

Victaulic® VicFlex™ Sprinkler Fittings

Series AH3 Braided Flexible Hose



Series AH3

1.0 PRODUCT DESCRIPTION

Available Sizes by Component

- **Series AH3 0.8"/DN20 Nominal ID Braided Hose:** 31"/790 mm, 36"/915 mm, 48"/1220 mm, 60"/1525 mm, 72"/1830 mm Note: length includes adapter nipple and 5.75"/146 mm straight reducer.
- For CCC Approved hose lengths, refer to [Section 5.3](#)

Connections

- **From Branchline**
 - ¾"/20 mm BSPT Female Thread (VdS only)
 - 1"/25 mm NPT or BSPT Female Thread
- **Hose Inlet**
 - ¾"/20 mm BSPT Male Thread (VdS only)
 - 1"/25 mm NPT or BSPT Male Thread
- **Sprinkler Reducer**
 - Sprinkler Connection: ½"/15 mm, ¾"/20 mm NPT or BSPT Female Thread
 - Straight Lengths: 5.75"/146 mm, 9"/230 mm, 13"/330 mm
 - 90° Elbows: Short elbows typically used with concealed sprinklers; Long elbows typically used with recessed pendent sprinklers.
 - Standard Short
 - Low-Profile Short
 - Standard Long
 - Low-Profile Long

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

1.0 PRODUCT DESCRIPTION (CONTINUED)

• Brackets

- Style AB2 for suspended and hard-lid ceilings and sidewalls: allows for vertical sprinkler adjustment and installation before most ceiling tiles are in place
- Style AB3 for surface mount applications, wood, metal and block walls, or ceilings
- Style AB4 for hard-lid ceilings with hat furring channel grid systems: allows for vertical sprinkler adjustment
- Style AB5 for hard-lid ceilings and sidewalls: allows for vertical sprinkler adjustment
- Style AB7 / Adjustable AB7 for suspended and hard-lid ceilings
- Style AB11 for lay-in panel suspended T-grid ceilings or drywall suspended T-grid ceilings: allows for low-profile installation (use only with 90° low-profile elbows)
- Style AB12 for suspended and hard-lid ceilings: allows for vertical sprinkler adjustment, and allows for low-profile installation down to 4"/100 mm
- Style ABBA bracket for suspended, exposed, and hard-lid ceilings
- Style ABMM bracket for surface mount and stand off-mount applications: wood, metal and block walls, or ceilings and hard-lid ceilings
- Strut channel and pipe clamp, not supplied by Victaulic

Maximum Working Temperature

- 225°F/107°C

Maximum Working Pressure

- 200 psi/1375 kPa (FM)
- 232 psi/1600 kPa (VdS)
- 232 psi/1.6 MPa (CCC)

Minimum Bend Radius

- 7"/178 mm (FM/CCC)
- 3"/76.2 mm (VdS)

Maximum Allowable Sprinkler K-Factors

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

2.0 CERTIFICATIONS/LISTINGS



3.0 SPECIFICATIONS – MATERIAL

Series AH3

Flexible Hose: 300-series Stainless Steel

Collar/Weld Fitting: 300-series Stainless Steel

Gasket Seal: Victaulic EPDM

Nut and Adapter Nipple: Carbon Steel, Zinc Plated

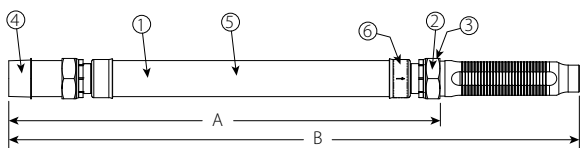
Reducer: Carbon Steel, Zinc-Plated

Brackets: Carbon Steel, Zinc-Plated

Low Profile Elbows: Ductile Iron, Zinc-Plated or Carbon Steel, Zinc-Plated

4.0 DIMENSIONS

Product Details – Series AH3 Braided Hose



| Item | Description |
|------|---------------------|
| 1 | Flexible Hose |
| 2 | Gasket |
| 3 | Nut |
| 4 | Adapter Nipple |
| 5 | Braid |
| 6 | Collar/Weld Fitting |

| Hose | Dimensions | |
|--------|--------------|--------------|
| | A | B |
| Series | inches mm | inches mm |
| AH3-31 | 25.6 650 | 31.0 790 |
| AH3-36 | 31.6 803 | 36.0 915 |
| AH3-48 | 42.6 1082 | 48.0 1220 |
| AH3-60 | 54.6 1387 | 60.0 1525 |
| AH3-72 | 66.6 1692 | 72.0 1830 |

Standard Reducer

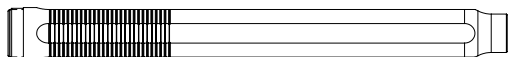


5.75"/146 mm Straight Reducer

Optional Reducers

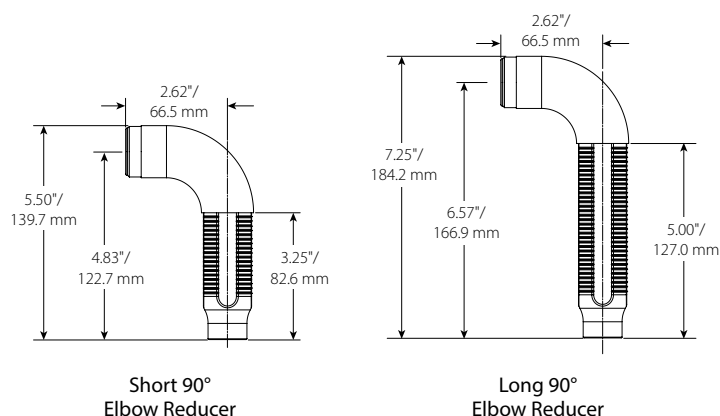


9.0"/230 mm Straight Reducer

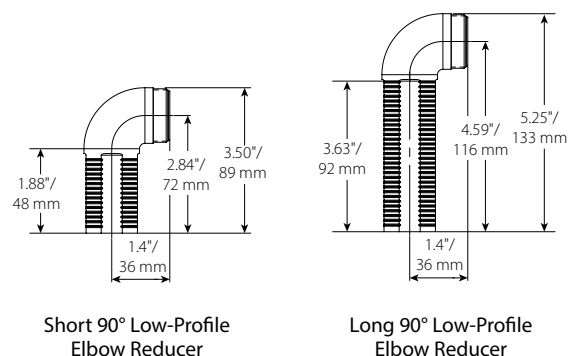


13.0"/330 mm Straight Reducer

Standard Elbow Reducers



Low-Profile Elbow Reducers



NOTE

- The Short 90° Elbow Reducer is typically used with concealed sprinklers while the Long 90° Elbow Reducer is typically used in the installation of recessed pendent sprinklers.

NOTE

- Style AB11: When Low-Profile Elbows are used with the Style AB11 bracket, the Low-Profile Short Elbow is typically used with concealed sprinklers while the Low-Profile Long Elbow is typically used in the installation of recessed pendent sprinklers.

4.1 DIMENSIONS

VicFlex™ Brackets

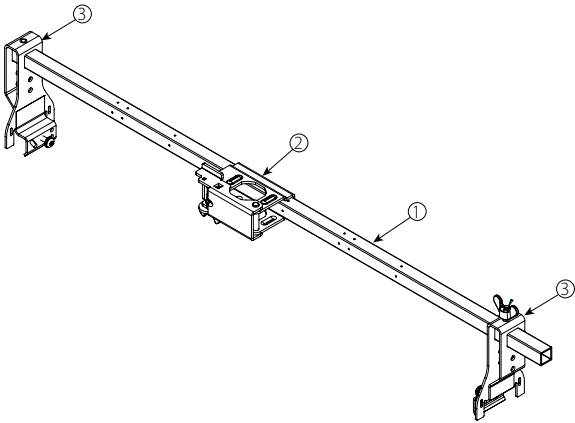
Style AB2

- Suspended Ceilings
- Hard-Lid Ceilings

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

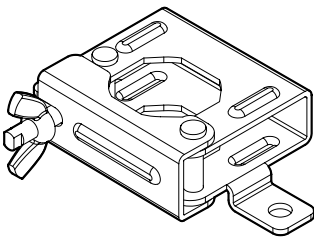
NOTE

- Both sizes FM/VdS Approved



Style AB3

- Surface Mount Applications
- FM Approved Only



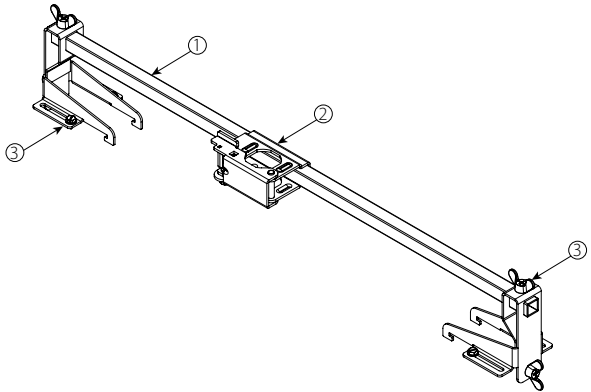
Style AB4

- 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 |

NOTE

- Both sizes FM/VdS Approved



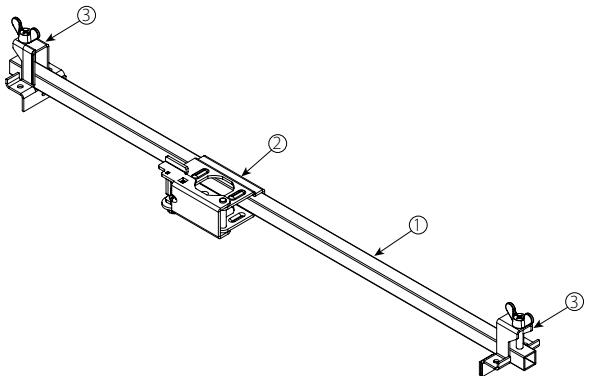
Style AB5

- Hard-Lid Ceilings

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

NOTE

- Both sizes FM/Vds Approved



4.1 DIMENSIONS (CONTINUED)

VicFlex™ Brackets

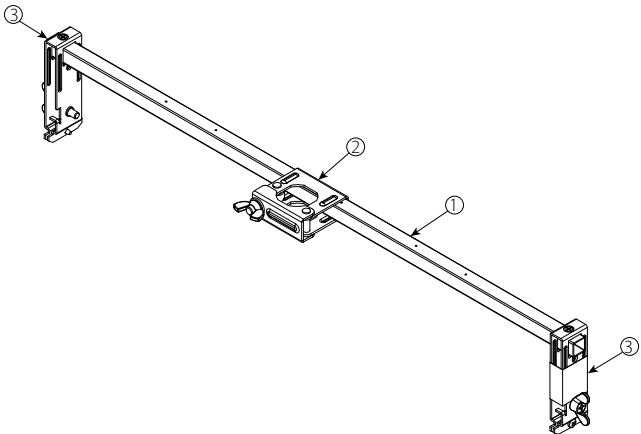
Style AB7

- Suspended Ceilings
- Hard-Lid Ceilings

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

NOTE

- Both sizes FM/VdS Approved.



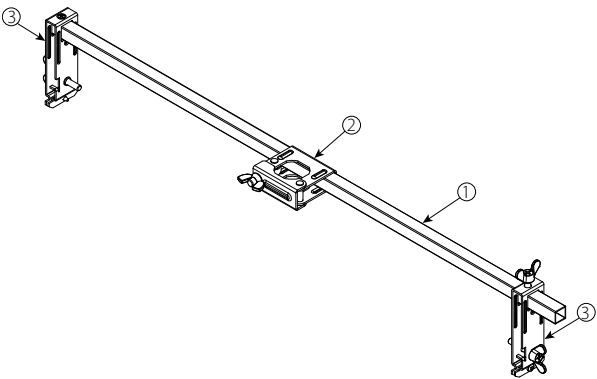
Style AB7 Adjustable

- Suspended Ceilings
- Hard-Lid Ceilings

| Item | Description |
|------|------------------------------|
| 1 | 700 mm or 1400 mm Square Bar |
| 2 | 1-Bee2™ Center Bracket |
| 3 | End Bracket (adjustable) |

NOTE

- Both sizes FM/VdS Approved



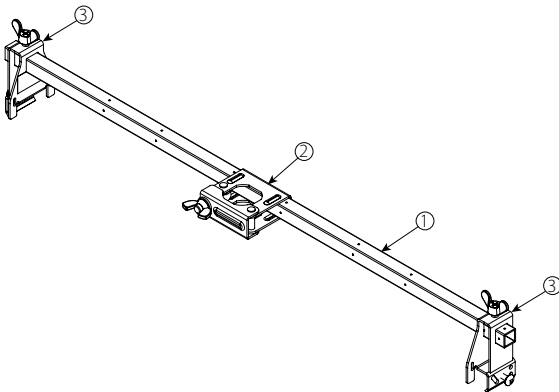
Style AB11

- Suspended Ceilings
- Hard-Lid Ceilings

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

NOTE

- FM/VdS Approved



4.1 DIMENSIONS (CONTINUED)

VicFlex™ Brackets

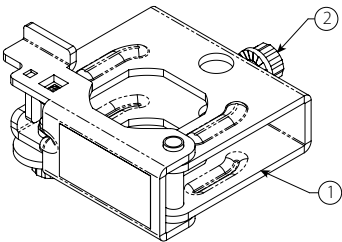
Style AB12

- Suspended Ceilings
- Hard-Lid Ceilings

| Item | Description |
|------|-------------------------|
| 1 | Style AB12 Bracket Body |
| 2 | T25 Drive Set Screw |

NOTE

- FM/VdS Approved



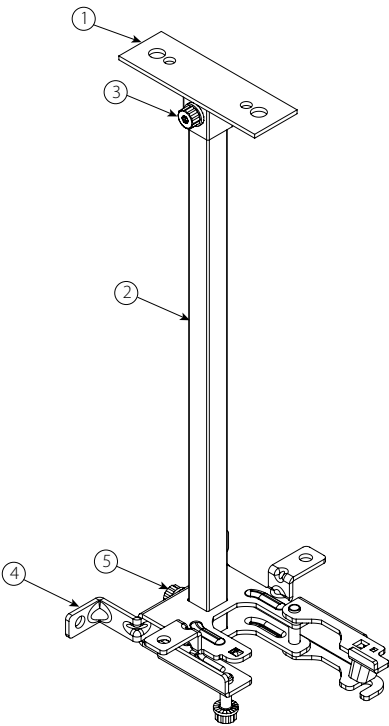
Style ABBA

- Floor-Above Mount
- Cantilever Mount
- Temporary Mount in Exposed Ceilings

| Item | Description |
|------|---|
| 1 | Style ABBA Mounting Plate |
| 2 | Style ABBA Square Bar |
| 3 | Cap Screw, Serrated Flange, M6 x 1 x 20, T25 Torx Drive Recessed |
| 4 | Style ABMM Bracket Body |
| 5 | Cap Screw, Serrated Flange, M6 x 1 x 15.24, T25 Torx Drive Recessed |

NOTE

- FM Approved



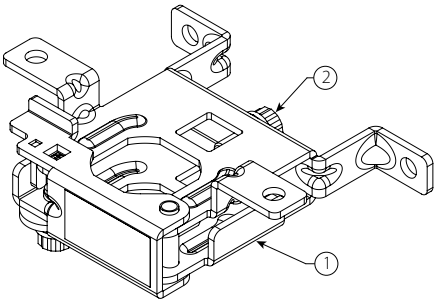
Style ABMM

- Surface Mount
- Stand-off Mount

| Item | Description |
|------|---|
| 1 | Style ABMM Bracket Body |
| 2 | Cap Screw, Serrated Flange, M6 x 1 x 15.24, T25 Torx Drive Recessed |

NOTE

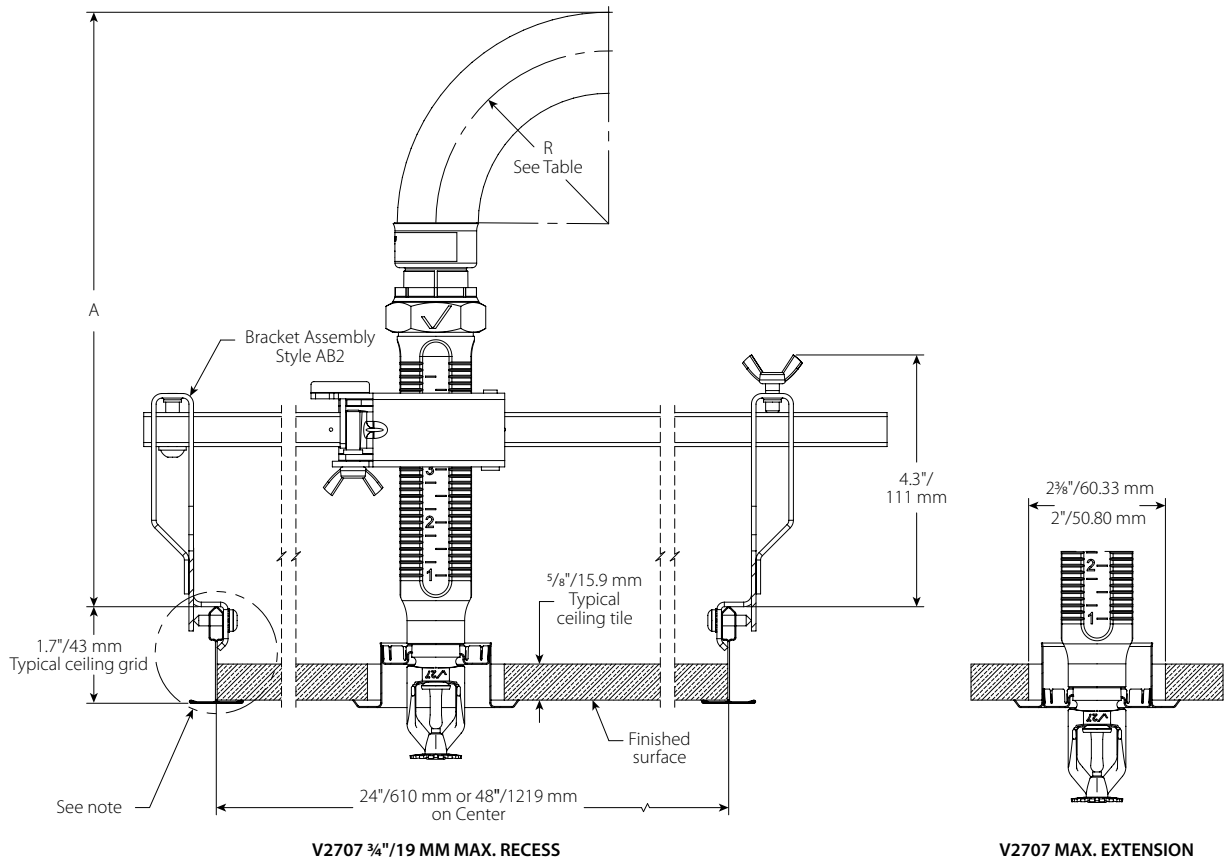
- FM Approved



4.2 DIMENSIONS

Clearances

Series AH3 Braided Hose and Style AB2 Bracket with Suspended T-grid Ceilings



| Dimension | | Hose Clearance | | | | | |
|-----------|--|---|---|---|---|---|---|
| | | Straight Reducer | | | | Long Elbow | Short Elbow |
| | | V2707 3/4" Max Recess inches mm | V3802 1/2" Max Recess inches mm | V2707 3/4" Max Recess inches mm | V3802 1/2" Max Recess inches mm | V2707 3/4" Max Recess inches mm | V3802 1/2" Max Recess inches mm |
| R | Bend Radius | 3.0 76.2 | | 7.0 178 | | — | |
| A | Minimum Required Installation Space | 9.6 244 | 11.1 281 | 13.6 345 | 15.1 383 | 5.8 147 | 5.8 147 |

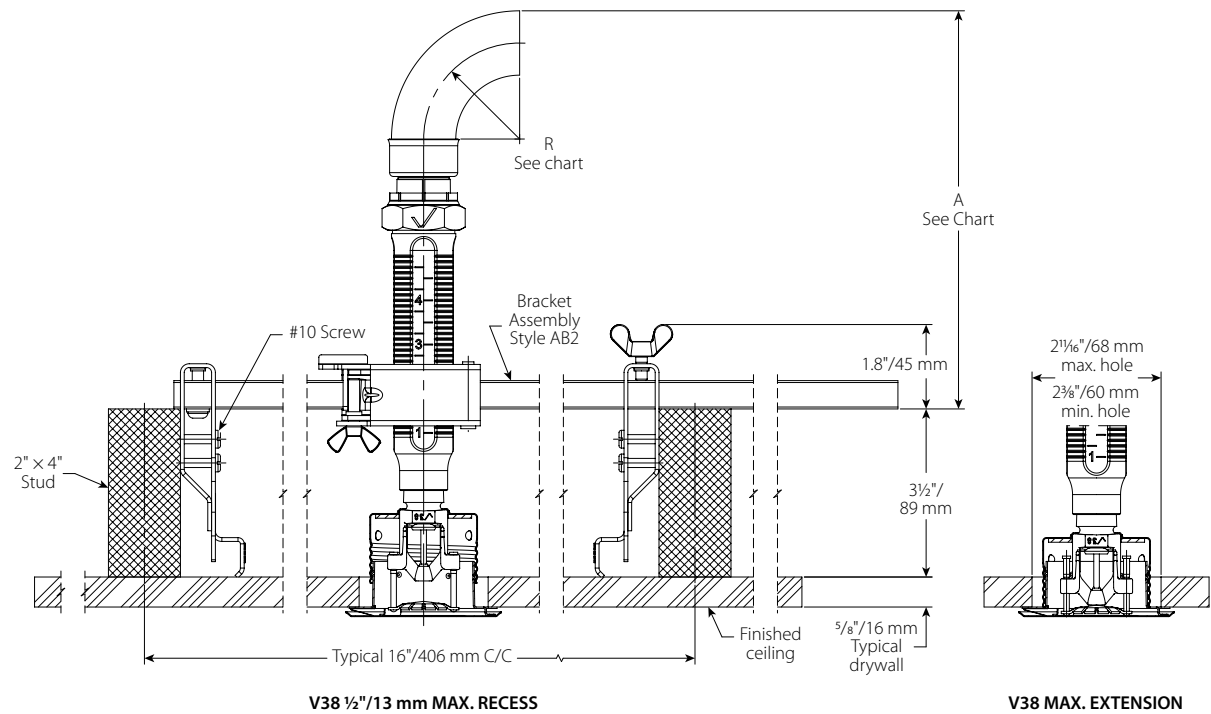
NOTE

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

4.3 DIMENSIONS

Clearances

Series AH3 Braided Hose and Style AB2 Bracket with Wood/Metal Joist Ceiling



| Dimension | | Hose Clearance | | | | | | | | |
|-----------|-------------------------------------|---|---|---|---|---|---|---|---|---|
| | | Straight Reducer | | | | | | | | |
| | | V2707 3/4" / 20 mm Max Recess inches mm | V3802 1/2" / 13 mm Max Recess inches mm | V2709 3/4" / 20 mm Sidewall inches mm | V2707 3/4" / 20 mm Max Recess inches mm | V3802 1/2" / 13 mm Max Recess inches mm | V2709 3/4" / 20 mm Sidewall inches mm | V2707 3/4" / 20 mm Max Recess inches mm | V3802 1/2" / 13 mm Max Recess inches mm | V2709 3/4" / 20 mm Sidewall inches mm |
| R | Bend Radius | 2.0 50 | | | 3.0 80 | | | 7.0 175 | | |
| A | Minimum Required Installation Space | 6.2 158 | 7.6 193 | 6.1 155 | 7.2 183 | 8.6 218 | 7.1 180 | 11.2 285 | 12.6 320 | 11.1 282 |

| Dimension | | Hose Clearance | | |
|-----------|-------------------------------------|---|---|---|
| | | Long Elbow | | Short Elbow |
| | | V2707 3/4" / 20 mm Max Recess inches mm | V2709 3/4" / 20 mm Sidewall inches mm | V3802 1/2" / 13 mm Max Recess inches mm |
| R | Bend Radius | — | | — |
| A | Minimum Required Installation Space | 3.3 84 | 3.6 91 | 3.3 84 |

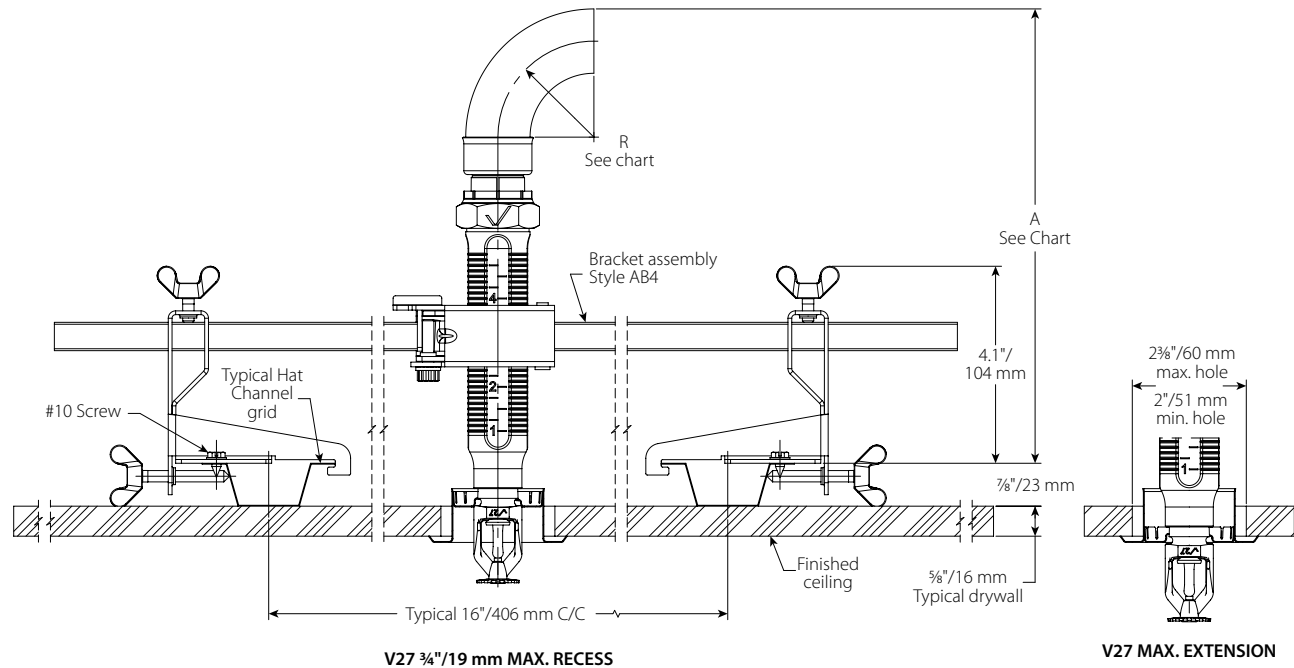
NOTE

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

4.4 DIMENSIONS

Clearances

Series AH3 Braided Hose and Style AB4 Bracket with Hat Furring Channel Ceiling



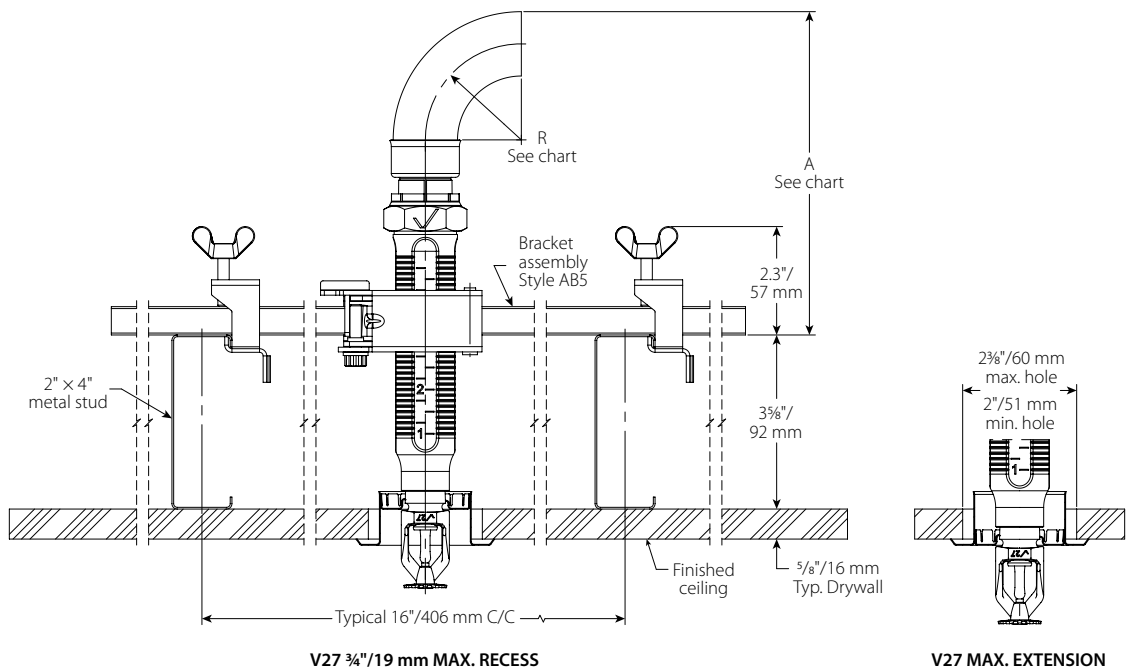
| Dimension | | Hose Clearance | | | | | | | |
|-----------|--|-----------------------------|---------------------|-----------------------------|---------------------|-----------------------------|---------------------|-----------------------------|---------------------|
| | | Straight Reducer | | | | | | Long Elbow | Short Elbow |
| | | V27 Pendent inches mm | V38 inches mm | V27 Pendent inches mm | V38 inches mm | V27 Pendent inches mm | V38 inches mm | V27 Pendent inches mm | V38 inches mm |
| R | Bend Radius | 2.0 50 | | 3.0 80 | | 7.0 175 | | — | — |
| A | Minimum Required Installation Space | 8.8 224 | 10.2 259 | 9.8 249 | 11.2 285 | 13.8 351 | 15.2 386 | 8.0 203 | 5.9 150 |

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

4.5 DIMENSIONS

Clearances

Series AH3 Braided Hose and Style AB5 Bracket with Metal Joist Ceiling



| Dimension | | Hose Clearance | | | | | |
|-----------|-------------------------------------|---|---|---|---|---|---|
| | | Straight Reducer | | | | | |
| | | V2707 3/4" / 20 mm Max Recess inches mm | V3802 1/2" / 13 mm Max Recess inches mm | V2709 3/4" / 20 mm Sidewall inches mm | V2707 3/4" / 20 mm Max Recess inches mm | V3802 1/2" / 13 mm Max Recess inches mm | V2709 3/4" / 20 mm Sidewall inches mm |
| R | Bend Radius | 3.0 80 | | | 7.0 175 | | |
| A | Minimum Required Installation Space | 7.0 178 | 8.7 221 | 7.1 180 | 11.0 279 | 12.7 323 | 11.1 282 |

| Dimension | | Hose Clearance | | | | |
|-----------|-------------------------------------|---|---|---|---|---|
| | | Long Elbow | | | Low-Profile Long Elbow | Short Elbow |
| | | V2707 3/4" / 20 mm Max Recess inches mm | V3802 1/2" / 13 mm Max Recess inches mm | V2709 3/4" / 20 mm Sidewall inches mm | V3802 1/2" / 13 mm Max Recess inches mm | V3802 1/2" / 13 mm Max Recess inches mm |
| R | Bend Radius | — | | | — | — |
| A | Minimum Required Installation Space | 3.5 89 | 4.9 124 | 3.6 91 | 2.9 74 | 3.3 84 |

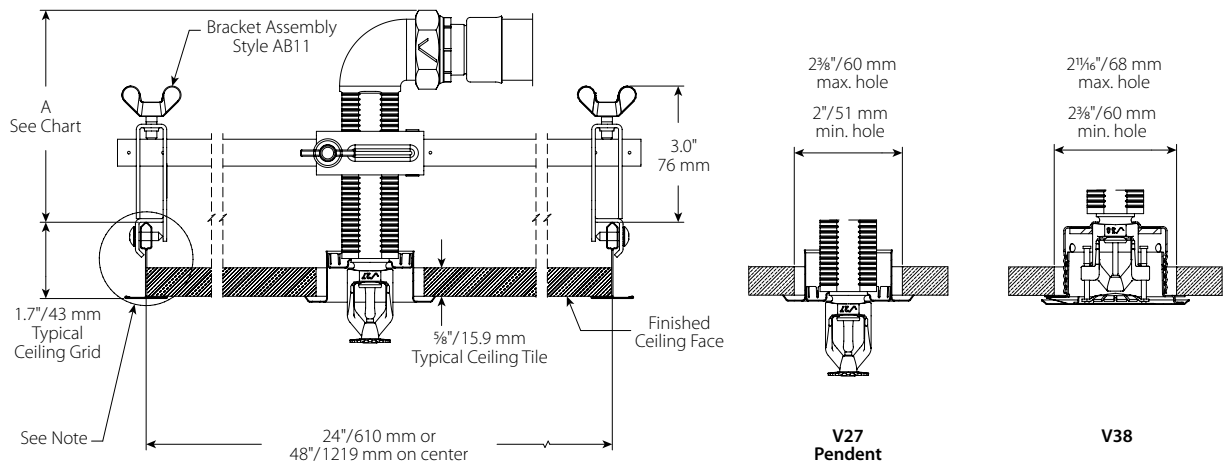
NOTE

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

4.6 DIMENSIONS

Clearances

Series AH3 Braided Hose and Style AB11 Bracket (LOW-PROFILE SOLUTION) with Suspended T-Grid Ceilings



| Dimension | | Hose Clearance | |
|-----------|-------------------------------------|---|---|
| | | Low-Profile Long Elbow | Low-Profile Short Elbow |
| | | V2707 ¾" / 20 mm Max Recess inches mm | V3802 ½" / 13 mm Max Recess inches mm |
| A | Minimum Required Installation Space | 4.0 102 | 3.9 99 |

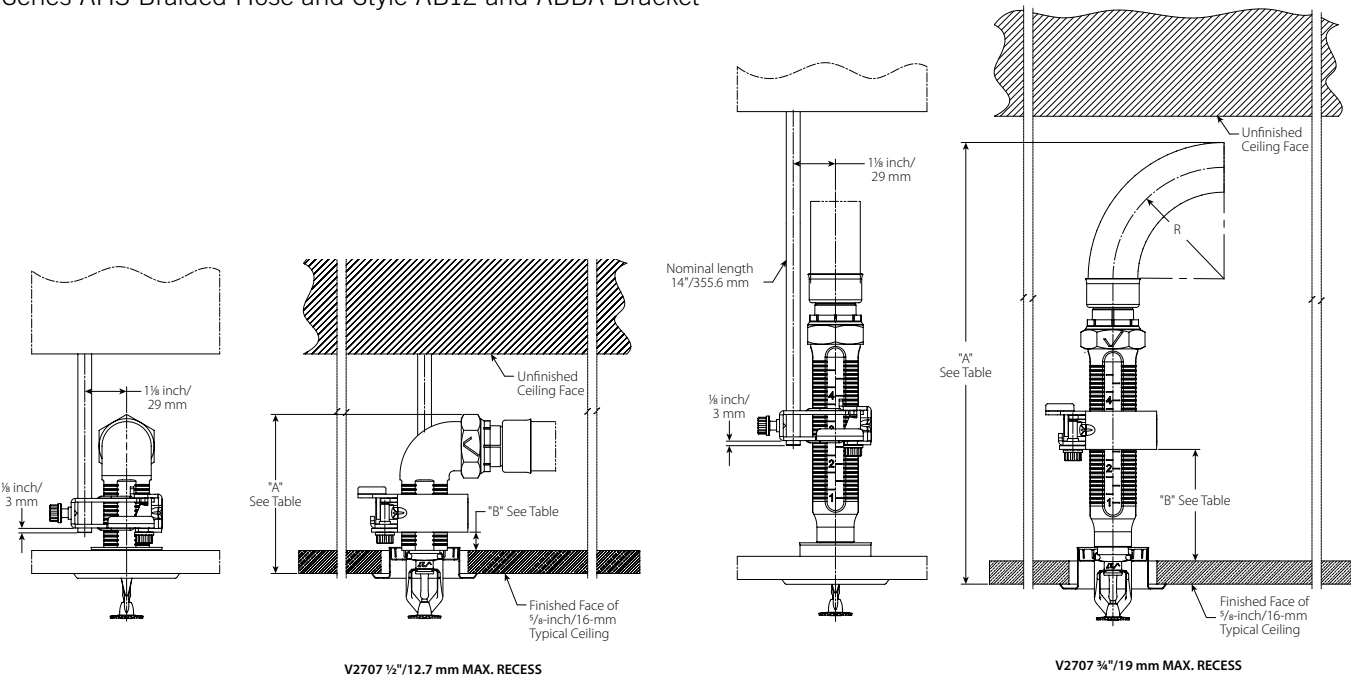
NOTE

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

4.7 DIMENSIONS

Clearances

Series AH3 Braided Hose and Style AB12 and ABBA Bracket



| Dimension | | Hose Clearance | | | | | | | | | |
|-----------|---|-------------------------|--------------|------------------------|--------------|----------------------|--------------|----------------------|--------------|---------------------------|---------------|
| | | Low-Profile Short Elbow | | Low-Profile Long Elbow | | Standard Short Elbow | | Standard Long Elbow | | Standard Straight Reducer | |
| | | 3/4" / 19mm Recessed* | Concealed | 3/4" / 19mm Recessed | Concealed | 3/4" / 19mm Recessed | Concealed | 3/4" / 19mm Recessed | Concealed | 3/4" / 19mm Recessed | Concealed |
| | | inches | inches | inches | inches | inches | inches | inches | inches | inches | inches |
| | | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm |
| R | Bend Radius | — | | — | | — | | — | | 7 175.0 | |
| A | Minimum Required Installation Space | 4.0 101.6 | 5.5 139.7 | 5.6 142.2 | 7.2 182.9 | 5.9 149.9 | 7.5 190.5 | 7.7 195.6 | 9.3 236.2 | 15.0 381.0 | 16.6 421.6 |
| B | Distance from Top of Typical Ceiling Tile to Bottom of Gate | 0.5 12.7 | 2.0 50.8 | 1.5 38.1 | 1.5 38.1 | 1.5 38.1 | 1.5 38.1 | 3.0 76.2 | 3.0 76.2 | 3.0 76.2 | 3.0 76.2 |

* Adjustability will be limited

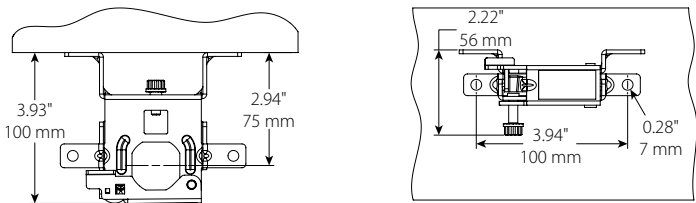
NOTE

- For Style AB12 Bracket Sprinkler location relative to 3/8" threaded rod is 1 1/2"/29 mm center-to-center.
- Variations of ceiling grids, sprinkler heads, brackets, and hoses are permitted but may result in clearance differences from the figures above.

4.8 DIMENSIONS

Stand-off Dimensions

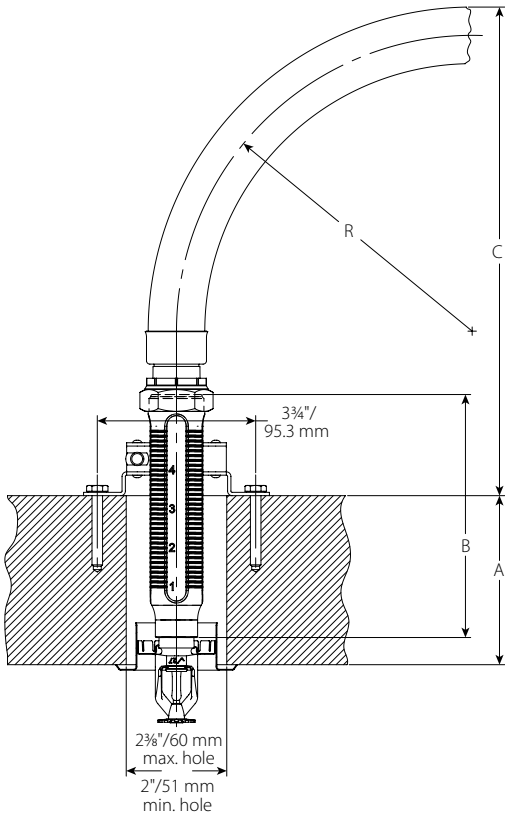
Style ABMM Bracket



4.9 DIMENSIONS

Clearances

Series AH3 Braided Hose and Style AB3 and ABMM Bracket for Surface Mount Application



| Dimension | | Hose Clearance | | | | | | | | | | | | | | | | | | | |
|-----------|---|----------------|-------------|-------------|---------------|-------------|-------------|-------------|-------------|-------------|-------------|---------------|-------------|-------------|---------------|-------------|-------------|-------------|-------------|-------------|-------------|
| | | inches mm | | | | | | | | | | inches mm | | | | | | | | | |
| R | Bend Radius | 7 175 | | | | | | | | | | 8 200 | | | | | | | | | |
| A | Wall Thickness | 2 50 | | 4 100 | | 6 150 | | 8 200 | | 10 250 | | 2 50 | | 4 100 | | 6 150 | | 8 200 | | 10 250 | |
| B | Outlet Length | 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 | 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 | 13 330.2 | 13 330.2 |
| C | Distance from Top of Ceiling to Top of Hose | 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 |

NOTE

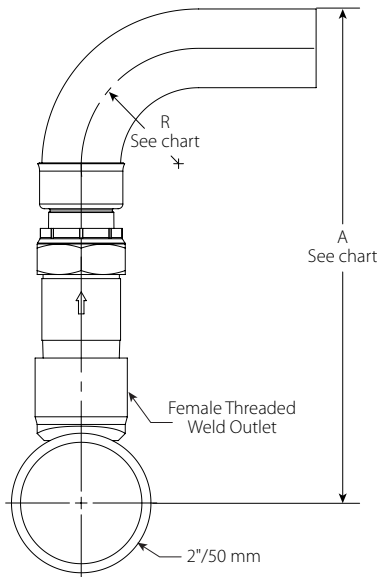
- Variations of ceiling grids, sprinkler heads, brackets, and hoses are permitted but may result in clearance differences from the figures above.
- See installation instructions for mounting screw type and size.

4.10 DIMENSIONS

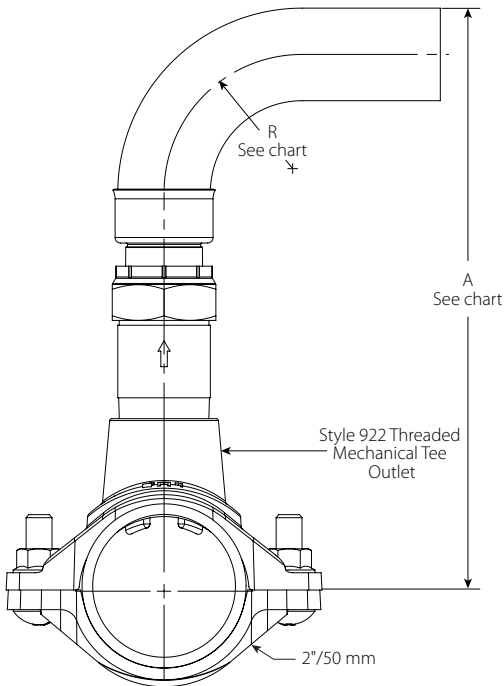
Branchline Clearances

Series AH3 Braided Hose with Female Threaded Outlet

Series AH3 Braided Hose with Style 922 Threaded Outlet



| Dimension | | Hose Clearance | | | | |
|-----------|-------------|----------------|-------------|-------------|-------------|--------------|
| | | inches mm | | | | |
| R | Bend Radius | 3 80 | 4 100 | 5 125 | 6 150 | 7 175 |
| A | Min. | 9.4 239 | 10.4 264 | 11.4 290 | 12.4 315 | 13.41 341 |



| Dimension | | Hose Clearance | | | | |
|-----------|-------------|----------------|------------|-------------|-------------|-------------|
| | | inches mm | | | | |
| R | Bend Radius | 3 80 | 4 100 | 5 125 | 6 150 | 7 175 |
| A | Min. | 8.1 205 | 9.1 231 | 10.1 256 | 11.1 281 | 12.1 307 |

5.0 PERFORMANCE – FRICTION LOSS DATA



Series AH3 Braided Hoses

Style AB2, AB3, AB4, AB5, AB7, AB7 Adj., AB11, AB12, ABBA and ABMM VicFlex™ Brackets

| Hose | Sprinkler | Reducer | | FM | |
|------------------------|------------------------------|-------------------------------------|----------|--|---------------|
| Length inches mm | K-Factor Imperial S.I. | Nominal Outlet Size inches DN | Type | Equivalent Length of 1"/33.7 mm Sch. 40 Pipe feet meters | Maximum Bends |
| 31 790 | 5.6 8.1 | ½ DN15 | Straight | 33.8 10.3 | 2 |
| | | | Elbow | 35.2 10.7 | |
| | 8.0 11.5 | ¾ DN20 | Straight | 30.9 9.4 | |
| | | | Elbow | 32.1 9.7 | |
| | 11.2 16.1 | ¾ DN20 | Straight | 34.1 10.4 | |
| | | | Elbow | 34.0 10.4 | |
| | 14.0 20.2 | ¾ DN20 | Straight | 34.2 10.4 | |
| | | | Elbow | 34.0 10.4 | |
| 36 915 | 5.6 8.1 | ½ DN15 | Straight | 43.0 13.1 | 2 |
| | | | Elbow | 44.9 13.7 | |
| | 8.0 11.5 | ¾ DN20 | Straight | 39.2 11.9 | |
| | | | Elbow | 40.8 12.4 | |
| | 11.2 16.1 | ¾ DN20 | Straight | 43.7 13.3 | |
| | | | Elbow | 43.9 13.4 | |
| | 14.0 20.2 | ¾ DN20 | Straight | 44.1 13.4 | |
| | | | Elbow | 44.2 13.5 | |
| 48 1220 | 5.6 8.1 | ½ DN15 | Straight | 65.2 19.9 | 3 |
| | | | Elbow | 68.3 20.8 | |
| | 8.0 11.5 | ¾ DN20 | Straight | 68.3 20.8 | |
| | | | Elbow | 68.5 20.8 | |
| | 11.2 16.1 | ¾ DN20 | Straight | 66.7 20.3 | |
| | | | Elbow | 67.8 20.7 | |
| | 14.0 20.2 | ¾ DN20 | Straight | 67.8 20.7 | |
| | | | Elbow | 67.8 21.0 | |

FM NOTES:

- Series AH3 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 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°.

5.0 PERFORMANCE – FRICTION LOSS DATA (CONTINUED)



Series AH3 Braided Hoses

Style AB2, AB3, AB4, AB5, AB7, AB7 Adj., AB11, AB12, ABBA and ABMM VicFlex™ Brackets

| Hose | Sprinkler | Reducer | | FM | |
|------------------------|------------------------------|-------------------------------------|----------|--|---------------|
| Length inches mm | K-Factor Imperial S.I. | Nominal Outlet Size inches DN | Type | Equivalent Length of 1"/33.7 mm Sch. 40 Pipe feet meters | Maximum Bends |
| 60 1525 | 5.6 8.1 | 1/2 DN15 | Straight | 87.4 26.6 | 4 |
| | | | Elbow | 91.7 27.9 | |
| | 8.0 11.5 | 3/4 DN20 | Straight | 97.7 29.7 | |
| | | | Elbow | 100.8 30.7 | |
| | 11.2 16.1 | 3/4 DN20 | Straight | 89.7 27.3 | |
| | | | Elbow | 91.7 27.9 | |
| | 14.0 20.2 | 3/4 DN20 | Straight | 91.6 27.9 | |
| | | | Elbow | 93.4 28.5 | |
| 72 1830 | 5.6 8.1 | 1/2 DN15 | Straight | 109.7 33.4 | 4 |
| | | | Elbow | 115.3 35.1 | |
| | 8.0 11.5 | 3/4 DN20 | Straight | 95.4 29.0 | |
| | | | Elbow | 97.0 29.5 | |
| | 11.2 16.1 | 3/4 DN20 | Straight | 113.1 34.5 | |
| | | | Elbow | 115.6 35.2 | |
| | 14.0 20.2 | 3/4 DN20 | Straight | 115.5 35.2 | |
| | | | Elbow | 118.4 36.1 | |

FM NOTES:

- Series AH3 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 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°.

5.1 PERFORMANCE – FRICTION LOSS DATA


Series AH3 Braided Hoses with 90° Low-Profile Elbows
Style AB5, AB11, AB12, ABBA and ABMM VicFlex™ Brackets

| Hose | Reducer | | Sprinkler | FM | |
|------------------------|----------|-------------------------------------|------------------------------|--|---------------|
| Length inches mm | Type | Nominal Outlet Size inches DN | K-factor Imperial S.I. | Equivalent Length of 1"/33.7mm Sch. 40 pipe feet meters | Maximum Bends |
| 31 790 | LP Elbow | 1/2 DN15 | 5.6 | 53.8 | 2 |
| | | | 8.1 | 16.3 | |
| | | 3/4 DN20 | 8.0 | 71.3 | |
| | | | 11.5 11.2 16.1 | 21.7 69.8 21.2 | |
| 36 915 | LP Elbow | 1/2 DN15 | 5.6 | 60 | 2 |
| | | | 8.1 | 18.2 | |
| | | 3/4 DN20 | 8.0 | 77.8 | |
| | | | 11.5 11.2 16.1 | 23.7 76.5 23.3 | |
| 48 1220 | LP Elbow | 1/2 DN15 | 5.6 | 75 | 3 |
| | | | 8.1 | 22.8 | |
| | | 3/4 DN20 | 8.0 | 93.4 | |
| | | | 11.5 11.2 16.1 | 28.4 92.5 28.1 | |
| 60 1525 | LP Elbow | 1/2 DN15 | 5.6 | 90 | 4 |
| | | | 8.1 | 27.4 | |
| | | 3/4 DN20 | 8.0 | 109 | |
| | | | 11.5 11.2 16.1 | 33.2 108.6 33.1 | |
| 72 1830 | LP Elbow | 1/2 DN15 | 5.6 | 105.2 | 4 |
| | | | 8.1 | 32 | |
| | | 3/4 DN20 | 8.0 | 124.8 | |
| | | | 11.5 11.2 16.1 | 38 124.9 38 | |

FM NOTES:

- Series AH3 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 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 AH3 Braided Hoses Style AB2, AB4, AB5, AB7, AB7 Adj., AB10, AB11, and AB12 VicFlex™ Brackets

| Hose | Reducer | VdS | |
|------------------------|-------------------------------------|--|---------------|
| Length mm inches | Nominal Outlet Size DN inches | Equivalent Length according to EN 10255 DN20 (26.9 x 2.65 mm) meters feet | Maximum Bends |
| 790 31 | DN15 ½ | 5.9 19.4 | 3 |
| | DN20 ¾ | | |
| 915 36 | DN15 ½ | 6.9 22.5 | 3 |
| | DN20 ¾ | | |
| 1220 48 | DN15 ½ | 9.2 30.0 | 3 |
| | DN20 ¾ | | |
| 1525 60 | DN15 ½ | 11.4 37.5 | 4 |
| | DN20 ¾ | | |
| 1830 72 | DN15 ½ | 13.7 45.0 | 4 |
| | DN20 ¾ | | |

VDS CEILING MANUFACTURERS LIST

AB2, AB7, AB10, AB11, AB12

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

AB4

No specific approval

AB5

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

5.3 PERFORMANCE



Series AH3 Braided Flexible Hoses Style AB2, AB5, AB7, AB10

| Hose | CCC | |
|------------------------|---|--------------------------------------|
| Length mm inches | Equivalent Length of 1"/33.7mm Sch. 40 pipe according to G5135.16 tested at 114 lpm (30 gpm) | |
| | Straight Configuration meters feet | Bend Configuration meters feet |
| 790 31 | 5.19 17.0 | 7.91 26.0 |
| 915 36 | 6.17 20.2 | 9.92 32.6 |
| 1220 48 | 8.93 29.3 | 14.55 47.7 |
| 1525 60 | 11.10 36.4 | 20.3 65.7 |
| 1830 72 | 13.43 44.1 | 23.64 77.6 |

6.0 NOTIFICATIONS

⚠ WARNING



- Read and understand all instructions before attempting to install any Victaulic products.
- Always verify that the piping system has been completely depressurized and drained immediately prior to installation, removal, adjustment, or maintenance of any Victaulic products.
- Wear safety glasses, hardhat, and foot protection.

Failure to follow these instructions could result in death or serious personal injury and property damage.

- These products shall be used only in fire protection systems that are designed and installed in accordance with current, applicable National Fire Protection Association (NFPA) standards, or equivalent local and national fire protection standards, and in accordance with applicable building and fire codes. These standards and codes contain important information regarding protection of systems from freezing temperatures, corrosion, mechanical damage, etc.
- The installer shall understand the use of this product and why it was specified for the particular application.
- The installer shall understand common industry safety standards and potential consequences of improper product installation.
- It is the system designer's responsibility to verify suitability of materials for use with the intended fluid media within the piping system and external environment.
- The material specifier shall evaluate the internal and external effect of chemical composition, pH level, operating temperature, chloride level, oxygen level, and flow rate on materials to confirm system life will be acceptable for the intended service.
- It is the responsibility of the owner of a building or their authorized agent to provide the sprinkler system installer with any knowledge that the water supply might be contaminated with or conducive to the development of microbiologically influenced corrosion (MIC), including as required by NFPA 13. Failure to identify adverse water quality issues may affect the *VicFlex* product and void the manufacturer's warranty.

Failure to follow installation requirements and local and national codes and standards could compromise system integrity or cause system failure, resulting in death or serious personal injury and property damage.

Victaulic VicFlex™ Braided Hoses may be painted/coated or caulked around, including fire barrier sealant, provided that the substance is compatible with stainless steel and zinc-plated carbon steel or ductile iron. Care shall be taken to ensure that the sprinkler and associated components do not come into contact with paint/coatings and caulking.

Victaulic VicFlex™ Braided Hoses that penetrate through non-fire rated gypsum wall (drywall) will function as designed, provided the components are installed in accordance with the respective installation instructions referenced in this document.

7.0 REFERENCE MATERIALS – CHARACTERISTICS

VicFlex™ Maximum Load Values

Series AH3 Hose with 24" Bracket

| Hose Length inches mm | Total Load | | Maximum Uniform Load | |
|-----------------------------|------------|------|----------------------|------------|
| | lb | N | lb/linear ft | N/linear m |
| 31 790 | 4.8 | 21.4 | 2.4 | 35.0 |
| 36 915 | 5.0 | 22.2 | 2.5 | 36.5 |
| 48 1220 | 5.6 | 24.9 | 2.8 | 40.9 |
| 60 1525 | 6.1 | 27.1 | 3.1 | 44.5 |
| 72 1830 | 6.6 | 29.4 | 3.3 | 48.2 |

Series AH3 Hose with 48" Bracket

| Hose Length inches mm | Total Load | | Maximum Uniform Load | |
|-----------------------------|------------|------|----------------------|------------|
| | lb | N | lb/linear ft | N/linear m |
| 31 790 | 5.7 | 25.4 | 2.9 | 41.6 |
| 36 915 | 5.9 | 26.2 | 3.0 | 43.1 |
| 48 1220 | 6.5 | 28.9 | 3.3 | 47.4 |
| 60 1525 | 7 | 31.1 | 3.5 | 51.1 |
| 72 1830 | 7.6 | 33.8 | 3.8 | 55.5 |

Total Load is defined as the sum of the weights of the following:

- Water-filled flexible sprinkler hose with threaded end fittings, including a typical fire sprinkler
- Bracket assembly (any applicable Victaulic bracket model of the relevant associated size)

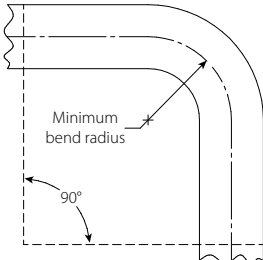
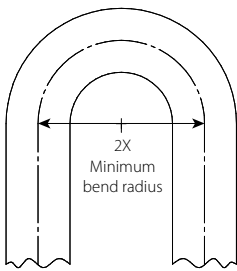
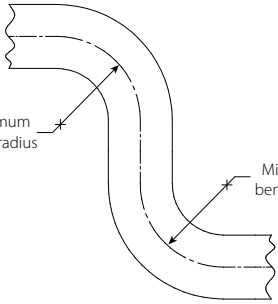
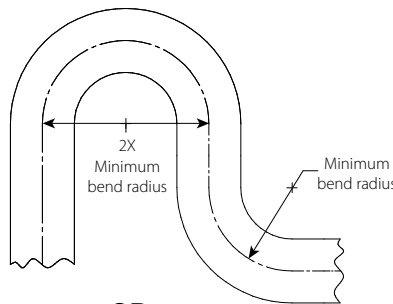
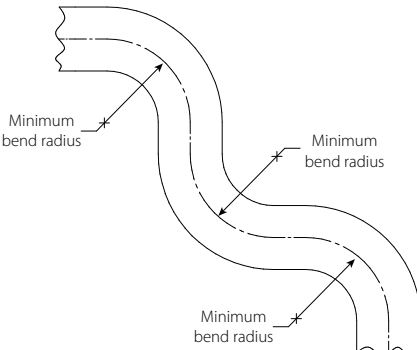
ASTM C 635: Suspension System Load-Carrying Capabilities (excerpted)

| Suspension System | Actual Length ft/m | Minimum Allowable Uniform Load | |
|-------------------|-----------------------|--------------------------------|------------|
| | | lb/linear ft | N/linear m |
| Direct Hung | Light | 5.0 | 75.7 |
| | Intermediate | 12.0 | 181.0 |
| | Heavy | 16.0 | 241.7 |

SUMMARY: All direct-hung suspension system duty classifications per ASTM C 635 are able to withstand the maximum water-filled weight of the *VicFlex* sprinkler hose and bracket.

7.0 REFERENCE MATERIALS – CHARACTERISTICS (CONTINUED)

Flexible Hose In-Plane Bend Characteristics

| One Bend | Two Bends | Three Bends |
|---|---|--|
|  |  OR  |  OR  |

NOTE

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

[I-VicFlex: Field Installation Handbook](#)

User Responsibility for Product Selection and Suitability

Each user bears final responsibility for determining the suitability of Victaulic products for their end-use application, in accordance with industry standards, project specifications, and Victaulic’s published performance, maintenance, and safety data, as well as all warnings and installation instructions. Nothing in this or any other document, nor any verbal recommendation, advice, or opinion from any Victaulic employee, shall be deemed to alter, vary, supersede, or waive any provision of Victaulic Company’s standard conditions of sale, warranty, installation instructions, or this disclaimer.

Installation

Always refer to and follow the [Victaulic Installation Handbook](#) or installation instructions for the product you are installing. Handbooks are included with each shipment of Victaulic products, providing complete installation and assembly data, and are available in PDF format on our website at [victaulic.com](#).

Warranty

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

Intellectual Property Rights

No statement concerning the use of any material, product, service, or design is intended, or should be construed, to grant any license under any patent or other intellectual property right of Victaulic or any of its affiliates, or as a recommendation for the use of such material, product, service, or design in the infringement of any patent or other intellectual property right. The terms “Patented” or “Patent Pending” refer to design or utility patents or patent applications for articles and/or methods of use in the United States and/or other countries. Victaulic and all other Victaulic marks are the trademarks or registered trademarks of Victaulic Company, and/or its affiliated entities, in the U.S. and/or other countries.

Note

All products bearing a Victaulic trademark are manufactured by Victaulic or to Victaulic specifications. All products are to be installed only in accordance with the applicable Victaulic installation instructions. Victaulic reserves the right to change product specifications, designs and standard equipment without notice and without incurring obligations.