



Model G5 Series Sprinklers

Standard Spray, Flat Concealed Pendent

Available with Gasketed Cover Plate

Features

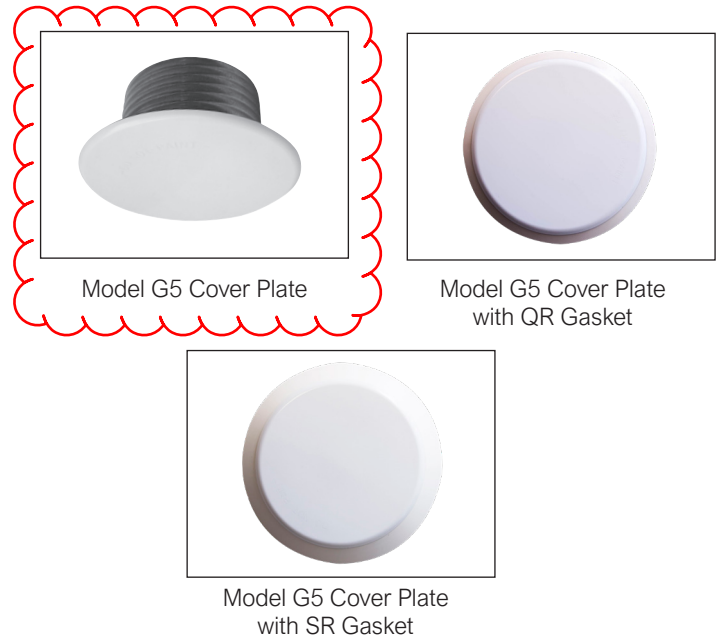
- Standard Coverage, Concealed Pendent (K2.8, 4.2, 5.6, & 8.0 [40, 60, 80, & 115 metric])
- Flat concealed cover plate available in a variety of finishes.
- Available with Stainless Steel Clad cover plate (see Table I).
- 3/4-inch (19 mm) cover plate adjustment.
- Cover plate available with optional gasket.

Product Description

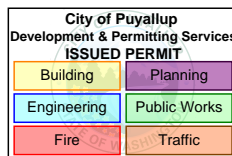
Model G5 series sprinklers are standard coverage, flat plate concealed sprinklers designed for installation in accordance with NFPA 13 and FM Global Property Loss Prevention Data Sheets. All Model G5 series sprinklers use a fusible-link operating element.

The sprinklers are offered with a standard Model G5 cover plate, a Model G5 cover plate with a quick-response (QR) gasket, or a Model G5 cover plate with a standard-response (SR) gasket. Model G5 sprinklers with a gasketed cover plate are intended for use in dust free environments such as clean rooms.

Model G5 sprinklers must only be used with the Model G5 cover plate listed or approved with the sprinkler. Table A provides a summary of available Model G5 series sprinklers, along with Listing and Approval information for each sprinkler and cover plate combination.



Note: Gasket material is silicone rubber, available in white only.



Model G5 Series Sprinkler Summary

Table A

Sprinkler Model	K-Factor gpm/psi ^{1/2} (L/min/bar ^{1/2})	Cover Plate Model	Listings and Approvals	Sensitivity	Max. Working Pressure psi (bar)	Sprinkler Identification Number (SIN)
G5-28	2.8 (40)	G5	cULus	QR	175 (12)	RA3411
			FM	SR		
		G5 QR Gasket	cULus	QR		
		G5 SR Gasket	cULus, FM	SR		
G5-42	4.2 (60)	G5	cULus	QR	175 (12)	RA3413
		G5 QR Gasket	cULus	SR		
		G5 SR Gasket	cULus	SR		
G5-56	5.6 (80)	G5	cULus	QR	250 (17)	RA3415
			FM, LPCB, VdS, CE, UKCA	SR	175 (12)	
		G5 QR Gasket	cULus	QR	250 (17)	
		G5 SR Gasket	cULus	SR	250 (17)	
			FM	SR	175 (12)	
G5-56 300	5.6 (80)	G5	cULus	QR	300 (21)	RA4014
		G5 QR Gasket	cULus	SR		
		G5 SR Gasket	cULus	SR		
G5-80	8.0 (115)	G5	cULus	QR	175 (12)	RA3412
		G5 QR Gasket	cULus	SR		
		G5 SR Gasket	cULus	SR		
G5-80F	8.0 (115)	G5	FM	SR	175 (12)	RA3417
		G5 SR Gasket				

Model G5-56 Standard Coverage, Concealed Pendent Sprinkler

SIN RA3415

Technical Specifications

Style: Flat Concealed Pendent
Threads: 1/2" NPT or ISO 7-1 R1/2
Nominal K-Factor: 5.6 (80 metric)
Max. Working Pressure:
 175 psi (12 bar)
 250 psi (17 bar) (cULus only)

Material Specifications

Fusible Link: Beryllium Nickel
Sprinkler Body: Brass Alloy
Levers: Bronze Alloy
Yoke: Brass Alloy
Sealing washer: Nickel with PTFE
Load Screw: Bronze Alloy
Towers: Copper Alloy
Pins: Stainless Steel
Deflector: Bronze Alloy
Cup: Steel

Temperature Ratings

Ordinary
 165°F (74°C) (Sprinkler)
 [135°F (57°C) (Cover Plate)]
 Intermediate
 212°F (100°C) (Sprinkler)
 [165°F (74°C) (Cover Plate)]

Sensitivity

(See Table D)

Cover Plates

Model G5
 Model G5 QR Gasket (cULus only)
 Model G5 SR Gasket (cULus and FM only)

Cover Plate Finishes

(See Table I)

Sprinkler Wrench

Model W3
 Model FC

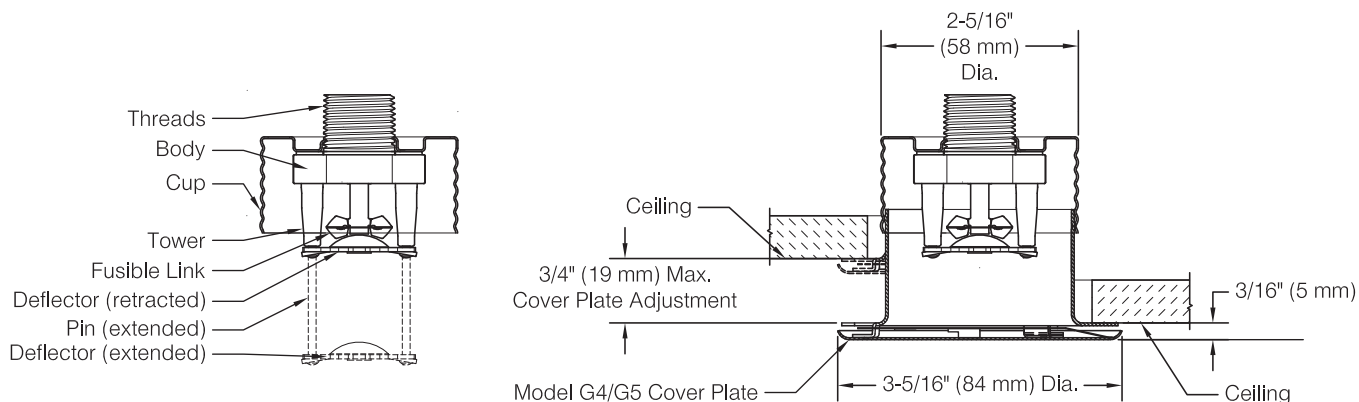
Listings and Approvals

cULus Listed (Light & Ordinary Hazard only)
 FM Approved
 LPCB Approved
 VdS Approved [165°F (74°C) only]
 CE Listed (2831-CPR-S2062)
 UKCA: 0832-UKCA-CPR-S5045



Model G5-56 Sprinkler Components and Dimensions

Figure 3



Model G5-56 Sensitivity

Table D

Cover Plate Model	Listing or Approval Agency		
	cULus	FM	LPCB, VdS, CE, UKCA
G5	QR	SR	SR
G5 QR Gasket	QR	--	--
G5 SR Gasket	SR	SR	--

QR: Quick-response

SR: Standard-response

Installation Dimensions and Cover Plate Information

						Table H
Cover Plate Model	Cover Plate Diameter Inch (mm)	Recommended Hole Diameter in Ceiling Inch (mm)	Cover Plate Adjustment Inch (mm)	Min. to Max. Face of Fitting to Ceiling ⁽¹⁾ Inch (mm)	Min. to Max. Dropped Deflector Distance below Ceiling Inch (mm)	Cover Plate Temperature Rating °F (°C)
G5	3-5/16 (84)	2-5/8 (67)	3/4 (19)	1-1/2 to 2-1/4 (38 to 57)	1/4 to 1 (6 to 25)	135°F ⁽³⁾ (57°C)
G5 QR Gasket ⁽²⁾	3-11/16 (94)					or
G5 SR Gasket ⁽²⁾	4 (101 mm)					165°F ⁽⁴⁾ (74°C)

Notes:

1. 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. A 1/2" x 1/2" brass nipple extension (Reliable P/N 6999991900) is available to assist with replacement of Reliable Model G4A sprinklers.
2. Model G5 QR Gasket and Model G5 SR Gasket cover plates are sold as assembled units including both the cover plate and gasket. Model G5 QR Gasket and Model G5 SR Gasket cover plates and gaskets are not interchangeable.
3. For use with 165°F (74°C) temperature rated sprinklers where the Maximum Ceiling Temperature does not exceed 100°F (38°C).
4. For use with 212°F (100°C) temperature rated sprinklers where the Maximum Ceiling Temperature does not exceed 150°F (66°C).

Cover Plate Finishes⁽¹⁾⁽²⁾
Table I

Standard Finishes	Special Application Finishes
White Paint Chrome ⁽⁴⁾	Off-White Paint Black Paint Custom Color Paint (Specify) ⁽³⁾ Raw Brass (Lacquered) Bright Brass ⁽⁴⁾ Finished Bronze ⁽⁴⁾ Satin Chrome ⁽⁴⁾ Stainless Steel Clad ⁽⁵⁾ Custom Printed

Notes:

1. Paint or any other coating applied over the factory finish will void all approvals and warranties.
2. Cover plates do not carry corrosion resistant listings or approvals.
3. Custom color paint is semi-gloss unless specified otherwise.
4. Not listed for use with QR sealing gasket.
5. Stainless steel clad cover plates are Type 316 Stainless Steel on the finished side and C102 Copper Alloy on the back side.

Application

Model G5 series sprinklers are standard coverage, flat plate concealed pendent sprinklers. The sprinklers are intended for use in accordance with NFPA 13 and FM Global Property Loss Prevention Data Sheets, as well as the requirements of the applicable approval agencies.

Model G5 series sprinklers are available as either Quick-response (QR) or Standard-response (SR) depending on the approval agency and cover plate selected.

Model G5 series sprinklers use Model G5 flat cover plates. Model G5 QR Gasket and G5 SR Gasket cover plates are available to limit air and dust movement through the ceiling.

Listing & Approval Agencies

Individual Model G5 series sprinkler may be listed or approved by the following agencies:

- Underwriters Laboratories, Inc. and UL Canada (cULus)
Listing Category: Sprinklers, Automatic and Open
Guide Number: VNIV
- FM Approvals (FM)
- Loss Prevention Certification Board (LPCB)
- VdS Schadenverhütung GmbH (VdS)
- EC-Certificate of Conformity 0832-CPD-2062 (CE)
- UKCA EN12259-1 : 1999 +A3:2006

See Table A and the individual sprinkler data sheets in this Bulletin for listings and approvals applicable to each sprinkler.

Installation

Model G5 series sprinklers are intended to be installed in accordance with NFPA 13, FM Global Property Loss Prevention Data Sheets, and the requirements of applicable authorities having jurisdiction. Model G5 series sprinklers must not be installed in ceilings with positive pressure in the space above. Ensure that the 4 slots in the cup are open and unobstructed following installation.

Model G5 series sprinklers are shipped with a wrench-able protective cap that should remain on the sprinkler until the sprinkler system is placed in service following construction.

Model G5 series sprinklers can be installed without removing the wrench-able protective cap using the Model W3 wrench. Alternatively, Model G5 series sprinklers can be installed using the Model FC wrench by temporarily removing the protective cap during installation of the sprinkler. The use of any other wrench to installed Model G5 series sprinklers is not permitted and may damage the sprinkler.

Wrench



Model FC

For use with Model G5 Series sprinklers without wrench-able cap installed



Model W3

For use with Model G5 Series sprinklers with wrench-able cap installed



Fully insert the Model W3 wrench over the cap until it reaches the bottom of the cup, or the Model FC wrench over the sprinkler until the wrench engages the body. Do not wrench any other part of the sprinkler/cup assembly. The Model W3 and FC wrenches are designed to be turned with a standard 1/2" square drive. Tighten the sprinkler into the fitting after applying a PTFE based thread sealant to the sprinkler's threads. Recommended installation torque is specified in Table J.

Replace any sprinkler or cover plate which has been painted (other than factory applied). Properly installed Model G5 cover plates will have an air gap that is required for proper operation, do not seal the gap or paint the cover plates. Model G5 series sprinklers have holes in the cup that must remain unobstructed.

Replace any sprinkler which has been damaged. A stock of spare sprinklers should be maintained to allow quick re-placement of damaged or operated sprinklers. Failure to properly maintain sprinklers may result in inadvertent operation or non-operation during a fire event.

Installation Torque

Table J

Sprinkler Threads	Recommended Installation Torque (min. – max.)	
	ft.lb	N-m
1/2" NPT or ISO7-1R1/2	8-18	11-24
3/4" NPT or ISO7-1R3/4	14-20	19-27

Do not exceed the maximum recommended torque. Exceeding the maximum recommended torque may cause leakage or impairment of the sprinkler. Use care when inserting or removing the wrench from the sprinkler to avoid damage to the sprinkler.

Install the cover plate by hand, pushing and then turning the cover in the clockwise direction until it is tight against the ceiling. For Model G5 QR Gasket and Model G5 SR Gasket cover plates, the gasket should be attached to the flange of the cover plate skirt only. Do not glue the gasket in place or allow the gasket to overlap both the cover plate and the flange of the skirt.

Maintenance

Reliable Model G5 series sprinkler 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.

Guarantee

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

Patents

Model G5 series sprinklers may be covered by one or more of the following patents:

U.S. Patent 6,554,077, U.S. Patent 7,275,603, U.S. Patent 8,776,903, U.S. Patent 9,248,327

Ordering Information

Specify the following when ordering.

Sprinkler

- Model [G5-28] [G5-42] [G5-56] [G5-56 300] [G5-80] [G5-80F]
- Temperature Rating [165°F (74°C)] [212°F (100°C)]
- Threads [NPT or ISO 7-1]

Cover Plate

- Model [G5, G5 QR Gasket, G5 SR Gasket]
- Finish (See Table I)

Sprinkler Wrench

- Model W3
- Model FC

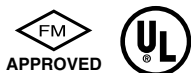
STANDARD TALL SERIES HOSE



STANDARD TALL HOSE: available in 24", 36", 48", 60", 72" hose lengths. Rated working pressure 175psi, Straight model, Standard 1" I.D.



STANDARD ELBOW TALL HOSE: 24", 36", 48", 60", 72" hose lengths. Rated working pressure 175psi, Elbow model.



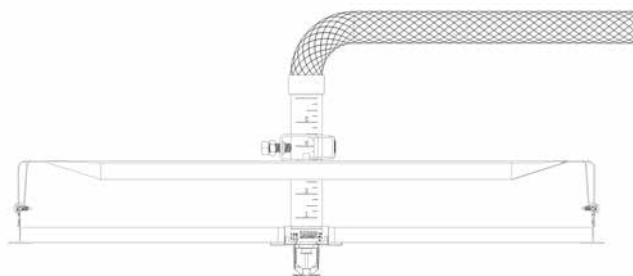
The benefits of installing FlexHead Commercial Connections include:

- Uniform bids / construction schedules
- Reduced man power and labor costs
- Retrofit existing buildings within confined spaces quickly and easily
- Increased efficiency
- Quick and easy installation
- Simple friction loss / water pressure calculations
- Relocate and reconfigure without draining and disassembling
- Flexible design provides versatility for changes in floor plan or occupancy
- Reduced service calls
- No call-backs due to quality manufacturing
- Rapid construction schedules allowing fast-track building occupancy

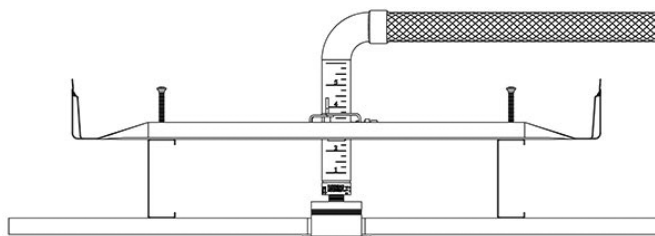
Unlike traditional hard-piped fire protection systems, FlexHead® sprinkler connections allow engineers, architects, contractors and building owners a degree of versatility previously unavailable, featuring:

- Industrial grade material
- Acceptable for use in a return-air plenum
- Perfect center-of-tile and aesthetic uniformity
- Approved for use with medium and heavy load grids (ASTM C635, 636)
- 100% leak-tested connections
- All welded, no o-rings
- Adjustable height and sprinkler alignment
- Proven technology
- Ceiling system compatibility
- Compatible with FM / UL sprinklers
- Meets 2013 NFPA 13 guidelines
- UL Approved for installation in dry wall ceiling grids

FLEXHEAD SUSPENDED CEILING DETAIL

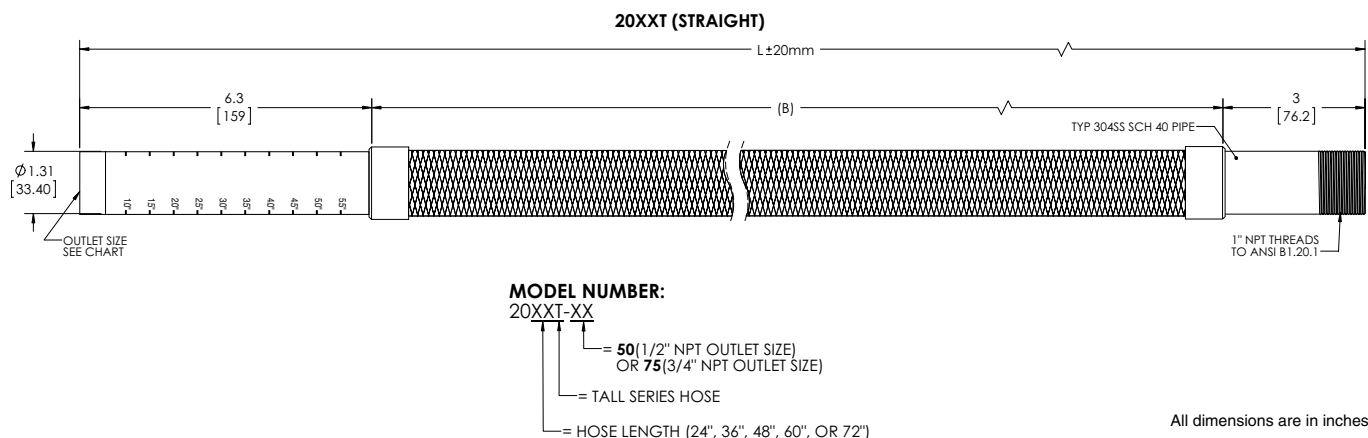


FLEXHEAD SHEETROCK CEILING DETAIL



PROJECT INFORMATION		APPROVAL STAMP
Project:		<input type="checkbox"/> Approved
Address:		<input type="checkbox"/> Approved as noted
Contractor:		<input type="checkbox"/> Not approved
Engineer:		Remarks:
Submittal Date:		
Notes 1:		
Notes 2:		

STANDARD TALL SERIES HOSE



FLEXHEAD STANDARD TALL HOSE SERIES – 1" INTERNAL DIAMETER (I.D.) HOSE SERIES

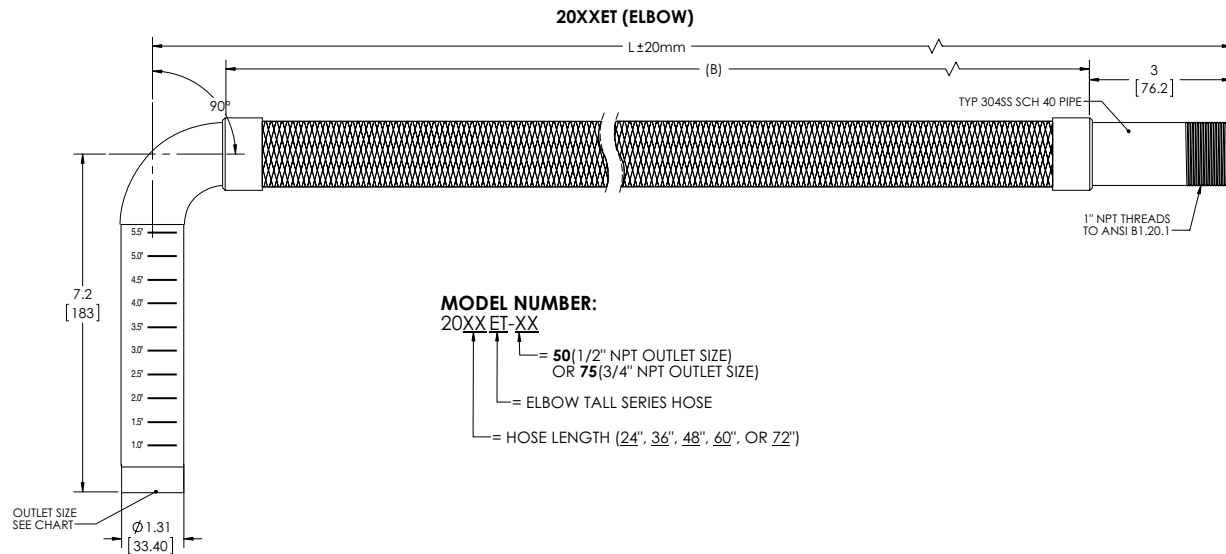
Model Number	Outlet Orifice Size	Hose Assembly Length (L)	Braid Length (B)	Minimum Bend Radius		Max. Number of 90° Bends		Equivalent Length of 1 in. Schedule 40 Pipe (Ft.)						Max. Rated Working Pressure	
				FM	UL	FM	UL	UL	FM					FM	UL
									5.6 k-Factor	8.0 k-Factor	11.2 k-Factor	14.0 k-Factor	16.8 k-Factor		
	In./cm.	In./mm.	In./mm.	In./mm.	In./mm.	In./mm.	In./mm.	Ft./m.	Ft./m.	Ft./m.	Ft./m.	Ft./m.	Ft./m.	PSI/Kpa	PSI/Kpa
2024T-50	1/2 1.27	24 610	14.7 373.4	8 200	3 76.2	1	3	11 3.4	18.4 5.6	7.7 2.3	7.6 2.3	—	—	175 1205	175 1205
2036T-50		36 914	26.7 678.2			2	3	16 4.9	26.6 8.1	11.5 3.5	11.5 3.5	—	—		
2048T-50		48 1219	38.7 983.0			3	4	24 7.3	30.3 9.2	15.3 4.6	15.3 4.7	—	—		
2060T-50		60 1524	50.7 1287.8			4	4	29 8.8	35.8 10.9	19.1 5.8	19.3 5.8	—	—		
2072T-50		72 1828	62.7 1592.6			4	4	35 10.7	45.6 13.9	23 7	23.2 7	—	—		
2024T-75	3/4 1.90	24 610	14.7 373.4	8 200	3 76.2	1	3	12 3.7	N/A			14.7 4.5	7.1 2.1	175 1205	175 1205
2036T-75		36 914	26.7 678.2			2	3	18 5.5	N/A	21.5 6.5	21.6 6.6	21.8 6.6	10.9 3.3		
2048T-75		48 1219	38.7 983.0			3	4	23 7.0	N/A	30.5 9.3	30.6 9.3	29 8.8	14.8 4.5		
2060T-75		60 1524	50.7 1287.8			4	4	29 8.8	N/A	39.5 12	39.6 12	36.1 11	18.7 5.6		
2072T-75		72 1828	62.7 1592.6			4	4	32 9.8	N/A	48.5 14.7	48.8 14.9	43.2 13.1	22.6 6.8		

Model Numbers: The "T" designates Tall Series Hose. The "50" designates 1/2" Outlet Hose Series. The "75" designates 3/4" Outlet Hose Series.

Equivalent Lengths are shown with maximum number of 90° bends at the minimum bend radius per agency. 2- 45° or 3-30° bends equal 1-90° bend. Different values were obtained by FM and UL due to the difference in minimum bend radius, testing protocol and calculation methods. Please see individual standards for more information relative to Friction Loss (equivalent length of pipe).

See listing(s) approval agency for the latest approval details.

STANDARD TALL SERIES HOSE



FLEXHEAD ELBOW TALL HOSE SERIES – 1" INTERNAL DIAMETER (I.D.) HOSE SERIES

Model Number	Outlet Orifice Size	Hose Assembly Length (L)	Braid Length (B)	Minimum Bend Radius		Max. Number of 90° Bends		Equivalent Length of 1 in. Schedule 40 Pipe (Ft.)						Max. Rated Working Pressure	
				FM	UL	FM	UL	UL	FM					FM	UL
									5.6 k-Factor	8.0 k-Factor	11.2 k-Factor	14.0 k-Factor	16.8 k-Factor		
	In./cm.	In./mm.	In./mm.	In./mm.	In./mm.	In./mm.	In./mm.	Ft./m.	Ft./m.	Ft./m.	Ft./m.	Ft./m.	Ft./m.	PSI/Kpa	PSI/Kpa
2024ET-50	1/2 1.27	24 610	19.5 495.3	8 200	3 76.2	1	3	19 5.8	26.4 8.0	6.8 2	7.4 2.2	—	—	175 1205	175 1205
2036ET-50		36 914	31.5 800.1			2	3	23 7.0	30.1 9.1	11.8 3.6	12.5 3.8	—	—		
2048ET-50		48 1219	43.5 1104.9			3	4	27 8.2	33.8 10.3	16.9 5.1	17.6 5.3	—	—		
2060ET-50		60 1524	55.5 1409.7			4	4	32 9.8	37.5 11.4	21.9 6.6	22.7 6.9	—	—		
2072ET-50		72 1828	67.5 1714.5			4	4	35 10.7	41.2 12.5	27 8.2	27.8 8.4	—	—		
2024ET-75	3/4 1.90	24 610	19.5 495.3	8 200	3 76.2	1	3	18 5.5	N/A			14.7 4.5	8.2 2.5	175 1205	175 1205
2036ET-75		36 914	31.5 800.1			2	3	23 7.0	N/A	25.2 7.7	26 7.9	21.8 6.6	13 3.9		
2048ET-75		48 1219	43.5 1104.9			3	4	23 7.0	N/A	32.9 10	33 10	29 8.8	17.8 5.4		
2060ET-75		60 1524	55.5 1409.7			4	4	29 8.8	N/A	40.6 12.3	40 12.1	36.1 11	22.6 6.8		
2072ET-75		72 1828	67.5 1714.5			4	4	32 9.8	N/A	48.5 14.7	47 14.3	43.2 13.1	27.5 8.3		

Model Numbers: The "ET" designates Elbow Tall Series Hose. The "50" designates 1/2" Outlet Hose Series. The "75" designates 3/4" Outlet Hose Series.

Equivalent Lengths are shown with maximum number of 90° bends at the minimum bend radius per agency. 2- 45° or 3-30° bends equal 1-90° bend. Different values were obtained by FM and UL due to the difference in minimum bend radius, testing protocol and calculation methods. Please see individual standards for more information relative to Friction Loss (equivalent length of pipe).

See listing(s) approval agency for the latest approval details.

INSTALLATION INSTRUCTIONS

MPO24BKT2 Multi-Position Open Hub Bracket (MPO)

Installation of FlexHead Commercial Ceiling Flexible Sprinkler Drop System

Recommend the use of proper PPE for installation. MPO24BKT2 is approved for use with the standard FlexHead® Flexible Sprinkler Hose in accordance to NFPA 13, 13D, & 13R for use in wet and dry sprinkler system. The Standard Flexible sprinkler hoses are UL approved for Limited flexibility and are intended for direct sprinkler connection.

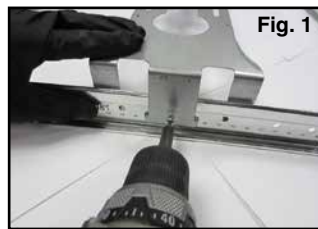
The MPO24BKT2 is pre-assembled at center tile position. (See below for additional installation configurations)



1 T Bar Ceiling Grid Installation

The MPO bracket is designed for use on ceiling grids conforming to ASTM C 635*.

Locate the center of the ceiling tile marking, align the offset screw with that marking for true center of tile installation. Insert one bracket leg at a time, applying a downward pressure on the bracket leg and T-Bar. Place the second leg on the T-Bar and repeat process. (Fig. 1)



2 FlexHead Flexible Hose Installation

Apply Teflon® tape or pipe sealant to the 1" NPT thread. Install into branch outlet. Any direction is acceptable, ensure the hose is allowed at least one bend per installation to allow for seismic movement. (See Friction Loss Chart on page 8 for details.)



Tighten hose using the pipe drop section, never apply a wrench to the braided hose for installation. (Fig. 2)

3 MPO Bracket Installation

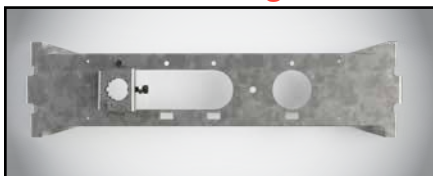
Maneuver the flexible sprinkler drop from the branch to the MPO bracket. Review that the hose length, number of bends, and bend radius are applicable for the installation per NFPA guidelines. (See corresponding hose submittal for installation information.)

The MPO bracket has an open hub for ease of installation. Open the hinge apparatus by turning the locking shaft ¼ turn. Slide the flexible hose drop into the hub. Ensure the drop is vertical, and the SS Flexible® hose is not applying a substantial moment on the bracket causing sprinkler misalignment. Latch the hinge door closed and adjust the sprinkler drop for desired ceiling height. Tighten the set screw till hand tight plus 1" turn, (100 in-lbs).

Install desired sprinkler head, per the manufacturer's installation instructions.



Installation Configurations



24" Tile – 24/4 - Quarter Mark Position



14 1/2" Wood Stud - Center Position ♦

Installation Complete



U.S and International Patent Pending: #6,123,154, #6,119,784, #6,752,218, #7,032,680, #6,488,097

20XXHE, 20XXSF, 20XXE & 20XXI, 20XXET with MPO24BKT2 Bracket has not been evaluated by UL.

*Intended for use on ASTM C 635 intermediate or heavy duty ceilings systems installed in accordance to ASTM C 636.

♦FM Approved, Installation has not been evaluated by UL.

INSTALLATION INSTRUCTIONS

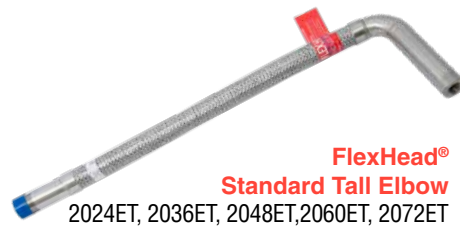
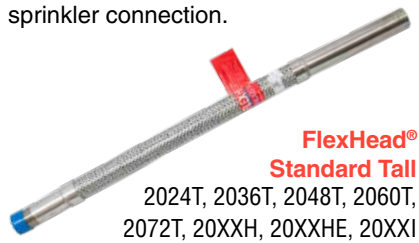
ADOXXBKT3 Adjustable Open Hub Bracket (ADO) Installation of FlexHead Commercial Ceiling Flexible Sprinkler Drop System

Recommend the use of proper PPE for installation. ADOXX-BKT3 is approved for use with the standard FlexHead® and SuperFlex™ Flexible Sprinkler Hose in accordance to NFPA 13, 13D, & 13R for use in wet and dry sprinkler system. The Standard & SuperFlex™ Flexible sprinkler hoses are UL approved for limited flexibility and are intended for direct sprinkler connection.

The ADOXXBKT3 is pre-assembled at center tile position. (See below for additional installation configurations)



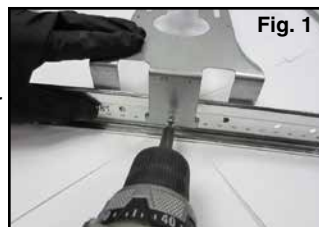
ADO16BKT3 & ADO24BKT3 UL Listed and FM Approved.
ADO30BKT3 & ADO48BKT3 FM Approved.



1 T Bar Ceiling Grid Installation

The ADO bracket is designed for use on ceiling grids conforming to ASTM C 635*.

Locate the center of the ceiling tile marking, align the offset screw with that marking for true center of tile installation. Insert one bracket leg at a time, applying a downward pressure on the bracket leg and T-Bar. Place the second leg on the T-Bar and repeat process. (Fig. 1)



2 FlexHead Flexible Hose Installation

A. For threaded fitting branch connection: Apply Teflon® tape or pipe sealant to the 1" NPT thread. Install into branch outlet. Tighten the hose using the pipe section, never apply a wrench to the braided hose when installing.

B. For groove connection follow the grooved coupling manufacturer's installation instructions.

C. For SLT connection follow Gruvlok® installation instructions, "Fig 7074SLT SlideLOK® Ready for Installation Cap & Fitting Instructions".

The FlexHead connection can be installed in any direction from the branch. Ensure the hose is allowed at least one bend per installation to allow for seismic movement. (See fiction Loss Chart on Page 3 for details)



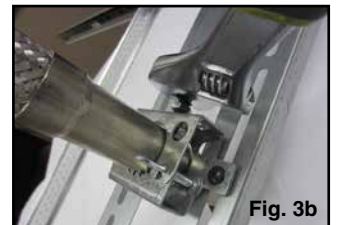
*Do not wrench on
braided hose*

3 ADO Bracket Installation

Maneuver the flexible sprinkler drop from the branch to the ADO bracket. Review that the hose length, number of bends, and bend radius are applicable for the installation per NFPA guidelines. (See corresponding hose submittal for installation information.)

The ADO bracket has an open hub for ease of installation. Open the hinge apparatus by turning the locking shaft ¼ turn. Slide the flexible hose drop into the hub. Ensure the drop is vertical, and the SS Flexible® hose is not applying a substantial moment on the bracket causing sprinkler misalignment. Latch the hinge door closed and adjust the sprinkler drop for desired ceiling height. Tighten the set screw till hand tight plus ¾" turn, (130 in-lbs). (Fig. 3a and 3b)

Install desired sprinkler head, per the manufacturer's installation instructions.



Installation Configurations



24" Tile – 24/4 - Quarter Mark Position



14½" Wood Stud - Center Position♦

Installation Complete



U.S and International Patent Pending: #6,123,154, #6,119,784, #6,752,218, #7,032,680, #6,488,097
20XXT, 220XXET, 20XXH, 20XXHE, 20XXI, with ADOXXBKT3 Bracket has not been evaluated by UL.

*Intended for use on ASTM C 635 intermediate or heavy duty ceilings systems installed in accordance to ASTM C 636.

•FM Approved, Installation has not been evaluated by UL.

INSTALLATION INSTRUCTIONS

MPT24BKT1 Multi-Position Tall Bracket (MPT)

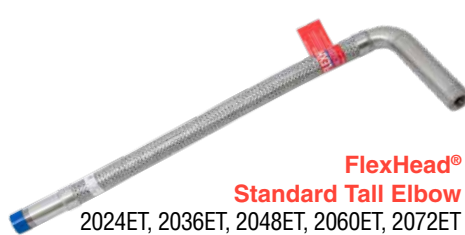
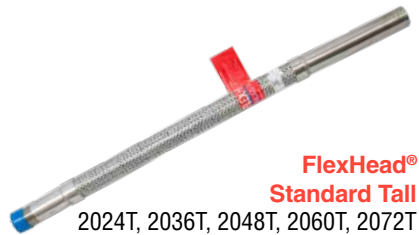
Installation of FlexHead Commercial Ceiling Flexible Sprinkler Drop System

Recommend the use of proper PPE for installation. MPT-24-BKT1 is approved for use with the standard FlexHead® and SuperFlex™ Flexible Sprinkler Hose in accordance to NFPA 13, 13D, & 13R for use in wet and dry sprinkler system. The Standard & SuperFlex™ Flexible sprinkler hoses are UL

approved for limited flexibility and are intended for direct sprinkler connection.



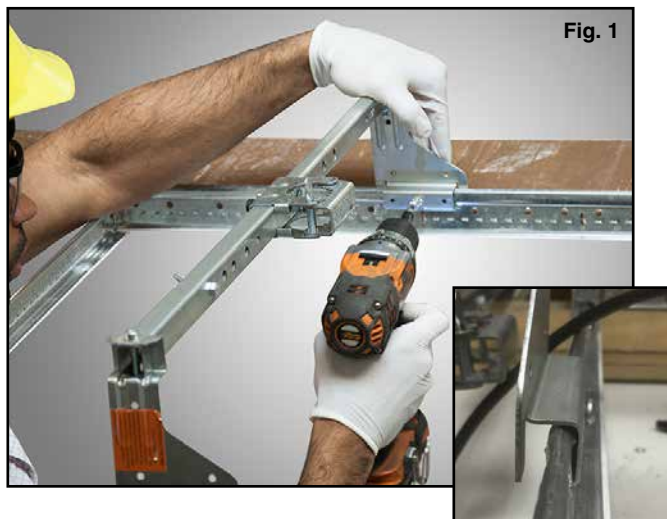
The MPT bracket is set for 24" center of tile installation. (See back side for additional installation configurations)



1 T Bar Ceiling Grid Installation

The MPT bracket is designed for use on ceiling grids conforming to ASTM C 635*.

Locate the center of the ceiling tile marking, align the offset screw with that marking for true center of tile installation. Insert one bracket leg at a time, applying a downward pressure on the bracket leg and T-Bar. Screw the self tapping screw using a #2 square head driver. Place the second leg on the T-Bar and repeat process. (Fig. 1)



2 FlexHead Flexible Hose Installation

A. For threaded fitting branch connection: Apply Teflon® tape or pipe sealant to the 1" NPT thread. Install into branch outlet. Tighten the hose using the pipe section, never apply a wrench to the braided hose when installing.

B. For groove connection follow the grooved coupling manufacturer's installation instructions.

C. For SLT connection follow Gruvlok® installation instructions, "Fig 7074SLT SlideLOK® Ready for Installation Cap & Fitting Instructions".

The FlexHead connection can be installed in any direction from the branch. Ensure the hose is allowed at least one bend per installation to allow for seismic movement. (See fiction Loss Chart on Page 3 for details)



Do not wrench on braided hose

*Intended for use on ASTM C 635 intermediate or heavy duty ceilings systems installed in accordance to ASTM C 636.

3 Secure the Flexhead Sprinkler Drop to MPT Bracket – Maneuver the flexible sprinkler drop from the branch to the MPT bracket. Review that the hose length, number of bends, and bend radius are applicable for the installation per NFPA guidelines. (See corresponding hose submittal for installation information.)

The MPT bracket has an open hub for ease of installation. Open the hinge apparatus by turning the locking shaft $\frac{1}{4}$ turn. Slide the flexible hose drop into the hub. Ensure the drop is vertical, and the SS Flexible® hose is not applying a substantial moment on the bracket causing sprinkler misalignment. Latch the hinge door close and adjust the sprinkler drop for desired ceiling height. Tightening the set screw till hand tight plus two full revolutions, (130 in-lbs). (Fig. 3a and 3b)

Install desired sprinkler head, per the manufacturer's installation instructions.

4 Ceiling Tile Installation – The flexible sprinkler drop system with MPT Bracket is able to be installed prior to the ceiling tile installation, preventing the need for sprinkler contractor tile adjustment.

For ease of tile installation, cut the largest sprinkler hole recommended by the manufacturer. The largest hole that is still covered by the sprinkler escutcheon allows for an easier install.

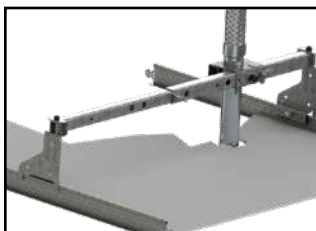
Angle the tile at 45 degrees and push the tile through the hole and up above the ceiling T-bar, maneuver the tile and allow it to drop in the proper location. (Fig. 4)



Installation Complete



Installation Configurations



24" Tile – 24/4
Quarter Mark Position



16" Tile – 16/2
Center Position



16" Metal Stud
Center Position♦



14 $\frac{1}{2}$ " Wood Stud
Center Position♦

U.S. and International Patent Pending: #6,123,154, #6,119,784, #6,752,218, #7,032,680, #6,488,097
20XXET with MPT-24BKT1 Bracket has not been evaluated by UL.
♦FM Approved, Installation has not been evaluated by UL.

FRICITION LOSS DATA & SPECIFICATIONS

Model Number	Outlet Orifice Size	Hose Assembly Length	Minimum Bend Radius		Max. Number of 90° Bends		Equivalent Length of 1 in. Schedule 40 Pipe (Ft.)								Max. Rated Working Pressure	
			FM	UL	UL	FM	UL	FM						FM	UL	
								5.6 k-Factor	8.0 k-Factor	11.2 k-Factor	14.0 k-Factor	16.8 k-Factor	22.4 k-Factor			
	In./cm.	In./mm.	In./mm.	In./mm.	In./mm.	In./mm.	Ft./m.	Ft./m.	Ft./m.	Ft./m.	Ft./m.	Ft./m.	Ft./m.	PSI/Kpa	PSI/Kpa	
SuperFlex 1" Internal Diameter (I.D.) Hose Series																
2036SF-50	½ 1.27	36 914	7 178	2 50.8	5	2	30 9.1	16.2 4.9	16.9 5.1	11.5 3.5	—	—	—			
2048SF-50		48 1219			8	3	47 14.3	28.7 8.7	29.3 8.9	15.4 4.7	—	—	—			
2072SF-50		72 1828			12	4	71 21.6	53.9 16.4	54.3 16.5	23.2 7	—	—	—			
2036SF-75	¾ 1.90	36 914	7 178	2 50.8	5	2	29 8.8	—	21.5 6.5	21.6 6.5	21.8 6.6	22 6.7	—			
2048SF-75		48 1219			8	3	44 13.4	—	30.5 9.2	30.6 9.3	31.1 9.4	30.8 9.3	—			
2072SF-75		72 1828			12	4	70 21.3	—	48.5 14.7	48.8 14.8	49.9 15.2	48.6 14.8	—			
SuperFlex Elbow 1" Internal Diameter (I.D.) Hose Series																
2036ESF-50	½ 1.27	36 914	7 178	N/A	—	2	—	25.8 7.8	26.1 7.9	12.5 3.8	—	—	—	175 1205	175 1205	
2048ESF-50		48 1219			—	3	—	36.1 11	36.3 11	17.6 5.3	—	—	—			
2072ESF-50		72 1828			—	4	—	57.3 17.4	56.9 17.3	27.8 8.4	—	—	—			
2036ESF-75	¾ 1.90	36 914	7 178	N/A	—	2	—	—	25.2 7.6	26 7.9	25.9 7.9	25.7 7.8	—	175 1205	175 1205	
2048ESF-75		48 1219			—	3	—	—	32.9 10	33 10	33 10	33 10	—			
2072ESF-75		72 1828			—	4	—	—	48.5 14.8	47 14.3	47.3 14.4	47.6 14.5	—			
Flexhead Standard Tall 1" Internal Diameter (I.D.) Hose Series																
2024T-50	½ 1.27	24 610	8 200	3 76.2	3	1	11 3.4	18.4 5.6	7.7 2.3	7.6 2.3	—	—	—	175 1205	175 1205	
2036T-50		36 914			3	2	16 4.9	26.6 8.1	11.5 3.5	11.5 3.5	—	—	—			
2048T-50		48 1219			4	3	24 7.3	30.3 9.2	15.3 4.6	15.4 4.7	—	—	—			
2060T-50		60 1524			4	4	29 8.8	35.8 10.9	19.1 5.8	19.3 5.8	—	—	—			
2072T-50		72 1828			4	4	35 10.7	45.6 13.9	23.0 7	23.2 7	—	—	—			
2024T-75	¾ 1.90	24 610	8 200	3 76.2	3	1	12 3.7	—	7.3 2.2	5.9 1.8	14.7 4.5	7.1 2.1	—	175 1205	175 1205	
2036T-75		36 914			3	2	18 5.5	—	21.5 6.5	10.4 3.1	21.8 6.6	10.9 3.3	—			
2048T-75		48 1219			4	3	23 7.0	—	30.5 9.3	14.9 4.5	29 8.8	14.8 4.5	—			
2060T-75		60 1524			4	4	29 8.8	—	39.5 12	19.4 5.9	36.1 11	18.7 5.6	—			
2072T-75		72 1828			4	4	32 9.8	—	48.5 14.7	24.0 7.3	43.2 13.1	22.6 6.8	—			
Flexhead Standard Tall Elbow 1" Internal Diameter (I.D.) Hose Series																
2024ET-50	½ 1.27	24 610	8 200	3 76.2	3	1	19 5.8	26.4 8.0	6.8 2	7.4 2.2	—	—	—	175 1205	175 1205	
2036ET-50		36 914			3	2	23 7.0	30.1 9.1	11.8 3.6	12.5 3.8	—	—	—			
2048ET-50		48 1219			4	3	27 8.2	33.8 10.3	16.9 5.1	17.6 5.3	—	—	—			
2060ET-50		60 1524			4	4	32 9.8	37.5 11.4	21.9 6.6	22.7 6.9	—	—	—			
2072ET-50		72 1828			4	4	35 10.7	41.2 12.5	27.0 8.2	27.8 8.4	—	—	—			

See Table Notes on Page 8.

FRICTION LOSS DATA & SPECIFICATIONS																
Model Number	Outlet Orifice Size	Hose Assembly Length	Minimum Bend Radius		Max. Number of 90° Bends		Equivalent Length of 1 in. Schedule 40 Pipe (Ft.)								Max. Rated Working Pressure	
			FM	UL	UL	FM	UL	FM						FM	UL	
								5.6 k-Factor	8.0 k-Factor	11.2 k-Factor	14.0 k-Factor	16.8 k-Factor	22.4 k-Factor			
	In./cm.	In./mm.	In./mm.	In./mm.	In./mm.	In./mm.	Ft./m.	Ft./m.	Ft./m.	Ft./m.	Ft./m.	Ft./m.	Ft./m.	PSI/Kpa	PSI/Kpa	
2024ET-75	¾ 1.90	24 610	8 200	3 76.2	3	1	18 5.5	—	8.8 2.6	8.7 2.6	14.7 4.5	8.2 2.5	—	175 1205	175 1205	
2036ET-75		36 914			3	2	23 7.0	—	25.5 7.7	14.2 4.2	21.8 6.6	13 3.9	—			
2048ET-75		48 1219			4	3	23 7.0	—	32.9 10	18.4 5.6	29 8.8	17.8 5.4	—			
2060ET-75		60 1524			4	4	29 8.8	—	40.6 12.3	22.7 6.9	36.1 11.0	22.6 6.8	—			
2072ET-75		72 1828			4	4	32 9.8	—	48.5 14.7	27.0 8.2	43.2 13.1	27.5 8.3	—			
Flexhead High Pressure 1" Internal Diameter (I.D.) Hose Series																
2024H-50	½ 1.27	24 610	8 200	3 76.2	3	2	11 3.4	18.4 5.6	7.7 2.3	7.6 2.3	—	—	—	300 2068	300 2068	
2036H-50		36 914			3	3	16 4.9	26.6 8.1	11.5 3.5	11.5 3.5	—	—	—			
2048H-50		48 1219			4	4	24 7.3	30.3 9.2	15.3 4.6	15.4 4.7	—	—	—			
2060H-50		60 1524			4	4	29 8.8	35.8 10.9	19.1 5.8	19.3 5.8	—	—	—			
2072H-50		72 1828			4	4	35 10.7	45.6 13.9	23.0 7	23.2 7	—	—	—			
2024H-75	¾ 1.90	24 610	8 200	3 76.2	3	2	12 3.7	—	14.7 4.5	6.8 2.0	14.7 4.5	7.1 2.1	—	300 2068	300 2068	
2036H-75		36 914			3	3	18 5.5	—	21.5 6.5	11.4 3.4	21.8 6.6	10.9 3.3	—			
2048H-75		48 1219			4	4	23 7.0	—	30.5 9.2	16.0 5.1	29 8.8	14.8 4.5	—			
2060H-75		60 1524			4	4	29 8.8	—	39.5 12	20.6 6.2	36.1 11.0	18.7 5.7	—			
2072H-75		72 1828			4	4	32 9.8	—	48.5 14.7	25.3 7.7	43.2 13.1	22.6 6.8	—			
Flexhead High Pressure Elbow 1" Internal Diameter (I.D.) Hose Series																
2024HE-50	½ 1.27	24 610	8 200	3 76.2	3	2	19 5.8	14.7 4.5	6.8 2	7.4 2.2	—	—	—	300 2068	300 2068	
2036HE-50		36 914			3	3	23 7.0	21.8 6.6	11.8 3.6	12.5 3.8	—	—	—			
2048HE-50		48 1219			4	4	27 8.2	29.0 8.8	16.9 5.1	17.6 5.3	—	—	—			
2060HE-50		60 1524			4	4	32 9.8	36.1 11	21.9 6.6	22.7 6.9	—	—	—			
2072HE-50		72 1828			4	4	35 10.7	43.2 13.1	27.0 8.2	27.8 8.4	—	—	—			
2024HE-75	¾ 1.90	24 610	8 200	3 76.2	3	2	18 5.5	—	14.7 4.5	—	14.7 4.5	8.2 2.5	—	300 2068	300 2068	
2036HE-75		36 914			3	3	23 7.0	—	25.2 7.7	26 7.9	21.8 6.6	13 3.9	—			
2048HE-75		48 1219			4	4	23 7.0	—	32.9 10	33 10	29 8.8	17.8 5.4	—			
2060HE-75		60 1524			4	4	29 8.8	—	40.5 12.3	40 12.2	36.1 11.0	22.6 6.8	—			
2072HE-75		72 1828			4	4	32 9.8	—	48.5 14.8	47 14.3	43.2 13.1	27.5 8.3	—			
Flexhead Dry Pendent System 1" Internal Diameter (I.D.) Hose Series																
2024-DPS	1 2.54	24 610	7 180	—	—	1	—	18.4 5.6	7.7 2.3	7.6 2.3	—	7.1 2.1	10.7 3.3	—	175 1205	
2036-DPS		36 914			—	2	—	26.6 8.1	11.5 3.5	11.5 3.5	—	10.9 3.3	15.1 4.6			
2048-DPS		48 1219			—	3	—	30.3 9.2	15.3 4.7	15.4 4.7	—	14.8 4.5	21.5 6.5			
2060-DPS		60 1524			—	4	—	35.8 10.9	19.1 5.8	19.3 5.9	—	18.7 5.7	25.3 7.7			
2072-DPS		72 1828			—	4	—	45.6 13.9	23 7	23.2 7	—	22.6 6.9	26.9 8.1			

See Table Notes on Page 8.

FRICTION LOSS DATA & SPECIFICATIONS															
Model Number	Outlet Orifice Size	Hose Assembly Length	Minimum Bend Radius		Max. Number of 90° Bends		Equivalent Length of 1 in. Schedule 40 Pipe (Ft.)							Max. Rated Working Pressure	
			FM	UL	UL	FM	UL	FM						FM	UL
								5.6 k-Factor	8.0 k-Factor	11.2 k-Factor	14.0 k-Factor	16.8 k-Factor	22.4 k-Factor		
	In./cm.	In./mm.	In./mm.	In./mm.	In./mm.	In./mm.	Ft./m.	Ft./m.	Ft./m.	Ft./m.	Ft./m.	Ft./m.	Ft./m.	PSI/Kpa	PSI/Kpa
Flexhead Institutional 1" Internal Diameter (I.D) Hose Series															
2024I	½ 1.27	24 610	8 200	3 76.2	3	1	11 3.4	18.4 5.6	—	—	—	—	—	175 1205	175 1205
2036I		36 914			3	3	16 4.9	26.6 8.1	—	—	—	—	—		
2048I		48 1219			4	4	24 7.3	30.3 9.2	—	—	—	—	—		
2060I		60 1524			4	4	29 8.8	35.8 10.9	—	—	—	—	—		
2072I		72 1828			4	4	35 10.7	45.6 13.9	—	—	—	—	—		
2024I	¾ 1.90	24 610	8 200	3 76.2	3	1	12 3.7	—	—	—	11.6 3.5	—	—	175 1205	175 1205
2036I		36 914			3	2	18 5.5	—	—	—	16 4.9	—	—		
2048I		48 1219			4	3	23 7.0	—	—	—	17.9 5.4	—	—		
2060I		60 1524			4	4	29 8.8	—	—	—	24.7 7.5	—	—		
2072I		72 1828			4	4	32 9.8	—	—	—	28.9 8.8	—	—		
Flexhead Institutional for use with Amerlux Ceiling System - 1" Internal Diameter (I.D) Hose Series															
2024IA	½ 1.27	24 610	8 200	—	—	1	11 3.4	—	18.4 5.6	—	—	—	—	175 1205	175 1205
2036IA		36 914			—	2	16 4.9	—	26.6 8.1	—	—	—	—		
2048IA		48 1219			—	3	24 7.3	—	30.3 9.2	—	—	—	—		
2060IA		60 1524			—	4	29 8.8	—	35.8 10.9	—	—	—	—		
2072IA		72 1828			—	4	35 10.7	—	45.6 13.9	—	—	—	—		

NOTES:

Model Numbers:

- "SF" designates SuperFlex™ Hose series.
- "ESF" designates SuperFlex™ Elbow Hose series.
- "E" designates elbow drop hose series
- "T" designates straight tall style hose
- "ET" designates elbow tall style hose series.
- "H" designates high pressure 300psi working pressure hose series.
- "HE" designates high pressure 300psi elbow hose series.
- "DPS" designates dry pendant system.
- "DT" designates drain tee hose series used in dry pendent/freezer application.
- "DPS" and "DT" models are approved for use in cold storage application (Freezer, Cold Chamber) and combine an approved flexible sprinkler hose and an approved dry pendent sprinkler. UHO-1 or UHO-3 is required to connect the flexible sprinkler hose to the dry sprinkler.
- "I" indicates institutional flexible hose.
- "A" indicates models for use with Amerlux Ceiling System.
- "50" designates ½" Outlet Hose series. The "75" designates ¾" Outlet Hose series. Inlet size 1".
- Max Ambient Temperature Rating on all model numbers are 300° F (148° C).
- Equivalent lengths are shown with maximum number of 90° bends at the minimum bend radius per agency. 2-45° or 3-30° bend equal 1-90° bend. Different values were obtained by FM and UL due to the difference in minimum bend radius, testing protocol and calculation methods. Please see individual standards for more information relative to Friction Loss (equivalent length of pipe).
- All hoses require a minimum of one bend for installation. Bend radius tool available for 3" bend "T" hose, "SF" hose does not require bend radius tool.
- FM equivalent length calculation includes Sprinkler Head Friction Loss.
- See listing(s) approval agency for the latest approval details.