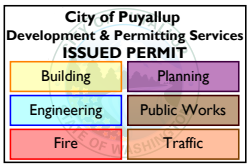
ARCHER
CONSTRUCTION, INC
7855 South 206th Street, Kent, WA 98032
• Phone: 253-872-7222 •Fax: 253-872-7277



FIRE SPRINKLER EQUIPMENT SUBMITTAL

FOR

ROUND ONE TI
3500 S. MERIDIAN ST.
PUYALLUP, WA 98373

Archer Job # S21-121

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- Retainer Strap – Erico Model 300C

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- Upright, QR – Victaulic Model V2704
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Schedule 10 and Schedule 40

FM Approved and UL Listed Sprinkler Pipe

Bull Moose Tube Company is a recognized producer of quality pipe products. Our Schedule 10 and Schedule 40 are FM Approved and UL Listed (for U.S. and Canada), even though these products do not require separate approvals and listings. Bull Moose Tube made the decision to have them approved and listed for your peace of mind. Our Sch. 10 and Sch. 40 have been through the same rigorous testing as our other fine pipe products.

Bull Moose Tube's Sch. 10 and Sch. 40 pipes are made to ASTM A135 and ASTM A795. These products are typically supplied with our protective coating but can be supplied without the coating so they can be hot-dip galvanized to meet FM requirements for use in dry systems in accordance with the zinc coating specifications of ASTM A795 or ASTM A53. All Schedule 10 and Schedule 40 pipe has a pressure rating of 300 PSI.

Schedule 10 Pipe

Nominal Pipe Size (in)	Nominal O.D. (in)	Nominal I.D. (in)	Weight/Ft	Bundle Size
1	1.315	1.097	1.41 lbs/ft	91
1 1/4	1.660	1.442	1.81 lbs/ft	61
1 1/2	1.900	1.682	2.09 lbs/ft	61
2	2.375	2.157	2.64 lbs/ft	37
2 1/2	2.875	2.635	3.53 lbs/ft	30
3	3.500	3.260	4.34 lbs/ft	19
4	4.500	4.260	5.62 lbs/ft	19

Schedule 40 Pipe

Nominal Pipe Size (in)	Nominal O.D. (in)	Nominal I.D. (in)	Weight/Ft	Bundle Size
1	1.315	1.049	1.68 lbs/ft	70
1 1/4	1.660	1.380	2.27 lbs/ft	51
1 1/2	1.900	1.610	2.72 lbs/ft	44
2	2.375	2.067	3.66 lbs/ft	30
2 1/2	2.875	2.468	5.80 lbs/ft	30
3	3.500	3.068	7.58 lbs/ft	19
4	4.500	4.026	10.80 lbs/ft	19

PIPE PREPARATION

For proper operation, all pipe surfaces should be cleaned prior to installation. In order to provide a leak-tight seat for the gasket, pipe surfaces should be free from indentations and projections from the end of the pipe to the groove. All loose paint, scale, dirt, chips, grease, and rust must be removed prior to installation. Failure to take these important steps may result in improper coupling assembly, causing leakage. Also, check the manufacturer's instructions for the specific fitting used.

BULL MOOSE TUBE COMPANY
A CAPARO company

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Chesterfield, MO 63017
(800) 325-4467
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www.bullmoosetube.com
e-mail: sales@bullmoosetube.com

For additional information, contact your salesperson today at (800) 325-4467 or (636) 537-2600 in the USA, or from Canada call (800) 882-4666

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FIG. 3201

90° Elbow

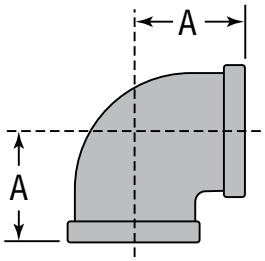

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FIGURE 3201 - 90° ELBOW

Nominal Size	Maximum Working Pressure▲	Dimension A	Approx. Wt. Each
In. (mm)	*PSI (kPa)*	*In. (mm)*	*Lbs. (kg)*
1 *20*	500 *3450*	1.50 *38.10*	0.62 *0.28*
1¼ *32*	500 *3450*	1.75 *44.45*	0.90 *0.41*
1½ *40*	500 *3450*	1.94 *49.276*	1.20 *0.54*
2 *50*	500 *3450*	2.25 *57.15*	1.85 *0.84*

▲ – Working Pressure Ratings are for reference only and based on Sch. 40 pipe. For the latest UL/ULC, and FM pressure ratings versus pipe schedule, please visit anvilintl.com or contact your local Anvil Representative.

MATERIAL SPECIFICATIONS

Dimensions: ASME B16.3

Material: ASTM A536 Grade 65-45-12

Finish: Black

Threads: NPT per ASME B1.20.1

Agency Approvals: All ductile iron threaded fittings are UL/ULC Listed and FM Approved.

NOTICE: Ductile iron fittings have higher tensile strength than that of steel pipe. Therefore, over tightening can cause damage to pipe threads which may cause leakage. Ductile iron fittings should be tightened approximately three turns beyond hand tight, but no more than four turns.

PROJECT INFORMATION	APPROVAL STAMP
Project:	☐ **Approved**
Address:	☐ **Approved as noted**
Contractor:	☐ **Not approved**
Engineer:	**Remarks:**
Submittal Date:	
Notes 1:	
Notes 2:	

FIG. 3201R

Reducing 90° Elbow

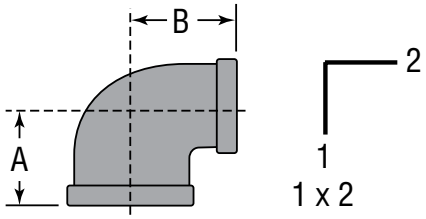

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FIGURE 3201R - REDUCING 90° ELBOW

Nominal Size 1 x 2	Max. Working Pressure▲	Dimensions A	Dimensions B	Approx. Wt. Each
In. (mm)	*PSI (kPa)*	*In. (mm)*	*In. (mm)*	*Lbs. (kg)*
1 x ½ *25 x 15*	500 *3450*	1.26 *32.00*	1.36 *34.54*	0.44 *0.20*
1 x ¾ *25 x 20*	500 *3450*	1.37 *34.79*	1.45 *36.83*	0.52 *0.24*
1¼ x ½ *32 x 15*	500 *34550*	1.34 *34.03*	1.53 *38.86*	0.64 *0.29*
1¼ x ¾ *32 x 20*	500 *3450*	1.45 *36.83*	1.62 *41.14*	0.72 *0.33*
1¼ x 1 *32 x 25*	500 *3450*	1.58 *40.13*	1.67 *42.41*	0.75 *0.34*
1½ x 1 *40 x 25*	500 *3450*	1.65 *41.91*	1.80 *45.72*	0.92 *0.42*
1½ x 1¼ *40 x 32*	500 *3450*	1.82 *46.22*	1.88 *47.75*	1.08 *0.49*
2 x ½ *50 x 15*	500 *3450*	1.49 *37.84*	1.88 *47.75*	1.08 *0.49*
2 x ¾ *50 x 20*	500 *3450*	1.60 *40.64*	1.97 *50.03*	1.24 *0.56*
2 x 1 *50 x 25*	500 *3450*	1.73 *43.94*	2.02 *51.30*	1.40 *0.64*
2 x 1¼ *50 x 32*	500 *3450*	1.90 *48.26*	2.10 *53.34*	1.52 *0.70*
2 x 1½ *50 x 40*	500 *3450*	2.02 *51.30*	2.16 *54.86*	1.65 *0.75*

▲ – Working Pressure Ratings are for reference only and based on Sch. 40 pipe. For the latest UL/ULC, and FM pressure ratings versus pipe schedule, please visit anvilintl.com or contact your local Anvil Representative.

MATERIAL SPECIFICATIONS

Dimensions: ASME B16.3

Material: ASTM A536 Grade 65-45-12

Finish: Black

Threads: NPT per ASME B1.20.1

Agency Approvals: All ductile iron threaded fittings are UL/ULC Listed and FM Approved.

NOTICE: Ductile iron fittings have higher tensile strength than that of steel pipe. Therefore, over tightening can cause damage to pipe threads which may cause leakage. Ductile iron fittings should be tightened approximately three turns beyond hand tight, but no more than four turns.

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Address:	☐ **Approved as noted**
Contractor:	☐ **Not approved**
Engineer:	**Remarks:**
Submittal Date:	
Notes 1:	
Notes 2:	

FIG. 3205

Straight Tee

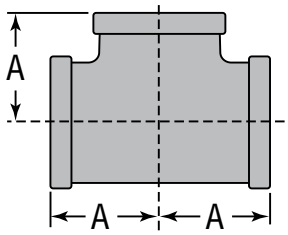

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FIGURE 3205 - STRAIGHT TEE

Nominal Size	Maximum Working Pressure▲	Dimension A	Approx. Wt. Each
In. (mm)	*PSI (kPa)*	*In. (mm)*	*Lbs. (kg)*
1 *25*	500 *3450*	1.50 *38.10*	0.85 *0.39*
1¼ *32*	500 *3450*	1.75 *44.45*	1.22 *0.55*
1½ *40*	500 *3450*	1.94 *49.27*	1.55 *0.70*
2 *50*	500 *3450*	2.25 *57.15*	2.45 *1.11*

▲ – Working Pressure Ratings are for reference only and based on Sch. 40 pipe. For the latest UL/ULC, and FM pressure ratings versus pipe schedule, please visit anvilintl.com or contact your local Anvil Representative.

MATERIAL SPECIFICATIONS

Dimensions: ASME B16.3

Material: ASTM A536 Grade 65-45-12

Finish: Black

Threads: NPT per ASME B1.20.1

Agency Approvals: All ductile iron threaded fittings are UL/ULC Listed and FM Approved.

NOTICE: Ductile iron fittings have higher tensile strength than that of steel pipe. Therefore, over tightening can cause damage to pipe threads which may cause leakage. Ductile iron fittings should be tightened approximately three turns beyond hand tight, but no more than four turns.

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Address:	☐ **Approved as noted**
Contractor:	☐ **Not approved**
Engineer:	**Remarks:**
Submittal Date:	
Notes 1:	
Notes 2:	

FIG. 3205R

Reducing Tee

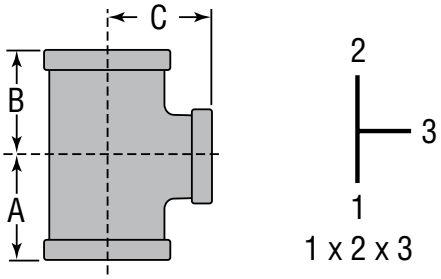

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FIGURE 3205R - REDUCING TEE

Nominal Size 1 x 2 x 3	Max. Working Pressure▲	Dimensions A	Dimensions B	Dimensions C	Approx. Wt. Each
In. (mm)	*PSI (kPa)*	*In. (mm)*	*In. (mm)*	*In. (mm)*	*Lbs. (kg)*
1 x ½ x 1 *25 x 15 x 25*	500 *3450*	1.50 *38.10*	1.36 *34.54*	1.50 *38.10*	0.64 *0.29*
1 x ¾ x 1 *25 x 20 x 25*	500 *3450*	1.50 *38.10*	1.45 *36.83*	1.50 *38.10*	0.73 *0.33*
1 x 1 x ½ *25 x 25 x 15*	500 *3450*	1.26 *32.00*	1.26 *32.00*	1.36 *34.54*	0.71 *0.32*
1 x 1 x ¾ *25 x 25 x 20*	500 *3450*	1.37 *34.80*	1.37 *34.80*	1.45 *36.83*	0.76 *0.34*
1 x 1 x 1¼* *25 x 25 x 32*	500 *3450*	1.67 *42.41*	1.67 *42.41*	1.58 *40.13*	0.98 *0.44*
1 x 1 x 1½* *25 x 25 x 40*	500 *3450*	1.80 *45.72*	1.80 *45.72*	1.65 *41.91*	1.16 *0.53*
1¼ x 1 x ½* *32 x 25 x 15*	500 *3450*	1.34 *34.04*	1.26 *32.00*	1.53 *38.86*	0.82 *0.37*
1¼ x 1 x ¾ *32 x 25 x 20*	500 *3450*	1.45 *36.83*	1.37 *34.80*	1.62 *41.15*	0.90 *0.41*
1¼ x 1 x 1 *32 x 25 x 25*	500 *3450*	1.58 *40.13*	1.50 *38.10*	1.67 *42.42*	1.00 *0.45*
1¼ x 1 x 1¼ *32 x 25 x 32*	500 *3450*	1.75 *44.45*	1.67 *42.42*	1.75 *44.45*	1.08 *0.49*
1¼ x 1 x 1½ *32 x 25 x 40*	500 *3450*	1.88 *47.75*	1.80 *45.72*	1.82 *46.22*	1.42 *0.64*
1¼ x 1¼ x ½ *32 x 32 x 15*	500 *3450*	1.34 *34.04*	1.34 *34.04*	1.53 *38.86*	0.86 *0.39*

MATERIAL SPECIFICATIONS

Dimensions: ASME B16.3

Material: ASTM A536 Grade 65-45-12

Finish: Black

Threads: NPT per ASME B1.20.1

Agency Approvals: All ductile iron threaded fittings are UL/ULC Listed and FM Approved.

NOTICE: Ductile iron fittings have higher tensile strength than that of steel pipe. Therefore, over tightening can cause damage to pipe threads which may cause leakage. Ductile iron fittings should be tightened approximately three turns beyond hand tight, but no more than four turns.

FIGURE 3205R - REDUCING TEE

Nominal Size 1 x 2 x 3	Max. Working Pressure▲	Dimensions A	Dimensions B	Dimensions C	Approx. Wt. Each
In. (mm)	*PSI (kPa)*	*In. (mm)*	*In. (mm)*	*In. (mm)*	*Lbs. (kg)*
1¼ x 1¼ x ¾ *32 x 32 x 20*	500 *3450*	1.45 *36.83*	1.45 *36.83*	1.62 *41.15*	0.92 *0.42*
1¼ x 1¼ x 1 *32 x 32 x 25*	500 *3450*	1.58 *40.13*	1.58 *40.13*	1.67 *42.42*	0.95 *0.43*
1¼ x 1¼ x 1½* *32 x 32 x 40*	500 *3450*	1.88 *47.75*	1.88 *47.75*	1.82 *46.22*	1.45 *0.66*

▲ Working Pressure Ratings are for reference only and based on Sch. 40 pipe. For the latest UL/ULC, and FM pressure ratings versus pipe schedule, please visit anvilintl.com or contact your local Anvil Representative.

* Part supplied as "Bull Head Tee".

PROJECT INFORMATION	APPROVAL STAMP
Project:	☐ **Approved**
Address:	☐ **Approved as noted**
Contractor:	☐ **Not approved**
Engineer:	**Remarks:**
Submittal Date:	
Notes 1:	
Notes 2:	

FIG. 3205R

Reducing Tee

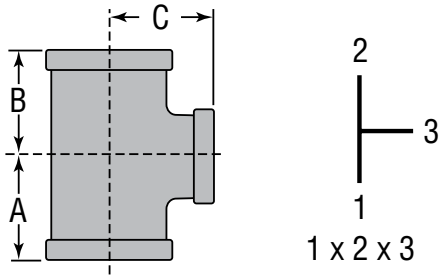


FIGURE 3205R - REDUCING TEE					
Nominal Size	Max. Working Pressure▲	Dimensions			Approx. Wt. Each
1 x 2 x 3		A	B	C	
In. (mm)	*PSI (kPa)*	*In. (mm)*	*In. (mm)*	*In. (mm)*	*Lbs. (kg)*
1¼ x 1¼ x 2* *32 x 32 x 50*	500 *3450*	2.10 *53.34*	2.10 *53.34*	1.90 *48.26*	1.75 *0.79*
1½ x 1 x ½ *40 x 25 x 15*	500 *3450*	1.41 *35.81*	1.34 *34.04*	1.66 *42.16*	0.95 *0.43*
1½ x 1 x ¾ *40 x 25 x 20*	500 *3450*	1.52 *38.61*	1.37 *34.80*	1.75 *44.45*	1.14 *0.52*
1½ x 1 x 1 *40 x 25 x 25*	500 *3450*	1.65 *41.91*	1.50 *38.10*	1.80 *45.72*	1.17 *0.53*
1½ x 1 x 1¼ *40 x 25 x 32*	500 *3450*	1.82 *46.23*	1.67 *42.42*	1.88 *47.75*	1.34 *0.61*
1½ x 1 x 1½ *40 x 25 x 40*	500 *3450*	1.94 *49.28*	1.80 *45.72*	1.94 *49.28*	1.45 *0.66*
1½ x1¼ x ½ *40 x 32 x 15*	500 *3450*	1.41 *35.81*	1.34 *34.04*	1.66 *42.16*	1.05 *0.48*
1½ x1¼ x ¾ *40 x 32 x 20*	500 *3450*	1.52 *38.61*	1.45 *36.83*	1.75 *44.45*	1.15 *0.5*
1½ x 1¼ x 1 *40 x 32 x 25*	500 *3450*	1.65 *41.91*	1.58 *40.13*	1.80 *45.72*	1.25 *0.57*
1½ x 1¼ x 2* *40 x 32 x 50*	500 *3450*	2.16 *54.86*	2.10 *53.34*	2.02 *51.30*	1.90 *0.86*
1½ x 1½ x ½ *40 x 40 x 15*	500 *3450*	1.41 *35.81*	1.41 *35.81*	1.16 *29.46*	1.15 *0.52*
1½ x 1½ x ¾ *40 x 40 x 20*	500 *3450*	1.52 *38.61*	1.52 *38.61*	1.75 *44.45*	1.24 *0.56*
1½ x 1½ x 1 *40 x 40 x 25*	500 *3450*	1.65 *41.91*	1.65 *41.91*	1.80 *45.72*	1.30 *0.59*
1½ x 1½ x 1¼ *40 x 40 x 32*	500 *3450*	1.82 *46.23*	1.82 *46.23*	1.88 *47.75*	1.48 *0.67*

FIGURE 3205R - REDUCING TEE					
Nominal Size	Max. Working Pressure▲	Dimensions			Approx. Wt. Each
1 x 2 x 3		A	B	C	
In. (mm)	*PSI (kPa)*	*In. (mm)*	*In. (mm)*	*In. (mm)*	*Lbs. (kg)*
1½ x 1½ x 2* *40 x 40 x 50*	500 *3450*	2.16 *54.86*	2.16 *54.86*	2.02 *51.30*	1.98 *0.90*
2 x 1 x 2 *50 x 25 x 50*	500 *3450*	2.25 *57.15*	2.02 *51.31*	2.25 *57.15*	2.15 *0.98*
2 x 1¼ x 2 *50 x 32 x 50*	500 *3450*	2.25 *57.15*	2.10 *53.34*	2.25 *57.15*	2.30 *1.04*
2 x 1½ x ½ *50 x 40 x 15*	500 *3450*	1.49 *37.85*	1.41 *35.81*	1.88 *47.75*	1.50 *0.68*
2 x 1½ x ¾ *50 x 40 x 20*	500 *3450*	1.60 *40.64*	1.52 *38.61*	1.97 *50.04*	1.62 *0.73*
2 x 1½ x 1 *50 x 40 x 25*	500 *3450*	1.73 *43.94*	1.65 *41.91*	2.02 *51.31*	1.64 *0.74*
2 x 1½ x 1¼ *50 x 40 x 32*	500 *3450*	1.90 *48.26*	1.82 *46.23*	2.10 *53.34*	1.80 *0.82*
2 x 1½ x 1½ *50 x 40 x 40*	500 *3450*	2.02 *51.31*	1.94 *49.28*	2.16 *54.86*	2.00 *0.91*
2 x 1½ x 2 *50 x 40 x 50*	500 *3450*	2.25 *57.15*	2.16 *54.86*	2.25 *57.15*	2.35 *1.07*
2 x 2 x ½ *50 x 50 x 15*	500 *3450*	1.49 *37.85*	1.49 *37.85*	1.88 *47.75*	1.60 *0.73*
2 x 2 x ¾ *50 x 50 x 20*	500 *3450*	1.60 *40.64*	1.60 *40.64*	1.97 *50.04*	1.68 *0.76*
2 x 2 x 1 *50 x 50 x 25*	500 *3450*	1.73 *43.94*	1.73 *43.94*	2.02 *51.31*	1.85 *0.84*
2 x 2 x 1¼ *50 x 50 x 32*	500 *3450*	1.90 *44.45*	1.90 *42.42*	2.10 *44.45*	2.04 *0.93*
2 x 2 x 1½ *50 x 50 x 40*	500 *3450*	2.02 *44.45*	2.02 *42.42*	2.16 *44.45*	2.18 *0.99*

▲ Working Pressure Ratings are for reference only and based on Sch. 40 pipe. For the latest UL/ULC, and FM pressure ratings versus pipe schedule, please visit anvilintl.com or contact your local Anvil Representative.

* Part supplied as "Bull Head Tee".

FireLock® Fittings

10.03

Material Specifications:

Fitting:

Ductile iron conforming to ASTM A-536, grade 65-45-12.

Fitting Coating:

- ☐ Orange enamel
- ☐ Red enamel in Europe, Middle East, Africa, and India
- ☐ Optional: Hot dipped galvanized

Approvals/Listings:

c UL us LISTED FM LPCB VdS

Product Description:

FireLock® products comprise a unique system specifically designed for fire protection services. FireLock full-flow elbows and tees feature CAD-developed, hydrodynamic design, affording a shorter center-to-end dimension than standard fittings. A noticeable bulge allows the water to make a smoother turn to maintain similar flow characteristics as standard full flow fittings.

FireLock fittings are designed for use exclusively with Victaulic couplings that have been Listed or Approved for Fire Protection Services. Use of other couplings or flange adapters may result in bolt pad interference.

Refer to the appropriate listing agency or approval body for pressure ratings. Pressure ratings vary by agency.

Job/Owner

System No.	
Location	

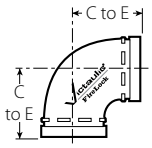
Contractor

Submitted By	
Date	

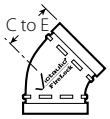
Engineer

Spec Section	
Paragraph	
Approved	
Date	

Dimensions:



NO. 001



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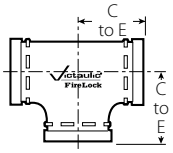


NO. 002

No. 006

Nominal Size inches mm	Actual Outside Diameter inches mm	No. 001 90° Elbow C to E inches mm	No. 001 90° Elbow Approx. Weight Each Lbs. kg	No. 003 45° Elbow C to E inches mm	No. 003 45° Elbow Approx. Weight Each Lbs. kg	No. 002 Straight Tee C to E inches mm	No. 002 Straight Tee Approx. Weight Each Lbs. kg	No. 006 Cap C to E inches mm	No. 006 Cap Approx. Weight Each Lbs. kg
1 ¼ 32	1.660 42.4	— —	— —	— —	— —	— —	— —	0.82 21	0.3 0.1
1 ½ 40	1.900 48.3	— —	— —	— —	— —	— —	— —	0.82 21	0.4 0.2
2 50	2.375 60.3	2.75 70	1.7 0.8	2.00 51	1.8 0.8	2.75 70	2.4 1.1	0.88 22	0.6 0.3
2 ½ 65	2.875 73.0	3.00 76	3.1 1.4	2.25 57	2.2 1.0	3.00 76	3.6 1.6	0.88 22	1.0 0.5
76.1 mm	3.000 76.1	3.00 76	3.30 1.5	2.25 57	2.4 1.1	3.00 76.2	3.8 1.7	—	—
3 80	3.500 88.9	3.38 86	4.0 1.8	2.50 64	3.1 1.4	3.38 86	5.3 2.4	0.88 22	1.2 0.5
108 mm	4.250 108.0	4.00 102	5.7 2.6	3.00 76	5.1 2.3	4.00 102	7.5 3.4	—	—
4 100	4.500 114.3	4.00 102	6.7 3.0	3.00 76	5.6 2.5	4.00 102	8.7 3.9	1.00 25	2.4 1.1
5 125	5.563 141.3	4.88 124	12.6 5.7	3.25 83	8.3 3.8	4.88 124	15.7 7.1	1.00 25	4.1 1.9
139.7 mm	5.500 139.7	4.88 124.0	12.4 5.6	3.25 82.6	8.2 3.7	4.88 124.0	15.4 6.9	—	—
159 mm	6.250 158.8	5.50 140	12.6 5.7	3.50 89	9.2 4.2	5.50 140	17.9 8.0	—	—
6 150	6.625 168.3	5.50 140	18.3 8.3	3.50 89	11.7 5.3	5.50 140	22.7 10.3	1.00 25	5.9 2.7
165.1 mm	6.500 165.1	5.43 139.7	17.6 7.9	3.50 88.9	11.4 5.2	5.50 139.7	22.0 9.9	—	—
8 200	8.625 219.1	6.81 173	25.5 11.6	4.25 108	20.4 9.3	6.94 176	38.7 17.6	1.13 29	12.7 5.8

Flow Data:

Nominal Size inches mm	Actual Outside Diameter inches mm	Frictional Resistance Equivalent Feet/meters of Straight Pipe[1]			
		Elbows		No. 002 Straight Tee	
		No. 001 90° Elbow	No. 003 45° Elbow	Branch	Run
1 ¼ 32	1.660 42.4	— —	— —	— —	— —
1 ½ 40	1.900 48.3	— —	— —	— —	— —
2 50	2.375 60.3	3.5 1.1	1.8 0.5	8.5 2.6	3.5 1.1
2½ 65	2.875 73.0	4.3 1.3	2.2 0.7	10.8 3.3	4.3 1.3
76.1 mm	3.000 76.1	4.5 1.4	2.3 0.7	11.0 3.4	4.5 1.4
3 80	3.500 88.9	5.0 1.5	2.6 0.8	13.0 4.0	5.0 1.5
108 mm	4.250 108.0	6.4 2.0	3.2 0.9	15.3 4.7	6.4 2.0
4 100	4.500 114.3	6.8 2.1	3.4 1.0	16.0 4.9	6.8 2.1
5 125	5.563 141.3	8.5 2.6	4.2 1.3	21.0 6.4	8.5 2.6
139.7 mm	5.500 139.7	8.3 2.5	4.1 1.3	20.6 6.3	8.3 2.5
159 mm	6.250 158.8	9.4 2.9	4.9 1.5	25.0 7.6	9.6 2.9
6 150	6.625 168.3	10.0 3.0	5.0 1.5	25.0 7.6	10.0 3.0
165.1 mm	6.500 165.1	9.8 3.0	4.9 1.5	24.5 7.5	9.8 3.0
8 200	8.625 219.1	13.0 4.0	5.0 1.5	33.0 10.1	13.0 4.0

[1] The flow data listed is based upon the pressure drop of Schedule 40 pipe.

General Notes:

NOTE: When assembling FireLock EZ couplings onto end caps, take additional care to make certain the end cap is fully seated against the gasket end stop. For FireLock EZ Style 009N/009H couplings, use FireLock No. 006 end caps containing the “EZ” marking on the inside face or No. 60 end caps containing the “QV EZ” marking on the inside face. Non-Victaulic end cap products shall not be used with Style 009/009V/009H couplings.

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.

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

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

Trademarks
Victaulic® is a registered trademark of Victaulic Company.

Vic®-End II End of Run Fitting

SEE VICTAULIC PUBLICATION 10.01 FOR DETAILS

SERIES 67

The No. 67, Vic®-End II, End of Run Fitting is the fast, easy, economical way to end a branch line. The fitting installs easily with standard FireLock® couplings and allows direct head connection, sprigs or drops.

Available in 1¼, 1½, 2 and 2½"/32-65 mm sizes, the fittings can be supplied with ½, ¾, or 1"/15, 20 or 25 mm female threaded (NPT) outlet (BSPT option available).

The 90° reducing outlet fitting is UL/ULC Listed and FM Approved for a maximum rated working pressure of 500 psi/3450 kPa.

MATERIAL SPECIFICATIONS

Housing: Ductile iron conforming to ASTM A-536, grade 65-45-12, painted Orange Enamel. Ductile iron conforming to ASTM A-395, grade 65-45-15, is available upon special request.

- **Optional:** Galvanized – hot dipped.

Outlet: NPT

- **Optional:** BSPT

DIMENSIONS, PERFORMANCE

Nominal Size Inches/mm			C to E Inches/mm	Approx. Weight Ea Lbs./Kg	Equivalent Feet/meters of pipe
1¼ 32	×	½ NPT 15 NPT	2.38 61	1.4 0.6	2.8 0.9
		¾ NPT 20 NPT	2.38 61	1.4 0.6	2.8 0.9
		1 NPT 25 NPT	2.38 61	1.4 0.6	2.8 0.9
1½ 40	×	½ NPT 15 NPT	2.50 64	1.6 0.7	2.9 0.9
		¾ NPT 20 NPT	2.50 64	1.6 0.7	2.9 0.9
		1 NPT 25 NPT	2.50 64	1.6 0.7	2.9 0.9
2 50	×	½ NPT 15 NPT	2.75 70	1.7 0.8	4.0 1.2
		¾ NPT 20 NPT	2.75 70	1.7 0.8	4.0 1.2
		1 NPT 25 NPT	2.75 70	1.7 0.8	4.0 1.2
2½ 65	×	½ NPT 15 NPT	3.00 76	2.0 0.9	5.7 1.7
		¾ NPT 20 NPT	3.00 76	2.0 0.9	5.7 1.7
		1 NPT 25 NPT	3.00 76	2.0 0.9	5.7 1.7

JOB/OWNER

System No. _____

Location _____

CONTRACTOR

Submitted By _____

Date _____

ENGINEER

Spec Sect _____ Para _____

Approved _____

Date _____

www.victaulic.com

Vic®-End II End of Run Fitting

SERIES 67

WARRANTY

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

NOTE

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

WARNING

⚠ WARNING

- **This product must be installed by an experienced, trained installer, in accordance with the instructions provided with each valve. These instructions contain important information.**

Failure to follow these instructions may result in serious personal injury, property damage, or valve leakage.

If you need additional copies of this product literature or the valve installation instructions, or if you have any questions about the safe installation and use of this device, contact Victaulic Company, P.O. Box 31, Easton, PA 18044-0031 USA, Telephone: 001-610-559-3300.

WCAS-7GNF4Y

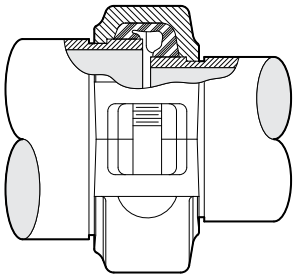
10.21 3209 REV D UPDATED 7/2008

Reducing Coupling

STYLE 750

LISTED FM VdS LPCB 104-1a/05 CP
SEE VICTAULIC PUBLICATION 10.01 FOR DETAILS

The Style 750 Reducing Coupling permits direct reduction on the piping run. Designed to replace two couplings and a reducing fitting, the Style 750 features a special reducing gasket for pressure responsive sealing. A steel washer which prevents telescoping of the smaller pipe inside the larger pipe during vertical systems assembly is available upon request.



MATERIAL SPECIFICATIONS

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.

Housing Coating: Orange enamel
- **Optional:** Hot dipped galvanized and others

Gasket: (Specify choice*):

- **Grade "E" EPDM (All other sizes)**
  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 potable water service. 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.

- **Optional:** Assembly Washer: Galvanized, carbon steel

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 _____

www.victaulic.com

Reducing Coupling

STYLE 750

DIMENSIONS

Size			Max. Work Pressure *	Max. End Load *	Allow. Pipe End Sep. †	Deflect. Fr. C_L†		Bolt/Nut@ No - Size	Dimensions – Inches/mm			Approx. Wgt. Each
Nominal Size Inches/mm			psi kPa	Lbs. N	Inches/ mm	Per Cplg. Deg.	Pipe In./Ft. mm/m	Inches	X	Y	Z	Lbs. kg
2 50	×	1 25	350 2410	500 2225	0 – 0.07 0 – 1.8	0° – 57'	0.20 17	2 – 3/8 x 2	3.38 85	5.28 134	1.88 48	2.7 1.2
		1 ½ 40	350 2410	1000 4450	0 – 0.07 0 – 1.8	0° – 57'	0.20 17	2 – 3/8 x 2	3.38 85	5.28 134	1.88 48	2.0 1.0
2 ½ 65	×	2 50	500 3450	2215 9850	0 – 0.07 0 – 1.8	0° – 47'	0.16 14	2 – 3/8 x 2	4.00 102	5.93 151	1.88 48	3.1 1.4
76.1 mm	×	2 50	350 2410	1550 6900	0 – 0.07 0 – 1.8	0° – 47'	0.16 14	2 – ½ x 2 ¾	4.38 111	6.63 168	1.88 48	4.6 2.1
3 80	×	2 50	350 2410	1550 6900	0 – 0.07 0 – 1.8	0° – 39'	0.13 11	2 – ½ x 2 ¾	4.75 121	7.13 181	1.88 48	4.9 2.2
		2 ½ 65	500 3450	3250 14460	0 – 0.07 0 – 1.8	0° – 39'	0.13 11	2 – ½ x 2 ¾	4.75 121	7.13 181	1.88 48	4.3 2.0
88.9 mm	×	76.1 mm	350 2410	2475 11010	0 – 0.07 0 – 1.8	0° – 39'	0.13 11	2 – ½ x 2 ¾	4.75 121	7.13 181	1.88 48	4.2 1.9
4 100	×	2 50	350 2410	1550 6900	0 – 0.13 0 – 3.2	1° – 19'	0.28 25	2 – 5/8 x 3 ¼	6.25 159	8.90 226	2.25 57	8.1 3.7
		2 ½ 65	350 2410	2275 10125	0 – 0.13 0 – 3.2	1° – 19'	0.28 25	2 – 5/8 x 3 ¼	6.25 159	8.90 226	2.25 57	8.6 3.9
		3 80	500 3450	4810 21400	0 – 0.13 0 – 3.2	1° – 19'	0.28 25	2 – 5/8 x 3 ¼	6.00 152	8.90 226	2.25 57	6.7 3.0
114.3 mm	×	76.1 mm	350 2410	2475 11014	0 – 0.13 0 – 3.2	1° – 19'	0.28 25	2 – 5/8 x 3 ¼	6.25 159	8.90 226	2.25 57	6.9 3.1
5 125	×	4 100	350 2410	5565 24765	0 – 0.13 0 – 3.2	1° – 3'	0.22 19	2 – ¾ x 4 ¼	7.18 182	10.70 272	2.13 54	11.2 5.1
6 150	×	4 100	350 2410	5565 24765	0 – 0.13 0 – 3.2	0° – 52'	0.18 15	2 – ¾ x 4 ¼	8.63 181	11.90 302	2.25 57	16.7 7.6
		5 125	350 2410	8500 37825	0 – 0.13 0 – 3.2	0° – 52'	0.18 15	2 – ¾ x 4 ¼	8.31 211	11.90 302	2.25 57	12.9 5.9
165.1 mm	×	4 100	350 2410	5565 24765	0 – 0.13 0 – 3.2	0° – 55'	0.19 16	2 – ¾ x 4 ¼	8.63 219	11.90 302	2.25 57	15.2 6.9
8 200	×	6 150	350 2410	12060 53645	0 – 0.13 0 – 3.2	0° – 38'	0.13 11	2 – 7/8 x 5	10.81 275	14.88 378	2.50 64	22.4 10.2
219.1 mm	×	165.1 mm	350 2410	11610 51645	0 – 0.13 0 – 3.2	0° – 38'	0.13 11	2 – 7/8 x 5	10.75 273	14.88 378	2.50 64	23.2 10.5
10 273	×	8 219.1	350 2410	20450 90970	0 – 0.13 0 – 3.2	0° – 25'	0.9 8	2 – 1 x 5 ½	13.12 333	17.26 438	2.62 67	31.4 14.2

Style 750 Reducing couplings should not be used with end caps (#60) in systems where a vacuum may be developed. Contact Victaulic for details.

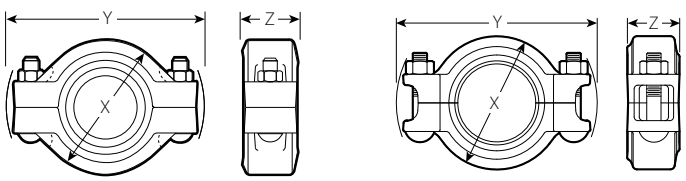
* Working Pressure and End Load are total, from all internal and external loads, based on standard weight (ANSI) steel pipe, standard **roll** or **cut** grooved in accordance with Victaulic specifications. Contact Victaulic for performance on other pipe. Maximum working pressure rating based on larger pipe size. Maximum End Load rating based on smaller pipe size. WARNING: FOR ONE TIME FIELD TEST ONLY, the Maximum Joint Working Pressure may be increased to 1 ½ times the figures shown.

† Allowable Pipe End Separation and Deflection figures show the maximum nominal range of movement available at each joint for standard **roll** grooved pipe. Figures for standard **cut** grooved pipe may be doubled. These figures are maximums; for design and installation purposes these figures should be reduced by: 50% for ¾ – 3 ½"/20 – 90 mm; 25% for 4"/100 mm and larger.

@ Number of bolts required equals number of housing segments.

Metric thread size bolts are available (color coded gold) for all coupling sizes upon request. Contact Victaulic for details.

WARNING: Depressurize and drain the piping system before attempting to install, remove, or adjust any Victaulic piping products.



Reducing Coupling

STYLE 750

FLOW DATA

HEAD LOSS

The head loss across Style 750 Reducing coupling is very small and is essentially the same as for standard short body reducing pipe fittings.

Equivalent lengths of standard weight steel pipe are shown in the tables. All data is based on water flowing at ambient temperature.

FLOW REDUCING

Size			Equiv. Pipe Length
Nominal Size Inches/mm			Sm. Dia. Feet/m
2 50	×	1 25	5.9 1.8
		1 ½ 40	2.0 0.6
2 ½ 65	×	2 50	1.9 0.6
76.1 mm	×	2 50	1.9 0.6
3 80	×	2 50	5.5 1.7
		2 ½ 65	3.8 1.2
88.9 mm	×	76.1 mm	3.8 1.2
4 100	×	2 50	6.0 1.8
		2 ½ 65	6.0 1.8
		3 80	6.0 1.8
114.3 mm	×	76.1 mm	6.0 1.8
5 125	×	4 100	3.0 0.9
6 150	×	4 100	6.0 1.8
		5 125	4.5 1.4
165.1 mm	×	4 100	6.0 1.8
8 200	×	6 150	7.3 2.2
219.1 mm	×	165.1 mm	7.3 2.23
10 273	×	8 219.1	8.7 2.65

FLOW EXPANDING

Size			Equiv. Pipe Length
Nominal Size Inches/mm			Sm. Dia. Feet/m
1 25	×	2 50	2.7 0.8
1 ½ 40	×	2 50	1.9 0.6
2 50	×	2 ½ 65	1.0 0.3
		76.1 mm	1.0 0.3
		3 80	3.5 1.1
		4 100	3.0 0.9
2 ½ 65	×	3 80	2.5 0.8
		4 100	3.0 0.9
76.1 mm	×	88.9 mm	2.5 0.8
		114.3 mm	3.0 0.9
3 80	×	4 100	2.5 0.8
4 100	×	5 125	3.3 1.0
		6 150	4.6 1.4
		165.1 mm	4.6 1.4
5 125	×	6 150	2.3 0.7
6 150	×	8 200	6.0 1.8
165.1 mm	×	219.1 mm	5.4 1.65
8 219.1	×	10 273	6.3 19.2

Reducing Coupling

STYLE 750

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.

WARRANTY

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

NOTE

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

06.08 1536 REV J UPDATED 08/2012

FireLock EZ® Rigid Coupling

STYLE 009H

SEE VICTAULIC PUBLICATION 10.01 FOR DETAILS

The FireLock EZ Style 009H coupling is a rigid, installation-ready coupling for fire protection pipe joining. The coupling's unique design eliminates loose parts, insures consistent installation and provides substantial gains in productivity.

IMPORTANT

FireLock EZ Style 009H couplings are recommended for use ONLY on fire protection systems.

PATENTED

LISTINGS/APPROVALS *

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.

Standard Pipe

Size	cULus/FM			VdS	LPCB
Nominal Size Inches/mm	Sch. 5 psi/KPa	Sch.10 psi/kPa	Sch. 40 psi/KPa	psi/kPa	psi/kPa
1¼ 32	175 1206	365 2517	365 2517	365 2517	365 2517
1½ 40	175 1206	365 2517	365 2517	365 2517	365 2517
2 50	175 1206	365 2517	365 2517	365 2517	365 2517
2½ 65	N/A	365 2517	365 2517	365 2517	365 2517
76.1 mm	N/A	N/A	365** 2517**	365 2517	365 2517
3 80	N/A	365 2517	365 2517	365 2517	365 2517
108 mm	N/A	365*** 2517***	365*** 2517***	N/A	N/A
4 100	N/A	365 2517	365 2517	365 2517	365 2517
133 mm	N/A	290*** 1999***	365*** 2517***	N/A	N/A
139.7 mm	N/A	N/A	290** 1999**	232 1600	365 2517
165.1 mm	N/A	N/A	290** 1999**	232 1600	365 2517
6# 150#	N/A	290 1999	365 2517	232 1600	365 2517

* Listed/Approved for wet and dry pipe systems (> –40°F/–40°C).
Please refer to the Victaulic Installation Manual (I-009H_009_009V.pdf) for details concerning when supplemental lubrication is required.

** EN-10219(L) for 76.1mm size; EN-10255(M)

Regional availability only#

*** FM Approved only.

JOB/OWNER

System No. _____

Location _____

CONTRACTOR

Submitted By _____

Date _____

ENGINEER

Spec Sect _____ Para _____

Approved _____

Date _____

www.victaulic.com

FireLock EZ® Rigid Coupling

STYLE 009H

LISTINGS/APPROVALS *

Speciality Pipe

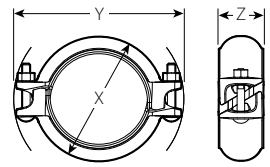
Pipe	Size	Pressure Rating – psi/kPa		Pipe	Size	Pressure Rating – psi/kPa		Pipe	Size	Pressure Rating – psi/kPa	
Sch.	Inches	cULus	FM	Sch.	Inches	cULus	FM	Sch.	Inches	cULus	FM
BLT	1 ¼ – 2	300 2068	300 2068	EZT	1 ¼ – 2	300 2068	300 2068	MT	1 ¼ – 2	300 2068	300 2068
DF	1 ¼ – 4	300 2068	300 2068	FF	1 ¼ – 4	300 2068	300 2068	MLT	1 ¼ – 2	N/A	300 2068
DT	1 ¼ – 2	300 2068	300 2068	FLF	1 ¼ – 4	N/A	300 2068	ST	1 ¼ – 2	N/A	300 2068
EF	1 ¼ – 4	175 1206	175 1206	FLT	1 ¼ – 2	N/A	300 2068	STF	1 ¼ – 4	N/A	300 2068
EL	1 ¼ – 2	300 2068	300 2068	FLTL	1 ¼ – 2	N/A	300 2068	TF	2 ¼ – 4	N/A	300 2068
ET40	1 ¼ – 2	300 2068	300 2068	GL	1 ¼ – 2	300 2068	300 2068	WLS	1 ¼ – 2	300 2068	300 2068
EZF	3 – 4	300 2068	300 2068	MF	1 ¼ – 4	300 2068	300 2068	WST	1 ¼ – 2	N/A	175 1206
								XL	1 ¼ – 2	300 2068	300 2068

Note: The Specialty Pipe table only applies to imperial sizes, NOT to metric sizes.

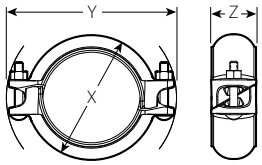
FireLock EZ® Rigid Coupling

STYLE 009H

STYLE 009H DIMENSIONS



STYLE 009H PRE-ASSEMBLED (PUSH ON CONDITION)



STYLE 009H JOINT ASSEMBLED

Size		Max. Work. Press. *	Max. End Load *	Allow. Pipe End Sep. †	@ Bolt/Nut No. – Size	Dimensions – Inches/mm					Aprx. Wgt. Ea.
Nominal Size Inches mm	Actual Outside Dia. Inches mm	psi kPa	Lbs. N	Inches mm	Inches	Pre-assembled (Stab in condition)		Joint Assembled			Lbs. kg
						X	Y	X	Y	Z	
1 ¼ 32	1.660 42.4	365 2517	790 3514	0.10 2.54	2 - 3/8 x 2 - M10 x 2	2.95 75	4.77 121	2.70 69	4.63 118	1.93 49	1.4 0.7
1 ½ 40	1.900 48.3	365 2517	1035 4604	0.10 2.54	2 - 3/8 x 2 - M10 x 2	3.19 81	4.97 126	2.94 75	4.79 122	1.93 49	1.5 0.7
2 50	2.37 5 60.3	365 2517	1616 7193	0.12 3.05	2 - 3/8 x 2 - M10 x 2	3.79 96	5.53 140	3.45 88	5.42 138	1.93 49	1.9 0.9
2½ 65	2.875 73.0	365 2517	2370 10542	0.12 3.05	2 - 3/8 x 2 ½ - M10 x 2 ½	4.29 109	6.09 155	3.92 100	5.85 149	1.93 49	2.1 1.0
76.1 mm	3.000 76.1	365 2517	2580 11476	0.12 3.05	2 - 3/8 x 2 ½ - M10 x 2 ½	4.40 112	6.31 160	4.05 103	5.90 150	1.93 49	2.1 1.0
3 80	3.500 88.9	365 2517	3512 15622	0.12 3.05	2 - 3/8 x 2 ½ - M10 x 2 ½	4.91 125	6.70 170	4.55 116	6.46 164	1.93 49	2.3 1.0
108 mm	4.250 108.0	365 2517	5178 23030	0.17 4.32	2 - 3/8 x 2 ½ - M10 x 2 ½	5.56 141	7.61 193	5.27 134	7.51 191	2.14 54	2.8 1.2
4 100	4.500 114.3	365 2517	5805 25822	0.17 4.32	2 - 3/8 x 2 ½ - M10 x 2 ½	5.95 151	7.82 199	5.54 141	7.47 190	2.14 55	2.9 1.3
133 mm	5.250 133.0	365 2517	7900 35140	0.17 4.33	2 - 3/8 x 2 ½ - M10 x 2 ½	6.66 169	9.11 232	6.36 162	9.01 229	2.14 55	4.3 1.9
139.7 mm	5.500 139.7	365 2517	8620 38340	0.17 4.32	2 - 3/8 x 2 ½ - M10 x 2 ½	6.75 172	9.29 236	6.46 164	9.23 234	2.09 53	4.6 2.1
165.1 mm	6.500 165.1	290 1999	9623 42805	0.17 4.32	2 - 5/8 x 3 ¼ - M16 x 3 ¼	7.84 199	10.93 278	7.55 192	10.85 276	2.11 54	5.69 2.6
6 150	6.625 168.3	290 1999	9997 44469	0.17 4.32	2 - 5/8 x 3 ¼ - M16 x 3 ¼	7.96 202	11.08 281	7.67 195	11.99 305	2.11 54	5.92 2.69

* Working Pressure and End Load are total, from all internal and external loads, based on standard weight (ANSI) steel pipe, standard roll or cut grooved in accordance with Victaulic specifications. See page 1 of this document for Listed/Approved ratings on other pipe.

WARNING: FOR ONE TIME FIELD TEST ONLY, the Maximum Joint Working Pressure may be increased to 1 ½ times the figures shown in the chart on page 1, specific to pipe schedule and size.

† The allowable pipe separation dimension shown is for system layout purposes only. FireLock EZ couplings are considered rigid connections and will not accommodate expansion or contraction of the piping system.

@ Number of bolts required equals number of housing segments.

MATERIAL SPECIFICATIONS

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.

Housing Coating:

- Orange enamel (North America, Asia Pacific)
- Red enamel (Europe)

Optional Coatings:

- Hot dipped galvanized

Gasket:

- **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.

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.

FireLock EZ® Rigid Coupling

STYLE 009H

GENERAL NOTES

NOTE: When assembling FireLock EZ couplings onto end caps, take additional care to make certain the end cap is fully seated against the gasket end stop. For FireLock EZ Style 009H couplings, use FireLock No. 006 end caps containing the "EZ" marking on the inside face or No. 60 end caps containing the "QV EZ" marking on the inside face. Non-Victaulic end cap products shall not be used with Style 009H couplings.

IMPORTANT: Gaskets intended for the Style 009 or Style 009V couplings cannot be used with the Style 009H coupling. There is no interchanging of gaskets or housings between coupling styles.

USE OF FLUSHSEAL GASKETS FOR DRY PIPE SYSTEMS

FireLock EZ couplings are supplied with FireLock EZ Grade "E" Type A gaskets. These gaskets include an integral pipe stop, that once installed provides the same benefits as a FlushSeal gasket for dry pipe systems. It should be noted that standard FlushSeal gaskets are not compatible and cannot be used with the FireLock EZ couplings.

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.

WARRANTY

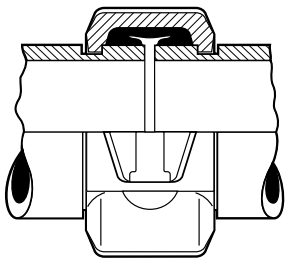
Refer to the Warranty section of the current Price List or contact Victaulic for details.

NOTE

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

Victaulic® Flexible Coupling Style 75

06.05



Exaggerated for clarity

Approvals/Listings

See Victaulic publication 10.01 for details

See Victaulic publication 02.06 for portable water approvals if applicable.

Product Description

Style 75 is available where moderate pressures are expected or weight considerations are a factor. Up to 50% lighter in weight than the Style 77, the Style 75 coupling is recommended for service up to 500 psi/3450 kPa depending on size. Housings are cast in two identical pieces in all sizes. Hot-dip galvanized and special coatings are available for all sizes.

The Victaulic standard flexible coupling offering for grade "EHP" or "T" gaskets is the Style 177 installation-ready flexible coupling. For all available sizes, the Style 177 is the standard flexible coupling Victaulic supplies in North America for piping systems using Grade "EHP" or "T" gaskets. Contact Victaulic for further details.

Performance data presented in this document is based on use with standard wall, carbon steel pipe. For use with stainless steel pipe, please reference publication 17.09 for pressure ratings and end loads. When used on light wall stainless steel pipe, the Victaulic RX roll set must be used to roll groove the pipe. For further information regarding roll grooving stainless steel, refer to publication 17.01.

WARNING

- **Victaulic RX roll sets must be used when grooving light-wall/thin-wall stainless steel pipe for use with Victaulic Couplings.**

Failure to use Victaulic RX roll sets when grooving light-wall/thin-wall stainless steel pipe may cause joint failure, resulting in serious personal injury and/or property damage.

NOTICE

- **Victaulic RX grooving rolls must be ordered separately. They are identified by a silver color and the designation RX on the front of the roll sets.**

Job/Owner

System No.	
Location	

Contractor

Submitted By	
Date	

Engineer

Spec Section	
Paragraph	
Approved	
Date	

06.05 1470 Rev O Updated 09/2014

Material Specifications

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.

Housing Coating: (specify choice)

- ☐ Standard: Orange enamel.
- ☐ Optional: Hot dipped galvanized and others.

Gasket: (specify choice[1])

NOTE: Additional gasket styles are available. Contact Victaulic for details.

- ☐ **Grade "E" EPDM**
  EPDM (Green stripe color code). Temperature range –30°F to +230°F/–34°C to +110°C. May be specified 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 +73°F/+23°C and hot +180°F/+82°C potable water service and ANSI/NSF 372. NOT COMPATIBLE FOR PETROLEUM SERVICES.
- ☐ **Grade "T" Nitrile**
  Nitrile (Orange stripe color code). Temperature range 20°F to +180°F/29°C to +82°C. May be specified for petroleum products, air with oil vapors, vegetable and mineral oils within the specified temperature range. Not compatible for hot water services over +150°F/+66°C or for hot dry air over +140°F/+60°C.

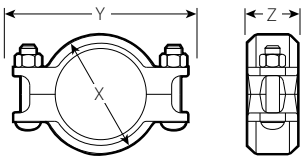
1 Services listed are General Service Guidelines only. It should be noted that there are services for which these gaskets are not compatible. Reference should always be made to the latest Victaulic Gasket Selection Guide for specific gasket service guidelines and for a listing of services which are not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

Bolts/Nuts:

Heat-treated plated carbon steel, trackhead meeting the physical and chemical requirements of ASTM A-449 and physical requirements of ASTM A-183

Dimensions

Style 75



Nominal Size inches mm	Actual Outside Diameter inches mm	Maximum Working Pressure [2] psi kPa	Maximum End Load [2] lbs. N	Allow. Pipe End Separation[3] inches mm	Deflection from Centerline[3] Per Cplg. Degrees	 Pipe inches/ft. mm/m	Bolt/Nut[4] (No.) size inches	Dimensions X inches mm	 Y inches mm	 Z inches mm	Approx. Weight Each lbs. kg
1 25	1.315 33.4	500 3450	680 3025	0–0.06 0–1.6	2°–43′	0.57 48	2– ⅜ x 2	2.38 61	4.27 108	1.77 45	1.3 0.6
1 ¼ 32	1.660 42.2	500 3450	1080 4805	0–0.06 0–1.6	2°–10′	0.45 38	2– ⅜ x 2	2.68 68	4.61 117	1.77 45	1.4 0.6
1 ½ 40	1.900 48.3	500 3450	1420 6320	0–0.06 0–1.6	1°–56′	0.40 33	2– ⅜ x 2	2.91 74	4.82 122	1.77 45	1.5 0.6
2 50	2.375 60.3	500 3450	2215 9860	0–0.06 0–1.6	1°–31′	0.32 26	2– ⅜ x 2	3.43 87	5.22 133	1.88 48	1.7 0.8
2 ½ 65	2.875 73.0	500 3450	3245 14440	0–0.06 0–1.6	1°–15′	0.26 22	2– ⅜ x 2	3.88 98	5.68 144	1.88 48	1.9 0.9
76.1 mm	3.000 76.1	500 3450	3535 15730	0–0.06 0–1.6	1°–12′	0.26 22	2– ⅜ x 2	4.00 102	5.90 150	1.88 48	1.9 0.9
3 80	3.500 88.9	500 3450	4800 21360	0–0.06 0–1.6	1°–2′	0.22 18	2– ½ x 2 ¾	4.50 114	7.00 178	1.88 48	2.9 1.3
3 ½ 90	4.000 101.6	500 3450	6300 28035	0–0.06 0–1.6	0°-54′	0.19 16	2– ½ x 2 ¾	5.00 127	7.50 191	1.88 48	2.9 1.3
4 100	4.500 114.3	500 3450	7950 35380	0–0.13 0–3.2	1°–36′	0.34 28	2– ½ x 2 ¾	5.80 147	8.03 204	2.13 54	4.1 1.9
108.0 mm	4.250 108.0	450 3100	6380 28395	0–0.13 0–3.2	1°–41′	0.35 29	2– 12 x 70	5.55 141	7.79 198	2.13 54	3.7 1.7
4 ½ 120	5.000 127.0	450 3100	8820 39250	0–0.13 0–3.2	1°–26′	0.25 21	2– ⅝ x 3 ¼	6.13 156	9.43 240	2.13 54	5.5 2.5
5 125	5.563 141.3	450 3100	10935 48660	0–0.13 0–3.2	1°–18′	0.27 23	2– ⅝ x 3 ¼	6.88 175	10.07 256	2.13 54	5.8 2.6
133.0 mm	5.250 133.0	450 3100	9735 43325	0–0.13 0–3.2	1°–21′	0.28 24	2– 16 x 82.5	6.55 166	9.37 238	2.13 54	6.0 2.7
139.7 mm	5.500 139.7	450 3100	10665 47460	0–0.13 0–3.2	1°–18′	0.28 24	2– ⅝ x 3 ¼	6.80 173	9.59 244	2.13 54	6.3 2.9
152.4 mm	6.000 152.4	450 3100	12735 56670	0–0.13 0–3.2	1°–12′	0.21 18	2– ⅝ x 3 ¼	7.38 187	10.48 266	1.88 48	6.2 2.8
6 150	6.625 168.3	450 3100	15525 69085	0–0.13 0–3.2	1°–5′	0.23 18	2– ⅝ x 3 ¼	8.00 203	11.07 281	2.13 54	7.0 3.2
159.0 mm	6.250 159.0	450 3100	13800 61405	0–0.13 0–3.2	1°–9′	0.24 20	2– 16 x 82.5	7.63 194	10.49 266	2.13 54	6.8 3.1
8 200	8.625 219.1	450 3100	26280 116945	0–0.13 0–3.2	0°–50′	0.18 14	2– ¾ x 4 ¼	10.34 263	13.97 355	2.13 59	12.4 5.6

2 Working Pressure and End Load are total, from all internal and external loads, based on standard weight (ANSI) steel pipe, standard **roll** or **cut** grooved in accordance with Victaulic specifications. Contact Victaulic for performance on other pipe.

3 Allowable Pipe End Separation and Deflection figures show the maximum nominal range of movement available at each joint for standard **roll** grooved pipe. Figures for standard **cut** grooved pipe may be doubled. These figures are maximums; for design and installation purposes these figures should be reduced by: 50% for ¾ – 3 ½"/20 – 90 mm; 25% for 4"/100 mm and larger.

4 Number of bolts required equals number of housing segments.

General Notes

Metric thread size bolts are available (color coded gold) for all coupling sizes upon request. Contact Victaulic for details.

WARNING: FOR ONE TIME FIELD TEST ONLY, the Maximum Joint Working Pressure may be increased to 1½ times the figures shown.

FireLock® Outlet-T

STYLE 922

SEE VICTAULIC PUBLICATION 10.01 FOR DETAILS

The Style 922 Outlet-T provides a convenient method of incorporating ½, ¾, and 1"/15, 20 and 25 mm outlets for directly connecting sprinklers, drop nipples, sprigs, gauges, drains and other outlet products. Available for 1¼ through 76.1 mm/32 to 76.1 mm piping systems, Style 922 outlets are UL/ULC Listed, LPCB and FM Approved for branch connections and VdS Approved for direct sprinkler connection only on wet and dry systems.

The locating collar engages into the hole prepared in the pipe. When tightened, the assembly compresses the gasket onto the OD of the pipe. The Style 922 Outlet-T is UL/FM rated up to 300 psi/2068 kPa and VdS rated up to 16 bar at the ambient temperatures typical for fire protection systems.

Style 922 is suitable for use on standard, lightwall, Schedule 5 and other specialty pipes.* Contact Victaulic for other optional coatings.

*Consult Section 10.01 for specific listings/approvals.

MATERIAL SPECIFICATIONS

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.

Gasket:

- **Grade "E" EPDM - Type A**
  (Violet color code). FireLock products have been Listed by Underwriters Laboratories Inc. and Approved by Factory Mutual Research for wet and dry (oil free air) sprinkler services up to the rated working pressure using the Grade "E" Type A Gasket System.

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.

Housing Coating:

- Orange enamel (North America, Latin America, Asia Pacific)
- Red enamel (Europe)

JOB/OWNER

System No. _____

Location _____

CONTRACTOR

Submitted By _____

Date _____

ENGINEER

Spec Sect _____ Para _____

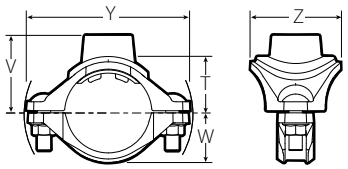
Approved _____

Date _____

FireLock® Outlet-T

STYLE 922

DIMENSIONS



Nominal Size inches/mm			Hole Diameter	Dimensions – inches/millimeters					Approx. Weight Each
Run X Branch FPT†			+0.06/+1.5 -0.00/-0.0	T*	V	W	Y	Z	lbs/kg
1 ¼ 32	X	½ 15	1 3/16 30.2	1.30 33.0	1.83 46.5	1.10 27.9	3.87 98.3	2.56 65.0	1.0 0.45
		¾ 20	1 3/16 30.2	1.28 32.5	1.83 46.5	1.10 27.9	3.87 98.3	2.56 65.0	1.1 0.50
		1 25	1 3/16 30.2	1.52 38.6	2.18 55.4	1.10 27.9	3.87 98.3	2.56 65.0	1.2 0.54
1 ½ 40	X	½ 15	1 3/16 30.2	1.42 36.1	1.95 49.5	1.22 31.0	4.08 103.6	2.56 65.0	1.2 0.54
		¾ 20	1 3/16 30.2	1.40 35.6	1.95 49.5	1.22 31.0	4.08 103.6	2.56 65.0	1.2 0.54
		1 25	1 3/16 30.2	1.64 41.7	2.30 58.4	1.22 31.0	4.08 103.6	2.56 65.0	1.3 0.59
2 50	X	½ 15	1 3/16 30.2	1.66 42.2	2.19 55.6	1.46 37.1	4.60 116.8	2.56 65.0	1.3 0.59
		¾ 20	1 3/16 30.2	1.64 41.7	2.19 55.6	1.46 37.1	4.60 116.8	2.56 65.0	1.4 0.64
		1 25	1 3/16 30.2	1.88 47.8	2.54 64.5	1.46 37.1	4.60 116.8	2.56 65.0	1.5 0.68
2 ½ 65	X	½ 15	1 3/16 30.2	1.91 48.5	2.44 62.0	1.71 43.4	5.40 137.2	2.56 65.0	1.6 0.73
		¾ 20	1 3/16 30.2	1.89 48.0	2.44 62.0	1.71 43.4	5.40 137.2	2.56 65.0	1.6 0.73
		1 25	1 3/16 30.2	2.13 54.1	2.79 70.9	1.71 43.4	5.40 137.2	2.56 65.0	1.6 0.73
76.1 mm	X	½ 15	1 3/16 30.2	1.91 48.5	2.44 62.0	1.71 43.4	5.50 139.7	2.56 65.0	1.6 0.73
		¾ 20	1 3/16 30.2	1.89 48.0	2.44 62.0	1.71 43.4	5.50 139.7	2.56 65.0	1.6 0.73
		1 25	1 3/16 30.2	2.13 54.1	2.79 70.9	1.71 43.4	5.50 139.7	2.56 65.0	1.7 0.80

† Victaulic female threaded products are designed to accommodate standard NPT or BSPT (optional) male pipe threads only. Use of male threaded products with special features, such as probes, dry pendent sprinklers, etc., should be verified as suitable for use with this Victaulic product. Failure to verify suitability in advance may result in assembly problems or leakage.

*Center of run to engaged pipe end for NPT threads (dimensions are approximate).

FireLock® Outlet-T

STYLE 922

PERFORMANCE

Run Size x Outlet Size			Equivalent Length of 1 inch Schedule 40 Steel Pipe (per UL 213, Section 16) (C=120)*, FT
Inches/mm			Feet/meters
1 ¼ 32	X	1 25	8.5 2.6
1 ½ 40	X	1 25	8.5 2.6
2 50	X	1 25	8.5 2.6
2 ½ 65	X	1 25	8.5 2.6
76.1 mm	X	1 25	8.5 2.6

* Hazen-Williams coefficient of friction is 120

FireLock® Outlet-T

STYLE 922

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.

WARRANTY

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

NOTE

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

Mechanical-T® Bolted Branch Outlets

SEE VICTAULIC PUBLICATION 10.01 FOR DETAILS

STYLES 920 AND 920N

STYLES 920 AND 920N

STYLE 920 CROSS

PATENTED

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 500 psi/3450 kPa 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.

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 _____

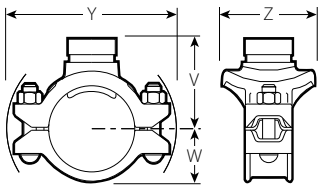
Approved _____

Date _____

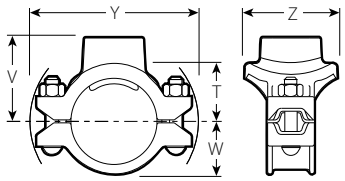
Mechanical-T® Bolted Branch Outlets

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
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	—
		¾ (a) ¤ 20	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	—
		1 (a) ¤ 25	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	—
		1 ¼ (a) †¤ 32	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
		1 ½ (a) †¤ 40	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
2 ½ 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	—
		¾ (a) §¤ 20	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	—
		1 (a) §¤ 25	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	—
		1 ¼ † (a) ¤ 32	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
		1 ½ † (a) ¤ 40	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	—
		¾ (a) 20	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	—
		1 (a) 25	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	—
		1 ¼ (a) ¤ 32	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
		1 ½ (a) ¤ 40	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	—
		¾ (a) ¤ 20	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	—
		1 (a) 25	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	—
		1 ¼ (a) †¤ 32 (b)	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
		1 ½ (a) †¤ 40 (b)	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
		2 (a) ¤ 50	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
3 ½ 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.

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¤ LPCB approved for fire protection services

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IMPORTANT NOTES:

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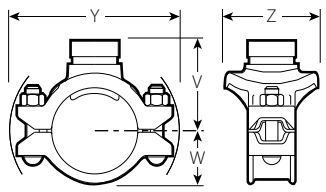
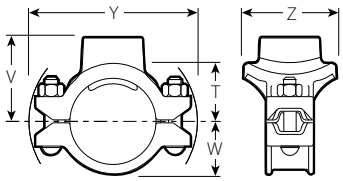
Mechanical-T® Bolted Branch Outlets

STYLES 920 AND 920N

DIMENSIONS



GROOVED OUTLET



FEMALE THREADED OUTLET

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- 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 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	—
	1 ¼ (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
	1 ½ (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
	2 ½ (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 ×	1 ¼ (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	—
	1 ½ (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 ×	1 ½ (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
	2 ½ (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												

IMPORTANT NOTES:

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

** 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.

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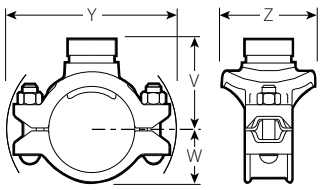
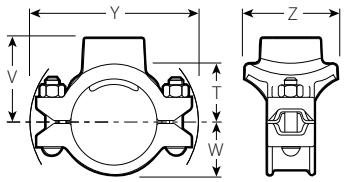
Mechanical-T® Bolted Branch Outlets

STYLES 920 AND 920N

DIMENSIONS



GROOVED OUTLET



FEMALE THREADED OUTLET

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- 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 ×	1 ½ † 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 ×	1 ¼ (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
	1 ½ (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
	2 ½ 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 ×	1 ½ (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).

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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.

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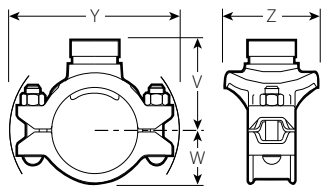
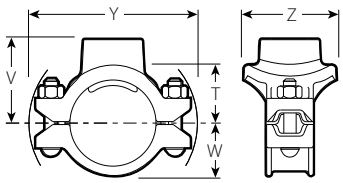
Mechanical-T® Bolted Branch Outlets

STYLES 920 AND 920N

DIMENSIONS



GROOVED OUTLET



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- Sizes from 2 × ½"/50 × 15 mm through 8 × 4"/200 × 100 mm

Size Run × Branch Nominal Size Inches mm		Style No. 920 or 920N	Max. Work Pressure@ psi kPa	Dimensions 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	Approx. Weight Each Female Thd. Lbs. kg	Grv. Lbs. kg
TABLE CONTINUED FROM PAGE 4												
165.1 ×	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	—
	1 ¼ ¤ 32	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	—
	1 ½ (a) †¤ 40	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
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	76.1 mm	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
	3 (a) † ø 80	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
	4 (a) †¤ 100	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
8 200 ×	2 (a) † 50	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
	2 ½ (a) † 65	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
	76.1 mm ¤	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
	3 (a) †¤ 80	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
	4 (a) †¤ 100	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

** 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.`

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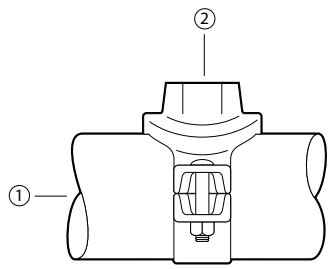
Mechanical-T® Bolted Branch Outlets

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_V and Kv Values

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

Formulas for C_V /K_v 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_v = Flow Coefficient

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

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

Where:
Q = Flow (m^3/h)
ΔP = Pressure Drop (bar)
K_v = Flow Coefficient

OUTLET SIZE		Equivalent Length of Outlet Size Schedule 40 Carbon Steel Pipe (per UL 213, Sec. 16) (C = 120)ŧ FT		C_V/K_V 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	-	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 98.3	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

ŧ Hazen-Williams coefficient of friction is 120.
* Pipe with a wall thickness of 0.165in./4.2mm.

Mechanical-T® 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)	Vds (Style 920N)
21/2 - 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
21/2 - 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
21/2 - 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	21/2	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"/100 mm, 5"/125 mm, 6"/150 mm and 8"/200 mm diameter pipe. The Style 931 comes with a 2½"/65 mm 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

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.

WARRANTY

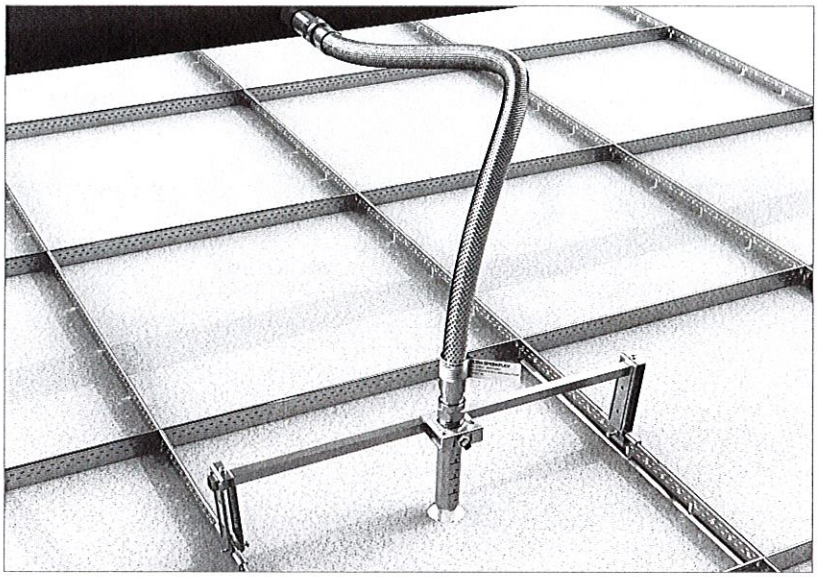
Refer to the Warranty section of the current Price List or contact Victaulic for details.

NOTE

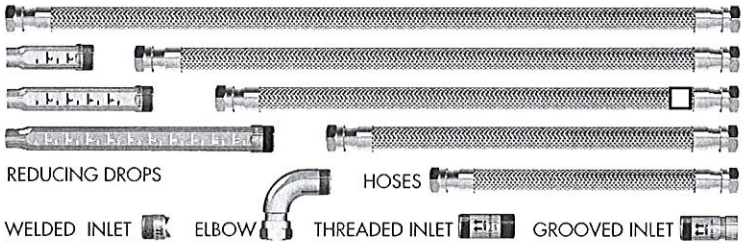
This product shall be manufactured by Victaulic or to Victaulic specifications. All products to be installed in accordance with current Victaulic installation/assembly instructions. Victaulic reserves the right to change product specifications, designs and standard equipment without notice and without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

SprinkFLEX® Flexible Sprinkler Connections

ULTRA SPRINKFLEX®



HB1 Series Hose Components



Standard Hose come assembled with 1" NPT threaded inlet and 7"reducing drop. Optional component sold separately in box of 20.

Hose lengths 28", 40", 48", 59", & 71"

Hose Inlet Connections
- o Standard: 1" NPT threaded inlet
- o Optional: 1" cut groove Inlet
  1" weld out for 1 - 1 ¼" – 5" branch size.

Hose Reducing Drops
- o Standard: Tall 7" reducing drop, ½" or ¾"
- o Optional: Short 4" reducing drop, ½" or ¾"

Xtra-Long 13" reducing drop ½", ¾"

Elbow - Optional

Ultra SprinkFLEX® is an economical, versatile 1" hose solution for fire sprinkler system engineers, designers, and installers.

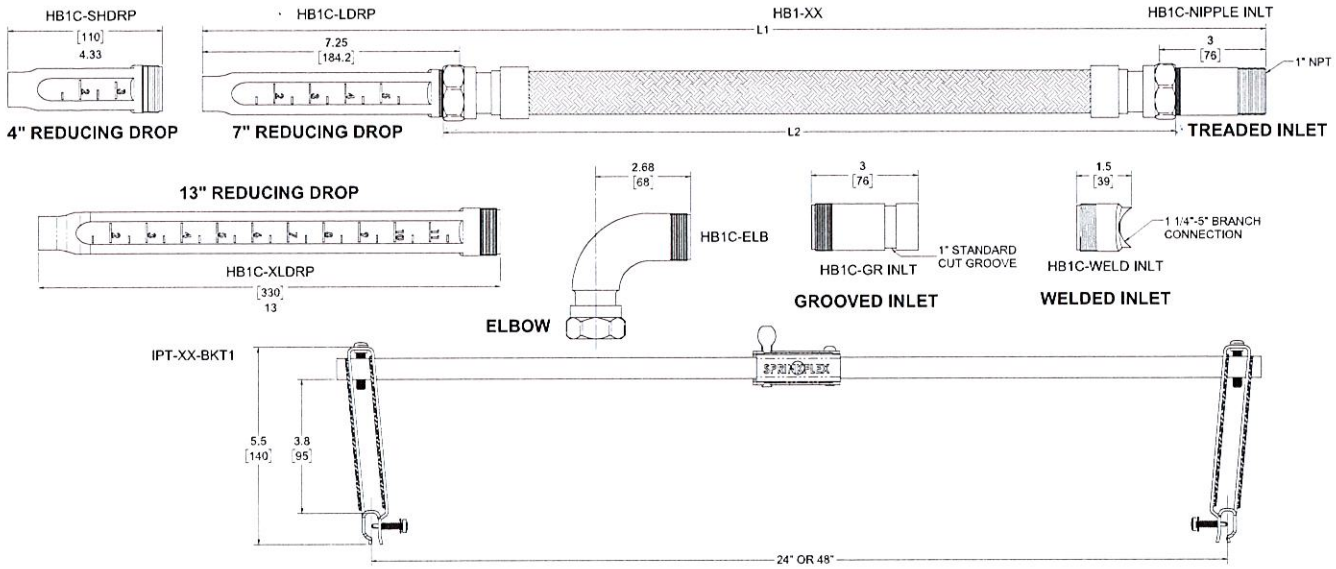
The three piece design is available with interchangeable components to create a flexible fire sprinkler hose solutions for all obstacles encountered in the field. Ultra SprinkFLEX hoses are available in 28", 40", 48", 59", and 71".

The 71" hose is designed to accept up to 12 bends for the longest length, eliminating the need to count or measure bends, leading to faster installs and inspections that lead to quicker occupancy.

Ultra SprinkFLEX® Feature and Benefits

- Fully braided three piece hose design
- Interchangeable components
- UL listed for tight 2-inch Bend Radius
- 71" hose designed to accept up to 12 bends
- High temperature silicone gasket design rated at 225°F UL, 275°F FM
- Threaded, groove, and weld inlet components for branch connection
- Accommodates pendant, semi-recessed, and concealed sprinkler heads
- SprinkFLEX® name provides unmatched quality and value

PROJECT INFORMATION	APPROVAL STAMP
Project:	☐ Approved
Address:	☐ Approved as noted
Contractor:	☐ Not approved
Engineer:	Remarks:
Submittal Date:	
Notes 1:	
Notes 2:	



ULTRA SPRINKFLEX - 1" INTERNAL DIAMETER (I.D.) HB1 HOSE SERIES & COMPONENTS (UL/FM)

MODEL NUMBER	INLET SIZE (INCHES) CM	OUTLET ORIFICE SIZE (INCHES) CM	ASSEMBLY LENGTH [L1] INCHES (mm)	BRAIDED HOSE ASSEMBLY LENGTH (L2)	MINIMUM BEND RADIUS		MAX NUMBER OF 90° BENDS		EQUIVALENT LENGTH OF 1in. DIAMETER SCHEDULE 40 PIPE FT (m)		MAX RATED WORKING PRESSURE	
					FM in. (mm)	UL in.(mm)	UL	FM	(UL)	(FM)	UL PSI (KPA)	FM PSI (KPA)
1" INTERNAL DIAMETER (I.D.) HOSE SERIES												
HB1-28-H	1	½ (1.27)	27 (700)	19.15 (486)	7 (203)	2 (50.8)	4	1	15	14.5 (4.4)	175 (1205)	175 (1205)
HB1-40-H			40 (1000)	30.15 (766)			5	2	21	20.8 (6.3)		
HB1-48-H			48 (1200)	38.15 (969)			8	3	29	22.4 (6.8)		
HB1-59-H			59 (1500)	50.15 (1274)			10	3	45	31.4 (9.5)		
HB1-71-H[1]			71 (1800)	62.15 (1325)			12	4	57	36.3 (11.0)		
HB1-28-T	1	¾ (1.90)	27 (700)	19.15 (486)	7 (203)	2 (50.8)	4	1	15	14.(4 .3)	175 (1205)	175 (1205)
HB1-40-T			40 (1000)	30.15 (766)			5	2	21	20.7 (6.3)		
HB1-48-T			48 (1200)	38.15 (969)			8	3	29	22.3 (6.7)		
HB1-59-T			59 (1500)	50.15 (1274)			10	3	45	31.3 (9.5)		
HB1-71-T[1]			71 (1800)	62.15 (1325)			12	4	57	36.2 (11.0)		
1" INTERNAL DIAMETER (I.D.) HOSE SERIES COMPONENTS												
HB1-28	1	N/A	19 (486)	N/A	7 (203)	2 (50.8)	4	1	9	4.3 (1.3)	175 (1205)	175 (1205)
HB1-40			30 (766)				5	2	15	10.4 (3.1)		
HB1-48			38 (969)				8	3	23	12.2 (3.7)		
HB1-59			50 (1274)				10	3	40	21.2 (6.4)		
HB1-71			62 (1579)				12	4	57	26.1 (7.9)		
HB1C-ELB[1]	1"	1 (25.4)	3.15 (80)		N/A	N/A	N/A	N/A	2	4 (1.2)	175 (1205)	175 (1205)
HB1C-SHDRP-H		½ (1.27)	4.3 (110)						5	8.4 (2.5)		
HB1C-SHDRP-T		¾ (1.90)	4.3 (110)						5	8.2 (2.4)		
HB1C-LDRP-H		½ (1.27)	7.25 (184)						6	9.2 (2.8)		
HB1C-LDRP-T		¾ (1.90)	7.25 (184)						6	9.1 (2.7)		
HB1C-XLDRP-H		½ (1.27)	13 (330)						6	11.4 (3.4)		
HB1C-XLDRP-T[1]		¾(1.90)	13 (330)						6	11.2 (3.4)		
HB1C-WELD INLT		1 (25.4)	3 (106)						0	0 (0)		
HB1C-NIPPLE INLT		1 (25.4)	3 (106)						0	1 (0.3)		
HB1C-GR INLT		1 (25.4)	3 (106)							1 (0.3)		

[1] NOT EVALUATED BY UL

INSTALLATION INSTRUCTIONS

IPT24BKT1 & IPT48BKT1 Open Hub Tall Bracket (IPT)

Installation of SPRINKFLEX Commercial Ceiling Flexible Sprinkler Drop System

HOSE MODEL:
HB1 Ultra SprinkFLEX Series; HB1-28, HB1-40, HB1-48, HB1-59, HB1-72, HB1C Components

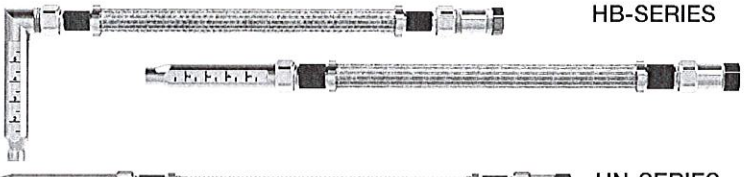
HB Series: HB-28, HB-40, HB-48, HB-59, HB-71 HBE-28, HBE-40, HBE-48, HBE-59, HBE-71

HN Series: HN-28, HN-40, HN-48, HN-59, HN-71 HNE-28, HNE-40, HNE-48, HNE-59, HNE-71

BRACKET MODEL:
IPT24BKT1
IPT48BKT1

c UL us LISTED FM APPROVED
For Listing/Approval Details and Limitations, visit our website at www.anvilintl.com or contact an Anvil® Sales Representative.

HB1- Ultra SprinkFLEX SERIES



HB-SERIES

HN-SERIES

Our SprinkFLEX flexible sprinkler hose fitting are UL approved for limited flexibility and intended to use for direct connection to fire sprinkler in wet / dry systems in accordance with NFPA 13, 13D and 13R. Our SprinkFLEX flexible sprinkler hose fitting can be installed for use in ceilings with grids which meets ASTM C635 and ASTM C636 referenced by IBC, and is approved for use in standard intermediate and heavy duty structural classification.

1 Determine the place where the sprinkler head will be located. The standard bracket IPT24BKT1 is 24 inches (600mm) long and shall be mounted on the 24 inch (600mm) ceiling grid. The long bracket IPT48BKT1 is 48 inches long (1200mm) long and shall be mounted on the 48 inch (1200mm) ceiling grid. The sprinkler should be located as close as possible to the center of the distance between ceiling grids (if necessary).

2 Locate the center of the ceiling tile. Screw 1" offset from the center for the true center of the title installation. Insert one bracket leg at a time, applying a downward pressure on the bracket leg and T-bar. Secure self-drilling screw using a phillips head drive. Place the second screw leg on the T-bar and repeat the process. See Fig 1.

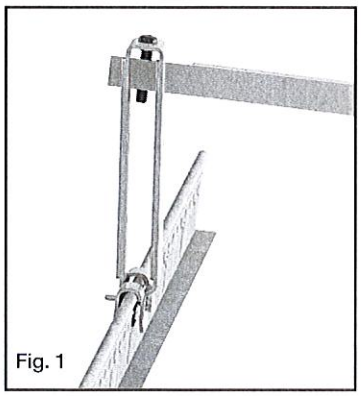


Fig. 1

3 Separate inlet component (if necessary) from the flexible hose and attach the inlet component onto the branch line. Make sure that the arrow is in the appropriate direction of flow to the sprinkler. For threaded connections use pipe sealant and/or Teflon tape the connection to the branch line. For groove coupling installation please refer to the manufacturing installation instructions See Fig. 2. Attach one end of the flexible hose on to the inlet component and tighten the slip nut to hand tight plus 1/2 turn (equivalent to 15 ft-LBS.) Do not twist the flexible hose. See Fig. 3.

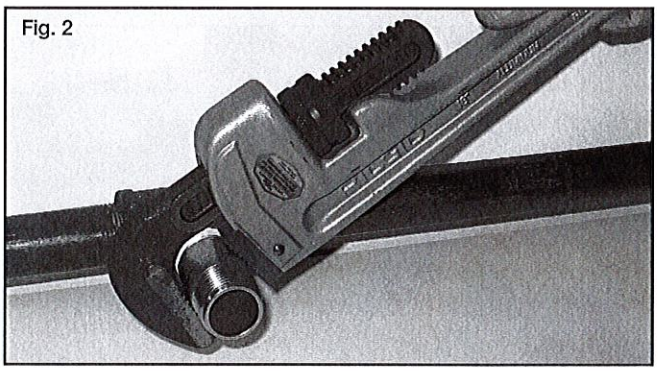


Fig. 2

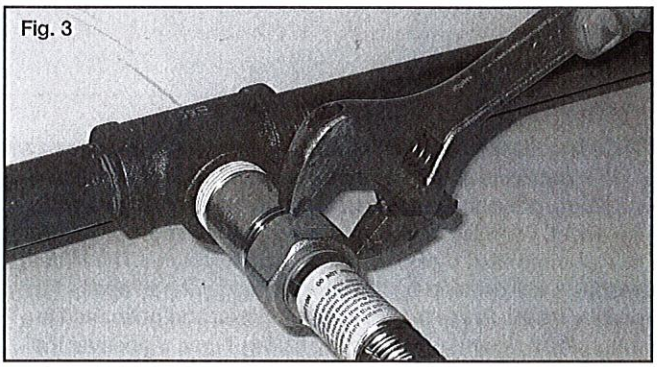
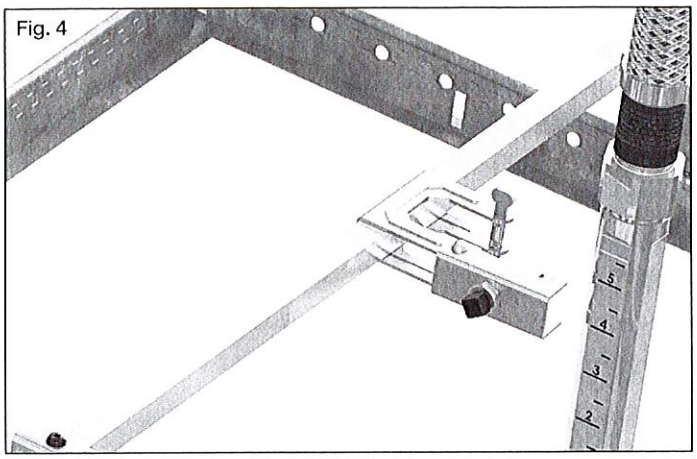


Fig. 3

4 Manoeuver the flexible sprinkler drop from branch to the IPT bracket. Maneuver the flexible sprinkler drop from branch to the IPT bracket. Review that the hose length, number of bends, and bend radius are applicable for installation per UL, FM, & NFPA guidelines. (See corresponding hose technical data sheet). The tube arc should not be twisted and arc should be as large and smooth as possible. FLEXIBLE HOSES ARE NOT TO BE INSTALLED STRAIGHT (NO BENDS).

Note: The 7/8" HB & HN series hose should not be bent within 2 1/2 inches (64 mm) of the connection nut at both ends.

Fig. 4



5 The IPT bracket has an open hub for ease of installation. Open the hinge apparatus by turning the locking shaft ¼ turn. Slide the flexible hose drop into the hub. Ensure the drop is vertical and is not applying a substantial moment on the bracket causing sprinkler head misalignment. See Fig. 4.

6 Latch the hinge door closed and adjust the sprinkler drop for desired ceiling height. Tighten the set screw to 130in-lbs (hand tight plus ¾ turn. See Fig 5.

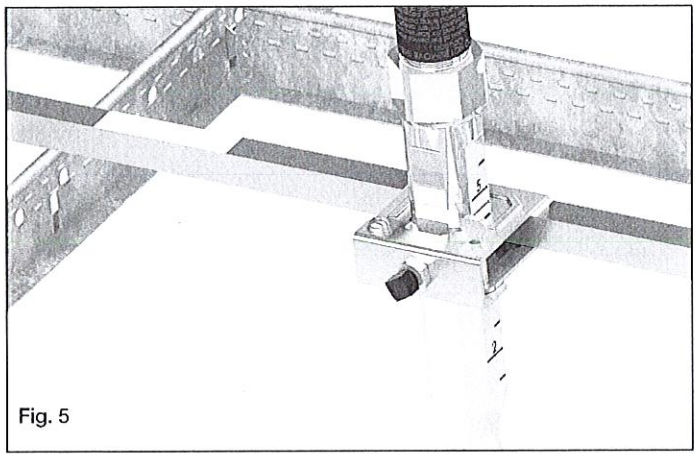
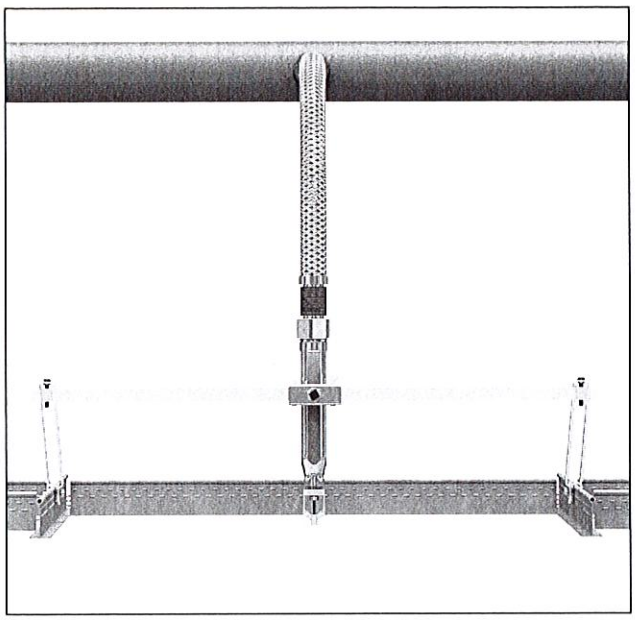


Fig. 5

7 Ceiling tile Installation- The flexible sprinkler drop system with IPT bracket is able to be installed prior to the ceiling tile installation, preventing the need for sprinkler contractor tile adjustment. For ease of tile installation, cut the largest sprinkler hole recommended by sprinkler head manufacturer. The largest hole that is still covered by the sprinkler escutcheon allows for an easier install. Angle the tile at a 45 degree and push the tile through the hole and up above the ceiling T-bar, maneuver the tile and allow it to drop in the proper location. (Fig. 6)

8 Install desired Sprinkler head, per the Sprinkler head manufacturers installation instructions.



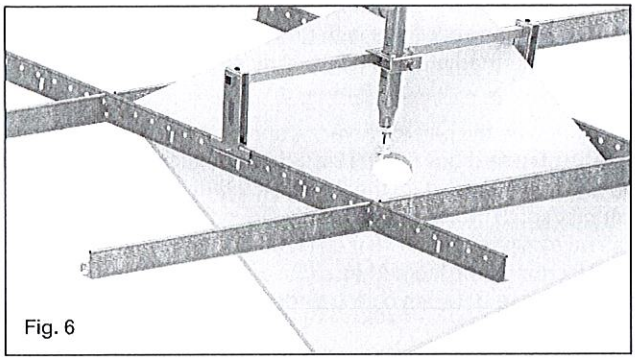


Fig. 6

⚠ WARNING

- Read and understand all instructions before attempting to install any SprinkFLEX® products.
- Wear safety glasses, hardhat, and foot protection during installation.
- These installation instructions are intended for an experienced, trained installer.
- The user must understand the purpose of these products, common industry standards for safety, and the potential consequences of improper product installation.
- De-pressurize the system before performing maintenance on the flexible hose assembly.
- Failure to follow these installation instructions could cause improper sprinkler operation, resulting in serious personal injury and/or property damage. Installation for ASTM C635 metal ceiling suspension systems installed in accordance with ASTM C636 standards.

7/8" ID SPRINKFLEX HOSE (UL & FM) FRICTION LOSS DATA & SPECIFICATIONS

MODEL NUMBER	INLET SIZE (INCHES) CM	OUTLET ORIFICE SIZE (INCHES) CM	HOSE ASSEMBLY LENGTH [L] INCHES (mm)	MINIMUM BEND RADIUS		MAX NUMBER OF 90° BENDS		EQUIVALENT LENGTH OF 1in. DIAMETER SCHEDULE 40 PIPE FT (m)			MAX RATED WORKING PRESSURE	
				FM in. (mm)	UL in. (mm)	UL	FM	(UL)	(FM) 5.6 k-factor	(FM) 8.0 k-factor	UL PSI (KPA)	FM PSI (KPA)
1" INTERNAL DIAMETER (I.D) HOSE SERIES												
HB28H-7	1	1/2 (1.27)	27 (700)	8 (203)	3 (76.2)	2	1	28	18.6 (5.7)	-	200 (1379)	175 (1205)
HB40H-7			40 (1000)			3	1	52	24.6 (7.5)	-		
HB48H-7			48 (1200)			3	3	64	28.5 (8.6)	-		
HB59H-7			59 (1500)			3	3	72	34.4 (10.4)	-		
HB71H-7			71 (1800)			3	4	94	40.4 (12.3)	-		
HB28T-7	1	3/4 (1.90)	27 (700)	8 (203)	3 (76.2)	2	1	28	-	18.8 (5.7)	200 (1379)	175 (1205)
HB40T-7			40 (1000)			3	1	52	-	24.8 (7.6)		
HB48T-7			48 (1200)			3	3	64	-	28.7 (8.7)		
HB59T-7			59 (1500)			3	3	72	-	34.6 (10.5)		
HB71T-7			71 (1800)			3	4	94	-	40.6 (12.4)		
HN28H-7	1	1/2 (1.27)	27 (700)	-	3 (76.2)	2	-	28	-	-	200 (1379)	-
HN40H-7			40 (1000)			3	-	52	-	-		
HN48H-7			48 (1200)			3	-	64	-	-		
HN59H-7			59 (1500)			3	-	72	-	-		
HN71H-7			71 (1800)			3	-	94	-	-		
HN28T-7	1	3/4 (1.90)	27 (700)	-	3 (76.2)	2	-	28	-	-	200 (1379)	-
HN40T-7			40 (1000)			3	-	52	-	-		
HN48T-7			48 (1200)			3	-	64	-	-		
HN59T-7			59 (1500)			3	-	72	-	-		
HN71T-7			71 (1800)			3	-	94	-	-		
HBE28H-6 & HBE28H-7	1	1/2 (1.27)	27 (700)	8 (203)	3 (76.2)	2	1	33	20.6 (6.3)	-	-	175 (1205)
HBE40H-6 & HBE40H-7			40 (1000)			3	1	56	26.6 (8.1)	-		
HBE48H-6 & HBE48H-7			48 (1200)			3	3	67	30.5 (9.3)	-		
HBE59H-6 & HBE59H-7			59 (1500)			3	3	76	36.4 (11.1)	-		
HBE71H-6 & HBE71H-7			71 (1800)			3	4	97	42.4 (12.9)	-		
HBE28T-6 & HBE28T-7	1	3/4 (1.90)	27 (700)	8 (203)	3 (76.2)	2	1	33	-	20.8 (6.3)	-	175 (1205)
HBE40T-6 & HBE40T-7			40 (1000)			3	1	56	-	26.8 (8.2)		
HBE48T-6 & HBE48T-7			48 (1200)			3	3	67	-	30.7 (9.4)		
HBE59T-6 & HBE59T-7			59 (1500)			3	3	76	-	36.6 (11.2)		
HBE71T-6 & HBE71T-7			71 (1800)			3	4	97	-	42.6 (13.0)		
HNE28H-6 & HNE28H-7	1	1/2 (1.27)	27 (700)	-	3 (76.2)	2	-	33	-	-	-	175 (1205)
HNE40H-6 & HNE40H-7			40 (1000)			3	-	56	-	-		
HNE48H-6 & HNE48H-7			48 (1200)			3	-	67	-	-		
HNE59H-6 & HNE59H-7			59 (1500)			3	-	76	-	-		
HNE71H-6 & HNE71H-7			71 (1800)			3	-	97	-	-		
HNE28T-6 & HNE28T-7	1	3/4 (1.90)	27 (700)	-	3 (76.2)	2	-	33	-	-	-	175 (1205)
HNE40T-6 & HNE40T-7			40 (1000)			3	-	56	-	-		
HNE48T-6 & HNE48T-7			48 (1200)			3	-	67	-	-		
HNE59T-6 & HNE59T-7			59 (1500)			3	-	76	-	-		
HNE71T-6 & HNE71T-7			71 (1800)			3	-	97	-	-		

NOTES:

* MODEL NUMBERS: THE FIRST TWO LETTERS "HN" DESIGNATES SPRINKFLEX UNBRAIDED HOSE SERIES. THE FIRST TWO LETTERS "HB" DESIGNATES SPRINKFLEX BRAIDED HOSE SERIES, THE "E" DESIGNATES ELBOW. THE "H" DESIGNATES ½" OUTLET HOSE SERIES. THE "T" DESIGNATES ¾" OUTLET HOSE SERIES. HE "7" DESIGNATES TALL REDUCER.
* MAX AMBIENT TEMPERATURE RATING ON ALL HB & HN MODEL NUMBERS 300°F.
* MAX AMBIENT TEMPERATURE RATING ON ALL HB1 MODEL NUMBERS 225°F (107°C) UL, 275°F (135°C) FM.
* EQUIVALENT LENGTHS ARE SHOWN WITH MAXIMUM NUMBER OF 90 DEGREE BENDS AT THE MINIMUM BEND-RADIUS PER AGENCY.

2- 45 DEGREE OR 3-30 DEGREE BENDS EQUAL 1-90 DEGREE BEND.

DIFFERENT VALUES WERE OBTAINED BY FM AND UL DUE TO THE DIFFERENCE IN MINIMUM BEND RADIUS, TESTING PROTOCOL AND CALCULATION METHODS.

PLEASE SEE INDIVIDUAL STANDARDS FOR MORE INFORMATION RELATIVE TO FRICTION LOSS (EQUIVALENT LENGTH OF PIPE).

* FM EQUIVALENT LENGTH CALCULATION INCLUDES SPRINKLER HEAD FRICTION LOSS.
* SEE LISTING(S) APPROVAL AGENCY FOR THE LATEST APPROVAL DETAILS.

ULTRA SPRINKFLEX®

HB1 FRICTION LOSS TABLE (FM)							
HOSE ASSEMBLIES	INLET SIZE (INCHES)	OUTLET ORIFICE SIZE (INCHES)	HOSE ASSEMBLY LENGTH IN. (mm)	MINIMUM BEND RADIUS IN. (mm)	NUMBER OF 90° BENDS	EQUIVALENT LENGTH OF 1 IN. SCHEDULE 40 PIPE, FT. (m)	RATED WORKING PRESSURE PSI (KPA)
HB1-28H	1	½	28 (700)	7 (180)	1	14.5 (4.4)	175 (1205)
HB1-40H			40 (1000)	7 (180)	2	20.8 (6.3)	
HB1-48H			48 (1200)	7 (180)	3	22.4 (6.8)	
HB1-59H			59 (1500)	7 (180)	3	31.4 (9.5)	
HB1-71H			71 (1800)	7 (180)	4	36.3 (11.0)	
HB1-28T	1	¾	28 (700)	7 (180)	1	14.4 (4.3)	175 (1205)
HB1-40T			40 (1000)	7 (180)	2	20.7 (6.3)	
HB1-48T			48 (1200)	7 (180)	3	22.3 (6.7)	
HB1-59T			59 (1500)	7 (180)	3	31.3 (9.5)	
HB1-71T			71 (1800)	7 (180)	4	36.2 (11.0)	
HOSE COMPONENTS	INLET SIZE (INCHES)	OUTLET ORIFICE SIZE (INCHES)	DESCRIPTION	MINIMUM BEND RADIUS IN. (mm)	NUMBER OF 90° BENDS	EQUIVALENT LENGTH OF 1 IN. SCHEDULE 40 PIPE, FT. (m)	RATED WORKING PRESSURE PSI (KPA)
HB1-28	N/A	N/A	28" HOSE BODY	7 (180)	1	4.3 (1.3)	175 (1205)
HB1-40			40" HOSE BODY	7 (180)	2	10.4 (3.1)	
HB1-48			48" HOSE BODY	7 (180)	3	12.2 (3.7)	
HB1-59			59" HOSE BODY	7 (180)	3	21.2 (6.4)	
HB1-71			71" HOSE BODY	7 (180)	4	26.1 (7.9)	
HB1C-ELB	N/A	N/A	90 REDUCER			4 (1.2)	175 (1205)
HB1C-SHDRP-H		½	SHORT REDUCER ½"			8.4 (2.5)	
HB1C-SHDRP-T		¾	SHORT REDUCER ¾"			8.2 (2.4)	
HB1C-LDRP-H		½	STANDARD REDUCER ½"			9.2 (2.8)	
HB1C-LDRP-T		¾	STANDARD REDUCER ¾"			9.1 (2.7)	
HB1C-XLDRP-H		½	LONG REDUCER ½"			11.4 (3.4)	
HB1C-XLDRP-T		¾	LONG REDUCER ¾"			11.2 (3.4)	
HB1C-WELD INLT		N/A	WELD INLET			0 (0)	175 (1205)
HB1C-NIPPLE INLT		N/A	THREAD INLET			1 (0.3)	
HB1C-GR INLT		N/A	1" CUT GROOVE INLET			1 (0.3)	

HB1 is a1 in. nominal dia. flexible metal sprinkler hose for providing a connection to automatic sprinklers in commercial ceilings. These flexible sprinkler hose models are available as a three piece style. The three piece style, the reducer and Inlet is threaded to the flexible hose body. Above is listed with standard flexible hose assembly and component level. Approval of the flexible sprinkler hose models listed above are limited for use in commercial suspended ceilings with ceiling bracket systems manufactured by Anvil International, LLC.

- All fricton loss testing was conducted with no sprinkler head, K-factor
- All components were friction loss tested separately
- All components such as reducers, hose body and outlets can be combined to provide a total equivalent length value.

HB1 FRICTION LOSS TABLE (UL)

HOSE ASSEMBLIES	INLET BY OUTLET (INCHES)	HOSE ASSEMBLY LENGTH IN.	MINIMUM BEND RADIUS IN. (mm)	MAX NUMBER OF 90° BENDS	EQUIVALENT LENGTH OF 1 IN. SCHEDULE 40 PIPE FT. (m)	MAX RATED WORKING PRESSURE PSI (KPA)
HB1-28-SHDRP-H & HB1-GR-28-SHDRP-H	1x1½	24.0	2 (51)	4	16	175 (1205)
HB1-40-SHDRP-H & HB1-GR-40-SHDRP-H	1x1½	37.0	2 (51)	5	21	
HB1-48-SHDRP-H & HB1-GR-48-SHDRP-H	1x1½	45.0	2 (51)	8	34	
HB1-59-SHDRP-H & HB1-GR-59-SHDRP-H	1x1½	56.0	2 (51)	10	45	
HB1-71-SHDRP-H & HB1-GR-71-SHDRP-H	1x1½	68.0	2 (51)	12	55	
HB1-28-SHDRP-T & HB1-GR-28-SHDRP-T	1x¾	24.0	2 (51)	4	15	175 (1205)
HB1-40-SHDRP-T & HB1-GR-40-SHDRP-T	1x¾	37.0	2 (51)	5	23	
HB1-48-SHDRP-T & HB1-GR-48-SHDRP-T	1x¾	45.0	2 (51)	8	34	
HB1-59-SHDRP-T & HB1-GR-59-SHDRP-T	1x¾	56.0	2 (51)	10	48	
HB1-71-SHDRP-T & HB1-GR-71-SHDRP-T	1x¾	68.0	2 (51)	12	55	
HB1-28-LDRP-H & HB1-GR-28-LDRP-H	1x1½	27.0	2 (51)	4	16	175 (1205)
HB1-40-LDRP-H & HB1-GR-40-LDRP-H	1x1½	40.0	2 (51)	5	20	
HB1-48-LDRP-H & HB1-GR-48-LDRP-H	1x1½	48.0	2 (51)	8	34	
HB1-59-LDRP-H & HB1-GR-59-LDRP-H	1x1½	59.0	2 (51)	10	44	
HB1-71-LDRP-H & HB1-GR-71-LDRP-H	1x1½	71.0	2 (51)	12	56	
HB1-28-LDRP-T & HB1-GR-28-LDRP-T	1x¾	27.0	2 (51)	4	15	175 (1205)
HB1-40-LDRP-T & HB1-GR-40-LDRP-T	1x¾	40.0	2 (51)	5	23	
HB1-48-LDRP-T & HB1-GR-48-LDRP-T	1x¾	48.0	2 (51)	8	34	
HB1-59-LDRP-T & HB1-GR-59-LDRP-T	1x¾	59.0	2 (51)	10	48	
HB1-71-LDRP-T & HB1-GR-71-LDRP-T	1x¾	71.0	2 (51)	12	56	
HB1-28-XLDRP-H & HB1-GR-28-XLDRP-H	1x1½	32.7	2 (51)	4	16	175 (1205)
HB1-40-XLDRP-H & HB1-GR-40-XLDRP-H	1x1½	45.7	2 (51)	5	23	
HB1-48-XLDRP-H & HB1-GR-48-XLDRP-H	1x1½	53.7	2 (51)	8	35	
HB1-59-XLDRP-H & HB1-GR-59-XLDRP-H	1x1½	64.7	2 (51)	10	48	
HB1-28-XLDRP-T & HB1-GR-28-XLDRP-T	1x¾	32.7	2 (51)	4	15	175 (1205)
HB1-40-XLDRP-T & HB1-GR-40-XLDRP-T	1x¾	45.7	2 (51)	5	23	
HB1-48-XLDRP-T & HB1-GR-48-XLDRP-T	1x¾	53.7	2 (51)	8	35	
HB1-59-XLDRP-T & HB1-GR-59-XLDRP-T	1x¾	64.7	2 (51)	10	48	
HB1CE-28-SHDRP-H & HB1CE-GR-28-SHDRP-H	1x1½	24.0	2 (51)	4	18	175 (1205)
HB1CE-40-SHDRP-H & HB1CE-GR-40-SHDRP-H	1x1½	35.0	2 (51)	5	23	
HB1CE-48-SHDRP-H & HB1CE-GR-48-SHDRP-H	1x1½	43.0	2 (51)	8	36	
HB1CE-59-SHDRP-H & HB1CE-GR-59-SHDRP-H	1x1½	55.0	2 (51)	10	48	
HB1CE-71-SHDRP-H & HB1CE-GR-71-SHDRP-H	1x1½	67.0	2 (51)	12	57	
HB1CE-28-SHDRP-T & HB1CE-GR-28-SHDRP-T	1x¾	24.0	2 (51)	4	17	175 (1205)
HB1CE-40-SHDRP-T & HB1CE-GR-40-SHDRP-T	1x¾	35.0	2 (51)	5	25	
HB1CE-48-SHDRP-T & HB1CE-GR-48-SHDRP-T	1x¾	43.0	2 (51)	8	36	
HB1CE-59-SHDRP-T & HB1CE-GR-59-SHDRP-T	1x¾	55.0	2 (51)	10	49	
HB1CE-71-SHDRP-T & HB1CE-GR-71-SHDRP-T	1x¾	67.0	2 (51)	12	57	
HB1CE-28-LDRP-H & HB1CE-GR-28-LDRP-H	1x1½	24.0	2 (51)	4	18	175 (1205)
HB1CE-40-LDRP-H & HB1CE-GR-40-LDRP-H	1x1½	35.0	2 (51)	5	22	
HB1CE-48-LDRP-H & HB1CE-GR-48-LDRP-H	1x1½	43.0	2 (51)	8	36	
HB1CE-59-LDRP-H & HB1CE-GR-59-LDRP-H	1x1½	55.0	2 (51)	10	46	

HB1 FRICTION LOSS TABLE (UL) CONTINUTED

HOSE ASSEMBLIES	INLET BY OUTLET (INCHES)	HOSE ASSEMBLY LENGTH IN.	MINIMUM BEND RADIUS IN. (mm)	MAX NUMBER OF 90° BENDS	EQUIVALENT LENGTH OF 1 IN. SCHEDULE 40 PIPE FT. (m)	MAX RATED WORKING PRESSURE PSI (KPA)
HB1CE-28-LDRP-T & HB1CE-GR-28-LDRP-T	1x¾	24.0	2 (51)	4	17	175 (1205)
HB1CE-40-LDRP-T & HB1CE-GR-40-LDRP-T	1x¾	35.0	2 (51)	5	25	
HB1CE-48-LDRP-T & HB1CE-GR-48-LDRP-T	1x¾	43.0	2 (51)	8	36	
HB1CE-59-LDRP-T & HB1CE-GR-59-LDRP-T	1x¾	55.0	2 (51)	10	49	

- Extra-long reducer, 13" reducer, with HB1-71 length hose has not been evaluated by UL
- HB1 series - Only silicon o-ring - rated to be used in max ambient temperature of 225°F UL and 275°F FM.
- Equivalent length are shown with max number of 90° bends at the minimum bend-radius per approval agency. 2-45° or 3-30° equals 1-90° bend.
- Different values were obtained by FM and UL due to the difference in minimum bend radius, test protocol, and calculation methods.
- See listing approval agency for the latest approval details.

HOSE SERIES CONFIGURATION
HB1-XX-X

OUTLET SIZE	
H = ½"	T = ¾"

HOSE LENGTH				
28"	40"	48"	59"	71"

ULTRA SPRINKFLEX SERIES

HOSE SERIES CONFIGURATION
HB1-XX-X

OUTLET SIZE	
H = ½"	T = ¾"

HOSE COMPONENT	
SHDRP: 4" REDUCING DROP	WELD INLT - 1" WELD INLET -BRANCH 1 ¼" - 5"
LDRP: 7" REDUCING DROP	NIPPLE INLT - 1" NPT INLET NIPPLE
XLDRP: 13" REDUCING DROP	GR INLT - 1" CUT GROOVE INLET NIPPLE
ELB: ELBOW	

ULTRA SPRINKFLEX SERIES

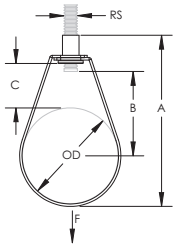
IMPORTANT INSTALLATION INFORMATION

- SprinkFLEX products must be installed according to current, applicable National Fire Protection Association (NFPA 13, 13D, 13R, etc.) standards or equivalent standards for wet, dry, or pre-action systems. Deviations from these standards or alterations to SprinkFLEX products or sprinklers will void any warrant. In addition, installations must meet provision of the local authority having jurisdiction and local codes, as applicable.
- For suspended ceiling applications, the ends of the SprinkFLEX Bracket must be installed to the rails of an ASTM C635 ceiling installed in accordance with ASTM C636 standards.
- SprinkFLEX Stainless Steel Sprinkler Fittings and/or the SprinkFLEX Bracket must not be intermixed with other manufacturer's products.
- Refer to the specific product submittal for applications and listing information. These submittals are located on the website at www.anvilintl.com.
- Size the piping system to provide the minimum required flow rate for the sprinkler system.
- Flush the system to remove foreign material. Continue to flush the system until water runs clear.
- DO NOT install sprinkler system piping through heating ducts.
- DO NOT connect sprinkler system piping to domestic hot water systems.
- DO NOT install sprinklers where they will be exposed to temperatures that exceed the maximum ambient temperature rating for the sprinkler.
- The flexible stainless steel hose should not be bent or fluctuated up-and-down or side-to-side when it is pressurized for test.
- The HB & HN stainless steel hose should not be bent within 2½ inches/64 mm of the connection nut at both ends.
- Flexible stainless steel hose and fittings have limited flexibility and are intended only to be installed with bends at their respective minimum bend radii.
- Protect wet piping systems for freezing temperatures.
- If construction is altered, refer to applicable standards to determine if additional sprinklers are required.
- The owner is responsible for maintaining the fire protection system in proper operating condition.
- For minimum maintenance and inspection requirements, refer to NFPA 25 and the NFPA pamphlet that describes the care and maintenance of sprinkler systems. In addition, the authority having jurisdiction may have additional maintenance, testing, and inspection requirements that must be followed.
- IPT48BKT1 has not been evaluated by UL.
- HB1 71 with extra long reducing drop has not been evaluated by UL.
- HB1 Elbow with extra long reducing drop has not been evaluated by UL.
- WELD INLT has not be evaluated by UL.
- UL maximum K-factor of sprinkler to be connected to sprinkler reducing nipple:
  - HN & HNE unbraided: 8.0K
  - HB & HBE braided: 16.8K
- HB1 hose series is UL listed with IPT-24-BKT1 with largest K-factor of 16.8K.
- HB1C-GR inlet is approved with the use of 74FP coupling assembly.

115 Standard Duty Loop Hanger

The 115 Standard Duty Loop Hanger is ideal for suspending stationary, non-insulated pipe lines, including CPVC pipes, in fire sprinkler systems. A knurled insert nut helps simplify vertical adjustments and flared edges on the base (1/2" to 4" sizes) help protect pipes from coming into contact with any sharp edges of the hanger.

- Flared edges help prevent any sharp surfaces from coming into contact with the pipe (1/2" to 4" sizes)
- Retained insert nut helps ensure the loop hanger and insert nut stay together
- Recommended for the suspension of stationary non-insulated pipe lines
- Manufactured to use the minimum rod size permitted by NFPA® for fire sprinkler piping
- Conforms with Federal Specification WW-H-171 (Type 10), Manufacturers Standardization Society (MSS) SP-58 (Type 10)

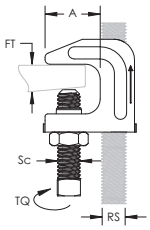


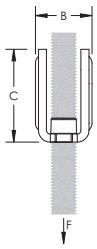
Material: Steel
Finish: Pregalvanized

Part Number	Pipe Size	Outer Diameter OD	Rod Size RS	A	B	C	Static Load F	Certifications
1150050EG	1/2"	0.840"	3/8"	2 13/16"	1 1/8"	1"	300 lb	cULus
1150075EG	3/4"	1.050"	3/8"	3"	1 3/16"	15/16"	300 lb	cULus, FM
1150100EG	1"	1.315"	3/8"	3 1/4"	1 3/8"	15/16"	300 lb	cULus, FM
1150125EG	1 1/4"	1.660"	3/8"	3 9/16"	1 1/2"	15/16"	300 lb	cULus, FM
1150150EG	1 1/2"	1.900"	3/8"	3 13/16"	1 5/8"	15/16"	300 lb	cULus, FM
1150200EG	2"	2.375"	3/8"	4 1/4"	1 7/8"	15/16"	300 lb	cULus, FM
1150250EG	2 1/2"	2.875"	3/8"	5 9/16"	2 13/16"	1 9/16"	525 lb	cULus, FM
1150300EG	3"	3.500"	3/8"	6 9/16"	3 1/2"	1 15/16"	525 lb	cULus, FM
1150350EG	3 1/2"	4.000"	3/8"	7 1/16"	3 3/4"	1 15/16"	585 lb	cULus, FM
1150400EG	4"	4.500"	3/8"	7 9/16"	4"	1 15/16"	650 lb	cULus, FM
1150500EG	5"	5.563"	1/2"	9 13/16"	4 3/4"	2 1/4"	1,000 lb	cULus, FM
1150600EG	6"	6.625"	1/2"	11 5/16"	6 5/16"	3 5/16"	1,000 lb	cULus, FM
1150800EG	8"	8.625"	1/2"	12 7/8"	6 7/8"	2 7/8"	1,000 lb	cULus, FM

SBC Stamped Beam Clamp, Top Mount

- Allows structural attachment to metal beams, bar joist, channel, or angle iron in top mount position only unless used on a parallel flange
- Lightweight, one-piece stamped body provides superior strength and eliminates deficiencies associated with castings
- Spins onto threaded rod and allows for easy adjustment
- Conforms with Federal Specification WW-H-171 (Type 23), Manufacturers Standardization Society ANSI®/MSS-SP-58 (Type 19)





Material: Steel
Finish: Pregalvanized

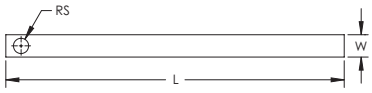
Part Number	Rod Size RS	Flange Thickness FT	A	B	C	Screw Diameter Sc	Torque TQ	Static Load F
SBC037	3/8"	3/4" Max	0.925"	0.85"	1.58"	3/8"	5 ft lb	500 lb

Set screw must be tightened and torqued onto the sloped side of the I-beam, channel, or angle iron flange.

Recognizing that torque wrenches are generally not used or available on many job sites, the setscrew should be tightened so it contacts the I-beam and then an additional 1/4 to 1/2 turn added.

300C Standard Retainer Strap

- Retainer strap for beam clamps



Material: Steel
Finish: Pregalvanized

Part Number	Rod Size RS	Length L	Width W
300C3706EG	3/8"	6"	15/16"
300C3708EG	3/8"	8"	15/16"
300C3710EG	3/8"	10"	15/16"
300C3712EG	3/8"	12"	15/16"
300C3714EG	3/8"	14"	15/16"
300C3716EG	3/8"	16"	15/16"
300C3718EG	3/8"	18"	15/16"
300C5008EG	1/2"	8"	15/16"
300C5010EG	1/2"	10"	15/16"
300C5012EG	1/2"	12"	15/16"
300C5014EG	1/2"	14"	15/16"
300C5016EG	1/2"	16"	15/16"
300C6206EG	5/8"	6"	1 3/16"
300C6208EG	5/8"	8"	1 3/16"
300C6210EG	5/8"	10"	1 3/16"
300C6212EG	5/8"	12"	1 3/16"
300C6214EG	5/8"	14"	1 3/16"
300C7506EG	3/4"	6"	1 3/16"
300C7508EG	3/4"	8"	1 3/16"
300C7510EG	3/4"	10"	1 3/16"
300C7514EG	3/4"	14"	1 3/16"

Part Number	Rod Size RS	Length L	Width W
300C8706EG	7/8"	6"	2"
300C8708EG	7/8"	8"	2"
300C8714EG	7/8"	14"	2"

Field bend and use jam nut over hanger rod to secure.
Add 2" to width of flange to determine minimum length strap required.

PENTAIR

FireLock® V27, K5.6
Models V2703, V2707, V2704, V2708

40.10

Standard Spray
Upright, Pendent and Recessed Pendent
Standard and Quick Response

V2703/V2704
Upright

V2707/V2708
Pendent

V2707/V2708
Recessed Pendent

Approvals/Listings:

See Victaulic Publication 10.01 for more details.

Product Description:

These Model V27 standard spray sprinklers are designed to produce a hemispherical spray pattern for standard commercial applications. They are available with either standard or quick response bulbs. It is cast with a hex-shaped wrench boss to allow easy tightening from many angles, reducing assembly effort. This sprinkler is available in various temperature ratings (see chart on page 3) and finishes to meet many design requirements. The recessed pendent should be utilized with a Model V27 recessed escutcheon which provides up to 3/4"/19 mm of adjustments.

Coverage

For coverage area and sprinkler placement, refer to NFPA 13 or applicable standard.

Technical Specifications:

Models: V2703, V2704, V2707, V2708

Style: Pendent, Upright or Recessed Pendent

Nominal Orifice Size: ½"/13 mm

K Factor: 5.6 Imp./8.1 S.I.[1]

Nominal Thread Size: ½" NPT/15 mm

Max. Working Pressure:

- 175 psi/1200 kPa (FM)
- 250 psi/1725 kPa (UL)

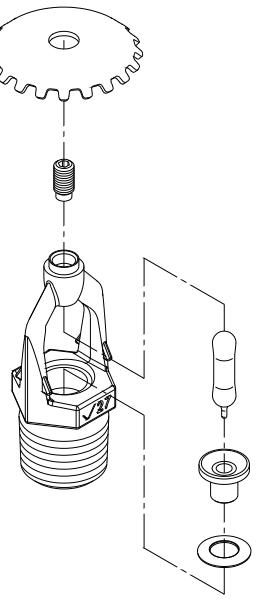
Factory Hydrostatic Test: 100% @ 500 psi/3450 kPa

Min. Operating Pressure:

- 7 psi/48 kPa
- 0.35 bar/5 psi (VdS for upright only)

Temperature Rating: See chart

[1] For K-Factor when pressure is measured in Bar, multiply S.I. units by 10.0.



Exaggerated for clarity

Job/Owner

System No.	
Location	

Contractor

Submitted By	
Date	

Engineer

Spec Section	
Paragraph	
Approved	
Date	

40.10 2544 Rev. J Updated 07/2014

Material Specifications:

Upright Deflector: Bronze per UNS C11000

Pendent Deflector: Bronze per UNS C51000

Bulb: Glass with glycerin solution

Bulb Nominal Diameter:

- ☐ Standard: 5.0 mm
- ☐ Quick Response: 3.0 mm

Load Screw: Bronze per UNS C65100

Pip Cap: Bronze per UNS C65100

Spring: Beryllium nickel

Seal: Teflon[2] tape

Frame: Die cast brass 65-30

Lodgement Spring: Stainless steel per UNS S30200

Accessories

Installation Wrench:

- ☐ Open End: V27
- ☐ Recessed: V27-2

Sprinkler Finishes:

- ☐ Plain Brass
- ☐ Chrome plated
- ☐ White painted[3]
- ☐ Black painted[3]
- ☐ Custom painted[3]
- ☐ Proprietary Nickel Teflon[2] coating[3]
- ☐ VC-250[4]

155, 200, 286 SR Only:

- ☐ Wax[3]

For cabinets and other accessories refer to separate sheet.

[2] Teflon is a registered trademark of Dupont Co.

[3] UL Listed for corrosion resistance.

[4] UL Listed and FM Approved for corrosion resistance.

Approvals/Listings:

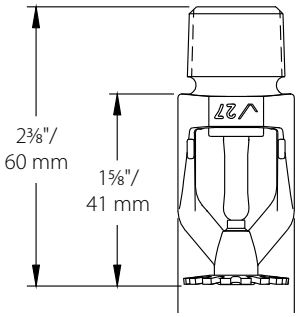
APPROVALS/LISTINGS	Model					
	V2703	V2707	V2707	V2704	V2708	V2708 [7]
Orifice Size (inches)	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"
Orifice Size (mm)	13	13	13	13	13	13
Nominal K Factor Imperial	5.6	5.6	5.6	5.6	5.6	5.6
Nominal K Factor S.I.[5]	8.1	8.1	8.1	8.1	8.1	8.1
Response	Standard	Standard	Standard	Quick	Quick	Quick
Deflector Type	Upright	Pendent	Recessed Pendent	Upright	Pendent	Recessed Pendent
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 360°F/182°C	135°F/57°C 155°F/68°C 175°F/79°C 200°F/93°C 286°F/141°C 360°F/182°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	135°F/57°C 155°F/68°C 175°F/79°C 200°F/93°C
FM	135°F/57°C 155°F/68°C 175°F/79°C 200°F/93°C 286°F/141°C 360°F/182°C	135°F/57°C 155°F/68°C 175°F/79°C 200°F/93°C 286°F/141°C 360°F/182°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	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
NYC/MEA 62-99-E	135°F/57°C 155°F/68°C 175°F/79°C 200°F/93°C 286°F/141°C 360°F/182°C	135°F/57°C 155°F/68°C 175°F/79°C 200°F/93°C 286°F/141°C 360°F/182°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	135°F/57°C 155°F/68°C 175°F/79°C 200°F/93°C
CSFM 7690-0531:112	135°F/57°C 155°F/68°C 175°F/79°C 200°F/93°C 286°F/141°C 360°F/182°C	135°F/57°C 155°F/68°C 175°F/79°C 200°F/93°C 286°F/141°C 360°F/182°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	135°F/57°C 155°F/68°C 175°F/79°C 200°F/93°C
LPCB	135°F/57°C 155°F/68°C 175°F/79°C 200°F/93°C 286°F/141°C 360°F/182°C	None	None	135°F/57°C 155°F/68°C 175°F/79°C 200°F/93°C	None	None
VNIIPO	135°F/57°C 155°F/68°C 175°F/79°C 200°F/93°C 286°F/141°C 360°F/182°C	135°F/57°C 155°F/68°C 175°F/79°C 200°F/93°C 286°F/141°C 360°F/182°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	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
CCC	ZSTZ 155°F/68°C 200°F/93°C	ZSTX 155°F/68°C 200°F/93°C	None	K-ZSTZ 155°F/68°C 200°F/93°C	K-ZSTZ 155°F/68°C 200°F/93°C	None
VdS	135°F/57°C 155°F/68°C 175°F/79°C 200°F/93°C 286°F/141°C 360°F/182°C	None	None	135°F/57°C 155°F/68°C 175°F/79°C 200°F/93°C 286°F/141°C	None	None
CE	135°F/57°C 155°F/68°C 175°F/79°C 200°F/93°C 286°F/141°C 360°F/182°C	None	None	135°F/57°C 155°F/68°C 175°F/79°C 200°F/93°C 286°F/141°C	None	None

[5] For K Factor when pressure is measured in Bar, multiply S.I. units by 10.0

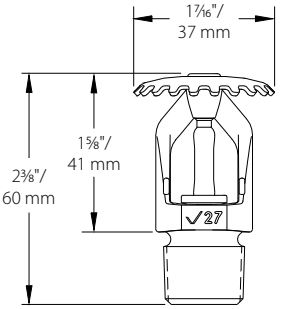
[7] FM Approved with 1/2" adjustment escutcheon only - quick response

Note: Listings and Approvals as of printing. All are approved open.

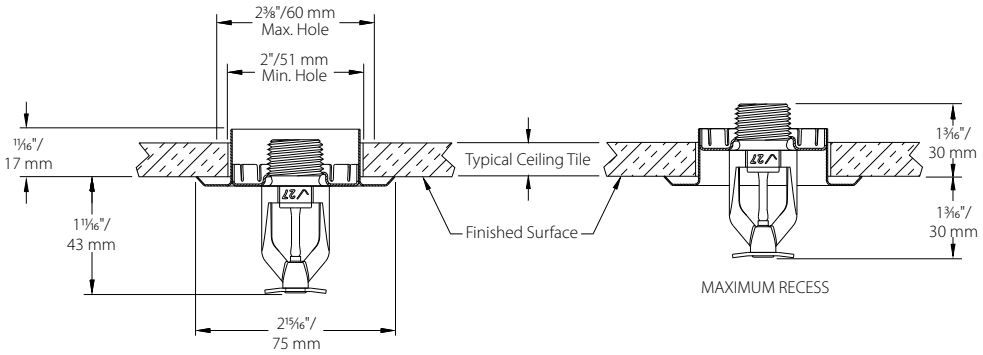
Dimensions:



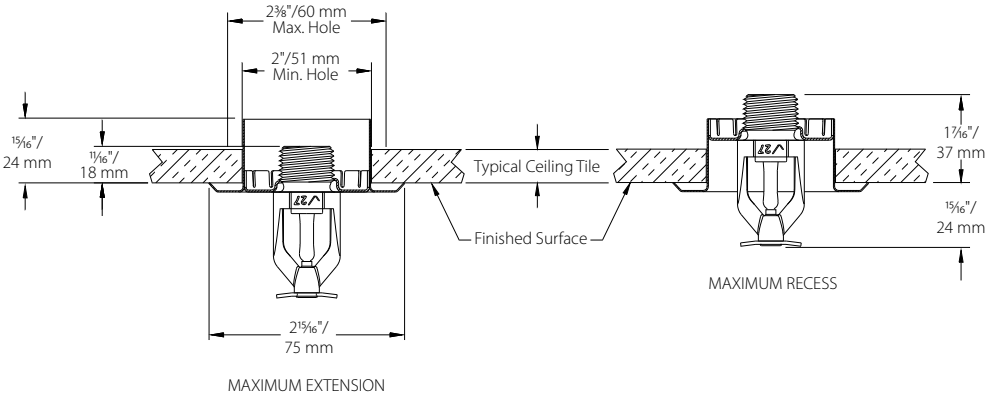
Standard Pendent –
V2707, V2708



Standard Upright –
V2703, V2704



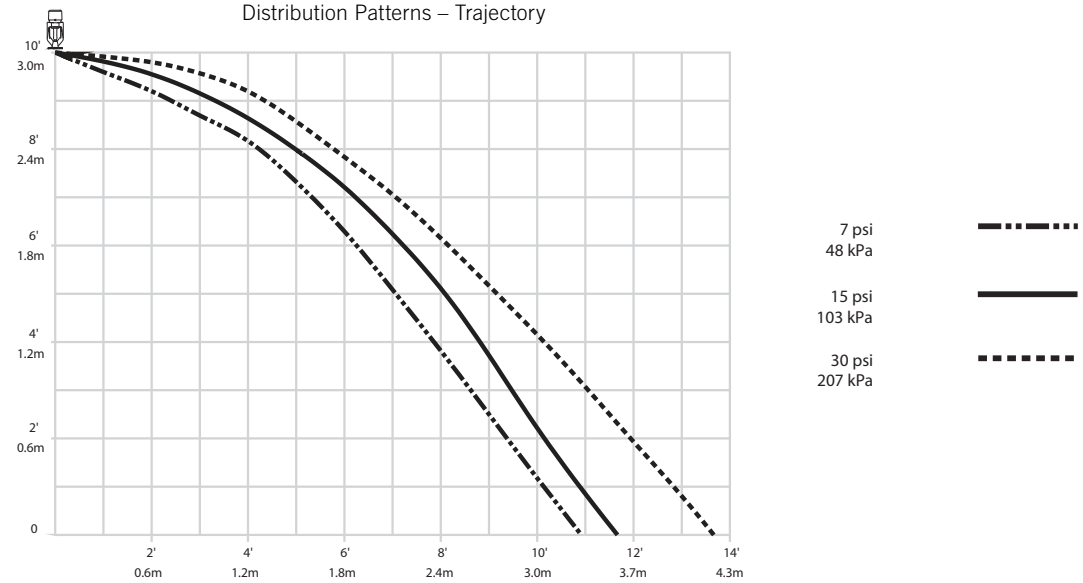
½" Adjustment Recessed – V2707, V2708 (drawing not to scale)



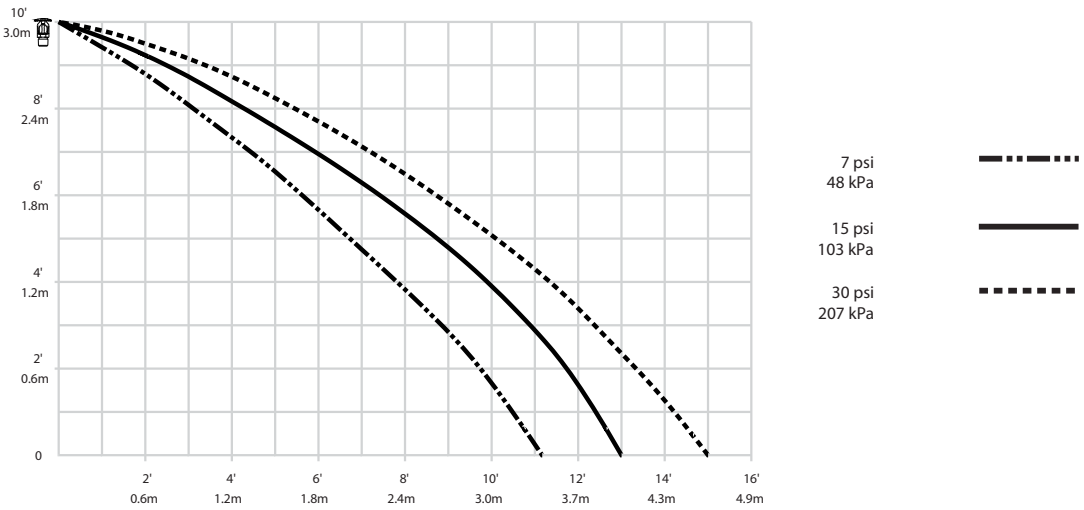
¾" Adjustment Recessed – V2707, V2708 (drawing not to scale)

Distribution Patterns:

Models V2707, V2708
K5.6 Standard Pendent and Recessed Pendent
Distribution Patterns – Trajectory



Models V2703, V2704
K5.6 Standard Upright
Distribution Patterns – Trajectory



NOTES:

A. Data shown is approximate and can vary due to differences in installation.

B. These graphs illustrate approximate trajectories, floor-wetting, and wall-wetting patterns for these specific Victaulic FireLock Automatic Sprinklers. They are provided as information for guidance in avoiding obstructions to sprinklers and should not be used as minimum sprinkler spacing rules for installation. **Refer to the appropriate NFPA National Fire Code or the Authority Having Jurisdiction for specific information regarding obstructions, spacing limitations and area of coverage requirements.** Failure to follow these guidelines could adversely affect the performance of the sprinkler and will void all Listings, Approvals and Warranties.

C. All patterns are symmetrical to the centerline of the waterway.

Ratings:

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

Sprinkler Temperature Classification	Victaulic Part Identification	Temperature – °F/°C		Glass Bulb Color
		Nominal Temperature Rating	Maximum Ambient Temperature Allowed	
Ordinary	A	135°F/57°C	100°F/38°C	Orange
Ordinary	C	155°F/68°C	100°F/38°C	Red
Intermediate	E	175°F/79°C	150°F/65°C	Yellow
Intermediate	F	200°F/93°C	150°F/65°C	Green
High	J	286°F/141°C	225°F [8]/107°C	Blue
Extra High [7]	K	360°F/182°C	300°F/149°C	Purple
–	M	Open	–	No Bulb

[7] Standard response only.

[8] 150/65 if wax coated.

Available Wrenches:

	V27-2 Recessed	V27 Open End
V2707, V2708 Pendent	✓	✓
V2707, V2708 Recessed Pendent	✓	–
V2703, V2704 Upright	–	✓

⚠ WARNING

- **Always read and understand installation, care, and maintenance instructions, supplied with each box of sprinklers, before proceeding with installation of any sprinklers.**
- **Always wear safety glasses and foot protection.**
- **Depressurize and drain the piping system before attempting to install, remove, or adjust any Victaulic piping products.**
- **Installation rules, especially those governing obstruction, must be strictly followed.**
- **Painting, plating, or any re-coating of sprinklers (other than that supplied by Victaulic) is not allowed.**

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

The owner is responsible for maintaining the fire protection system and devices in proper operating condition. For minimum maintenance and inspection requirements, refer to the current National Fire Protection Association pamphlet that describes care and maintenance of sprinkler systems. In addition, the authority having jurisdiction may have additional maintenance, testing, and inspection requirements that must be followed.

If you need additional copies of this publication, or if you have any questions about the safe installation of this product, contact Victaulic World Headquarters: P.O. Box 31, Easton, Pennsylvania 18044-0031 USA, Telephone: 001-610-559-3300.

Installation
Reference should always be made to the I-40 Victaulic FireLock Automatic Sprinklers Installation and Maintenance Sheet for the product you are installing. This installation sheet is included with each shipment of Victaulic products for complete installation and assembly data, and is available in PDF format on our website at victaulic.com.

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

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

Trademarks
Victaulic is a registered trademark of Victaulic Company.

