PRODUCT SUBMITTALS

Project:

Schoolhouse Condos
21 Bean Road
Meriden, NH

Prepared By:

LIFE SAFETY
Fire Protection, Inc.
SPRINKLER SYSTEM DESIGN & INSTALLATION

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"THE INCH"
RESIDENTIAL
AUTOMATIC SPRINKLERS
MODEL GL4906
ONE INCH ADJUSTABLE
FLAT PLATE CONCEALED PENDENT

DESCRIPTION AND OPERATION

The Globe Model GL4906 Residential One Inch Adjustable Concealed Pendent Sprinkler has a flat plate profile that utilizes a 3mm frangible glass ampule as the thermosensitive element. It features economy, aesthetics and the lowest allowable water flow with a nominal 1" of adjustment for easier installation. The combination of the 3mm frangible glass ampule and specially designed deflector make the Model GL4906 the ultimate in life safety and fire control. It has met the strict requirements of Underwriters Laboratories Inc. as described in UL Standard, 1626, for Residential Sprinklers for Fire Protection Service, and should be used accordingly. This sprinkler should also be installed in accordance with the appropriate NFPA Standard 13, 13D or 13R and under the direction of the approving authorities having jurisdiction.

All that is seen at the ceiling is the 3 5/16" diameter flat ceiling plate color finished to match the specifier's exact requirements. The ceiling plate is soldered to the sprinkler's special upper support assembly in three places. Upon the application of sufficient heat, the plate falls to the floor exposing the residential pendent spray sprinkler. At the prescribed temperature the internal pressure within the ampule exceeds the strength of the glass causing the glass bulb to shatter. This results in water discharge which is distributed in an approved pattern.

TECHNICAL DATA

- See reverse side for Approvals and Specifications.
- Temperature Rating: 155°F (68°C)
- Water Working Pressure Rating: 175 psi (12 Bars)
- Factory tested hydrostatically to 500 psi (34 Bars)
- Maximum low temperature glass bulb rating: -67°F (-55°C)
- Frame - bronze • Deflector - brass • Screw - brass
- Bulb seat - copper • Spring - nickel alloy • Seal - teflon
- Bulb - glass with alcohol based solution, 3mm size
- Cover Plate - brass
- Upper Escutcheon Assembly - steel

RESIDENTIAL
FLAT PLATE
CONCEALED PENDENT

• SPRINKLER TEMPERATURE RATING/CLASSIFICATION and COLOR CODING

CLASSIFICATION	AVAILABLE SPRINKLER TEMPERATURES		BULB COLOR	N.F.P.A. MAXIMUM CEILING TEMPERATURE	
ORDINARY	155°F	68°C	RED	100°F	38°C

4077 AIRPARK DRIVE, STANDISH, MICHIGAN 48658 989-846-4583 • FAX 989-846-9231

RESIDENTIAL
AUTOMATIC SPRINKLERS
MODEL GL4906 ONE INCH ADJUSTABLE FLAT PLATE CONCEALED PENDENT

SPECIFICATIONS AND APPROVALS

SIN MODEL	NOMINAL "K" FACTOR	THREAD SIZE	LENGTH	FINISHES	155°F (68°C) SPRINKLER WITH 135°F (57°C) PLATE	cULus
GL4906	4.9 (68 metric)	1/2" NPT	3" (7.6 cm)	Bright Chrome White Painted Bright Brass* Satin Chrome* Other Painted Finishes*	X	X

NOTE: METRIC CONVERSIONS ARE APPROXIMATE.

*FINISHES AVAILABLE ON SPECIAL ORDER. FOR PAINTED PLATES OTHER THAN WHITE, CONTACT GLOBE FOR ORDERING SPECIFICATIONS.

INSTALLATION DATA FOR FLAT AND SLOPED CEILINGS**

ONE INCH ADJUSTABLE FLAT PLATE CONCEALED PENDENT

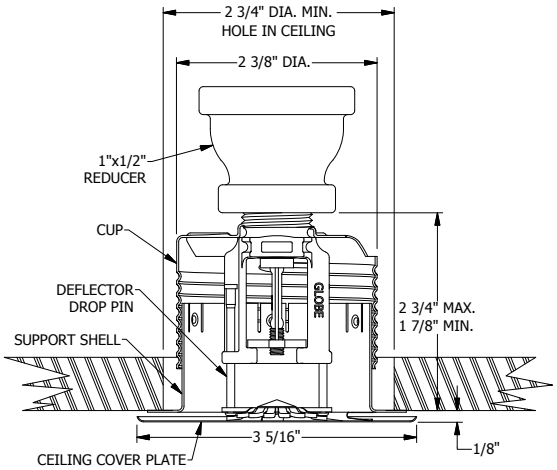
MODEL	MAXIMUM AREA OF COVERAGE	MINIMUM WATER DISCHARGE & PRESSURES NEEDED PER SPRINKLER*
GL4906	12' x 12'	13 G.P.M. - 7 P.S.I.
	14' x 14'	13 G.P.M. - 7 P.S.I.
	16' x 16'	13 G.P.M. - 7 P.S.I.
	18' x 18'	17 G.P.M. - 12 P.S.I.
	20' x 20'	20 G.P.M. - 16.7 P.S.I.

NOTE: MINIMUM 9' SPRINKLER SPACING.

*WHEN THESE SPRINKLERS ARE USED IN NFPA 13 SYSTEMS, A 0.1 DESIGN DENSITY MINIMUM SHALL BE UTILIZED.

**REFER TO PAGE 2 OF THE GLOBE RESIDENTIAL SPRINKLER INSTALLATION GUIDE FOR NFPA 13D and 13R REQUIREMENTS.

CROSS SECTION



FLAT PLATE CONCEALED PENDENT

ORDERING INFORMATION

SPECIFY

- Quantity • Model Number • Style
- Orifice • Temperature • Finishes desired
- Quantity - Concealed Wrenches - P/N 332765
- Quantity - Protective Caps - P/N 332868

COVER PLATE SIZE	WHITE 135°F PART #	CHROME 135°F PART #
3 5/16"	332892	332891

GLOBE® PRODUCT WARRANTY

Globe agrees to repair or replace any of its own manufactured products found to be defective in material or workmanship for a period of one year from date of shipment.

For specific details of our warranty please refer to Price List Terms and Conditions of Sale (Our Price List).

4077 AIRPARK DRIVE, STANDISH, MICHIGAN 48658

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1-800-248-0278 www.globesprinkler.com

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Bulletin 014 March 2019

Model F1FR Series Quick Response Glass Bulb Sprinklers

Model F1FR56 Sprinkler Types

Standard Spray Upright
Standard Spray Pendent
Conventional Upright/Pendent
Vertical Sidewall
Horizontal Sidewall

Model F1FR56 Recessed Sprinkler Types

Standard Spray Pendent
Horizontal Sidewall

Model F1FR56 Concealed Sprinkler Types

Standard Spray Pendent

Model F1FR42, F1FRXLH & F1FR28 Sprinkler Types

Standard Spray Upright
Standard Spray Pendent

Model F1FR40 Sprinkler Types

Standard Spray Pendent

Model F1FR42, F1FR40, F1FRXLH & F1FR28 Recessed Sprinkler Types

Standard Spray Pendent

Model F1FR56LL & F1FR42LL Low Lead Sprinkler Types

Standard Spray Pendent with less than 0.25% Lead Content

Listing & Approvals

The following organizations provide Listings or Approvals for various Model F1FR series sprinklers. See the Design and Installation table in this Bulletin for information on specific listings and approvals applicable to each sprinkler.

1. Underwriters Laboratories Inc. and Certified for Canada (cULus) in accordance with ANSI/UL199.
2. FM Approvals (FM)
3. Loss Prevention Certification Board (LPCB)
4. VdS Schadenverhütung GmbH (VdS)
5. Underwriters Laboratories Inc. and Underwriters Laboratories of Canada Certified for Health Effects to NSF/ANSI Standard 61 Annex G (ULH)
6. EC Certificate: 0786-CPD-40239 (RA1414), 0786-CPD-40251 (RA1425), 0786-CPD-40252 (RA1475) (EC)

UL Listing Category

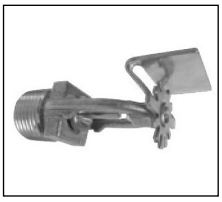
Sprinklers, Automatic & Open (VNIV)
Quick Response Sprinkler


Upright

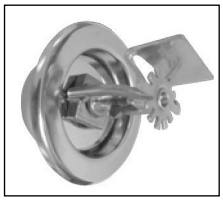

Pendent


Conventional


Vertical Sidewall


Horizontal Sidewall


Recessed Pendent/F1/F2


Recessed Horizontal Sidewall


Concealed Pendent


Recessed Pendent/FP


XLH Upright


XLH Pendent


XLH Recessed Pendent F1/F2


XLH Recessed Pendent FP

Product Description

Reliable Model F1FR series sprinklers are quick-response automatic sprinklers with a glass bulb thermal element. Model F1FR series sprinklers are Standard Spray sprinklers, with the exception of the Model F1FR56 Conventional sprinkler which is an Old-style/Conventional sprinkler.

The Model F1FR Series automatic sprinklers utilize a 3.0 mm frangible glass bulb. These sprinklers have demonstrated response times in laboratory tests which are five to ten times faster than standard response sprinklers. This quick response enables the Model F1FR Series sprinklers to apply water to a fire faster than standard-response sprinklers of the same temperature rating.

The glass bulb consists of an accurately controlled amount of special fluid hermetically sealed inside a precisely manufactured glass capsule. This glass bulb is specially constructed to provide fast thermal response.

At normal temperatures, the glass bulb contains the fluid in both the liquid and vapor phases. The vapor phase can be seen as a small bubble. As heat is applied, the liquid expands, forcing the bubble smaller and smaller as the liquid pressure increases. Continued heating forces the liquid to push out against the bulb, causing the glass to shatter, opening the waterway and allowing the deflector to distribute the discharging water.

Model F1FR Series sprinklers provide a wide range of options where quick-response, glass bulb sprinklers are used:

- Pendent, recessed pendent, upright, horizontal sidewall, and vertical sidewall deflectors
- K-factors of 2.8 (40 metric), 4.0 (57 metric), 4.2 (60 metric), and 5.6 (80 metric)
- Flush, recessed, and concealed installations

See the Design and Installation Information table in this Bulletin for information on the approvals and availability of specific Model F1FR series sprinkler configurations.

Model F1FR Recessed Pendent and Recessed Horizontal Sidewall sprinklers are required to be used with Reliable Model F1, F2, or FP recessed escutcheons. See the Recessed Escutcheon Data table in this Bulletin for listing and approval information with each specific Model F1FR series sprinkler. Model F1 and F2 recessed escutcheons, shown in Fig. 1 and 3, are a friction fit assembly allowing for 3/4-inch (19mm) and 1/2-inch (12.7mm) of adjustment, respectively. Model FP recessed escutcheons, shown in Fig. 2, provide a 1/2-inch (12.7mm) threaded adjustment.

Model F1FR56 Concealed Pendent and Model F1FR56LL Concealed Pendent sprinklers are required to be used with Model CCP cover plates. A standard profile Model CCP cover plate is available that provides up to 1/2-inch (12.7mm) of cover plate adjustment. In addition, a low profile Model CCP cover plate is also available that provides up to 5/16-inch (8.0mm) of cover plate adjustment. See the Design and Installation Information and Listed and Approved Temperature Ratings tables in this Bulletin for further information on approved cover plate options.

Application

Model F1FR Series sprinklers are intended for use in accordance with NFPA 13, FM Property Loss Prevention Data Sheets, and the requirements of the Authority Having Jurisdiction. Care must be exercised that the k-factor, temperature rating, deflector style, and sprinkler type are in accordance with the requirements of the applicable design and installation standards. In addition, Model F1FR Series sprinklers must be used in accordance with their listings and approvals, as well as the information provided in this Bulletin.

Installation

Glass bulb sprinklers have orange bulb protectors or protective caps to minimize bulb damage during shipping, handling and installation. Reliable sprinkler installation wrenches are designed to install sprinklers with bulb protectors in place. Remove the bulb protector at the time when the sprinkler system is placed in service for fire protection. Removal of the bulb protector before this time may leave the bulb vulnerable to damage. Remove bulb protectors by undoing the clasp by hand. Do not use tools to remove bulb protectors.

Model F1FR Series sprinklers must be installed with the Reliable sprinkler installation wrench identified in the Design and Installation Information table in this Bulletin. Any other wrench may damage the sprinkler. A leak tight sprinkler joint can be obtained with a torque of 8 to 18 lb-ft (11 to 24 N-m). Do not tighten sprinklers over the maximum recommended installation torque. Exceeding the maximum recommended installation torque may cause leakage or impairment of the sprinkler.

Recessed Sprinklers

Model F1FR Series Recessed sprinklers are to be installed as shown in Fig. 1, Fig. 2, or Fig. 3, as applicable to the specific model being installed. The Recessed Escutcheon Data table in the Bulletin identifies the only recessed escutcheons that are permitted to be used with each Model F1FR Series Recessed sprinkler. The use of any other recessed escutcheon will void all approvals and negate all warranties.

Concealed Sprinklers

Model F1FR Series Concealed Pendent sprinklers are to be installed as shown in Fig. 4 or Fig. 5, as applicable to the selected cover plate. Model F1FR56 Concealed Pendent and Model F1FR56LL Concealed Pendent sprinklers have a factory-installed Model CCP cup. A protective cap is installed at the factory that should remain on the sprinkler until the sprinkler is installed and should then be reinstalled on the sprinkler until the cover plate is installed. The concealed sprinkler assemblies are completed by the installation of a Model CCP push-on/thread-off cover plate assembly. The cover plate and sprinkler cup assemblies are joined using a cover plate skirt with flexible tabs for threaded engagement. A choice of two Model CCP cover plate assemblies provides either 1/2-inch (13mm) or 5/8-inch (8mm) of cover adjustment. Do not install Model F1FR Series Concealed Pendent sprinklers in ceilings which have positive pressure in the space above.

Model F1FR Series Concealed Pendent sprinklers require a 2-5/8-inch (67mm) diameter hole to be cut in the ceiling. The Model GFR2 wrench is used to engage the sprinkler wrenching surfaces and to install the sprinkler in the fitting. Remove the protective cap to install the sprinkler, then reinstall the protective cap until the cover plate is installed. When inserting or removing the wrench from the sprinkler/cup assembly, care should be taken to prevent damage to the sprinkler. Do not wrench any other part of the sprinkler/cup assembly. Installation is completed by removing the protective cap from the sprinkler and pushing the cover plate onto the cup. Final adjustment is made by hand turning the cover plate until the skirt flange makes full contact with the ceiling. Cover plate removal requires turning the cover plate in the counter clockwise direction. After installation, inspect all sprinklers to ensure that there is a gap between the cover plate and ceiling and that the four cup slots are open and free from any air flow impediment to the space above.

Concealed cover plate/cup assemblies are listed only for use with specific sprinklers. The use of any concealed cover plate/cup assembly other than the Reliable Model CCP with Model F1FR56 Concealed Pendent and Model F1FR56LL Concealed Pendent sprinklers or the use of the Model CCP Concealed cover plate assembly on any sprinkler with which it is not specifically listed my prevent good fire protection and will void all guarantees, warranties, listings and approvals.

Technical Data:

Sensitivity: Quick-response
Thread Size: 1/2-inch NPT standard; ISO 7-R1/2 optional
Maximum Working Pressure: 175 psi (12 bar) - 100% Factory tested hydrostatically to 500 psi (34.5 bar)
SIN RA1425, RA1414 & RA1435 cULus listed for 250 psi (17 bar)

Design and Installation Information											
Model	**Nominal K-factor**		**Nominal Orifice Diameter**		**Deflector/ Orientation**	**Nominal Sprinkler Height**		**Installation Wrench**	**SIN**	**Listings and Approvals**	**Approval Notes**
	US	**Metric**	**inches**	**mm**		**inches**	**mm**				
F1FR28	2.8	40	3/8	10	Pendent	2.25	57	W2	RA1411	cULus	2
					Recessed Pendent	2.25	57	GFR2	RA1411	cULus	2
					Upright	2.25	57	W2	RA1421	cULus	1,2
F1FR40	4.0	57	3/8	10	Pendent	2.25	57	W2	RA1418	VdS	
					Recessed Pendent	2.25	57	GFR2	RA1418	VdS	
F1FR42	4.2	60	7/16	10	Pendent	2.25	57	W2	RA1413	cULus	2
					Recessed Pendent	2.25	57	GFR2	RA1413	cULus	2
					Upright	2.25	57	W2	RA1423	cULus	1,2
F1FR42LL	4.2	60	7/16	10	Pendent	2.25	57	W2	RA1410	cULus, ULH	
					Recessed Pendent	2.25	57	GFR2	RA1410	cULus, ULH	
F1FRXLH (F1FR42 with Pintle)	4.2	60	7/16	10	Pendent	2.25	57	W2	RA1413	cULus	2
					Recessed Pendent	2.25	57	GFR2	RA1413	cULus	2
					Upright	2.25	57	W2	RA1423	cULus	1,2
F1FR56	5.6	80	1/2	15	Pendent	2.25	57	W2	RA1414	cULus, FM, LPCB, VdS, EC	1,2,3,4
					Recessed Pendent	2.25	57	GFR2	RA1414	cULus, FM, LPCB, VdS, EC	1,2,3,4
					Concealed Pendent	2.25	57	GFR2	RA1414	cULus,VdS,EC	5,6
					Upright	2.25	57	W2	RA1425	cULus, FM, LPCB, VdS, EC	1,2,3,4
					"Conventional (Pendent or Upright)"	2.25	57	W2	RA1475	LPCB, VdS, EC	4
F1FR56LL	5.6	80	1/2	15	Pendent	2.25	57	W2	RA1415	cULus, ULH	1
					Recessed Pendent	2.25	57	GFR2	RA1415	cULus, ULH	
					Concealed Pendent	2.25	57	GFR2	RA1415	cULus, ULH	6
F1FR56	5.6	80	1/2	15	Horizontal Sidewall	2.63	67	W2	RA1435	cULus, FM	1,2,3,7
					Recessed Horizontal Sidewall	2.63	67	GFR2	RA1435	cULus, FM	8
F1FR56	5.6	80	1/2	15	Vertical Sidewall (Pendent or Upright)	2.25	57	W2	RA1485	cULus, FM, LPCB	1,2,3,9

(1) cULus Listed Corrosion Resistant sprinkler when ordered with available Polyester coating.
(2) cULus Listed Corrosion Resistant sprinkler when ordered with available Electroless Nickel PTFE plating.
(3) Available with FM approved Polyester coating in black or white.
(4) Available with LPCB and VdS approved Polyester coating.
(5) VdS and EC approvals of the F1FR56 Concealed Pendent sprinkler are for 155°F (68°C) temperature rated sprinklers only. VdS approved sprinklers must use Norbulb brand glass bulbs with the 1/2-inch (12.7mm) adjustment Model CCP cover plate only.
(6) Model F1FR56 Concealed Pendent and Model F1FR56LL Concealed Pendent sprinklers must be used with Reliable Model CCP cover plates, available as either standard depth with 1/2-inch (12.7mm) of adjustment or low profile with 5/16-inch (8.0 mm) of adjustment.
(7) cULus Listing of the F1FR56 Horizontal Sidewall sprinkler is for Light and Ordinary Hazard occupancies only. Minimum to maximum deflector to ceiling distance shall be 4 inches to 12 inches (102mm to 305mm). FM Approval of the F1FR56 Horizontal Sidewall sprinkler is for Light Hazard occupancies only.
(8) cULus Listing and FM Approval of the F1FR56 Recessed Horizontal Sidewall sprinkler is for Light Hazard occupancies only.
(9) The F1FR56 Vertical Sidewall sprinkler is listed and approved for use only in Light Hazard occupancies. LPCB approval of the F1FR56 Vertical Sidewall sprinkler is for installation in the Pendent position only.

Listed and Approved Temperature Ratings

Model	Deflector/ Orientation	Ordinary Temp. Classification 100°F (38°C) Max. Ambient Temp.		Intermediate Temp. Classification 150°F (65°C) Max. Ambient Temp.		High Temp. Classification 225°F (107°C) Max. Ambient Temp.
		135°F (57°C) Temp. Rating	155°F (68°C) Temp. Rating	175°F (79°C) Temp. Rating	200°F (93°C) Temp. Rating	286°F (141°C) Temp. Rating
		Orange Bulb	Red Bulb	Yellow Bulb	Green Bulb	Blue Bulb
F1FR28	Pendent	cULus				
	Recessed Pendent	cULus				
	Upright	cULus				
F1FR40	Pendent	VdS				
	Recessed Pendent	VdS				
F1FR42	Pendent	cULus				
	Recessed Pendent	cULus				
	Upright	cULus				
F1FR42LL	Pendent				cULus, ULH	
	Recessed Pendent				cULus, ULH	
F1FRXLH	Pendent	cULus				
	Recessed Pendent	cULus				
	Upright	cULus				
F1FR56	Pendent	cULus, FM, LPCB, VdS, EC				
	Recessed Pendent	cULus, FM, LPCB, VdS, EC				
	Concealed Pendent*	cULus	cULus,VdS,EC	cULus		
	Upright	cULus, FM, LPCB, VdS, EC				
	"Conventional (Pendent or Upright)"	LPCB, VdS, EC				
F1FR56LL	Pendent				cULus, ULH	
	Recessed Pendent				cULus, ULH	
	Concealed Pendent*				cULus, ULH	
F1FR56	Horizontal Sidewall	cULus, FM				
	Recessed Horizontal Sidewall	cULus, FM				
F1FR56	Vertical Sidewall (Pendent or Upright)	cULus, FM, LPCB				

* Model F1FR56 Concealed Pendent and F1FR56LL Concealed Pendent sprinklers must be used with Reliable Model CCP cover plates. For Ordinary Temperature Classification sprinklers use a 135°F (57°C) temperature rated cover plate. For Intermediate Temperature Classification sprinklers use a 165°F (74°C) temperature rated cover plate.

Recessed Escutcheon Data

Model	Deflector/ Orientation	Listed and Approved Recessed Escutcheons			SIN
		Model F1 (Fig. 1 & 3) 3/4-inch (19mm) adjustment	Model F2 (Fig. 1 & 3) 1/2-inch (12.7mm) adjustment	Model FP (Fig. 2) 1/2-inch (12.7mm) adjustment	
F1FR28	Recessed Pendent	cULus	cULus	cULus	RA1411
F1FR40	Recessed Pendent	VdS	VdS	VdS	RA1418
F1FR42	Recessed Pendent	cULus	cULus	cULus	RA1413
F1FR42LL	Recessed Pendent	cULus, ULH	cULus, ULH	cULus, ULH	RA1410
F1FR42XLH	Recessed Pendent	cULus	cULus	cULus	RA1413
F1FR56	Recessed Pendent	cULus, LPCB, VdS, EC	cULus, FM, LPCB, VdS, EC	cULus, VdS, EC	RA1414
F1FR56LL	Recessed Pendent	cULus, ULH	cULus, ULH	cULus, ULH	RA1415
F1FR56	Recessed Horizontal Sidewall	cULus	cULus, FM	cULus	RA1435

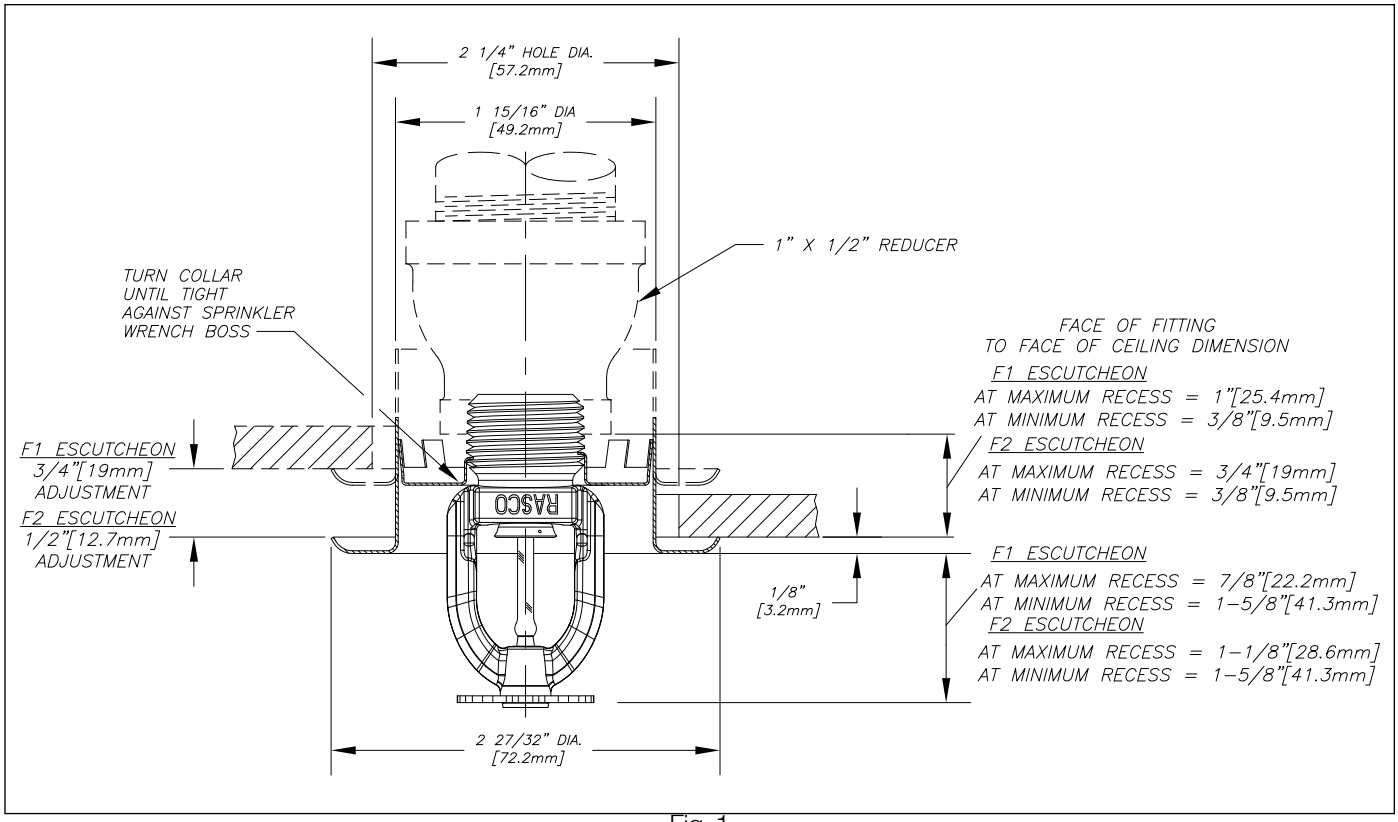


Fig. 1
Model F1FR56, F1FR56LL, F1FR42, F1FR40, F1FR42LL, F1FRXLH & F1FR28
Recessed Pendent sprinkler with Model F1 or F2 escutcheon

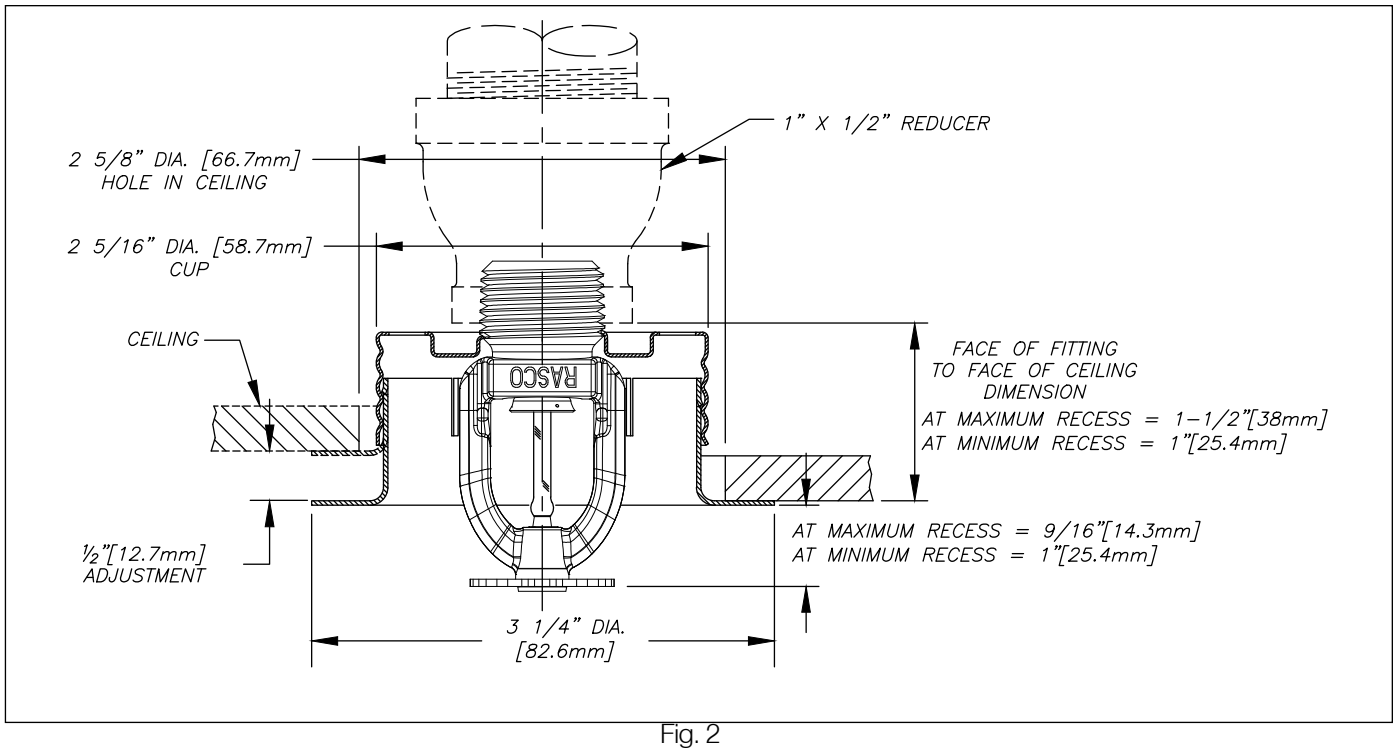


Fig. 2
Model F1FR56, F1FR56LL, F1FR42, F1FR40, F1FR42LL, F1FRXLH & F1FR28
Recessed Pendent sprinkler with Model FP escutcheon

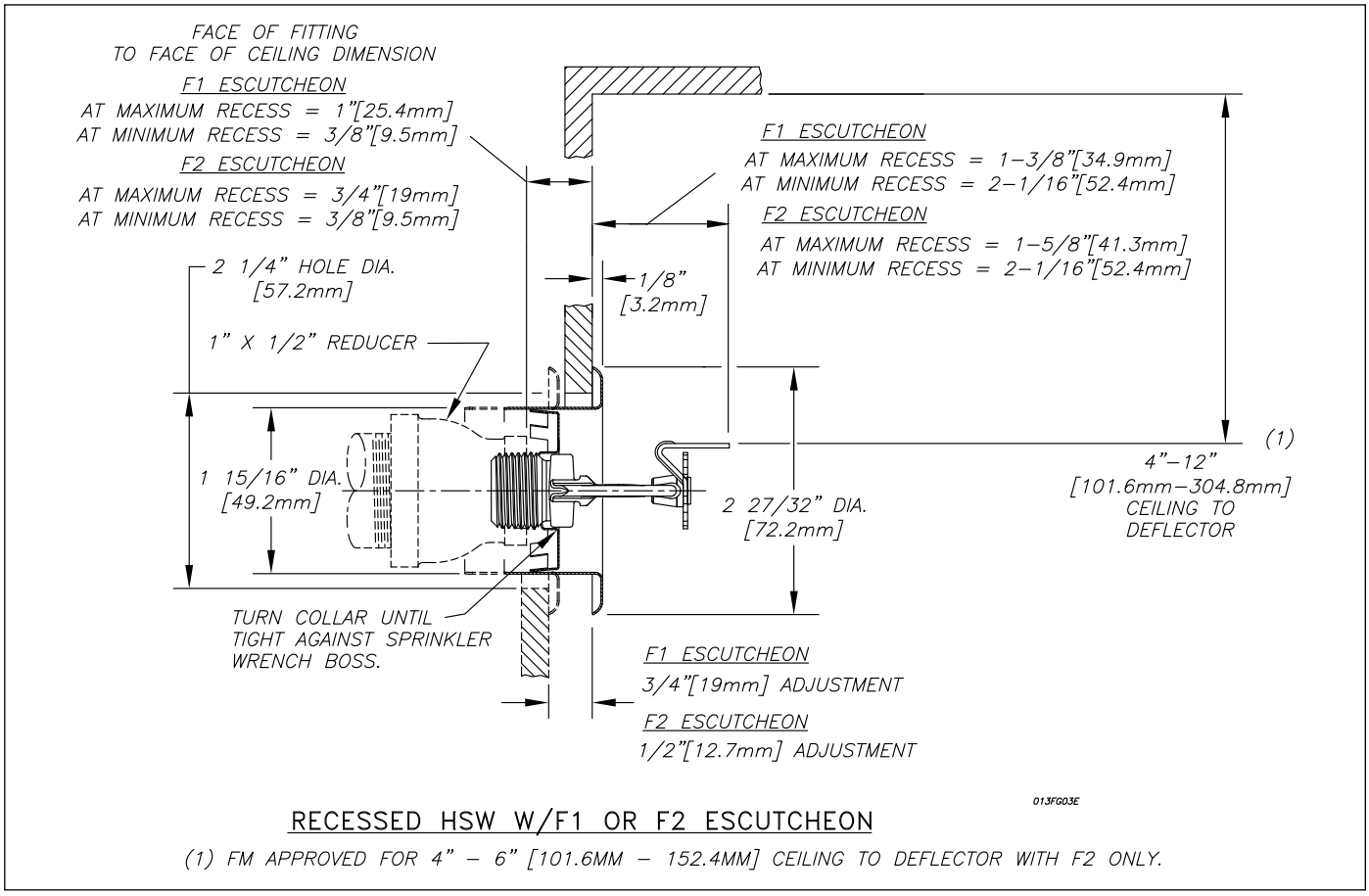


Fig. 3
Model F1FR56 Recessed Horizontal Sidewall sprinkler with Model F1 or F2 escutcheon

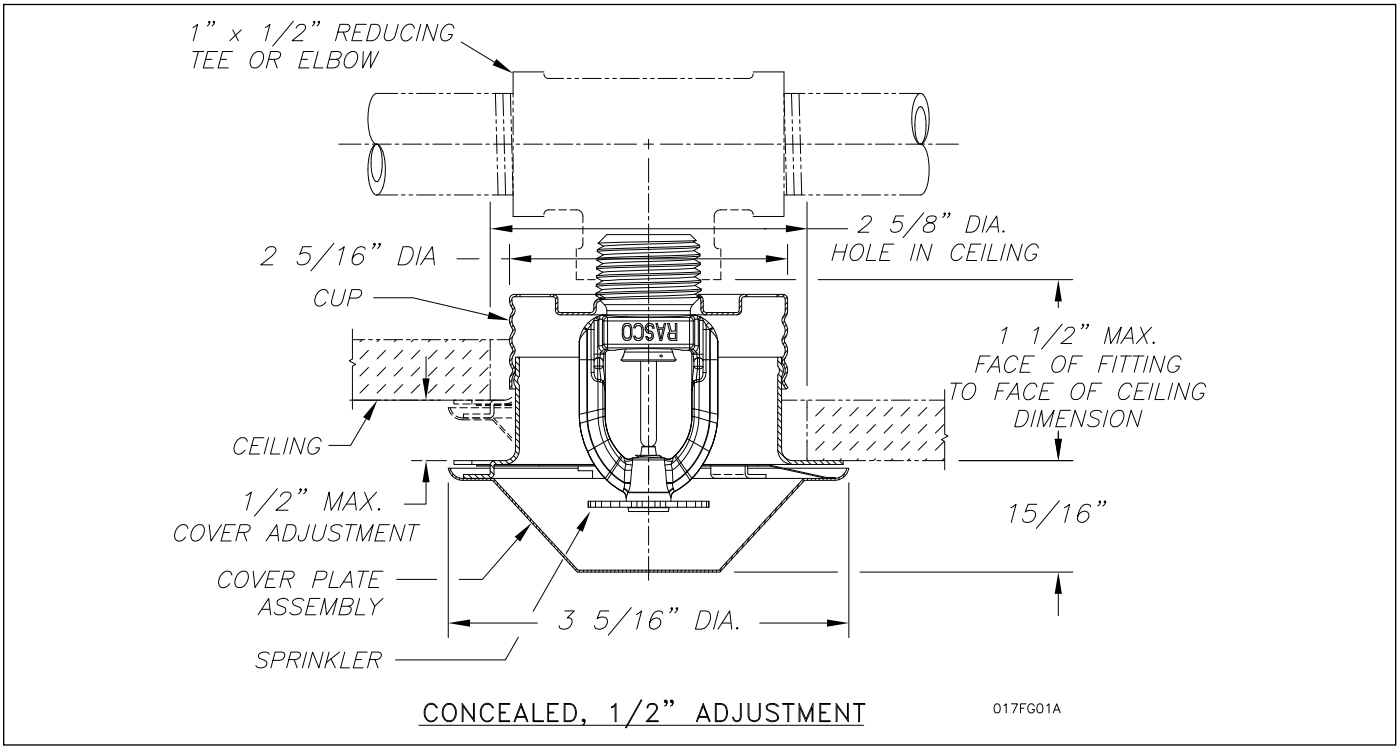


Fig. 4
Model F1FR56/F1FR56LL Concealed Pendent sprinkler with standard depth
1/2-inch (12.7mm) adjustment - Model CCP cover plate

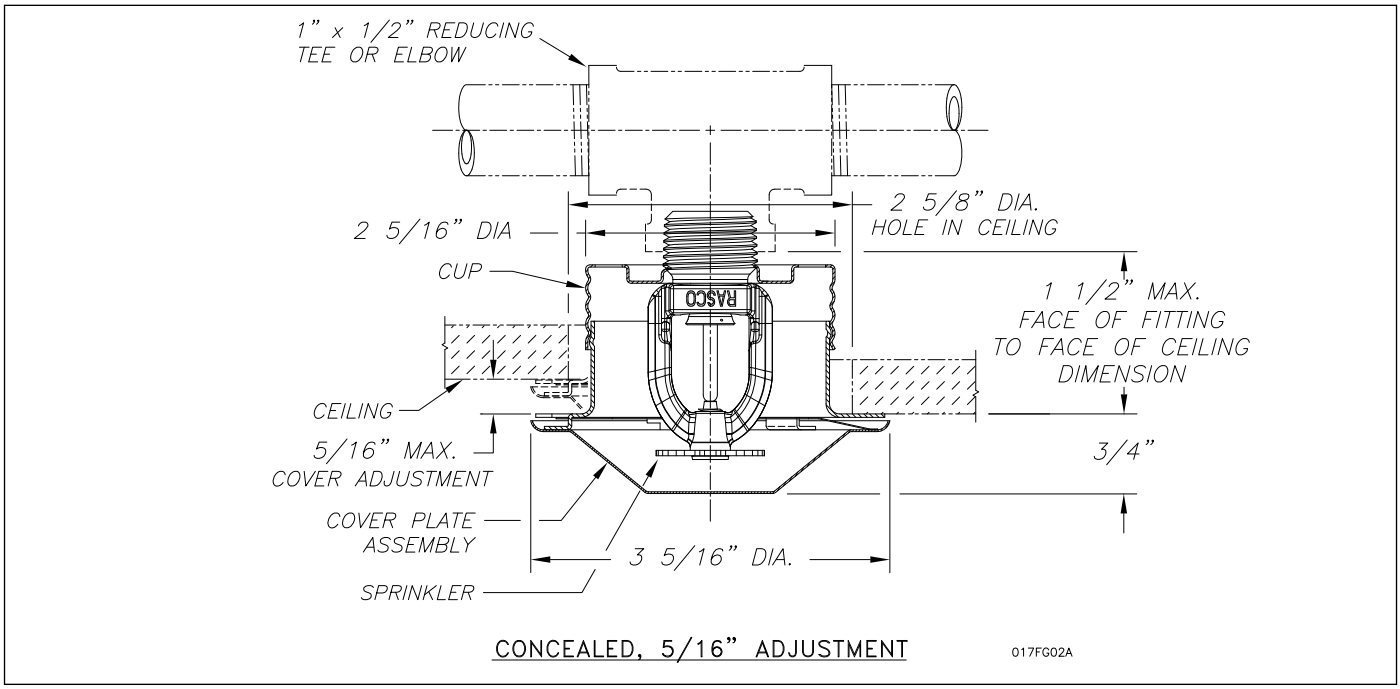


Fig. 5 - Model F1FR56/F1FR56LL Concealed Pendent sprinkler with low profile 5/16-inch (8.0mm) adjustment - Model CCP cover plate

Maintenance

The Model F1FR Series sprinklers should be inspected and the sprinkler system maintained in accordance with NFPA 25. Do not clean sprinklers with soap and water, ammonia or any other cleaning fluids. Remove dust by using a soft brush or gentle vacuuming. Replace any sprinkler which has been painted (other than factory applied) or damaged in any way. A stock of spare sprinklers should be maintained to allow quick replacement of damaged or operated sprinklers.

Finishes [1]

Standard Finishes		
Sprinkler	**Escutcheon**	**Cover plate[1]**
Bronze	Brass	Chrome
Chrome Plated	Chrome Plated	White
Polyester Coated [4][5][6]	White Painted	
Special Application Finishes		
Sprinkler	**Escutcheon**	**Cover plate[1]**
Electroless Nickel PTFE[7]	Electroless Nickel PTFE	Bright Brass
Bright Brass[3]	Bright Brass	Black Plating
Black Plated	Black Plated	Black Paint
Black Paint[2][6]	Black Paint	Off White
Off White[2][6]	Off White	Satin Chrome
Chrome Dull	Chrome Dull	

[1] Other finishes and colors are available on special order. Consult the factory for details. Custom color painted sprinklers may not retain their UL Corrosion resistance listing. Coverplate custom paint is semi-gloss, unless specified otherwise.

[2] cULus Listed only.

[3] 200°F (93°C) maximum.

[4] cULus listed "corrosion resistance" applies to SIN Numbers RA1435 (HSW), RA1485(VSW), RA1425 (Upright), RA1414 (Pendent) and RA1415 (Pendent) in standard black or white. Corrosion resistance in other polyester colors is available upon request.

[5] FM Approvals finish as "Polyester coated" applies to SIN Number RA1414, RA1435 and RA1425 in standard black or white.

[6] LPCB and VdS Approved finish applies only to RA1425, RA1414, RA1418 (VdS) and RA1475.

[7] cULus listed Corrosion Resistant

Material Data	
Frame:	DZR Brass, QM Brass, or Low Lead Brass
Deflector:	CDA Alloy 220, 260, or 510
Load Screw\Pintle:	CDA Alloy 360 or 544
Cup:	CDA Alloy 651 or 693
Washer:	Nickel Alloy 440 or 360, coated with PTFE Adhesive Tape
Bulb:	Glass

Ordering Information

Specify:

1. Sprinkler Model: [F1FR28][F1FR40][F1FR42] [F1FR42LL][F1FRXLH][F1FR56][F1FR56LL]
2. Sprinkler Deflector/Orientation: [Pendent][Recessed Pendent][Upright][Conventional][Horizontal Sidewall] [Recessed Horizontal Sidewall][Vertical Sidewall]
3. Sprinkler threads: [1/2-inch NPT][ISO 7-R1/2]
4. Sprinkler Temperature Rating: [135°F (57°C)][155°F (68°C)][175°F (79°C)][200°F (93°C)][286°F (141°C)]
5. Sprinkler Finish
6. Escutcheon Model: [F1][F2][FP]
7. Escutcheon Finish (where applicable)
8. Cover plate Model: [standard profile CCP 1/2-inch (12.7mm) adjustment][low profile CCP 5/16-inch (8.0mm) adjustment]
9. Cover plate Temperature Rating: [135°F (57°C) for use with Ordinary Temperature sprinklers][165°F (74°C) for use with Intermediate Temperature sprinklers]
10. Cover plate Finish

Note: When Model F1FR Series Recessed sprinklers are ordered, the sprinklers and escutcheons are packaged separately.

Reliable...For Complete Protection

Reliable offers a wide selection of sprinkler components. Following are some of the many precision-made Reliable products that guard life and property from fire around the clock.

- Automatic sprinklers
- Flush automatic sprinklers
- Recessed automatic sprinklers
- Concealed automatic sprinklers
- Adjustable automatic sprinklers
- Dry automatic sprinklers
- Intermediate level sprinklers
- Open sprinklers
- Spray nozzles
- Alarm valves
- Retarding chambers
- Dry pipe valves
- Accelerators for dry pipe valves
- Mechanical sprinkler alarms
- Electrical sprinkler alarm switches
- Water flow detectors
- Deluge valves
- Detector check valves
- Check valves
- Electrical system
- Sprinkler emergency cabinets
- Sprinkler wrenches
- Sprinkler escutcheons and guards
- Inspectors test connections
- Sight drains
- Ball drips and drum drips
- Control valve seals
- Air maintenance devices
- Air compressors
- Pressure gauges
- Identification signs
- Fire department connection

The equipment presented in this bulletin is to be installed in accordance with the latest published Standards of the National Fire Protection Association, Factory Mutual Research Corporation, or other similar organizations and also with the provisions of governmental codes or ordinances whenever applicable. Products manufactured and distributed by Reliable have been protecting life and property for almost 100 years.

Manufactured by

Reliable®

Reliable Automatic Sprinkler Co., Inc.

(800) 431-1588	Sales Offices
(800) 848-6051	Sales Fax
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www.reliablesprinkler.com	Internet Address

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For Non-Health Hazard Applications

Job Name _____ Contractor _____

Job Location _____ Approval _____

Engineer _____ Contractor's P.O. No. _____

Approval _____ Representative _____

Series 007
Double Check Valve Assemblies

Sizes: ½" – 3" (15 – 80mm)

Series 007 Double Check Valve Assemblies shall be installed at referenced cross-connections to prevent the backflow of polluted water into the potable water supply. Only those cross-connections identified by local inspection authorities as non-health hazard shall be allowed the use of an approved double check valve assembly.

Check with local authority having jurisdiction regarding vertical orientation, frequency of testing or other installation requirements.

The valve shall meet the requirements of ASSE Std. 1015 and AWWA Std. C510. Approved by the Foundation for Cross-Connection Control and Hydraulic Research at the University of Southern California.

Features

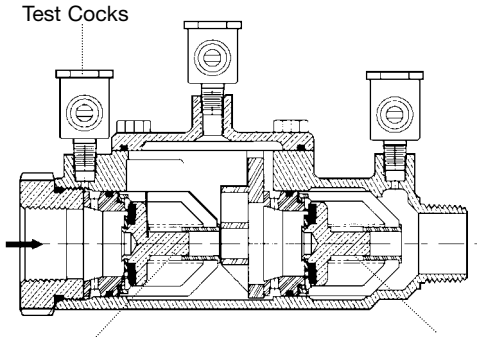
- Ease of maintenance — only one cover
- Top entry
- Replaceable seats and seat discs
- Modular construction
- Compact design
- Cast bronze body construction — ½" – 2" (15 – 50mm)
- Fused epoxy coated cast iron body — 2½" – 3" (65 – 80mm)
- Top mounted ball valve test cocks
- Low pressure drop
- No special tools required for servicing
- ½" – 1" (15 – 25mm) have tee handles

Specifications

A Double Check Valve Assembly shall be installed at each noted location. The assembly shall consist of two positive seating check modules with captured springs and rubber seat discs. The check module seats and seat discs shall be replaceable. Service of all internal components shall be through a single access cover secured with stainless steel bolts. The assembly shall also include two resilient seated isolation valves; four top mounted, resilient seated test cocks. The assembly shall meet the requirements of ASSE Std. 1015 and AWWA Std. C510. Approved by the Foundation for Cross-Connection Control and Hydraulic Research at the University of Southern California. Assembly shall be a Watts Regulator Company Series 007.

¾" (20mm) 007M3QT

2" (50mm) 007M1QT HC



The 007 Series features a modular design concept which facilitates complete maintenance and assembly by retaining the spring load.

Now Available
WattsBox Insulated Enclosures.
For more information, send for literature ES-WB.

IMPORTANT: *INQUIRE WITH GOVERNING AUTHORITIES FOR LOCAL INSTALLATION REQUIREMENTS*

WATTS®

Pressure — Temperature

½" – 2" (15 – 50mm)

Temperature Range: 33°F – 180°F (0.5°C – 82°C).

Maximum Working Pressure: 175psi (12.1 bar).

2½" – 3" (65 – 80mm)

Temperature Range: 33°F – 110°F (0.5°C – 43°C) continuous, 140°F (60°C) intermittent.

Maximum Working Pressure: 175psi (12.1 bar).

Standards

ASSE Std. 1015, AWWA Std. C510

IAPMO PS31, CSA B64.5

Approvals

† ASSE, AWWA, IAPMO, CSA, UPC

▲ Approved by the Foundation for Cross-Connection Control and Hydraulic Research at the University of Southern California.

• Models LF and S are not listed.

◆ UL Classified (LF models only) ¾" – 2" (20 – 50mm) (except 009M3LF)

◆ UL Classified with OSY gate valves (2½" and 3" horizontal only.)

* Horizontal approval on all sizes.

Suffix:

S - bronze strainer

LF - without shutoff valves

LH - locking handle ball valves (open position)

SH - stainless steel ball valve handles

HC - 2½" inlet/outlet fire hydrant fittings (2" valve)

Prefix:

U - Union connections

2½" – 3" (65 – 80mm)

Suffix:

NRS - non-rising stem resilient seated gate valves

OSY - UL/FM outside stem and yoke resilient seated gate valves

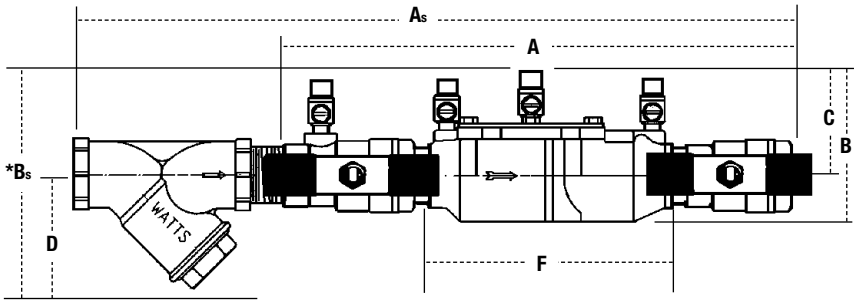
LF - without shutoff valves

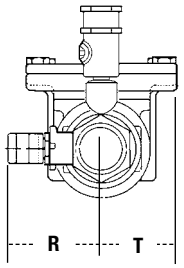
QT-FDA - FDA epoxy coated quarter-turn ball valves

Dimensions – Weights

Models

Sizes: ½" – 2" (15 – 50mm)





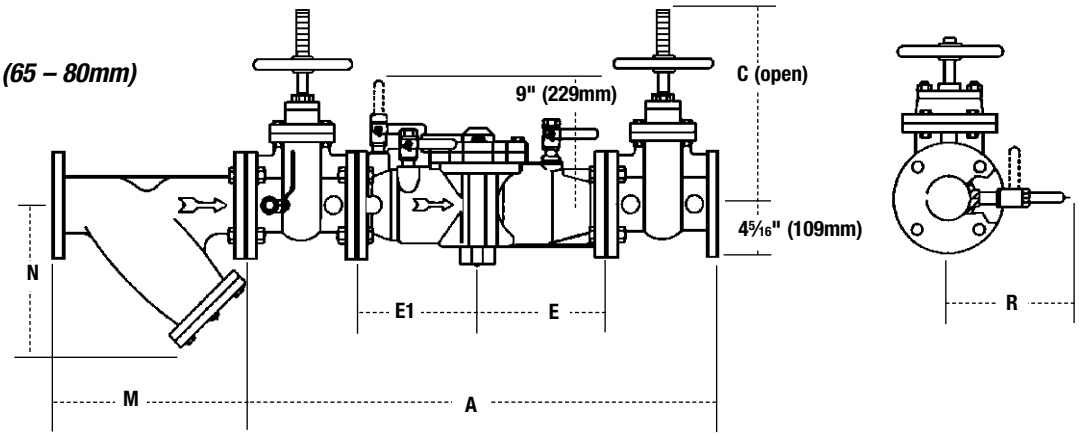
***Subscript 'S' = strainer model**

Suffix HC — Fire Hydrant Fittings dimension "A" = 23½" (594mm)

MODEL	SIZE (DN)		DIMENSIONS																WEIGHT	
			A		B		C		D		F		G		R		T			
	in.	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*lbs.*	*kgs.*
†▲007QT	½	15	10	254	4 5/8	117	2 7/16	62	—	—	5	127	3 3/8	85	2 5/16	59	2 1/16	52	4.5	2
†▲007M3QT	¾	20	11 1/8	282	4	102	3 1/8	79	—	—	6 3/16	157	3 7/16	87	2 1/8	54	1 5/16	33	5	2.3
†▲007M1QT	1	25	13 1/4	337	5 1/8	130	4	102	—	—	7 1/2	191	3 3/8	85	1 11/16	43	1 11/16	43	12	5.4
†▲007M2QT	1 1/4	32	16 3/8	416	5	127	3 5/16	84	—	—	9 1/2	241	5	127	3	76	2	50	15	6.8
†▲007M2QT	1 1/2	40	16 3/4	425	4 7/8	124	3 1/2	89	—	—	9 3/4	248	5 13/16	148	3 1/8	79	2 11/16	68	15.9	7.2
†▲007M1QT	2	50	19 1/2	495	6 1/4	159	4	102	—	—	13 3/8	340	6 1/8	156	3 7/16	87	2 11/16	68	25.7	11.7
• 007QT-S	½	15	13	330	6	152	2 7/16	62	3	76	5	127	3 3/8	85	2 5/16	59	2 1/16	52	5.5	2.5
• 007M3QT-S	¾	20	14 1/2	368	6 1/8	156	3 1/8	79	3	76	6 3/16	157	3 7/16	87	2 1/8	54	1 5/16	33	6.7	3.1
• 007M1QT-S	1	25	17 15/16	157	7 3/4	197	4	102	3 1/4	83	7 1/2	191	3 3/8	85	1 11/16	43	1 11/16	43	14	6.4
• 007M2QT-S	1 1/4	32	21 1/2	546	7 1/16	179	3 5/16	84	3 1/2	83	9 1/2	241	5	127	3	76	2	50	19	8.6
• 007M2QT-S	1 1/2	40	25 1/16	637	7 1/16	179	3 1/2	89	3 3/4	95	9 3/4	248	5 13/16	148	3 1/8	79	2 11/16	68	19.6	8.9
• 007M1QT-S	2	50	27 1/4	692	8 3/4	222	4	102	4	102	13 3/8	340	6 1/8	156	3 7/16	87	2 11/16	68	33.5	15.2

Dimensions – Weights

Sizes: 2½" – 3" (65 – 80mm)



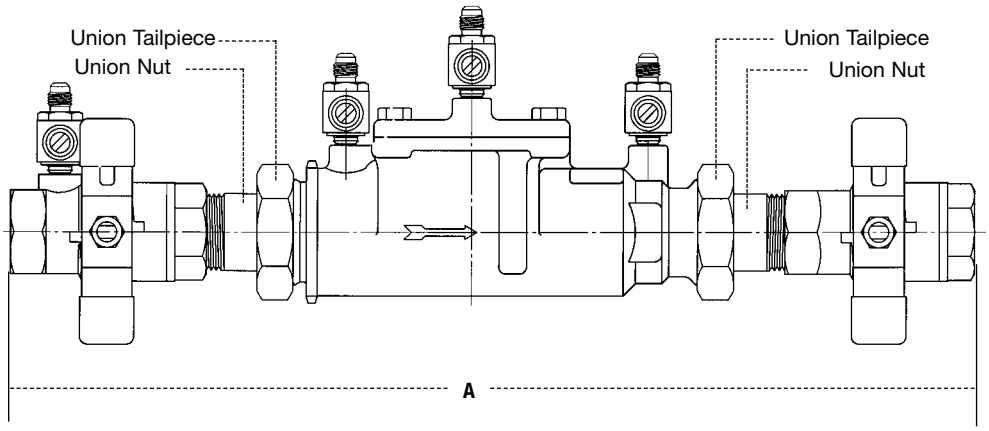
MODEL		SIZE (DN)		DIMENSIONS								WEIGHT	
				A		C		E, E1		R			
		in.	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*lbs.*	*kgs.*
	007QT-FDA	2½	65	33⅛	841	6⅜	162	9¹⁄₁₆	230	8¾	222	155	70
▲	007-NRS	2½	65	33⅛	841	9⅜	238	9¹⁄₁₆	230	8¾	222	155	70
▲◆	007-OSY	2½	65	33⅛	841	16⅜	416	9¹⁄₁₆	230	8¾	222	158	72
	007-QT-FDA	3	80	34⅛	867	6⅜	162	9¹⁄₁₆	230	8¾	222	155	70
▲◆	007-NRS	3	80	34⅛	867	10¼	260	9¹⁄₁₆	230	8¾	222	185	84
▲	007-OSY	3	80	34⅛	867	18⅞	479	9¹⁄₁₆	230	8¾	222	185	84

Strainer Dimensions

SIZE						WEIGHT	
		M		N			
in.	*mm*	*in.*	*mm*	*in.*	*mm*	*lbs.*	*kgs.*
2½	65	10	254	6½	165	28	13
3*	80	10⅛	267	7	178	34	15

*S Models only

1" U007M1QT



Sizes: ½" – 2" (15 – 50mm)

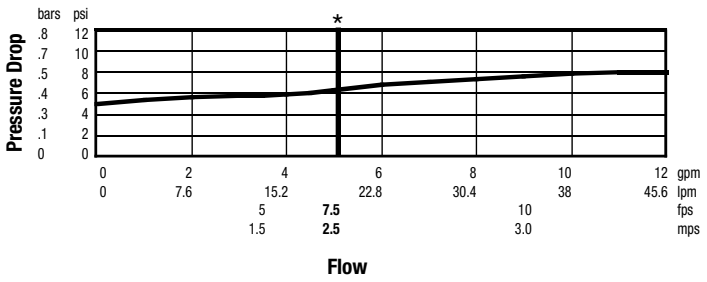
MODEL	SIZE (DN)		DIMENSIONS	
			A	
	in.	*mm*	*in.*	*mm*
U007QT	½	15	12¹³⁄₁₆	326
U007M2QT	¾	20	13¹³⁄₁₆	350
U007M2QT	1	25	16⅝	422
U007M2QT	1¼	32	20¾	527
U007M2QT	1½	40	21½	546
U007M1QT	2	50	24½	622

Capacity

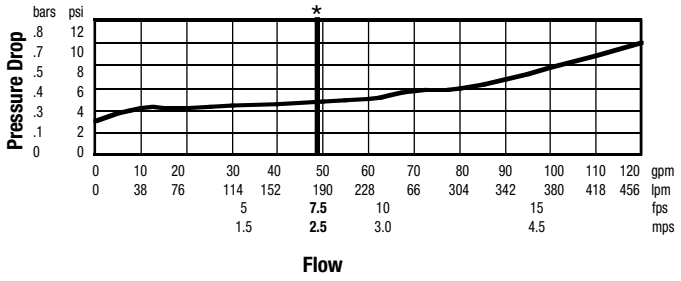
As complied from documented Foundation for Cross-Connection Control and Hydraulic Research at the University of Southern California lab tests.

* Typical maximum system flow rate (7.5 feet/sec., 2.3 meters/sec.)
** UL rated flow

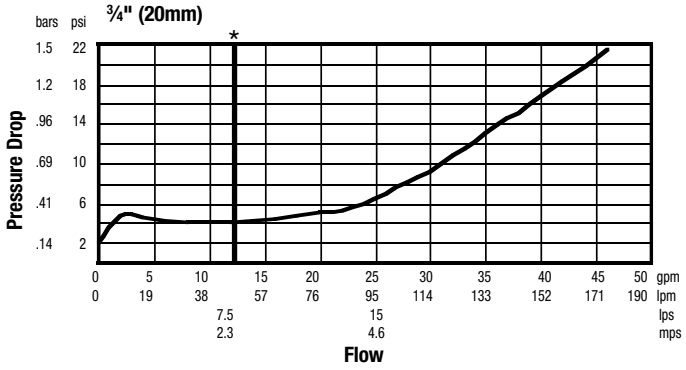
½" (15mm)



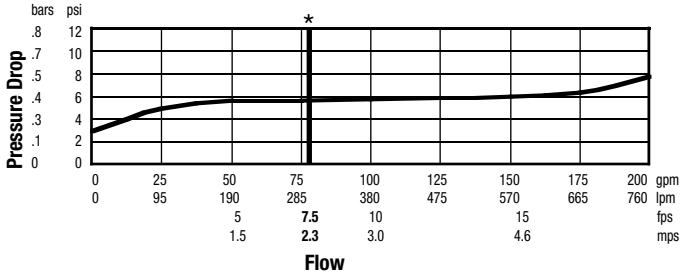
1½" (40mm)



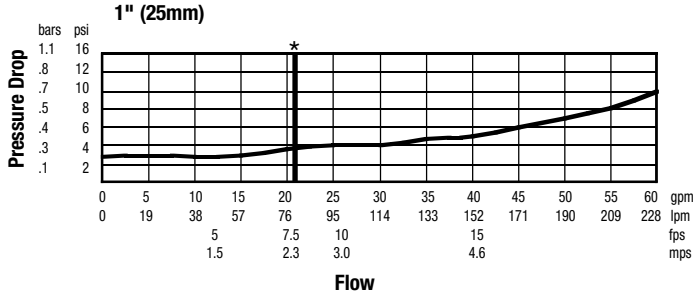
¾" (20mm)



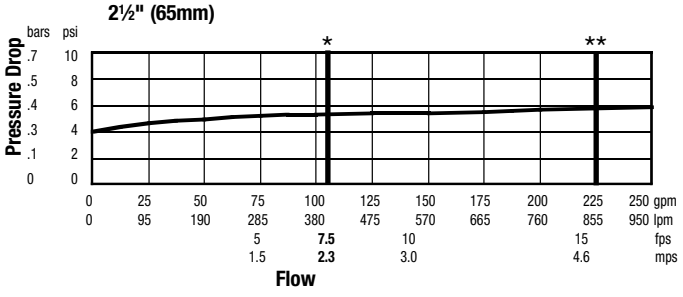
2" (50mm)



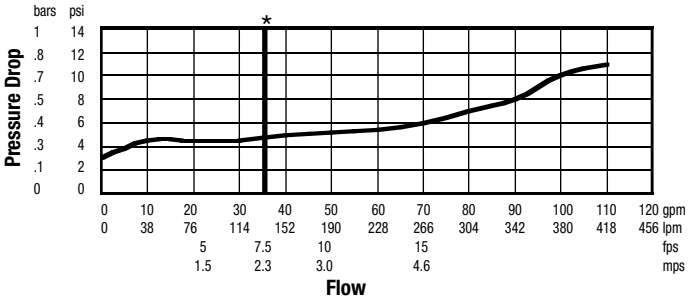
1" (25mm)



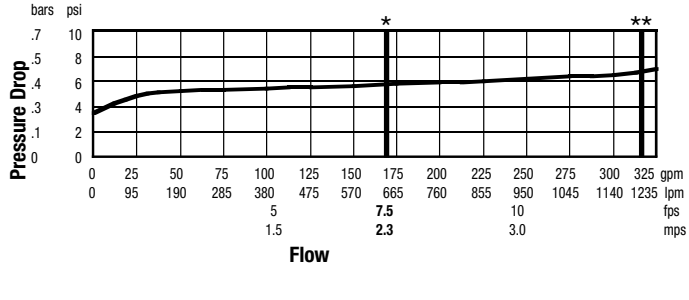
2½" (65mm)



1¼" (32mm)



3" (80mm)



WATTS®

Backflow Prevention Products

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Canada: 5435 North Service Rd., Burlington, ONT. L7L 5H7; www.wattscanada.ca

ES-007 0830

FlameGuard™ CPVC FIRE SPRINKLER PRODUCTS

FG-2-0700

CORROSION RESISTANT
SUPERIOR FLOW
EASE OF INSTALLATION

Spears **FlameGuard**™ CPVC Fire Sprinkler Products provide a cost effective alternative to metal systems with advantages of high corrosion resistance, improved system hydraulics, ease of installation, and quick assembly with readily available tools. CPVC Fire Sprinkler Systems are based on proven products that have been in continuous service for over 40 years. Spears **FlameGuard**™ products are approved by UL, FM Global, LPCB and Certified by NSF International for potable water use. Check local codes for restrictions and limitations.

Corrosion Resistant CPVC Material Does Not Sustain Biological Growth

Unlike metal systems, **FlameGuard**™ CPVC products never rust, scale or pit and do not sustain biological growth - a cause of Microbiologically Influenced Corrosion (MIC) which can destroy metal fire sprinkler systems from the inside out.

Superior Flow Characteristics for Lower Friction Losses

The smooth-wall interior surfaces of **FlameGuard**™ CPVC systems result in reduced friction loss over metal systems. The design flow characteristics remain constant throughout the life of the product because there is no interior corrosion in the system due to microbiological activity.

Pressure Rated to 175 psi @ 150° F

FlameGuard™ CPVC Fittings are produced in a combination of Schedule 40 and Schedule 80 configurations conforming to ASTM F438 or F439 standards for use with SDR 13.5 CPVC fire sprinkler pipe. UL Rated working pressure is 175 psi @ 150° F (LPCB rated to 120°F).

Easy Installation for Lower Costs

FlameGuard™ CPVC system installations significantly reduce costs over conventional metal piping by virtually eliminating prefabrication. Systems can be fully installed onsite using solvent cement joining methods.

UL Listed for NFPA 13, 13R & 13D Systems

FlameGuard™ CPVC Fire Sprinkler Products are UL listed for Light Hazard occupancies as defined in NFPA 13, Residential occupancies up to and including 4-stories as defined in NFPA 13R, and Residential occupancies for one and two family dwellings and manufactured homes as defined in NFPA 13D. Consult Spears CPVC Fire Sprinkler Piping Products Installation Instructions and NFPA Standards for additional applications including air plenum, system risers, underground, attic, and garage installations.

Full 10-Year Limited Warranty

FlameGuard™ CPVC Fire Sprinkler Products are warranted for 10 years against defects in material or workmanship. Consult Spears **FlameGuard**™ warranty for additional details.

MADE IN THE U.S.A. WITH PRIDE

PROGRESSIVE PRODUCTS
FROM SPEARS INNOVATION & TECHNOLOGY

Visit our web site: www.spearsmfg.com

Quality Systems Certificate No. 293
Corporate Facilities, Sylmar, CA
Assessed to ISO 9001

Spears **FlameGuard™** . . . The Leader in Innovative CPVC Fire Sprinkler System Products

Pioneer in Molded-in Brass Insert Head Adapters

Spears pioneered the development of the **FlameGuard™** molded-in-place brass thread insert for connection of sprinkler heads to CPVC fire sprinkler systems, then refining the design to produce one of the most reliable adapters of its type. Available in straight and reducing sizes with 1/2", 3/4" and 1" Brass FIPT threads, plus 3/4" through 2" Brass FIPT threaded female adapters for metal-to-plastic transitions.

Innovator of Advanced Stainless Steel Reinforced (SR) Head Adapters

Spears **FlameGuard™** continuous improvement program developed the technology to produce a superior patented plastic threaded fitting - the Stainless Steel Reinforced (SR) Design. This unique design incorporates a patented thermoplastic compression process that equalizes stresses generated by tapered thread joint make-up. All CPVC plastic body and threads provide a more uniform construction and improved corrosion resistance. Available in straight and reducing sizes with 1/2", 3/4" and 1" SR FIPT threads, plus 3/4" through 1-1/4" SR FIPT threaded female adapters for metal-to-plastic transitions.

Full Assortment of Specialty Products & Fittings Configurations

Spears **FlameGuard™** provides the specialty fittings needed in today's fire sprinkler systems. Like the adjustable drop nipple for fine-tuning to finished ceiling height, side-wall tees for opposing heads, and ringed head adapter for ease of locating during installation. Plus, Spears **FlameGuard™** line offers a full assortment of CPVC fire sprinkler fitting configurations including Tees, Elbows, Flanges, Couplings, Caps, Grooved Coupling Adapters and Unions, sizes 3/4" through 3".

Spears Solvent Cements & Thread Sealant

FlameGuard™ products should be installed using Spears FS-3 Solvent Cement & FS-1 Primer or FS-5 One-Step Solvent Cement. For threaded joints, use Spears **BLUE 75™** Thread Sealant that has been tested for compatibility with **FlameGuard™** CPVC Fire Sprinkler Products. Consult sprinkler head manufacturer prior to use.

Installation Training Available - Contact Spears Technical Services for Details

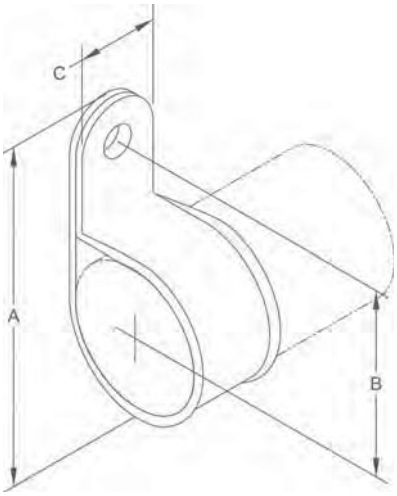
FlameGuard™ Products must be installed in accordance with Spears CPVC Fire Sprinkler Piping Products Installation Instructions, National Fire Protection Association Standards 13, 13R, 13D, and in accordance with local codes. Code requirements and field conditions may differ. It is the responsibility of the installing contractor to insure that the product is suitable to meet these requirements.

SPEARS® MANUFACTURING COMPANY

CORPORATE OFFICES
15853 Olden Street, Sylmar, CA 91342
P.O. Box 9203, Sylmar, CA 91392
(818) 364-1611 • http://www.spearsmfg.com

Fig. 22 - Hanger for CPVC Plastic Pipe Single Fastener Strap Type

c UL US LISTED



Size Range — 3/4" thru 2" CPVC pipe

Material — Pre-Galvanized Steel

Function — Intended to perform as a hanger to support CPVC piping used in automatic fire sprinkler systems. The product acts as a hanger when tab is upward and the fastener screw is in the horizontal position. Figure 22 can be installed on the top of a beam, but in this situation acts as a guide to the piping which is supported by the beam itself. It is not intended to support CPVC pipe from under a flat horizontal surface, such as a ceiling. For this type of installation, use the TOLCO® Fig. 23, Double Fastener Strap for CPVC Piping. Fig. 22, when inverted, with the hanger tab downward, can function as a restrainer to prevent the upward movement of the sprinkler head during activation.

Approvals — Underwriters' Laboratories Listed in the USA **(UL)** and Canada **(cUL)** to support fire sprinkler piping. May be installed in wood using fasteners supplied with product, or into minimum 20 gauge steel using (1) 1/4" x 1" tek type screw. Meets and exceeds the requirements of NFPA 13, 13R and 13D.

Features — Fig. 22 incorporates features which protect the pipe and ease installation. The flared edge design protects CPVC pipe from any rough surface. It is easily attached to the building structure using the special UL Listed hex head self threading screw furnished with the product, this is the minimum size fastener acceptable. It is recommended that rechargeable electric drills fitted with a hex socket attachment to be used as installation tools. No impact tools (such as a hammer) are allowed. Damage has been know to result from installations using impact type tools. No pre-drilling of a pilot hole in wood is required.

Finish — Pre-Galvanized

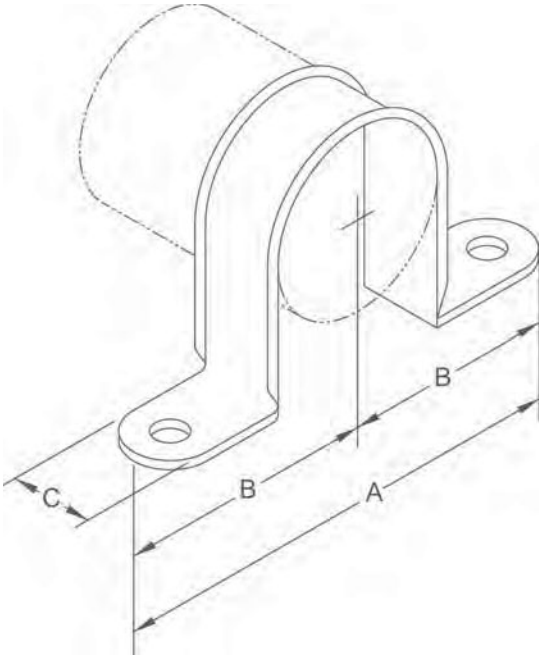
Order By — Figure number and CPVC pipe size.

Dimensions • Weights

CPVC Pipe Size	A	B	C	Max. Hanger Spacing (Ft.)	Fastener Hex Head Size	Approx. Wt./100
3/4	2 7/16	1 5/16	1 3/16	5½	5/16	9
1	2 11/16	1 7/16	1 3/16	6	5/16	9
1¼	3 1/16	1 5/8	1 3/16	6½	5/16	11
1½	3 5/16	1¾	1 3/16	7	5/16	12
2	3¾	2 1/8	1 3/16	8	5/16	15

Fig. 23 - Hanger for CPVC Plastic Pipe Double Fastener Strap Type

c UL US LISTED



Size Range — 3/4" thru 3" CPVC pipe

Material — Pre-Galvanized Steel

Function — Intended to perform as a hanger/restrainer to support CPVC piping used in automatic fire sprinkler systems. Fig. 23 can be installed on the top, bottom or side of a beam. The Fig. 23 also functions as a restrainer to prevent the upward movement of the sprinkler head during activation.

Approvals — Underwriters' Laboratories Listed in the USA **(UL)** and Canada **(cUL)** to support fire sprinkler piping. May be installed in wood using fasteners supplied with product, or into minimum 20 gauge steel using (2) 1/4" x 1" tek type screw. Meets and exceeds the requirements of NFPA 13, 13R and 13D.

Features — Fig. 23 incorporates features which protect the pipe and ease installation. The flared edge design protects the CPVC pipe from any rough surface. It also incorporates snap restrainers allowing easier and faster installation. Easily attaches to the building structure using the two UL Listed hex head self threading screws* furnished with the product. It is recommended that rechargeable electric drills fitted with a hex socket attachment be used as installation tools. No impact tools (such as a hammer) are allowed. Damage has been known
to result from installations using impact type tools.
No pre-drilling of a pilot hole in wood is required.

Finish — Pre-Galvanized

Order By — Figure number and pipe size

*** Hardened hex head self threading screw is furnished with the product and is the minimum fastener size acceptable.**

Dimensions • Weights

CPVC Pipe Size	A	B	C	Max. Hanger Spacing (Ft.)	Fastener Hex Head Size	Approx. Wt./100
3/4	3 1/8	1 9/16	1 3/16	5 1/2	5/16	9
1	3 3/8	1 11/16	1 3/16	6	5/16	9
1 1/4	4 3/16	2 3/32	1 3/16	6 1/2	5/16	11
1 1/2	4 7/16	2 7/32	1 3/16	7	5/16	12
2	4 7/8	2 7/16	1 3/16	8	5/16	15
2 1/2	10 9/32	2 11/16	1 3/16	9	5/16	22
3	11 7/8	3	1 3/16	10	5/16	25

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Fire Sprinkler Pipe

Schedule 10 and Schedule 40

Submittal Data Sheet

FM Approved and Fully Listed Sprinkler Pipe
Wheatland's Schedule 10 and Schedule 40 steel fire sprinkler pipe is FM Approved and UL, C-UL and FM Listed.

Approvals and Specifications
Both products meet or exceed the following standards:

- ASTM A135, Type E, Grade A (Schedule 10)
- ASTM A795, Type E, Grade A (Schedule 40)
- NFPA 13

Manufacturing Protocols
Schedule 10 and Schedule 40 are subjected to the toughest possible testing protocols to ensure the highest quality and long-lasting performance.

Finishes and Coatings
All Wheatland black steel fire sprinkler pipe up to 6" receives a proprietary mill coating to ensure a clean, corrosion-resistant surface that outperforms and outlasts standard lacquer coatings. This coating allows the pipe to be easily painted, without special preparation. Schedule 10 and Schedule 40 can be ordered in black, or with hot-dip galvanizing, to meet FM/UL requirements for dry systems that meet the zinc coating specifications of ASTM A795 or A53. All Wheatland galvanized material is also UL Listed.

Product Marking
Each length of Wheatland fire sprinkler pipe is continuously stenciled to show the manufacturer, type of pipe, grade, size and length. Barcoding is acceptable as a supplementary identification method.

SCHEDULE 10 SPECIFICATIONS

NPS	NOM OD		NOM ID		NOMINAL WALL		NOMINAL WEIGHT		UL	PIECES
	in.	mm	in.	mm	in.	mm	lbs./ft.	kg/m	CRR*	Lift
1¼	1.660	42.2	1.442	36.6	.109	2.77	1.81	2.69	7.3	61
1½	1.900	48.3	1.682	42.7	.109	2.77	2.09	3.11	5.8	61
2	2.375	60.3	2.157	54.8	.109	2.77	2.64	3.93	4.7	37
2½	2.875	73.0	2.635	66.9	.120	3.05	3.53	5.26	3.5	30
3	3.500	88.9	3.260	82.8	.120	3.05	4.34	6.46	2.6	19
4	4.500	114.3	4.260	108.2	.120	3.05	5.62	8.37	1.6	19
5	5.563	141.3	5.295	134.5	.134	3.40	7.78	11.58	1.5	13
6	6.625	168.3	6.357	161.5	.134	3.40	9.30	13.85	1.0	10
8	8.625	219.1	8.249	209.5	.188	4.78	16.96	25.26	2.1	7

** Calculated using Standard UL CRR formula, UL Fire Protection Directory, Category VIZY.*
** The CRR is a ratio value used to measure the ability of a pipe to withstand corrosion. Threaded Schedule 40 steel pipe is used as the benchmark (value of 1.0).*

SCHEDULE 40 SPECIFICATIONS

NPS	NOM OD		NOM ID		NOMINAL WALL		NOMINAL WEIGHT		UL	PIECES
	in.	mm	in.	mm	in.	mm	lbs./ft.	kg/m	CRR*	Lift
1	1.315	33.4	1.049	26.6	.133	3.38	1.68	2.50	1.00	70
1¼	1.660	42.2	1.380	35.1	.140	3.56	2.27	3.39	1.00	51
1½	1.900	48.3	1.610	40.9	.145	3.68	2.72	4.05	1.00	44
2	2.375	60.3	2.067	52.5	.154	3.91	3.66	5.45	1.00	30

** Calculated using Standard UL CRR formula, UL Fire Protection Directory, Category VIZY.*
** The CRR is a ratio value used to measure the ability of a pipe to withstand corrosion. Threaded Schedule 40 steel pipe is used as the benchmark (value of 1.0).*

SUBMITTAL INFORMATION

PROJECT: _____ CONTRACTOR: _____ DATE: _____

ENGINEER: _____ SPECIFICATION REFERENCE: _____ SYSTEM TYPE: _____

LOCATIONS: _____ COMMENTS: _____

☐ BLACK ☐ HOT-DIP GALVANIZED

Wheatland Tube 700 South Dock Street Sharon, PA 16146
P 800.257.8182 | **F** 724.346.7260 | info@wheatland.com | wheatland.com

Wheatland Tube
JMC STEEL GROUP

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WOOD — Sammys

WOOD • 1/4" Rod (Vertical Mount)

Use #14 Nut Driver (Item #100)

Item #	Model	Shk Lgth	Shk Dia	Box Qty	Weight (per 100)	Case Qty
20	GST.750	3/4	1/4	100	4.75	1000
21	GST100	1	1/4	100	5.00	1000
22	GST200	2	1/4	100	6.50	1000
23	GST300	3	1/4	100	7.50	1000
24	GST600	6	1/4	50	9.00	500

#14
(Item #100-black)
Sammys 1/4", 3/8" rod

WOOD • 3/8" Rod (Vertical Mount)

Use #14 Nut Driver (Item #100)

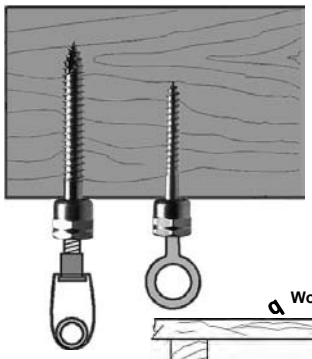
Approvals	Item #	Model	Shk Lgth	Shk Dia	FM Test Load, lb.	UL Test Load lb.	UL/FM Pipe Size	Actual Pullout	Box Qty
	10	GST.75	3/4	1/4				564# -6 Ply	100
NFPA	11	GST10	1	1/4				210# -7/16 OSB 670# -3/4" Ply	100
UL•FM•NFPA	12	GST20	2	1/4	940#	850#	3/4-2 1/2	1760# - Fir	100
UL•NFPA	* 27	GST25-380	2 1/2	3/8		1500#	4	2113# -Fir	50
UL•FM•NFPA	13	GST30	3	1/4	1475#	1500#	3/4-4	2060# - Fir	100
NFPA	403	GST40	4	1/4				2180# -Fir	50
NFPA	14	GST60	6	1/4				2230# -Fir	50

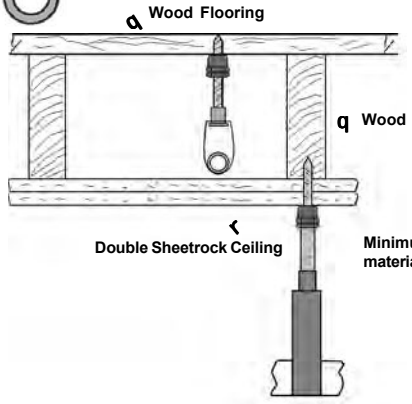
#14SW
(Item #101-red)
Sidewinders & Sammys 1/2" rod

WOOD • 1/2" Rod (Vertical Mount)

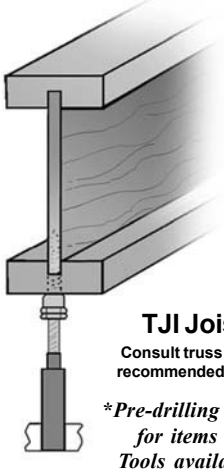
Use #14SW Nut Driver (Item #101)

Item #	Model	Shk Lgth	Shk Dia	Actual Pullout	Box Qty	Weight (per 100)	Case Qty
8	GST 2	2	1/4	1760# -Fir	50	7.00	500
* 06	GST2.5-380	2 1/2	3/8	2113# -Fir	50	10.00	500
15	GST3	3	1/4	2275# -Fir	50	10.50	500
16	GST4	4	1/4	2180# -Fir	50	10.60	500
17	GST6	6	1/4	2230# -Fir	50	10.95	500



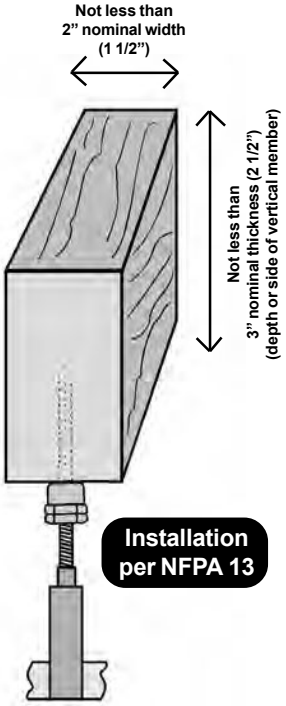


Minimum 2" imbedment into base material for NFPA 13 compliance



TJI Joist / Truss
Consult truss manufacturer for recommended installation point.

**Pre-drilling may be required for items #27 and #06. Tools available on page 9.*



For vertical use. Install in center of lower face.

Installation per NFPA 13

UL Listings and CAD Drawings are available at www.SammySuperScrew.com

Note: Screws must be installed with appropriate nut driver to comply with warranty

WOOD —Sidewinders

WOOD • 1/4" Rod (Horizontal Mount)

Use #14SW Nut Driver (Item #101)

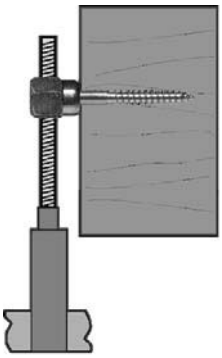
Item #	Model	Shk Lgth	Shk Dia	Actual Shear/Pullout	Box Qty	Weight (per 100)	Case Qty
4016	SWG100	1	1/4		100	7.50	1000
300	SWG200	2	1/4	1725# -F ir	100	8.00	1000

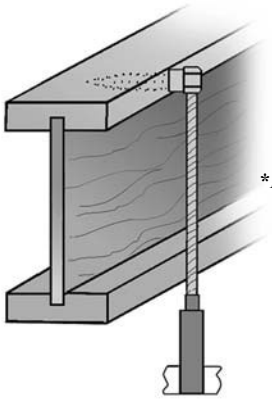
#14SW
(Item #101-red)
Sidewinders & Sammys 1/2" rod

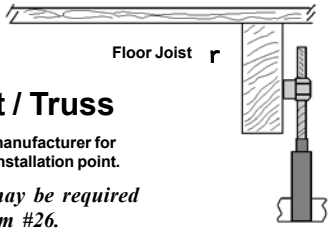
WOOD • 3/8" Rod (Horizontal Mount)

Use #14SW Nut Driver (Item #101)

Approvals	Item #	Model	Shk Lgth	Shk Dia	UL Test Load lb.	UL/FM Pipe Size	Actual Shear/Pullout	Box Qty	Weight (per 100)
	18	SWG10	1	1/4				100	6.00
UL•NFPA	19	SWG20	2	1/4	1250#	3	1725# -F ir	100	7.00
UL•NFPA	* 26	SWG25-380	2 1/2	3/8	1500#	4	2249# -F ir	50	10.25
	25	SWG30	3	1/4				50	8.50





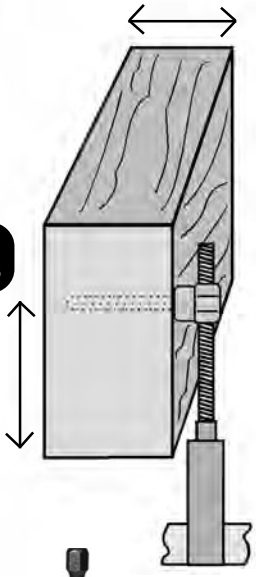


TJI Joist / Truss

Consult truss manufacturer for recommended installation point.

**Pre-drilling may be required for item #26.*
Tools available on page 9.

Not less than 2" nominal width (1 1/2") up to 3 1/2" pipe; not less than 3" nominal width 4" & 5" pipe



Installation per NFPA 13

Minimum 2 1/2" from bottom for branch lines. Minimum 3" from bottom for main lines. Exception: This requirement shall not apply to 2" or thicker nailing strips resting on top of steel beams.

SHEETROCK — Toggle

SHEETROCK • 1/4" Rod (Vertical Mount)

Use #14 Nut Driver (Item #100)

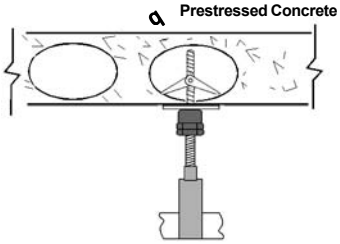
Item #	Model	Shk Lgth	Shk Dia	Actual Pullout	Box Qty	Weight (per 100)	Case Qty
71	SST300	3	1/4	450# Lath & Plaster 404# 2 Layers 5/8 Rock	50	12.00	500

#14
(Item #100-black)
Sammys 1/4", 3/8" rod

SHEETROCK • 3/8" Rod (Vertical Mount)

Use #14 Nut Driver (Item #100)

Item #	Model	Shk Lgth	Shk Dia	Actual Pullout	Pkg Qty	Weight (per 100)	Case Qty
70	SST30	3	1/4	450# Lath & Plaster 404# 2 Layers 5/8 Rock	50	12.00	500



Note: Screws must be installed with appropriate nut driver to comply with warranty

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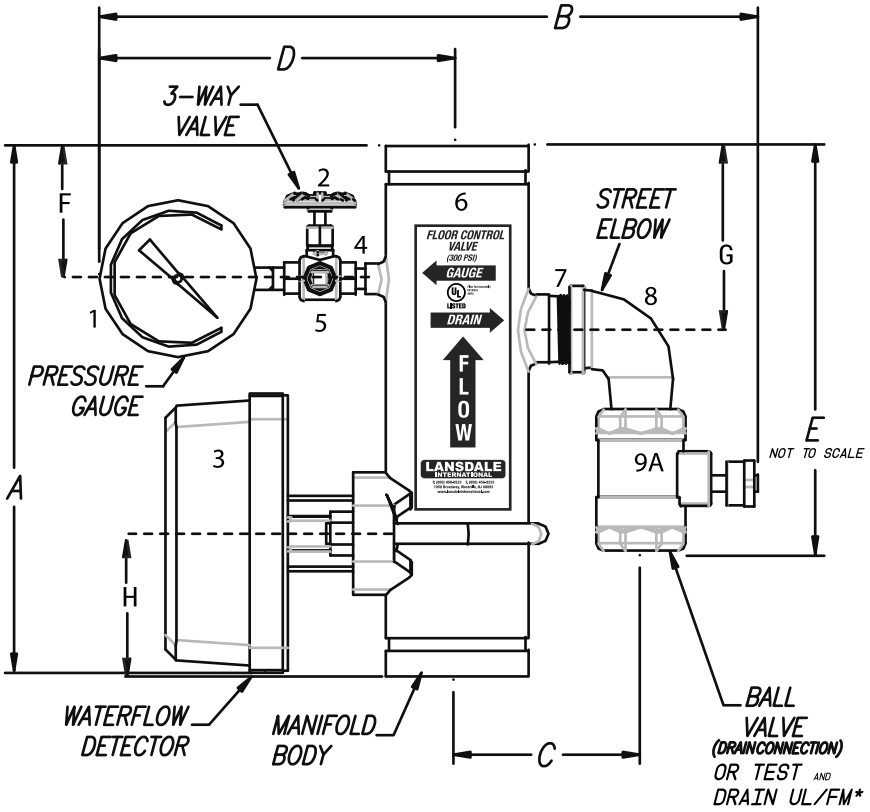

Flow Test Assembly
EX15816
4DP2
LISTED

MATERIAL LIST

NO	Description	Qty
1	LANSDALE AIR / WATER - 3-1/2" DIA 0-300 PSI w/ STAINLESS STEEL CASE UL & FM approved	1
2	1/4" 3-Way VALVE	1
3	System Sensor Water Flow Switch w retard UL/FM Approved	1
4	1/4 x 2 Black Nipple	1
5	1/4 Black CI Plug	1
6	Commercial Riser Body Sch 40 A53 Steel Pipe	1
7	Black Nipple _x close	1
8	Galvanized Street Elbow (90 degree)	1
9A	Ball Valve 300 PSI, 600 WOG UL/FM approved	1
9B	Lansdale International or equal, Test & Drain UL/FM Approved	1

BASIC ASSEMBLY (3" (80MM) VERSION SHOWN)

Nominal Size	2"	2.5 "	3"	4"	6"
A	13"	13"	13"	13"	13"
B (Ball Valve)	13"	13¾"	15¾"	19½"	20"
B (Test & Drain)	13½"	14¼"	16¼"	19"	20¾"
C	5¼"	5"	5½"	7 "	8¼"
D	9¼"	9½"	9½"	10⅜"	11"
E (Ball Valve)	5⅝"	7⅛"	9⅞"	12⅛"	13½"
E (Test & Drain)	10"	10¼"	12¼"	14¾"	14½"
F	3½"	3½"	3½"	3½"	3½"
G	4½"	4½"	4½"	4½"	4½"
H	3½"	3½"	3½"	3½"	3½"

Body Size	2"	2.5 "	3"	4"	6"
Ball Valve Size	1"	1.25"	1.25"	2"	2"
Test & Drain Size	1"	1.25"	1.25"	2"	2"

NOTE:
All tolerances (with exception of the grooves) plus or minus 1/4 of an inch.
All Welds to be ¼" fillet surface prep of body - SSPC-SP-7 finished with 2.5 mils Bengal Red TGIC/ Acryllic Epoxy powder coat, electrostatically applied.

** AVAILABLE WITH PRESSURE RELIEF OPTION*

PROJECT INFORMATION	APPROVAL STAMP
Project:	☐ Approved
Address:	☐ Approved as noted
Contractor:	☐ Not approved
Engineer:	Remarks:
Submittal Data:	
Notes 1:	
Notes 2:	

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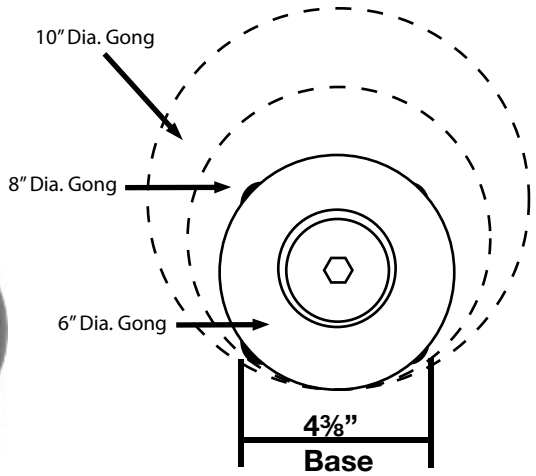
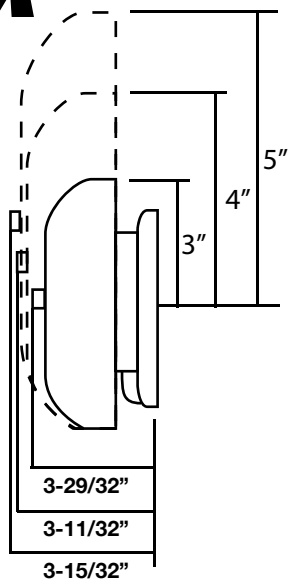
BELLS and BACK BOX

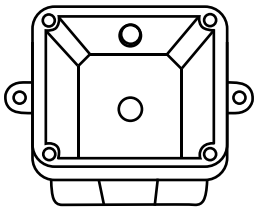
- **Four wire, 120 and 24 volt**
- **Indoor and Outdoor installation**
- **Weatherproof backbox**

120 VAC: 6", 8", 10"
24 VAC: 6", 10"



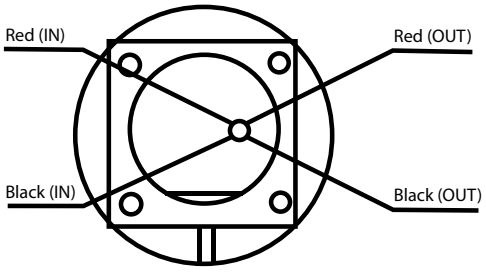


Rating	6 Gong Size		8 Gong Size		10 Gong Size	
Voltage	Rated Current	Sound level at 1 meter	Rated Current	Sound level at 1 meter	Rated Current	Sound level at 1 meter
6VDC	250mA	95dB	250mA	95dB	250mA	95dB
12VDC	180mA	95dB	180mA	95dB	180mA	95dB
24VDC	100mA	95dB	100mA	95dB	100mA	95dB
120VAC	25mA	95dB	25mA	95dB	25mA	95dB
220VAC	20mA	95dB	20mA	95dB	20mA	95dB


Back Box

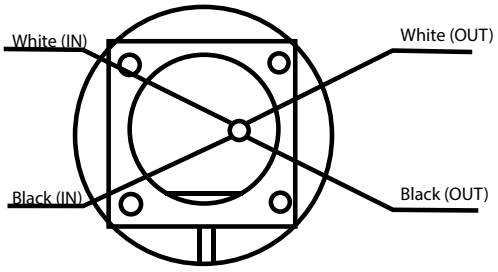
WIRING INSTRUCTIONS

D.C. BELLS (observe polarity)



When electrical supervisor is required use in and out leads as shown.
1. Observe polarity to ring DC Bells
2. Red wires positive(+)
3. Black wires negative (-)

A.C. BELLS



When electrical supervisor is required use in and out leads as shown.
1. When using AC bells, terminate each extra wire separately after last bell.
2. End-of-line resistor is not required on AC Bells

PROJECT INFORMATION	APPROVAL STAMP
Project:	☐ Approved
Address:	☐ Approved as noted
Contractor:	☐ Not approved
Engineer:	Remarks:
Submittal Data:	
Notes 1:	
Notes 2:	

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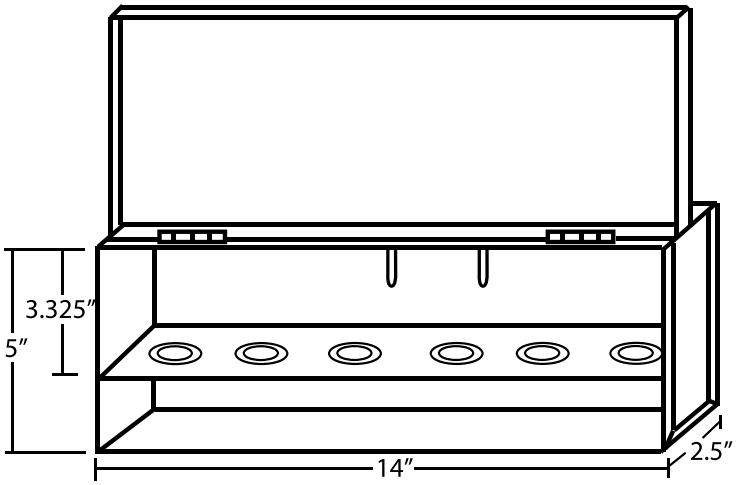
SPARE HEAD BOX (6)

All cabinets come with “knockouts to accommodate 3/4” IPS sprinklers.
Finished in red enamel.



PROJECT INFORMATION	APPROVAL STAMP
Project:	☐ Approved
Address:	☐ Approved as noted
Contractor:	☐ Not approved
Engineer:	Remarks:
Submittal Data:	
Notes 1:	
Notes 2:	

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Open Snoot Assembly

FNPT x FNST* Connection

Description

The single outlet open snoot is constructed of cast brass. The single swivel is complete with gasket and comes standard with pin lugs. Outlet is 2 1/2" NPT female thread. Comes standard with 2 1/2" NST female swivel. Kit includes: open snoot, 2 ½" brass plug with chain, and 2 ½" FDC Brass Wall Plate.

Installation

Installation can be achieved with tools readily available in the field using common installation practices. Make sure male threads of pipe to which the snoot is being attached are liberally coated with a pipe thread sealant such as PipeFit Thread Sealant with PTFE or PTFE Thread Sealant Tape. Tighten the snoot until hand tight. Tighten one additional turn past hand tight to achieve a water tight seal of the threads. **DO NOT OVER TIGHTEN! Over Tightening may cause thread failure as well as cracking of the snoot body.**

Specifications

Material:
Cast brass

Size:
2 1/2 FNPT x F Swivel*

*Available Swivels:

NST	3.0686" x 7.5TPI
BCT	3.000" x 8TPI
ONT	3.125" x 5TPI
QST	3.031" x 7TPI
PHX	3.062" x 6TPI
TEM	3.075" x 6TPI
CLV	3.078" x 8TPI
DET	3.125" x 7.5TPI

Check thread dimensions for other 2 1/2" applications.

Fire Protection Products, Inc
6241 Yarrow Dr., Suite A, Carlsbad, CA 92011-1541
For questions: 1 800 344-1822 • 1 800 344-3775 fax • www.fppi.com

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Swing Check Valve

INSIST ON FPPI®

Full Floating Clapper Assembly

Description

The bronze* swing check valve features a full floating clapper assembly that provides for a positive seal each time the valve is cycled. This feature improves the swing check valves ability to “clear” any debris that may be present in the water supply. The seat material is NBR which provides for a positive seal even under light residual pressures.

Installation

For horizontal installation only. The female by female swing check valve should be installed in accordance with commonly used installation practices for the fire sprinkler industry. Proper seal of the threads can be accomplished by applying a liberal amount of PTFE based thread sealant such as PipeFit® Thread Sealant Paste or PTFE Tape. Never use tape and paste together. This will cause excessive stress on the threaded connection leading to failure of the valve. Do not exceed one full turn past hand tight when installing male threads into the check valve.

Warning

DO NOT OVER TIGHTEN. Over tightening during installation will crack the valve body. Evidence of overtightening may not be readily visible or apparent upon pressurization.

Specifications

Valve Body:
Cast Bronze*
(85-5-5-5)

Clapper Assembly:
Forged Brass

Seat:
NBR (Chloramine Resistant)

Sizes:
½” IPS
2” IPS
Female by female

Rated Pressure:
250 psi

*Contains lead. Not for use in water systems intended for human consumption.

3198 LIONSHEAD AVE
CARLSBAD, CA 92010
TEL + 1 760 599-1168
+ 1 800 344-1822
FAX + 1 800 344-3775

Brass Ball Drip Valve

INSIST ON FPPI®

Description

The solid brass* ball drip is a “ball” type check valve. When properly installed, the internal ball rests in the lower most area of the valve body allowing for proper drainage of moisture accumulation. Upon system pressurization, the internal ball is “pushed” into the small end of the ball drip body closing the opening. When system pressure is removed, the ball returns to its original position. One of the most common uses is on the dry side of the Fire Department Connection valve. This use helps keep moisture from accumulating inside the Fire Department Connection. Designed for horizontal installation only.

Installation

Proper installation of the brass ball drip can be accomplished with standard piping installation tools. Make sure the threads are clean and free from burs and debris. Apply a thread sealant suitable for the materials being joined such as PipeFit, PipeFit AS or PTFE tape. When using a paste type sealant, make sure to brush the sealant deep into the root of the threads. Thread the ball drip into female threads hand tight. Finish tightening with a pipe wrench up to one full turn.

Do not over tighten. Over tightening may damage threads and ball drip. Finish piping to allow for proper drainage. **Valve opens by force of gravity only. Do not use with more than 1 ft. column of water (water pressure) on the ball check. Use only in the horizontal position.**

Specifications

Type:
Straight Pattern

Material:
Body: Brass*
Ball: Brass*

Standard Finishes:
Rough Brass*

Adjustment Range:
¼” x ½” MNPT
½” x ½” MNPT
¾” x ¾” MNPT

*Contains lead. Not for use in water systems intended for human consumption.

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