#### INTRODUCTION

### **WARNING**



- · Read and understand all instructions before attempting to install any Victaulic VicFlex<sup>™</sup> products.
- · Wear safety glasses, hardhat, and foot protection.
- These installation instructions are intended for an experienced, trained installer.
- . The user must understand the purpose of these products, common industry standards for safety, and the potential consequences of improper product installation.

Failure to follow these instructions could cause improper sprinkler operation, serious personal injury, and/or property damage.

VicFlex<sup>™</sup> Sprinkler Fittings connect the branch line directly to the sprinkler using a flexible hose and fittings and are particularly suited for use in ceiling suspension systems. Each drop assembly comes with one flexible hose, one branch line connection nipple, one sprinkler reducing nipple, and the Style AB7 Bracket.

- VicFlex<sup>™</sup> Series AH2 and AH4 flexible hoses with the Style AB7 Bracket are FM Approved and VdS Approved.
- VicFlex<sup>™</sup> Series AH5 flexible hoses with the Style AB7 Bracket are cULus Listed
- VicFlex™ Series AH2-300 flexible hoses with the Style AB7 Bracket are FM Approved.

VicFlex<sup>™</sup> flexible hoses are City of Los Angeles (RR5659) Approved, accepted for use by the City of New York Department of Buildings (MEA 60-05-E), and have the OSHPD Pre-Approval (OPA-2255-07).

Series AH2 and AH4 flexible hoses are available in lengths from 31 - 72 inches/787 - 1829 mm with either 1/2-inch/15-mm or 3/4-inch/ 20 mm NPT or BSPT threaded outlets. Series AH5 flexible hoses are available in lengths from 24 - 72 inches/610 - 1829 mm with either ½-inch/15-mm or ¾-inch/20 mm NPT or BSPT threaded outlets.

### **TECHNICAL DATA FOR FLEXIBLE HOSES**

### Maximum Working Pressure Rating:

200 psi/14 Bar (FM Approval) 175 psi/12 Bar (UL Listing) 16 Bar/232 psi (VdS Approval)

300 psi/21 Bar (FM Approval - Series AH2-300)

Maximum Ambient Temperature Rating: 225° F/107° C

#### Connection to Branch Line:

1-inch/25-mm NPT/BSPT 20-mm/3/4-inch BSPT (VdS)

#### Minimum Bend Radius of Flexible Hose:

7 inch/178 mm (FM Approval - Series AH2 and AH4)

3 inch/76 mm (VdS Approval – Series AH2 and AH4)

4 inch/102 mm (cULus Listing – Series AH5) 8 inch/203 mm (FM Approval – Series AH2-300)

### Maximum Number of 90° Bends Per Flexible Hose:

Refer to the "Friction Loss Data" section. NOTE: For Series AH5 flexible hoses, the flexible hose should not be bent within 21/2 inches/64 mm of the connection nut at both ends.

#### Maximum K-Factor of Sprinkler to be Connected to Sprinkler Reducing Nipple:

8.0 US/115 metric (AH2, AH4) or 5.6 US/80 metric (AH5) for ½ inch/15 mm

14.0 US/200 metric (AH2, AH4) or 8.0 US/115 metric (AH5) for 34 inch/20 mm

8.0 US/115 metric for ¾ inch/20 mm (VdS)

### IMPORTANT INSTALLATION INFORMATION

- VicFlex<sup>™</sup> products must be installed according to current, applicable National Fire Protection Association (NFPA 13, 13D, 13R, etc.) standards or equivalent standards. VicFlex<sup>™</sup> products are intended to be installed in wet or dry sprinkler systems. Deviations from these standards or alterations to VicFlex™ products or sprinklers will void any Victaulic warranty. In addition, installations must meet provisions of the local authority having jurisdiction and local codes, as applicable.
- Drop ceiling construction shall meet the requirements of ASTM C635 and shall be installed in accordance with ASTM C636.
- VicFlex<sup>™</sup> Sprinkler Fittings and/or the Style AB7 Bracket must not be intermixed with other manufacturer's products.
- SHORT 90° ELBOW REDUCERS ARE TYPICALLY USED WITH CONCEALED SPRINKLERS (FM AND VdS ONLY).
- Refer to the specific product submittal for applications and listing information. These submittals are located in Sections 10 and 40 of the Victaulic G-100 Catalog or on the Victaulic website at www.victaulic.com. In addition, when installing Victaulic FireLock® Automatic Sprinklers with Victaulic VicFlex™ Sprinkler Fittings, refer to the I-40 Installation and Maintenance Instructions for details on sprinkler installation requirements.
- Size the piping system to provide at least the minimum required flow rate for the sprinkler system.
- Per NFPA requirements, flush the system to remove foreign material. Continue to flush the system until water runs clear.
- **DO NOT** install sprinkler system piping through heating ducts.
- DO NOT connect sprinkler system piping to domestic hot water
- **DO NOT** install sprinklers and sprinkler fittings where they will be exposed to temperatures that exceed the maximum ambient temperature rating for the sprinkler and sprinkler fittings.
- The flexible hose should not be bent or fluctuated up-and-down or side-to-side when it is pressurized.
- Flexible hose and fittings have limited flexibility\* and are intended only to be installed with bends not less than their respective minimum bend radii. DO NOT install flexible hose in a straight configuration.
- Protect wet piping systems from freezing temperatures.
- If construction is altered, refer to applicable standards to determine if additional sprinklers are required.
- The owner is responsible for maintaining the fire protection system in proper operating condition.
- For minimum maintenance and inspection requirements, refer to NFPA 25 and the NFPA pamphlet that describes the care and maintenance of sprinkler systems. In addition, the authority having jurisdiction may have additional maintenance, testing, and inspection requirements that must be followed.

### WARNING

 Relocation of VicFlex<sup>™</sup> products MUST be performed by qualified personnel familiar with the system's original design criteria, sprinkler listings/approvals, and state and local codes (including NFPA 13 standards).

Failure to relocate this VicFlex™ product properly could affect its performance during a fire, resulting in serious personal injury and property damage.

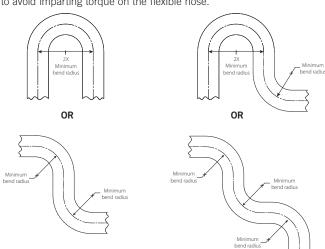
\* Reference UL 2443: Section 25.1



STYLE AB7

### FLEXIBLE HOSE BEND CHARACTERISTICS

**NOTE:** For out-of-plane (three-dimensional) bends, care must be taken to avoid imparting torque on the flexible hose.



# SERIES AH4 FLEXIBLE HOSE ASSEMBLY MODEL NUMBER CORRELATION

Series AH4 Hose Assembly Designation	Outlet Size	Series AQB Hose Assembly Designation	Series AFB Hose Assembly Designation
4114.24	1/2	AQB31HLD	AFB31HLD
AH4-31	3/4	AQB31TLD	AFB31TLD
AH4-36	1/2	AQB36HLD	AFB36HLD
AH4-30	3/4	AQB36TLD	AFB36TLD
AH4-48	1/2	AQB48HLD	AFB48HLD
	3/4	AQB48TLD	AFB48TLD
ALL4 CO	1/2	AQB60HLD	AFB60HLD
AH4-60	3/4	AQB60TLD	AFB60TLD
AH4-72	1/2	AQB72HLD	AFB72HLD
	3/4	AQB72TLD	AFB72TLD

### SERIES AH2 AND AH4 FLEXIBLE HOSE FRICTION LOSS DATA (FM)

	Langth of Flevible Hose	Outlet Size#	Equivalent Length of 1-inch/33.7-mm Schedule 40 Pipe feet/meters	Maximum Number of 90° Bends§
Model	Length of Flexible Hose inches/mm	inches	FM*	FM
AH2-31	31	1/2	23.5 7.2	2
7412 31	790	3/4	14.9 4.5	
AH4-31	31 790	1/2	20.6 6.3 16.3	2
	/90	3/4	5.0	
AH2-36	36	1/2	27.8 8.5	2
AHZ-30	36 915	3/4	19.4 5.9	2
AH4-36	36	1/2	29.7 9.0	2
AI 14-30	915	3/4	21.8 6.7	Δ
	48 1220	1/2	38.2 11.6	
AH2-48		3/4	30.3	3
AH4-48	48 1220	1/2	9.2 27.5 8.3	3
		3/4	28.3 8.6	3
	60	1/2	42.4 12.9	
AH2-60	1525	3/4	33.9 10.3	4
AU4.60	60 1525	1/2	35.7 10.9	,
AH4-60		3/4	34.9 10.6	4
			46.6	
AH2-72	72 1830	1/2	14.2	4
		3/4	37.5 11.4	7
4114.72	72 1830	1/2	45.9 14.0	,
AH4-72		3/4	41.5 12.6	4

<sup>\* 7-</sup>inch/178-mm minimum bend radius for Series AH2 and Series AH4 flexible hoses (tested with standard 5½-inch/140-mm length straight reducer). # ¾-inch outlet data shown with K14.0. For other K-factor friction loss data, refer to Victaulic submittal 10.85.

For friction loss data for elbows, refer to Victaulic submittal 10.85.

**NOTE:** Refer to the FM 1637 standard for additional information regarding friction loss test methods.



<sup>§</sup> A higher number of bends may be permitted, provided the sum of degrees is equal to or less than the total maximum allowable degrees of bends (e.g. Two 90° bends equal 180°. Three 90° bends equal 270°). The minimum bend radius and maximum number of 90° offset (bends), stated in these installation instructions, refer to the final installed condition of the hose.

### SERIES AH2 AND AH4 FLEXIBLE HOSE FRICTION LOSS DATA (VdS)

	Length of Flexible Hose	Outlet Size#	Equivalent Length of Steel Pipe According to DIN 2448, DN 25 (33.7 x 2.6) and Relating to a Flow Velocity of 5 m/s	Maximum Number of 90° Bends at 76.2-mm/3-inch Bend Radius		Maximum Number of 90° Bends at 76.2-mm/3-inch Bend Radius		
Model	mm/inches	mm	25-mm/1-ind	ch Branchline	20-mm/¾-ind	20-mm/¾-inch Branchline		
AH2-31	790 31	15 20	5.2 meters 17.1 feet	3	4.7 meters 15.6 feet	3		
AH4-31	790 31	15 20	5.5 meters 18.1 feet	3	4.7 meters 15.6 feet	3		
AH2-36	915 36	15 20	6.1 meters 19.9 feet	3	5.5 meters 17.9 feet	3		
AH4-36	915 36	15 20	6.4 meters 20.9 feet	3	5.5 meters 17.9 feet	3		
AH2-48	1220 48	15 20	8.1 meters 26.5 feet	3	7.3 meters 24.0 feet	3		
AH4-48	1220 48	15 20	8.5 meters 28.0 feet	3	7.3 meters 24.0 feet	3		
AH2-60	1525 60	15 20	10.1 meters 33.2 feet	4	9.1 meters 29.9 feet	4		
AH4-60	1525 60	15 20	10.6 meters 34.9 feet	4	9.1 meters 29.9 feet	4		
AH2-72	1830 72	15 20	12.0 meters 39.8 feet	4	11.0 meters 36.0 feet	4		
AH4-72	1830 72	15 20	12.8 meters 42.0 feet	4	11.0 meters 36.0 feet	4		

VdS NOTES: Series AH2 and AH4 Flexible Hoses are VdS Approved for use in wet systems only. Only VdS Approved pendent spray sprinklers of 10-mm, 15-mm, and 20-mm nominal diameters with K-factors of 57, 80, and 115 may be used.

The VdS Approval applies only to use in the following manufacturers' suspended ceiling systems:

Ceiling Suspension Systems for Style AB1, AB2, AB7, and AB10 Brackets			CD Profile (60 mm) Channel Ceiling Systems for Style AB8 Brackets	Hat Furring Channel Ceiling Systems for Style AB4 and AB9 Brackets	
Odenwald Richter Dipling	Armstrong AMF Chicago Metallic	Durlum Geipel Gema-Armstrong	Lindner Suckow & Fischer USG Donn	Knauf Rigips	No Specific Approval Required

Other manufacturers' ceiling systems, with comparable or better performance, can be considered for approval.

VdS standards for safety include, but are not limited to: pressure cycling, corrosion resistance, flow characteristics, vibration resistance, leakage, mechanical strength, and hydrostatic strength. Differences in equivalent lengths are due to varying test methods, per FM 1637 and VdS standards. Refer to these standards for additional information regarding friction loss test methods.

### SERIES AH2-300 FLEXIBLE HOSE FRICTION LOSS DATA (FM)

	Length of Flexible Hose	Outlet Size#	Equivalent Length of 1-inch/33.7-mm Schedule 40 Pipe feet/meters	Maximum Number of 90° Bends§
Model	Length of Flexible Hose inches/mm	inches	FM*	FM
AH2-300-31	31	1/2	23.5 7.2	2
AHZ-300-31	790	3/4	14.9 4.5	Ζ
ALID 200 26	36	1/2	27.8 8.5	2
AH2-300-36	915	3/4	19.4 5.9	2
AU2 200 40	48 1220	1/2	38.2 11.6	2
AH2-300-48		3/4	30.3 9.2	3
	60	1/2	42.4 12.9	
AH2-300-60	1525	3/4	33.9 10.3	4
	72	1/2	46.6 14.2	<u> </u>
	1830	3/4	37.5 11.4	4

<sup>\* 8-</sup>inch/203-mm minimum bend radius for Series AH2-300 flexible hoses (tested with standard 5 ½-inch/140-mm length straight reducer)

For friction loss data for elbows, refer to Victaulic submittal 10.85. **NOTE:** Differences in equivalent lengths are due to varying test methods, per UL 2443 and FM 1637 standards. Refer to these standards for additional information regarding friction loss test methods.



<sup>#</sup> ¾-inch outlet data shown with K14.0 - For other K-factor friction loss data, refer to Victaulic submittal 10.85

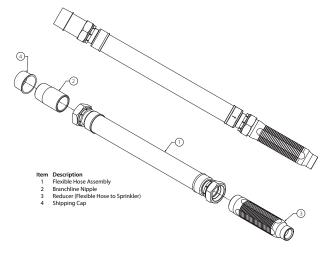
<sup>§</sup> A higher number of bends may be permitted, provided the sum of degrees is equal to or less than the total maximum allowable degrees of bends (e.g. Two 90° bends equal 180°. Three 90° bends equal 270°). The minimum bend radius and maximum number of 90° offset (bends), stated in these installation instructions, refer to the final installed condition of the hose.

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## SERIES AH5 FLEXIBLE HOSE ASSEMBLY MODEL NUMBER CORRELATION

Series AH5 Hose Assembly Designation	Outlet Size	Series AQU Hose Assembly Designation	Series AF Hose Assembly Designation
AH5-31	1/2	AQU-31	AF-31H
АПЭ-ЭТ	3/4	AQU-31	AF-31T
ALUE 26	1/2	4011.26	AF-36H
AH5-36	3/4	AQU-36	AF-36T
ALIE 40	1/2	AOU 40	AF-48H
AH5-48	3/4	AQU-48	AF-48T
AH5-60	1/2	4011.60	AF-60H
	3/4	AQU-60	AF-60T
AH5-72	1/2	401172	AF-72H
	3/4	AQU-72	AF-72T

### FLEXIBLE HOSE ASSEMBLY DRAWING



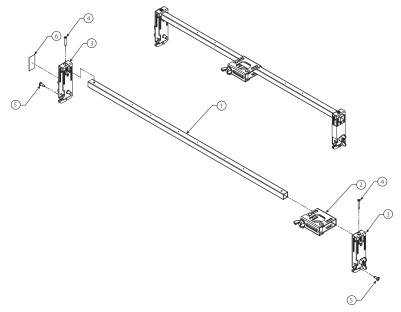
# SERIES AH5 FLEXIBLE HOSE FRICTION LOSS DATA (UL)

Length of Flexible Hose	Actual Length of Flexible Hose inches/mm	Outlet Size	Equivalent Length of 1-inch/33.7-mm Schedule 40 Pipe feet/meters	Maximum Number of 90° Bends at 4-inch/102-mm		
inches	UL	inches	UL‡	Bend Radius §		
24	28	1/2	18 5.5	2		
24	700	3/4	32 9.8	2		
31	31	1/2	27 8.2	2		
	780	3/4	33 10.1	۷		
36	40 1000	1/2	44 13.4	3		
30		3/4	48 14.6	J		
48	48	1/2	53 16.2	3		
40	1220	3/4	55 16.8	3		
60	61 1540	61	61	1/2	68 20.7	3
		3/4	63 19.2	3		
72	72 1830	1/2	73 22.3	3		
		3/4	76 23.2	3		

‡ Series AH5 at 4-inch/102-mm minimum bend radius and straight reducers § A higher number of bends may be permitted, provided the sum of degrees is equal to or less than the total maximum allowable degrees of bend (e.g. Two 90° bends equal 180°. Three 90° bends equal 270°). For friction loss data for elbows, refer to Victaulic submittal 10.85.

EXAMPLE: A 48-inch Series AH5 hose installed with two 30° bends and two 90° bends at a 4-inch bend radius is permitted and considered equivalent to the data in the table shown above. In this example, the total number of degrees is 240°, which is less than the allowable 270°.

### STYLE AB7 BRACKET ASSEMBLY DRAWING



Item	Description
1	24-inch/610-mm or 48-inch/1219-mm Long Square Bar*
2	Center Gate Assembly with Wing Nut
3	Style AB7 End Bracket with Wing Screw
4	Sheet Metal Screw
5	#8 x ½-inch Self-Drilling Screw
6	Relocation Warning Label

<sup>\*</sup> Reference submittal document 10.85 for listing information.

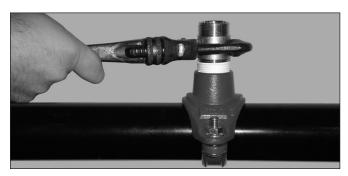


# INSTALLATION FOR ASTM C635 CEILING SUSPENSION SYSTEMS INSTALLED IN ACCORDANCE WITH ASTM C636 STANDARDS

### **WARNING**

- The flexible hose should not be bent or fluctuated up-anddown or side-to-side when it is pressurized for test.
- For Series AH5 flexible hoses, the flexible hose should not be bent within 2½ inches/64 mm of the connection nut at both ends

Failure to follow these instructions could cause improper sprinkler operation, resulting in serious personal injury and/or property damage.

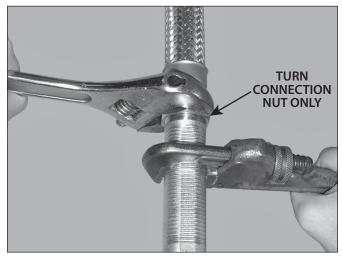


 Apply pipe joint compound or PTFE thread sealant tape to the tapered threads of the branch line connection nipple, in accordance with the pipe joint compound or tape manufacturer's instructions. Using a pipe wrench, tighten the branch line connection nipple into the branch line.



- 2. Confirm that the seal inside the nut of the flexible hose is in place and is free from damage prior to installation. Connect the nut to the branch line connection nipple, as shown above.
- DO NOT use pipe joint compound or PTFE thread sealant tape on the threads of the branch line connection nipple. The seal inside the nut of the flexible hose provides the leak-proof connection.
- FOR SERIES AH2 AND AH4 FLEXIBLE HOSES: Tighten the connection nut to a torque of 40ft-lbs/54 N•m (approximately ½ to ¾ of a turn past hand-tight).
- FOR SERIES AH5 FLEXIBLE HOSES: Tighten the connection nut to a torque of 15ft-lbs/20N•m (approximately ½ a turn past handtight).

**NOTE:** To prevent damage to the seal, tighten the assembly by applying torque only to the connection nut and DO NOT exceed the specified torque.

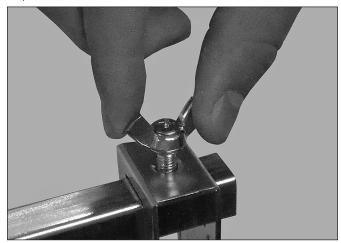


3. Confirm that the seal inside the nut of the flexible hose is in place and is free from damage prior to installation. Connect the nut to the sprinkler reducing nipple.

### SHORT 90° ELBOW REDUCERS ARE TYPICALLY USED WITH CONCEALED SPRINKLERS (FM AND VdS ONLY).

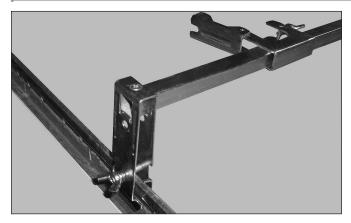
- DO NOT use pipe joint compound or PTFE thread sealant tape on the fine threads of the sprinkler reducing nipple. The seal inside the nut of the flexible hose provides the leak-proof connection.
- FOR SERIES AH2 AND AH4 FLEXIBLE HOSES: Tighten the connection nut to a torque of 40ft-lbs/54 N•m (approximately ½ to ¾ of a turn past hand-tight).
- FOR SERIES AH5 FLEXIBLE HOSES: Tighten the connection nut to a torque of 15ft-lbs/20N•m (approximately ½ a turn past handtight).

**NOTE:** To prevent damage to the seal, tighten the assembly by applying torque only to the connection nut and DO NOT exceed the specified torque.

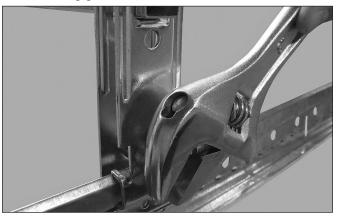


**NOTE:** For adjustable end bracket assemblies (regional availability), loosen the wing screw on top of one end bracket assembly to allow the end bracket to slide on the square bar. Follow step 4, then tighten the wing screw on top of each end bracket assembly to a torque of 36 inch-lbs/4 N•m (approximately ½ to ¾ of a turn past hand-tight) to secure the end brackets to the square bar.

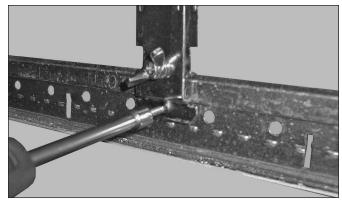




4. Attach the end brackets of the Style AB7 Bracket to the rails of an ASTM C635 ceiling suspension system installed in accordance with ASTM C636 standards. Make sure the ends of the Style AB7 Bracket engage the rails, as shown above.



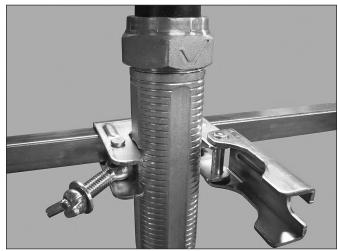
**4a.** Tighten the wing screw on each side of the end bracket assemblies to a torque of 36 inch-lbs/4 N•m (approximately ½ to ¾ of a turn past hand-tight) to secure the end brackets to the rails.



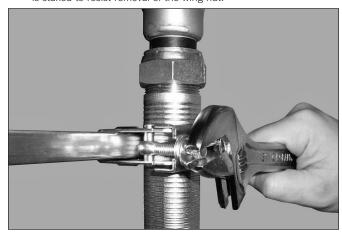
5. For installations that must meet cULus Listing requirements, or for added tamper resistance, tighten a #8 x ½-inch self-drilling screw through each Style AB7 end bracket assembly and into the ceiling grid by using a #2 recessed square drive bit. NOTE: A tamper-evident label is available and can be applied to one or both of the end brackets.



5a. For center-of tile installations, position the center gate assembly between the two center marks on the square bar, as shown above.



6. Move the center gate assembly of the Style AB7 Bracket to the desired location. Loosen the wing nut to open the center gate assembly, then slide the sprinkler reducing nipple into the center gate assembly. NOTE: The pivot screw of the center gate assembly is staked to resist removal of the wing nut.



6a. Close the center gate assembly around the sprinkler reducing nipple. Swing the pivot screw and washer into the slot on the gate, and tighten the wing nut to a torque of 40 - 50 inch-lbs/4.5 - 5.6 N●m (approximately hand-tight, plus ½ to ¾ of a turn). NOTE: Make sure the washer is seated under the head of the wing nut.

**NOTE:** Install the sprinkler by following the manufacturer's installation instructions. For Victaulic sprinklers, refer to the I-40 Victaulic FireLock Automatic Sprinklers Installation and Maintenance Instructions.



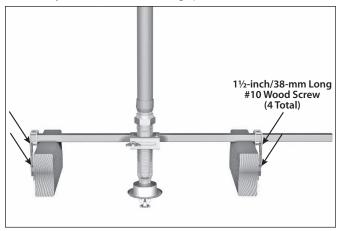
STYLE AB7

# 2 X 4 WOOD JOIST/STUD INSTALLATION (FM ONLY)

 Perform steps 1 - 3 of the "Installation for ASTM C635 Ceiling Suspension Systems Installed in Accordance with ASTM C636 Standards" section



- Using a #2 Phillips head screwdriver, remove the sheet metal screw from only one end bracket assembly of the Style AB7 Bracket.
- 2a. Remove the wing screw from each of the end bracket assemblies.
- 3. Place the end bracket assembly (with the sheet metal screw still installed) up against the outside surface of the wood joist/stud with the square bar resting on top of the wood joists/studs.
- **3a.** Slide the end bracket assembly (with the sheet metal screw removed in step 2) toward the outside surface of the opposite wood joist/stud, as shown in the graphic below.



- 4. Install the modified Style AB7 Bracket assembly to the wood joists/ studs by using four, 1½-inch/38-mm long #10 wood screws in the locations noted in the graphic shown above.
- 5. Optional: Using an %-inch/3-mm drill bit, drill a hole down through the end bracket assembly (with the sheet metal screw removed in step 2) and into the square bar to accommodate re-installation of the sheet metal screw. Re-install the sheet metal screw into the end bracket assembly/square bar.
- 6. Perform steps 5a 6a of the "Installation for ASTM C635 Ceiling Suspension Systems Installed in Accordance with ASTM C636 Standards" section to complete the installation.

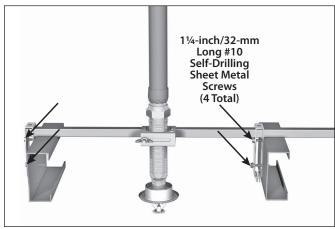
**NOTE:** For wood joists/studs larger than 2 x 4, longer sprinkler reducing nipples should be used, or the alternative installation method on the next page should be followed.

# 2 X 4 METAL JOIST/STUD INSTALLATION (FM ONLY)

 Perform steps 1 - 3 of the "Installation for ASTM C635 Ceiling Suspension Systems Installed in Accordance with ASTM C636 Standards" section



- 2. Using a #2 Phillips head screwdriver, remove the sheet metal screw from only one end bracket assembly of the Style AB7 Bracket. Slide the end bracket assembly toward the center of the square bar.
- 2a. Remove the wing screw from each of the end bracket assemblies.
- Place the end bracket assembly (with the sheet metal screw still installed) up against the outside surface of the metal joist/stud with the square bar resting on top of the metal joists/studs.
- **3a.** Slide the end bracket assembly (with the sheet metal screw removed in step 2) toward the inside, flat surface of the opposite metal joist/stud, as shown in the graphic below.



- 4. Install the modified Style AB7 Bracket assembly to the metal joists/ studs by using four, 1¼-inch/32-mm long #10 self-drilling sheet metal screws in the locations noted in the graphic shown above.
- 5. Optional: Using an %-inch/3-mm drill bit, drill a hole down through the end bracket assembly (with the sheet metal screw removed in step 2) and into the square bar to accommodate re-installation of the sheet metal screw. Re-install the sheet metal screw into the end bracket assembly/square bar.
- 6. Perform steps 5a 6a of the "Installation for ASTM C635 Ceiling Suspension Systems Installed in Accordance with ASTM C636 Standards" section to complete the installation.

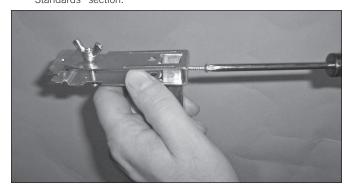
**NOTE:** For wood joists/studs larger than 2 x 4, longer sprinkler reducing nipples should be used, or the alternative installation method on the next page should be followed.



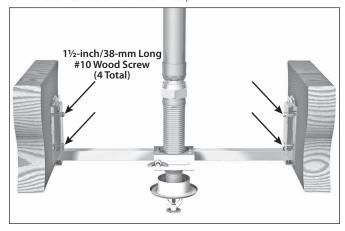
STYLE AB7

# ALTERNATIVE WOOD JOIST/STUD INSTALLATION (FM ONLY)

 Perform steps 1 - 3 of the "Installation for ASTM C635 Ceiling Suspension Systems Installed in Accordance with ASTM C636 Standards" section



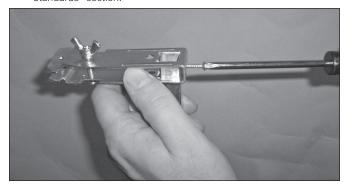
- Using a #2 Phillips head screwdriver, remove the sheet metal screw from only one end bracket assembly of the Style AB7 Bracket. Remove the end bracket assembly from the square bar.
- 2a. Remove the wing screw from each of the end bracket assemblies.
- 3. Measure the distance between the wood joists/studs.
- 3a. Cut the square bar to the length needed to fit between the two wood joists/studs. This length must be measured from the outside of the end bracket assembly (with the wing screw removed) to the point on the square bar that will butt up against the other wood joist/stud.
- 4. Place the end bracket assembly, removed in step 2, onto the end of the square bar so that the square bar is flush with the outside of the end bracket assembly. Mark the new location where the sheet metal screw will be re-installed. Drill an 1/s-inch/3-mm hole at the mark on the square bar to accommodate re-installation of the sheet metal screw.
- 5. Re-install the end bracket assembly to the square bar with the sheet metal screw removed in step 2.



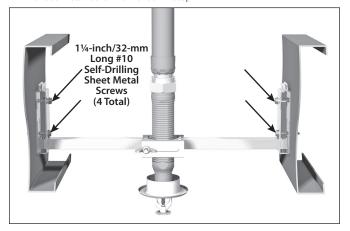
- **6.** Install the modified Style AB7 Bracket assembly between the wood joists/studs by using four, 1½-inch/38-mm long #10 wood screws in the locations noted in the graphic shown above.
- Perform steps 5a 6a of the "Installation for ASTM C635 Ceiling Suspension Systems Installed in Accordance with ASTM C636 Standards" section to complete the installation.

## ALTERNATIVE METAL JOIST/STUD INSTALLATION (FM ONLY)

 Perform steps 1 - 3 of the "Installation for ASTM C635 Ceiling Suspension Systems Installed in Accordance with ASTM C636 Standards" section.



- 2. Using a #2 Phillips head screwdriver, remove the sheet metal screw from only one end bracket assembly of the Style AB7 Bracket. Remove the end bracket assembly from the square bar.
- **2a.** Remove the wing screw from each of the end bracket assemblies.
- 3. Measure the distance between the metal joists/studs.
- **3a.** Cut the square bar to the length needed to fit between the two metal joists/studs. This length must be measured from the outside of the end bracket assembly (with the wing screw removed) to the point on the square bar that will butt up against the other metal joist/stud.
- 4. Place the end bracket assembly, removed in step 2, onto the end of the square bar so that the square bar is flush with the outside of the end bracket assembly. Mark the new location where the sheet metal screw will be re-installed. Drill an 1/8-inch/3-mm hole at the mark on the square bar to accommodate re-installation of the sheet metal screw.
- Re-install the end bracket assembly to the square bar with the sheet metal screw removed in step 2.



- 6. Install the modified Style AB7 Bracket assembly between the metal joists/studs by using four, 1 ¼-inch/32-mm long #10 self-drilling sheet metal screws in the locations noted in the graphic shown above
- Perform steps 5a 6a of the "Installation for ASTM C635 Ceiling Suspension Systems Installed in Accordance with ASTM C636 Standards" section to complete the installation.

