KFR56 Pendent Sprinkler Components and Dimensions

Figure 1



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 W14 (with guard installed)

Listings and Approvals

cULus Listed
 FM Approved
 VdS Approved
 CE Certificate of constancy of performance
 0786-CPR40314
 UKCA: 0832-UKCA-CPR-S5075

Sprinkler Finishes

(See Table C)

Sensitivity

Quick-response

Temperature Ratings

165°F (74°C), Gray Link
 212°F (100°C), White Link

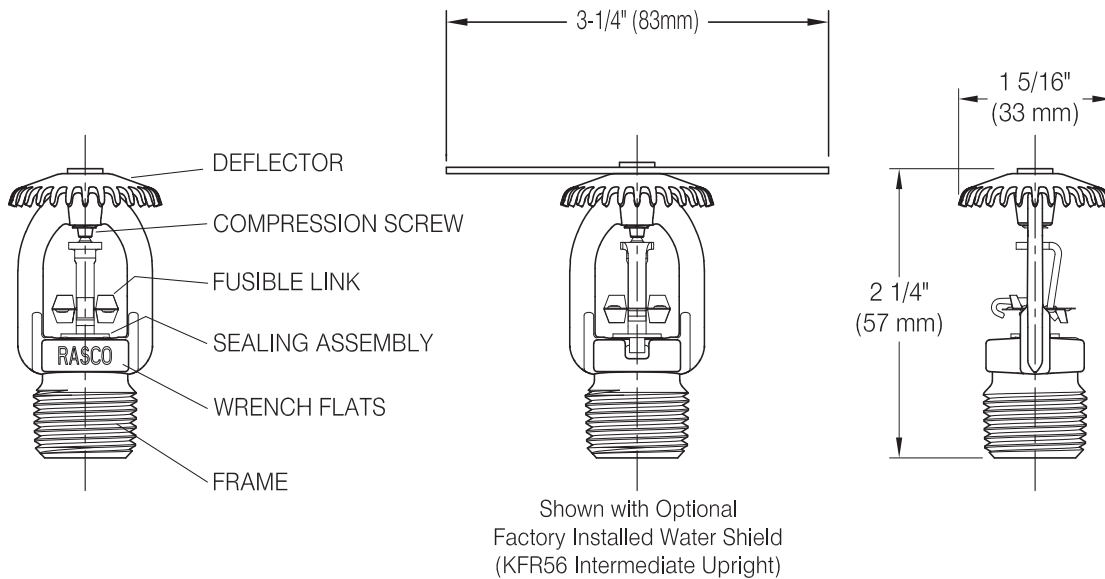
Guards/Water Shields

F-1 Guard (cULus, FM)
 F-3 Guard/Water Shield (cULus, FM)
 Factory Installed Shield (cULus, FM)



Model KFR56 Upright Sprinkler Components and Dimensions

Figure 2



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 (non-recessed)
 Model W1 or W4 (recessed)
 Model W14 (with guard installed)

Listings and Approvals

cULus Listed
 FM Approved
 VdS Approved
 CE Certificate of constancy of performance
 0786-CPR40312
 UKCA: 0832-UKCA-CPR-S5073

Sprinkler Finishes

(See Table C)

Sensitivity

Quick-response

Temperature Ratings

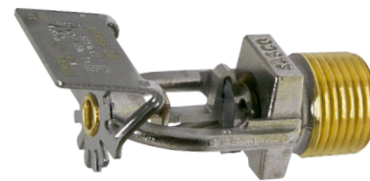
165°F (74°C), Gray Link
 212°F (100°C), White Link

Recessed Escutcheons

Model F1 escutcheon (cULus only)
 Model F2 escutcheon (cULus, FM)
 Model FP escutcheon (cULus only)

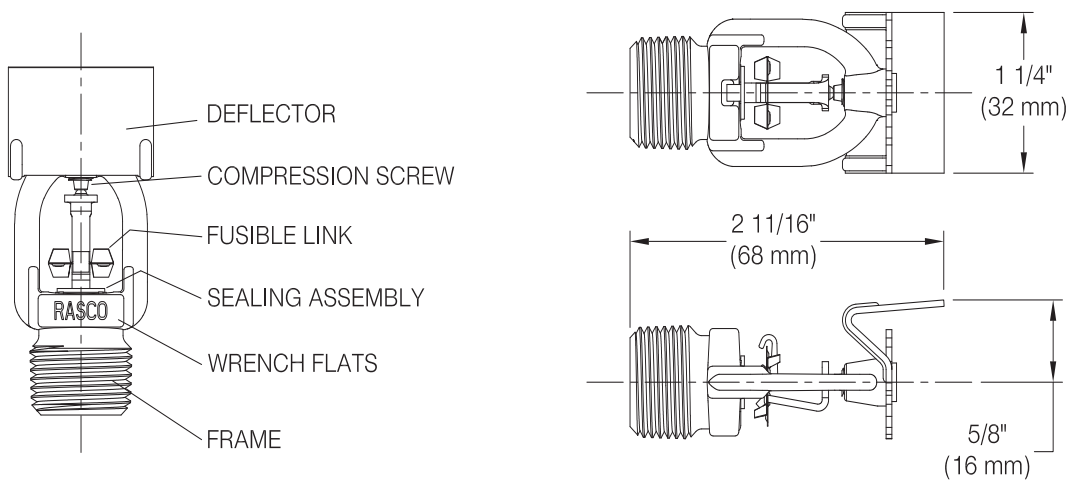
Guards

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



Model KFR56 HSW Sprinkler Components and Dimensions

Figure 3



Recessed Escutcheon and Conical Concealed Cover Plate Dimensions

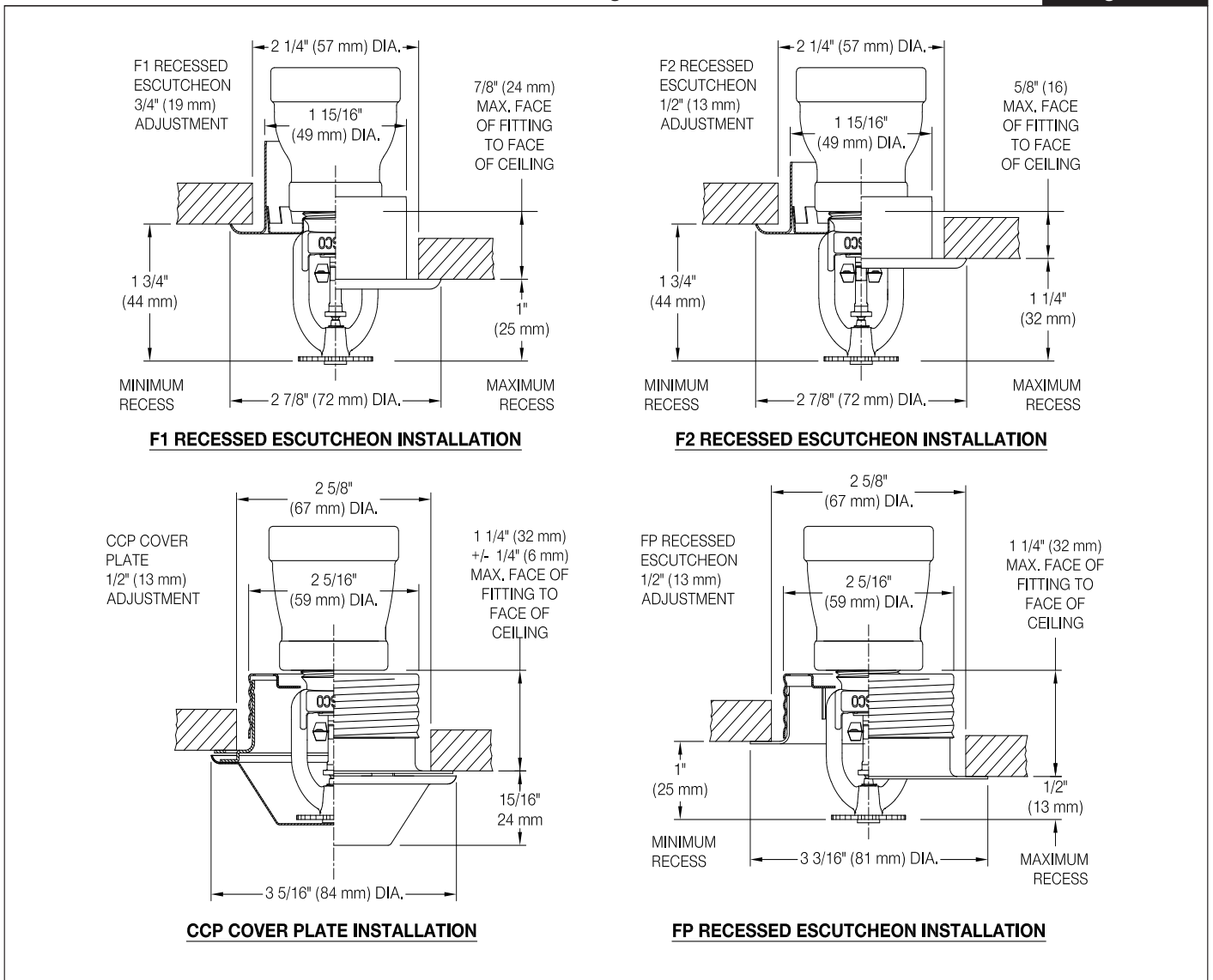
Table B

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

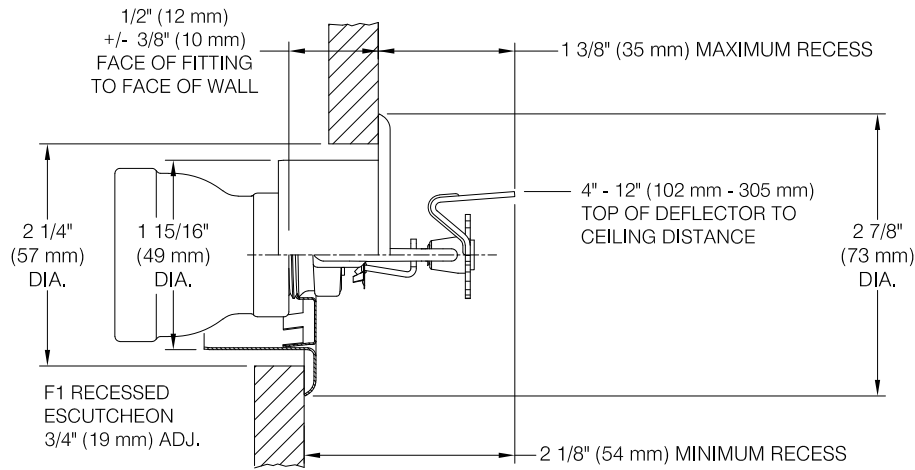
*Note: Face of fitting to ceiling dimensions are based on nominal thread make up. Verify dimensions based on fitting and thread sealing method prior to installation.

Recessed Escutcheon and Conical Concealed Cover Plate Diagrams

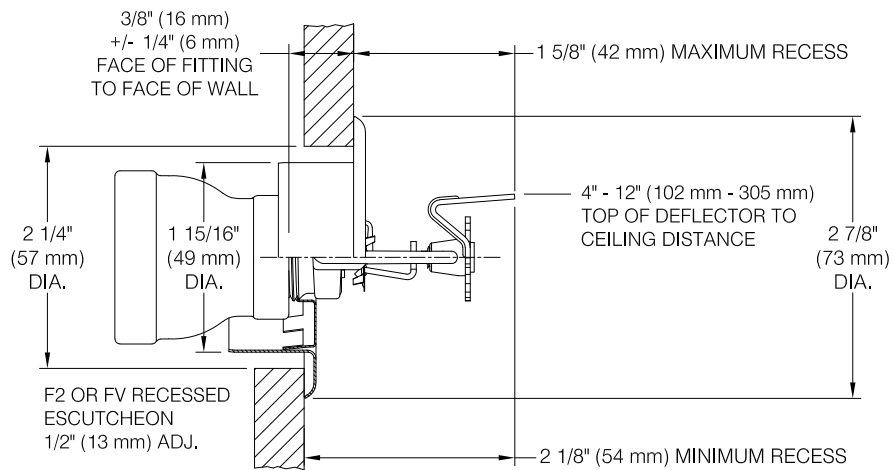
Figure 4



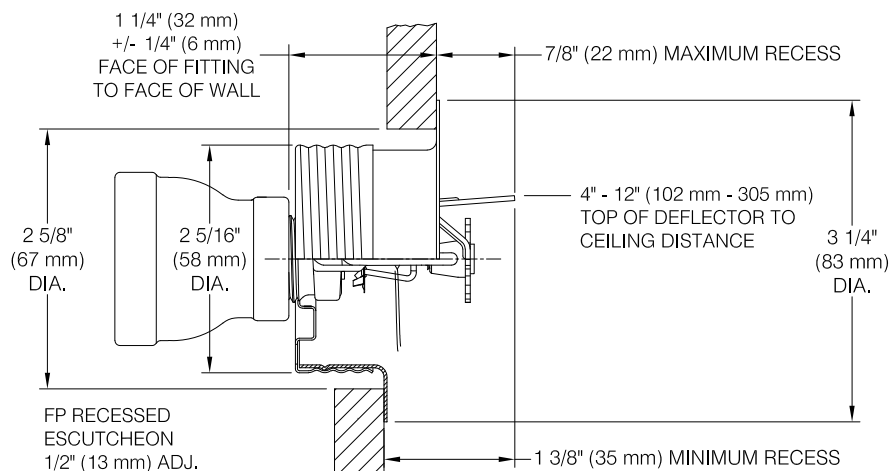
Note: Pendent sprinklers with CCP cover plates or FP recessed escutcheons shall not be installed in locations where the pressure in the ceiling is positive with respect to the pressure below the ceiling. Ensure that the openings in the cup are unobstructed following installation.



F1 RECESSED ESCUTCHEON INSTALLATION



F2 RECESSED ESCUTCHEON INSTALLATION



FP RECESSED ESCUTCHEON INSTALLATION

Note: Sidewall sprinklers with FP recessed escutcheons shall not be installed in locations where the pressure in or behind the wall is positive with respect to the pressure in the protected area. Ensure that the openings in the FP cup are unobstructed following installation.

Sprinkler, Escutcheon, and Cover Plate Finishes⁽¹⁾

Table C

Standard Finishes			Special Application Finishes		
Sprinkler	F1, F2, and FP ⁽²⁾ Escutcheons	CCP Cover Plate	Sprinkler	F1, F2, and FP ⁽²⁾ Escutcheons	CCP Cover Plate
Bronze	Brass	--	Bright Brass	Bright Brass	Bright Brass
Chrome Plated	Chrome Plated	Chrome Plated	Satin Chrome	Satin Chrome	Satin Chrome
White Polyester	White Polyester	White Paint	Black Polyester	Black Polyester	Black Paint
			Custom Color Polyester	Custom Color Polyester	Custom Color Paint

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.

Wrench



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, KFR56 Upright Intermediate, 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 or W4 (Recessed Pendent & HSW, CCP)
- W14 (with guard installed)