

Victaulic® Vic-Flex™ Sprinkler Fittings

Series AH2 and AH2-CC Braided Flexible Hoses



Series AH2



Series AH2-CC

1.0 PRODUCT DESCRIPTION

Available Sizes by Component

- **Series AH2 Braided Hose:** 31, 36, 48, 60, 72"/790, 914, 1219, 1525, 1830 mm. Note: length includes adapter nipple and 5.75"/140 mm straight reducer.
- **Series AH2-CC Braided Hose:** 31, 36, 48, 60, 72"/790, 914, 1219, 1525, 1830 mm. Note: length includes captured coupling and 5.75"/140 mm straight reducer.
- **Sprinkler Reducers:** ½" and ¾"/15 and 20 mm sprinkler connections and 5.75, 9, 13"/140, 230, 330 mm straight lengths and short, long 90° elbows. Note: The short 90° elbow is typically used with concealed sprinklers while the long 90° elbow is typically used in the installation of recessed pendent sprinklers. Low Profile long, and short 90° elbows for use with Style AB11 Bracket.
- **Inlet Connections:**
 - 1"/25 mm Grooved IGS
 - 1"/25 mm NPT or BSPT adapter nipples for attaching to pipe and fittings outlined in NFPA standards.
 - ¾"/20 mm NPT or BSPT adapter nipples available for VdS.
 - 1 ¼"/ 32mm BSPT adapter nipples available for LPCB.
- **Brackets:**
 - Style AB1 for suspended and hard-lid ceilings, allows installation before most ceiling tiles in place
 - Style AB2 for suspended and hard-lid ceilings, allows for vertical sprinkler adjustment, and installation before most ceiling tiles in place
 - Style AB3 for surface mount applications, wood, metal and block walls
 - Style AB4 for hard-lid ceilings with hat furring channel grid systems, allows for vertical sprinkler adjustment
 - Style AB5 for hard-lid ceilings, allows for vertical sprinkler adjustment
 - Style AB7 for suspended and hard-lid ceilings
 - Style AB7 Adjustable for suspended and hard-lid ceilings
 - Style AB8 for hard-lid ceilings with CD 60/27 profile metal studs (regionally available)
 - Style AB9 for hard-lid ceilings with hat furring channel grid systems
 - Style AB10 for Armstrong® TechZone™ ceilings
 - Style AB11 for lay-in panel suspended t-grid ceilings or drywall suspended t-grid ceilings, allows for low profile installations (use only with 90° low profile elbows)

ALWAYS REFER TO ANY NOTIFICATIONS AT THE END OF THIS DOCUMENT REGARDING PRODUCT INSTALLATION, MAINTENANCE OR SUPPORT.

System No.		Location	
Submitted By		Date	

Spec Section		Paragraph	
Approved		Date	

1.0 PRODUCT DESCRIPTION (Continued)

Maximum Working Temperature

- 225°F/107°C

Maximum Working Pressure

- 200 psi/1375 kPa (FM Approval)
- 175 psi/1206 kPa (cULus Listed)
- 1600 kPa/232 psi (VdS/LPCB Approved)

Connections

- To adapter nipple (inlet) via
 - 1"/25.4 mm Grooved IGS
 - 1"/25.4 mm NPT or BSPT male thread
 - ¾"/20 mm BSPT male thread (VdS only)
 - 1 ¼"/32 mm BSPT male thread (LPCB only)
- To sprinkler head (outlet) via ½" or ¾"/15 mm or 20 mm

Minimum Bend Radius

- 7"/178 mm (FM Approval)
- 2"/51 mm (cULus Listed)
- 3"/76.2 mm (VdS/LPCB Approved)

Maximum Allowable Sprinkler K-Factors

- FM (½"/15mm reducer) K5.6/8,1 (S.I.), (¾"/20mm reducer) K14.0/20,2 (S.I.)
- cULus (½"/15mm reducer) K8.0/11,5 (S.I.), (¾"/20mm reducer) K14.0/20,2 (S.I.)
- VdS/LPCB (½"/15mm reducer) K5.6/8,1 (S.I.), (¾"/20mm reducer) K8.0/11,5 (S.I.)

2.0 CERTIFICATION/LISTINGS



3.0 SPECIFICATIONS – MATERIAL

Series AH2

- **Flexible Hose:** 300-series Stainless Steel
- **Collar/Weld Fitting:** 300-series Stainless Steel
- **Gasket Seal:** Victaulic EPDM
- **Isolation Ring:** Nylon
- **Nut and Nipple:** Carbon Steel, Zinc Plated
- **Reducer (½"/15 mm or ¾"/20 mm):** Carbon Steel, Zinc-Plated
- Low Profile Elbows: Stainless Steel

Brackets: Carbon Steel, Zinc-Plated

Series AH2-CC

- **Flexible Hose:** 300-series Stainless Steel
- **Collar/Weld Fitting:** 300-series Stainless Steel
- **Gasket Seal:** Victaulic EPDM
- **Isolation Ring:** Nylon
- **Nut and Nipple:** Carbon Steel, Zinc Plated
- **Reducer (½"/15 mm or ¾"/20 mm):** Carbon Steel, Zinc-Plated
- **Housing:** Ductile iron conforming to ASTM A 536, Grade 65-45-12. Ductile iron conforming to ASTM A 395, Grade 65-45-15, is available upon special request.

Coupling Housing Coating:

- Orange enamel (North America, Asia Pacific).
- Red enamel (Europe).
- Hot dipped galvanized.

Gasket:¹

- **Grade “E” EPDM (Type A)**

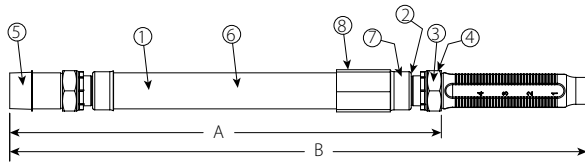
FireLock EZ products have been Listed by Underwriters Laboratories Inc., Underwriters Laboratories of Canada Limited, and Approved by Factory Mutual Research for wet and dry (oil free air) sprinkler services within the rated working pressure.

¹ Services listed are General Service Guidelines only. It should be noted that there are services for which these gaskets are not compatible. Reference should always be made to the latest [Victaulic Gasket Selection Guide](#) for specific gasket service guidelines and for a listing of services which are not compatible.

- **Bolts/Nut:** Zinc electroplated carbon steel, trackhead meeting the physical and chemical requirements of ASTM A 449 and physical requirements of ASTM A 183.
- **Linkage:** CrMo Alloy Steel zinc electroplated per ASTM B633 Zn/Fe 5, Type III Finish

4.0 DIMENSIONS

Product Details - Series AH2 Braided Hose

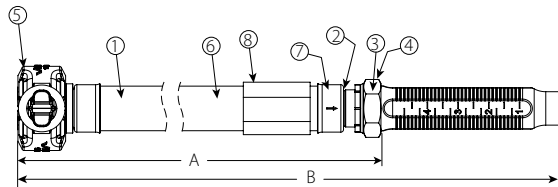


Item	Description
1	Flexible Hose
2	Isolation Ring
3	Gasket
4	Nut
5	Adapter Nipple
6	Braid
7	Collar/Weld Fitting
8	Sleeve

Hose Length Dimensions

Hose Length inches mm	A inches mm	B inches mm
31/790	25.3/641	31/790
36/915	31.3/794	36/915
48/1219	42.3/1073	48/1220
60/1525	54.3/1378	60/1525
72/1830	66.3/1683	72/1830

Series AH2-CC Braided Hose



Item	Description
1	Flexible Hose
2	Isolation Ring
3	Gasket
4	Nut
5	Captured Coupling
6	Braid
7	Collar/Weld Fitting
8	Sleeve

Hose Length inches mm	A inches mm	B inches mm
31/790	24.5/622	29.8/757
36/915	29.5/749	34.8/884
48/1219	41.5/1054	46.8/1189
60/1525	53.5/1359	58.8/1494
72/1830	65.5/1664	70.8/1798

4.0 DIMENSIONS (Continued)

Standard Reducer

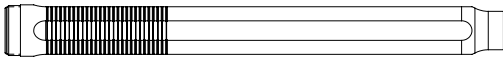


5.75"/140 mm straight reducer

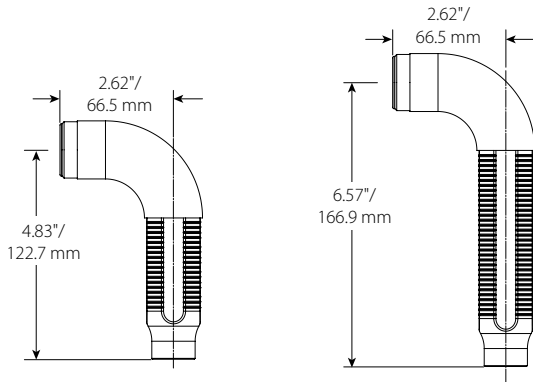
Optional Reducers



9.0"/229 mm straight reducer



13.0"/330 mm straight reducer



Short 90° elbow reducer

Long 90° elbow reducer

NOTE

- The Short 90° elbow reducer is typically used with concealed sprinklers while the longer 90 elbow is typically used in the installation of recessed pendent sprinklers.
- FM/VdS Approved only.

4.1 DIMENSIONS

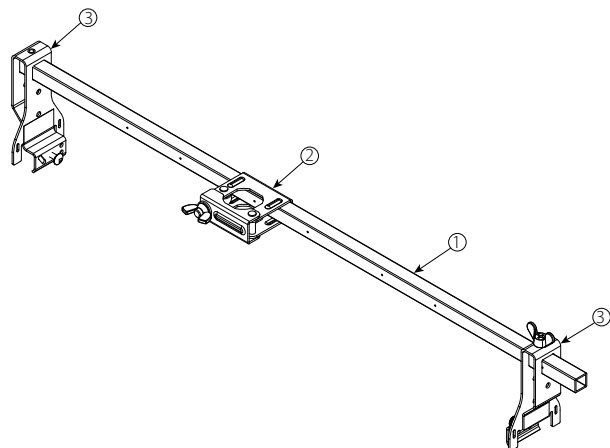
VicFlex Brackets

Style AB1

- Suspended Ceilings
- Hard-Lid Ceilings (FM Only)

Item	Description
1	24"/610mm or 48"/1219mm Square Bar*
2	Patented Center Bracket
3	End Bracket

*Both sizes FM/VdS/LPCB approved, cULus listed

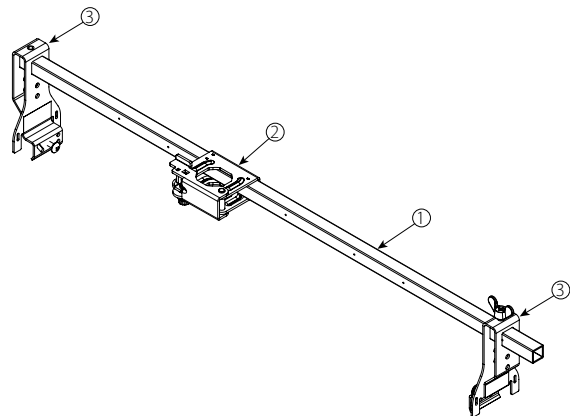


Style AB2

- Suspended Ceilings
- Hard-Lid Ceilings

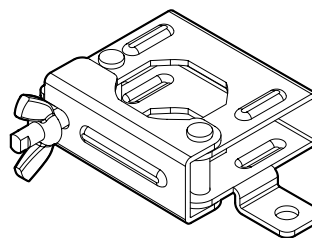
Item	Description
1	24"/610mm or 48"/1219mm Square Bar*
2	Patented Vertically Adjustable Center Bracket
3	End Bracket

*Both sizes FM/VdS/LPCB approved, cULus listed



Style AB3

- Surface Mount Applications
- FM Approved



4.2 DIMENSIONS

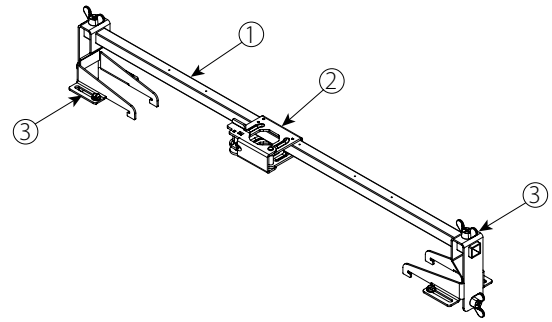
VicFlex Brackets

Style AB4

- Hard-Lid Ceilings with Hat furring channel grid system

Item	Description
1	24"/610 mm or 48"/1219 mm Square Bar*
2	Patented Vertically Adjustable Center Bracket
3	End Bracket for Hat Furring Channel

*Both sizes FM/VdS approved, cULus listed

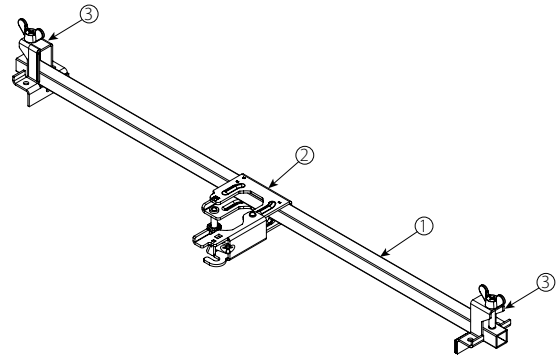


Style AB5

- Hard-Lid Ceilings

Item	Description
1	24"/610 mm or 48"/1219 mm Square Bar*
2	Patented Vertically Adjustable Center Bracket
3	End Bracket

*Both sizes FM/VdS approved, cULus listed

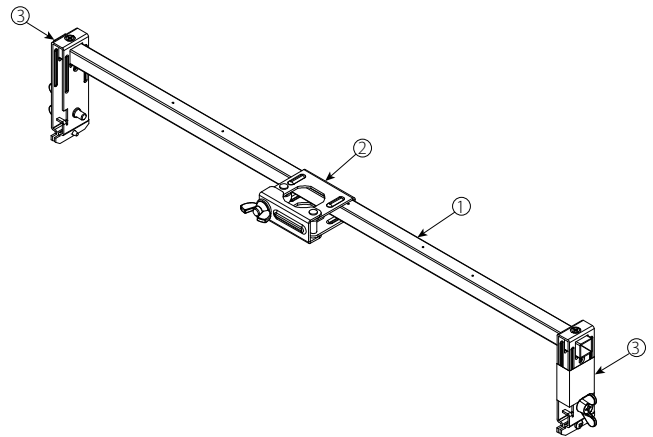


Style AB7

- Suspended Ceilings
- Hard-Lid Ceilings

Item	Description
1	24"/610 mm or 48"/1219 mm Square Bar*
2	Patented 1-Bee2® Center Bracket
3	End Bracket

*Both sizes FM/VdS approved.

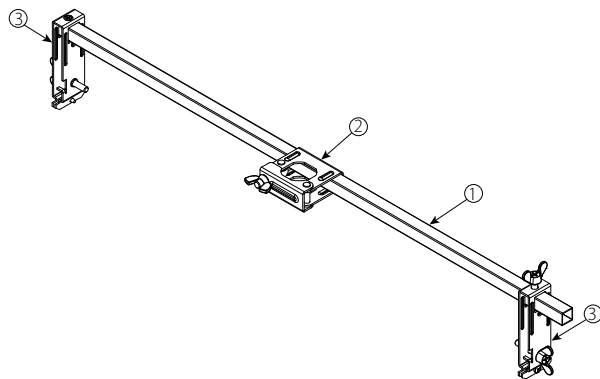


Style AB7 Adjustable

- Suspended Ceilings
- Hard-Lid Ceilings

Item	Description
1	700 mm or 1400 mm Square Bar*
2	Patented 1-Bee2® Center Bracket
3	End Bracket (adjustable)

*Both sizes FM/VdS approved.



4.3 DIMENSIONS

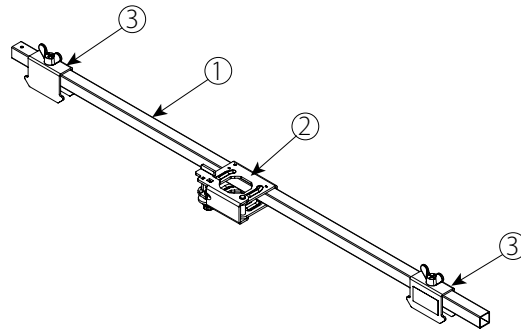
VicFlex Brackets

Style AB8

- Hard-Lid Ceilings

Item	Description
1	700 mm or 1400 mm Square Bar*
2	Patented Vertically Adjustable Center Bracket
3	End Bracket

*Both sizes FM/VdS approved.

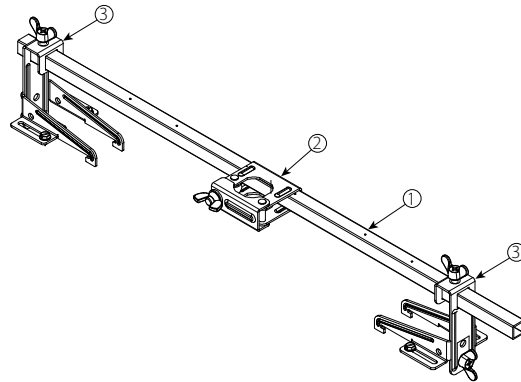


Style AB9

- Hard-Lid ceilings with Hat furring channel grid system

Item	Description
1	24"/610 mm or 48"/1219 mm Square Bar*
2	Patented 1-Bee2® Center Bracket
3	End Bracket for Hat Furring Channel

*Both sizes FM/VdS approved.

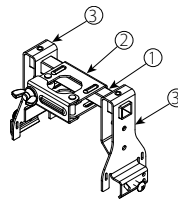


Style AB10

- Suspended ceilings
- Armstrong® TechZone™

Item	Description
1	6"/152 mm Square Bar*
2	Patented 1-Bee2® Center Bracket
3	End Bracket

*FM/VdS approved, cULus listed.



4.3 DIMENSIONS (Continued)

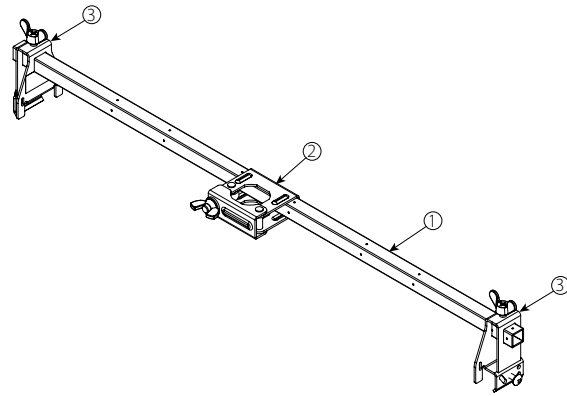
VicFlex Brackets

Style AB11

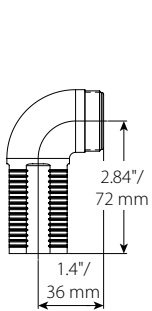
- Suspended ceilings
- Hard-Lid Ceilings

Item	Description
1	24"/610 mm or 48"/1219 mm Square Bar*
2	Patented 1-Bee2® Center Bracket
3	End Bracket

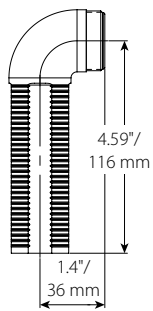
*FM/VdS approved, cULus listed.



Low Profile



Short 90° elbow reducer



Long 90° elbow reducer

NOTE

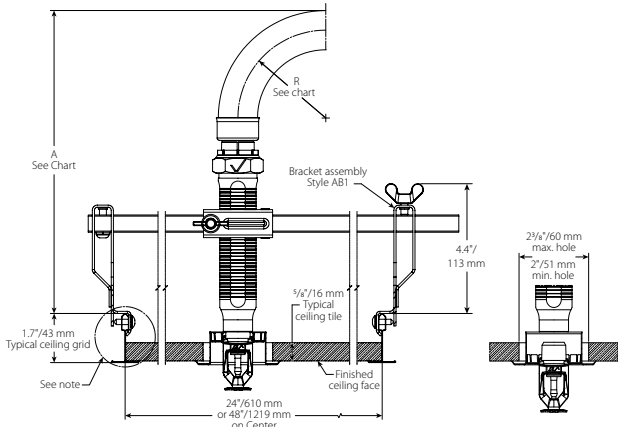
- The Short 90° elbow reducer is typically used with concealed sprinklers while the longer 90 elbow is typically used in the installation of recessed pendent sprinklers.

4.4 DIMENSIONS

CLEARANCES ABOVE CEILING

Series AH2 Braided Hose and Style AB1 Bracket

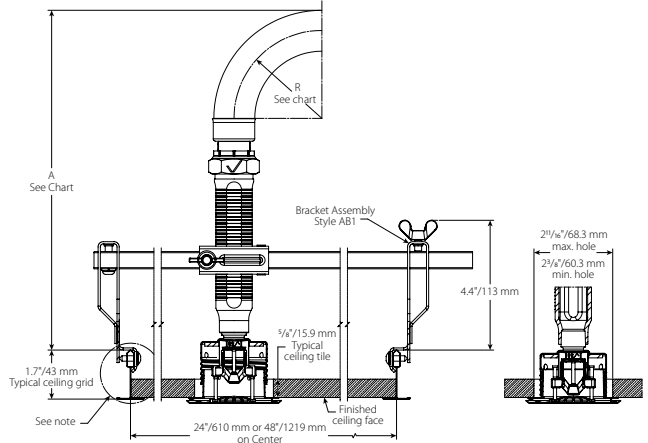
Suspended Ceiling Grid with Recessed Sprinkler



V2707 3/4"/19mm Max. Recess

Dimension		inches	inches	inches	inches	inches	inches
		mm	mm	mm	mm	mm	mm
R	Minimum Bend Radius	2	3	4	5	6	7
		50	80	100	125	150	175
A	Min.	10.8	11.8	12.8	13.8	14.8	15.8
		273	299	324	349	375	400

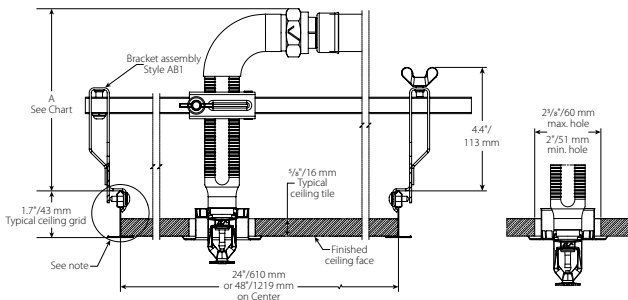
Suspended Ceiling Grid with Concealed Sprinkler



V3802 1/2"/12.7mm Max. Recess

Dimension		inches	inches	inches	inches	inches	inches
		mm	mm	mm	mm	mm	mm
R	Minimum Bend Radius	2	3	4	5	6	7
		50	80	100	125	150	175
A	Min.	10.1	11.1	12.1	13.1	14.1	15.1
		269	281	307	333	358	383

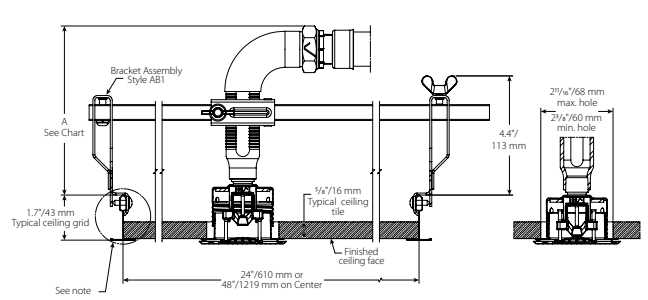
Suspended Ceiling Grid with Recessed Sprinkler with 90° Elbow (Long)



V2707 3/4"/19mm Max. Recess

Dimension		inches	mm
A	Min.	8.0	200

Suspended Ceiling Grid with Concealed Sprinkler with 90° Elbow (Short)



V3802 1/2"/12.7mm Max. Recess

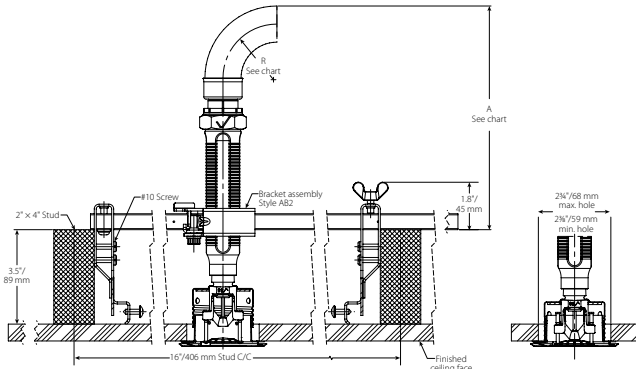
Dimension		inches	mm
A	Min.	5.8	147

4.4 DIMENSIONS (Continued)

CLEARANCES ABOVE CEILING

Series AH2 Braided Hose and Style AB2 Bracket

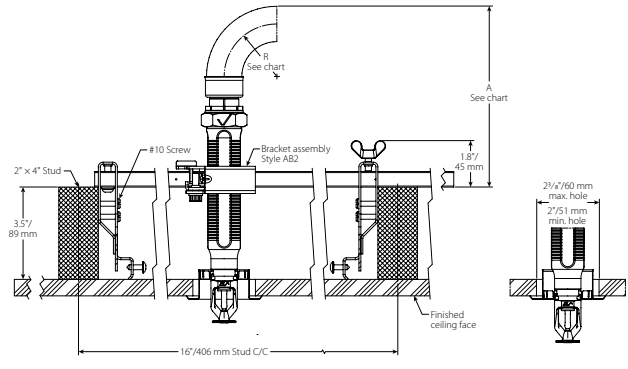
Hard-lid Ceiling with Concealed Sprinkler



V3802 1/2"/12.7mm Max. Recess

Hose Clearance Chart							
Dimension		inches	inches	inches	inches	inches	inches
		mm	mm	mm	mm	mm	mm
R	Minimum Bend Radius	2	3	4	5	6	7
		50	80	100	125	150	175
A	Min.	7.6	8.6	9.6	10.6	11.6	12.6
		193	218	244	269	295	320

Hard-lid Ceiling with Recessed Sprinkler



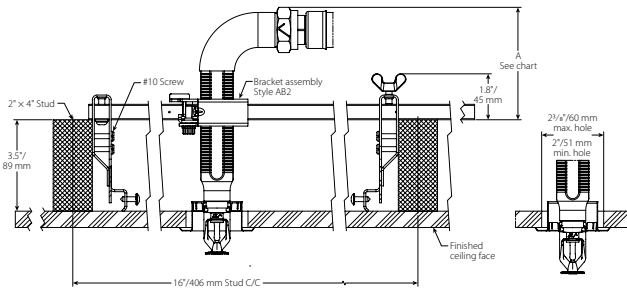
V2707 3/4"/19mm Max. Recess

Hose Clearance Chart							
Dimension		inches	inches	inches	inches	inches	inches
		mm	mm	mm	mm	mm	mm
R	Minimum Bend Radius	2	3	4	5	6	7
		50	80	100	125	150	175
A	Min.	6.1	7.1	8.1	9.1	10.1	11.1
		155	180	206	231	256	282

NOTE

- Variations of ceiling grids, sprinkler heads, brackets, and hoses are permitted but may result in clearance differences from the figures above.

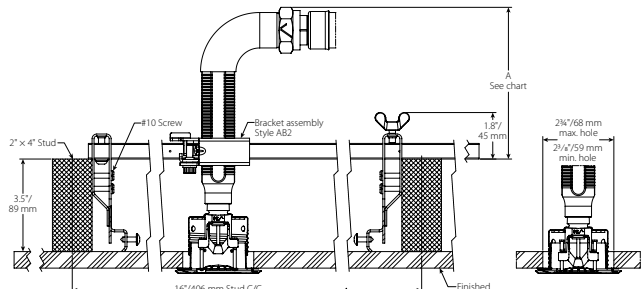
Hard-lid Ceiling Grid with Concealed Sprinkler with 90° Elbow (Short)



V3802 1/2"/12.7mm Max. Recess

Hose Clearance Chart		
Dimension		inches mm
A	Min.	5.0 127

Hard-lid Ceiling with Recessed Sprinkler with 90° Elbow (Long)



V2707 3/4"/19mm Max. Recess

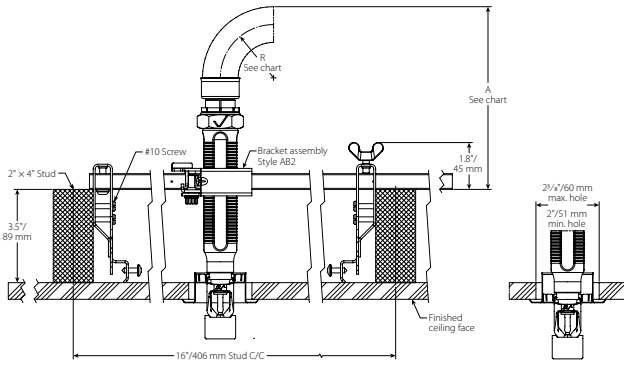
Hose Clearance Chart		
Dimension		inches mm
A	Min.	3.6 91

4.5 DIMENSIONS

CLEARANCES WITHIN SIDEWALL

Series AH2 Braided Hose and Style AB2 Bracket

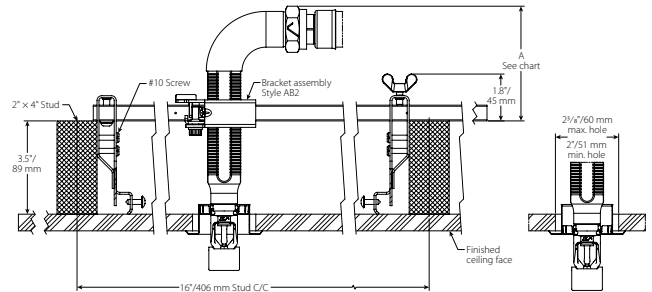
Horizontal Sidewall Sprinkler



V2707 3/4\"/>

Hose Clearance Chart							
Dimension		inches					
		mm	mm	mm	mm	mm	mm
R	Minimum Bend Radius	2	3	4	5	6	7
		50	80	100	125	150	175
A	Min.	6.1	7.1	8.1	9.1	10.1	11.1
		155	180	206	231	256	282

Horizontal Sidewall Sprinkler with 90° Elbow (Long)



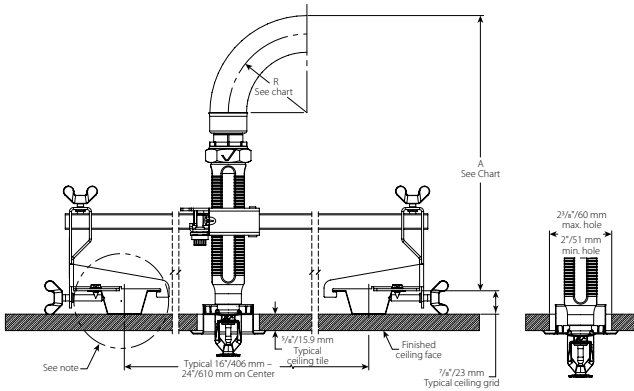
V2707 3/4\"/>

Hose Clearance Chart		
Dimension		inches
		mm
A	Min.	3.6
		91

4.6 DIMENSIONS

CLEARANCES ABOVE CEILING

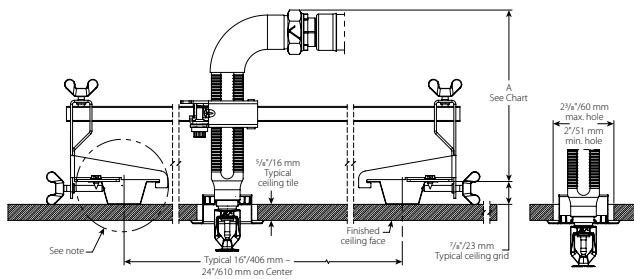
Series AH2 Braided Hose and Style AB4 Bracket
 Hat Furring Channel Grid with Recessed Sprinkler



V2707 3/4" 19mm Max. Recess

Hose Clearance Chart		inches	inches	inches	inches	inches	inches
Dimension		mm	mm	mm	mm	mm	mm
R	Minimum Bend Radius	2	3	4	5	6	7
		50	80	100	125	150	175
A	Min.	10.3	11.3	12.3	13.3	14.3	15.3
		262	287	313	338	363.5	389

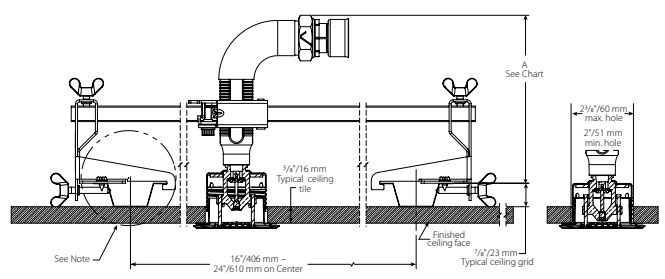
Hat Furring Channel Grid with Recessed Sprinkler with 90° Elbow (Long)



V2707 3/4" 19mm Max. Recess

Hose Clearance Chart		inches	mm
A	Min.	8	200

Hat Furring Channel Grid with Concealed Sprinkler with 90° Elbow (Short)



V2707 3/4" 19mm Max. Recess

Hose Clearance Chart		inches	mm
A	Min.	5.9	149

NOTE

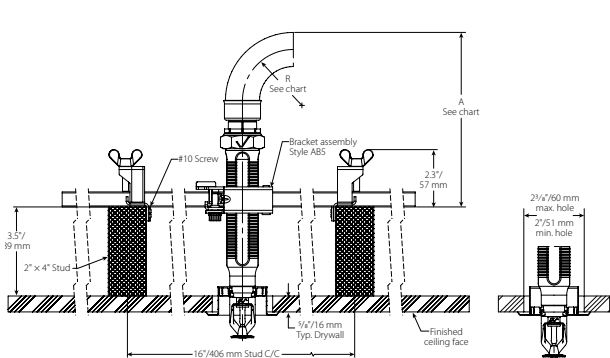
- Variations of ceiling grids, sprinkler heads, brackets, and hoses are permitted but may result in clearance differences from the figures above.

4.6 DIMENSIONS (Continued)

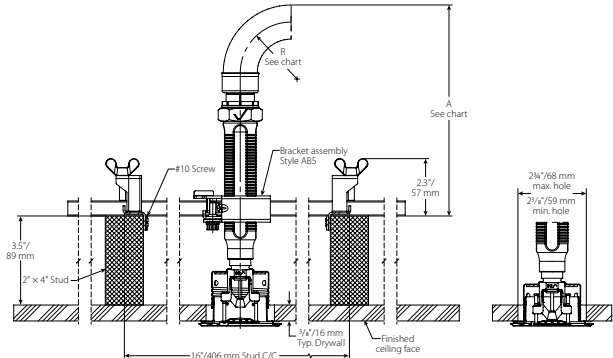
CLEARANCES ABOVE CEILING

Series AH2 Braided Hose and Style AB5 Bracket

Hard-lid Ceiling with Recessed Sprinkler



V2707 3/4" / 19mm Max. Recess

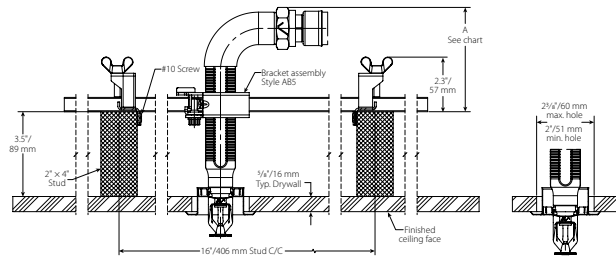


V3802 1/2" / 13mm Max. Recess

Dimension		inches	inches	inches	inches	inches	inches
		mm	mm	mm	mm	mm	mm
R	Minimum Bend Radius	2	3	4	5	6	7
		50	80	100	125	150	175
A	Min.	6.1	7.1	8.1	9.1	10.1	11.1
		155	180	206	231	256	282

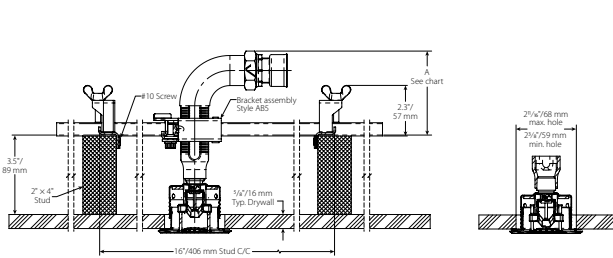
Dimension		inches	inches	inches	inches	inches	inches
		mm	mm	mm	mm	mm	mm
R	Minimum Bend Radius	2	3	4	5	6	7
		50	80	100	125	150	175
A	Min.	7.6	8.6	9.6	10.6	11.6	12.6
		193	218	244	269	295	320

Recessed Pendant with 90° Elbow (Long)



V2707 3/4" / 19mm Max. Recess

Hard-lid Ceiling with Concealed Pendant with 90° Elbow (Short)



V3802 1/2" / 13mm Max. Recess

Dimension		inches
		mm
A	Min.	3.6
		91

Dimension		inches
		mm
A	Min.	3.3
		84

NOTE

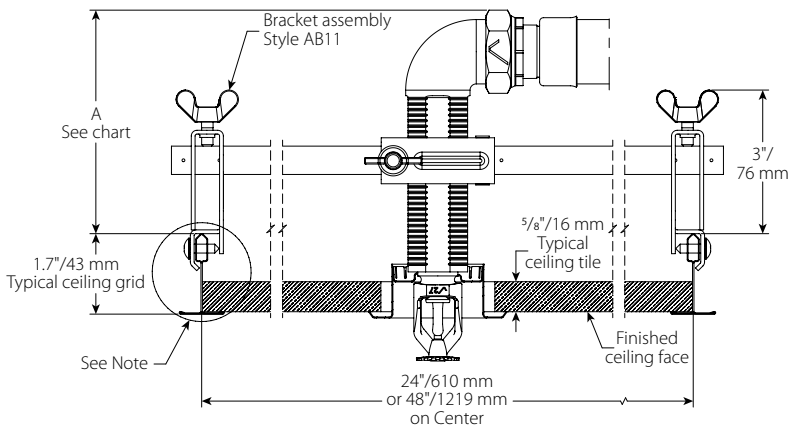
- Variations of ceiling grids, sprinkler heads, brackets, and hoses are permitted but may result in clearance differences from the figures above.

4.6 DIMENSIONS (Continued)

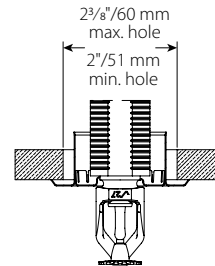
CLEARANCES ABOVE CEILING

Series AH2 Braided Hose and Style AB11 Bracket (LOW PROFILE SOLUTION)

Suspended Ceiling Grid with Recessed Sprinkler with LP 90° Elbow (Long)



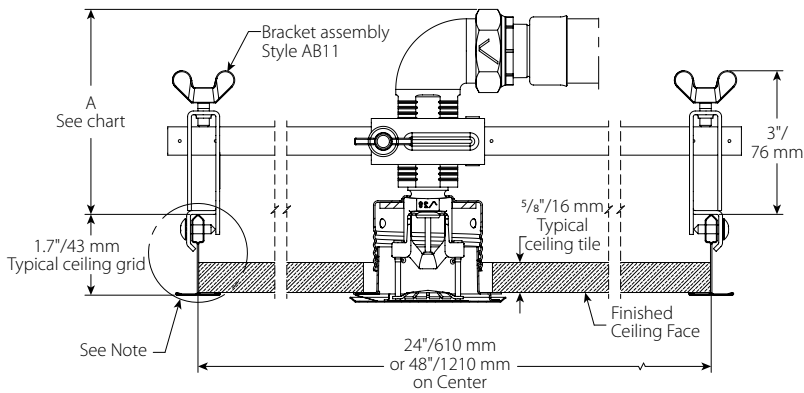
V2707 3/4" / 19 mm MAX. RECESS



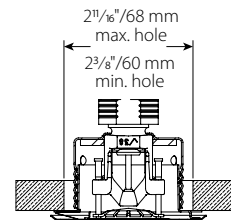
V2707 MAX. EXTENSION

Hose Clearance Chart		
Dimension		inches mm
A	Min.	4.0 100

Suspended Ceiling Grid with Concealed Pendent with LP 90° Elbow (Short)



V3802 1/2" / 13 mm MAX. RECESS



V3802 MAX. EXTENSION

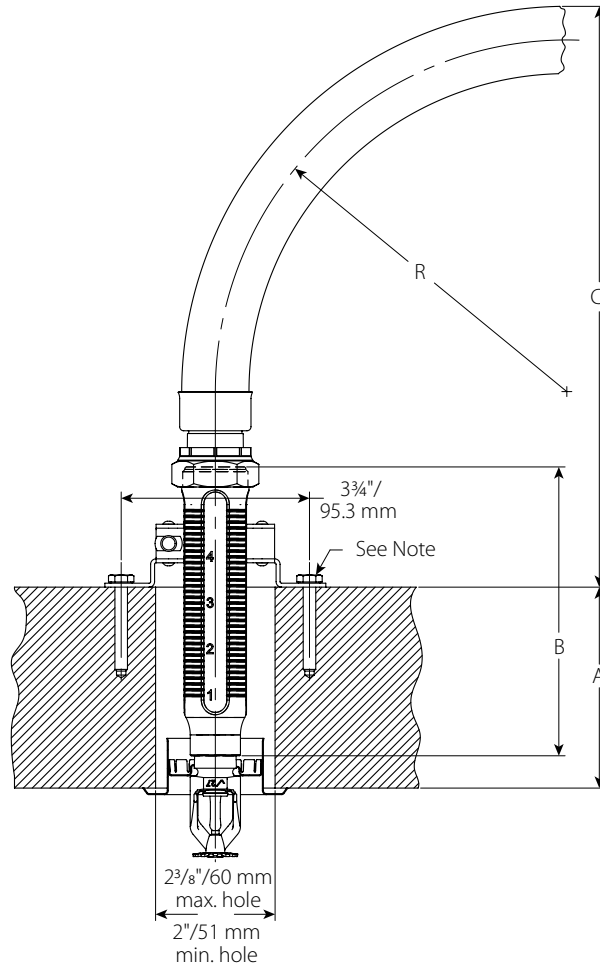
Hose Clearance Chart		
Dimension		inches mm
A	Min.	3.9 99

4.6 DIMENSIONS (Continued)

CLEARANCES ABOVE CEILING

Series AH2 Braided Hose and Style AB3 Bracket

Surface Mount Application with Recessed Sprinkler



Hose Clearances																														
Wall Thickness "A"	2 50			4 100			6 150			8 200			10 250			2 50			4 100			6 150			8 200			10 250		
	Outlet Length "B"	5.75 146.1	9 228.6	13 330.2	5.75 146.1	9 228.6	13 330.2	5.75 146.1	9 228.6	13 330.2	5.75 146.1	9 228.6	13 330.2	5.75 146.1	9 228.6	13 330.2	5.75 146.1	9 228.6	13 330.2	5.75 146.1	9 228.6	13 330.2	5.75 146.1	9 228.6	13 330.2	5.75 146.1	9 228.6	13 330.2		
Hose Clearance "C"	11.6 294	14.8 376	18.8 478	9.6 243	12.8 325	16.8 427	10.8 275	14.8 376	12.8 325	10.8 275	12.6 319	15.8 402	19.8 503	10.6 268	13.8 351	17.8 452	11.8 300	15.8 402	13.8 351	11.8 300	15.8 402	13.8 351	11.8 300	15.8 402	13.8 351	11.8 300				
Bend Radius "R"	7 175									8 200																				

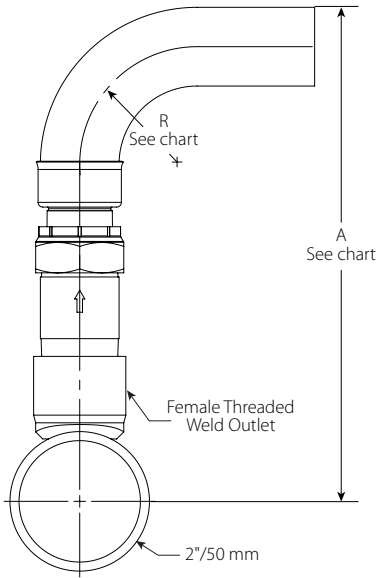
NOTE

- Variations of ceiling grids, sprinkler heads, brackets, and hoses are permitted but may result in clearance differences from the figures above.
- See installation instructions for mounting screw type and size.

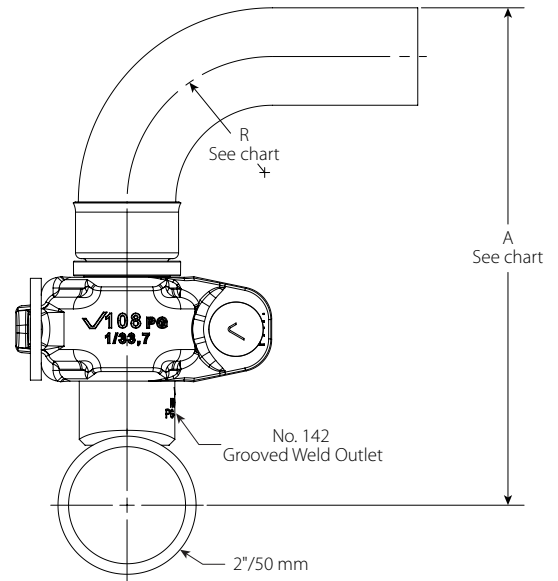
4.7 DIMENSIONS

BRANCHLINE CLEARANCES

Series AH2 Braided Hose with female threaded outlet



Series AH2-CC Braided Hose with grooved outlet



Hose Clearance Chart							
Dimension		inches	inches	inches	inches	inches	inches
		mm	mm	mm	mm	mm	mm
R	Minimum Bend Radius	2	3	4	5	6	7
		50	80	100	125	150	175
A	Min.	8.4	9.4	10.4	11.4	12.4	13.41
		214	239	264	290	315	341

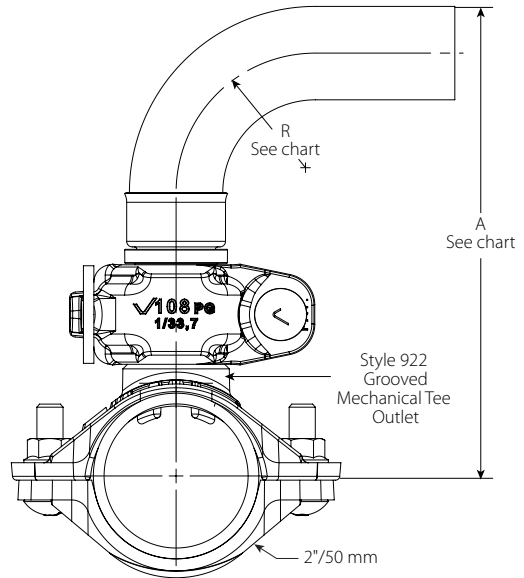
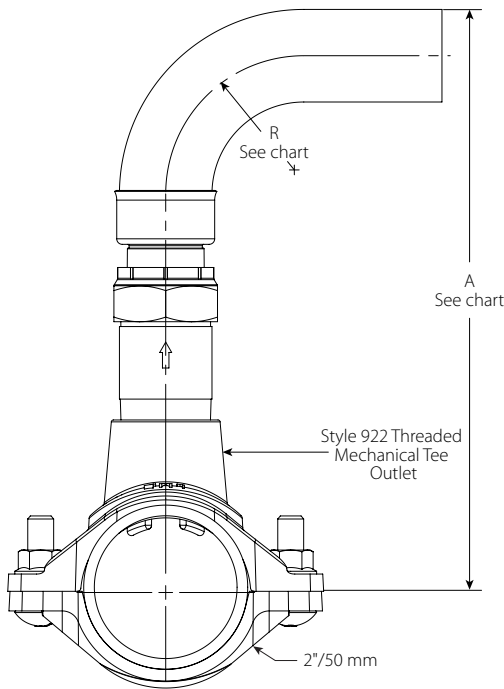
Hose Clearance Chart							
Dimension		inches	inches	inches	inches	inches	inches
		mm	mm	mm	mm	mm	mm
R	Minimum Bend Radius	2	3	4	5	6	7
		50	80	100	125	150	175
A	Min.	7.1	8.1	9.1	10.1	11.1	12.1
		180	205	231	256	281	307

4.7 DIMENSIONS (Continued)

BRANCHLINE CLEARANCES

Series AH2 Braided Hose with Style 922 threaded outlet

Series AH2-CC Braided Hose with Style 922 grooved outlet



Hose Clearance Chart							
Dimension		inches	inches	inches	inches	inches	inches
		mm	mm	mm	mm	mm	mm
R	Minimum Bend Radius	2	3	4	5	6	7
		50	80	100	125	150	175
A	Min.	8.4	9.4	10.4	11.4	12.4	13.4
		212	238	263	289	314	339

Hose Clearance Chart							
Dimension		inches	inches	inches	inches	inches	inches
		mm	mm	mm	mm	mm	mm
R	Minimum Bend Radius	2	3	4	5	6	7
		50	80	100	125	150	175
A	Min.	6.7	7.7	8.7	9.7	10.7	11.7
		171	197	222	247	273	298

5.0 PERFORMANCE – FRICTION LOSS DATA



**Series AH2 and AH2-CC Braided Hoses with Straight 5.75"/140 mm Reducers
Style AB1, AB2, AB4, AB5 and AB10 Brackets**

inches/mm	inches/mm/type	Equivalent Length of 1"/33.7 mm Sch. 40 Pipe (C=120) feet/meters	Maximum Number of 90° Bends at 2"/51 mm Bend Radius
31/775	1/2"/15/Straight	16/4.9	4
	3/4"/20/Straight	17/5.2	4
36/900	1/2"/15/Straight	21/6.4	5
	3/4"/20/Straight	23/7.0	5
48/1200	1/2"/15/Straight	32/9.8	8
	3/4"/20/Straight	37/11.3	8
60/1500	1/2"/15/Straight	46/14.0	10
	3/4"/20/Straight	46/14.0	10
72/1800	1/2"/15/Straight	55/16.8	12
	3/4"/20/Straight	53/16.2	12



**Series AH2 Braided Hose with 90° Low Profile Elbows
Style AB11 VicFlex Bracket**

inches/mm	inches/mm	Equivalent Length of 1"/33.7 mm Sch. 40 Pipe feet/meters	Maximum Number of 90° Bends at 2"/51 mm Bend Radius
31/775	1/2"/15	24/7.3	4
	3/4"/20	24/7.3	4
36/900	1/2"/15	26/7.9	5
	3/4"/20	28/8.5	5
48/1200	1/2"/15	43/13.1	8
	3/4"/20	42/12.8	8
60/1500	1/2"/15	49/14.9	10
	3/4"/20	50/15.2	10
72/1800	1/2"/15	65/19.8	12
	3/4"/20	63/19.2	12

5.0 PERFORMANCE – FRICTION LOSS DATA (Continued)

Series AH2 and AH2-CC Braided Hoses Equivalent Length Design Guide

Equivalent length values at various numbers of 90 degree bends at 2"/51 mm center line bend radius

Length of Stainless Steel Flexible Hose inches/ mm	Outlet Size inches/ mm	1 Bend feet/ meters	2 Bends feet/ meters	3 Bends feet/ meters	4 Bends feet/ meters	5 Bends feet/ meters	6 Bends feet/ meters	7 Bends feet/ meters	8 Bends feet/ meters	9 Bends feet/ meters	10 Bends feet/ meters	11 Bends feet/ meters	12 Bends feet/ meters
31/775	1/2"/15	8.5/2.6	11.0/3.4	13.0/4.0	16.0/4.9	N.A	N.A	N.A	N.A	N.A	N.A	N.A	N.A
	3/4"/20	10.0/3.0	12.5/3.8	14.0/4.3	17.0/5.2	N.A	N.A	N.A	N.A	N.A	N.A	N.A	N.A
36/900	1/2"/15	13.5/4.1	16.0/4.9	18.0/5.5	19.0/5.8	21.0/6.4	N.A	N.A	N.A	N.A	N.A	N.A	N.A
	3/4"/20	14.0/4.3	17.0/5.2	19.5/5.9	20.0/6.1	23.0/7.0	N.A	N.A	N.A	N.A	N.A	N.A	N.A
48/1200	1/2"/15	15.5/4.7	17.0/5.2	19.5/5.9	20.0/6.1	21.0/6.4	22.0/6.7	28.0/8.5	32.0/9.8	N.A	N.A	N.A	N.A
	3/4"/20	17.0/5.2	19.0/5.8	21.5/6.6	24.5/7.5	26.0/7.9	27.0/8.2	30.0/9.1	37.0/11.3	N.A	N.A	N.A	N.A
60/1500	1/2"/15	21.5/6.6	24.0/7.3	27.0/8.2	28.5/8.7	30.0/9.1	31.0/9.4	37.0/11.3	42.0/12.8	44.0/13.4	46.0/14.0	N.A	N.A
	3/4"/20	23.0/7.0	24.0/7.3	28.0/8.5	29.5/9.0	30.5/9.3	31.0/9.4	38.0/11.6	42.0/12.8	44.0/13.4	46.0/14.0	N.A	N.A
72/1800	1/2"/15	30.0/9.1	32.0/9.8	36.5/11.1	37.5/11.4	40.5/12.5	41.0/12.8	42.0/12.8	46.0/14.0	49.0/14.9	52.0/15.8	54.0/16.5	55.0/16.8
	3/4"/20	32.0/9.8	32.5/9.9	35.0/10.7	35.5/10.8	40.0/12.3	40.5/12.3	41.0/12.5	46.0/14.0	50.0/15.2	51.0/15.5	52.0/15.8	53.0/16.2

NOTES:

- Values for use with 5.75"/140 mm straight reducers.

How to use this Design Guide:

- For some systems, it may be advantageous for the designer to calculate the system hydraulics using shorter equivalent lengths associated with fewer than the maximum allowable number of bends. In this case, the designer may select a design number of bends for the job and use the associated equivalent length from the design guide to determine the system hydraulics.
- It is possible that the actual installed condition of some of the flexible drops may have more bends than the designer selected. When this happens, the design guide may be used to find equivalent lengths based on the actual installed number of bends for particular sprinkler installations. The system hydraulics can be recalculated using actual equivalent lengths to verify the performance of the system.

5.1 PERFORMANCE – FRICTION LOSS DATA



Series AH2 and AH2-CC Braided Hoses
Style AB1, AB2, AB3, AB4, AB5, AB7, AB7 Adj., AB8, AB9 and AB10 VicFlex Brackets

Length of Stainless Steel Flexible Hose	K-Factor	Outlet Size	Equivalent	Maximum Number of 90° Bends at 7"/178mm Bend Radius
			Length of 1"/33.7mm Sch. 40 Pipe	
inches/mm	Imperial/S.I.	inches/mm/type	feet/meters	
31/775	5.6/8.1	1/2"/15/Straight	23.5/7.1	2
		1/2"/15/90° Elbow	23.5/7.1	
36/900	5.6/8.1	1/2"/15/Straight	27.8/8.5	2
		1/2"/15/90° Elbow	25.6/7.8	
48/1200	5.6/8.1	1/2"/15/Straight	38.2/11.6	3
		1/2"/15/90° Elbow	30.7/9.3	
60/1500	5.6/8.1	1/2"/15/Straight	42.4/12.9	4
		1/2"/15/90° Elbow	35.9/10.9	
72/1800	5.6/8.1	1/2"/15/Straight	46.6/14.2	4
		1/2"/15/90° Elbow	41.1/12.5	
31/775	8.0/11.5	3/4"/20/Straight	16.8/5.1	2
		3/4"/20/90° Elbow	16.8/5.1	
36/900	8.0/11.5	3/4"/20/Straight	20/6.0	2
		3/4"/20/90° Elbow	19.7/6.0	
48/1200	8.0/11.5	3/4"/20/Straight	27.8/8.4	3
		3/4"/20/90° Elbow	26.6/8.1	
60/1500	8.0/11.5	3/4"/20/Straight	35.7/10.9	4
		3/4"/20/90° Elbow	33.6/10.2	
72/1800	8.0/11.5	3/4"/20/Straight	43.5/13.2	4
		3/4"/20/90° Elbow	40.6/12.2	
31/775	11.2/16.1	3/4"/20/Straight	16.5/5.0	2
		3/4"/20/90° Elbow	17.8/5.4	
36/900	11.2/16.1	3/4"/20/Straight	19.5/5.9	2
		3/4"/20/90° Elbow	20.7/6.3	
48/1200	11.2/16.1	3/4"/20/Straight	26.7/8.1	3
		3/4"/20/90° Elbow	27.9/8.5	
60/1500	11.2/16.1	3/4"/20/Straight	33.9/10.3	4
		3/4"/20/90° Elbow	35/10.7	
72/1800	11.2/16.1	3/4"/20/Straight	41.3/12.5	4
		3/4"/20/90° Elbow	42.2/12.8	
31/775	14.0/20.2	3/4"/20/Straight	14.9/4.5	2
		3/4"/20/90° Elbow	15.5/4.72	
36/900	14.0/20.2	3/4"/20/Straight	19.4/5.9	2
		3/4"/20/90° Elbow	19.6/5.9	
48/1200	14.0/20.2	3/4"/20/Straight	30.3/9.2	3
		3/4"/20/90° Elbow	29.5/8.9	
60/1500	14.0/20.2	3/4"/20/Straight	33.9/10.3	4
		3/4"/20/90° Elbow	34.1/10.4	
72/1800	14.0/20.2	3/4"/20/Straight	37.5/11.4	4
		3/4"/20/90° Elbow	38.6/11.7	

FM NOTES:

- Series AH2 has been tested and Approved by FM Global for use in wet, dry and preaction systems per NFPA 13, 13R, and 13D and FM data sheets 2-0, 2-5, and 2-8. FM 1637 and Vds standards for safety include, but are not limited to, pressure cycling, corrosion resistance, flow characteristics, vibration resistance, leakage, mechanical 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.
- EXAMPLE: A 48-inch hose installed with two 30° bends and two 90° bends at a 7-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°.

5.2 PERFORMANCE – FRICTION LOSS DATA



Series AH2 Braided Hose with 90° Low Profile Elbows
Style AB11 VicFlex Bracket

Length of Stainless Steel Flexible Hose	K-Factor	Outlet Size	Equivalent Length of 1"/33.7mm Sch. 40 Pipe	Maximum Number of 90° Bends at 7"/178mm Bend Radius
inches/mm	Imperial/S.I.	inches/mm	feet/meters	
31/775	5.6/8.1	½"/15	13.7/4.2	2
36/900	5.6/8.1	½"/15	17.0/5.2	2
48/1200	5.6/8.1	½"/15	25.0/7.6	3
60/1500	5.6/8.1	½"/15	33.0/10.1	4
72/1800	5.6/8.1	½"/15	41.1/12.5	4
31/775	8.0/11.5	¾"/20	13.6/4.14	2
36/900	8.0/11.5	¾"/20	16.9/5.2	2
48/1200	8.0/11.5	¾"/20	27.8/8.5	3
60/1500	8.0/11.5	¾"/20	32.6/9.9	4
72/1800	8.0/11.5	¾"/20	40.6/12.4	4
31/775	11.2/16.1	¾"/20	13.7/4.2	2
36/900	11.2/16.1	¾"/20	17.0/5.2	2
48/1200	11.2/16.1	¾"/20	24.9/7.6	3
60/1500	11.2/16.1	¾"/20	32.9/10.0	4
72/1800	11.2/16.1	¾"/20	40.9/12.5	4
31/775	14.0/20.2	¾"/20	13.5/4.1	2
36/900	14.0/20.2	¾"/20	16.8/5.1	2
48/1200	14.0/20.2	¾"/20	24.7/7.5	3
60/1500	14.0/20.2	¾"/20	32.7/9.9	4
72/1800	14.0/20.2	¾"/20	40.7/12.4	4

FM NOTES:

- Series AH2 has been tested and Approved by FM Global for use in wet, dry and preaction systems per NFPA 13, 13R, and 13D and FM data sheets 2-0, 2-5, and 2-8. FM 1637 and Vds standards for safety include, but are not limited to, pressure cycling, corrosion resistance, flow characteristics, vibration resistance, leakage, mechanical 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.
- EXAMPLE: A 48-inch hose installed with two 30° bends and two 90° bends at a 7-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°.

5.3 PERFORMANCE – FRICTION LOSS DATA



**Series AH2 Braided Hose
Style AB1, AB2, AB4, AB5, AB7, AB7 Adj., AB8, AB9, AB10 and AB11 Brackets**

Length of Stainless Steel Flexible Hose	Outlet Size	Series AH2 Hose	
		Equivalent Length of steel pipe according to EN 10255 DN 25 (33,7 x 3,25)	Maximum Number of 90° Bends at 3"/76.2mm Bend Radius
mm/inches	mm/inches	meters/feet	meters/feet
775/31	15mm/1/2"	5.5/18.0	3
	20 mm/3/4"		
900/36	15mm/1/2"	6.4/21.0	3
	20 mm/3/4"		
1200/48	15mm/1/2"	8.5/27.9	3
	20 mm/3/4"		
1500/60	15mm/1/2"	10.7/35.1	4
	20 mm/3/4"		
1800/72	15mm/1/2"	12.8/42.0	4
	20 mm/3/4"		

VDS CEILING MANUFACTURERS LIST

AB1, AB2, AB7, AB10 ,AB11 AB4/9

1. AMF
2. Armstrong
3. Chicago Metallic
4. Dipling
5. Durlum
6. Geipel
7. Gema-Armstrong
8. Hilti
9. Knauf
10. Lafarge
11. Linder
12. Odenwald
13. Richter
14. Rigips
15. Rockfon Pagos
16. Suckow & Fischer
17. USG Donn

No specific approval

AB5, AB8

1. Hilti
2. Knauf
3. Lafarge
4. Lindner
5. Rigips



**Series AH2 Braided Hose
Style AB1 Bracket**

Length of Stainless Steel Flexible Hose	Outlet Size	Series AH2 Hose	
		Equivalent Length of steel pipe according to EN 10255 DN 25 (33,7 x 3,25)	Maximum Number of 90° Bends at 3"/76.2mm Bend Radius
mm/inches	mm/inches/type	meters/feet	
775/31	15mm/1/2"/Straight	1.8/6.0	2
	20 mm/3/4"/Straight		
900/36	15mm/1/2"/Straight	3.6/11.9	3
	20 mm/3/4"/Straight		
1200/48	15mm/1/2"/Straight	4.3/14.0	3
	20 mm/3/4"/Straight		
1500/60	15mm/1/2"/Straight	4.1/13.6	3
	20 mm/3/4"/Straight		
1800/72	15mm/1/2"/Straight	5.5/18.1	3
	20 mm/3/4"/Straight		

6.0 NOTIFICATIONS

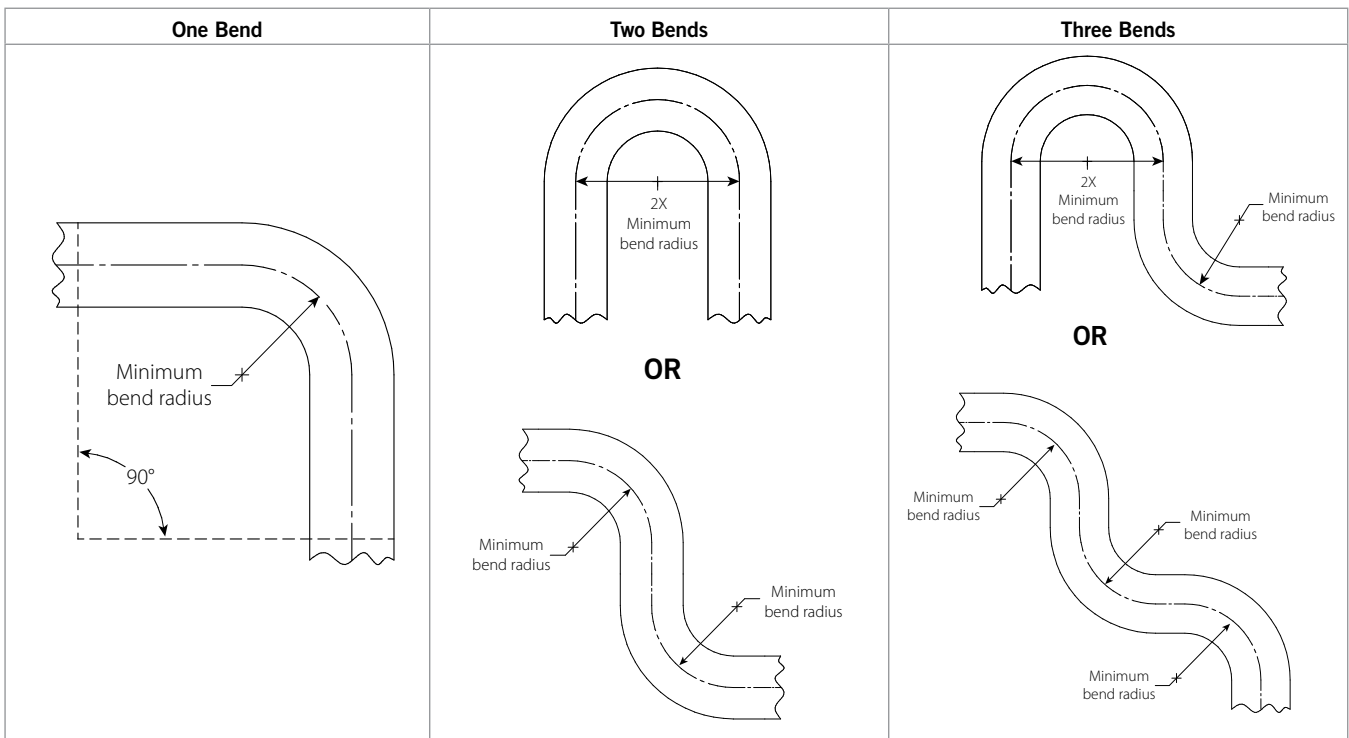
WARNING

- It is the responsibility of the system designer to verify suitability of 300-series stainless steel flexible hose for use with the intended fluid media within the piping system and external environments.
- The effect of chemical composition, pH level, operating temperature, chloride level, oxygen level, and flow rate on 300-series stainless steel flexible hose must be evaluated by the material specifier to confirm system life will be acceptable for the intended service.

Failure to follow these instructions could cause product failure, resulting in serious personal injury and/or property damage.

7.0 REFERENCE MATERIALS – CHARACTERISTICS

Flexible Hose In-Plane Bend Characteristics



NOTE

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

[I-VicFlex-AB1-AB2-AB10](#)

[I-VicFlex-AB3](#)

[I-VicFlex-AB7](#)

[I-VicFlex-AB8](#)

[I-VicFlex-AB4-AB9](#)

User Responsibility for Product Selection and Suitability

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Note

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Installation

Reference should always be made to I-VICFLEX-AB1-AB2-AB10, I-VICFLEX-AB4-AB9, I-VICFLEX-AB7, or I-VICFLEX-AB8 for the product you are installing. Handbooks are included with each shipment of Victaulic products for complete installation and assembly data, and are available in PDF format on our website at www.victaulic.com.

Warranty

Refer to the Warranty section of the current Price List or contact Victaulic for details.

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