

Building connections that last™



# Installation Guide

## FlexHead Commercial Ceiling Flexible Sprinkler Drop System



# INSTALLATION GUIDE

## 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)

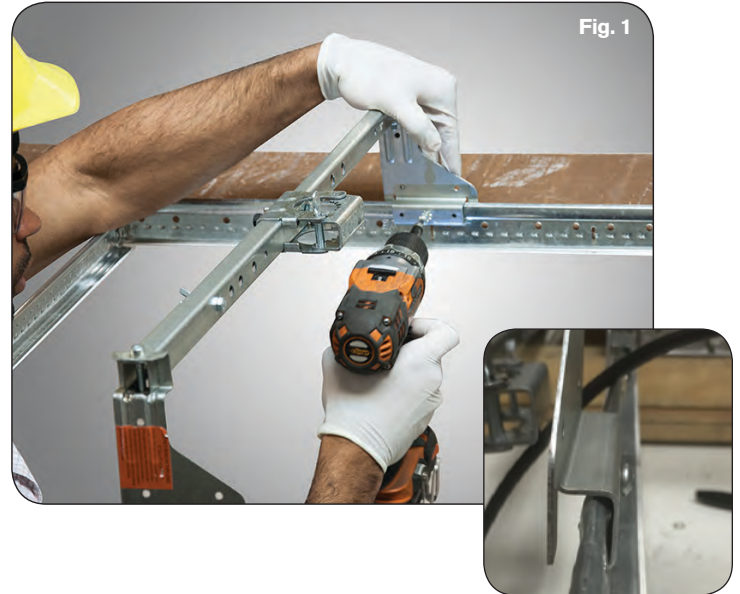
\*Intended for use on ASTM C 635 intermediate or heavy duty ceilings systems installed in accordance to ASTM C 636.



### 1 T Bar Ceiling Grid Installation

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

- A. 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. 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 3 for details.)
- B. Tighten hose using the pipe drop section, never apply a wrench to the braided hose for installation. (Fig. 2)



*Do not wrench on braided hose*

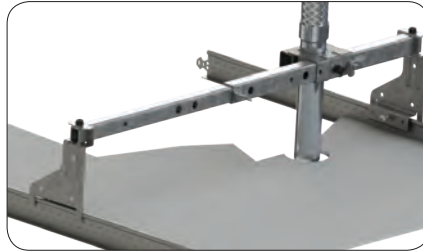
### 3 Secure the FlexHead Sprinkler Drop to MPT Bracket

- A. 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 technical data sheet for installation information.)
- B. The MPT 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 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)**
- C. Install desired sprinkler head, per the manufacturer's installation instructions.

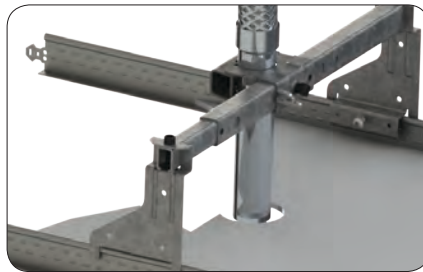
### Installation Complete



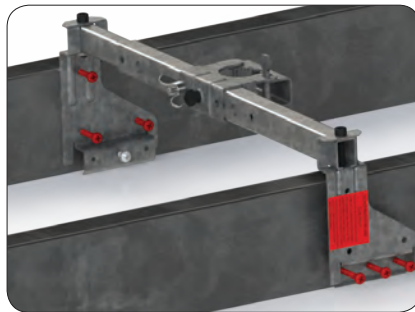
### Installation Configuration



24" Tile – 24/4  
Quarter Mark Position



16" Tile – 16/2  
Center Position



16" Metal Stud  
(Web Size > 5")  
Center Position\*

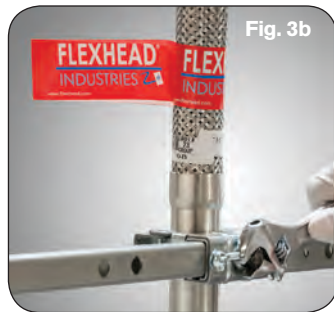


14-1/2" Wood Stud  
Center Position\*

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

\*FM Approved, Installation has not been evaluated by UL

20XXET with MPT-24BKT1  
bracket has not been evaluated  
by UL.



### 4 Ceiling Tile Installation

- A. 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.
- B. For ease of tile installation, cut the largest sprinkler hole recommended by the manufacture. The largest hole that is still covered by the sprinkler escutcheon allows for an easier install.
- C. 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)**



## FRICTION LOSS DATA & SPECIFICATIONS

MODEL NUMBER	OUTLET ORIFICE SIZE (in.) cm.	HOSE ASSEMBLY LENGTH in. (mm.)	MINIMUM BEND RADIUS		MAX NUMBER OF 90° BENDS		EQUIVALENT LENGTH OF 1in. SCHEDULE 40 PIPE (FT)						MAX RATED WORKING PRESSURE PSI (Kpa)	
			FM in. (mm.)	UL in. (mm.)	FM	UL	UL Ft (m.)	(FM) 5.6 k-factor Ft (m.)	(FM) 8.0 k-factor Ft (m.)	(FM) 11.2 k-factor Ft (m.)	(FM) 14.0 k-factor Ft (m.)	(FM) 16.8 k-factor Ft (m.)	FM PSI (Kpa)	UL PSI (Kpa)
<b>SuperFlex 1" INTERNAL DIAMETER (I.D.) HOSE SERIES</b>														
2036SF-50	½ (1.27)	36 (914)	7 (178)	2 (50.8)	2	5	30 (9.1)	16.2 (4.9)	16.9 (5.1)	11.5 (3.5)	–	–	175 (1205)	175 (1205)
2048SF-50		48 (1219)			3	8	47 (14.3)	28.7 (8.7)	29.3 (8.9)	15.4 (4.7)	–	–		
2072SF-50		72 (1828)			4	12	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)	2	5	29 (8.8)	–	21.5 (6.5)	21.6 (6.5)	21.8 (6.6)	22 (6.7)	175 (1205)	175 (1205)
2048SF-75		48 (1219)			3	8	44 (13.4)	–	30.5 (9.2)	30.6 (9.3)	31.1 (9.4)	30.8 (9.3)		
2072SF-75		72 (1828)			4	12	70 (21.3)	–	48.5 (14.7)	48.8 (14.8)	49.9 (15.2)	48.6 (14.8)		
<b>Standard FlexHead 1" INTERNAL DIAMETER (I.D.) HOSE SERIES</b>														
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)	–	–	–	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)	21.6 (6.6)	21.8 (6.6)	10.9 (3.3)		
2048T-75		48 (1219)			4	3	23 (7.0)	–	30.5 (9.3)	30.6 (9.3)	29 (8.8)	14.8 (4.5)		
2060T-75		60 (1524)			4	4	29 (8.8)	–	39.5 (12)	39.6 (12)	36.1 (11)	18.7 (5.6)		
2072T-75		72 (1828)			4	4	32 (9.8)	–	48.5 (14.7)	48.8 (14.9)	43.2 (13.1)	22.6 (6.8)		
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)	–	–		
2024ET-75	¾ (1.90)	24 (610)	8 (200)	3 (76.2)	3	1	18 (5.5)	–	–	–	14.7 (4.5)	8.2 (2.5)	175 (1205)	175 (1205)
2036ET-75		36 (914)			3	2	23 (7.0)	–	25.2 (7.7)	26 (7.9)	21.8 (6.6)	13 (3.9)		
2048ET-75		48 (1219)			4	3	23 (7.0)	–	32.9 (10)	33 (10)	29 (8.8)	17.8 (5.4)		
2060ET-75		60 (1524)			4	4	29 (8.8)	–	40.6 (12.3)	40 (12.1)	36.1 (11.0)	22.6 (6.8)		
2072ET-75		72 (1828)			4	4	32 (9.8)	–	48.5 (14.7)	47 (14.3)	43.2 (13.1)	27.5 (8.3)		

**NOTES:**

- \* Model Numbers: The "SF" designates SuperFlex™ Hose series. The "50" designates ½" Outlet Hose series. The "75" designates ¾" Outlet Hose series. Inlet size 1".
- \* "T" designates straight tall style hose and "ET" designates elbow tall style hose series.
- \* 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.
- \* 20XXSF, SuperFlex™ Hose, is UL Approved with MPT-24-BKT1 Bracket with largest k-factor of 16.8.
- \* FM equivalent length calculation includes Sprinkler Head Friction Loss.
- \* See listing(s) approval agency for the latest approval details.

### **About ASC Engineered Solutions**

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