

# VicFlex™ Sprinkler Fittings

## Style AB3



### Approvals/Listings:



See Victaulic Publication 10.01 for more details.

VicFlex™ Sprinkler Fittings provide fast and easy sprinkler installations in institutional applications such as concrete block walls or ceilings utilizing the Style AB3 bracket and Series AH2 or AH4 flexible stainless steel hoses.

### System Components:

#### • Hose Series:

Series AH1 Braided Hose

Series AH2 Braided Hose

Series AH2-300 Braided Hose

Series AH4 Braided Hose

**Assembly lengths:** 31, 36, 48, 60, 72"/90, 914, 1220, 1525, 1830mm. Note: length includes branch-line nipple and 5.5"/140mm straight reducer.

• **Sprinkler Reducers:** ½" and ¾"/15 and 20 mm sprinkler connections and 5.5"/140mm, 9"/230mm, 13"/330mm straight lengths and short, long 90° elbows.

• **Branch Connections:** 1"/25mm NPT or BSPT branch line nipples for attaching to rigid pipe. ¾"/20mm NPT or BSPT available for VdS.

• **Brackets:** Style AB3 for institutional applications

### Technical Specifications:

**Maximum Working Temperature:** 225°F/107.2°C

#### Maximum Working Pressure:

- 300 psi/1375 kPa

#### Connections:

To branch line (inlet) via 1"/25 mm NNPT or BSPT male thread

To sprinkler head (outlet) via ½" or ¾"/15 mm or 20 mm NPT or BSPT female thread

#### Minimum Bend Radius:

- 7"/178 mm

**Maximum Number of Bends per Flexible Drop:** See friction loss charts later in this document

### Job/Owner

System No.	
Location	

### Contractor

Submitted By	
Date	

### Engineer

Spec Section	
Paragraph	
Approved	
Date	

**Material Specifications:**

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**Braided Flexible Hose:**

- **Series AH2**

**Flexible Hose:** Type 304 Stainless Steel

**Collar/Weld Fitting:** Type 304 Stainless Steel

**Gasket Seal:** Victaulic Grade EV EPDM

**Isolation Ring:** Nylon

**Nut and Nipple:** Carbon Steel, Zinc-Plated

**Reducers (½ or ¾"): Carbon Steel, Zinc-Plated**

- **Series AH2-300**

**Flexible Hose:** Type 304 Stainless Steel

**Collar/Weld Fitting:** Type 304 Stainless Steel

**Gasket Seal:** Victaulic Grade EV EPDM

**Isolation Ring:** Nylon

**Nut and Nipple:** Carbon Steel, Zinc-Plated

**Reducers (½ or ¾"): Carbon Steel, Zinc-Plated**

- **Series AH4**

**Flexible Hose:** Type 304 Stainless Steel

**Collar/Weld Fitting:** Type 304 Stainless Steel

**Gasket Seal:** EPDM per ASTM D2000

**Isolation Ring:** N/A

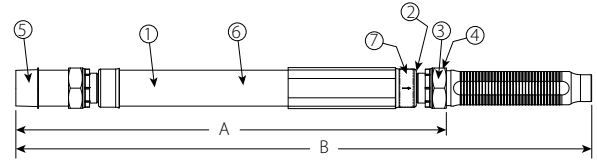
**Nut and Nipple:** Carbon Steel, Zinc-Plated

**Reducers (½ or ¾"): Carbon Steel, Zinc-Plated**

- **Bracket:** Carbon Steel, Zinc-Plated

**Product Details - Series AH1 Braided Hose  
Series AH2 Braided Hose  
Series AH2-300 Braided Hose  
Series AH4 Braided Hose**

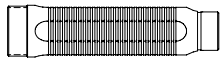
Item	Description
1	Flexible Hose
2	Isolation Ring (series AH2 only)
3	Gasket
4	Nut
5	Branch Line Nipple
6	Braid
7	Collar/Weld Fitting



**Hose Length Dimensions**

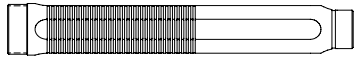
Hose Length inches	A inches	B inches
31	25.5	31
36	31.5	36
48	42.5	48
60	54.5	60
72	66.5	72

Standard:

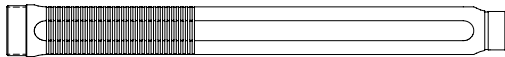


5.5" straight reducer

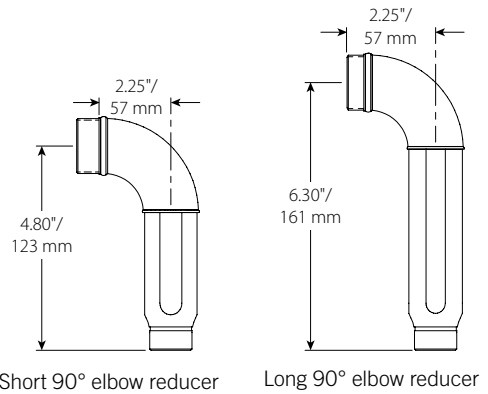
Optional:



9.0" straight reducer



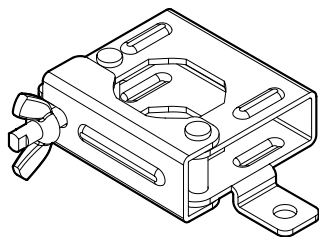
13.0" straight reducer



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.

**VicFlex™ Style AB3 Institutional Bracket**

VicFlex™ Style AB3 brackets can be installed in institutional pendent or sidewall applications in block walls or ceilings ranging from 3 – 12" in thickness.



**FM Friction Loss Data - Series AH2 and Series AH4 Braided Hose**

Length of Stainless Steel Flexible Hose inches	Sprinkler K-Factor Imperial/S.I.	Outlet Size inches/type	Series AH1 Hose for use with Style AB1, AB2, AB4, AB7, AB7 Adj., AB8, AB9, and AB10 VicFlex Bracket.		Series AH2 Braided Hose for use with Style AB3 VicFlex Bracket.		Series AH2-300 Braided Hose for use with Style AB3 VicFlex Bracket.		Series AH4 Hose for use with Style AB3 VicFlex Bracket.	
			Equivalent Length of 1"/33.7mm Sch. 40 Pipe feet/meters	Maximum Number of 90° Bends at 7"/178mm Bend Radius	Equivalent Length of 1"/33.7mm Sch. 40 Pipe feet/meters	Maximum Number of 90° Bends at 7"/178mm Bend Radius	Equivalent Length of 1"/33.7mm Sch. 40 Pipe feet/meters	Maximum Number of 90° Bends at 8"/205mm Bend Radius	Equivalent Length of 1"/33.7mm Sch. 40 Pipe feet/meters	Maximum Number of 90° Bends at 7"/178mm Bend Radius
31	5.6/8.1	1/2"/Straight	53.8/16.4	2	23.5/7.1	2	23.5/7.1	2	20.6/6.3	2
		1/2"/90° Elbow	53.8/16.4		23/7.0		23/7.0		21.7/6.6	
36	5.6/8.1	1/2"/Straight	63.7/19.4	2	27.8/8.5	2	27.8/8.5	2	29.7/9.0	2
		1/2"/90° Elbow	63.1/19.2		27.7/8.4		27.7/8.4		29.8/9.0	
48	5.6/8.1	1/2"/Straight	87.9/26.8	3	38.2/11.6	3	38.2/11.6	3	27.5/8.3	3
		1/2"/90° Elbow	85.8/26.1		37.4/11.4		37.4/11.4		29.2/8.9	
60	5.6/8.1	1/2"/Straight	112.2/34.1	4	42.4/12.9	4	42.4/12.9	4	35.7/10.9	4
		1/2"/90° Elbow	108.4/33.0		43/13.1		43/13.1		37.2/11.3	
72	5.6/8.1	1/2"/Straight	136.5/41.6	4	46.6/14.2	4	46.6/14.2	4	45.9/14.0	4
		1/2"/90° Elbow	131.1/39.9		48.5/14.7		48.5/14.7		47.5/14.5	
31	8.0/11.5	3/4"/Straight	44.4/13.5	2	20.7/6.3	2	20.7/6.3	2	13.3/4.0	2
		3/4"/90° Elbow	47.6/14.5		20.5/6.2		20.5/6.2		14.6/4.4	
36	8.0/11.5	3/4"/Straight	55.6/16.9	2	25.0/7.6	2	25.0/7.6	2	21.7/6.6	2
		3/4"/90° Elbow	57.5/17.5		24.6/7.5		24.6/7.5		22.4/6.8	
48	8.0/11.5	3/4"/Straight	82.8/25.2	3	35.5/10.8	3	35.5/10.8	3	21.2/6.4	3
		3/4"/90° Elbow	81.7/24.9		34.7/10.6		34.7/10.6		22.2/6.7	
60	8.0/11.5	3/4"/Straight	110.1/33.5	4	39.6/12.1	4	39.6/12.1	4	27.9/8.5	4
		3/4"/90° Elbow	105.9/32.2		40.1/12.2		40.1/12.2		28.9/8.8	
72	8.0/11.5	3/4"/Straight	137.3	4	43.5/13.2	4	43.5/13.2	4	38.8/11.8	4
		3/4"/90° Elbow	130.2/39.7		45.2/13.7		45.2/13.7		39.4/12.0	
31	11.2/16.1	3/4"/Straight	45.5/13.8	2	17.8/5.4	2	17.8/5.4	2	16.4/5.0	2
		3/4"/90° Elbow	47.1/14.3		18/5.5		18/5.5		19.9/6.1	
36	11.2/16.1	3/4"/Straight	66.3/20.2	2	22.2/6.7	2	22.2/6.7	2	21.7/6.6	2
		3/4"/90° Elbow	57.5/17.5		22.1/6.7		22.1/6.7		24.2/7.4	
48	11.2/16.1	3/4"/Straight	82.7/25.2	3	32.9/10.0	3	32.9/10.0	3	28.5/8.7	3
		3/4"/90° Elbow	82.8/25.2		32.1/9.8		32.1/9.8		29.9/9.1	
60	11.2/16.1	3/4"/Straight	109.1/33.2	4	36.8/11.2	4	36.8/11.2	4	34.7/10.5	4
		3/4"/90° Elbow	108.1/32.9		37.1/11.3		37.1/11.3		30.3/9.2	
72	11.2/16.1	3/4"/Straight	135.5/41.3	4	40.5/12.3	4	40.5/12.3	4	38.6/11.6	4
		3/4"/90° Elbow	133.4/40.6		41.9/12.7		41.9/12.7		38.6/11.7	
31	14.0/20.2	3/4"/Straight	44.3/13.5	2	14.9/4.5	2	14.9/4.5	2	16.3/5.0	2
		3/4"/90° Elbow	46.4/14.1		15.5/4.72		15.5/4.72		19.9/6.1	
36	14.0/20.2	3/4"/Straight	55.5/16.9	2	19.4/5.9	2	19.4/5.9	2	21.8/6.7	2
		3/4"/90° Elbow	56.7/17.3		19.6/5.9		19.6/5.9		24.2/7.4	
48	14.0/20.2	3/4"/Straight	83.0/25.3	3	30.3/9.2	3	30.3/9.2	3	28.3/8.6	3
		3/4"/90° Elbow	82.1/25.0		29.5/8.9		29.5/8.9		29.9/9.1	
60	14.0/20.2	3/4"/Straight	110.4/33.6	4	33.9/10.3	4	33.9/10.3	4	34.9/10.6	4
		3/4"/90° Elbow	107.5/32.7		34.1/10.4		34.1/10.4		30.3/9.2	
72	14.0/20.2	3/4"/Straight	137.9/42.0	4	37.5/11.4	4	37.5/11.4	4	41.5/12.6	4
		3/4"/90° Elbow	132.8/40.4		38.6/11.7		38.6/11.7		38.6/11.7	

**FM Notes:**

Series AH2 and AH4 have 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. The FM 1637 standard for safety includes, but is not limited to pressure cycling, corrosion resistance, flow characteristics, vibration resistance, leakage, mechanical and hydrostatic strength.

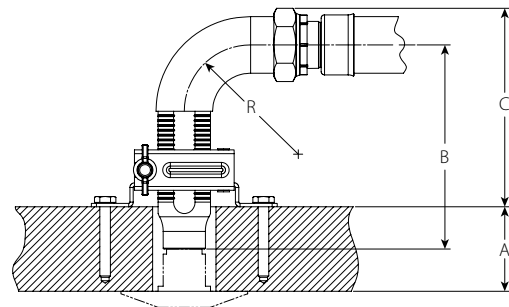
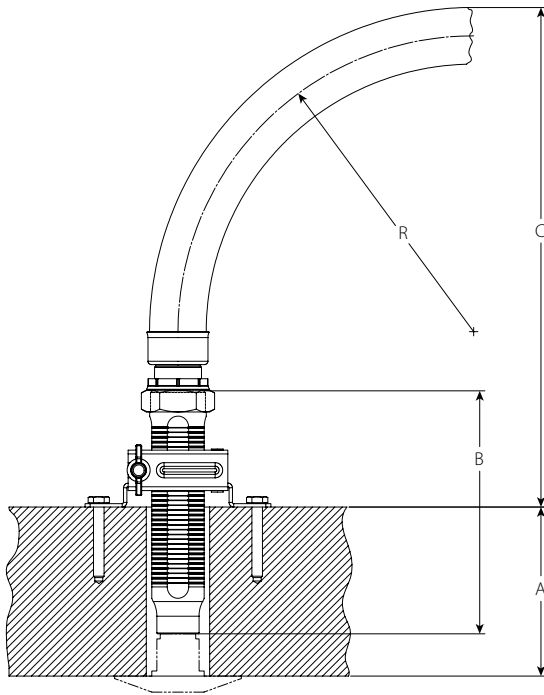
Differences in equivalent lengths are due to varying test methods, per FM 1637 and VdS standards. Refer to these standards for additional information regarding friction loss test methods.

EXAMPLE: A 48-inch Series AH2 or AH4 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°.

**Braided Hoses Assembly:**

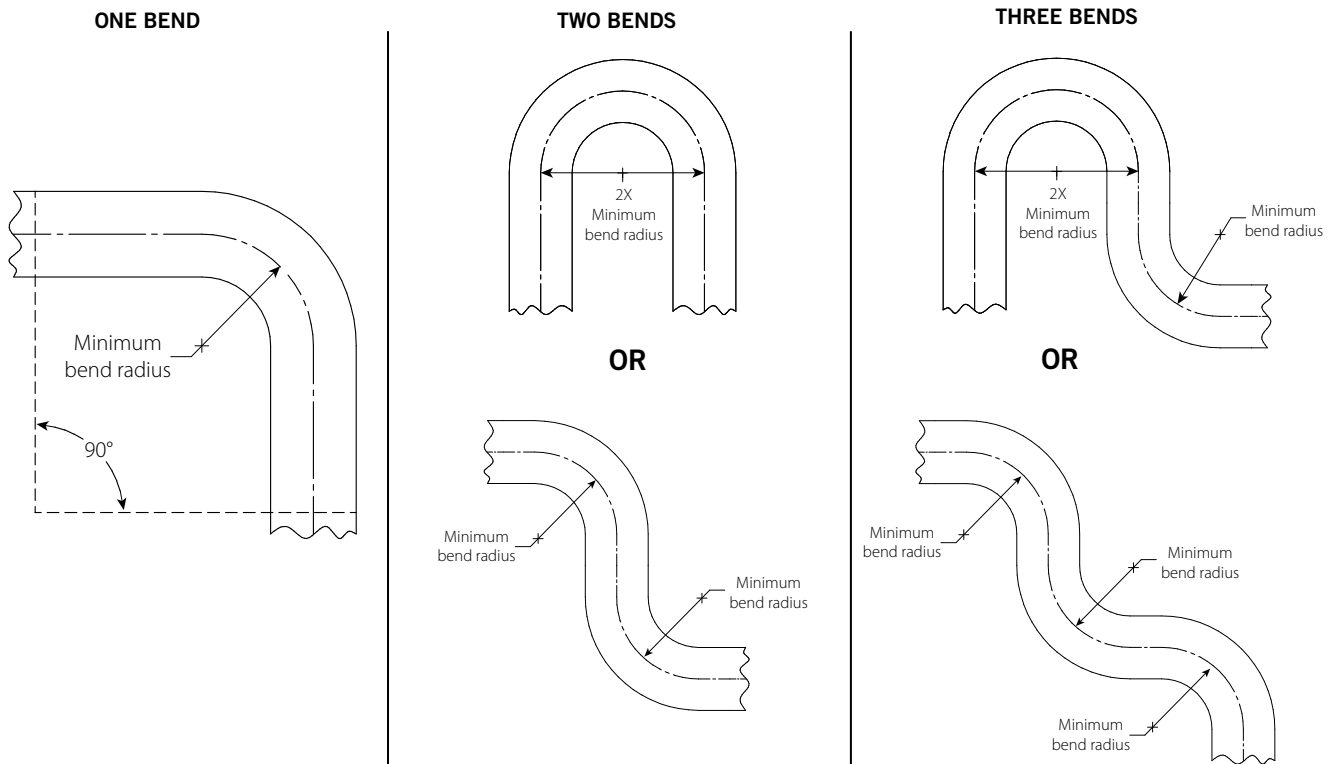
Institutional Installation with Recessed Sprinkler  
 -Clearances Behind Block Wall at various Center-Line Bend Radii

Hose Clearances																										
Wall Thickness "A"	2 50			4 100			6 150			8 200			10 250		12 300											
Outlet Length "B"	5.75 146.1	9 228.6	13 330.2	5.75 146.1	9 228.6	13 330.2	9 228.6	13 330.2	9 228.6	13 330.2	13 330.2	13 330.2	5.75 146.1	9 228.6	13 330.2	5.75 146.1	9 228.6	13 330.2	9 228.6	13 330.2	9 228.6	13 330.2	9 228.6	13 330.2	13 330.2	13 330.2
Hose Clearance "C"	13.82 351.03	17.07 433.58	21.07 535.18	11.82 300.23	15.07 382.78	19.07 484.38	13.07 331.98	17.07 433.58	11.07 281.18	15.07 382.78	13.07 331.98	11.07 281.18	14.82 376.43	18.07 458.98	22.07 560.58	12.82 325.63	16.07 408.18	20.07 509.78	14.07 357.38	18.07 458.98	12.07 306.58	16.07 408.18	14.07 357.38	12.07 306.58	14.07 357.38	12.07 306.58
Bend Radius "R"	7 175						8 200																			



**Note:** Style AB3 and Series AH2 figures shown. Variations of block wall, sprinkler heads, reducers, and hoses are permitted but may result in clearance differences from the figures above.

### Flexible Hose In-Plane Bend Characteristics



Note: For out-of-plane (three-dimensional) bends: care must be taken to avoid imparting torsional stress on the hose

### Model Number Correlation

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

#### Installation

Reference should always be made to the [I-100 Victaulic Field Installation Handbook](#) 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](http://www.victaulic.com).

#### Warranty

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

#### Note

This product shall be manufactured by Victaulic or to Victaulic specifications. All products to be installed in accordance with current Victaulic installation/assembly instructions. Victaulic reserves the right to change product specifications, designs and standard equipment without notice and without incurring obligations.

#### Trademarks

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