



# FIRE SUPPRESSION SERVICES INC

OMEGA POOLS

TENANT IMPROVEMENT

41516 NORTH FOREST DALE DRIVE

SUITE 47

Park City, Utah

## Materials Submittal

<input checked="checked" type="checkbox"/>	NO EXCEPTION TAKEN
<input type="checkbox"/>	REJECTED
<input type="checkbox"/>	MAKE CORRECTION NOTED
<input type="checkbox"/>	REVISE AND RESUBMIT
<input type="checkbox"/>	SUBMIT SPECIFIED ITEM

Checking is only for general conformance with the design concept of the project and general compliance with the information given in the contract documents. Any action shown is subject to the requirement of the plans and specifications. Contractor is responsible for: dimensions which shall be confirmed and correlated at the job site; fabrication processes and techniques of construction; coordination of his work with that of all other trades; and the safe and satisfactory performance of this work.

CRAIG BLUE, P.E.  
CONSULTING ENGINEERS

Date 1/12/26 By *C. Blue*

# Victaulic® FireLock™ Series FL-QR

## Standard Coverage, Quick Response

### Upright, Pendent and Recessed Pendent Sprinklers

#### K2.8 (4.0), K4.2 (6.1), K5.6 (8.1), K8.0 (11.5)



41.01



## 1.0 PRODUCT DESCRIPTION

QUICK RESPONSE UPRIGHT SPRINKLERS				
SIN	V2815	V4215	V2704	V3402
ORIENTATION	UPRIGHT	UPRIGHT	UPRIGHT	UPRIGHT
K-FACTOR <sup>1</sup>	2.8 Imp./4.0 S.I.	4.2 Imp./6.1 S.I.	5.6 Imp./8.1 S.I.	8.0 Imp./11.5 S.I.
CONNECTION	½" NPT/15mm BSPT	½" NPT/15mm BSPT	½" NPT/15mm BSPT/IGS	¾" NPT/20mm BSPT/IGS
MAX. WORKING PRESSURE	175 psi/1200 kPa	175 psi/1200 kPa	175 psi/1200 kPa cULus 250 psi/1725 kPa	175 psi/1200 kPa
GLOBE RE-DESIGNATION	GL2815	GL4215	–	–
GLOBE EQUIVALENT	–	–	GL5615	GL8118

QUICK RESPONSE PENDENT SPRINKLERS				
SIN	V2801	V4201	V2708	V3406
ORIENTATION	PENDENT	PENDENT	PENDENT	PENDENT
K-FACTOR <sup>1</sup>	2.8 Imp./4.0 S.I.	4.2 Imp./6.1 S.I.	5.6 Imp./8.1 S.I.	8.0 Imp./11.5 S.I.
CONNECTION	½" NPT/15mm BSPT	½" NPT/15mm BSPT	½" NPT/15mm BSPT/IGS	¾" NPT/20mm BSPT/IGS
MAX. WORKING PRESSURE	175 psi/1200 kPa	175 psi/1200 kPa	175 psi/1200 kPa cULus 250 psi/1725 kPa	175 psi/1200 kPa
GLOBE RE-DESIGNATION	GL2801	GL4201	–	–
GLOBE EQUIVALENT	–	–	GL5601	GL8101

QUICK RESPONSE RECESSED PENDENT SPRINKLERS				
SIN	V2801	V4201	V2708	V3406
ORIENTATION	PENDENT	PENDENT	PENDENT	PENDENT
K-FACTOR <sup>1</sup>	2.8 Imp./4.0 S.I.	4.2 Imp./6.1 S.I.	5.6 Imp./8.1 S.I.	8.0 Imp./11.5 S.I.
CONNECTION	½" NPT/15mm BSPT	½" NPT/15mm BSPT	½" NPT/15mm BSPT/IGS	¾" NPT/20mm BSPT/IGS
MAX. WORKING PRESSURE	175 psi/1200 kPa	175 psi/1200 kPa	175 psi/1200 kPa cULus 250 psi/1725 kPa	175 psi/1200 kPa
ESCUTCHEON	Recessed	Recessed	Recessed	Recessed
GLOBE RE-DESIGNATION	GL2801	GL4201	–	–
GLOBE EQUIVALENT	–	–	GL5601	GL8101

AVAILABLE GUARDS/SHIELDS				
SPRINKLER	V28	V42	V27	V34
Upright			■	■
Pendent			■	■

AVAILABLE WRENCHES							
SPRINKLER	V56-2 Recessed	V56 Open End	V27-2 Recessed	V27 Open End	V34-2 Recessed	V34 Open End	⅜ Hex-Bit
V2815 and V4215		■					
V2707 and V2704				■			■
V3402						■	■
V2801, and V4201	■	■					
V2706 and V2708			■	■			■
V3406					■	■	■

**Factory Hydrostatic Test:** 100% @ 500 psi/3447 kPa/34 bar

**Min. Operating Pressure:** UL/FM: 7 psi/48 kPa/5 bar

VdS: 5 psi/35 kPa/35 bar (Upright only)

**Temperature Rating:** See tables in section 2.0

<sup>1</sup> For K-Factor when pressure is measured in bar, multiply S.I. units by 10.0.

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



## 2.0 CERTIFICATION/LISTINGS



UPRIGHT APPROVALS/LISTINGS				
SIN	V2815	V4215	V2704	V3402
Nominal K Factor Imperial	2.8	4.2	5.6	8.0
Nominal K Factor S.I. <sup>2</sup>	4.0	6.1	8.1	11.5
Orientation	UPRIGHT	UPRIGHT	UPRIGHT	UPRIGHT
Approved Temperature Ratings F°/C°				
cULus	135°F/57°C 155°F/68°C 175°F/79°C 200°F/93°C 286°F/141°C	135°F/57°C 155°F/68°C 175°F/79°C 200°F/93°C 286°F/141°C	135°F/57°C 155°F/68°C 175°F/79°C 200°F/93°C 286°F/141°C	135°F/57°C 155°F/68°C 175°F/79°C 200°F/93°C 286°F/141°C
FM	–	–	135°F/57°C 155°F/68°C 175°F/79°C 200°F/93°C 286°F/141°C	135°F/57°C 155°F/68°C 175°F/79°C 200°F/93°C 286°F/141°C
LPCB	–	–	135°F/57°C 155°F/68°C 175°F/79°C 200°F/93°C 286°F/141°C	135°F/57°C 155°F/68°C 175°F/79°C 200°F/93°C 286°F/141°C
CE, UKCA	–	–	135°F/57°C 155°F/68°C 175°F/79°C 200°F/93°C 286°F/141°C	135°F/57°C 155°F/68°C 175°F/79°C 200°F/93°C 286°F/141°C
VdS	–	–	135°F/57°C 155°F/68°C 175°F/79°C 200°F/93°C 286°F/141°C	135°F/57°C 155°F/68°C 175°F/79°C 200°F/93°C 286°F/141°C
CCC K-ZSTZ	–	–	155°F/68°C 175°F/79°C 286°F/141°C	155°F/68°C 286°F/141°C

<sup>2</sup> For K-Factor when pressure is measured in Bar, multiply S.I. units by 10.

PENDENT APPROVALS/LISTINGS				
SIN	V2801	V4201	V2708	V3406
Nominal K Factor Imperial	2.8	4.2	5.6	8.0
Nominal K Factor S.I. <sup>2</sup>	4.0	6.1	8.1	11.5
Orientation	PENDENT	PENDENT	PENDENT	PENDENT
Escutcheon	Flush/Extended	Flush/Extended	Flush/Extended	Flush/Extended
Approved Temperature Ratings F°/C°				
cULus	135°F/57°C 155°F/68°C 175°F/79°C 200°F/93°C 286°F/141°C	135°F/57°C 155°F/68°C 175°F/79°C 200°F/93°C 286°F/141°C	135°F/57°C 155°F/68°C 175°F/79°C 200°F/93°C 286°F/141°C	135°F/57°C 155°F/68°C 175°F/79°C 200°F/93°C 286°F/141°C
FM	–	–	135°F/57°C 155°F/68°C 175°F/79°C 200°F/93°C 286°F/141°C	135°F/57°C 155°F/68°C 175°F/79°C 200°F/93°C 286°F/141°C
CCC K-ZSTX	–	–	155°F/68°C 200°F/93°C 286°F/141°C	155°F/68°C 286°F/141°C

<sup>2</sup> For K-Factor when pressure is measured in Bar, multiply S.I. units by 10.

## NOTES

- Listings and approval as of printing.
- Where cULus Listed, Polyester and VC-250 Coatings Listed as Corrosion Resistant (V3402 with VC-250 Only)
- Where FM Approved, VC-250 Coating Approved as Corrosion Resistant
- New York City Acceptance - All UL Listed and/or FM Approved sprinklers acceptable to NYC per section 28-113 of the Administrative Code and the OTCR Rule.

## 2.0 CERTIFICATION/LISTINGS (CONTINUED)

RECESSED PENDENT APPROVALS/LISTINGS				
SIN	V2801	V4201	V2708	V3406
Nominal K Factor Imperial	2.8	4.2	5.6	8.0
Nominal K Factor S.I. <sup>2</sup>	4.0	6.1	8.1	11.5
Orientation	PENDENT	PENDENT	PENDENT	PENDENT
Escutcheon	Recessed	Recessed	Recessed	Recessed
Approved Temperature Ratings F°/C°				
cULus	135°F/57°C 155°F/68°C 175°F/79°C 200°F/93°C 286°F/141°C	135°F/57°C 155°F/68°C 175°F/79°C 200°F/93°C 286°F/141°C	135°F/57°C 155°F/68°C 175°F/79°C 200°F/93°C	135°F/57°C 155°F/68°C 175°F/79°C 200°F/93°C 286°F/141°C
FM WITH ½" ADJUSTMENT ESCUTCHEON ONLY	–	–	135°F/57°C 155°F/68°C 175°F/79°C 200°F/93°C	135°F/57°C 155°F/68°C 175°F/79°C 200°F/93°C
CCC K-ZSTX	–	–	155°F/68°C 200°F/93°C 286°F/141°C	155°F/68°C 286°F/141°C

<sup>2</sup> For K-Factor when pressure is measured in Bar, multiply S.I. units by 10.

### NOTES

- Listings and approval as of printing.
- Where cULus Listed, Polyester and VC-250 Coatings Listed as Corrosion Resistant (V3402 with VC-250 Only)
- Where FM Approved, VC-250 Coating Approved as Corrosion Resistant
- New York City Acceptance - All UL Listed and/or FM Approved sprinklers acceptable to NYC per section 28-113 of the Administrative Code and the OTCR Rule.

### 3.0 SPECIFICATIONS – MATERIAL

**Deflector:** Bronze

**Bulb Nominal Diameter:** 3.0mm

**Load Screw:** Bronze

**Pip Cap:** Bronze

**Spring Seal:** PTFE coated Beryllium nickel alloy

**Frame:** Brass

**Lodgement Spring:** Stainless steel

**Installation Wrench:** Ductile iron

**Sprinkler Frame Finishes:**

- Plain brass
- Chrome plated
- White polyester painted<sup>3, 4</sup>
- Flat black polyester painted<sup>3, 4</sup>
- Custom polyester painted<sup>3, 4</sup>
- VC-250<sup>5</sup>

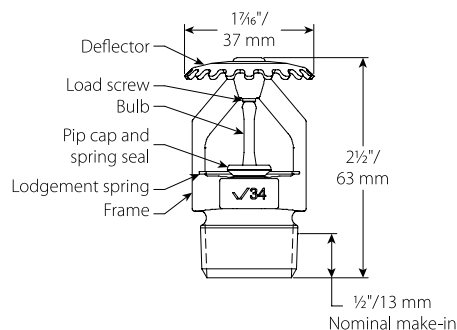
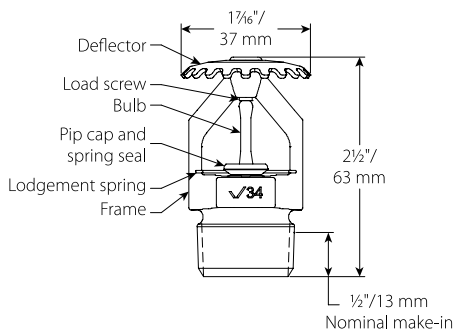
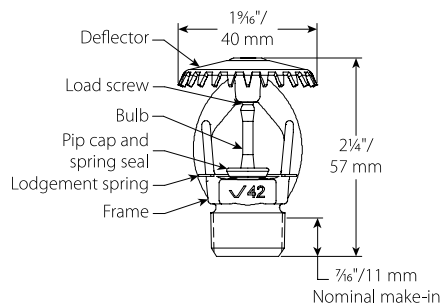
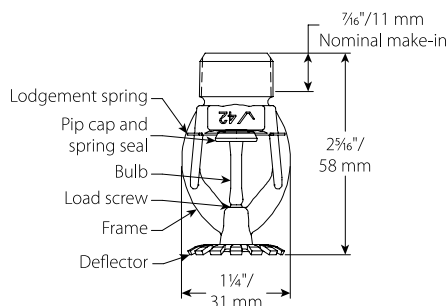
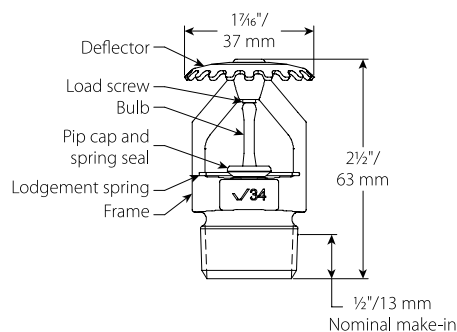
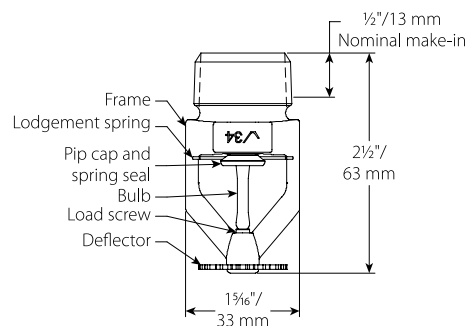
<sup>3</sup> Not available on the Intermediate Level Style Pendant.

<sup>4</sup> UL Listed for corrosion resistance.

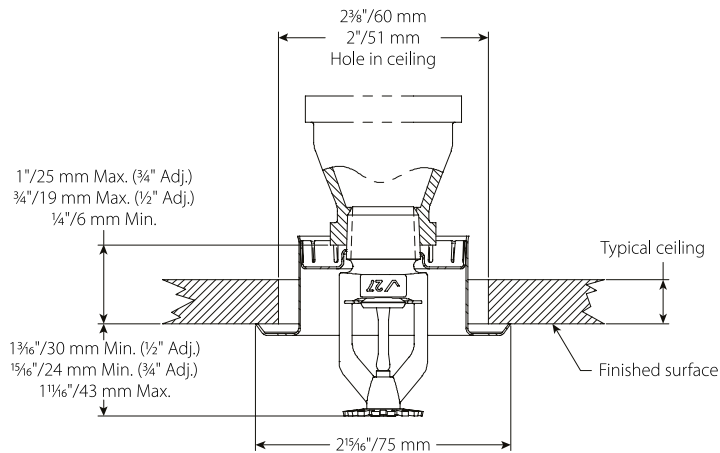
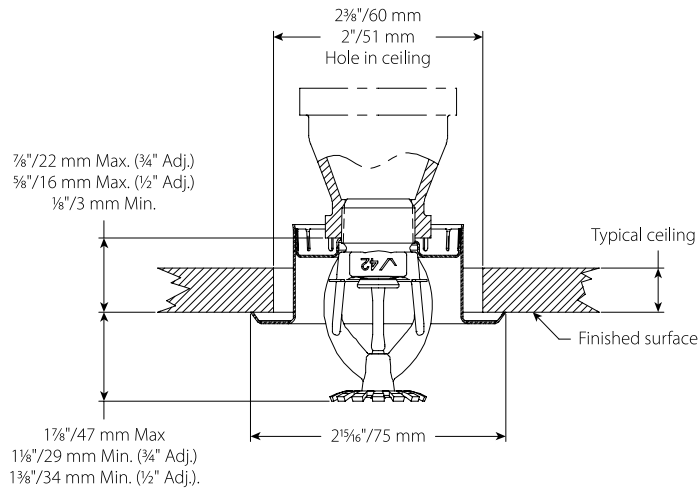
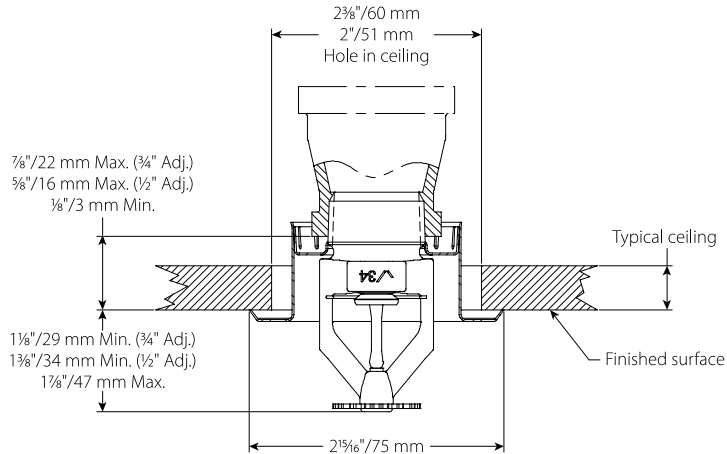
<sup>5</sup> UL Listed and FM Approved for corrosion resistance.

**NOTE**

- For cabinets and other accessories refer to separate sheet.








## 4.0 DIMENSIONS




## 5.0 PERFORMANCE

Sprinkler is to be installed and designed as per NFPA, FM Datasheets, or any local standards.

## 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 13, 13D, 13R, etc.) standards, or equivalent 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 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.

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.

## 7.0 REFERENCE MATERIALS

Ratings: All glass bulbs are rated for temperatures from -67°F/-55°C to those shown in the table below.

[I-40: Victaulic FireLock™ Automatic Sprinklers Installation and Maintenance Instructions](#)

[I-V9: Style V9 Victaulic FireLock™ IGS™ Installation-Ready™ Sprinkler Coupling Installation Instructions](#)

### User Responsibility for Product Selection and Suitability

Each user bears final responsibility for making a determination as to the suitability of Victaulic products for a particular end-use application, in accordance with industry standards and project specifications, as well as Victaulic performance, maintenance, safety, and warning 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, installation guide, or this disclaimer.

### Intellectual Property Rights

No statement contained herein concerning a possible or suggested use of any material, product, service, or design is intended, or should be constructed, to grant any license under any patent or other intellectual property right of Victaulic or any of its subsidiaries or affiliates covering such use or design, 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.

### 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.

### Installation

Reference should always be made to the Victaulic installation handbook or installation instructions of 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 [www.victaulic.com](http://www.victaulic.com).

### Warranty

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

### Trademarks

*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.

# Victaulic® FireLock™ Series FL-RES

## Residential

### Pendent and Recessed Pendent, K3.0 (4.3), K4.9 (7.0), K5.6 (8.0), K6.9 (9.9)



## 1.0 PRODUCT DESCRIPTION

RESIDENTIAL PENDENT/RECESSED PENDENT SPRINKLERS				
SIN	V3010	V2740	V5610	V3426
ORIENTATION	PENDENT	PENDENT	PENDENT	PENDENT
K-FACTOR <sup>1</sup>	3.0 Imp./4.2 S.I.	4.9 Imp./7.1 S.I.	5.6 Imp./8.1 S.I.	6.9 Imp./9.9 S.I.
CONNECTION	½" NPT/15 mm	½" NPT/15 mm	½" NPT/15 mm	¾" NPT/20 mm
MAX. WORKING PRESSURE	175 psi (1200 kPa)	175 psi (1200 kPa)	175 psi (1200 kPa)	175 psi (1200 kPa)
GLOBE RE-DESIGNATION	GL3010	–	GL5610	–
GLOBE EQUIVALENT	–	GL4910	–	–

AVAILABLE WRENCHES						
SPRINKLER	V27 Recessed	V27 Open End	V56 Recessed	V56 Open End	V34 Recessed	V34 Open End
V3010			■	■		
V2740	■	■				
V5610			■	■		
V3426					■	■

**Factory Hydrostatic Test:** 100% @ 500 psi/3447 kPa/34 bar

**Min. Operating Pressure: UL:** 7psi/48 kPa/.5 bar

**Temperature Rating:** See tables in section 2.0

<sup>1</sup> For K-Factor when pressure is measured in bar, multiply S.I. units by 10.0.

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





## 2.0 CERTIFICATION/LISTINGS

SIN	Nominal K Factor		Listing Agency/ Approved Temperature Ratings			Max. Coverage Area Width X Length Ft. x Ft m x m	Flow GPM L/min	Pressure PSI kPa	Adjustment in mm	Deflector to Ceiling/ Mounting Surface Distance in (mm)	Minimum Spacing Ft. m
	Imperial	S.I. <sup>2</sup>	155°F/68°C	175°F/79°C	200°F/93°C						
V3010	3.0	4.2	cULus EU	cULus	cULus	12 x 12 3.7 x 3.7	8 30.3	7.1 49	½ 15	Smooth Ceilings Recessed See Installation Detail  Smooth Ceilings Exposed Max. 4 (101.6)  Beamed Ceilings Adjacent per NFPA 13, 13D, or 13R as appropriate  Beamed Ceilings In Beam 14 Max. Beam Depth Recessed in Beam: See Installation detail	8 2.4
						14 x 14 4.3 x 4.3	10 37.8	11.1 76.5			
V2740	4.9	7.1	cULus	cULus	N/A	12 x 12 3.7 x 3.7	13 49.2	7.0 48	½ and ¾ 15 and 20		
						14 x 14 4.3 x 4.3	13 49.2	7.0 48			
						16 x 16 4.9 x 4.9	13 49.2	7.0 48			
						18 x 18 5.5 x 5.5	17 64.3	12.0 83			
						20 x 20 6.1 x 6.1	20 75.7	16.7 115			
V5610	5.6	8.1	cULus	NA	N/A	12 x 12 3.7 x 3.7	15 57	7.2 50	½ 15		
						16 x 16 4.9 x 4.9	19 72	11.5 79			
						18 x 18 5.5 x 5.5	21 79	14.1 97			
						20 x 20 6.1 x 6.1	24 91	18.4 127			
V3426	6.9	9.9	cULus	cULus	N/A	12 x 12 3.7 x 3.7	20 75.7	8.4 58	½ and ¾ 15 and 20		
						14 x 14 4.3 x 4.3	20 75.7	8.4 58			
						16 x 16 4.9 x 4.9	20 75.7	8.4 58			
						18 x 18 5.5 x 5.5	20 75.7	8.4 58			
						20 x 20 6.1 x 6.1	22 83.3	10.2 70			

### NOTE

- Listings and approval as of printing.

### 3.0 SPECIFICATIONS – MATERIAL

**Deflector:** Bronze

**Bulb Nominal Diameter:** 3.0mm

**Load Screw:** Bronze

**Pip Cap:** Bronze

**Spring Seal Assembly:** PTFE coated Beryllium nickel alloy

**Frame:** Brass

**Lodgement Spring:** Stainless Steel

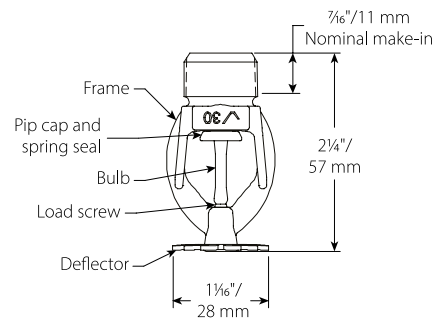
**Installation Wrench:** Ductile iron

**Sprinkler Frame Finishes:**

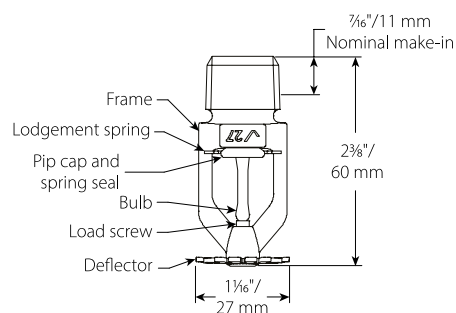
- Plain brass
- Chrome plated
- White polyester painted
- Flat black polyester painted
- Custom polyester painted

**NOTE**

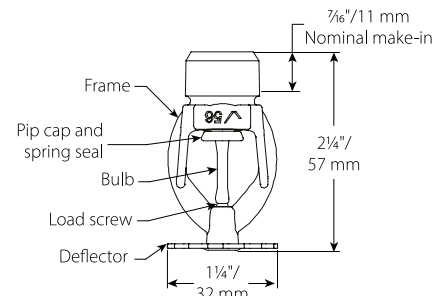
- For cabinets and other accessories refer to separate sheet.



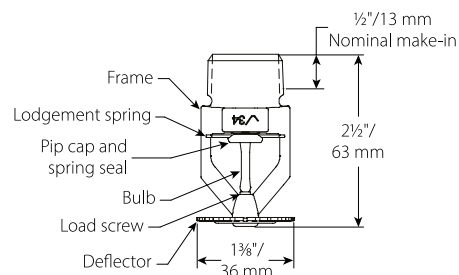
**V3010**



**V2740**

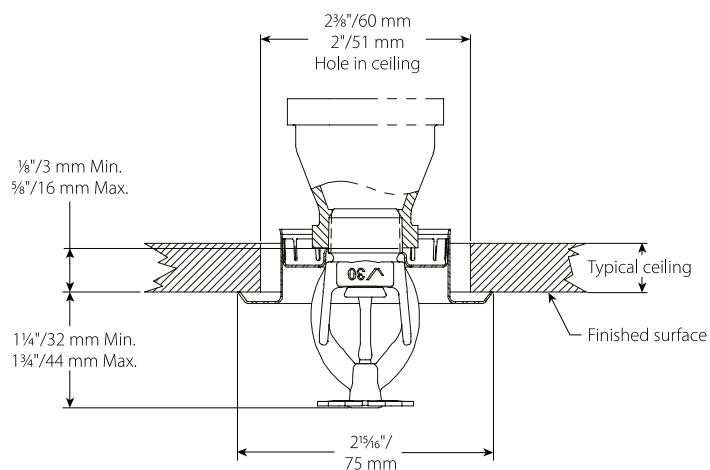


**V5610**

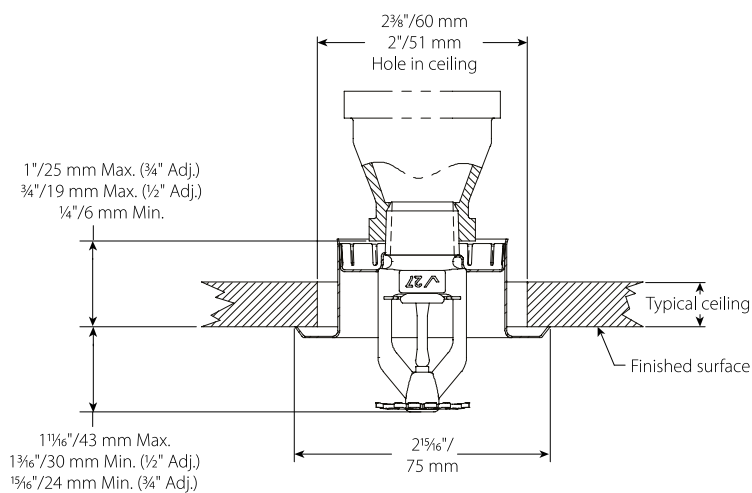


**V3426**

## 4.0 DIMENSIONS

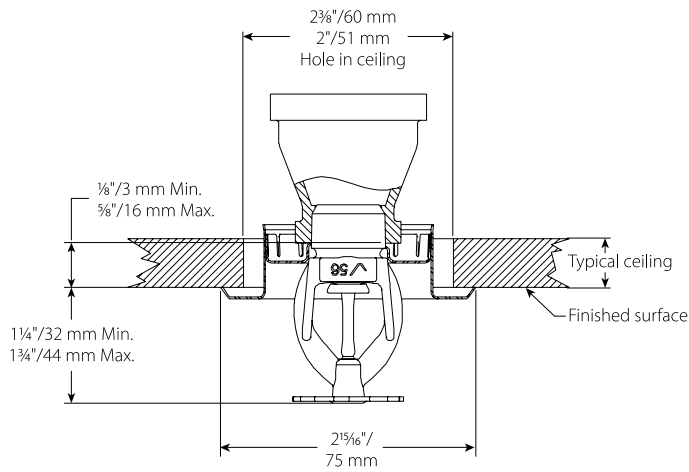


**V3010**

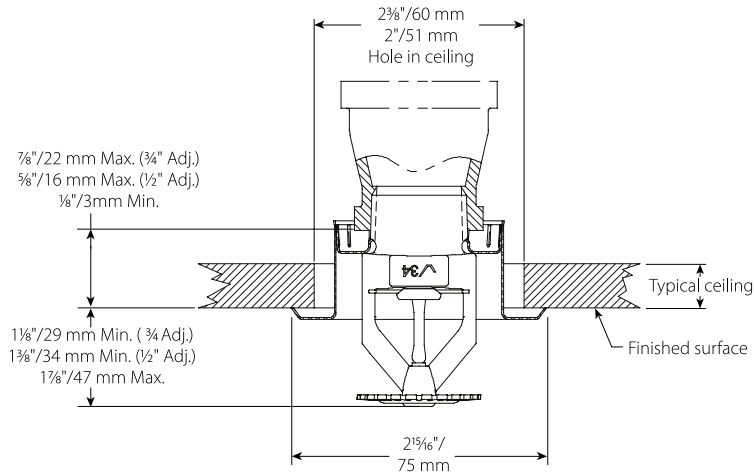


**V2740**

## 4.0 DIMENSIONS (CONTINUED)



**V5610**









**V3426**

5.0 PERFORMANCE

Sprinkler is to be installed and designed as per NFPA, FM Datasheets, or any local standards.

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 13, 13D, 13R, etc.) standards, or equivalent 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 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.

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.

7.0 REFERENCE MATERIALS

**Ratings:** All glass bulbs are rated for temperatures from -67°F/-55°C.

User Responsibility for Product Selection and Suitability

Each user bears final responsibility for making a determination as to the suitability of Victaulic products for a particular end-use application, in accordance with industry standards and project specifications, as well as Victaulic performance, maintenance, safety, and warning 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, installation guide, or this disclaimer.

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No statement contained herein concerning a possible or suggested use of any material, product, service, or design is intended, or should be constructed, to grant any license under any patent or other intellectual property right of Victaulic or any of its subsidiaries or affiliates covering such use or design, 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.

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.

Installation

Reference should always be made to the Victaulic installation handbook or installation instructions of 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 [www.victaulic.com](http://www.victaulic.com).

Warranty

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

Trademarks

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.

## APPROVALS AND SPECIFICATIONS

- ASTM A135, Grade A
- ASTM A795, Type E, Grade A
- Pressure rated to 300 psi
- Underwriters Laboratories—United States of America
- Underwriters Laboratories—Canada
- Factory Mutual
- NFPA-13
- NFPA-13R
- NFPA-14
- CIVIL DEFENSE APPROVAL—United Arab Emirates
- Made in the United States of America
- UL, ULC & FM listed for roll-groove, plain-end and welded joints for wet, dry, preaction and deluge sprinkler systems.
- LEED v4 Certified

## FINISHES AND COATINGS

- Eddy Flow Sprinkler Pipe receives an OD mill coating of water-based paint which has corrosion protection expected with a painted carbon steel product, i.e. it would be expected to resist corrosion for an extended and indefinite period in a clean and dry environment and, as environmental conditions deteriorate, the corrosion protection would also diminish.
- Eddy Flow Sprinkler Pipe (black) receives an ID mill coating of Eddy Guard II MIC preventative coating. EG2 has been tested at independent laboratories to resist bacterial growth and maintain minimal bacterial count after multiple flushes (25) of the pipe.
- Eddy Flow Sprinkler Pipe when Hot Dip Galvanized by ASTM A123 and supplied by Bull Moose Tube is UL listed and FM approved.

## PRODUCT IDENTIFICATION

- Every length of Bull Moose fire sprinkler pipe features large, easy-to-read, continuous stenciling, clearly identifying the manufacturer, type of pipe, size, and length.

Nominal Pipe Size (inches)	1-1/4"	1-1/2"	2"	2-1/2"	3"	4"
<b>O.D. (in)</b>	1.660	1.900	2.375	2.875	3.500	4.500
<b>I.D. (in)</b>	1.530	1.728	2.203	2.705	3.334	4.310
<b>Empty Weight (lb/ft)</b>	1.222	1.844	2.330	2.809	3.361	4.968
<b>Water Filled Weight (lb/ft)</b>	2.019	2.860	3.982	5.299	7.144	11.290
<b>C.R.R.*</b>	1.98	3.44	2.78	1.66	1.00	1.00
<b>Pieces per Lift</b>	61	61	37	30	19	19

\*Calculated using Standard UL CRR formula, UL Fire Protection Directory, Category VIZY



## SUBMITTAL INFORMATION

Project	<input type="text"/>	
Contractor	<input type="text"/>	
Engineer	<input type="text"/>	
Specification Reference	<input type="text"/>	
Date	<input type="text"/>	System Type <input type="text"/>
Locations	<input type="text"/>	
Comments	<input type="text"/>	

☐ Eddy Flow - Black
 ☐ Eddy Flow - Hot Dip Galvanized

## APPROVALS AND SPECIFICATIONS

- ASTM A135, Grade A
- ASTM A795, Type E, Grade A
- Pressure rated to 300 psi
- Underwriters Laboratories—United States of America
- Underwriters Laboratories—Canada
- Factory Mutual
- NFPA-13
- NFPA-13R
- NFPA-14
- CIVIL DEFENSE APPROVAL—United Arab Emirates
- Made in the United States of America
- UL, ULC & FM listed for roll-groove, plain-end and welded joints for wet, dry, preaction and deluge sprinkler systems.
- LEED v4 Certified

## FINISHES AND COATINGS

- Eddythread Sprinkler Pipe receives an OD mill coating of water-based paint which has corrosion protection expected with a painted carbon steel product, i.e. it would be expected to resist corrosion for an extended and indefinite period in a clean and dry environment and, as environmental conditions deteriorate, the corrosion protection would also diminish.
- Eddythread Sprinkler Pipe (black) receives an ID mill coating of Eddy Guard II MIC preventative coating. EG2 has been tested at independent laboratories to resist bacterial growth and maintain minimal bacterial count after multiple flushes (25) of the pipe.
- Eddythread Sprinkler Pipe when Hot Dip Galvanized by ASTM A123 and supplied by Bull Moose Tube is UL listed and FM approved.

## PRODUCT IDENTIFICATION

- Every length of Bull Moose fire sprinkler pipe features large, easy-to-read, continuous stenciling, clearly identifying the manufacturer, type of pipe, size, and length.

Nominal Pipe Size (inches)	1	1-1/4"	1-1/2"	2"
<b>O.D. (in)</b>	1.295	1.650	1.900	2.375
<b>I.D. (in)</b>	1.083	1.418	1.654	2.123
<b>Empty Weight (lb/ft)</b>	1.461	2.070	2.547	3.308
<b>Water Filled Weight (lb/ft)</b>	1.860	2.754	3.468	4.842
<b>C.R.R.*</b>	1.00	1.00	1.00	1.00
<b>Pieces per Lift</b>	70	51	44	30

\*Calculated using Standard UL CRR formula, UL Fire Protection Directory, Category VIZY



## SUBMITTAL INFORMATION

Project	<input type="text"/>		
Contractor	<input type="text"/>		
Engineer	<input type="text"/>		
Specification Reference	<input type="text"/>		
Date	<input type="text"/>	System Type	<input type="text"/>
Locations	<input type="text"/>		
Comments	<input type="text"/>		

☐ Eddythread - Black
 ☐ Eddythread - Hot Dip Galvanized

## Mechanical-T® Bolted Branch Outlets

### STYLES 920 AND 920N

Victaulic Mechanical-T® Outlet provides a direct branch connection at any location a hole can be cut in pipe. The hole is cut oversize to receive a “holefinder” locating collar which secures the outlet in position permanently. A pressure responsive gasket seals on the pipe O.D.

Cross-type connections can be achieved by utilizing two upper housings of the same style and size, with the same or differing branch size connections. NOTE: Style 920 and Style 920N housings cannot be mated to each other to achieve a cross connection.

Style 920 and Style 920N Mechanical-T outlets are available with grooved or female threaded outlet. Specify choice on order. Units are supplied painted with plated bolts. Galvanized housings are available, supplied with plated bolts.

All sizes of Style 920 and 920N are rated at 500psi/3450kPa working pressure on Schedule 10 and 40 carbon steel pipe. They may also be used on high density polyethylene or polybutylene (HDPE) pipe. Pressure ratings on HDPE are dependent on the pipe rating. Contact Victaulic for ratings on other pipe. **Style 920 and 920N are not recommended for use on PVC plastic pipe.**

Standard piping practices dictate that the Mechanical-T Styles 920 and 920N must be installed so that the main and branch connections are a true 90° angle when permanently attached to the pipeline surface.

Additionally, the Vic-Tap II® hole cutting tool, which allows for hole cutting capabilities on pressurized systems, utilizes the Style 920 Mechanical-T in conjunction with the Series 726 Vic-Ball Valve to create the Style 931 Vic-Tap II Mechanical-T unit. See page 8 for further information.



EN 10311  
CPR (EU)  
No. 305/2011



BS EN 10311  
CPR (UK)  
2019 No. 465

SEE VICTAULIC PUBLICATION 10.01 FOR DETAILS



STYLES 920 AND 920N



STYLE 920 CROSS

PATENTED

### MATERIAL SPECIFICATIONS

**Housing/Coating:** Ductile iron conforming to ASTM A-536, grade 65-45-12, with orange enamel coating. Ductile iron conforming to ASTM A-395, grade 65-45-15, is available upon special request.

- **Optional:** Hot dipped galvanized

#### Gasket: (Specify choice\*)

- **Grade “E” EPDM**

EPDM (Green color code). Temperature range –30°F to +230°F/–34°C to +110°C.

Recommended for cold and hot water service within the specified temperature range plus a variety of dilute acids, oil-free air and many chemical services. UL Classified in accordance with ANSI/NSF 61 for cold +86°F/+30°C and hot +180°F/+82°C. NOT RECOMMENDED FOR PETROLEUM SERVICES.

- **Grade “T” nitrile**

Nitrile (Orange color code). Temperature range –20°F to +180°F/–29°C to +82°C.

Recommended for petroleum products, air with oil vapors, vegetable and mineral oils within the specified temperature range. Not recommended for hot water services over +150°F/+66°C or for hot dry air over +140°F/+60°C.

\*Services listed are General Service Recommendations only. It should be noted that there are services for which these gaskets are not recommended. Reference should always be made to the latest Victaulic Gasket Selection Guide for specific gasket service recommendations and for a listing of services which are not recommended.

**Bolts/Nuts:** Heat-treated plated carbon steel, trackhead meeting the physical and chemical requirements of ASTM A-449 and physical requirements of ASTM A-183.

### JOB/OWNER

System No. \_\_\_\_\_

Location \_\_\_\_\_

### CONTRACTOR

Submitted By \_\_\_\_\_

Date \_\_\_\_\_

### ENGINEER

Spec Sect \_\_\_\_\_ Para \_\_\_\_\_

Approved \_\_\_\_\_

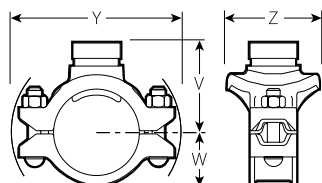
Date \_\_\_\_\_



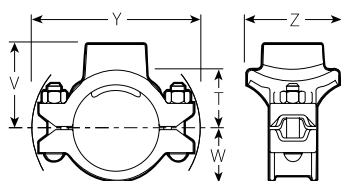
# Mechanical-T<sup>®</sup> Bolted Branch Outlets

## STYLES 920 AND 920N

### DIMENSIONS



GROOVED OUTLET



FEMALE THREADED OUTLET

- Provides a direct branch connection at any location where a hole can be cut in the pipe
- A pressure responsive gasket provides the seal
- Request Publication 11.03 for Mechanical-T cross assemblies
- Pressure rated up to 500 psi/3450 kPa on steel pipe; also available for use with HDPE pipe
- Sizes from 2 × ½"/50 × 15 mm through 8 × 4"/200 × 100 mm

### IMPORTANT NOTES:

Style 920 and Style 920N housings cannot be mated to one another to achieve cross connections.

Size	Style No.	Max. Work Pressure@	Dimensions							Approx. Weight Each	
Run × Branch Nominal Size Inches mm	920 or 920N	psi kPa	Hole Diameter +0.13 -0.00 Inches mm	T** Inches mm	V † # Thd. Inches mm	V † Grv. Inches mm	W Inches mm	Y Inches mm	Z Inches mm	Female Thd. Lbs. kg	Grv. Lbs. kg
2 50 × ½ (a) □ 15	920N	500 3450	1.50 38.1	2.00 51	2.53 64	—	1.61 41	5.35 136	2.75 70	3.1 1.5	—
	920N	500 3450	1.50 38.1	1.97 50	2.53 64	—	1.61 41	5.35 136	2.75 70	3.1 1.5	—
	920N	500 3450	1.50 38.1	1.85 47	2.53 64	—	1.61 41	5.35 136	2.75 70	3.0 1.4	—
	920N	500 3450	1.75 44.5	2.05 52	2.75 70	3.00 76	1.61 41	5.35 136	3.00 76	3.5 1.7	3.2 1.5
	920N	500 3450	1.75 44.5	2.03 52	2.75 70	3.12 79	1.61 41	5.35 136	3.25 83	3.6 1.7	3.2 1.5
2½ 65 × ½ (a) § 15	920N	500 3450	1.50 38.1	2.21 56	2.74 70	—	1.82 46	5.64 143	2.75 70	3.0 1.4	—
	920N	500 3450	1.50 38.1	2.18 55	2.74 70	—	1.82 46	5.64 143	2.75 70	3.0 1.4	—
	920N	500 3450	1.50 38.1	2.06 52	2.74 70	—	1.82 46	5.64 143	2.75 70	2.9 1.4	—
	920N	500 3450	1.75 44.5	2.30 58	3.00 76	3.25 83	1.82 46	6.29 160	3.00 76	3.5 1.7	3.2 1.5
	920N	500 3450	2.00 50.8	2.28 58	3.00 76	3.25 83	1.82 46	6.26 159	3.25 83	3.6 1.7	3.3 1.6
76.1 × ½ (a) □ 15	920N	300 2065	1.50 38.1	2.22 56	2.75 70	—	2.25 57	6.46 164	3.18 81	3.9 1.8	—
	920N	300 2065	1.50 38.1	2.19 56	2.75 70	—	2.25 57	6.46 164	3.18 81	3.9 1.8	—
	920N	300 2065	1.50 38.1	2.07 53	2.75 70	—	2.25 57	6.46 164	3.18 81	3.8 1.7	—
	920N	500 3450	1.75 44.5	2.30 58	3.00 76	3.31 84	1.92 49	6.29 160	3.00 76	3.5 1.6	3.2 1.5
	920N	500 3450	2.00 50.8	2.28 58	3.00 76	3.31 84	1.92 49	6.29 160	3.25 83	3.5 1.6	3.3 1.5
3 80 × ½ (a) □ 15	920N	500 3450	1.50 38.1	2.52 64	3.05 78	—	2.28 58	6.15 156	2.75 70	3.4 1.6	—
	920N	500 3450	1.50 38.1	2.49 63	3.05 78	—	2.28 58	6.15 156	2.75 70	3.4 1.6	—
	920N	500 3450	1.50 38.1	2.38 61	3.06 78	—	2.28 58	6.15 156	2.75 70	3.3 1.6	—
	920N	500 3450	1.75 44.5	2.55 65	3.25 83	3.56 90	2.28 58	6.15 156	3.00 76	3.8 1.8	3.7 1.8
	920N	500 3450	2.00 50.8	2.78 71	3.50 89	3.56 90	2.28 58	6.15 156	3.25 83	4.1 1.9	3.8 1.8
	920N	500 3450	2.50 63.5	2.75 70	3.50 89	3.56 90	2.28 58	6.75 172	3.88 99	4.9 2.3	4.6 2.1
3½ 90 × 2 50	920N	500 3450	2.50 63.5	3.00 76	—	3.75 95	2.44 62	6.72 171	3.88 99	—	3.8 1.8

TABLE CONTINUED ON PG. 3

\*\* Center of run to engaged pipe end, female threaded outlet only (dimensions approximate).

† Available with grooved or female threaded outlet. Specify choice on order.

‡ Center of run to end of fitting.

# Female threaded outlets are available to NPT and BSPT specifications.

@ See page 7 for Fire Protection approvals and pressure ratings.

(a) British Standard female pipe threaded outlet is available as listed. Specify "BSPT" clearly on order.

(b) For 76.1 mm threaded outlet, specify 2½" BSPT clearly on order.

§ Vds approved for fire protection services

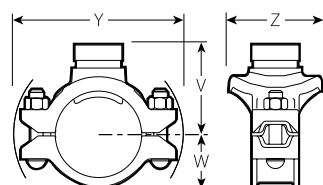
□ LPCB approved for fire protection services

Ø Approved for use in China by Tianjin Approvals Company.

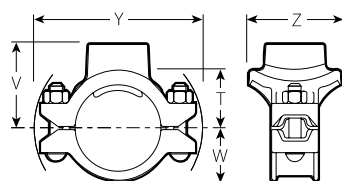
# Mechanical-T® Bolted Branch Outlets

STYLES 920 AND 920N

## DIMENSIONS



GROOVED OUTLET



FEMALE THREADED OUTLET

- Provides a direct branch connection at any location where a hole can be cut in the pipe
- A pressure responsive gasket provides the seal
- Request Publication 11.03 for Mechanical-T cross assemblies
- Pressure rated up to 500 psi/3450 kPa on steel pipe; also available for use with HDPE pipe
- Sizes from 2 × ½"/50 × 15 mm through 8 × 4"/200 × 100 mm

## IMPORTANT NOTES:

Style 920 and Style 920N housings cannot be mated to one another to achieve cross connections.

Size		Style No.	Max. Work Pressure®	Dimensions							Approx. Weight Each	
Run × Branch Nominal Size Inches mm		920 or 920N	psi kPa	Hole Diameter +0.13 -0.00	T** Inches mm	V ‡ # Thd. Inches mm	V ‡ Grv. Inches mm	W Inches mm	Y Inches mm	Z Inches mm	Female Thd. Lbs. kg	Grv. Lbs. kg
TABLE CONTINUED FROM PAGE 2												
4 100 ×	½ (a) □ 15	920N	500 3450	1.50 38.1	3.03 77	3.56 90	—	2.69 68	7.01 178	2.75 70	3.7 1.8	—
	¾ (a) □ 20	920N	500 3450	1.50 38.1	3.00 76	3.56 90	—	2.69 68	7.01 178	2.75 70	3.7 1.8	—
	1 (a) □ 25	920N	500 3450	1.50 38.1	2.88 73	3.56 90	—	2.69 68	7.01 178	2.75 70	3.6 1.8	—
	1¼ (a) † 32 (b)	920N	500 3450	1.75 44.5	3.08 78	3.78 96	4.00 102	2.69 68	7.01 178	3.00 76	4.0 1.9	3.6 1.8
	1½ (a) † 40 (b)	920N	500 3450	2.00 50.8	3.28 83	4.00 102	4.00 102	2.69 68	7.01 178	3.25 83	4.2 2.0	3.9 1.9
	2 (a) † 50	920N	500 3450	2.50 63.5	3.25 83	4.00 102	4.00 102	2.69 68	7.01 178	3.88 99	5.0 2.3	4.6 2.1
	2½ (a) † 65	920	500 3450	2.75 69.9	2.88 73	4.00 102	4.00 102	2.69 68	7.34 186	4.63 118	5.8 2.6	5.0 2.3
	76.1 mm	920	500 3450	2.75 69.9	2.88 73	—	4.00 102	2.69 68	7.34 186	4.63 118	—	6.4 2.9
	3 (a) † 80	920	500 3450	3.50 88.9	3.31 84	4.50 114	4.12 105	2.69 68	7.73 196	5.12 130	8.4 3.8	6.4 2.9
108.0 ×	1¼ (a) □ 32	920N	500 3450	1.75 44.5	3.08 78	3.78 96	—	2.63 67	7.64 194	3.05 78	5.0 2.3	—
	1½ (a) □ 40	920N	500 3450	2.00 50.8	3.28 83	4.00 102	—	2.63 67	7.64 194	3.25 83	5.0 2.3	—
	2 (a) 50	920N	500 3450	2.50 63.5	3.25 83	4.00 102	—	2.63 67	7.64 194	4.00 102	4.0 1.9	—
	76.1 mm	920	500 3450	2.75 69.9	2.88 73	4.00 102	4.00 102	2.63 67	7.64 194	4.29 109	8.0 3.6	7.8 3.5
	3 (a) 80	920	500 3450	3.50 88.9	3.31 84	4.50 114	4.50 114	2.63 67	7.63 194	4.88 124	6.8 3.1	6.5 3.0
5 125 ×	1½ (a) † 40	920	500 3450	2.00 50.8	4.03 102	4.75 121	4.75 121	3.16 80	9.70 246	3.69 94	7.4 3.4	7.6 3.4
	2 (a) † 50	920	500 3450	2.50 63.5	4.00 102	4.75 121	4.75 121	3.16 80	9.70 246	4.38 111	8.2 3.7	8.0 3.6
	2½ (a) † 65	920	500 3450	2.75 69.9	3.63 92	4.75 121	4.75 121	3.16 80	9.70 246	4.63 118	8.3 3.8	7.9 3.6
	76.1 mm □	920	500 3450	2.75 69.9	3.75 95	—	4.75 121	3.16 80	9.70 246	4.63 118	—	8.0 3.6
	3 (a) † 80	920	500 3450	3.50 88.9	3.81 97	5.00 127	4.63 118	3.16 80	9.70 246	5.31 135	8.4 3.8	8.8 4.0
133.0 ×	2 50	920N	500 3450	2.50 63.5	3.75 95	4.50 114	—	3.17 81	8.00 203	3.88 99	8.0 3.6	—
	3 80	920	500 3450	3.50 88.9	3.81 97	5.00 127	—	3.00 76	9.46 240	5.31 135	8.0 3.6	—
TABLE CONTINUED ON PG. 4												

\*\* Center of run to engaged pipe end, female threaded outlet only (dimensions approximate).

† Available with grooved or female threaded outlet. Specify choice on order.

‡ Center of run to end of fitting.

# Female threaded outlets are available to NPT and BSPT specifications.

@ See page 7 for Fire Protection approvals and pressure ratings.

(a) British Standard female pipe threaded outlet is available as listed. Specify "BSPT" clearly on order.

(b) For 76.1 mm threaded outlet, specify 2½" BSPT clearly on order.

§ Vds approved for fire protection services

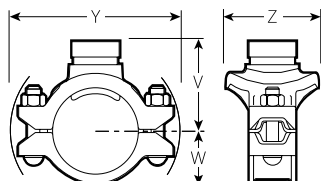
□ LPCB approved for fire protection services

∅ Approved for use in China by Tianjin Approvals Company.

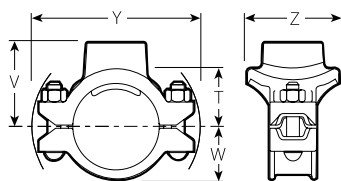
# Mechanical-T<sup>®</sup> Bolted Branch Outlets

STYLES 920 AND 920N

## DIMENSIONS



GROOVED OUTLET



FEMALE THREADED OUTLET

- Provides a direct branch connection at any location where a hole can be cut in the pipe
- A pressure responsive gasket provides the seal
- Request Publication 11.03 for Mechanical-T cross assemblies
- Pressure rated up to 500 psi/3450 kPa on steel pipe; also available for use with HDPE pipe
- Sizes from 2 × ½"/50 × 15 mm through 8 × 4"/200 × 100 mm

### IMPORTANT NOTES:

Style 920 and Style 920N housings cannot be mated to one another to achieve cross connections.

Size	Style No.	Max. Work Pressure@	Dimensions							Approx. Weight Each			
Run × Branch Nominal Size Inches mm	920 or 920N	psi kPa	Hole Diameter +0.13 -0.00	T** Inches mm	V ‡ # Thd. Inches mm	V ‡ Grv. Inches mm	W Inches mm	Y Inches mm	Z Inches mm	Female Thd. Lbs. kg	Grv. Lbs. kg		
TABLE CONTINUED FROM PAGE 3													
139.7 ×	1½ † 40	920N	500 3450	2.00 50.8	3.78 96	4.50 114	—	3.30 84	8.23 209	3.25 83	7.0 3.2	—	
	2 † 50	920N	500 3450	2.50 63.5	3.75 95	4.50 114	—	3.30 84	8.23 209	3.88 99	9.0 4.1	—	
6 150 ×	1¼ (a) 32 (b)	920N	500 3450	1.75 44.5	4.43 112	5.13 130	5.13 130	3.79 96	9.15 232	3.25 83	5.1 2.3	4.8 2.2	
	1½ (a) † 40 (b)	920N	500 3450	2.00 50.8	4.40 112	5.13 130	5.13 130	3.79 96	9.15 232	3.25 83	5.4 2.4	5.1 2.3	
	2 (a) † 50	920N	500 3450	2.50 63.5	4.38 111	5.13 130	5.13 130	3.79 96	9.15 232	3.88 99	6.0 2.7	5.6 2.5	
	2½ 65	920	500 3450	2.75 69.9	4.01 110	5.13 130	5.12 130	3.69 94	10.51 267	4.63 118	8.3 3.8	7.6 3.4	
	76.1 mm □	920	500 3450	2.75 69.9	4.15 105	—	5.21 132	3.69 94	10.51 267	4.63 118	—	8.4 3.8	
	3 (a) † 80	920	500 3450	3.50 88.9	4.31 110	5.50 140	5.13 130	3.69 94	10.51 267	5.31 135	9.9 4.5	8.4 3.8	
	4 (a) † 100	920	500 3450	4.50 114.3	3.81 97	5.75 146	5.38 137	3.69 94	10.51 267	6.25 159	10.1 4.6	10.1 4.6	
	159.0 ×	1½ (a) 40	920N	500 3450	2.00 50.8	4.41 112	5.13 130	—	3.63 92	9.40 239	3.25 83	7.8 3.5	—
		2 (a) 50	920N	500 3450	2.50 63.5	4.38 111	5.13 130	—	3.63 92	9.40 239	3.88 99	8.0 3.6	—
		76.1 mm	920	500 3450	2.75 69.9	4.38 111	5.50 140	5.13 130	3.63 92	9.40 239	4.63 118	9.5 4.3	9.5 4.3
3 80		920	500 3450	3.50 88.9	4.31 110	5.50 140	5.13 130	3.63 92	9.40 239	5.31 135	8.1 3.7	14.0 6.4	
108.0 mm		920	500 3450	4.50 114.3	4.45 113	—	5.38 137	3.63 92	9.40 239	6.12 155	—	10.0 4.5	
4 100		920	500 3450	4.50 114.3	3.81 96.80	5.75 146	—	3.63 92	9.40 239	6.25 159	18.0 8.2	—	
TABLE CONTINUED ON PG. 5													

\*\* Center of run to engaged pipe end, female threaded outlet only (dimensions approximate).

† Available with grooved or female threaded outlet. Specify choice on order.

‡ Center of run to end of fitting.

# Female threaded outlets are available to NPT and BSPT specifications.

@ See page 7 for Fire Protection approvals and pressure ratings.

(a) British Standard female pipe threaded outlet is available as listed. Specify "BSPT" clearly on order.

(b) For 76.1 mm threaded outlet, specify 2½" BSPT clearly on order.

§ Vds approved for fire protection services

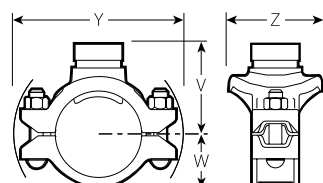
□ LPCB approved for fire protection services

Ø Approved for use in China by Tianjin Approvals Company.

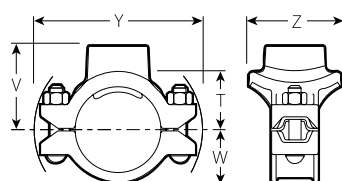
# Mechanical-T<sup>®</sup> Bolted Branch Outlets

STYLES 920 AND 920N

## DIMENSIONS



GROOVED OUTLET



FEMALE THREADED OUTLET

- Provides a direct branch connection at any location where a hole can be cut in the pipe
- A pressure responsive gasket provides the seal
- Request Publication 11.03 for Mechanical-T cross assemblies
- Pressure rated up to 500 psi/3450 kPa on steel pipe; also available for use with HDPE pipe
- Sizes from 2 × ½"/50 × 15 mm through 8 × 4"/200 × 100 mm

Size	Style No.	Max. Work Pressure®	Dimensions							Approx. Weight Each	
Run × Branch Nominal Size Inches mm	920 or 920N	psi kPa	Hole Diameter +0.13 -0.00	T** Inches mm	V ‡ # Thd. Inches mm	V ‡ Grv. Inches mm	W Inches mm	Y Inches mm	Z Inches mm	Female Thd. Lbs. kg	Grv. Lbs. kg
TABLE CONTINUED FROM PAGE 4											
165.1 × 25	920N	500 3450	1.50 38.1	3.88 99	4.56 116	—	3.79 96	9.34 237	2.75 70	8.0 3.6	—
	920N	500 3450	1.75 44.5	4.43 113	5.13 130	—	3.79 96	9.34 237	3.25 83	8.4 3.8	—
	920N	500 3450	2.00 50.8	4.41 112	5.13 130	5.13 130	3.79 96	9.34 237	3.25 83	8.4 3.8	5.4 2.4
	920N	500 3450	2.50 63.5	4.38 111	5.13 130	5.13 130	3.79 96	9.34 237	3.88 99	8.5 3.9	6.0 2.7
	920	500 3450	2.75 69.9	4.01 110	5.13 130	5.21 132	3.63 92	10.51 267	4.63 118	8.6 3.9	7.6 3.4
	920	500 3450	3.50 88.9	4.31 110	5.50 140	5.13 130	3.63 92	10.51 267	5.31 135	10.2 4.6	8.4 3.8
	920	500 3450	4.50 114.3	3.81 97	5.75 146	5.38 137	3.63 92	10.51 267	6.25 159	10.5 4.8	8.4 3.8
	920	500 3450	2.75 69.9	5.44 138	6.19 157	6.25 159	4.81 122	12.42 316	4.50 114	11.6 5.3	11.6 5.3
8 × 200	920	500 3450	2.75 69.9	5.07 129	6.19 157	6.19 157	4.81 122	12.42 316	4.50 114	11.6 5.3	11.6 5.3
	920	500 3450	2.75 69.9	5.25 133	—	6.25 159	4.81 122	12.42 316	4.56 116	—	11.6 5.3
	920	500 3450	3.50 88.9	5.31 135	6.50 165	6.50 165	4.81 122	12.42 316	5.31 135	12.6 5.7	11.6 5.3
	920	500 3450	4.50 114.3	4.81 122	6.75 171	6.38 162	4.81 122	12.42 316	6.25 159	15.3 6.9	12.5 5.7
	920	500 3450	2.75 69.9	5.07 129	6.19 157	6.19 157	4.81 122	12.42 316	4.50 114	11.6 5.3	11.6 5.3

\*\* Center of run to engaged pipe end, female threaded outlet only (dimensions approximate).

† Available with grooved or female threaded outlet. Specify choice on order.

‡ Center of run to end of fitting.

# Female threaded outlets are available to NPT and BSPT specifications.

@ See page 7 for Fire Protection approvals and pressure ratings.

(a) British Standard female pipe threaded outlet is available as listed. Specify "BSPT" clearly on order.

(b) For 76.1 mm threaded outlet, specify 2½" BSPT clearly on order.

§ Vds approved for fire protection services

⌘ LPCB approved for fire protection services

Ø Approved for use in China by Tianjin Approvals Company.

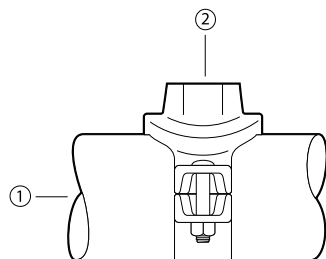
## IMPORTANT NOTES:

Style 920 and Style 920N housings cannot be mated to **each other** to achieve cross connections.

# Mechanical-T® Bolted Branch Outlets

STYLES 920 AND 920N

## FLOW DATA



Exaggerated for clarity

Flow test data has shown that the total head loss between point (1) and (2) for the Style 920, 920N and 929 Mechanical-T® fittings can best be expressed in terms of the pressure difference across the inlet and branch. The pressure difference can be obtained from the relationship below.

### C<sub>v</sub> and K<sub>v</sub> Values

Values for flow of water at +60°F/+16°C are shown in the table below.

### Formulas for C<sub>v</sub>/K<sub>v</sub> Values:

$$\Delta P = \frac{Q^2}{C_v^2}$$

$$Q = C_v \times \sqrt{\Delta P}$$

### Where:

Q = Flow (GPM)

ΔP = Pressure Drop (psi)

C<sub>v</sub> = Flow Coefficient

$$\Delta P = \frac{Q^2}{K_v^2}$$

$$Q = K_v \times \sqrt{\Delta P}$$

### Where:

Q = Flow (m³/hr)

ΔP = Pressure Drop (Bar)

K<sub>v</sub> = Flow Coefficient

OUTLET SIZE		Equivalent Length of Outlet Size Schedule 40 Carbon Steel Pipe (per UL 213, Sec. 16) (C = 120)† FT		C <sub>v</sub> /K <sub>v</sub> Values	
NOMINAL DIAMETER In/mm	ACTUAL O.D. In/mm	GROOVED	THREADED	GROOVED	THREADED
½ 15	0.840 21.3	-	2	-	11 9.4
¾ 20	1.050 26.7	-	4	-	16 13.7
1 25	1.315 33.7	3**	8	-	21 1.8
1 ¼ 32	1.660 42.7	5 ½	6	50 42.9	48 41.1
1 ½ 40	1.900 48.3	11	11	53 45.4	53 45.4
2 50	2.375 60.3	9	10 ½	112 96	104 89.1
2 ½ 65	2.875 73.0	20	12 ½	119 102	150 128.5
76.1 mm	3.000 76.1	16*	-	161 138.1	-
3 80	3.500 88.9	14	15 ½	249 213.4	237 203.1
4 100	4.500 114.3	20	22	421 360.8	401 343.6

† Hazen-Williams coefficient of friction is 120.

\* Pipe with a wall thickness of 0.165in./4.2mm.

\*\* 1" FireLock™ Innovative Groove System (IGS) outlet

## Mechanical-T<sup>®</sup> Bolted Branch Outlets

STYLES 920 AND 920N

### FIRE PROTECTION APPROVALS AND PRESSURE RATINGS

The information provided below is based on the latest listing and approval data at the time of publication. Listings/Approvals are subject to change and/or additions by the approvals agencies. Contact Victaulic for performance on other pipe and the latest listings and approvals.

Run Size		Outlet Size	Pipe	Approval Agency Rated Working Pressures – psi/kPa					
Nominal Size Inches/mm	Actual Outside Diameter Inches/mm	Inches/mm	Schedule	UL	ULC	FM	LPCB	Vds	
								(Style 920)	(Style 920N)
2 1/2 - 6 65 - 150	2.875 - 6.625 73.0 - 168.3	All	10, 40	400 2755	400 2755	400 2755	290 1999	232 1599	362 2496
2 1/2 - 4 65 - 100	2.875 - 4.500 73.0 - 114.3	All	DF	300 2065	300 2065	300 2065	290 1999	232 1599	362 2496
2 1/2 - 4 65 - 100	2.875 - 4.500 73.0 - 114.3	All	SF	300 2065	300 2065	300 2065	290 1999	232 1599	362 2496
6 150	6.625 168.3	3, 4	10	300 2065	300 2065	250 1724	290 1999	232 1599	362 2496
6 150	6.625 168.3	3, 4	30, 40	300 2065	300 2065	300 2065	290 1999	232 1599	362 2496
8 200	8.625 219.1	2 1/2	10, 40	400 2755	—	—	—	145 1000	—
8 200	8.625 219.1	3, 4	10	300 2065	—	250 1724	—	145 1000	—
8 200	8.625 219.1	3, 4	30, 40	300 2065	—	300 2065	—	145 1000	—

NOTES:

10 refers to Listed/Approved Schedule 10 steel sprinkler pipe.

40 refers to Listed/Approved Schedule 40 steel sprinkler pipe.

DF refers to Listed/Approved Dyna-Flow steel sprinkler pipe manufactured by American Tube Company.

SF refers to Listed/Approved Super-Flo steel sprinkler pipe manufactured by Allied Tube and Conduit Corporation.

### VIC-TAP II HOLE CUTTING TOOL FOR 4 - 8"/100 - 200 MM CARBON STEEL PIPE



The Vic-Tap II hole cutting tool is designed for use with the Style 931 Vic-Tap II Mechanical-T unit, which is a combination of the Style 920 Mechanical-T and Series 726 Vic-Ball Valve. The Vic-Tap II is capable of tapping into carbon steel pipe systems under pressures up to 500 psi/3450 kPa.

The Style 931 Vic-Tap II Mechanical-T unit is a full port ball valve which can be mounted on 4"/100mm, 5"/125mm, 6"/150mm and 8"/200mm diameter pipe. The Style 931 comes with a 2 1/2"/65mm grooved outlet.

The drill motor is an electric motor with ground fault circuit interrupter (GFCI) in accordance with safety codes.

For more information, refer to publication 24.01.

## Mechanical-T® Bolted Branch Outlets

STYLES 920 AND 920N

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### 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).

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### WARRANTY

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

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### 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.

# Victaulic® VicFlex™ 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 1"/DN25 ID Braided Hose:** 31, 36, 48, 60, 72"/790, 915, 1220, 1525, 1830 mm. Note: length includes adapter nipple and 5.75"/140 mm straight reducer.

**Series AH2-CC 1"/DN25 ID Braided Hose:** 31, 36, 48, 60, 72"/790, 915, 1220, 1525, 1830 mm.

Note: length includes captured coupling and 5.75"/140 mm straight reducer.

#### Connections

- **From Branchline**

- ¾"/20mm BSPT female thread (VdS only)
- 1 ¼"/32mm BSPT female thread (LPCB only)
- 1"/25mm NPT or BSPT female Thread
- 1"/25mm Grooved IGS (refer to Submittal 10.54 for additional IGS connections)
  - No. 116 CPVC Adapter (1"/25mm Female CPVC Socket x 1"/25mm Grooved IGS)
  - No. 142 Welded Outlet
  - Style 922 Outlet-T
  - Style 920N Mechanical-T Outlet
  - No. 65 Grooved End of Run Fitting

- **Hose Inlet**

- 1"/25mm Grooved IGS
- 1"/25mm NPT or BSPT male thread
- ¾"/20mm BSPT male thread (VdS only)
- 1 ¼"/32mm BSPT male thread (LPCB only)

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





## 1.0 PRODUCT DESCRIPTION (CONTINUED)

### • Sprinkler Reducer

- Sprinkler Connection: ½" and ¾"/15mm and 20mm NPT or BSPT female thread
- Straight Lengths: 5.75", 9", 13"/140mm, 230mm, 330mm
- 90° Elbows
  - Standard Short
  - Low Profile Short
  - Standard Long
  - Low Profile Long

(Short elbows typically used with concealed sprinklers. Long elbows typically used with recessed pendent sprinklers)

### Brackets

- Style AB2 for suspended and hard-lid ceilings and sidewalls, allows for vertical sprinkler adjustment, and installation before most ceiling tiles 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 for suspended and hard-lid ceilings
- Style AB7 Adjustable for suspended and hard-lid ceilings
- 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)
- Style AB12 for suspended and hard-lid ceilings, allows for vertical sprinkler adjustment, and allows for low profile installation down to 4"/100mm.
- 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
- 150°F/65°C (No. 116 CPVC Adapter)

### Maximum Working Pressure

- 200 psi/1375 kPa (FM Approval)
- 175 psi/1206 kPa (cULus Listed)
- 1600 kPa/232 psi (VdS/LPCB Approved)
- 1.4 MPa (CCCf Approved)
- 175 psi/1206 kPa (No. 116 CPVC Adapter)

### Minimum Bend Radius

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

## 1.0 PRODUCT DESCRIPTION (CONTINUED)

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

## 2.0 CERTIFICATION/LISTINGS



### NOTE

- The VicFlex Series AH2 Hose has been tested and evaluated by Spears® for acceptable use with Spears® CPVC Products and is therefore covered under the Spears® FlameGuard® Installer Protection Plan.

## 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:** Ductile Iron, Zinc-Plated

**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
- Coupling Retainer Ring:** Polyethylene
- Nut:** Carbon Steel, Zinc-Plated
- Reducer (½"/15 mm or ¾"/20 mm):** Carbon Steel, Zinc-Plated
- Low Profile Elbows:** Ductile Iron, 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:<sup>1</sup>

#### 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.

<sup>1</sup> 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.

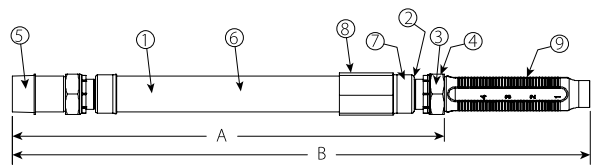
**Linkage:** CrMo Alloy Steel zinc electroplated per ASTM B633 Zn/Fe 5, Type III Finish

**No. 116 Adapter Fitting:** CPVC and Brass

**Seal:** Victaulic EPDM

4.0 DIMENSIONS

Product Details - Series AH2 Braided Hose

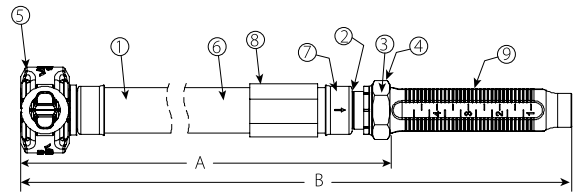


Item	Description
1	Flexible Hose
2	Isolation Ring
3	Gasket
4	Nut
5	Adapter Nipple
6	Braid
7	Collar/Weld Fitting
8	Sleeve
9	Reducer

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

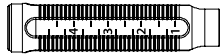


Item	Description
1	Flexible Hose
2	Isolation Ring
3	Gasket
4	Nut
5	Captured Coupling
6	Braid
7	Collar/Weld Fitting
8	Sleeve
9	Reducer

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

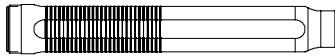
## 4.0 DIMENSIONS (CONTINUED)

### Standard Reducer

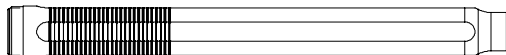


5.75"/140 mm straight reducer

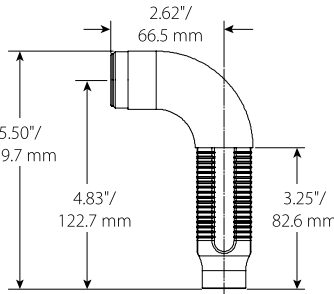
### Optional Reducers



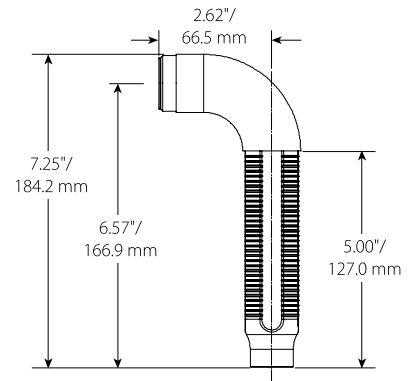
9.0"/229 mm straight reducer



13.0"/330 mm straight reducer



Short 90° elbow reducer

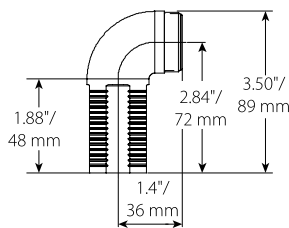


Long 90° elbow reducer

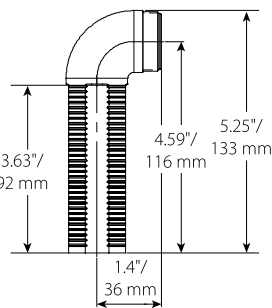
#### NOTE

- 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.

### Low Profile



Short 90° elbow reducer

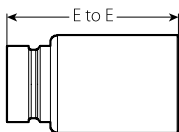


Long 90° elbow reducer

#### NOTE

- Style AB11: When low profiles elbows are 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.

### No. 116 CPVC Adapter



#### NOTES

- E to E is 3.0"/76.0 mm
- The No. 116 CPVC Adapter has 2 ft. (0.6 m) EQL of 1" Schedule 40 pipe.

## 4.1 DIMENSIONS

### VicFlex Brackets

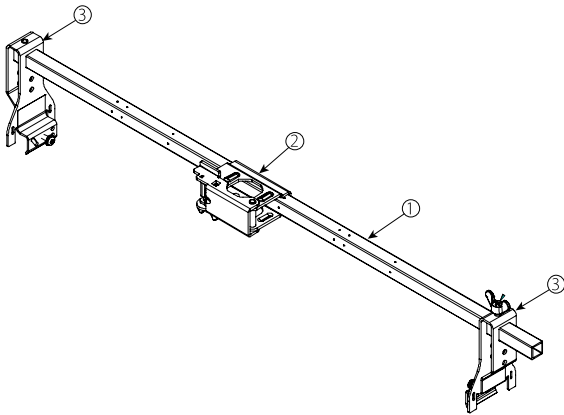
#### Style AB2

- 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

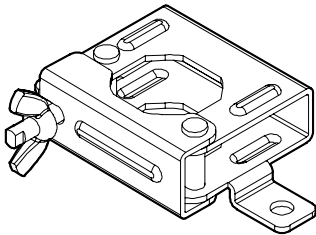
**NOTE**

- Both sizes FM/VdS/LPCB Approved, cULus listed



#### Style AB3

- Surface Mount Applications
- FM/LPCB Approved



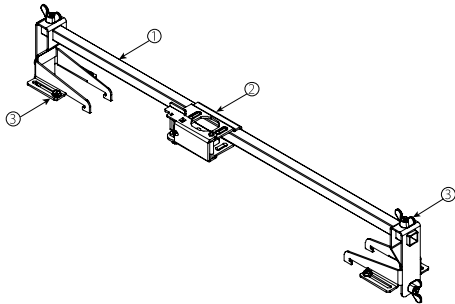
#### Style AB4

- 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/LPCB Approved, cULus listed.



## 4.2 DIMENSIONS

### *VicFlex* Brackets

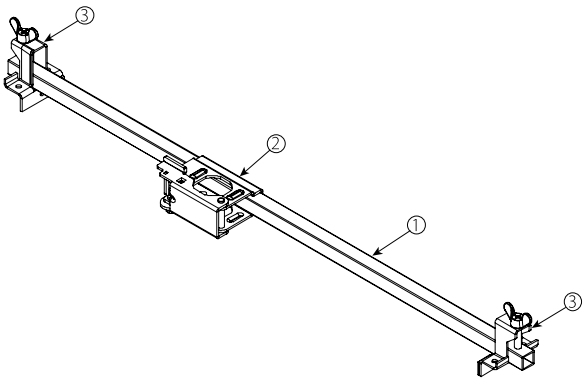
#### Style AB5

- 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/LPCB Approved, cULus listed.



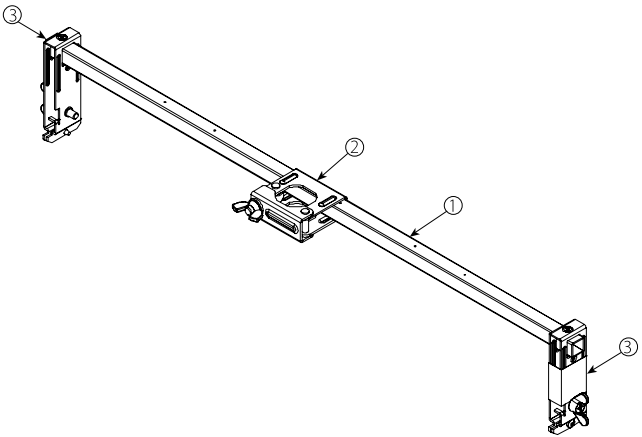
#### Style AB7

- 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

**NOTE**

- Both sizes FM/VdS/LPCB Approved.



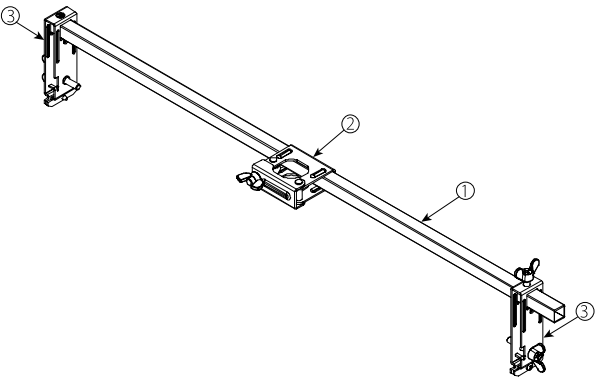
#### Style AB7 Adjustable

- 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)

**NOTE**

- Both sizes FM/VdS/LPCB Approved.



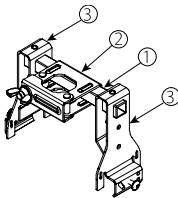
## 4.3 DIMENSIONS

### *VicFlex* Brackets

#### Style AB10

- Suspended ceilings
- Armstrong® TechZone™

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



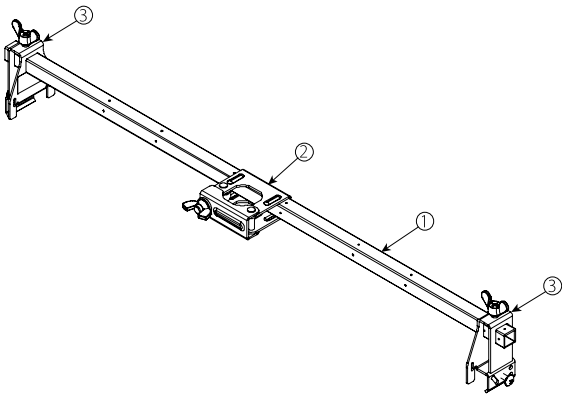
#### NOTE

- FM/VdS/LPCB Approved, cULus listed.

#### 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



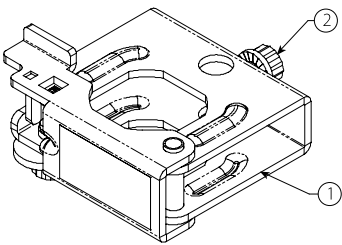
#### NOTE

- FM/VdS Approved, cULus listed.

#### Style AB12

- Suspended ceilings
- Hard-Lid ceilings

Item	Description
1	Style AB12 Bracket Body
2	#2 Square Drive Set Screw



#### NOTE

- FM/VdS Approved.

4.3 DIMENSIONS (CONTINUED)

VicFlex Brackets

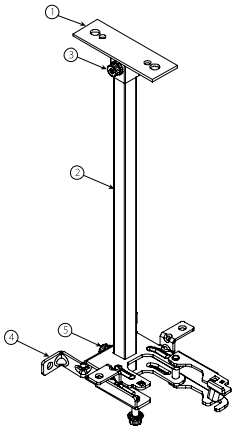
Style ABBA

- 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, Serated Flange, M6 x 1 x 20, T25 Torx Drive Recessed
4	Style ABMM Bracket Body
5	Cap Screw, Serated Flange, M6 x 1 x 15.24, T25 Torx Drive Recessed

NOTE

- FM Approved.



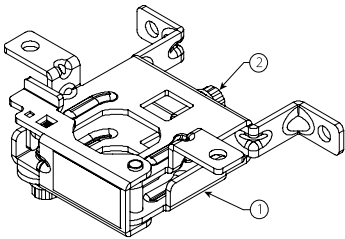
Style ABMM

- Surface mount
- Stand-off mount

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

NOTE

- FM Approved.

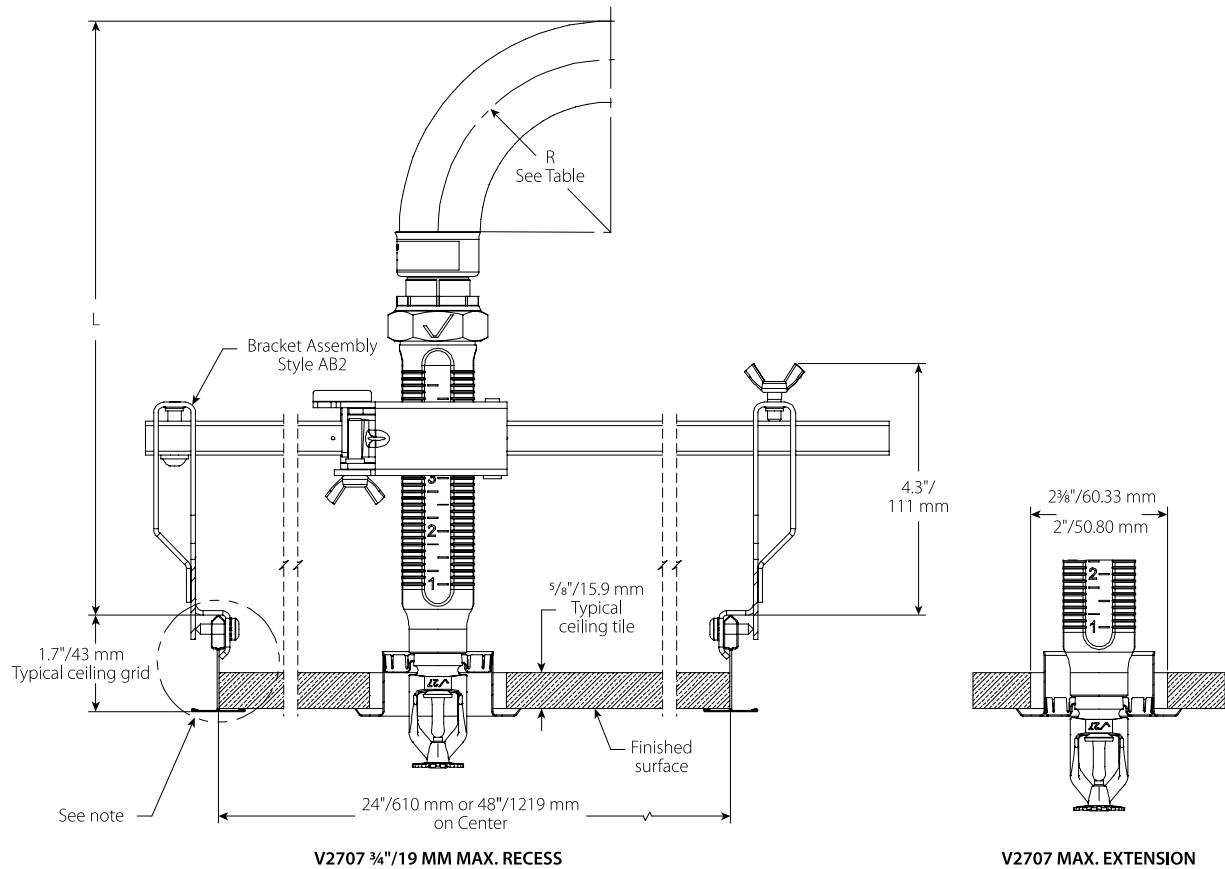




4.4 DIMENSIONS

Clearances

Series AH2 Braided Hose and Style AB2 Bracket



Hose Clearance Chart								
	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	V2707 3/4" Max Recess inches mm	V3802 1/2" Max Recess inches mm
"R" Minimum Bend Radius	2.0 50		3.0 80		7.0 175		-	
"A" Minimum Required Installation Space	8.6 218	10.1 269	9.6 244	11.1 281	13.6 345	15.1 383	5.8 147	5.8 147

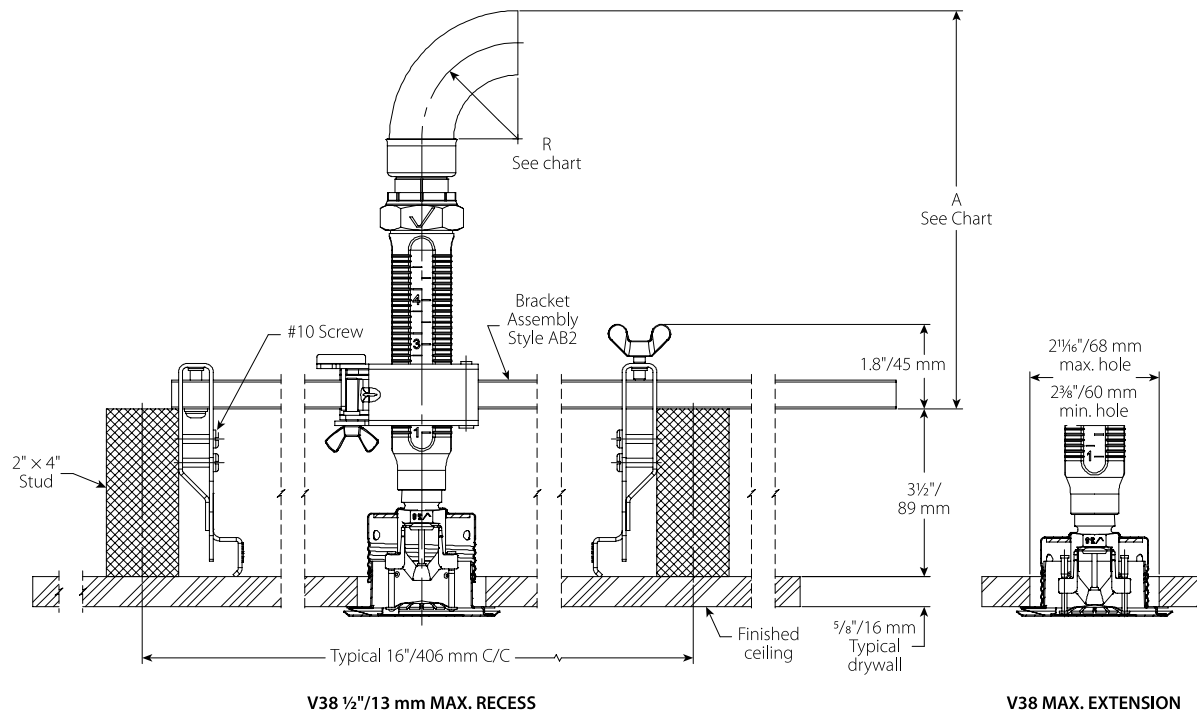
NOTE

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

## 4.5 DIMENSIONS

### Clearances

Series AH2 Braided Hose and Style AB2 Bracket



Hose Clearance Chart									
	Straight Reducer								
	V2707 ¾" I 20 mm Max Recess inches mm	V3802 ½" I 13 mm Max Recess inches mm	V2709 ¾" I 20 mm Sidewall inches mm	V2707 ¾" I 20 mm Max Recess inches mm	V3802 ½" I 13 mm Max Recess inches mm	V2709 ¾" I 20 mm Sidewall inches mm	V2707 ¾" I 20 mm Max Recess inches mm	V3802 ½" I 13 mm Max Recess inches mm	V2709 ¾" I 20 mm Sidewall inches mm
"R" Minimum 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

Hose Clearance Chart			
	Long Elbow		Short Elbow
	V2707 ¾" I 20 mm Max Recess inches mm	V2709 ¾" I 20 mm Sidewall inches mm	V3802 ½" I 13 mm Max Recess inches mm
"R" Minimum Bend Radius	-		
"A" Minimum Required Installation Space	3.3 84	3.6 91	3.3 84

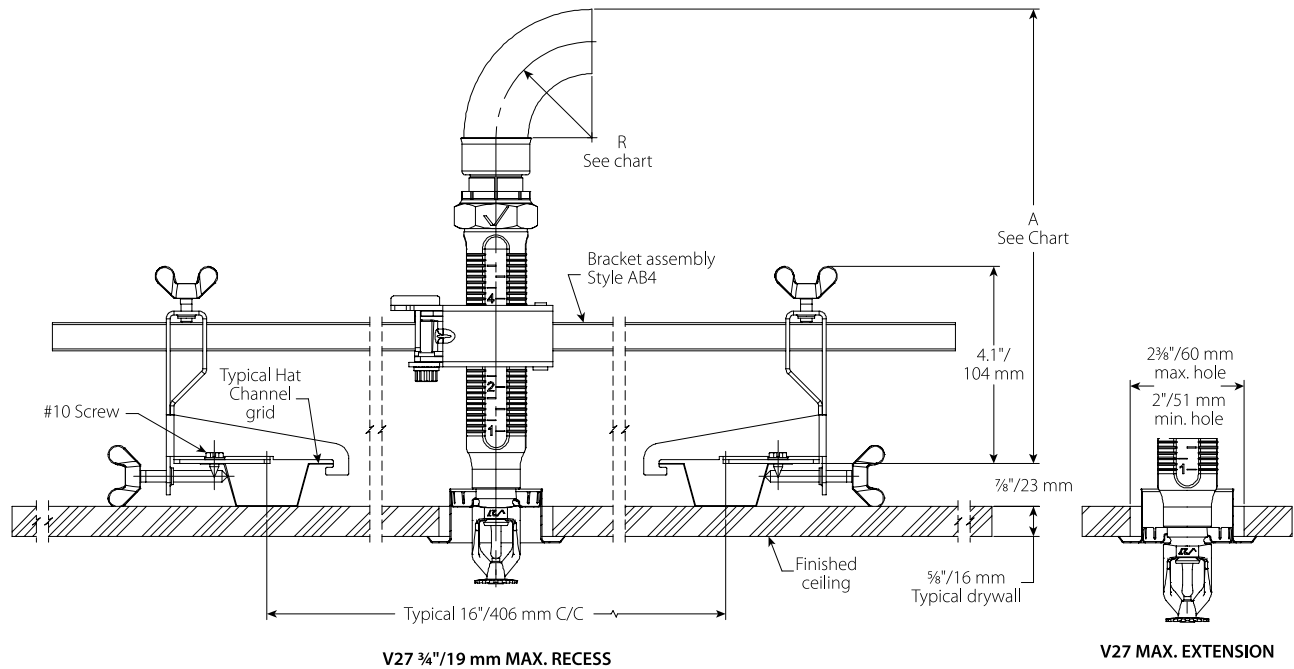
#### NOTE

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

## 4.6 DIMENSIONS

### Clearances

Series AH2 Braided Hose and Style AB4 Bracket



Hose Clearance Chart								
	Straight Reducer						Long Elbow	Short Elbow
	V2707 ¾" Max Recess inches mm	V3802 ½" Max Recess inches mm	V2707 ¾" Max Recess inches mm	V3802 ½" Max Recess inches mm	V2707 ¾" Max Recess inches mm	V3802 ½" Max Recess inches mm	V2707 ¾" Max Recess inches mm	V3802 ½" Max Recess inches mm
"R" Minimum Bend Radius	2.0 50	2.0 50	3.0 80	3.0 80	7.0 175	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

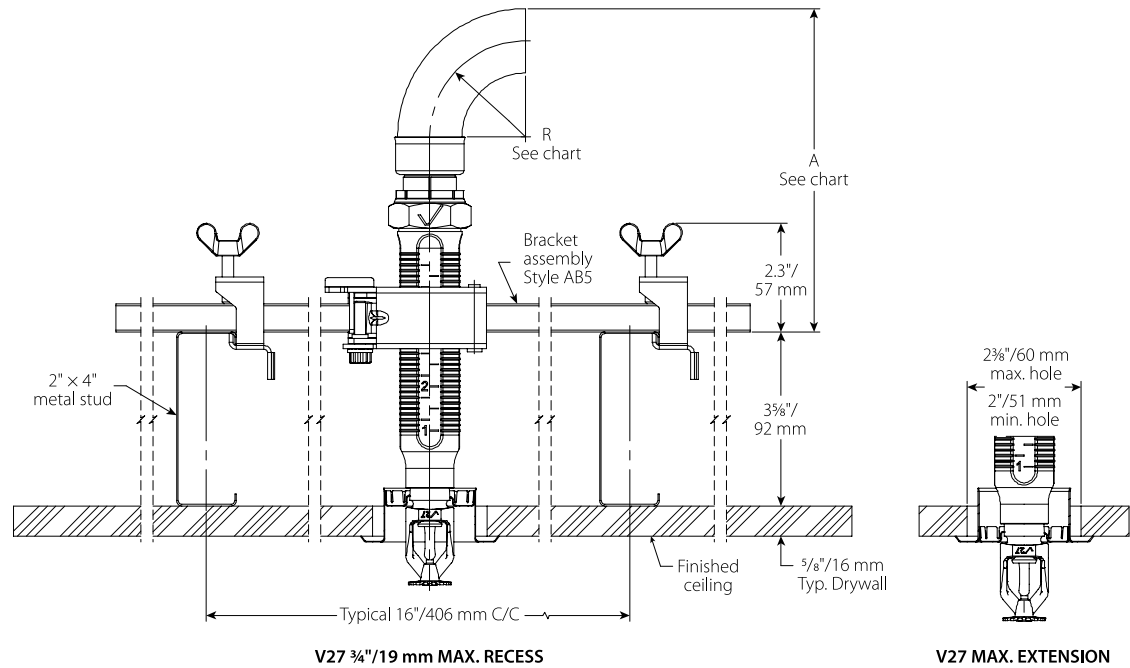
#### NOTE

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

## 4.7 DIMENSIONS

### Clearances

Series AH2 Braided Hose and Style AB5 Bracket



Hose Clearance Chart									
	Straight Reducer								
	"V2707 ¾" I 20 mm Max Recess" inches mm	V3802 ½" I 13 mm Max Recess inches mm	V2709 ¾" I 20 mm Sidewall inches mm	V2707 ¾" I 20 mm Max Recess inches mm	V3802 ½" I 13 mm Max Recess inches mm	V2709 ¾" I 20 mm Sidewall inches mm	V2707 ¾" I 20 mm Max Recess inches mm	V3802 ½" I 13 mm Max Recess inches mm	V2709 ¾" I 20 mm Sidewall inches mm
"R" Minimum Bend Radius	2.0 50			3.0 80			7.0 175		
"A" Minimum Required Installation Space	6.0 158	7.7 196	6.1 155	7.0 178	8.7 221	7.1 180	11.0 279	12.7 323	11.1 282

Hose Clearance Chart					
	Long Elbow			Low-Profile Long Elbow	Short Elbow
	V2707 ¾" I 20 mm Max Recess inches mm	V3802 ½" I 13 mm Max Recess inches mm	V2709 ¾" I 20 mm Sidewall inches mm	V3802 ½" I 13 mm Max Recess inches mm	V3802 ½" I 13 mm Max Recess inches mm
"R" Minimum Bend Radius	-				
"A" Minimum Required Installation Space	3.5 89	4.9 124	3.6 91	2.9 74	3.3 84

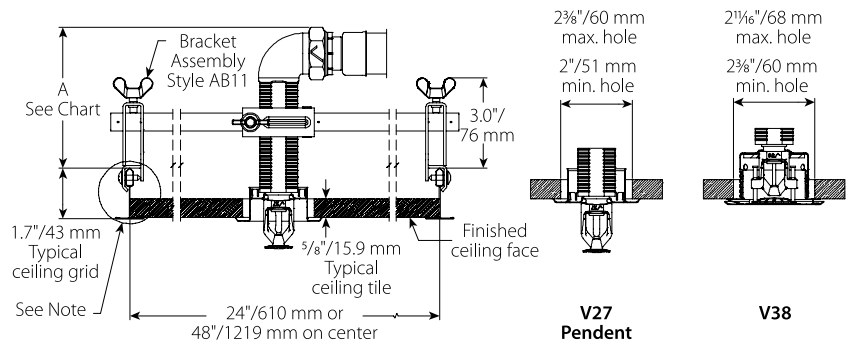
### NOTE

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

4.8 DIMENSIONS

Clearances

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



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

NOTE

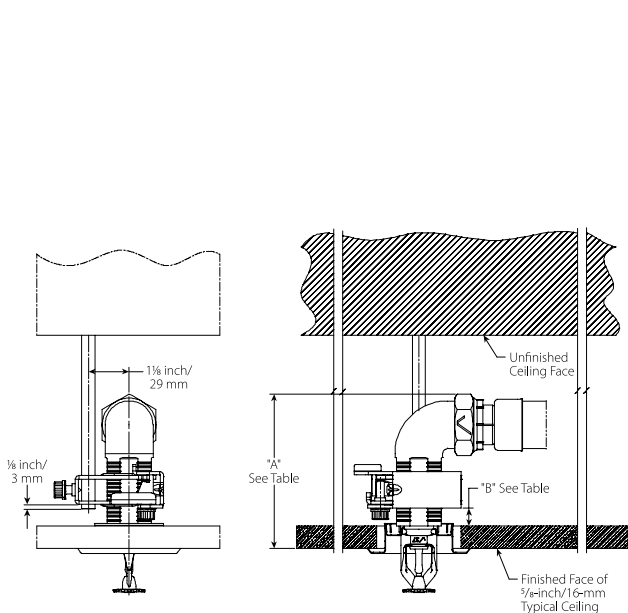
- Variations of ceiling grids, sprinkler heads, brackets, and hoses are permitted but may result in clearance differences from the figures above.

4.9 DIMENSIONS

Clearances

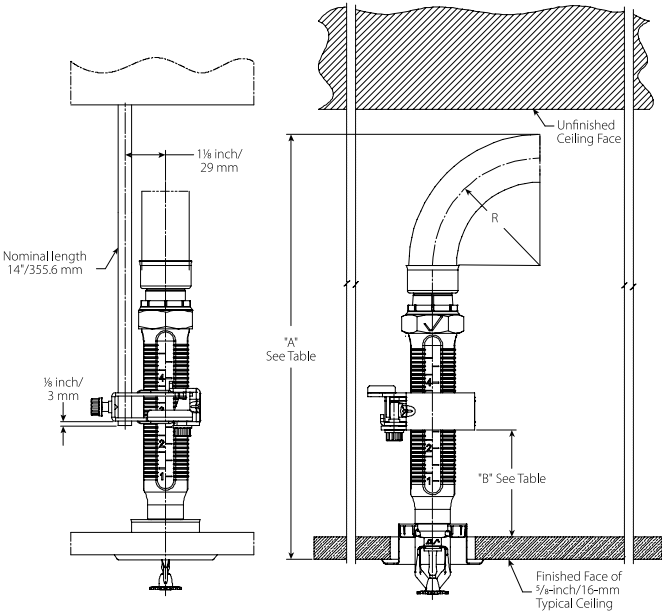
Style AB12 and ABBA Bracket

Suspended Ceiling Grid with Recessed Sprinkler with Low Profile Short Elbow



V2707 1/2"/12.7 mm MAX. RECESS

Suspended Ceiling Grid with Recessed Sprinkler and Straight 5.75"/140 mm Reducer



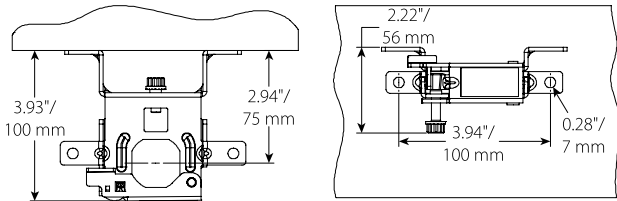
V2707 3/4"/19 mm MAX. RECESS

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

\* Adjustability will be limited

Style ABMM Bracket

Stand-off Dimensions

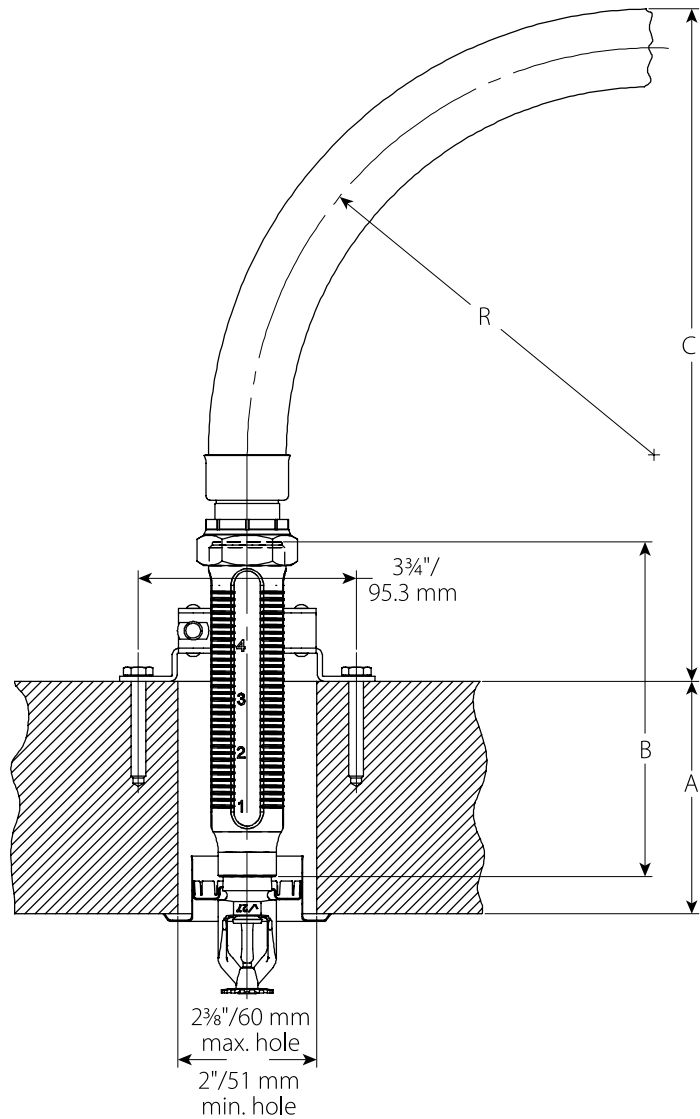


4.10 DIMENSIONS

Clearances

Style AB3 and ABMM Bracket

Surface Mount Application with Recessed Sprinkler



Hose Clearances																				
Dimension	inches mm			inches mm			inches mm		inches mm	inches mm	inches mm			inches mm			inches mm		inches mm	inches mm
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	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
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
Bend Radius "R"	7 175										8 200									

NOTE

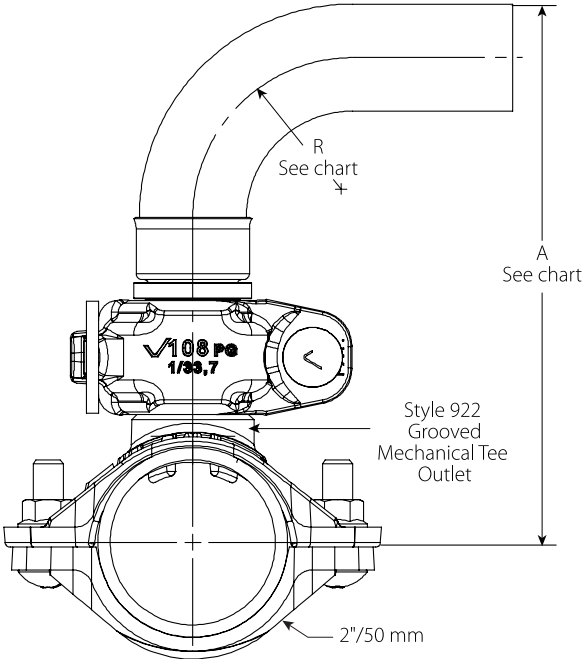
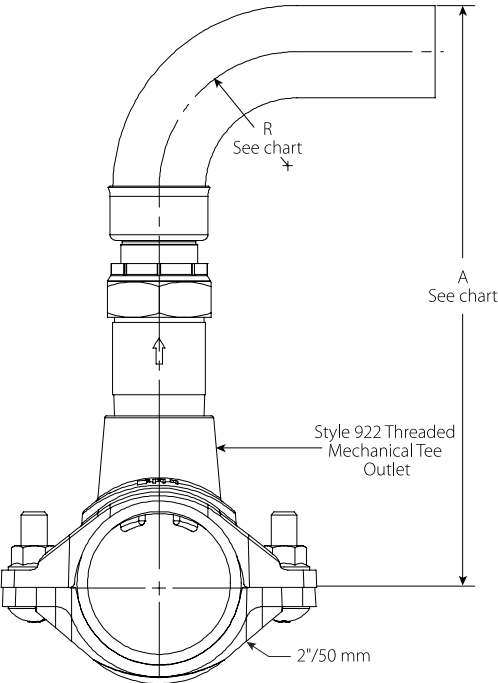
- Variations of ceiling grids, sprinkler heads, brackets, and hoses are permitted but may result in clearance differences from the figures above.

4.11 DIMENSIONS

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 mm	inches mm	inches mm	inches mm	inches mm
R	Minimum Bend Radius	3	4	5	6	7
		80	100	125	150	175
A	Min.	9.4	10.4	11.4	12.4	13.4
		238	263	289	314	339

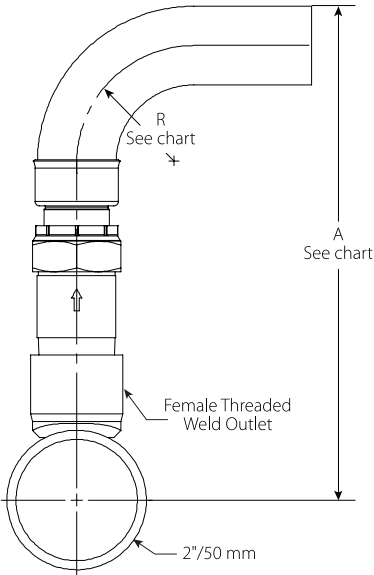
Hose Clearance Chart						
Dimension		inches mm	inches mm	inches mm	inches mm	inches mm
R	Minimum Bend Radius	3	4	5	6	7
		80	100	125	150	175
A	Min.	7.7	8.7	9.7	10.7	11.7
		197	222	247	273	298



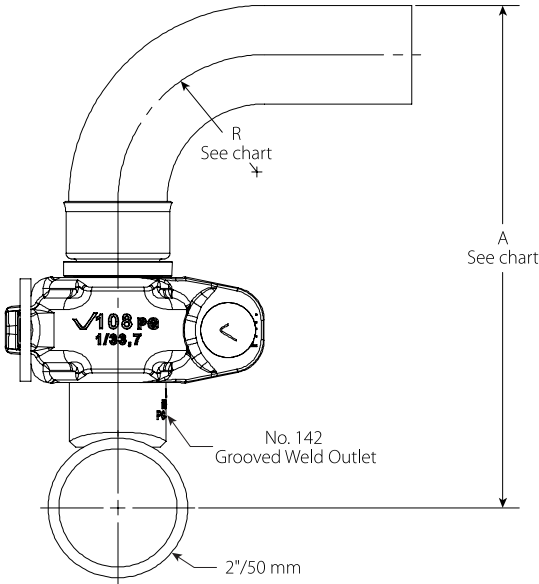
4.12 DIMENSIONS

BRANCHLINE CLEARANCES

Series AH2 Braided Hose with female threaded outlet



Series AH2-CC Braided Hose with grooved outlet



Hose Clearance Chart						
Dimension		inches mm	inches mm	inches mm	inches mm	inches mm
R	Minimum 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

Hose Clearance Chart						
Dimension		inches mm	inches mm	inches mm	inches mm	inches mm
R	Minimum 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 AH2 and AH2-CC Braided Hoses with Straight 5.75"/140 mm Reducers Style AB2, AB4, AB5 and AB10 Brackets

Hose  Length inches mm	Reducer		UL	
	Type	Nominal Outlet Size inches DN	Equivalent Length of 1"/33.7mm Sch. 40 pipe feet meters	Max Bends
31 790	Straight	1/2 DN15	15.0 4.6	3
31 790	Straight	1/2 DN15	16.0 4.9	4
31 790	Straight	3/4 DN20	19.0 5.8	3
31 790	Straight	3/4 DN20	20.0 6.1	4
36 915	Straight	1/2 DN15	18.0 5.5	3
36 915	Straight	1/2 DN15	21.0 6.4	5
36 915	Straight	3/4 DN20	21.0 6.4	3
36 915	Straight	3/4 DN20	23.0 7.0	5
48 1220	Straight	1/2 DN15	21.0 6.4	3
48 1220	Straight	1/2 DN15	32.0 9.8	8
48 1220	Straight	3/4 DN20	26.0 7.9	3
48 1220	Straight	3/4 DN20	37.0 11.3	8
60 1525	Straight	1/2 DN15	27.0 8.2	3
60 1525	Straight	1/2 DN15	46.0 14.0	10
60 1525	Straight	3/4 DN20	27.0 8.2	3
60 1525	Straight	3/4 DN20	46.0 14.0	10
72 1830	Straight	1/2 DN15	31.0 9.4	3
72 1830	Straight	1/2 DN15	55.0 16.8	12
72 1830	Straight	3/4 DN20	30.0 9.1	3
72 1830	Straight	3/4 DN20	60.0 18.3	12

## 5.0 PERFORMANCE – FRICTION LOSS DATA (CONTINUED)



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

Hose  Length inches mm	Reducer		UL	
	Type	Nominal Outlet Size inches DN	Equivalent Length of 1"/33.7mm Sch. 40 pipe feet meters	Max Bends
31 790	LP Elbow	1/2 DN15	18.0 5.5	3
31 790	LP Elbow	1/2 DN15	24.0 7.3	4
31 790	LP Elbow	3/4 DN20	21.0 6.4	3
31 790	LP Elbow	3/4 DN20	24.0 7.3	4
36 915	LP Elbow	1/2 DN15	19.0 5.8	3
36 915	LP Elbow	1/2 DN15	26.0 7.9	5
36 915	LP Elbow	3/4 DN20	23.0 7.0	3
36 915	LP Elbow	3/4 DN20	28.0 8.5	5
48 1220	LP Elbow	1/2 DN15	23.0 7.0	3
48 1220	LP Elbow	1/2 DN15	43.0 13.1	8
48 1220	LP Elbow	3/4 DN20	30.0 9.1	3
48 1220	LP Elbow	3/4 DN20	42.0 12.8	8
60 1525	LP Elbow	1/2 DN15	28.0 8.5	3
60 1525	LP Elbow	1/2 DN15	49.0 14.9	10
60 1525	LP Elbow	3/4 DN20	31.0 9.4	3
60 1525	LP Elbow	3/4 DN20	50.0 15.2	10
72 1830	LP Elbow	1/2 DN15	31.0 9.4	3
72 1830	LP Elbow	1/2 DN15	65.0 19.8	12
72 1830	LP Elbow	3/4 DN20	36.0 11.0	3
72 1830	LP Elbow	3/4 DN20	63.0 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 inches mm	Nominal Outlet Size inches DN	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
31 790	½ DN15	11.0 3.4	13.0 4.0	15.0 4.6	16.0 4.9	–	–	–	–	–	–	–	–
31 790	¾ DN20	12.0 3.7	14.0 4.3	19.0 5.8	20.0 6.1	–	–	–	–	–	–	–	–
36 915	½ DN15	14.0 4.3	16.0 4.9	18.0 5.5	19.0 5.8	21.0 6.4	–	–	–	–	–	–	–
36 915	¾ DN20	17.0 5.2	19.0 5.8	21.0 6.4	22.0 6.7	23.0 7.0	–	–	–	–	–	–	–
48 1220	½ DN15	18.0 5.5	19.0 5.8	21.0 6.4	23.0 7.0	25.0 7.6	27.0 8.2	30.0 9.1	32.0 9.8	–	–	–	–
48 1220	¾ DN20	21.0 6.4	24.0 7.3	26.0 7.9	28.0 8.5	31.0 9.4	33.0 10.1	35.0 10.7	37.0 11.3	–	–	–	–
60 1525	½ DN15	21.0 6.4	24.0 7.3	27.0 8.2	30.0 9.1	32.0 9.8	35.0 10.7	37.0 11.3	40.0 12.2	43.0 13.1	46.0 14.0	–	–
60 1525	¾ DN20	23.0 7.0	25.0 7.6	27.0 8.2	29.0 8.8	32.0 9.8	34.0 10.4	37.0 11.3	40.0 12.2	43.0 13.1	46.0 14.0	–	–
72 1830	½ DN15	27.0 8.2	29.0 8.8	31.0 9.4	34.0 10.4	37.0 11.3	40.0 12.2	43.0 13.1	46.0 14.0	48.0 14.6	50.0 15.2	52.0 15.8	55.0 16.8
72 1830	¾ DN20	26.0 7.9	28.0 8.5	30.0 9.1	33.0 10.1	37.0 11.3	40.0 12.2	44.0 13.4	48.0 14.6	51.0 15.5	54.0 16.5	57.0 17.4	60.0 18.3

#### NOTES

- Values for use with 5.75"/140 mm straight reducers.
- The values in this table are provided by the manufacturer for reference only. For friction loss data in accordance with the UL Certification, please refer to pages 19 and 20 of this publication.

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 AB2, AB3, AB4, AB5, AB7, AB7 Adj., AB8, AB10, AB12, ABBA and ABMM *VicFlex* Brackets

Length of Stainless Steel Flexible Hose  inches mm	K-Factor  Imperial S.I.	Outlet Size  inches mm type	Equivalent Length of 1"/33.7 mm Sch. 40 Pipe  feet meters	Maximum Number of 90° Bends at 7"/178 mm Bend Radius
31 790	5.6 8.1	½ 15 Straight	13.8 4.2	2
		½ 15 90° Elbow	23.5 7.1	
36 915	5.6 8.1	½ 15 Straight	16.6 5.1	2
		½ 15 90° Elbow	25.6 7.8	
48 1220	5.6 8.1	½ 15 Straight	23.4 7.1	3
		½ 15 90° Elbow	30.7 9.3	
60 1525	5.6 8.1	½ 15 Straight	30.2 9.2	4
		½ 15 90° Elbow	35.9 10.9	
72 1830	5.6 8.1	½ 15 Straight	37.0 11.3	4
		½ 15 90° Elbow	41.1 12.5	
31 790	8.0 11.5	¾ 20 Straight	16.8 5.1	2
		¾ 20 90° Elbow	16.8 5.1	
36 915	8.0 11.5	¾ 20 Straight	20 6.0	2
		¾ 20 90° Elbow	19.7 6.0	
48 1220	8.0 11.5	¾ 20 Straight	27.8 8.4	3
		¾ 20 90° Elbow	26.6 8.1	

#### FM NOTES

- The Series AH2 hose 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 standard for safety include, but are not limited to, pressure cycling, corrosion resistance, flow characteristics, vibration resistance, leakage, mechanical and hydrostatic strength.
- EXAMPLE: A 48-inch hose installed with two 30° bends and two 90° bends 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 (CONTINUED)



## Series AH2 and AH2-CC Braided Hoses

Style AB2, AB3, AB4, AB5, AB7, AB7 Adj., AB8, AB10, AB12, ABBA and ABMM *VicFlex* Brackets

Length of Stainless Steel Flexible Hose	K-Factor	Outlet Size	Equivalent Length of 1" / 33.7 mm Sch. 40 Pipe	Maximum Number of 90° Bends at 7" / 178 mm Bend Radius
inches mm	Imperial S.I.	inches mm type	feet meters	
60 1525	8.0 11.5	$\frac{3}{4}$ 20 Straight	35.7 10.9	4
		$\frac{3}{4}$ 20 90° Elbow	33.6 10.2	
72 1830	8.0 11.5	$\frac{3}{4}$ 20 Straight	43.5 13.2	4
		$\frac{3}{4}$ 20 90° Elbow	40.6 12.2	
31 790	11.2 16.1	$\frac{3}{4}$ 20 Straight	16.5 5.0	2
		$\frac{3}{4}$ 20 90° Elbow	17.8 5.4	
36 915	11.2 16.1	$\frac{3}{4}$ 20 Straight	19.5 5.9	2
		$\frac{3}{4}$ 20 90° Elbow	20.7 6.3	
48 1220	11.2 16.1	$\frac{3}{4}$ 20 Straight	26.7 8.1	3
		$\frac{3}{4}$ 20 90° Elbow	27.9 8.5	
60 1525	11.2 16.1	$\frac{3}{4}$ 20 Straight	33.9 10.3	4
		$\frac{3}{4}$ 20 90° Elbow	35 10.7	
72 1830	11.2 16.1	$\frac{3}{4}$ 20 Straight	41.3 12.5	4
		$\frac{3}{4}$ 20 90° Elbow	42.2 12.8	
31 790	14.0 20.2	$\frac{3}{4}$ 20 Straight	14.9 4.5	2
		$\frac{3}{4}$ 20 90° Elbow	15.5 4.72	

## FM NOTES

- The Series AH2 hose 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 standard for safety include, but are not limited to, pressure cycling, corrosion resistance, flow characteristics, vibration resistance, leakage, mechanical and hydrostatic strength.
- EXAMPLE: A 48-inch hose installed with two 30° bends and two 90° bends 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 (CONTINUED)



Series AH2 and AH2-CC Braided Hoses

Style AB2, AB3, AB4, AB5, AB7, AB7 Adj., AB8, AB10, AB12, ABBA and ABMM *VicFlex* Brackets

Length of Stainless Steel Flexible Hose	K-Factor	Outlet Size	Equivalent Length of 1"/33.7 mm Sch. 40 Pipe	Maximum Number of 90° Bends at 7"/178 mm Bend Radius
inches mm	Imperial S.I.	inches mm type	feet meters	
36 915	14.0 20.2	$\frac{3}{4}$ 20 Straight	19.4 5.9	2
		$\frac{3}{4}$ 20 90° Elbow	19.6 5.9	
48 1220	14.0 20.2	$\frac{3}{4}$ 20 Straight	30.3 9.2	3
		$\frac{3}{4}$ 20 90° Elbow	29.5 8.9	
60 1525	14.0 20.2	$\frac{3}{4}$ 20 Straight	33.9 10.3	4
		$\frac{3}{4}$ 20 90° Elbow	34.1 10.4	
72 1830	14.0 20.2	$\frac{3}{4}$ 20 Straight	37.5 11.4	4
		$\frac{3}{4}$ 20 90° Elbow	38.6 11.7	

### FM NOTES

- The Series AH2 hose 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 standard for safety include, but are not limited to, pressure cycling, corrosion resistance, flow characteristics, vibration resistance, leakage, mechanical and hydrostatic strength.
- EXAMPLE: A 48-inch hose installed with two 30° bends and two 90° bends 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 AB5, AB11, AB12, ABBA and ABMM *VicFlex* Bracket

Length of Stainless Steel Flexible Hose inches mm	K-Factor Imperial S.I.	Outlet Size inches mm	Equivalent Length of 1"/33.7mm Sch. 40 Pipe feet meters	Maximum Number of 90° Bends at 7"/178mm Bend Radius
31 790	5.6 8.1	½ 15	13.7 4.2	2
36 915	5.6 8.1	½ 15	17.0 5.2	2
48 1220	5.6 8.1	½ 15	25.0 7.6	3
60 1525	5.6 8.1	½ 15	33.0 10.1	4
72 1830	5.6 8.1	½ 15	41.1 12.5	4
31 790	8.0 11.5	¾ 20	13.6 4.14	2
36 915	8.0 11.5	¾ 20	16.9 5.2	2
48 1220	8.0 11.5	¾ 20	27.8 8.5	3
60 1525	8.0 11.5	¾ 20	32.6 9.9	4
72 1830	8.0 11.5	¾ 20	40.6 12.4	4
31 790	11.2 16.1	¾ 20	13.7 4.2	2
36 915	11.2 16.1	¾ 20	17.0 5.2	2
48 1220	11.2 16.1	¾ 20	24.9 7.6	3
60 1525	11.2 16.1	¾ 20	32.9 10.0	4
72 1830	11.2 16.1	¾ 20	40.9 12.5	4
31 790	14.0 20.2	¾ 20	13.5 4.1	2
36 915	14.0 20.2	¾ 20	16.8 5.1	2
48 1220	14.0 20.2	¾ 20	24.7 7.5	3
60 1525	14.0 20.2	¾ 20	32.7 9.9	4
72 1830	14.0 20.2	¾ 20	40.7 12.4	4

#### FM NOTES

- The Series AH2 hose 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 standard for safety include, but are not limited to, pressure cycling, corrosion resistance, flow characteristics, vibration resistance, leakage, mechanical and hydrostatic strength.
- EXAMPLE: A 48-inch hose installed with two 30° bends and two 90° bends 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 and AH2-CC Braided Hose  
Style AB2, AB4, AB5, AB7, AB7 Adj., AB8, AB10, AB11 and AB12 Brackets

Length of Stainless Steel Flexible Hose mm inches	Outlet Size DN inches	Equivalent Length of steel pipe according to EN 10255 DN 25 (33,7 x 3,25) meters feet	Maximum Number of 90° Bends at 3"/76.2 mm Bend Radius
790 31	DN15 ½	5.5 18.0	3
	DN20 ¾		
915 36	DN15 ½	6.4 21.0	3
	DN20 ¾		
1220 48	DN15 ½	8.5 27.9	3
	DN20 ¾		
1525 60	DN15 ½	10.7 35.1	4
	DN20 ¾		
1830 72	DN15 ½	12.8 42.0	4
	DN20 ¾		

#### VdS Ceiling Manufacturers List

##### AB2, AB7, AB10 ,AB11

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, AB8

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

### 5.3 PERFORMANCE – FRICTION LOSS DATA



#### Series AH2 and AH2-CC Braided Hose Style AB2, AB3, AB4, AB5, AB7, AB8, and AB10 Brackets

Length of Stainless Steel Flexible Hose  mm inches	Outlet Size mm inches type	Equivalent Length of steel pipe according to EN 10255 DN 25 (33,7 x 3,25)  meters feet	Maximum Number of 90° Bends at 3"/76.2 mm Bend Radius
790 31	15 mm ½ Straight	1.8 6.0	2
	20 mm ¾ Straight		
915 36	15 mm ½ Straight	3.6 11.9	3
	20 mm ¾ Straight		
1220 48	15 mm ½ Straight	4.3 14.0	3
	20 mm ¾ Straight		
1525 60	15 mm ½ Straight	4.1 13.6	3
	20 mm ¾ Straight		
1830 72	15 mm ½ Straight	5.5 18.1	3
	20 mm ¾ Straight		



#### Series AH2 Braided Hose Style AB2, AB3, AB4, AB5, AB7, AB8, AB10 and AB12 Brackets

Length of Flexible Hose  mm inches	Equivalent Length of 1"/33.7 mm Sch. 40 Pipe	
	Straight Configuration  meters feet	Bend Configuration  meters feet
790 31	0.87 2.9	2.70 8.9
915 36	1.00 3.3	2.80 9.2
1220 48	2.23 7.3	4.66 15.3
1525 60	2.90 9.5	6.5 21.3
1830 72	3.31 10.9	7.16 23.5

#### CCCF NOTE

- Friction loss data is in accordance with GB5135.16 tested at a flow rate of 114 liters per minute (30 gallons per minute).

## 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.

- 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 13, 13D, 13R, etc.) standards, or equivalent 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.

### 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.
- 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 micro-biologically 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 these instructions could cause product failure, resulting in serious personal injury and/or property damage.**

Victaulic VicFlex Series AH2 and AH2-CC Flexible Sprinkler Fittings may be painted provided the paint is compatible with stainless steel and zinc-plated carbon steel or ductile iron. Care should be taken to ensure the sprinkler and associated escutcheon or coverplate are not painted.

Victaulic VicFlex Series AH2 and AH2-CC penetrating 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 AH2 Hose with 24" Bracket

Model Size	Actual Length ft m	Total Load		Max. Uniform Load	
		lb	N	lb/linear ft	N/linear m
31/790	2.6 0.8	5.2	23	2.6	38
36/915	3 0.9	5.5	25	2.8	40
48/1220	4 1.2	6.3	28	3.1	46
60/1525	5 1.5	7.0	31	3.5	51
72/1830	6 1.8	7.7	34	3.9	57

#### Series AH2 Hose with 48" Bracket

Model Size	Actual Length ft m	Total Load		Max. Uniform Load	
		lb	N	lb/linear ft	N/linear m
31/790	2.6 0.8	6.1	27	1.5	22
36/915	3 0.9	6.4	29	1.6	23
48/1220	4 1.2	7.2	32	1.8	26
60/1525	5 1.5	7.9	35	2.0	29
72/1830	6 1.8	8.7	39	2.2	32

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)

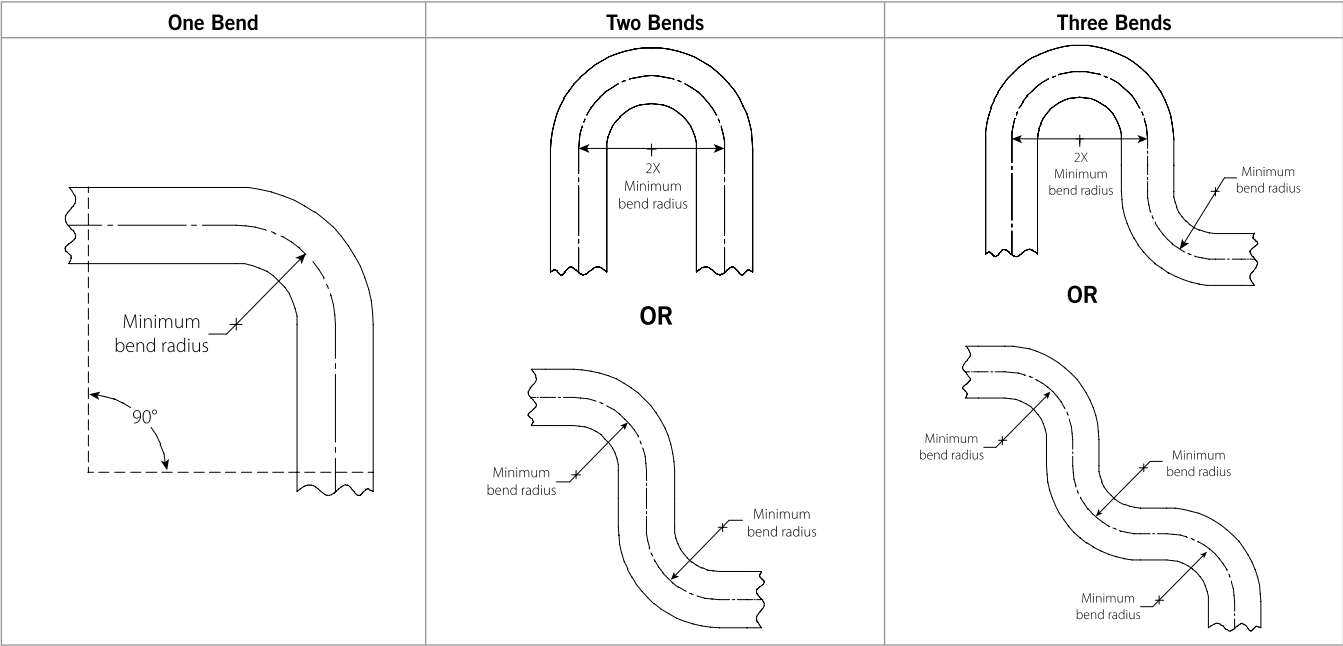
#### ASTM C 635: Suspension System Load-Carrying Capabilities (excerpted)

Suspension System	Actual Length ft/m	Min. 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



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

- [I-VicFlex-AB1-AB2](#)
- [I-VicFlex-AB3](#)
- [I-VicFlex-AB4](#)
- [I-VicFlex-AB5](#)
- [I-VicFlex-AB7](#)
- [I-VicFlex-AB12](#)
- [I-VicFlex-ABBA](#)
- [I-VicFlex-ABMM](#)
- [I-RES](#)

**User Responsibility for Product Selection and Suitability**  
Each user bears final responsibility for making a determination as to the suitability of Victaulic products for a particular end-use application, in accordance with industry standards and project specifications, and the applicable building codes and related regulations as well as Victaulic performance, maintenance, safety, and warning 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, installation guide, or this disclaimer.

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**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.

**Installation**  
Reference should always be made to I-VICFLEX-AB1-AB2-AB10, I-VICFLEX-AB4, 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](http://www.victaulic.com).

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

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