

PRODUCT DATA BOOK

FOR

THREE PEAS IN A POD LEARNING CENTER SLIDELL, LA

CONTRACTOR: JEFFERSON SPRINKLER, INC
 P.O. BOX 129
 GRETNA, LA 70054
 (504) 393-7699

Three Peas in a Pod Learning Center

DEVICES

- VK3021 QR PENDENT SPRINKLER WHITE (VIKING)
- VK534 QR PENDENT SPRINKLER WHITE (VIKING)
- WATERFLOW SWITCH, MODEL VSR-F (POTTER)
- SUPERVISORY SWITCH, MODEL OSYSU-1 (POTTER)
- ELECTRIC BELL (VIKING)

VALVES

- BUTTERFLY VALVE (NIBCO)
- ULTIMATE RISER (AGF)
- TESTanDRAIN, MODEL 1000 (AGF)

PIPE& FITTINGS

- SCHEDULE 40 & 10 BLACK (BULLMOOSE)
- SCHEDULE 40 & 10 BLACK (WHEATLAND)
- FLEXIBLE HOSE CONNECTIONS (VICTAULIC)
- CAST IRON SCREW FITTINGS (STAR)
- GROOVED FITTINGS (VICTAULIC)
- WELD OUTLETS (MERIT)

HANGERS

- FIGURE #92 TOP BEAM CLAMP (ANVIL)
- FIGURE #146 ALL THREAD ROD (ANVIL)
- FIGURE # 69 HANGER RING (ANVIL)

MISCELLANEOUS EQUIPMENT

- MODEL 757DCDA DOUBLE CHECK DETECTOR (WATTS)
- MODEL 6314 FDC (GUARDIAN)
- SPRINKLER CABINET & WRENCHES (VIKING)

DEVICES



TECHNICAL DATA

VK3021 QUICK RESPONSE PENDENT SPRINKLER (K5.6)

The Viking Corporation, 210 N Industrial Park Drive, Hastings MI 49058

Telephone: 269-945-9501 Technical Services: 877-384-5464 Fax: 269-818-1680 Email: techsvcs@vikingcorp.com

Visit the Viking website for the latest edition of this technical data page www.vikinggroupinc.com

1. DESCRIPTION

The Viking VK3021 Quick Response Pendent Sprinkler is a small thermosensitive glass bulb spray sprinkler available with various finishes and temperature ratings to meet design requirements. The special Polyester and Electroless Nickel PTFE (ENT) coatings can be used in decorative applications where colors are desired. In addition, these coatings have been investigated for installation in corrosive environments and are Listed and Approved as indicated in the Approval Chart.

2. LISTINGS AND APPROVALS



UL Listed: Category VNIV



FM Approved: Classes 2017, 2015, 2043

Refer to the Approval Chart and Design Criteria for requirements that must be followed.

3. TECHNICAL DATA

Specifications:

Minimum Operating Pressure: 7 psi (0.5 bar)

Rated to: 175 psi (12 bar) water working pressure.

Factory tested hydrostatically to 500 psi (34.5 bar).

Thread size: 1/2" NPT (15 mm BSP)

Nominal K-factor: 5.6 U.S. (80.6 metric*)

Glass-bulb fluid temperature rated to -65 °F (-55 °C)

* Metric K-factor measurement shown is in Bar. When pressure is measured in kPa, divide the metric K-factor shown by 10.0.

Material Standards:

Sprinkler Body: Brass CW602N, UNS-C84400 or QM Brass

Deflector: Stainless Steel UNS S30400

Pip Cap Shell - Stainless Steel UNS-S44400

Pip Cap Disc - Stainless Steel UNS-S30100

Belleville Spring - Nickel Alloy

Pip Cap Seal - Polytetrafluoroethylene (PTFE)

Compression Screw: Brass CW612N, CW508L, UNS-C36000 or UNS-C26000

Shipping Cap: Polyethylene

Bulb: Glass, nominal 3 mm diameter

Finishes and Temperatures:

Finish	Brass	Chrome	White Polyester	Black Polyester	ENT	--
Suffix	A	F	M-/W	M-/B	JN	--
Temperature	135 °F (57 °C)	155 °F (68 °C)	175 °F (79 °C)	200 °F (93 °C)	286 °F (141 °C)	Open
Suffix	A	B	D	E	G	Z

Ordering Information: (Refer to Table 1 and the current Viking List Price Book.)

4. INSTALLATION

Refer to appropriate NFPA, FM Global, and/or any other applicable installation standards.

5. OPERATION

During fire conditions, when the temperature around the sprinkler reaches its operating temperature, the heat-sensitive liquid in the glass bulb expands, causing the bulb to shatter, releasing the pip cap assembly. Water flowing through the sprinkler orifice strikes the sprinkler deflector, forming a uniform spray pattern to extinguish or control the fire.

6. INSPECTIONS, TESTS AND MAINTENANCE

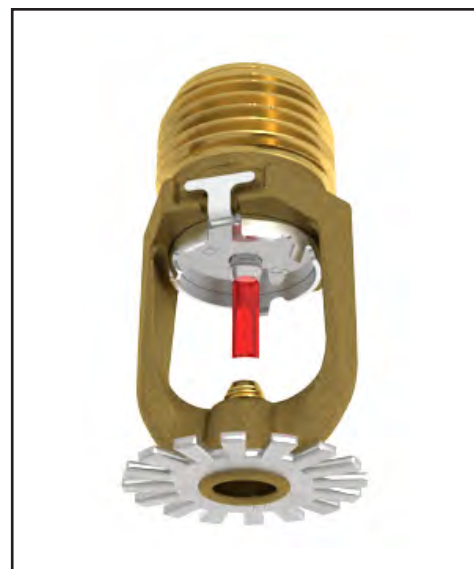
Refer to NFPA 25 for Inspection, Testing and Maintenance requirements.

7. AVAILABILITY

Viking Sprinkler Model VK3021 is available through a network of domestic and international distributors. See The Viking Corporation web site for the closest distributor or contact The Viking Corporation.

8. GUARANTEE

For details of warranty, refer to Viking's current list price schedule or contact Viking directly.



WARNING: Cancer and Reproductive Harm-
www.P65Warnings.ca.gov



TECHNICAL DATA

VK3021 QUICK RESPONSE PENDENT SPRINKLER (K5.6)

The Viking Corporation, 210 N Industrial Park Drive, Hastings MI 49058
 Telephone: 269-945-9501 Technical Services: 877-384-5464 Fax: 269-818-1680 Email: techsvcs@vikingcorp.com
 Visit the Viking website for the latest edition of this technical data page www.vikinggroupinc.com

TABLE 1: ORDERING INFORMATION
 Instructions: Using the sprinkler base part number,
 (1) add the suffix for the desired Finish
 (2) add the suffix for the desired Temperature Rating.

Sprinkler Base Part No.	Size		1: Finishes		2: Temperature Ratings			
	NPT Inch	BSP mm	Description	Suffix ¹	Nominal Rating	Bulb Color	Max. Ambient Ceiling Temperature ³	Suffix
19917	1/2	--	Brass	A	135 °F (57 °C)	Orange	100 °F (38 °C)	A
19929	--	15	Chrome	F	155 °F (68 °C)	Red	100 °F (38 °C)	B
			White Polyester ^{4,6}	M-/W	175 °F (79 °C)	Yellow	150 °F (65 °C)	D
			Black Polyester ^{4,6}	M-/B	200 °F (93 °C)	Green	150 °F (65 °C)	E
			ENT ^{4,5,6}	JN	286 °F (141 °C)	Blue	225 °F (107 °C)	G
					Open	--	--	Z

Example: 19917MB/W = VK3021 with White Polyester Finish and 155 °F (68 °C) Nominal temperature rating. This sprinkler is to be installed into an area with a maximum ambient temperature of 100 °F (38 °C) meaning if the area will experience temperatures above the maximum ambient rating, you shall use a higher temperature-rated sprinkler.

Accessories

Sprinkler Wrenches (see Figure 1):

- A. Installer Wrench: Part No. 22055 (available since 2017).
- B. Cabinet Wrench: Part No. 20901M/B (available since 2017).
- C. Recessed Socket Wrench: Part No. 20951M/B² (available since 2017).

Sprinkler Cabinet:

- A. Up to 6 sprinklers: Part number 01724A (available since 1971).
- B. 6-12 Sprinklers: Part number 01725A (available since 1971).

Footnotes

1. Where a dash (-) is shown in the Finish suffix designation, insert the desired Temperature Rating suffix. See example above.
2. Requires a 1/2" ratchet which is not available from Viking.
3. Based on NFPA 13, NFPA 13R, and NFPA 13D. Other limits may apply, depending on fire loading, sprinkler location, and other requirements of the Authority Having Jurisdiction. Refer to specific installation standards.
4. UL Listed as corrosion resistant.
5. FM Approved as a corrosion proofing coating for installation in corrosive environments.
6. The corrosion resistant and corrosion proofing coatings have passed the standard corrosion test required by the approving agencies indicated in the Approval Chart. These tests cannot and do not represent all possible corrosive environments. Prior to installation, verify through the end-user that the coatings are compatible with or suitable for the proposed environment. For automatic sprinklers, the ENT coating is applied to all exposed exterior surfaces, including the waterway.

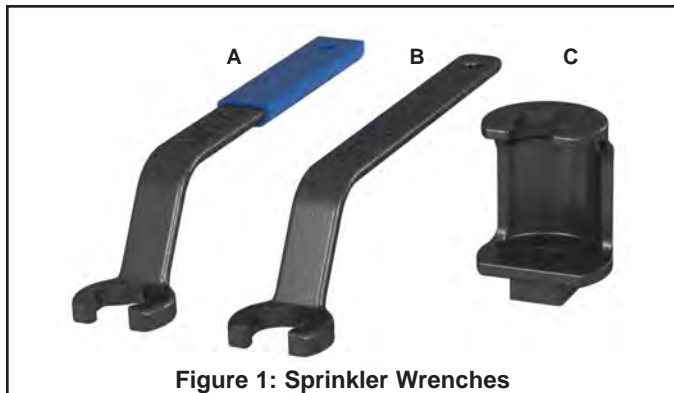


Figure 1: Sprinkler Wrenches

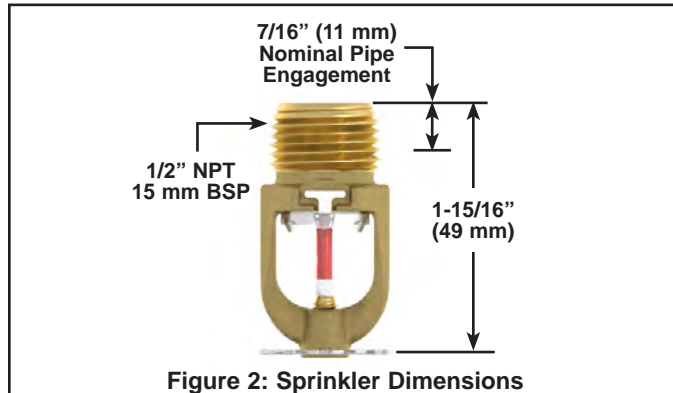


Figure 2: Sprinkler Dimensions



TECHNICAL DATA

VK3021 QUICK RESPONSE PENDENT SPRINKLER (K5.6)

The Viking Corporation, 210 N Industrial Park Drive, Hastings MI 49058
 Telephone: 269-945-9501 Technical Services: 877-384-5464 Fax: 269-818-1680 Email: techsvcs@vikingcorp.com
 Visit the Viking website for the latest edition of this technical data page www.vikinggroupinc.com

APPROVAL CHART Viking Quick Response Pendent Sprinkler VK3021 K5.6 (80.6 metric) Maximum 175 PSI (12 Bar) WWP				<table border="1" style="width: 100%;"> <tr> <td style="width: 50%;">Finish(es) →</td> <td style="width: 50%;">↓</td> <td rowspan="3" style="text-align: center; vertical-align: middle;">KEY</td> </tr> <tr> <td>Temperature(s) →</td> <td>→ A 1 X</td> </tr> <tr> <td>Escutcheon(s), If applicable →</td> <td>↑</td> </tr> </table>		Finish(es) →	↓	KEY	Temperature(s) →	→ A 1 X	Escutcheon(s), If applicable →	↑
Finish(es) →	↓	KEY										
Temperature(s) →	→ A 1 X											
Escutcheon(s), If applicable →	↑											
Sprinkler Base Part Number ¹	Thread Size		Listings and Approvals ²									
	NPT Inch	BSP mm	UL	FM								
19917	1/2	--	A1, B2X, B3Y	A1, B2X, B3Y								
19929	--	15	A1, B2X, B3Y	A1, B2X, B3Y								
Approved Temperature Rating Code: A = 135 °F (57 °C), 155 °F (68 °C), 175 °F (79 °C), 200 °F (93 °C), and 286 °F (141 °C) B = 135 °F (57 °C), 155 °F (68 °C), 175 °F (79 °C), and 200 °F (93 °C)												
Approved Finish Code: 1 = Brass, Chrome, White Polyester^{3,4}, Black Polyester^{3,4}, and ENT^{4,5} 2 = Brass, Chrome, White Polyester^{3,4}, and Black Polyester^{3,4} 3 = ENT^{4,5}												
Approved Escutcheon Code: X = Installed with Viking Recessed Escutcheons Models NP-1, NP-2, and NP-3, or Viking Standard Surface Mounted Escutcheons Y = Installed with Viking Model NP-1 Recessed Escutcheon OR Standard Surface Mounted Escutcheons												
Footnotes												
¹ Base Part number is shown. For complete part number, refer to Viking's current price schedule. ² This table shows the listings and approvals available at the time of printing. Check with the manufacturer for any additional approvals. ³ Other colors are available upon request with the same Listings and Approvals as the standard colors. ⁴ cULus Listed as corrosion resistant. ⁵ FM Approved as corrosion proofing for corrosive environments.												

DESIGN CRITERIA - UL

cULus Listing Requirements:

The Viking VK3021 Quick Response Pendent Sprinkler is cULus Listed as indicated in Approval Chart for installation in accordance with the latest edition of NFPA 13 for standard spray sprinklers.

- Designed for use in Light and Ordinary occupancies.
- The sprinkler installation rules contained in NFPA 13 for standard spray Pendent sprinklers shall be followed.

IMPORTANT: Always refer to Form No. F_091699 - Care and Handling of Sprinklers. Also refer to Form No. F_080614 for general care, installation, and maintenance information. Viking sprinklers are to be installed in accordance with the latest edition of Viking Technical Data, the appropriate standards of NFPA, LPCB, APSAD, VdS or other similar organizations, and also with the provisions of governmental codes, ordinances, and standards, whenever applicable.

DESIGN CRITERIA - FM

FM Approval Requirements:

The Viking VK3021 Quick Response Pendent Sprinkler is FM Approved as standard response Non-Storage Pendent sprinkler as indicated in the FM Approval Guide. For specific application and installation requirements, reference the latest applicable FM Loss Prevention Data Sheets (including Data Sheet 2-0). FM Global Loss Prevention Data Sheets contain guidelines relating to, but not limited to: minimum water supply requirements, hydraulic design, ceiling slope and obstructions, minimum and maximum allowable spacing, and deflector distance below the ceiling.

NOTE: The FM Installation guidelines may differ from UL and/or NFPA criteria.

IMPORTANT: Always refer to Form No. F_091699 - Care and Handling of Sprinklers. Also refer to Form No. F_080614 for general care, installation, and maintenance information. Viking sprinklers are to be installed in accordance with the latest edition of Viking Technical Data, the appropriate standards of NFPA, LPCB, APSAD, VdS or other similar organizations, and also with the provisions of governmental codes, ordinances, and standards, whenever applicable.



TECHNICAL DATA

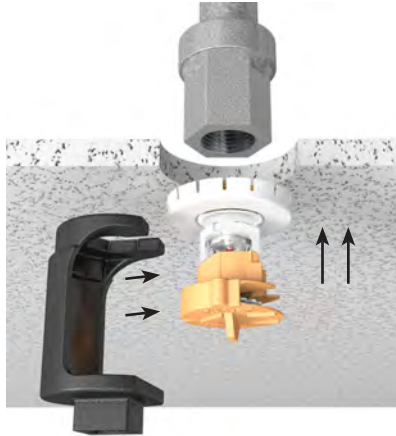
**VK3021 QUICK RESPONSE
PENDENT SPRINKLER (K5.6)**

The Viking Corporation, 210 N Industrial Park Drive, Hastings MI 49058
 Telephone: 269-945-9501 Technical Services: 877-384-5464 Fax: 269-818-1680 Email: techsvcs@vikingcorp.com
 Visit the Viking website for the latest edition of this technical data page www.vikinggroupinc.com

1. Install the escutcheon inner ring onto the sprinkler threads.



2. Carefully slide the wrench** sideways around the protective cap then push upwards to engage with the sprinkler wrench flats.



3. Install the sprinkler and escutcheon assembly into the pipe fitting. Be sure the escutcheon outer ring contacts the surface of the finished ceiling.

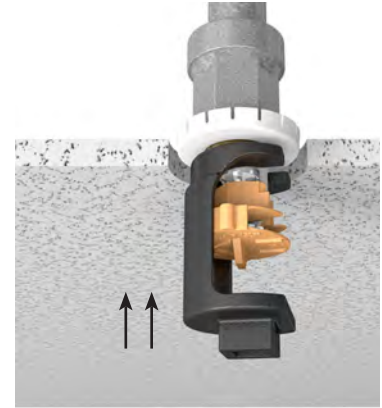
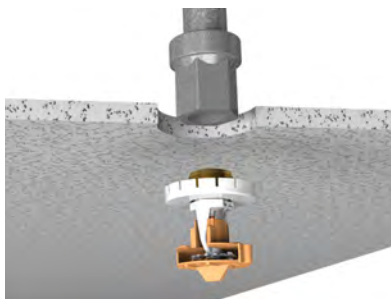


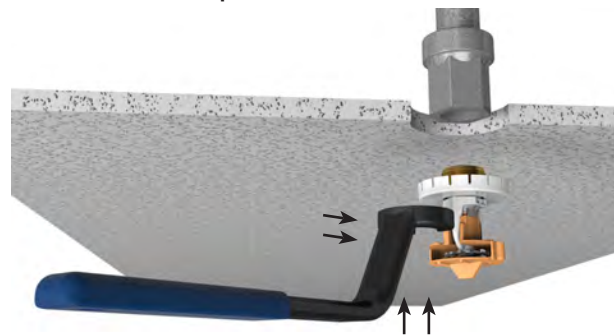
Figure 3: Recessed Installation (with Recessed Socket Wrench)

**A 1/2" ratchet is required (not available from Viking).

1. Install the escutcheon inner ring onto the sprinkler threads.



2. Carefully slide the wrench sideways around the protective cap then push upwards to engage with the sprinkler wrench flats.



3. Install the sprinkler and escutcheon assembly into the pipe fitting. Be sure the escutcheon outer ring contacts the surface of the finished ceiling.



Figure 4: Recessed Installation (with standard Installer's Wrench)



TECHNICAL DATA

**VK3021 QUICK RESPONSE
PENDENT SPRINKLER (K5.6)**

The Viking Corporation, 210 N Industrial Park Drive, Hastings MI 49058
 Telephone: 269-945-9501 Technical Services: 877-384-5464 Fax: 269-818-1680 Email: techsvcs@vikingcorp.com
 Visit the Viking website for the latest edition of this technical data page www.vikinggroupinc.com

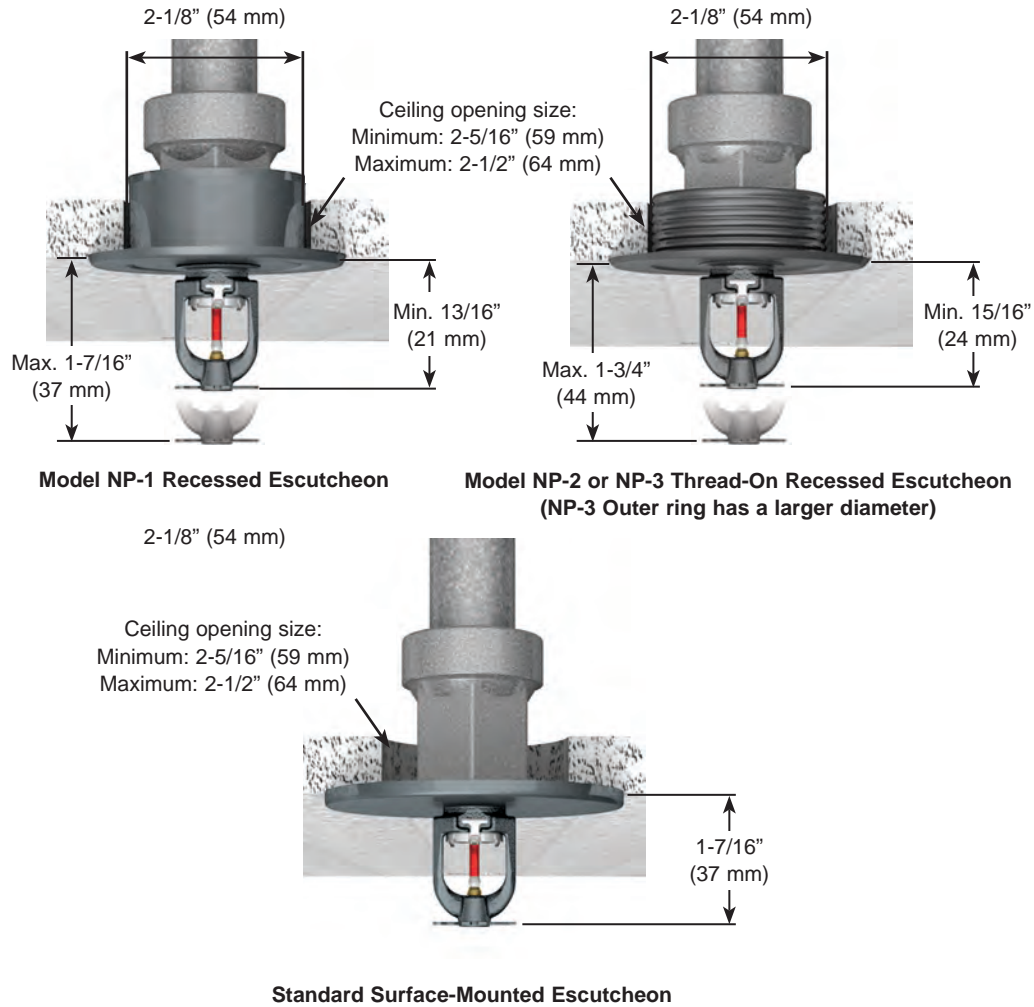


Figure 5: Installation Dimensions with Viking Escutcheons



TECHNICAL DATA

STANDARD/QUICK RESPONSE EXTENDED COVERAGE PENDENT SPRINKLER VK534 (K11.2)

The Viking Corporation, 210 N Industrial Park Drive, Hastings MI 49058

Telephone: 269-945-9501 Technical Services: 877-384-5464 Fax: 269-818-1680 Email: techsvcs@vikingcorp.com

1. DESCRIPTION

Viking EC/QREC Pendent Sprinkler VK534 is a thermosensitive spray sprinkler available in several different finishes and temperature ratings to meet varying design requirements. The extra-large orifice produces the flows required to meet Light and Ordinary Hazard density requirements at lower pressures than standard orifice or large orifice sprinklers. The glass bulb operating element and special deflector characteristics meet the challenges of quick response extended coverage standards. Pendent Sprinkler VK534 is cULus Listed as standard and quick response. The special Polyester and Electroless Nickel PTFE (ENT) coatings can be used in decorative applications where colors are desired. In addition, ENT coating has been investigated for installation in corrosive atmospheres. See Approval Charts.



2. LISTINGS AND APPROVALS



cULus Listed: Category VNIV

Refer to Approval Chart 1 and Design Criteria cULus Listing requirements.

3. TECHNICAL DATA

Specifications:

Minimum Operating Pressure: Refer to the Approval Charts.

Maximum Working Pressure: 175 psi (12 Bar). Factory tested hydrostatically to 500 psi (34.5 bar).

Factory tested hydrostatically to 500 psi (34.5 bar).

Thread size: 3/4" (20 mm) NPT

Nominal K-Factor: 11.2 U.S. (161.3 metric†)

† Metric K-factor measurement shown is in Bar. When pressure is measured in kPa, divide the metric K-factor shown by 10.0.

Glass-bulb fluid temperature rated to -65 °F (-55 °C)

Overall Length: 2-3/8" (61 mm)

Material Standards:

Sprinkler Frame: Brass UNS-C84400

Deflector: Brass UNS-C26000

Bulb: Glass, nominal 3 mm diameter

Belleville Spring Sealing Assembly: Nickel Alloy, coated on both sides with PTFE Tape

Screw: Brass UNS-C36000

Pip Cap and Insert Assembly: Copper UNS-C11000 and Stainless Steel
UNS-S30400

For Polyester Coated Sprinklers: Belleville Spring-Exposed

For ENT Coated Sprinkler: Belleville Spring-Exposed, Screw and Pipcap-
ENT plated.

Ordering Information: (Also refer to the current Viking price list.)

Order Viking EC/QREC Pendent Sprinkler VK534 by first adding the appropriate suffix for the sprinkler finish and then the appropriate suffix for the temperature rating to the sprinkler base part number.

Finish Suffix: Brass = A, Chrome = F, White Polyester = M-/W, Black Polyester = M-/B, and ENT = JN

Temperature Suffix: 135 °F (57 °C) = A, 155 °F (68 °C) = B, 175 °F (79 °C) = D, 200 °F (93 °C) = E, and 286 °F (141 °C) = G

For example, sprinkler VK534 with a Brass finish and a 155 °F (68 °C) temperature rating = Part No. 08340AB

Available Finishes And Temperature Ratings:

Refer to Table 1.

Accessories: (Also refer to the "Sprinkler Accessories" section of the Viking data book.)

Sprinkler Wrenches:

A. Standard Wrench: Part No. 05118CW/B (available since 1981)

B. Wrench for recessed pendent sprinkler: Part No. 11663W/B** (available since 2001)

**A 1/2" ratchet is required (not available from Viking).

Sprinkler Cabinets:

A. Six-head capacity: Part No. 01724A (available since 1971)

B. Twelve-head capacity: Part No. 01725A (available since 1971)

Viking Technical Data may be found on
The Viking Corporation's Web site at
<http://www.vikinggroupinc.com>.
The Web site may include a more recent
edition of this Technical Data Page.



TECHNICAL DATA

**STANDARD/QUICK RESPONSE
EXTENDED COVERAGE
PENDENT SPRINKLER
VK534 (K11.2)**

The Viking Corporation, 210 N Industrial Park Drive, Hastings MI 49058

Telephone: 269-945-9501 Technical Services: 877-384-5464 Fax: 269-818-1680 Email: techsvcs@vikingcorp.com

4. INSTALLATION

Refer to appropriate NFPA Installation Standards.

5. OPERATION

During fire conditions, the heat-sensitive liquid in the glass bulb expands, causing the glass to shatter, releasing the pip cap and sealing spring assembly. Water flowing through the sprinkler orifice strikes the sprinkler deflector, forming a uniform spray pattern to extinguish or control the fire.

6. INSPECTIONS, TESTS AND MAINTENANCE

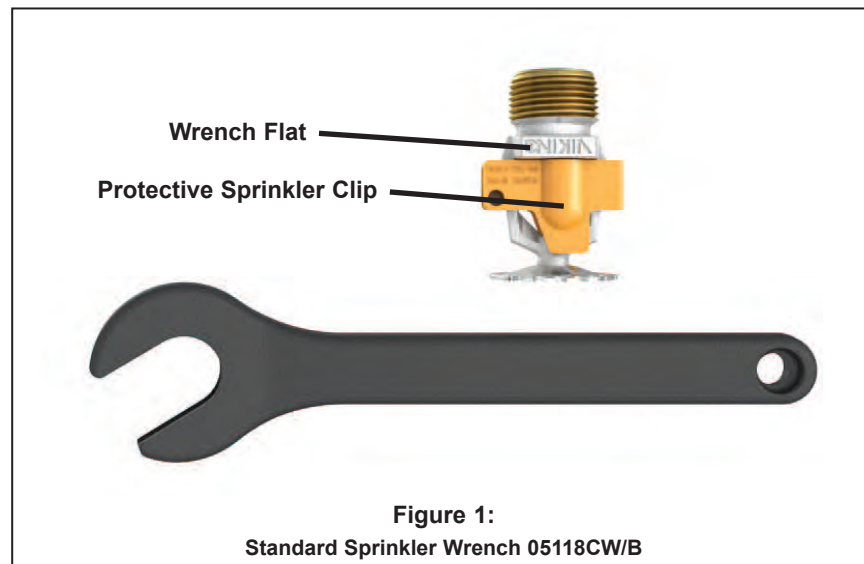
Refer to NFPA 25 for Inspection, Testing and Maintenance requirements.

7. AVAILABILITY

Viking EC/QREC Pendent Sprinkler VK534 is available through a network of domestic and international distributors. See The Viking Corporation web site for the closest distributor or contact The Viking Corporation.

8. GUARANTEE

For details of warranty, refer to Viking's current list price schedule or contact Viking directly.





TECHNICAL DATA

**STANDARD/QUICK RESPONSE
EXTENDED COVERAGE
PENDENT SPRINKLER
VK534 (K11.2)**

The Viking Corporation, 210 N Industrial Park Drive, Hastings MI 49058
 Telephone: 269-945-9501 Technical Services: 877-384-5464 Fax: 269-818-1680 Email: techsvcs@vikingcorp.com

TABLE 1: AVAILABLE SPRINKLER TEMPERATURE RATINGS AND FINISHES

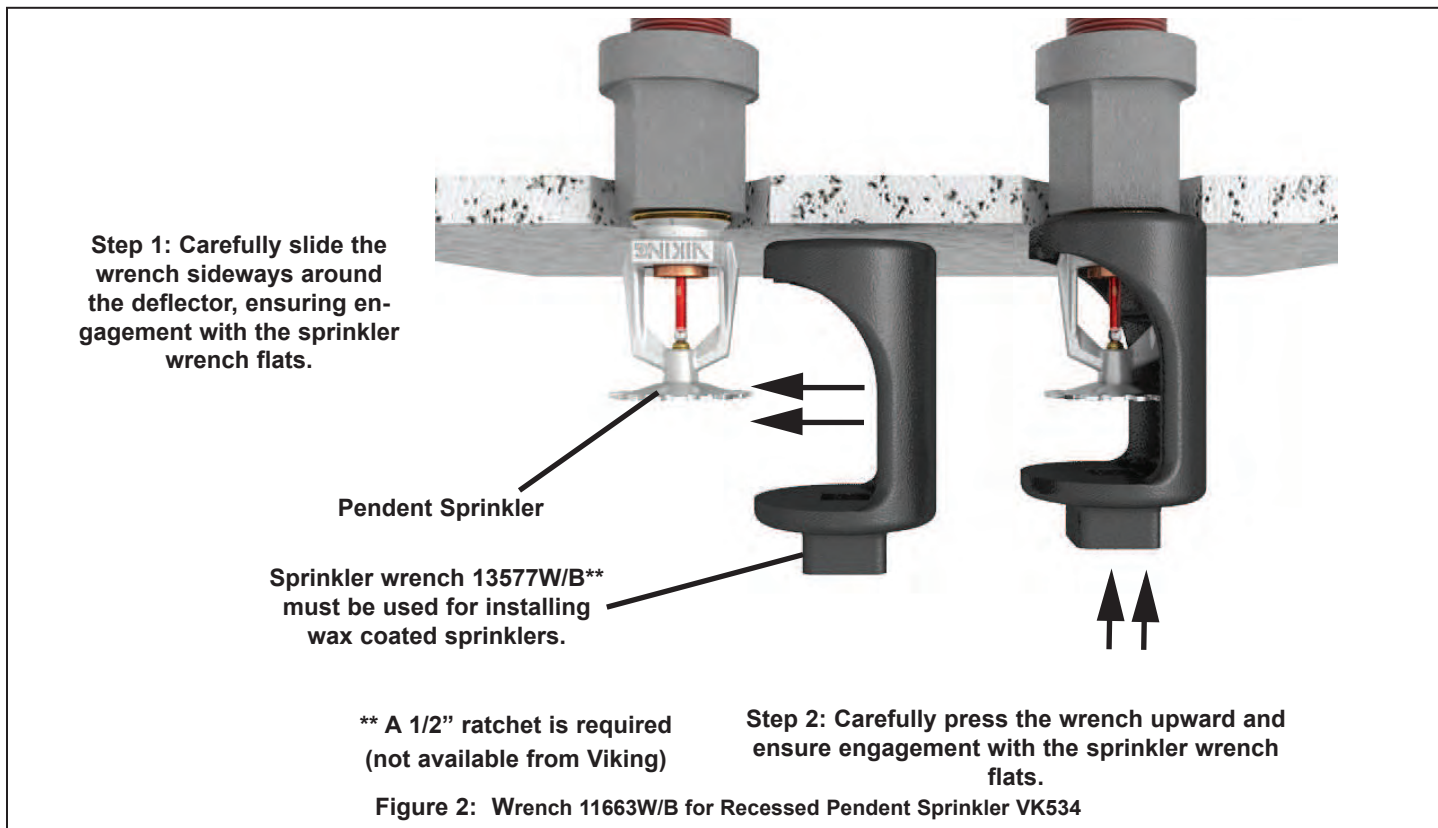
Sprinkler Temperature Classification	Sprinkler Nominal Temperature Rating ¹	Maximum Ambient Ceiling Temperature ²	Bulb Color
Ordinary	135 °F (57 °C)	100 °F (38 °C)	Orange
Ordinary	155 °F (68 °C)	100 °F (38 °C)	Red
Intermediate	175 °F (79 °C)	150 °F (65 °C)	Yellow
Intermediate	200 °F (93 °C)	150 °F (65 °C)	Green
High	286 °F (141 °C)	225 °F (107 °C)	Blue


Sprinkler Finishes: Brass, Chrome, White Polyester³, Black Polyester³, and ENT

Corrosion-Resistant Coatings⁴: ENT

Footnotes

- ¹ The sprinkler temperature rating is stamped on the deflector.
- ² Based on NFPA-13. Other limits may apply, depending on fire loading, sprinkler location, and other requirements of the Authority Having Jurisdiction. Refer to specific installation standards.
- ³ For automatic sprinklers, the coatings indicated are applied to the exposed exterior surfaces only. Note that the spring is exposed on sprinklers with Polyester coatings.
- ⁴ The corrosion-resistant coatings have passed the standard corrosion test required by the approving agencies indicated in the Approval Chart. These tests cannot and do not represent all possible corrosive environments. Prior to installation, verify through the end-user that the coatings are compatible with or suitable for the proposed environment. For ENT sprinklers, all exposed surfaces and the waterway are coated, but note that the spring is exposed.



	<h2 style="margin: 0;">TECHNICAL DATA</h2>	<h3 style="margin: 0;">STANDARD/QUICK RESPONSE EXTENDED COVERAGE PENDENT SPRINKLER VK534 (K11.2)</h3>
---	--	---

The Viking Corporation, 210 N Industrial Park Drive, Hastings MI 49058
 Telephone: 269-945-9501 Technical Services: 877-384-5464 Fax: 269-818-1680 Email: techsvcs@vikingcorp.com

Approval Chart 1 (UL)								
SR/QR EC Pendent Sprinkler VK534								
Sprinkler Base Part Number ¹	SIN	NPT Thread Size		Nominal K-Factor		Maximum Water Working Pressure	Overall Length	
		Inches	mm	U.S.	metric ²		Inches	mm
08340 Pendent	VK534	3/4	20	11.2	161.3	175 psi (12 Bar)	2-5/16	59
Max. Sprinkler Spacing (L x W ⁷)	Maximum Area per Sprinkler	Minimum Water Supply Requirements ⁵					Listings and Approvals ³ (Refer also to UL Design Criteria)	
		Light Hazard		Ordinary Hazard Group I	Ordinary Hazard Group II			
		Flow / Pressure		Flow / Pressure	Flow / Pressure		cULus ⁴	
Standard Response								
16 ft. x 16 ft. (4.9 m x 4.9 m)	256 ft ² (23.8 m ²)	--		38 gpm @ 11.5 psi (143.9 L/min @ .79 Bar)		51 gpm @ 20.7 psi (193.1 L/min @ 1.43 Bar)	C1X, D1Y, D2Z, C2W	
18 ft. x 18 ft. (5.5 m x 5.5 m)	324 ft ² (30.1 m ²)	--		49 gpm @ 19.1 psi (185.5 L/min @ 1.32 Bar)		65 gpm @ 33.7 psi (246.1 L/min @ 2.32 Bar)	C1X, D1Y, D2Z, C2W	
20 ft. x 20 ft. (6.1 m x 6.1 m)	400 ft ² (37.2 m ²)	--		60 gpm @ 28.7 psi (227.1 L/min @ 1.98 Bar)		80 gpm @ 51.0 psi (302.8 L/min @ 3.52 Bar)	C1X, D1Y, D2Z, C2W	
Quick Response								
12 ft. x 12 ft. (3.7 m x 3.7 m)	144 ft ² (13.4 m ²)	--		30 gpm @ 7.2 psi (113.6 L/min @ .50 Bar)		39 gpm @ 12.1 psi (147.7 L/min @ .84 Bar)	E1Y, E2Z	
14 ft. x 14 ft. (4.3 m x 4.3 m)	196 ft ² (18.2 m ²)	--		30 gpm @ 7.2 psi (113.6 L/min @ .50 Bar)		39 gpm @ 12.1 psi (147.7 L/min @ .84 Bar)	E1Y, E2Z	
16 ft. x 16 ft. (4.9 m x 4.9 m)	256 ft ² (23.8 m ²)	30 gpm @ 7.2 psi (113.6 L/min @ .50 Bar)		--		--	B1Y, F2Z	
18 ft. x 18 ft. (5.5 m x 5.5 m)	324 ft ² (30.1 m ²)	33 gpm @ 8.7 psi (124.9 L/min @ .60 Bar)		--		--	B1Y, F2Z	
20 ft. x 20 ft. (6.1 m x 6.1 m)	400 ft ² (37.2 m ²)	40 gpm @ 12.8 psi (151.4 L/min @ .88 Bar)		--		--	A1Y, G2Z	
Approved Temperature Ratings				Approved Finishes		Approved Escutcheons		
A - 135 °F (57 °C) and 175 °F (79 °C) B - 135 °F (57 °C), 155 °F (68 °C), and 175 °F (79 °C) C - 155 °F (68 °C), 175 °F (79 °C), 200 °F (93 °C), and 286 °F (141 °C) D - 155 °F (68 °C), 175 °F (79 °C), and 200 °F (93 °C) E - 155 °F (68 °C) F - 155 °F (68 °C), and 175 °F (79 °C) G - 175 °F (79 °C)				1 - Brass, Chrome, White Polyester, and Black Polyester 2 - ENT ⁶		W - Standard surface-mounted escutcheons only X - Standard surface-mounted escutcheons or the Micro-fast® Model F-1 Adjustable Escutcheon Y - Standard surface-mounted escutcheons or the Microfast® Model F-1 Adjustable Escutcheon, or recessed with the Micromatic® Model E-1, E-2, or E-3 Recessed Escutcheon Z - Standard surface-mounted escutcheons or the Micromatic Model E-1 Recessed Escutcheon.		
Footnotes								
¹ Part number shown is the base part number. For complete part number, refer to current Viking price list schedule. ² Metric K-factor measurement shown is when pressure is measured in Bar. When pressure is measured in kPa, divide the metric K-factor shown by 10.0. ³ This chart shows listings and approvals available at time of printing. Check with the manufacturer for any additional approvals. ⁴ cULus Listed for use in the U.S. and Canada. ⁵ To determine "Minimum Water Supply Requirement" for areas of coverage where length and width of actual sprinkler spacing are not equal, select the "Maximum Sprinkler Spacing" from the chart that is equal to or greater than the larger of the actual spacing (length or width) dimensions used. Example: When using 10'-6" x 13'-0" sprinkler spacing, provide the "Minimum Water Supply Requirement" listed in the chart for 14'-0" x 14'-0" spacing. For areas of coverage smaller than shown, use the "Minimum Water Supply Requirement" in the appropriate hazard group for the next larger area listed. The distance from sprinklers to walls shall not exceed one-half the "Maximum Sprinkler Spacing" listed for the "Minimum Water Supply Requirement" used. ⁶ cULus Listed as corrosion-resistant.								



TECHNICAL DATA

**STANDARD/QUICK RESPONSE
EXTENDED COVERAGE
PENDENT SPRINKLER
VK534 (K11.2)**

The Viking Corporation, 210 N Industrial Park Drive, Hastings MI 49058

Telephone: 269-945-9501 Technical Services: 877-384-5464 Fax: 269-818-1680 Email: techsvcs@vikingcorp.com

DESIGN CRITERIA - UL

(Also refer to Approval Chart 1.)

cULus Listing Requirements:

EC-ELO Pendent Sprinkler VK534 is cULus Listed as indicated in Approval Chart 1 for installation in accordance with the latest edition of NFPA 13 for extended coverage pendent spray sprinklers as indicated below:

- The minimum water supplies and maximum areas of coverage shown in Approval Chart 1 are designed to provide the following design densities: 0.10 gpm/ft² (4.1 mm/min) for Light Hazard densities; 0.15 gpm/ft² (6.1 mm/min) for Ordinary-Hazard Group I densities; 0.2 gpm/ft.² (8.1 mm/min) for Ordinary-Hazard Group II densities.
- The sprinkler installation rules contained in NFPA 13 for extended coverage pendent spray sprinklers must be followed.
- Viking EC-ELO Pendent Sprinklers are cULus Listed for use in unobstructed construction, and noncombustible obstructed construction consisting of solid steel and/or concrete beams as defined in the latest edition of NFPA 13.
- Ceiling slope not to exceed 2/12 (9.5°).

Also, Viking ECOH-ELO Pendent Sprinkler VK534 is specifically cULus Listed for Ordinary Hazard Occupancies:

- For non-combustible obstructed construction within trusses or bar joists having non-combustible web members greater than 1" (25.4 mm) when applying the 4 times obstruction criteria rule as defined in NFPA 13 under "Obstructions to Sprinkler Discharge Pattern Development".
- For installation under concrete tees when installed as follows:
 1. The stems of the concrete tee construction must be spaced between 3 ft (0.9 m) and 7 ft-6 in (2.3 m) on center. The depth of the concrete tees must not exceed 30 in (762 mm). The maximum permitted concrete tee length is 32 ft (9.8 m). However, where the concrete tee length exceeds 32 ft (9.8 m), non-combustible baffles, equal in height to the depth of the tees, can be installed so that the space between the tees does not exceed 32 ft (9.8 m).
 2. The sprinkler deflector is to be located in a horizontal plane at or above 1" (25.4 mm) below the bottom of the concrete tee stems.

IMPORTANT: Always refer to Bulletin Form No. F_091699 - Care and Handling of Sprinklers. Also refer to pages EC1-3 for general care, installation, and maintenance information. Viking sprinklers are to be installed in accordance with the latest edition of Viking technical data, the appropriate standards of NFPA, LPCB, APSAD, VdS or other similar organizations, and also with the provisions of governmental codes, ordinances, and standards, whenever applicable.



TECHNICAL DATA

STANDARD/QUICK RESPONSE
EXTENDED COVERAGE
PENDENT SPRINKLER
VK534 (K11.2)

The Viking Corporation, 210 N Industrial Park Drive, Hastings MI 49058
Telephone: 269-945-9501 Technical Services: 877-384-5464 Fax: 269-818-1680 Email: techsvcs@vikingcorp.com

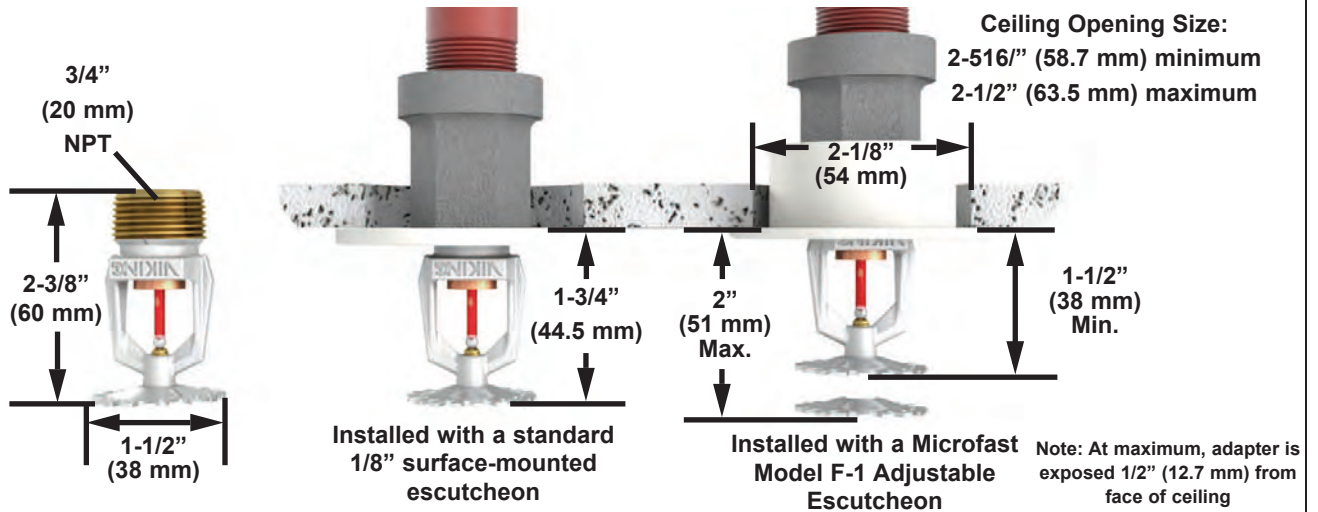


Figure 3: Sprinkler Dimensions with a Standard Escutcheon and the Model F-1 Adjustable Escutcheon

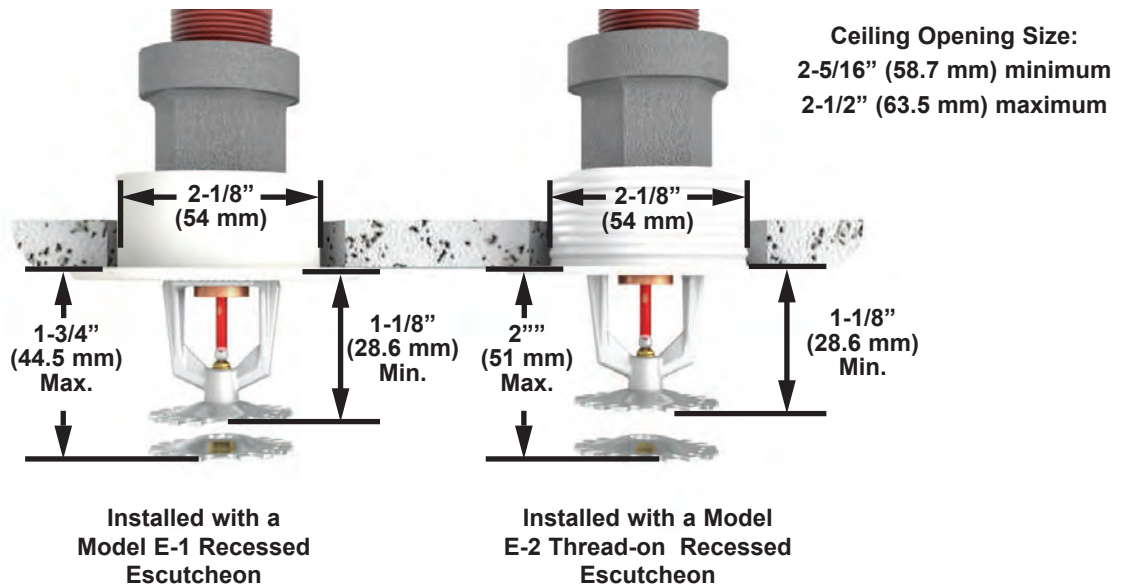


Figure 4: Sprinkler Dimensions with the Model E-1 and E-2 Recessed Escutcheons

SPECIFICATIONS

FLOW SWITCH

Red tamper proof switch housing with flow paddle.
Adjustable pneumatic retard setting from 0 to 70 seconds.
Two single pole, double throw microswitches to operate separate circuits, 120 Volt A.C. UL Listed for schedule 10 and 40 steel water pipe. Type and size as selected by model number.

MODEL SELECTION

FLOW SWITCHES

- 6201 2" For Steel Tube
- 6202 2-1/2" For Steel Tube
- 6203 3" For Steel Tube
- 6204 3-1/2" For Steel Tube
- 6205 4" For Steel Tube
- 6206 5" For Steel Tube
- 6207 6" For Steel Tube
- 6208 8" For Steel Tube
- 6211 2" For Copper Tube
- 6212 2-1/2" For Copper Tube
- 6216 Tee Type with Retard
- 6217 Tee Type without Retard

SUPERVISORY SWITCHES

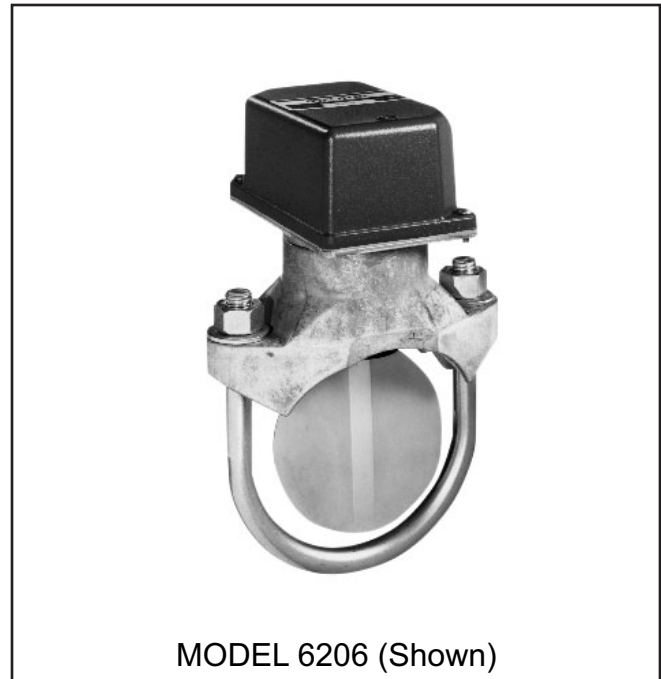
- 6220 For OS&Y Gate valves
- 6222 For Sprinkler System Valves
- 6223 For Post Indicator Type Valves & Regulating Valves

ACCESSORIES

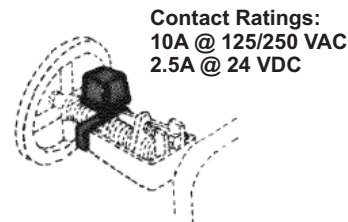
- 6230 Bell
 - 12 Volts 24 Volts
- 6235 Bell Guard
- 6240 Pressure Gauge (UL Listed)

PRODUCT OPTIONS

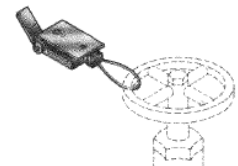
"NO AVAILABLE OPTIONS"



MODELS



**SUPERVISORY SWITCH
MODEL 6220**



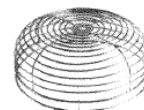
**SUPERVISORY SWITCH
MODEL 6222**



**SUPERVISORY SWITCH
MODEL 6223**



**BELL
MODEL 6230**



**BELL GUARD
MODEL 6235**



**PRESSURE GAUGE
MODEL 6240**

**Contact Ratings:
10A @ 125/250 VAC
2.5A @ 24 VDC**

**Contact Ratings:
10A @ 125/250 VAC
2.5A @ 24 VDC**

Call Potter Roemer - Fire Pro for current listings and approvals. Dimensions are subject to manufacturer's tolerance and may change without notice. Potter Roemer - Fire Pro assumes no responsibility for use of void or superseded data. © Copyright Potter Roemer - Fire Pro, Member of Morris Group International™ Please visit potterroemer.com for most current specifications.

6201-6240 SERIES Date: 09/22/15

MEMBERSHIP



**FIRE EQUIPMENT
MANUFACTURERS'
ASSOCIATION**

ONFSA
NATIONAL IRRE SPRINKLER ASSOCIATION, INC.



CASPE
American Society of
Plumbing Engineers



POTTER ROEMER/FIRE PRO

Headquarters:
P.O. Box 3527
City of Industry, CA
91744 U.S.A.
Los Angeles Area
800-366-3473
626-855-4890

Also in:
New York (800) 526-4592
Chicago (800) 547-3473
Atlanta (800) 762-0542
Miami (866) 961-3473
Dallas (866) 644-3473

www.potterroemer.com



UL, ULC, and FM Approved

Sizes Available: 6" (150mm), 8" (200mm) and 10" (250mm)

Voltages Available: 24VAC
120VAC
12VDC (10.2 to 15.6) Polarized
24VDC (20.4 to 31.2) Polarized

Service Use: Fire Alarm
General Signaling
Burglar Alarm

Environment: Indoor or outdoor use (See Note 1)
-40° to 150°F (-40° to 66°C)
(Outdoor use requires weatherproof backbox.)

Termination: AC Bells - 4 No. 18 AWG stranded wires
DC Bells - Terminal strip

Finish: Red powder coating

Optional: Model BBK-1 weatherproof backbox
Model BBX-1 deep weatherproof backbox

These vibrating type bells are designed for use as fire, burglar or general signaling devices. They have low power consumption and high decibel ratings. The unit mounts on a standard 4" (101mm) square electrical box for indoor use or on a model BBK-1 weatherproof backbox or BBX-1 deep weatherproof backbox for outdoor applications. Weatherproof backbox model BBK-1, Stock No. 1500001.

Notes:

1. Minimum dB ratings are calculated from integrated sound pressure measurements made at Underwriters Laboratories as specified in UL Standard 464. UL temperature range is -30° to 150°F (-34° to 66°C).
2. Typical dB ratings are calculated from measurements made with a conventional sound level meter and are indicative of output levels in an actual installation.
3. ULC only applies to MBA DC bells.

Size inches (mm)	Voltage	Model Number	Stock Number	Current (Max.)	Typical dB at 10 ft. (3m) (2)	Minimum dB at 10 ft. (3m) (1)
6 (150)	12VDC	MBA-6-12	1750070	.12A	85	76
8 (200)	12VDC	MBA-8-12	1750080	.12A	90	77
10 (250)	12VDC	MBA-10-12	1750060	.12A	92	78
6 (150)	24VDC	MBA-6-24	1750100	.06A	87	77
8 (200)	24VDC	MBA-8-24	1750110	.06A	91	79
10 (250)	24VDC	MBA-10-24	1750090	.06A	94	80
6 (150)	24VAC	PBA246	1806024*	.17A	91	78
8 (200)	24VAC	PBA248	1808024*	.17A	94	77
10 (250)	24VAC	PBA2410	1810024*	.17A	94	78
6 (150)	120VAC	PBA1206	1806120*	.05A	92	83
8 (200)	120VAC	PBA1208	1808120*	.05A	99	84
10 (250)	120VAC	PBA12010	1810120*	.05A	99	86

All DC bells are polarized and have built-in transient protection.

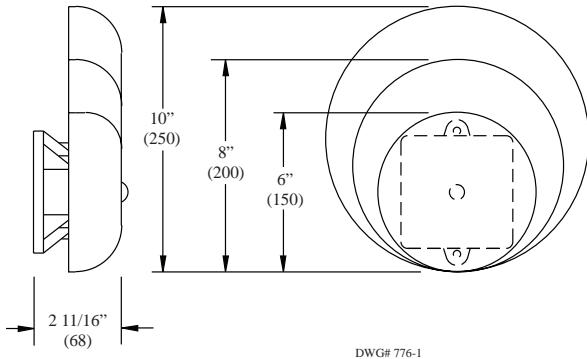
* Does not have ULC listing.

⚠ WARNING

In outdoor or wet installations, bell must be mounted with weatherproof backbox, BBK-1 or BBX-1. Standard electrical boxes will not provide a weatherproof enclosure. If the bell and/or assembly is exposed to moisture, it may fail or create an electrical hazard.

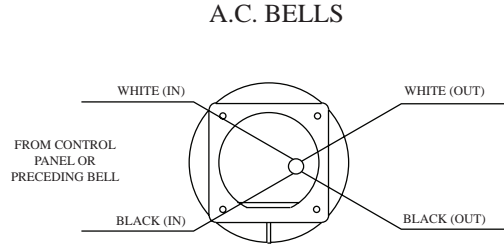
Bells Dimensions Inches (mm)

Fig. 1



Wiring (rear view)

Fig. 3



CAUTION:
WHEN ELECTRICAL SUPERVISION IS REQUIRED USE IN AND OUT LEADS AS SHOWN.

NOTES:

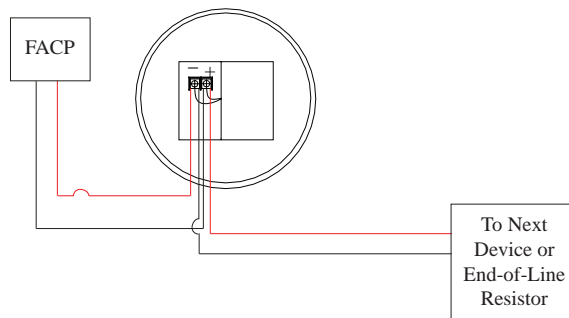
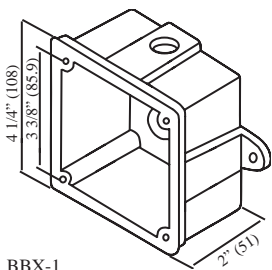
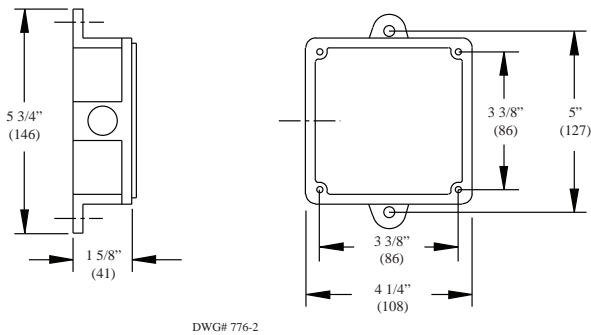
1. WHEN USING AC BELLS, TERMINATE EACH EXTRA WIRE SEPARATELY AFTER LAST BELL.
2. END-OF-LINE RESISTOR IS NOT REQUIRED ON AC BELLS.

DWG# 776-3

Weatherproof Backbox Dimensions Inches (mm)

Fig. 2

Box has one threaded 1/2" conduit entrance



Installation

1. The bell shall be installed in accordance with NFPA 13, 72, or local AHJ. The top of the device shall be no less than 90" AFF and not less than 6" below the ceiling.
2. Remove the gong.
3. Connect wiring (see Fig. 3).
4. Mount bell mechanism to backbox (bell mechanism must be mounted with the striker pointing down).
5. Reinstall the gong (be sure that the gong positioning pin, in the mechanism housing, is in the hole in the gong).
6. Test all bells for proper operation and observe that they can be heard where required (bells must be heard in all areas as designated by the authority having jurisdiction).

⚠ WARNING

Failure to install striker down will prevent bell from operating.

VALVES

300 lb. WWP UL/FM Butterfly Valves

Fire Protection Valve • Grooved Mechanical Style • Nylon Coated Ductile Iron Body • Extended Neck • Elastomer Encapsulated Disc • Internal Supervisory Switches Standard on -8 Version • Compatible with IPS Pipe

300 PSI/20.7 Bar Non-Shock Cold Water 2½" - 8"
175 PSI/12.1 Bar Non-Shock Cold Water 10"

UL/ULC LISTED • FM APPROVED • 2½" - 10" UL LISTED FOR INDOOR AND OUTDOOR SERVICE • CALIFORNIA STATE FIRE MARSHALL LISTING NO. 7770-1243:101 • APPROVED BY THE NEW YORK CITY MEA 9-97-E, VOL.2 WHEN ASSEMBLED WITH APPROPRIATE NYC INDICATOR FLAG

MATERIAL LIST

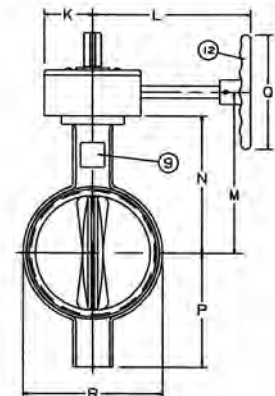
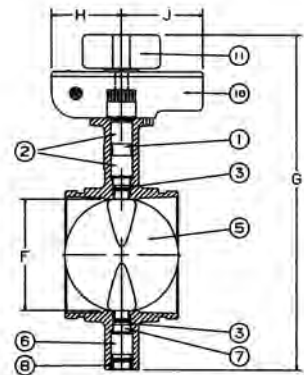
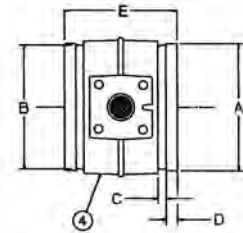
PART	SPECIFICATION
1. Upper Stem	Stainless Steel ASTM A582 Type 416
2. Upper Bushing	PTFE Bronze Sintered on Steel
3. "O" Ring	EPDM
4. Body	Ductile Iron ASTM A395 with Polyamide Coating
5. Disc	Ductile Iron ASTM A395 with EPDM Encapsulation
6. Lower Bushing	PTFE Bronze Sintered on Steel
7. Lower Stem	Stainless Steel ASTM A582 Type 416
8. Dust Plug	PVC
9. Nameplate	Aluminum
10. Gear Operator	Cast Iron and Steel
11. Indicator Flag	Cast Iron
12. Handwheel	Cast Iron

*-8N version has two factory mounted internal supervisory switches.
-4N version is gear operated only
Uses NIBCO model #TS-4 Switch Kit.
Polyamide coating has NSF certification.



GD-1765-8N
10"
(not shown)

GD-4765-8N*
Grooved
2½" thru 8"



DIMENSIONS—WEIGHTS—QUANTITIES

Size	Dimensions																
	A		B		C		D		E		F		G		H		
In.	mm.	In.	mm.	In.	mm.	In.	mm.	In.	mm.	In.	mm.	In.	mm.	In.	mm.		
2½	65	2.88	73	2.72	69	0.31	8	0.63	16	3.85	98	2.42	61	11.94	303	2.91	74
3 O.D.	76.1	3.00	76	2.84	72	0.31	8	0.63	16	3.85	98	2.42	61	11.94	303	2.91	74
3	80	3.50	89	3.34	85	0.31	8	0.63	16	3.85	98	2.86	73	12.48	317	2.91	74
4	100	4.50	114	4.33	110	0.38	10	0.63	16	4.56	116	3.84	98	14.18	360	2.91	74
5	125	5.56	141	5.39	137	0.38	10	0.63	16	5.86	149	4.79	122	15.17	385	2.91	74
6	150	6.63	168	6.45	164	0.38	10	0.63	16	5.86	149	5.73	146	17.54	446	2.91	74
6½ O.D.	165.1	6.51	165	6.32	161	0.38	10	0.63	16	5.86	149	5.73	146	17.54	446	2.91	74
8	200	8.63	219	8.44	214	0.44	11	0.75	19	5.26	134	7.71	196	19.42	493	2.91	74
10	250	10.75	273	10.56	268	0.50	13	0.75	19	6.29	160	9.56	243	24.03	610	3.90	99

Size	Dimensions										Weight								
	J		K		L		M		N		P		Q		R		Lbs.	Kg.	
In.	mm.	In.	mm.	In.	mm.	In.	mm.	In.	mm.	In.	mm.	In.	mm.	In.	mm.	In.	mm.		
2½	65	3.54	90	2.13	54	5.82	148	5.67	144	4.19	106	3.25	83	5.9	150	3.46	88	22	10.0
3 O.D.	76.1	3.54	90	2.13	54	5.82	148	5.67	144	4.19	106	3.25	83	5.9	150	3.46	88	22	10.4
3	80	3.54	90	2.13	54	5.82	148	5.94	151	4.44	113	3.54	90	5.9	150	3.97	101	23	10.4
4	100	3.54	90	2.13	54	7.64	194	6.31	173	5.33	135	4.35	110	5.9	150	5.03	128	28	12.7
5	125	3.54	90	2.13	54	7.64	194	7.32	186	5.83	148	4.84	123	5.9	150	6.27	159	31	14.1
6	150	3.54	90	2.13	54	7.64	194	8.62	219	7.11	181	5.93	151	5.9	150	7.25	184	41	18.6
6½ O.D.	165.1	3.54	90	2.13	54	7.64	194	8.62	219	7.11	181	5.93	151	5.9	150	7.25	184	41	18.6
8	200	3.54	90	2.13	54	7.91	201	9.80	249	8.05	204	6.87	174	9.8	250	9.25	235	53	24.1
10	250	3.98	101	3.03	77	9.49	241	11.61	295	9.86	250	9.17	233	18.0	457	11.80	300	88	40.0

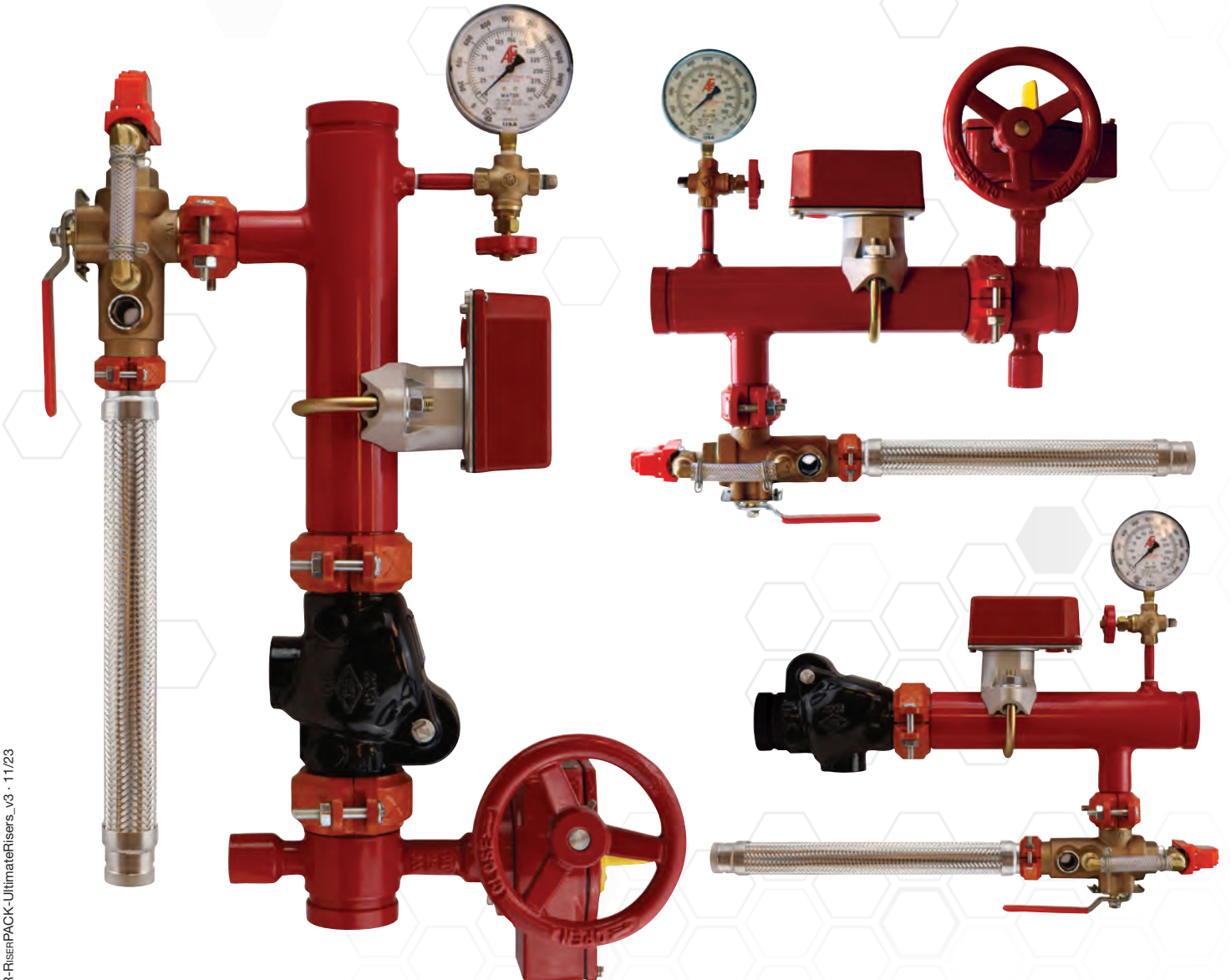




AGF Manufacturing

RISERPACK®

ULTIMATE ASSEMBLIES



Ultimate riser assemblies feature a steel manifold (2"-8"), butterfly valve or check valve (or both), 4" Model 7500 pressure gauge, 3-way universal gauge valve, TEST_{AND}DRAIN valve with drain line, waterflow alarm switch with retard, and a Model 7000L pressure relief valve (175 PSI) with drain trim; other PSI ratings are available (200, 225, or 300). The Model 7000L can be temporarily closed during hydrostatic testing so it doesn't have to be removed from the system. Refer to www.agfmfg.com for important information regarding pressure relief valve operating characteristics and how to choose the correct pressure rating for a specific application.

Ultimate Riser Assembly with Butterfly Valve, Check Valve and Drain Line

- Schedule 10
- Rolled Grooves
- Butterfly Valve
- Check Valve
- 2"-3" use TEST_{AND}DRAIN Model 2511 (Thd x Thd)
- 4"-6" use TEST_{AND}DRAIN Model 2511 (Grv x Grv)
- Flexible Stainless Steel Drain Line
- Includes Pressure Relief Valve with Drain Trim
- Horizontal or Vertical Installation

Available Options:

- Schedule 40 with Cut Groove
- Domestic Check Valve, Butterfly Valve, and Couplings
- Remove the "D" from the Part Number to order without Flexible Drain Line



Ultimate RiserPACK with Butterfly Valve and Check Valve Part Numbers							
Orifice Size		2"	2½"	3"	4"	6"	8"
K-Factor	Fractional						
2.8	3/8"	8457ABCD28	8462ABCD28	8472ABCD28	8482ABCD28	8492ABCD28	8498ABCD28
4.2	7/16"	8457ABCD42	8462ABCD42	8472ABCD42	8482ABCD42	8492ABCD42	8498ABCD42
5.6	1/2"	8457ABCD56	8462ABCD56	8472ABCD56	8482ABCD56	8492ABCD56	8498ABCD56
8.0	17/32"	8457ABCD80	8462ABCD80	8472ABCD80	8482ABCD80	8492ABCD80	8498ABCD80
11.2 (ELO)	5/8"	8457ABCD11	8462ABCD11	8472ABCD11	8482ABCD11	8492ABCD11	8498ABCD11
14.0 (ESFR)	3/4"	N/A	8462ABCD14	8472ABCD14	8482ABCD14	8492ABCD14	8498ABCD14
25.2	-	N/A	N/A	N/A	8482ABCD25	8492ABCD25	8498ABCD25

Ultimate Riser Assembly with Check Valve and Drain Line

- Schedule 10
- Rolled Grooves
- Check Valve
- Flexible Stainless Steel Drain Line

Available Options:

- Schedule 40 with Cut Groove
- Domestic Check Valve and Coupling
- Remove the "D" from the Part Number to order without Flexible Drain Line



Ultimate RiserPACK with Check Valve Part Numbers							
Orifice Size		2"	2½"	3"	4"	6"	8"
K-Factor	Fractional						
2.8	3/8"	8457ACD28	8462ACD28	8472ACD28	8482ACD28	8492ACD28	8498ACD28
4.2	7/16"	8457ACD42	8462ACD42	8472ACD42	8482ACD42	8492ACD42	8498ACD42
5.6	1/2"	8457ACD56	8462ACD56	8472ACD56	8482ACD56	8492ACD56	8498ACD56
8.0	17/32"	8457ACD80	8462ACD80	8472ACD80	8482ACD80	8492ACD80	8498ACD80
11.2 (ELO)	5/8"	8457ACD11	8462ACD11	8472ACD11	8482ACD11	8492ACD11	8498ACD11
14.0 (ESFR)	3/4"	N/A	8462ACD14	8472ACD14	8482ACD14	8492ACD14	8498ACD14
25.2	-	N/A	N/A	N/A	8482ACD25	8492ACD25	8498ACD25

Ultimate Riser Assembly with Butterfly Valve and Drain Line

- Schedule 10
- Rolled Grooves
- Butterfly Valve
- Flexible Stainless Steel Drain Line

Available Options:

- Schedule 40 with Cut Groove
- Domestic Butterfly Valve and Coupling
- Remove the "D" from the Part Number to order without Flexible Drain Line



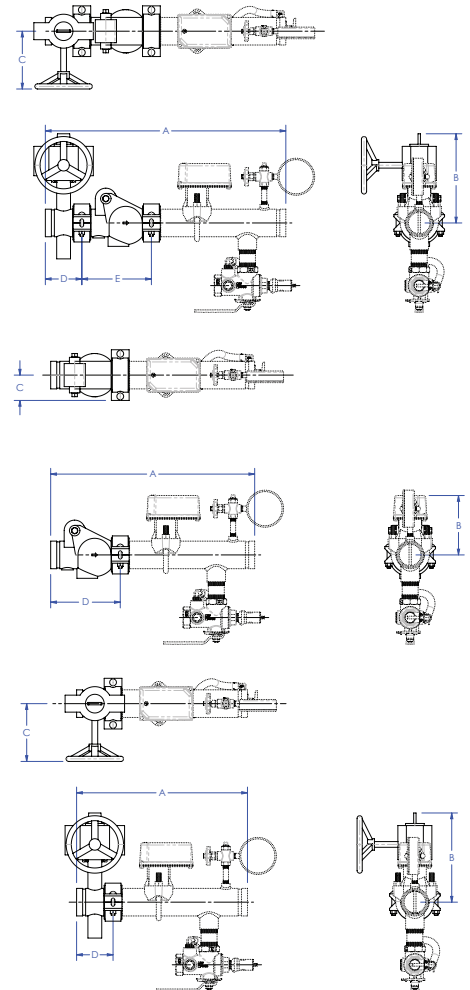
Ultimate RISERPACK with Butterfly Valve Part Numbers							
Orifice Size		2"	2½"	3"	4"	6"	8"
K-Factor	Fractional						
2.8	3/8"	8457ABD28	8462ABD28	8472ABD28	8482ABD28	8492ABD28	8498ABD28
4.2	7/16"	8457ABD42	8462ABD42	8472ABD42	8482ABD42	8492ABD42	8498ABD42
5.6	1/2"	8457ABD56	8462ABD56	8472ABD56	8482ABD56	8492ABD56	8498ABD56
8.0	17/32"	8457ABD80	8462ABD80	8472ABD80	8482ABD80	8492ABD80	8498ABD80
11.2 (ELO)	5/8"	8457ABD11	8462ABD11	8472ABD11	8482ABD11	8492ABD11	8498ABD11
14.0 (ESFR)	3/4"	N/A	8462ABD14	8472ABD14	8482ABD14	8492ABD14	8498ABD14
25.2	-	N/A	N/A	N/A	8482ABD25	8492ABD25	8498ABD25

Dimensions

Butterfly and Check Valve	Size	A	B	C	D	E
	2"	24 ⁷ / ₈ "	5 ¹ / ₈ "	2 ³ / ₄ "	4 ¹ / ₈ "	6 ³ / ₄ "
	2½"	25"	9 ¹ / ₄ "	6"	3 ³ / ₄ "	7 ¹ / ₄ "
	3"	25 ¹ / ₂ "	9 ⁷ / ₈ "	6"	3 ³ / ₄ "	7 ³ / ₄ "
	4"	26 ⁵ / ₈ "	10 ³ / ₄ "	6"	4 ¹ / ₂ "	8 ⁵ / ₈ "
	6"	30 ³ / ₄ "	12"	6"	5 ¹ / ₄ "	11 ¹ / ₂ "
	8"	33 ⁷ / ₈ "	14"	8 ¹ / ₄ "	5 ⁵ / ₈ "	14"

Check Valve	Size	A	B	C	D	E
	2"	20 ³ / ₄ "	6 ¹ / ₄ "	2 ⁵ / ₈ "	6 ³ / ₄ "	-
	2½"	21 ¹ / ₄ "	6 ¹ / ₄ "	2 ⁵ / ₈ "	7 ¹ / ₄ "	-
	3"	21 ³ / ₄ "	6 ¹ / ₂ "	3"	7 ³ / ₄ "	-
	4"	22 ¹ / ₈ "	7"	3 ⁵ / ₈ "	8 ⁵ / ₈ "	-
	6"	25 ¹ / ₂ "	8 ¹ / ₈ "	4 ⁷ / ₈ "	11 ¹ / ₂ "	-
8"	28"	9 ⁵ / ₈ "	6 ¹ / ₄ "	14"	-	

Butterfly Valve	Size	A	B	C	D	E
	2"	18 ¹ / ₄ "	5 ¹ / ₈ "	2 ³ / ₄ "	4 ¹ / ₈ "	-
	2½"	17 ³ / ₄ "	9 ¹ / ₄ "	6"	3 ³ / ₄ "	-
	3"	17 ³ / ₄ "	9 ⁷ / ₈ "	6"	3 ³ / ₄ "	-
	4"	18 ¹ / ₂ "	10 ³ / ₄ "	6"	4 ¹ / ₂ "	-
	6"	19 ¹ / ₄ "	12"	6"	5 ¹ / ₄ "	-
8"	19 ⁷ / ₈ "	14"	8 ¹ / ₄ "	5 ⁵ / ₈ "	-	



Domestic ultimate riser assemblies feature a steel manifold (2"-8"), butterfly valve or check valve (or both), 4" Model 7500 pressure gauge, 3-way universal gauge valve, TEST_{AND}DRAIN valve with drain line, waterflow alarm switch with retard, and a Model 7000L pressure relief valve (175 PSI) with drain trim; other PSI ratings are available (200, 225, or 300). The Model 7000L can be temporarily closed during hydrostatic testing so it doesn't have to be removed from the system. Refer to www.agfmfg.com for important information regarding pressure relief valve operating characteristics and how to choose the correct pressure rating for a specific application.

Domestic Ultimate Riser Assembly with Butterfly Valve, Check Valve and Drain Line

- Schedule 10
- Rolled Grooves
- Butterfly Valve
- Check Valve
- 2"-3" use TEST_{AND}DRAIN Model 2511 (Thd x Thd)
- 4"-6" use TEST_{AND}DRAIN Model 2511 (Grv x Grv)
- Flexible Stainless Steel Drain Line
- Includes Pressure Relief Valve with Drain Trim
- Horizontal or Vertical Installation

Available Options:

- Schedule 40 with Cut Groove
- Remove the "D" from the Part Number to order without Flexible Drain Line



Ultimate RiserPACK with Butterfly Valve and Check Valve Part Numbers							
Orifice Size		2"	2½"	3"	4"	6"	8"
K-Factor	Fractional						
2.8	3/8"	8457ABCD28-USA	8462ABCD28-USA	8472ABCD28-USA	8482ABCD28-USA	8492ABCD28-USA	8498ABCD28-USA
4.2	7/16"	8457ABCD42-USA	8462ABCD42-USA	8472ABCD42-USA	8482ABCD42-USA	8492ABCD42-USA	8498ABCD42-USA
5.6	1/2"	8457ABCD56-USA	8462ABCD56-USA	8472ABCD56-USA	8482ABCD56-USA	8492ABCD56-USA	8498ABCD56-USA
8.0	17/32"	8457ABCD80-USA	8462ABCD80-USA	8472ABCD80-USA	8482ABCD80-USA	8492ABCD80-USA	8498ABCD80-USA
11.2 (ELO)	5/8"	8457ABCD11-USA	8462ABCD11-USA	8472ABCD11-USA	8482ABCD11-USA	8492ABCD11-USA	8498ABCD11-USA
14.0 (ESFR)	3/4"	N/A	8462ABCD14-USA	8472ABCD14-USA	8482ABCD14-USA	8492ABCD14-USA	8498ABCD14-USA
25.2	-	N/A	N/A	N/A	8482ABCD25-USA	8492ABCD25-USA	8498ABCD25-USA

Domestic Ultimate Riser Assembly with Check Valve and Drain Line

- Schedule 10
- Rolled Grooves
- Check Valve
- Flexible Stainless Steel Drain Line

Available Options:

- Schedule 40 with Cut Groove
- Remove the "D" from the Part Number to order without Flexible Drain Line



Ultimate RiserPACK with Check Valve Part Numbers							
Orifice Size		2"	2½"	3"	4"	6"	8"
K-Factor	Fractional						
2.8	3/8"	8457ACD28-USA	8462ACD28-USA	8472ACD28-USA	8482ACD28-USA	8492ACD28-USA	8498ACD28-USA
4.2	7/16"	8457ACD42-USA	8462ACD42-USA	8472ACD42-USA	8482ACD42-USA	8492ACD42-USA	8498ACD42-USA
5.6	1/2"	8457ACD56-USA	8462ACD56-USA	8472ACD56-USA	8482ACD56-USA	8492ACD56-USA	8498ACD56-USA
8.0	17/32"	8457ACD80-USA	8462ACD80-USA	8472ACD80-USA	8482ACD80-USA	8492ACD80-USA	8498ACD80-USA
11.2 (ELO)	5/8"	8457ACD11-USA	8462ACD11-USA	8472ACD11-USA	8482ACD11-USA	8492ACD11-USA	8498ACD11-USA
14.0 (ESFR)	3/4"	N/A	8462ACD14-USA	8472ACD14-USA	8482ACD14-USA	8492ACD14-USA	8498ACD14-USA
25.2	-	N/A	N/A	N/A	8482ACD25-USA	8492ACD25-USA	8498ACD25-USA

Domestic Ultimate Riser Assembly with Butterfly Valve and Drain Line

- Schedule 10
- Rolled Grooves
- Butterfly Valve
- Flexible Stainless Steel Drain Line

Available Options:

- Schedule 40 with Cut Groove
- Remove the "D" from the Part Number to order without Flexible Drain Line)



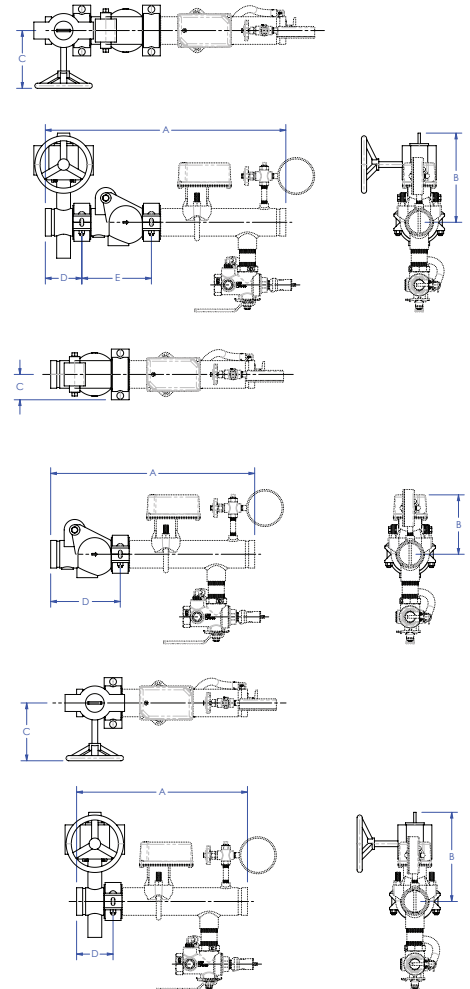
Ultimate RISERPACK with Butterfly Valve Part Numbers							
Orifice Size		2"	2½"	3"	4"	6"	8"
K-Factor	Fractional						
2.8	3/8"	8457ABD28-USA	8462ABD28-USA	8472ABD28-USA	8482ABD28-USA	8492ABD28-USA	8498ABD28-USA
4.2	7/16"	8457ABD42-USA	8462ABD42-USA	8472ABD42-USA	8482ABD42-USA	8492ABD42-USA	8498ABD42-USA
5.6	1/2"	8457ABD56-USA	8462ABD56-USA	8472ABD56-USA	8482ABD56-USA	8492ABD56-USA	8498ABD56-USA
8.0	17/32"	8457ABD80-USA	8462ABD80-USA	8472ABD80-USA	8482ABD80-USA	8492ABD80-USA	8498ABD80-USA
11.2 (ELO)	5/8"	8457ABD11-USA	8462ABD11-USA	8472ABD11-USA	8482ABD11-USA	8492ABD11-USA	8498ABD11-USA
14.0 (ESFR)	3/4"	N/A	8462ABD14-USA	8472ABD14-USA	8482ABD14-USA	8492ABD14-USA	8498ABD14-USA
25.2	-	N/A	N/A	N/A	8482ABD25-USA	8492ABD25-USA	8498ABD25-USA

Dimensions

Butterfly and Check Valve	Size	A	B	C	D	E
	2"	24"	6¼"	4"	3¼"	6¾"
	2½"	25"	6¾"	4"	3¾"	7¼"
	3"	25½"	7"	4"	3¾"	7¾"
	4"	26¾"	10"	5"	4⅝"	8⅝"
	6"	32⅝"	11"	5"	5⅝"	12¾"
	8"	33⅝"	15⅝"	7⅞"	5¼"	14⅝"

Check Valve	Size	A	B	C	D	E
	2"	20¾"	6¼"	2¾"	6¾"	-
	2½"	21¼"	6¼"	3"	7¼"	-
	3"	21¾"	6½"	3⅞"	7¾"	-
	4"	22⅞"	7"	3⅝"	8⅝"	-
	6"	26¾"	8⅞"	5"	12¾"	-
	8"	28⅝"	9⅞"	6¼"	14⅝"	-

Butterfly Valve	Size	A	B	C	D	E
	2"	17¼"	6¼"	4"	3¼"	-
	2½"	17¾"	6¾"	4"	3¾"	-
	3"	17¾"	7"	4"	3¾"	-
	4"	18⅝"	10"	5"	4⅝"	-
	6"	19⅞"	11"	5"	5⅝"	-
	8"	19¼"	15⅝"	7⅞"	5¼"	-



Corner mount ultimate riser assemblies feature a steel manifold (2"-6"), butterfly valve or check valve (or both), 4" Model 7500 pressure gauge, 3-way universal gauge valve, TEST_{AND}DRAIN valve with drain line, waterflow alarm switch with retard, and a Model 7000L pressure relief valve (175 PSI) with drain trim; other PSI ratings are available (200, 225, or 300). The Model 7000L can be temporarily closed during hydrostatic testing so it doesn't have to be removed from the system. Refer to www.agfmfg.com for important information regarding pressure relief valve operating characteristics and how to choose the correct pressure rating for a specific application.

Corner Mount Ultimate Riser Assembly with Butterfly Valve, Check Valve and Drain Line

- Schedule 10
- Rolled Grooves
- Butterfly Valve
- Check Valve
- 2"-3" use TEST_{AND}DRAIN Model 2511 (Thd x Thd)
- 4"-6" use TEST_{AND}DRAIN Model 2511 (Grv x Grv)
- Flexible Stainless Steel Drain Line
- Includes Pressure Relief Valve with Drain Trim
- Horizontal or Vertical Installation

Available Options:

- Schedule 40 with Cut Groove
- Remove the "D" from the Part Number to order without Flexible Drain Line



Ultimate RiserPACK with Butterfly Valve and Check Valve Part Numbers							
Orifice Size		2"	2½"	3"	4"	6"	8"
K-Factor	Fractional						
2.8	3/8"	8657ABCD28	8662ABCD28	8672ABCD28	8682ABCD28	8692ABCD28	8698ABCD28
4.2	7/16"	8657ABCD42	8662ABCD42	8672ABCD42	8682ABCD42	8692ABCD42	8698ABCD42
5.6	1/2"	8657ABCD56	8662ABCD56	8672ABCD56	8682ABCD56	8692ABCD56	8698ABCD56
8.0	17/32"	8657ABCD80	8662ABCD80	8672ABCD80	8682ABCD80	8692ABCD80	8698ABCD80
11.2 (ELO)	5/8"	8657ABCD11	8662ABCD11	8672ABCD11	8682ABCD11	8692ABCD11	8698ABCD11
14.0 (ESFR)	3/4"	N/A	8662ABCD14	8672ABCD14	8682ABCD14	8692ABCD14	8698ABCD14
25.2	-	N/A	N/A	N/A	8682ABCD25	8692ABCD25	8698ABCD25

Corner Mount Ultimate Riser Assembly with Check Valve and Drain Line

- Schedule 10
- Rolled Grooves
- Check Valve
- Flexible Stainless Steel Drain Line

Available Options:

- Schedule 40 with Cut Groove
- Remove the "D" from the Part Number to order without Flexible Drain Line



Ultimate RiserPACK with Check Valve Part Numbers							
Orifice Size		2"	2½"	3"	4"	6"	8"
K-Factor	Fractional						
2.8	3/8"	8657ACD28	8662ACD28	8672ACD28	8682ACD28	8692ACD28	8698ACD28
4.2	7/16"	8657ACD42	8662ACD42	8672ACD42	8682ACD42	8692ACD42	8698ACD42
5.6	1/2"	8657ACD56	8662ACD56	8672ACD56	8682ACD56	8692ACD56	8698ACD56
8.0	17/32"	8657ACD80	8662ACD80	8672ACD80	8682ACD80	8692ACD80	8698ACD80
11.2 (ELO)	5/8"	8657ACD11	8662ACD11	8672ACD11	8682ACD11	8692ACD11	8698ACD11
14.0 (ESFR)	3/4"	N/A	8662ACD14	8672ACD14	8682ACD14	8692ACD14	8698ACD14
25.2	-	N/A	N/A	N/A	8682ACD25	8692ACD25	8698ACD25

Corner Mount Ultimate Riser Assembly with Butterfly Valve and Drain Line

- Schedule 10
- Rolled Grooves
- Butterfly Valve
- Flexible Stainless Steel Drain Line

Available Options:

- Schedule 40 with Cut Groove
- Remove the "D" from the Part Number to order without Flexible Drain Line



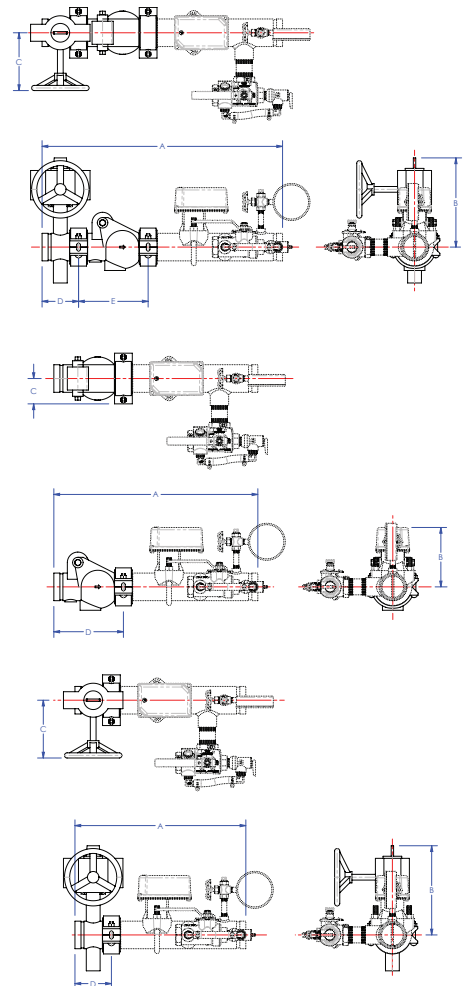
Ultimate RISERPACK with Butterfly Valve Part Numbers							
Orifice Size		2"	2½"	3"	4"	6"	8"
K-Factor	Fractional						
2.8	3/8"	8657ABD28	8662ABD28	8672ABD28	8682ABD28	8692ABD28	8698ABD28
4.2	7/16"	8657ABD42	8662ABD42	8672ABD42	8682ABD42	8692ABD42	8698ABD42
5.6	1/2"	8657ABD56	8662ABD56	8672ABD56	8682ABD56	8692ABD56	8698ABD56
8.0	17/32"	8657ABD80	8662ABD80	8672ABD80	8682ABD80	8692ABD80	8698ABD80
11.2 (ELO)	5/8"	8657ABD11	8662ABD11	8672ABD11	8682ABD11	8692ABD11	8698ABD11
14.0 (ESFR)	3/4"	N/A	8662ABD14	8672ABD14	8682ABD14	8692ABD14	8698ABD14
25.2	-	N/A	N/A	N/A	8682ABD25	8692ABD25	8698ABD25

Dimensions

Butterfly and Check Valve	Size	A	B	C	D	E
	2"	24 ⁷ / ₈ "	5 ¹ / ₈ "	2 ³ / ₄ "	4 ¹ / ₈ "	6 ³ / ₄ "
	2½"	25"	9 ¹ / ₄ "	6"	3 ³ / ₄ "	7 ¹ / ₄ "
	3"	25 ¹ / ₂ "	9 ⁷ / ₈ "	6"	3 ³ / ₄ "	7 ³ / ₄ "
	4"	26 ⁵ / ₈ "	10 ³ / ₄ "	6"	4 ¹ / ₂ "	8 ⁵ / ₈ "
	6"	30 ³ / ₄ "	12"	6"	5 ¹ / ₄ "	11 ¹ / ₂ "
	8"	33 ⁷ / ₈ "	14"	8 ¹ / ₄ "	5 ⁵ / ₈ "	14"

Check Valve	Size	A	B	C	D	E
	2"	20 ³ / ₄ "	6 ¹ / ₄ "	2 ³ / ₈ "	6 ³ / ₄ "	-
	2½"	21 ¹ / ₄ "	6 ¹ / ₄ "	2 ⁵ / ₈ "	7 ¹ / ₄ "	-
	3"	21 ³ / ₄ "	6 ¹ / ₂ "	3"	7 ³ / ₄ "	-
	4"	22 ¹ / ₈ "	7"	3 ⁵ / ₈ "	8 ⁵ / ₈ "	-
	6"	25 ¹ / ₂ "	8 ¹ / ₈ "	4 ⁷ / ₈ "	11 ¹ / ₂ "	-
8"	28"	9 ⁵ / ₈ "	6 ¹ / ₄ "	14"	-	

Butterfly Valve	Size	A	B	C	D	E
	2"	18 ¹ / ₄ "	5 ¹ / ₈ "	2 ³ / ₄ "	4 ¹ / ₈ "	-
	2½"	17 ³ / ₄ "	9 ¹ / ₄ "	6"	3 ³ / ₄ "	-
	3"	17 ³ / ₄ "	9 ⁷ / ₈ "	6"	3 ³ / ₄ "	-
	4"	18 ¹ / ₂ "	10 ³ / ₄ "	6"	4 ¹ / ₂ "	-
	6"	19 ¹ / ₄ "	12"	6"	5 ¹ / ₄ "	-
8"	19 ⁵ / ₈ "	14"	8 ¹ / ₄ "	5 ⁵ / ₈ "	-	



Domestic corner mount ultimate riser assemblies feature a steel manifold (2"-6"), butterfly valve or check valve (or both), 4" Model 7500 pressure gauge, 3-way universal gauge valve, TEST_{AND}DRAIN valve with drain line, waterflow alarm switch with retard, and a Model 7000L pressure relief valve (175 PSI) with drain trim; other PSI ratings are available (200, 225, or 300). The Model 7000L can be temporarily closed during hydrostatic testing so it doesn't have to be removed from the system. Refer to www.agfmfg.com for important information regarding pressure relief valve operating characteristics and how to choose the correct pressure rating for a specific application.

Domestic Corner Mount Ultimate Riser Assembly with Butterfly Valve, Check Valve and Drain Line

- Schedule 10
- Rolled Grooves
- Butterfly Valve
- Check Valve
- 2"-3" use TEST_{AND}DRAIN Model 2511 (Thd x Thd)
- 4"-6" use TEST_{AND}DRAIN Model 2511 (Grv x Grv)
- Flexible Stainless Steel Drain Line
- Includes Pressure Relief Valve with Drain Trim
- Horizontal or Vertical Installation

Available Options:

- Schedule 40 with Cut Groove
- Remove the "D" from the Part Number to order without Flexible Drain Line



Ultimate RiserPACK with Butterfly Valve and Check Valve Part Numbers							
Orifice Size		2"	2½"	3"	4"	6"	8"
K-Factor	Fractional						
2.8	3/8"	8657ABCD28-USA	8662ABCD28-USA	8672ABCD28-USA	8682ABCD28-USA	8692ABCD28-USA	8698ABCD28-USA
4.2	7/16"	8657ABCD42-USA	8662ABCD42-USA	8672ABCD42-USA	8682ABCD42-USA	8692ABCD42-USA	8698ABCD42-USA
5.6	1/2"	8657ABCD56-USA	8662ABCD56-USA	8672ABCD56-USA	8682ABCD56-USA	8692ABCD56-USA	8698ABCD56-USA
8.0	17/32"	8657ABCD80-USA	8662ABCD80-USA	8672ABCD80-USA	8682ABCD80-USA	8692ABCD80-USA	8698ABCD80-USA
11.2 (ELO)	5/8"	8657ABCD11-USA	8662ABCD11-USA	8672ABCD11-USA	8682ABCD11-USA	8692ABCD11-USA	8698ABCD11-USA
14.0 (ESFR)	3/4"	N/A	8662ABCD14-USA	8672ABCD14-USA	8682ABCD14-USA	8692ABCD14-USA	8698ABCD14-USA
25.2	-	N/A	N/A	N/A	8682ABCD25-USA	8692ABCD25-USA	8698ABCD25-USA

Domestic Corner Mount Ultimate Riser Assembly with Check Valve and Drain Line

- Schedule 10
- Rolled Grooves
- Check Valve
- Flexible Stainless Steel Drain Line

Available Options:

- Schedule 40 with Cut Groove
- Remove the "D" from the Part Number to order without Flexible Drain Line



Ultimate RiserPACK with Check Valve Part Numbers							
Orifice Size		2"	2½"	3"	4"	6"	8"
K-Factor	Fractional						
2.8	3/8"	8657ACD28-USA	8662ACD28-USA	8672ACD28-USA	8682ACD28-USA	8692ACD28-USA	8698ACD28-USA
4.2	7/16"	8657ACD42-USA	8662ACD42-USA	8672ACD42-USA	8682ACD42-USA	8692ACD42-USA	8698ACD42-USA
5.6	1/2"	8657ACD56-USA	8662ACD56-USA	8672ACD56-USA	8682ACD56-USA	8692ACD56-USA	8698ACD56-USA
8.0	17/32"	8657ACD80-USA	8662ACD80-USA	8672ACD80-USA	8682ACD80-USA	8692ACD80-USA	8698ACD80-USA
11.2 (ELO)	5/8"	8657ACD11-USA	8662ACD11-USA	8672ACD11-USA	8682ACD11-USA	8692ACD11-USA	8698ACD11-USA
14.0 (ESFR)	3/4"	N/A	8662ACD14-USA	8672ACD14-USA	8682ACD14-USA	8692ACD14-USA	8698ACD14-USA
25.2	-	N/A	N/A	N/A	8682ACD25-USA	8692ACD25-USA	8698ACD25-USA

Domestic Corner Mount Ultimate Riser Assembly with Butterfly Valve and Drain Line

- Schedule 10
- Rolled Grooves
- Butterfly Valve
- Flexible Stainless Steel Drain Line

Available Options:

- Schedule 40 with Cut Groove
- Remove the "D" from the Part Number to order without Flexible Drain Line



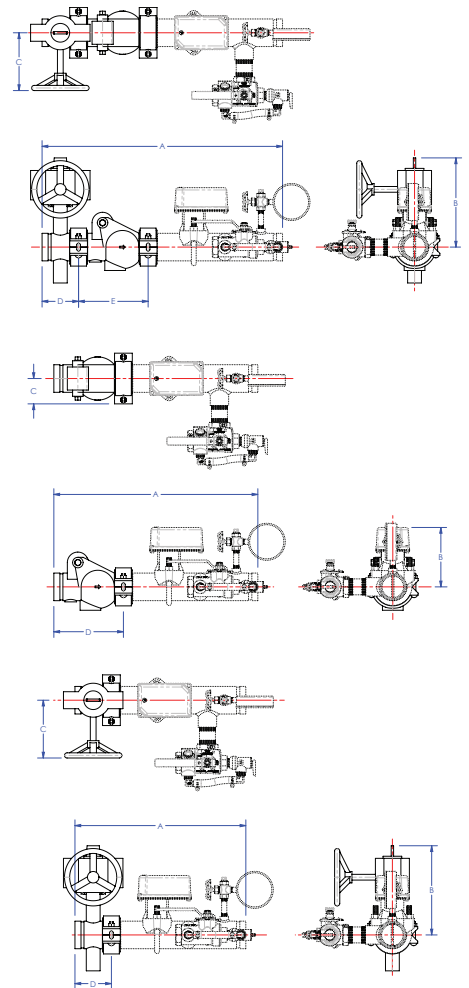
Ultimate RISERPACK with Butterfly Valve Part Numbers							
Orifice Size		2"	2½"	3"	4"	6"	8"
K-Factor	Fractional						
2.8	3/8"	8657ABD28-USA	8662ABD28-USA	8672ABD28-USA	8682ABD28-USA	8692ABD28-USA	8698ABD28-USA
4.2	7/16"	8657ABD42-USA	8662ABD42-USA	8672ABD42-USA	8682ABD42-USA	8692ABD42-USA	8698ABD42-USA
5.6	1/2"	8657ABD56-USA	8662ABD56-USA	8672ABD56-USA	8682ABD56-USA	8692ABD56-USA	8698ABD56-USA
8.0	17/32"	8657ABD80-USA	8662ABD80-USA	8672ABD80-USA	8682ABD80-USA	8692ABD80-USA	8698ABD80-USA
11.2 (ELO)	5/8"	8657ABD11-USA	8662ABD11-USA	8672ABD11-USA	8682ABD11-USA	8692ABD11-USA	8698ABD11-USA
14.0 (ESFR)	3/4"	N/A	8662ABD14-USA	8672ABD14-USA	8682ABD14-USA	8692ABD14-USA	8698ABD14-USA
25.2	-	N/A	N/A	N/A	8682ABD25-USA	8692ABD25-USA	8698ABD25-USA

Dimensions

Butterfly and Check Valve	Size	A	B	C	D	E
	2"	24"	6¼"	4"	3¼"	6¾"
	2½"	25"	6¾"	4"	3¾"	7¼"
	3"	25½"	7"	4"	3¾"	7¾"
	4"	26¾"	10"	5"	4⅝"	8⅝"
	6"	32⅝"	11"	5"	5⅝"	12¾"
	8"	33⅝"	15⅝"	7⅞"	5¼"	14⅞"

Check Valve	Size	A	B	C	D	E
	2"	20¾"	6¼"	2¾"	6¾"	-
	2½"	21¼"	6¼"	3"	7¼"	-
	3"	21¾"	6½"	3⅞"	7¾"	-
	4"	22⅞"	7"	3⅝"	8⅝"	-
	6"	26¾"	8⅞"	5"	12¾"	-
	8"	28⅝"	9⅞"	6¼"	14⅞"	-

Butterfly Valve	Size	A	B	C	D	E
	2"	17¼"	6¼"	4"	3¼"	-
	2½"	17¾"	6¾"	4"	3¾"	-
	3"	17¾"	7"	4"	3¾"	-
	4"	18⅞"	10"	5"	4⅝"	-
	6"	19⅞"	11"	5"	5⅝"	-
	8"	19¼"	15⅝"	7⅞"	5¼"	-



Ultimate RiserPACK Kits for Model 8000

Ultimate RiserPACK Kits are floor control add-ons for model 8000, 8011, and 8611 (commercial steel risers only). They give you the option of adding a butterfly valve, check valve, or butterfly valve and check valve upgrade to your RiserPACK (Ultimate Kits fit both schedule 10 and schedule 40 manifolds). All Ultimate RiserPACK Kit components are UL listed and FM approved. Domestic options available.



Butterfly Valve Kit

Includes: Butterfly Valve and Grooved Coupling

BFV Kit	
Size	Part No.
2"	BFV-20
2½"	BFV-25
3"	BFV-30
4"	BFV-40
6"	BFV-60
8"	BFV-80



Check Valve Kit

Includes: Check Valve and Grooved Coupling

CKV Kit	
Size	Part No.
2"	CKV-20
2½"	CKV-25
3"	CKV-30
4"	CKV-40
6"	CKV-60
8"	CKV-80



Butterfly and Check Valve Kit

Includes: Butterfly Valve, Check Valve, and 2 Grooved Couplings

BFVCKV Kit	
Size	Part No.
2"	BFVCKV-20
2½"	BFVCKV-25
3"	BFVCKV-30
4"	BFVCKV-40
6"	BFVCKV-60
8"	BFVCKV-80

FDL-100

Kit Includes: 1" x 32" Male NPT x Male NPT Drain Line and 1 Union.
Fits 2" RiserPACK Sizes.



FDL-100 Kit	
Part No.	
FDL-100	

FDL-125

Kit Includes: 1¼" x 36" Male NPT x Groove Drain Line and 1 Coupling.
Fits 2½" & 3" RiserPACK Sizes.



FDL-125 Kit	
Part No.	
FDL-125	

FDL-200

Kit Includes: 2" x 48" Groove x Groove Drain Line and 2 Couplings.
Fits 4", 6", & 8" RiserPACK Sizes.



FDL-200 Kit	
Part No.	
FDL-200	

Original Manufacturer's Part Reference Numbers

Butterfly Valve ASC Part Numbers*					
2"	2½"	3"	4"	6"	8"
4324000054	3230000002	3230000004	3230000006	3230000010	3230000012

Check Valve ASC Part Numbers*					
2"	2½"	3"	4"	6"	8"
4323000100	4323000102	4323000104	4323000106	4323000110	4323000112

*Domestic Options Available

NOTE: UL and FM standards for sprinkler system pressure relief valves require relief valves to operate within a range of their ratings. FM requires a relief valve to OPEN at a pressure no less than 85% of their rating and UL requires OPENING at a pressure no greater than 105% of their rating. Both standards require the relief valves to CLOSE within a percentage below OPEN. Choose the relief valve comparing static pressure to 90% of the relief valve's rating to determine the estimated minimum OPENING and 80% of the relief valve's rating for approximate maximum CLOSING. The relief valve should be installed where it is easily accessible for maintenance. Care should be taken that the relief valve CANNOT be isolated from the system when the system is operational. A relief valve should NEVER have a shutoff valve or a plug downstream of its outlet.

USA Patent and Other Patents Pending

Installation Orientation

Horizontal

Vertical

Rating

300 PSI

Compliance

NFPA 13

Approvals

UL/ULC (EX27218, EX4019, EX4533 & EX6266)

FM Approved Components

Domestic Ultimate RISERPACK Kits for Model 8000

Domestic Ultimate RISERPACK Kits are floor control add-ons for model 8000, 8011, and 8611 (commercial steel risers only). They give you the option of adding a butterfly valve, check valve, or butterfly valve and check valve upgrade to your RISERPACK (Ultimate Kits fit both schedule 10 and schedule 40 manifolds). All Ultimate RISERPACK Kit components are UL listed and FM approved. Domestic options available.



Butterfly Valve Kit

Includes: Butterfly Valve and Grooved Coupling

BFV Kit	
Size	Part No.
2"	BFV-20-USA
2½"	BFV-25-USA
3"	BFV-30-USA
4"	BFV-40-USA
6"	BFV-60-USA
8"	BFV-80-USA

FDL-100

Kit Includes: 1" x 32" Male NPT x Male NPT Drain Line and 1 Union.
Fits 2" RISERPACK Sizes.



FDL-100 Kit	
Part No.	
FDL-100-USA	



Check Valve Kit

Includes: Check Valve and Grooved Coupling

CKV Kit	
Size	Part No.
2"	CKV-20-USA
2½"	CKV-25-USA
3"	CKV-30-USA
4"	CKV-40-USA
6"	CKV-60-USA
8"	CKV-80-USA

FDL-125

Kit Includes: 1¼" x 36" Male NPT x Groove Drain Line and 1 Coupling.
Fits 2½" & 3" RISERPACK Sizes.



FDL-125 Kit	
Part No.	
FDL-125-USA	



Butterfly and Check Valve Kit

Includes: Butterfly Valve, Check Valve, and 2 Grooved Couplings

BFVCKV Kit	
Size	Part No.
2"	BFVCKV-20-USA
2½"	BFVCKV-25-USA
3"	BFVCKV-30-USA
4"	BFVCKV-40-USA
6"	BFVCKV-60-USA
8"	BFVCKV-80-USA

FDL-200

Kit Includes: 2" x 48" Groove x Groove Drain Line and 2 Couplings.
Fits 4", 6", & 8" RISERPACK Sizes.



FDL-200 Kit	
Part No.	
FDL-200-USA	

Original Manufacturer's Part Reference Numbers

Butterfly Valve ASC Part Numbers					
2"	2½"	3"	4"	6"	8"
7005015008	7005015024	700501040	700501068	7005015107	7005015123

Check Valve ASC Part Numbers					
2"	2½"	3"	4"	6"	8"
7005010140	7005010157	7005010165	7005010173	7005010199	7005010203

Coupling Part Numbers						
1¼"	2"	2½"	3"	4"	6"	8"
1605012283	1605012309	1605012358	1605012408	1605012457	1605012507	1605012515

NOTE: UL and FM standards for sprinkler system pressure relief valves require relief valves to operate within a range of their ratings. FM requires a relief valve to OPEN at a pressure no less than 85% of their rating and UL requires OPENING at a pressure no greater than 105% of their rating. Both standards require the relief valves to CLOSE within a percentage below OPEN. Choose the relief valve comparing static pressure to 90% of the relief valve's rating to determine the estimated minimum OPENING and 80% of the relief valve's rating for approximate maximum CLOSING. The relief valve should be installed where it is easily accessible for maintenance. Care should be taken that the relief valve CANNOT be isolated from the system when the system is operational. A relief valve should NEVER have a shutoff valve or a plug downstream of its outlet.

Installation Orientation

Horizontal
Vertical

Rating

300 PSI

Compliance

NFPA 13

Approvals

UL/ULC (EX27218, EX4019, EX4533 & EX6266)

FM Approved Components



USA Patent and Other Patents Pending



AGF Manufacturing

100 Quaker Lane • Malvern, PA 19355

Phone: 610-240-4900

Fax: 610-240-4906

orders@agfmfg.com

www.agfmfg.com



Model 1000

TEST AND DRAIN®

Sectional Floor Control Test and Drain Valve

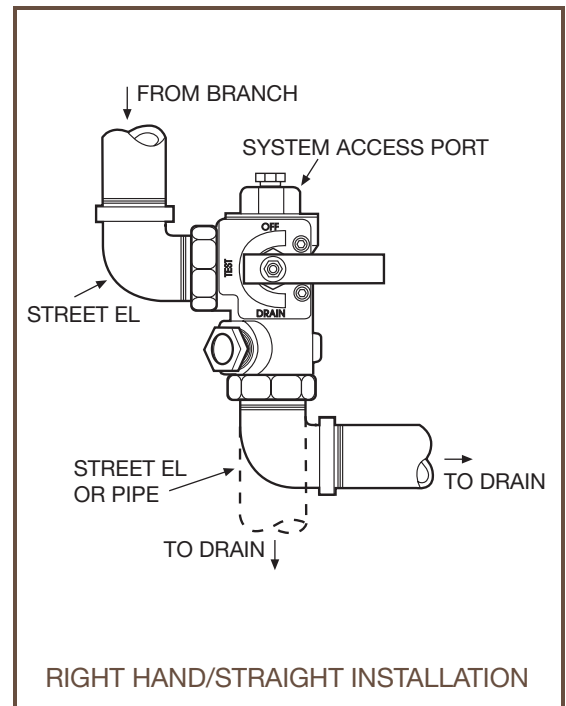


3/4" 1" 1 1/4" 1 1/2" 2"



- The AGF Manufacturing Inc. **Model 1000 TEST AND DRAIN®** provides both the test function and the express drain function for a wet fire sprinkler system.
- The **Model 1000** complies with the requirements of NFPA-13, NFPA-13R, and NFPA-13D.
- The **Model 1000 TEST AND DRAIN®** is a compact single handle ball valve which includes a tamper resistant test orifice and integral tamper resistant sight glasses, and is 300 PSI rated.
- Available in a full range of sizes from 3/4" to 2" NPT and BSPT, with all specifiable orifice sizes 3/8" (2.8K), 7/16" (4.2K), 1/2" (5.6K), 17/32" (8.0K), 5/8" (11.2K, ELO), 3/4" (14.0K, ESFR), and K25 as required by NFPA 13, 2007 Edition (see reverse).
- The orifice size is noted on the indicator plate and the valve features a tapped and plugged port for system access.
- A locking kit is available and can be ordered with the valve to provide vandal resistance or prevent unintentional alarm activation.
- Repair kits including (1) adapter gasket, (1) ball, (2) valve seats, (1) stem packing, and (1) stem washer are available for all **TEST AND DRAIN®** valves. Valve and orifice size must be specified when ordering.

MODEL 1000 - FRONT VIEW, VERTICAL INSTALLATION



Reliability, Versatility, Code Compatibility

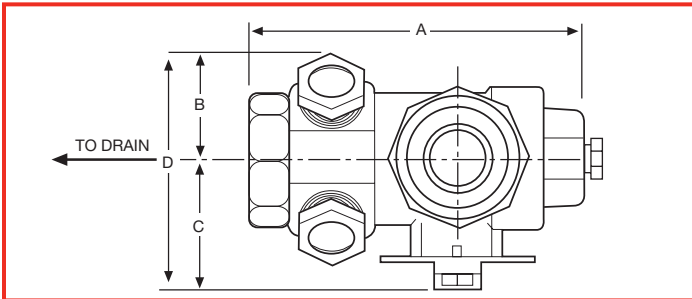


TEST AND DRAIN®

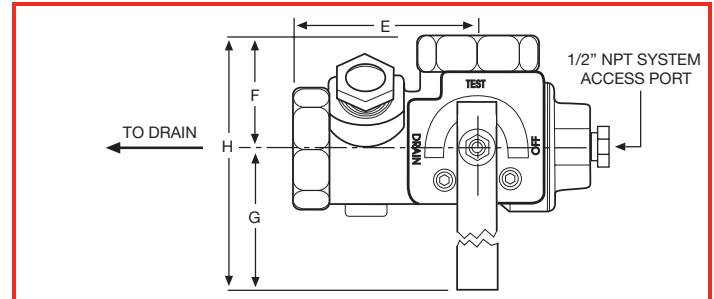
Model 1000

300 PSI Bronze Ball Valve

MODEL 1000 - PLAN VIEW



FRONT VIEW - HORIZONTAL INSTALL



DIMENSIONS

Orifice Size Available: 3/8", 7/16", 1/2", 17/32", ELO (5/8")*, ESFR (3/4")*, & K25**

SIZE	A	B	C	D	E	F	G	H
3/4"	5 1/16" (128 mm)	1 1/2" (37.5 mm)	2 3/16" (57 mm)	3 5/8" (93 mm)	3 3/8" (86 mm)	1 13/16" (46 mm)	4 9/16" (117 mm)	6 3/8" (162.5 mm)
1"	5 1/16" (128 mm)	1 1/2" (37.5 mm)	2 3/16" (57 mm)	3 5/8" (93 mm)	3 3/8" (86 mm)	1 13/16" (46 mm)	4 9/16" (117 mm)	6 3/8" (162.5 mm)
1 1/4"	5 7/16" (163 mm)	1 11/16" (43 mm)	2 9/16" (65 mm)	4 1/4" (108 mm)	3 5/16" (83 mm)	1 15/16" (51 mm)	5 9/16" (141 mm)	5 1/2" (192 mm)
1 1/2"	6 7/16" (163 mm)	1 13/16" (45 mm)	3 1/4" (81.5 mm)	5 1/16" (127 mm)	3 7/8" (99 mm)	2 5/8" (67 mm)	8 1/4" (207 mm)	10 7/8" (274 mm)
2"	6 7/16" (163 mm)	1 13/16" (45 mm)	3 1/4" (81.5 mm)	5 1/16" (127 mm)	3 7/8" (99 mm)	2 5/8" (67 mm)	8 1/4" (207 mm)	10 7/8" (274 mm)

* Available on 1 1/4" to 2" size units only

** Available on 1 1/2" and 2" size units only

THE MODEL 1000 PROVIDES ALL OF THE FOLLOWING...

From the 2007 Edition of NFPA 13

- Chapter 8.16.2.4.1* Provisions shall be made to properly drain all parts of the system.
- Chapter 8.16.2.4.2 Drain connections, interior sectional or floor control valve(s) – shall be provided with a drain connection having a minimum size as shown in Table 8.16.2.4.2.
- & 8.16.2.4.3
- Chapter 8.16.2.4.4 Drains shall discharge outside or to a drain capable of handling the flow of the drain.
- Chapter A.8.17.4.2 (Wet Pipe System) test connection is permitted to terminate into a drain capable of accepting full flow... using an approved sight test connection containing a smooth bore corrosion-resistant orifice giving a flow equivalent to one sprinkler...
- Chapter 8.17.4.2.2 The test connection valve shall be readily accessible.
- Chapter 8.17.4.2.4 shall be permitted to be installed in any location... downstream of the waterflow alarm.
- Chapter 8.17.4.3.1 (Dry Pipe System) a trip test connection not less than 1" in diameter, terminating in a smooth bore corrosion-resistant orifice, to provide a flow equivalent to one sprinkler...
- Chapter 8.17.4.3.2 The trip test connection... with a shutoff valve and plug not less than 1", at least one of which shall be brass.

MATERIALS

- Handle: Steel
- Stem: Rod Brass
- Ball: C.P. Brass
- Body: Bronze
- Valve Seat: Impregnated Teflon®
- Indicator Plate: Steel
- Handle Stop: Steel

APPROVALS

- UL and ULC Listed (EX4019)
- FM Approved
- NYC-BSA No. 720-87-SM



USA Patent # 4741361 and Other Patents Pending



AGF Manufacturing Inc.
 100 Quaker Lane, Malvern, PA 19355
 Phone: 610-240-4900
 Fax: 610-240-4906
 www.testandrain.com

Job Name: _____
 Architect: _____
 Engineer: _____
 Contractor: _____

PIPE & FITTINGS

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.

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	4.260	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.



A CAPARO company

1819 Clarkson Road
 Chesterfield, MO 63017
 (800) 325-4467
 FAX: (636) 537-2645
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



Schedule 10

Sprinkler Pipe

Wheatland's Schedule 10 Sprinkler Pipe is a high quality sprinkler pipe offering you the full range of assurances you require. Schedule 10 Sprinkler Pipe has passed some of the toughest lab tests ever created for sprinkler pipe.

Made in the U.S.A. by Wheatland Tube Company means made to the highest standards for consistent quality.

Specifications and Approvals

Wheatland's schedule 10 Sprinkler Pipe is made from the highest quality steel in one of the nation's most modern and most complete pipe manufacturing plants. Our proprietary mill coating offers you a clean, corrosion and heat resistant surface that outlasts and outperforms standard lacquer coatings. Plus, this coating can be quickly and easily painted without special preparation. Or it may be hot-dipped galvanized to meet FM requirements for dry systems in accordance with the zinc coating specification of ASTM A795 or A53.

Wheatland's Schedule 10 Lightwall Sprinkler Pipe meets or exceeds the following:

- UL Listed
- FM Approved
- ASTM A135, Grade A

Please refer to appropriate documentation for up-to-date listing and approval information. Specifications and descriptions are accurate as known at time of publication and are subject to change without notice.

Specifications										
NPS	Nominal O.D		Nominal I.D		Nominal Wall		Nominal Weight		UL CRR*	Pieces Lift
	in.	mm	in.	mm	in.	mm	lbs./ft.	kg/m		
1 1/4	1.660	42.2	1.442	36.6	.109	2.77	1.81	2.69	7.3	61
1 1/2	1.900	48.3	1.682	42.7	.109	2.77	2.09	3.11	5.8	61
2	2.375	60.3	2.157	54.8	.109	2.77	2.64	3.93	4.7	37
2 1/2	2.875	73.0	2.635	66.9	.120	3.05	3.53	5.26	3.5	30
3	3.500	88.9	3.260	82.8	.120	3.05	4.34	6.46	2.6	19
4	4.500	114.3	4.260	108.2	.120	3.05	5.62	8.37	1.6	19
5	5.563	141.3	5.295	134.5	.134	3.40	7.78	11.58	1.5	13
6	6.625	168.3	6.357	161.5	.134	3.40	9.30	13.85	1.0	10

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

* The CRR is a ratio value used to measure the ability of a pipe to withstand corrosion. Schedule 40 steel pipe is used as the benchmark (value of 1.0).



Wheatland Tube Company

1 Council Avenue, P.O. Box 608 Wheatland, PA 16161-0608

Ph 800.257.8182 Fax 724.346.7260

www.wheatland.com

Schedule 40

Sprinkler Pipe

Wheatland's Schedule 40 Sprinkler Pipe is a high quality sprinkler pipe offering you the full range of assurances you require. Schedule 40 Sprinkler Pipe has passed some of the toughest lab tests ever created for sprinkler pipe.

Made in the U.S.A. by Wheatland Tube Company means made to the highest standards for consistent quality.

Specifications and Approvals

Wheatland's schedule 40 Sprinkler Pipe is made from the highest quality steel in one of the nation's most modern and most complete pipe manufacturing plants. Our proprietary mill coating offers you a clean, corrosion and heat resistant surface that outlasts and outperforms standard lacquer coatings. Plus, this coating can be quickly and easily painted without special preparation. Or it may be hot-dipped galvanized to meet FM requirements for dry systems in accordance with the zinc coating specification of ASTM A795. Schedule 40 is also available as ASTM A 53 Type F, Grade A in NPS 1 - 6 and is UL Listed and FM Approved.

Wheatland's Schedule 40 Standard Wall Sprinkler Pipe meets or exceeds the following:

- UL Listed
- FM Approved
- ASTM A795, Type E, Grade A

Please refer to appropriate documentation for up-to-date listing and approval information. Specifications and descriptions are accurate as known at time of publication and are subject to change without notice.

Specifications										
NPS	Nominal O.D		Nominal I.D		Nominal Wall		Nominal Weight		UL CRR*	Pieces Lift
	in.	mm	in.	mm	in.	mm	lbs./ft.	kg/m		
1"	1.315	33.4	1.049	26.6	.133	3.38	1.68	2.50	1.00	70
1 1/4"	1.660	42.2	1.380	35.1	.140	3.56	2.27	3.39	1.00	51
1 1/2"	1.900	48.3	1.610	40.9	.145	3.68	2.72	4.05	1.00	44
2"	2.375	60.3	2.067	52.5	.154	3.91	3.66	5.45	1.00	30

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

* The CRR is a ratio value used to measure the ability of a pipe to withstand corrosion. Schedule 40 steel pipe is used as the benchmark (value of 1.0).



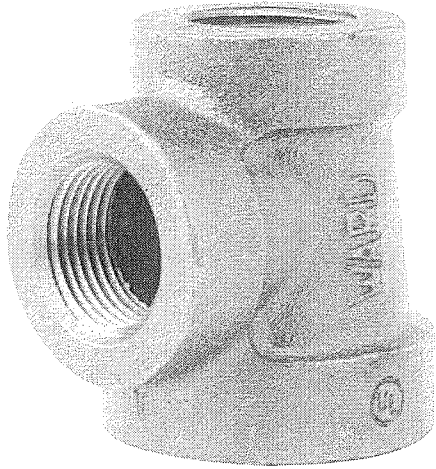
Wheatland Tube Company

1 Council Avenue, P.O. Box 608 Wheatland, PA 16161-0608

Ph 800.257.8182 Fax 724.346.7260

www.wheatland.com

SECTION 6 STANDARD CAST IRON PIPE FITTINGS CLASS 125, 250



The iron from which Class 125 cast iron fittings are made is held to strict formula by careful chemical analysis and control.

Tapping is done on the most modern machines. All tappings are to USA Standards for iron pipe threads. Straightness and correct depth of threads is assured through continuous capable inspection, by careful trained inspectors.

Every fitting is hand sorted and inspected to eliminate defective castings.

WARD fittings are made to specifications published as American National Standards for pipe fittings.

A chamfer is cut or cast in all openings, permitting easy entrance of pipe and preventing damage to the first thread in handling and threading.

Because of the close attention paid to formula control and the use of modern precision equipment we are able to produce castings of rugged strength and the ability to make a water tight seal.

NPS	O.D. of Band (min)	Thread Length (min)	Metal Thickness (min)
1/4	0.97	0.36	0.11
3/8	1.16	0.40	0.12
1/2	1.38	0.47	0.13
3/4	1.67	0.54	0.15
1	1.99	0.62	0.17
1 1/4	2.43	0.71	0.18
1 1/2	2.72	0.74	0.20
2	3.32	0.79	0.22
2 1/2	3.90	0.96	0.24
3	4.66	1.02	0.26
3 1/2	5.24	1.07	0.28
4	5.83	1.12	0.31

TEMPERATURE-PRESSURE RATING

Temp F°	PSI	
	CLASS 125	CLASS 250
-20 TO 150	175	400
200	165	370
250	150	340
300	140	310
350	125 (Note1)	300
400	—	250 (Note 2)

Notes:

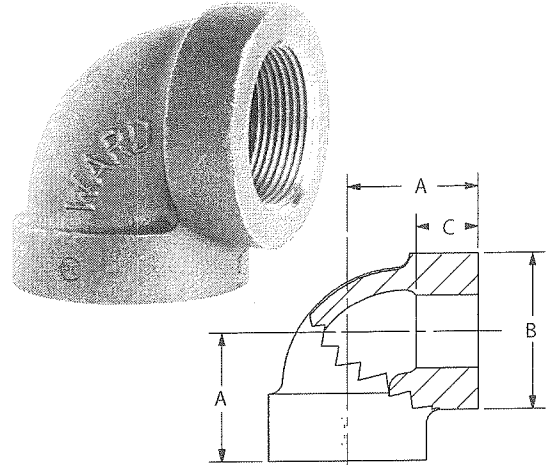
1) Permissible for service temperature up to 360° F reflecting temperature of saturated steam at 125 psi.

2) Permissible for service temperature up to 406° F reflecting temperature of saturated steam at 250 psig.

Material: ASTM A126 Class A Minimum
Dimensions: ANSI/ASME B16.4
 ANSI/ASME B1.20.1
Pressure Ratings: ANSI/ASME B16.4
Coatings: ASTM A153
 ASTM B633
Additional Specifications: UL, ULC, FM, NSF 61 and NSF 61 Annex G where applicable

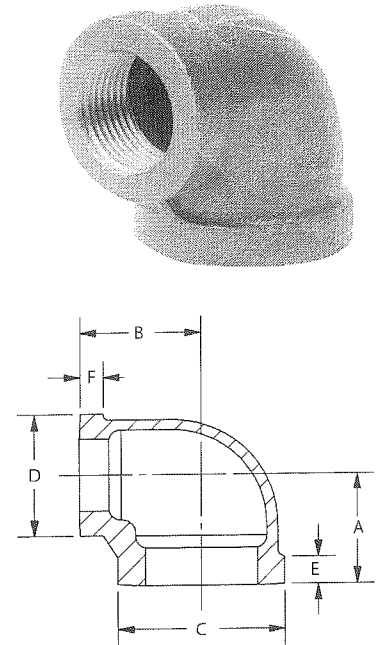
CAST IRON 90° STRAIGHT ELL CLASS 125

NPS	Center to End A	Outside Dia. of Band B (min)	Thread Length C (min)	Take Out
1/4	0.81	0.93	0.32	0.408
3/8	0.95	1.12	0.36	0.5
1/2	1.12	1.34	0.43	0.58
3/4	1.31	1.63	0.50	0.76
1	1.50	1.95	0.58	0.81
1 1/4	1.75	2.39	0.67	1.04
1 1/2	1.94	2.68	0.70	1.21
2	2.25	3.28	0.75	1.49
2 1/2	2.70	3.86	0.92	1.56
3	3.08	4.62	0.98	1.88
3 1/2	3.42	5.20	1.03	2.17
4	3.79	5.79	1.08	2.49
5	—	—	—	—
6	—	—	—	—
8	—	—	—	—



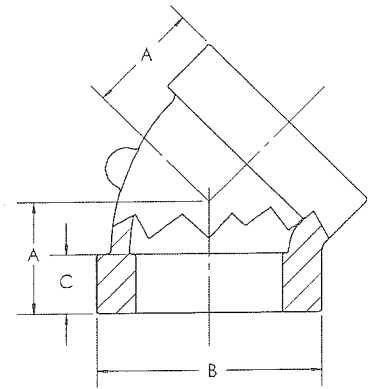
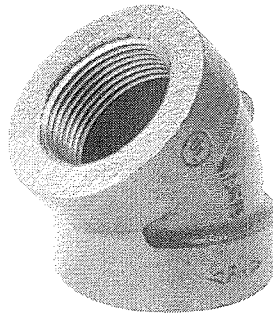
CAST IRON 90° REDUCING ELL CLASS 125

NPS	Center to End A	Center to End B	Outside Dia. of Band C (min)	Outside Dia. of Band D (min)	Length of Threads E (min)	Length of Threads F (min)	Take Out	Take Out
1/2 x 3/8	—	—	—	—	—	—	—	—
1/2 x 1/4	—	—	—	—	—	—	—	—
3/4 x 1/2	1.20	1.22	1.63	1.34	0.50	0.43	0.6	0.68
*3/4 x 3/8	1.20	1.22	1.63	1.12	0.50	0.36	0.6	0.81
1 x 3/4	1.37	1.45	1.95	1.63	0.58	0.50	0.6	0.90
1 x 1/2	1.26	1.36	1.95	1.34	0.58	0.43	0.5	0.82
1 1/4 x 1	1.58	1.67	2.39	1.95	0.67	0.58	0.8	0.98
1 1/4 x 3/4	1.45	1.62	2.39	1.63	0.67	0.50	0.7	1.07
1 1/4 x 1/2	1.34	1.53	2.39	1.34	0.67	0.43	0.6	0.99
1 1/2 x 1 1/4	1.82	1.88	2.68	2.39	0.70	0.67	1.09	1.17
1 1/2 x 1	1.65	1.80	2.68	1.95	0.70	0.58	0.92	1.11
1 1/2 x 3/4	1.52	1.75	2.68	1.63	0.70	0.50	0.79	1.20
1 1/2 x 1/2	1.41	1.66	2.68	1.34	0.70	0.43	0.79	1.21
2 x 1 1/2	2.02	2.16	3.28	2.68	0.75	0.70	1.26	1.43
2 x 1 1/4	1.90	2.10	3.28	2.39	0.75	0.67	1.14	1.39
2 x 1	1.73	2.02	3.28	1.95	0.75	0.58	0.97	1.33
2 x 3/4	1.60	1.97	3.28	1.63	0.75	0.50	0.84	1.42
2 x 1/2	1.60	1.97	3.28	1.34	0.75	0.43	0.84	1.43
2 1/2 x 2	2.39	2.60	3.86	3.28	0.92	0.75	1.25	1.84
2 1/2 x 1 1/2	2.16	2.51	3.86	2.68	0.92	0.70	1.02	1.78
2 1/2 x 1 1/4	2.04	2.45	3.86	2.39	0.92	0.67	0.90	1.74
2 1/2 x 1	1.87	2.37	3.86	1.95	0.92	0.58	0.73	1.68
*2 1/2 x 3/4	1.87	2.37	3.86	1.63	0.92	0.50	0.73	1.82
3 x 2 1/2	2.83	2.99	4.62	3.86	0.98	0.92	1.63	1.85
3 x 2	2.52	2.89	4.62	3.28	0.98	0.75	1.32	2.13
3 x 1 1/2	2.29	2.80	4.62	2.68	0.98	0.70	1.32	2.16
3 x 1 1/4	2.17	2.74	4.62	2.39	0.98	0.67	0.97	2.03
*3 x 1	2.17	2.74	4.62	1.95	0.98	0.58	0.97	2.05
3 1/2 x 3	—	—	—	—	—	—	—	—
4 x 3 1/2	3.54	3.69	5.79	5.20	1.08	1.03	2.24	2.44
4 x 3	3.30	3.60	5.79	4.62	1.08	0.98	2.00	2.40
4 x 2 1/2	3.05	3.51	5.79	3.86	1.08	0.92	2.00	2.46
4 x 2	2.74	3.41	5.79	3.28	1.08	0.75	1.44	2.65
*4 x 1 1/2	2.74	3.41	5.79	2.68	1.08	0.70	1.44	2.68
5 x 4	—	—	—	—	—	—	—	—
6 x 4	—	—	—	—	—	—	—	—
6 x 3	—	—	—	—	—	—	—	—



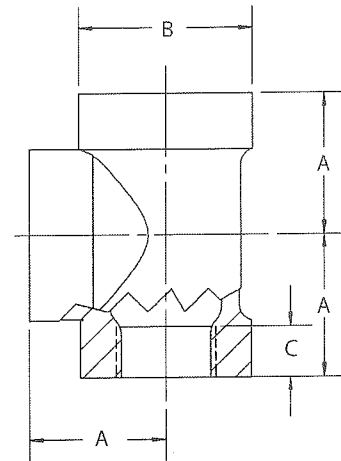
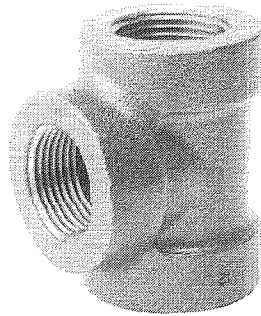
CAST IRON 45° ELL CLASS 125

NPS	Center to End A	Outside Dia. of Band B (min)	Length of Threads C (min)	Take Out
1/4	—	—	—	—
3/8	—	—	—	—
1/2	0.88	1.34	0.43	0.34
3/4	0.98	1.63	0.50	0.43
1	1.12	1.95	0.58	0.43
1 1/4	1.29	2.39	0.67	0.58
1 1/2	1.43	2.68	0.70	0.70
2	1.68	3.28	0.75	0.92
2 1/2	1.95	3.86	0.92	0.81
3	2.17	4.62	0.98	0.97
3 1/2	—	—	—	—
4	2.61	5.79	1.08	1.31
5	—	—	—	—
6	—	—	—	—

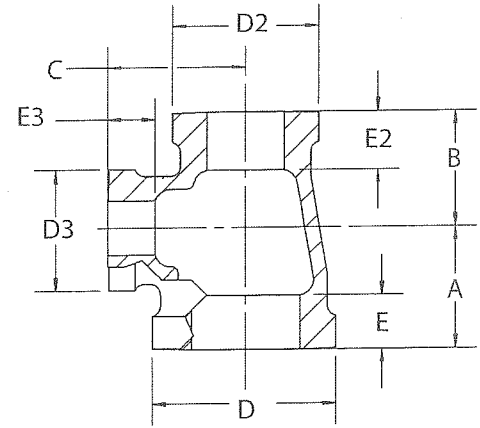
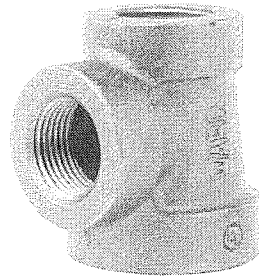


CAST IRON STRAIGHT TEE CLASS 125

NPS	Center to End A	Outside Dia. of Band B (min)	Length of Threads C (min)	Take Out
1/4	—	—	—	—
3/8	0.95	1.12	0.36	0.54
1/2	1.12	1.34	0.43	0.58
3/4	1.31	1.63	0.50	0.76
1	1.50	1.95	0.58	0.81
1 1/4	1.75	2.39	0.67	1.04
1 1/2	1.94	2.68	0.70	1.21
2	2.25	3.28	0.75	1.49
2 1/2	2.70	3.86	0.92	1.56
3	3.08	4.62	0.98	1.88
3 1/2	3.42	5.20	1.03	2.17
4	3.79	5.79	1.08	2.49
5	—	—	—	—
6	—	—	—	—



CAST IRON REDUCING TEES CLASS 125



NPS	Center to End A	Center to End B	Center to End C	Outside Dia. of Band D (min)	Outside Dia. of Band D2 (min)	Outside Dia. of Band D3 (min)	Length of Threads E (min)	Length of Threads E2 (min)	Length of Threads E3 (min)	Take Out	Take Out	Take Out
1/2 x 1/2 x 3/8	1.04	1.04	1.03	1.34	1.34	1.12	0.43	0.43	0.36	0.50	0.50	0.62
1/2 x 1/2 x 1/4	—	—	—	—	—	—	—	—	—	—	—	—
*1/2 x 3/8 x 1/2	1.12	1.12	1.12	1.34	1.12	1.34	0.43	0.36	0.43	0.58	0.71	0.58
*1/2 x 3/8 x 3/8	1.12	1.12	1.12	1.34	1.12	1.12	0.43	0.36	0.36	0.58	0.71	0.71
*3/8 x 3/8 x 1/2	1.12	1.12	1.12	1.12	1.12	1.34	0.36	0.36	0.43	0.71	0.71	0.58
3/4 x 3/4 x 1/2	1.20	1.20	1.22	1.63	1.63	1.34	0.50	0.50	0.43	0.65	0.65	0.68
3/4 x 3/4 x 3/8	1.12	1.12	1.13	1.63	1.63	1.12	0.50	0.50	0.36	0.57	0.57	0.72
3/4 x 3/4 x 1/4	—	—	—	—	—	—	—	—	—	—	—	—
3/4 x 1/2 x 3/4	1.31	1.22	1.31	1.63	1.34	1.63	0.50	0.43	0.50	0.76	0.68	0.76
3/4 x 1/2 x 1/2	1.20	1.12	1.22	1.63	1.34	1.34	0.50	0.43	0.43	0.65	0.58	0.68
1/2 x 1/2 x 3/4	1.22	1.22	1.20	1.340	1.340	1.630	0.430	0.430	0.500	0.68	0.68	0.65
1 x 1 x 3/4	1.37	1.37	1.45	1.95	1.95	1.63	0.58	0.58	0.50	0.68	0.68	0.90
1 x 1 x 1/2	1.26	1.26	1.36	1.95	1.95	1.34	0.58	0.58	0.43	0.57	0.57	0.82
1 x 1 x 3/8	1.18	1.18	1.27	1.95	1.95	1.12	0.58	0.58	0.36	0.49	0.49	0.86
1 x 1 x 1/4	—	—	—	—	—	—	—	—	—	—	—	—
1 x 3/4 x 1	1.50	1.45	1.50	1.95	1.63	1.95	0.58	0.50	0.58	0.81	0.90	0.81
1 x 3/4 x 3/4	1.37	1.31	1.45	1.95	1.63	1.63	0.58	0.50	0.50	0.68	0.76	0.90
1 x 3/4 x 1/2	1.26	1.20	1.36	1.95	1.63	1.34	0.58	0.50	0.43	0.57	0.65	0.82
1 x 1/2 x 1	1.50	1.36	1.50	1.95	1.34	1.95	0.58	0.43	0.58	0.81	0.82	0.81
1 x 1/2 x 3/4	1.37	1.22	1.45	1.95	1.34	1.63	0.58	0.43	0.50	0.68	0.68	0.90
1 x 1/2 x 1/2	—	—	—	—	—	—	—	—	—	—	—	—
1 x 3/8 x 1	1.50	1.27	1.50	1.95	1.12	1.95	0.58	0.36	0.58	0.81	0.86	0.81
*1 x 1/4 x 1	1.50	1.20	1.50	1.95	0.93	1.95	0.58	0.32	0.58	0.81	0.79	0.81
3/4 x 3/4 x 1	1.45	1.45	1.37	1.63	1.63	1.95	0.50	0.50	0.58	0.90	0.90	0.68
*3/4 x 1/2 x 1	1.45	1.45	1.37	1.63	1.34	1.95	0.50	0.43	0.58	0.90	0.91	0.68
1/2 x 1/2 x 1	—	—	—	—	—	—	—	—	—	—	—	—
1 1/4 x 1 1/4 x 1	1.58	1.58	1.67	2.39	2.39	1.95	0.67	0.67	0.58	0.87	0.87	0.98
1 1/4 x 1 1/4 x 3/4	1.45	1.45	1.62	2.39	2.39	1.63	0.67	0.67	0.50	0.74	0.74	1.07
1 1/4 x 1 1/4 x 1/2	1.34	1.34	1.53	2.39	2.39	1.34	0.67	0.67	0.43	0.63	0.63	0.99
1 1/4 x 1 1/4 x 1/8	---	---	---	---	---	---	---	---	---	---	---	---
1 1/4 x 1 x 1 1/4	1.75	1.67	1.75	2.39	1.95	2.39	0.67	0.58	0.67	1.04	0.98	1.04
1 1/4 x 1 x 1	1.58	1.50	1.67	2.39	1.95	1.95	0.67	0.58	0.58	0.87	0.81	0.98
1 1/4 x 1 x 3/4	1.45	1.37	1.62	2.39	1.95	1.63	0.67	0.58	0.50	0.74	0.68	1.07

* Manufactured to WARD specifications

CAST IRON REDUCING TEE CLASS 125

NPS	Center to End A	Center to End B	Center to End C	Outside Dia. of Band D (min)	Outside Dia. of Band D2 (min)	Outside Dia. of Band D3 (min)	Length of Threads E (min)	Length of Threads E2 (min)	Length of Threads E3 (min)	Take Out	Take Out	Take Out
1 1/4 x 1 x 1/2	1.34	1.26	1.53	2.39	1.95	1.34	0.67	0.58	0.43	0.63	0.57	0.99
1 1/4 x 3/4 x 1 1/4	1.75	1.62	1.75	2.39	1.63	2.39	0.67	0.50	0.67	1.04	1.07	1.04
1 1/4 x 3/4 x 1	1.58	1.45	1.67	2.39	1.63	1.95	0.67	0.50	0.58	0.87	0.90	0.98
1 1/4 x 3/4 x 3/4	1.45	1.31	1.62	2.39	1.63	1.63	0.67	0.50	0.50	0.74	0.76	1.07
*1 1/4 x 3/4 x 1/2	1.45	1.31	1.62	2.39	1.63	1.34	0.67	0.50	0.43	0.74	0.76	1.08
1 1/4 x 1/2 x 1 1/4	1.75	1.53	1.75	2.39	1.34	2.39	0.67	0.43	0.67	1.04	0.99	1.04
1 1/4 x 1/2 x 1	1.58	1.36	1.67	2.39	1.34	1.95	0.67	0.43	0.58	0.87	0.82	0.98
*1 1/4 x 1/2 x 3/4	1.45	1.31	1.62	2.39	1.34	1.63	0.67	0.43	0.50	0.74	0.77	1.07
*1 1/4 x 1/2 x 1/2	1.34	1.12	1.53	2.39	1.34	1.34	0.67	0.43	0.43	0.63	0.58	0.99
*1 1/4 x 1/2 x 3/8	1.58	1.45	1.45	2.39	1.34	1.12	0.67	0.43	0.36	0.87	0.91	1.04
*1 1/4 x 1/4 x 1 1/4	1.75	1.53	1.75	2.39	0.93	2.39	0.67	0.32	0.67	1.04	1.12	1.04
*1 1/4 x 1/8 x 1 1/4	1.75	1.53	1.75	2.39	0.81	2.39	0.67	0.32	0.67	1.04	1.26	1.04
1 x 1 x 1 1/4	1.67	1.67	1.58	1.95	1.95	2.39	0.58	0.58	0.67	0.98	0.98	0.87
*1 x 3/4 x 1 1/4	1.75	1.62	1.75	1.95	1.63	2.39	0.58	0.50	0.67	1.06	1.07	1.04
*1 x 1/2 x 1 1/4	1.75	1.53	1.75	1.95	1.34	2.39	0.58	0.43	0.67	1.06	0.99	1.04
1 1/2 x 1 1/2 x 1 1/4	1.82	1.82	1.88	2.68	2.68	2.39	0.70	0.70	0.67	1.09	1.09	1.17
1 1/2 x 1 1/2 x 1	1.65	1.65	1.80	2.68	2.68	1.95	0.70	0.70	0.58	0.92	0.92	1.11
1 1/2 x 1 1/2 x 3/4	1.52	1.52	1.75	2.68	2.68	1.63	0.70	0.70	0.50	0.79	0.79	1.20
1 1/2 x 1 1/2 x 1/2	1.41	1.41	1.66	2.68	2.68	1.34	0.70	0.70	0.43	0.68	0.68	1.12
1 1/2 x 1 1/2 x 3/8	1.41	1.41	1.66	2.68	2.68	1.12	0.70	0.70	0.36	0.68	0.68	1.25
1 1/2 x 1 1/4 x 1 1/2	1.94	1.88	1.94	2.68	2.39	2.68	0.70	0.67	0.70	1.21	1.17	1.21
1 1/2 x 1 1/4 x 1 1/4	1.82	1.75	1.88	2.68	2.39	2.39	0.70	0.67	0.67	1.09	1.04	1.17
1 1/2 x 1 1/4 x 1	1.65	1.58	1.80	2.68	2.39	1.95	0.70	0.67	0.58	0.92	0.87	1.11
1 1/2 x 1 1/4 x 3/4	1.52	1.45	1.75	2.68	2.39	1.63	0.70	0.67	0.50	0.79	0.74	1.20
1 1/2 x 1 1/4 x 1/2	1.41	1.34	1.66	2.68	2.39	1.34	0.70	0.67	0.43	0.68	0.63	1.12
1 1/2 x 1 x 1 1/2	1.94	1.80	1.94	2.68	1.95	2.68	0.70	0.58	0.70	1.21	1.11	1.21
1 1/2 x 1 x 1 1/4	1.94	1.80	1.94	2.68	1.95	2.39	0.70	0.58	0.67	1.21	1.11	1.23
1 1/2 x 1 x 1	1.65	1.50	1.80	2.68	1.95	1.95	0.70	0.58	0.58	0.92	0.81	1.11
*1 1/2 x 1 x 3/4	1.65	1.50	1.80	2.68	1.95	1.63	0.70	0.58	0.50	0.92	0.81	1.25
*1 1/2 x 1 x 1/2	1.41	1.34	1.66	2.68	1.95	1.34	0.70	0.58	0.43	0.68	0.65	1.12
1 1/2 x 3/4 x 1 1/2	1.94	1.75	1.94	2.68	1.63	2.68	0.70	0.50	0.70	1.21	1.20	1.21
1 1/2 x 3/4 x 1 1/4	1.82	1.62	1.88	2.68	1.63	2.39	0.70	0.50	1.09	1.21	1.07	1.17
*1 1/2 x 3/4 x 1	1.65	1.50	1.80	2.68	1.63	1.95	0.70	0.50	0.58	0.92	0.95	1.11
*1 1/2 x 3/4 x 3/4	1.65	1.50	1.80	2.68	1.63	1.63	0.70	0.50	0.50	0.92	0.95	1.25
*1 1/2 x 3/4 x 1/2	1.52	1.37	1.80	2.68	1.63	1.34	0.70	0.50	0.43	0.80	0.82	1.26
1 1/2 x 1/2 x 1 1/2	1.94	1.66	1.94	2.68	1.34	2.68	0.70	0.43	0.70	1.21	1.12	1.21
*1 1/2 x 1/2 x 1 1/4	1.94	1.66	1.94	2.68	1.34	2.39	0.70	0.43	0.67	1.21	1.12	1.23
*1 1/2 x 1/2 x 3/4	1.52	1.37	1.80	2.68	1.34	1.63	0.70	0.43	0.50	0.80	0.84	1.25
*1 1/2 x 1/2 x 1/2	1.52	1.37	1.80	2.68	1.34	1.34	0.70	0.43	0.43	0.80	0.84	1.26
1 1/4 x 1 1/4 x 1 1/2	1.88	1.88	1.82	2.39	2.39	2.68	0.67	0.67	0.70	1.17	1.17	1.09
1 1/4 x 1 x 1 1/2	1.88	1.80	1.82	2.39	1.95	2.68	0.67	0.58	0.70	1.17	1.11	1.09
*1 1/4 x 3/4 x 1 1/2	1.94	1.75	1.94	2.39	1.63	2.68	0.67	0.50	0.70	1.23	1.20	1.21
*1 1/4 x 1/2 x 1 1/2	1.94	1.66	1.94	2.39	1.34	2.68	0.67	0.43	0.70	1.23	1.12	1.21

* Manufactured to WARD specifications

CAST IRON REDUCING TEE CLASS 125

NPS	Center to End A	Center to End B	Center to End C	Outside Dia. of Band D (min)	Outside Dia. of Band D2 (Min)	Outside Dia. of Band D3 (min)	Length of Threads E (min)	Length of Threads E2 (min)	Length of Threads E3 (min)	Take Out	Take Out	Take Out
1 x 1 x 1 1/2	1.80	1.80	1.65	1.95	1.95	2.68	0.58	0.58	0.70	1.11	1.11	0.92
2 x 2 x 1 1/2	2.02	2.02	2.16	3.28	3.28	2.68	0.75	0.75	0.70	1.26	1.26	1.43
2 x 2 x 1 1/4	1.90	1.90	2.10	3.28	3.28	2.39	0.75	0.75	0.67	1.14	1.14	1.39
2 x 2 x 1	1.73	1.73	2.02	3.28	3.28	1.95	0.75	0.75	0.58	0.97	0.97	1.33
2 x 2 x 3/4	1.60	1.60	1.97	3.28	3.28	1.63	0.75	0.75	0.50	0.84	0.84	1.42
2 x 2 x 1/2	1.49	1.49	1.88	3.28	3.28	1.34	0.75	0.75	0.43	0.73	0.73	1.34
2 x 1 1/2 x 2	2.25	2.16	2.25	3.28	2.68	3.28	0.75	0.70	0.75	1.49	1.43	1.49
2 x 1 1/2 x 1 1/2	2.02	1.94	2.16	3.28	2.68	2.68	0.75	0.70	0.70	1.26	1.21	1.43
2 x 1 1/2 x 1 1/4	2.02	1.94	2.16	3.28	2.68	2.39	0.75	0.70	0.67	1.26	1.21	1.45
2 x 1 1/2 x 1	1.73	1.65	2.02	3.28	2.68	1.95	0.75	0.70	0.58	0.97	0.92	1.33
2 x 1 1/2 x 3/4	1.60	1.52	1.97	3.28	2.68	1.63	0.75	0.70	0.50	0.84	0.79	1.42
2 x 1 1/2 x 1/2	1.49	1.41	1.88	3.28	2.68	1.34	0.75	0.70	0.43	0.73	0.68	1.34
2 x 1 1/4 x 2	2.25	2.10	2.25	3.28	2.39	3.28	0.75	0.67	0.75	1.49	1.39	1.49
2 x 1 1/4 x 1 1/2	1.02	1.88	2.16	3.28	2.39	2.68	0.75	0.67	0.70	0.26	1.17	1.43
2 x 1 1/4 x 1 1/4	1.90	1.75	2.10	3.28	2.39	2.39	0.75	0.67	0.67	1.14	1.04	1.39
2 x 1 1/4 x 1	1.73	1.58	2.02	3.28	2.39	1.95	0.75	0.67	0.58	0.97	0.87	1.33
2 x 1 1/4 x 3/4	—	—	—	—	—	—	—	—	—	—	—	—
*2 x 1 1/4 x 1/2	1.49	1.41	1.88	3.28	2.39	1.34	0.75	0.67	0.43	0.73	0.70	1.34
2 x 1 x 2	2.25	2.02	2.25	3.28	1.95	3.28	0.75	0.58	0.75	1.49	1.33	1.49
2 x 1 x 1 1/2	2.02	1.80	2.16	3.28	1.95	2.68	0.75	0.58	0.70	1.26	1.11	1.43
2 x 1 x 1 1/4	1.90	1.67	2.10	3.28	1.95	2.39	0.75	0.58	0.67	1.14	0.98	1.39
*2 x 1 x 1	1.73	1.94	2.02	3.28	1.95	1.95	0.75	0.58	0.58	0.97	1.25	1.33
*2 x 1 x 3/4	1.73	1.94	2.02	3.28	1.95	1.63	0.75	0.58	0.50	0.97	1.25	1.47
2 x 3/4 x 2	2.25	1.97	2.25	3.28	1.63	3.28	0.75	0.50	0.75	1.49	1.42	1.49
*2 x 3/4 x 1 1/2	2.25	1.97	2.25	3.28	1.63	2.68	0.75	0.50	0.70	1.49	1.42	1.52
*2 x 3/4 x 1 1/4	2.25	1.97	2.25	3.28	1.63	2.39	0.75	0.50	0.67	1.49	1.42	1.54
*2 x 3/4 x 1	1.73	1.94	2.02	3.28	1.63	1.95	0.75	0.50	0.58	0.97	1.39	1.33
*2 x 3/4 x 3/4	1.60	1.60	1.97	3.28	1.63	1.63	0.75	0.50	0.50	0.84	1.05	1.42
*2 x 3/4 x 1/2	1.60	1.60	1.97	3.28	1.63	1.34	0.75	0.50	0.43	0.84	1.05	1.43
2 x 1/2 x 2	2.25	1.88	2.25	3.28	1.34	3.280	0.75	0.43	0.75	1.49	1.34	1.49
*2 x 1/2 x 1 1/2	2.02	1.66	2.16	3.28	1.34	2.68	0.75	0.43	0.70	1.26	1.12	1.43
*2 x 1/2 x 1 1/4	2.02	1.66	2.16	3.28	1.34	2.39	0.75	0.43	0.67	1.26	1.12	1.45
*2 x 1/2 x 3/4	1.60	1.60	1.97	3.28	1.34	1.63	0.75	0.43	0.50	0.84	1.06	1.42
*2 x 1/2 x 1/2	1.60	1.60	1.97	3.28	1.34	1.34	0.75	0.43	0.43	0.84	1.06	1.43
1 1/2 x 1 1/2 x 2	2.16	2.16	2.02	2.68	2.68	3.28	0.70	0.70	0.75	1.43	1.43	1.26
1 1/2 x 1 1/4 x 2	2.16	2.10	2.02	2.68	2.39	3.28	0.70	0.67	0.75	1.43	1.39	1.26
1 1/2 x 1 x 2	2.16	2.02	2.02	2.68	1.95	3.28	0.70	0.58	0.75	1.43	1.33	1.26
1 1/4 x 1 1/4 x 2	—	—	—	—	—	—	—	—	—	—	—	—
1 1/4 x 1 x 2	—	—	—	—	—	—	—	—	—	—	—	—
1 x 1 x 2	—	—	—	—	—	—	—	—	—	—	—	—
2 1/2 x 2 1/2 x 2	2.39	2.39	2.60	3.86	3.86	3.28	0.92	0.92	0.75	1.25	1.25	1.84
2 1/2 x 2 1/2 x 1 1/2	2.16	2.16	2.51	3.86	3.86	2.68	0.92	0.92	0.70	1.02	1.02	1.78

* Manufactured to WARD specifications

CAST IRON REDUCING TEE CLASS 125

NPS	Center to End A	Center to End B	Center to End C	Outside Dia. of Band D (min)	Outside Dia. of Band D2 (Min)	Outside Dia. of Band D3 (min)	Length of Threads E (min)	Length of Threads E2 (min)	Length of Threads E3 (min)	Take Out	Take Out	Take Out
2 1/2 x 2 1/2 x 1 1/4	2.04	2.04	2.45	3.86	3.86	2.39	0.92	0.92	0.67	0.90	0.90	1.74
2 1/2 x 2 1/2 x 1	1.87	1.87	2.37	3.86	3.86	1.95	0.92	0.92	0.58	0.73	0.73	1.68
2 1/2 x 2 1/2 x 3/4	1.87	1.87	2.32	3.86	3.86	1.63	0.92	0.92	0.50	0.73	0.73	1.77
2 1/2 x 2 1/2 x 1/2	1.87	1.87	2.23	3.86	3.86	1.34	0.92	0.92	0.43	0.73	0.73	1.69
2 1/2 x 2 x 2 1/2	2.70	2.60	2.70	3.86	3.28	3.86	0.92	0.75	0.92	1.56	1.84	1.56
2 1/2 x 2 x 2	2.39	2.25	2.60	3.86	3.28	3.28	0.92	0.75	0.75	1.25	1.49	1.84
2 1/2 x 2 x 1 1/2	2.16	2.02	2.51	3.86	3.28	2.68	0.92	0.75	0.70	1.02	1.26	1.78
2 1/2 x 2 x 1 1/4	2.04	1.90	2.45	3.86	3.28	2.39	0.92	0.75	0.67	0.90	1.14	1.74
2 1/2 x 2 x 1	1.87	1.73	2.37	3.86	3.28	1.95	0.92	0.75	0.58	0.73	0.97	1.68
2 1/2 x 2 x 3/4	1.74	1.60	2.32	3.86	3.28	1.63	0.92	0.75	0.50	0.60	0.84	1.77
2 1/2 x 2 x 1/2	1.63	1.49	2.23	3.86	3.28	1.34	0.92	0.75	0.43	0.49	0.73	1.696
2 1/2 x 1 1/2 x 2 1/2	2.70	2.51	2.70	3.86	2.68	3.86	0.92	0.70	0.92	1.56	1.78	1.563
2 1/2 x 1 1/2 x 2	2.39	2.16	2.60	3.86	2.68	3.28	0.92	0.70	0.75	1.25	1.43	1.84
2 1/2 x 1 1/2 x 1 1/2	2.16	1.94	2.51	3.86	2.68	2.68	0.92	0.70	0.70	1.02	1.21	1.786
*2 1/2 x 1 1/2 x 1 1/4	2.04	1.90	2.45	3.86	2.68	2.39	0.92	0.70	0.67	0.90	1.17	1.743
*2 1/2 x 1 1/2 x 1/2	1.63	1.49	2.23	3.86	2.68	1.34	0.92	0.70	0.43	0.49	0.76	1.696
2 1/2 x 1 1/4 x 2 1/2	2.70	2.45	2.70	3.86	2.39	3.86	0.92	0.67	0.92	1.56	1.74	1.563
2 1/2 x 1 1/4 x 2	2.70	2.45	2.70	3.86	2.39	3.28	0.92	0.67	0.75	1.56	1.74	1.94
*2 1/2 x 1 1/4 x 1 1/2	2.16	1.94	2.51	3.86	2.39	2.68	0.92	0.67	0.70	1.02	1.23	1.78
*2 1/2 x 1 1/4 x 1 1/4	2.04	1.90	2.45	3.86	2.39	2.39	0.92	0.67	0.67	0.90	1.19	1.74
*2 1/2 x 1 1/4 x 1	2.14	2.12	2.51	3.86	2.39	1.95	0.92	0.67	0.58	1.00	1.41	1.82
2 1/2 x 1 x 2 1/2	2.70	2.37	2.70	3.86	1.95	3.86	0.92	0.58	0.92	1.56	1.68	1.56
2 1/2 x 1 x 2	2.39	2.02	2.60	3.86	1.95	3.28	0.92	0.58	0.75	1.25	1.33	1.84
*2 1/2 x 1 x 1 1/4	2.14	2.12	2.51	3.86	1.95	2.39	0.92	0.58	0.67	1.00	1.43	1.80
*2 1/2 x 1 x 1	1.94	1.75	2.37	3.86	1.95	1.95	0.92	0.58	0.58	0.80	1.06	1.68
*2 1/2 x 1 x 3/4	1.94	1.75	2.37	3.86	1.95	1.63	0.92	0.58	0.50	0.80	1.06	1.82
2 1/2 x 3/4 x 2 1/2	2.70	2.32	2.70	3.86	1.63	3.86	0.92	0.50	0.92	1.56	1.77	1.56
*2 1/2 x 3/4 x 2	2.70	2.32	2.70	3.86	1.63	3.28	0.92	0.50	0.75	1.56	1.77	1.94
*2 1/2 x 3/4 x 3/4	1.94	1.75	2.37	3.86	1.63	1.63	0.92	0.50	0.50	0.80	1.20	1.82
2 1/2 x 1/2 x 2 1/2	2.70	2.23	2.70	3.86	1.34	3.86	0.92	0.43	0.92	1.56	1.69	1.56
*2 1/2 x 1/2 x 2	2.70	2.60	2.70	3.86	1.34	3.28	0.92	0.43	0.75	1.56	2.06	1.94
2 x 2 x 2 1/2	2.60	2.60	2.39	3.28	3.28	3.86	0.75	0.75	0.92	1.84	1.46	1.25
2 x 1 1/2 x 2 1/2	2.60	2.51	2.39	3.28	2.68	3.86	0.75	0.70	0.92	1.84	1.78	1.25
2 x 1 1/4 x 2 1/2	2.60	2.45	2.39	3.28	2.39	3.86	0.75	0.67	0.92	1.84	1.74	1.25
*2 x 1 x 2 1/2	2.70	2.45	2.70	3.28	1.95	3.86	0.75	0.58	0.92	1.94	1.76	1.56
*2 x 3/4 x 2 1/2	2.70	2.32	2.70	3.28	1.63	3.86	0.75	0.50	0.92	1.94	1.77	1.56
1 1/2 x 1 1/2 x 2 1/2	2.51	2.51	2.16	2.68	2.68	3.86	0.70	0.70	0.92	1.78	1.78	1.02
3 x 3 x 2 1/2	2.83	2.83	2.99	4.62	4.62	3.86	0.98	0.98	0.92	1.63	1.63	1.85
3 x 3 x 2	2.52	2.52	2.89	4.62	4.62	3.28	0.98	0.98	0.75	1.32	1.32	2.13
3 x 3 x 1 1/2	2.29	2.29	2.80	4.62	4.62	2.68	0.98	0.98	0.70	1.09	1.09	2.07
3 x 3 x 1 1/4	2.17	2.17	2.74	4.62	4.62	2.39	0.98	0.98	0.67	0.97	0.97	2.03
3 x 3 x 1	2.00	2.00	2.66	4.62	4.62	1.95	0.98	0.98	0.58	0.80	0.80	1.97

* Manufactured to WARD specifications

CAST IRON REDUCING TEE CLASS 125

NPS	Center to End A	Center to End B	Center to End C	Outside Dia. of Band D (min)	Outside Dia. of Band D2 (Min)	Outside Dia. of Band D3 (min)	Length of Threads E (min)	Length of Threads E2 (min)	Length of Threads E3 (min)	Take Out	Take Out	Take Out
3 x 3 x 3/4	—	—	—	—	—	—	—	—	—	—	—	—
3 x 3 x 1/2	—	—	—	—	—	—	—	—	—	—	—	—
3 x 2 1/2 x 3	3.08	2.99	3.08	4.62	3.86	4.62	0.98	0.92	0.98	1.88	1.85	1.88
3 x 2 1/2 x 2 1/2	2.83	2.70	2.99	4.62	3.86	3.86	0.98	0.92	0.92	1.63	1.56	1.85
3 x 2 1/2 x 2	2.52	2.39	2.89	4.62	3.86	3.28	0.98	0.92	0.75	1.32	1.25	2.13
3 x 2 1/2 x 1 1/2	—	—	—	—	—	—	—	—	—	—	—	—
3 x 2 1/2 x 1 1/4	2.17	2.04	2.74	4.62	3.86	2.39	0.98	0.92	0.67	0.97	0.90	2.03
3 x 2 1/2 x 1	—	—	—	—	—	—	—	—	—	—	—	—
3 x 2 x 3	3.08	2.89	3.08	4.62	3.28	4.62	0.98	0.75	0.98	1.88	2.13	1.88
3 x 2 x 2 1/2	2.83	2.60	2.99	4.62	3.28	3.86	0.98	0.75	0.92	1.63	1.84	1.85
3 x 2 x 2	2.52	2.25	2.89	4.62	3.28	3.28	0.98	0.75	0.75	1.32	1.49	2.13
3 x 2 x 1 1/2	2.29	2.02	2.80	4.62	3.28	2.68	0.98	0.75	0.70	1.09	1.26	2.07
3 x 1 1/2 x 3	3.08	2.80	3.08	4.62	2.68	4.62	0.98	0.70	0.98	1.88	2.07	1.88
*3 x 1 1/2 x 2	2.52	2.25	2.89	4.62	2.68	3.28	0.98	0.70	0.75	1.32	1.52	2.13
*3 x 1 1/2 x 1 1/2	2.52	2.25	2.89	4.62	2.68	2.68	0.98	0.70	0.70	1.32	1.52	2.16
3 x 1 1/4 x 3	3.08	2.74	3.08	4.62	2.39	4.62	0.98	0.67	0.98	1.88	2.03	1.88
*3 x 1 1/4 x 2	2.52	2.70	2.89	4.62	2.39	3.28	0.98	0.67	0.75	1.32	1.99	2.13
3 x 1 x 3	3.08	2.66	3.08	4.62	1.95	4.62	0.98	0.58	0.98	1.88	1.97	1.88
*3 x 1 x 2	2.52	2.63	2.89	4.62	1.95	3.28	0.98	0.58	0.75	1.32	1.94	2.13
3 x 3/4 x 3	3.08	2.61	3.08	4.62	1.63	4.62	0.98	0.50	0.98	1.88	2.06	1.88
2 1/2 x 2 1/2 x 3	2.99	2.99	2.83	3.86	3.86	4.62	0.92	0.92	0.98	1.85	1.85	1.63
2 1/2 x 2 x 3	2.99	2.89	2.83	3.86	3.28	4.62	0.92	0.75	0.98	1.85	2.13	1.63
2 x 2 x 3	2.89	2.99	2.52	3.28	3.28	4.62	0.75	0.75	0.98	2.13	2.23	1.32
*1 1/2 x 1 1/2 x 3	2.83	2.83	2.27	2.68	2.68	4.62	0.70	0.70	0.98	2.10	2.10	1.07
3 1/2 x 3 1/2 x 3	3.18	3.18	3.33	5.20	5.20	4.62	1.03	1.03	0.98	1.93	1.93	2.13
3 1/2 x 3 1/2 x 2 1/2	2.93	2.93	3.24	5.20	5.20	3.86	1.03	1.03	0.92	1.68	1.68	2.10
3 1/2 x 3 1/2 x 2	2.62	2.62	3.14	5.20	5.20	3.28	1.03	1.03	0.75	1.37	1.37	2.38
3 1/2 x 3 1/2 x 1 1/2	2.39	2.39	3.05	5.20	5.20	2.68	1.03	1.03	0.70	1.14	1.14	2.32
3 1/2 x 3 1/2 x 1 1/4	2.27	2.27	2.99	5.20	5.20	2.39	1.03	1.03	0.67	1.02	1.02	2.28
3 1/2 x 3 1/2 x 1	2.10	2.10	2.91	5.20	5.20	1.95	1.03	1.03	0.58	0.85	0.85	2.22
*3 1/2 x 3 x 3 1/2	3.42	3.42	3.42	5.20	4.62	5.20	1.03	0.98	1.03	2.17	2.22	2.17
3 1/2 x 3 x 3	3.18	3.08	3.33	5.20	4.62	4.62	1.03	0.98	0.98	1.93	1.88	2.13
3 1/2 x 3 x 2 1/2	2.93	2.83	3.24	5.20	4.62	3.86	1.03	0.98	0.92	1.68	1.63	2.10
3 1/2 x 3 x 2	2.62	2.52	3.14	5.20	4.62	3.28	1.03	0.98	0.75	1.37	1.32	2.38
3 1/2 x 3 x 1 1/2	2.39	2.29	3.05	5.20	4.62	2.68	1.03	0.98	0.70	1.14	1.09	2.32
*3 1/2 x 3 x 1 1/4	2.39	2.29	3.05	5.20	4.62	2.39	1.03	0.98	0.67	1.14	1.09	2.34
*3 1/2 x 2 1/2 x 2	—	—	—	—	—	—	—	—	—	—	—	—
3 1/2 x 1 1/4 x 3 1/2	3.42	2.99	3.42	5.20	2.39	5.20	1.03	0.67	1.03	2.17	2.28	2.17
3 1/2 x 1 x 3 1/2	3.42	2.91	3.42	5.20	1.95	5.20	1.03	0.58	1.03	2.17	2.22	2.17
3 x 3 x 3 1/2	3.33	3.33	3.18	4.62	4.62	5.20	0.98	0.98	1.03	2.13	2.13	1.93
4 x 4 x 3 1/2	3.54	3.54	3.69	5.79	5.79	5.20	1.08	1.08	1.03	2.24	2.24	2.44
4 x 4 x 3	3.30	3.30	3.60	5.79	5.79	4.62	1.08	1.08	0.98	2.00	2.00	2.40

* Manufactured to WARD specifications

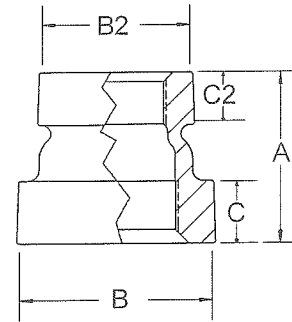
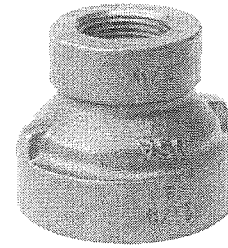
CAST IRON REDUCING TEE CLASS 125

NPS	Center to End A	Center to End B	Center to End C	Outside Dia. of Band D (min)	Outside Dia. of Band D2 (Min)	Outside Dia. of Band D3 (min)	Length of Threads E (min)	Length of Threads E2 (min)	Length of Threads E3 (min)	Take Out	Take Out	Take Out
4 x 4 x 2 1/2	3.05	3.05	3.51	5.79	5.79	3.86	1.08	1.08	0.92	1.75	1.75	2.37
4 x 4 x 2	2.74	2.74	3.41	5.79	5.79	3.28	1.08	1.08	0.75	1.44	1.44	2.65
4 x 4 x 1 1/2	2.51	2.51	3.32	5.79	5.79	2.68	1.08	1.08	0.70	1.21	1.21	2.59
4 x 4 x 1 1/4	—	—	—	—	—	—	—	—	—	—	—	—
4 x 4 x 1	—	—	—	—	—	—	—	—	—	—	—	—
4 x 4 x 3/4	—	—	—	—	—	—	—	—	—	—	—	—
4 x 3 1/2 x 4	3.79	3.69	3.79	5.79	5.20	5.79	1.08	1.03	1.08	2.49	2.44	2.49
4 x 3 1/2 x 3 1/2	3.54	3.42	3.69	5.79	5.20	5.20	1.08	1.03	1.03	2.24	2.17	2.44
4 x 3 1/2 x 3	3.30	3.18	3.60	5.79	5.20	4.62	1.08	1.03	0.98	2.00	1.93	2.40
4 x 3 1/2 x 2 1/2	3.05	2.93	3.51	5.79	5.20	3.86	1.08	1.03	0.92	1.75	1.68	2.37
4 x 3 1/2 x 2	2.74	2.62	3.41	5.79	5.20	3.28	1.08	1.03	0.75	1.44	1.37	2.65
4 x 3 1/2 x 1 1/2	2.51	2.39	3.32	5.79	5.20	2.68	1.08	1.03	0.70	1.21	1.14	2.59
4 x 3 x 4	3.79	3.60	3.79	5.79	4.62	5.79	1.08	0.98	1.08	2.49	2.40	2.49
*4 x 3 x 3 1/2	3.79	3.69	3.79	5.79	4.62	5.20	1.08	0.98	1.03	2.49	2.49	2.54
4 x 3 x 3	3.30	3.08	3.60	5.79	4.62	4.62	1.08	0.98	0.98	2.00	1.88	2.40
4 x 3 x 2 1/2	3.05	2.83	3.51	5.79	4.62	3.86	1.08	0.98	0.92	1.75	1.63	2.37
4 x 3 x 2	2.74	2.52	3.41	5.79	4.62	3.28	1.08	0.98	0.75	1.44	1.32	2.65
*4 x 3 x 1 1/2	2.51	2.39	3.32	5.79	4.62	2.68	1.08	0.98	0.70	1.21	1.19	2.59
4 x 2 1/2 x 4	3.79	3.51	3.79	5.79	3.86	5.79	1.08	0.92	1.08	2.49	2.37	2.49
4 x 2 1/2 x 3	3.30	2.99	3.60	5.79	3.86	4.62	1.08	0.92	0.98	2.00	1.85	2.40
4 x 2 1/2 x 2 1/2	3.05	2.70	3.51	5.79	3.86	3.86	1.08	0.92	0.92	1.75	1.56	2.37
*4 x 2 1/2 x 2	3.05	2.70	3.51	5.79	3.86	3.28	1.08	0.92	0.75	1.75	1.56	2.75
4 x 2 x 4	3.79	3.41	3.79	5.79	3.28	5.79	1.08	0.75	1.08	2.49	2.65	2.49
*4 x 2 x 2 1/2	3.05	2.70	3.51	5.79	3.28	3.86	1.08	0.75	0.92	1.75	1.94	2.37
4 x 2 x 2	2.74	2.25	3.41	5.79	3.28	3.28	1.08	0.75	0.75	1.44	1.49	2.65
*4 x 2 x 1 1/2	2.74	2.25	3.41	5.79	3.28	2.68	1.08	0.75	0.70	1.44	1.49	2.68
4 x 1 1/2 x 4	3.79	3.32	3.79	5.79	2.68	5.79	1.08	0.70	1.08	2.49	2.59	2.49
*4 x 1 1/2 x 2	2.74	2.25	3.41	5.79	2.68	3.28	1.08	0.70	0.75	1.44	1.52	2.65
*4 x 1 1/2 x 1 1/2	2.74	2.25	3.41	5.79	2.68	2.68	1.08	0.70	0.70	1.44	1.52	2.68
4 x 1 1/4 x 4	3.79	3.26	3.79	5.79	2.39	5.79	1.08	0.67	1.08	2.49	2.55	2.49
4 x 1 x 4	3.79	3.18	3.79	5.79	1.95	5.79	1.08	0.58	1.08	2.49	2.49	2.49
3 1/2 x 3 1/2 x 4	3.69	3.69	3.54	5.20	5.20	5.79	1.03	1.03	1.08	2.44	2.44	2.24
3 x 3 x 4	—	—	—	—	—	—	—	—	—	—	—	—
5 x 5 x 4	—	—	—	—	—	—	—	—	—	—	—	—
5 x 5 x 3	—	—	—	—	—	—	—	—	—	—	—	—
5 x 5 x 2 1/2	—	—	—	—	—	—	—	—	—	—	—	—
5 x 5 x 2	—	—	—	—	—	—	—	—	—	—	—	—
6 x 6 x 5	—	—	—	—	—	—	—	—	—	—	—	—
6 x 6 x 4	—	—	—	—	—	—	—	—	—	—	—	—
6 x 6 x 3	—	—	—	—	—	—	—	—	—	—	—	—

* Manufactured to WARD specifications

CAST IRON CONCENTRIC REDUCING COUPLING CLASS 125

NPS	Length of Coupling A	Outside Dia. of Band Small End B (min)	Outside Dia. of Large End B2 (min)	Length of Threads Small End C (min)	Length of Threads Large End C2 (min)	Take Out	Take Out
3/4 x 1/2	1.50	1.31	1.62	0.43	0.50	0.20	0.22
1 x 1/2	1.70	1.31	1.99	0.43	0.58	0.85	0.85
1 x 3/4	1.70	1.63	1.99	0.50	0.58	0.85	0.85
1 1/4 x 1	2.130	1.95	2.39	0.58	0.67	0.17	0.30
1 1/4 x 3/4	2.13	1.95	2.39	0.50	0.67	0.17	0.32
1 1/4 x 1/2	—	—	—	—	—	—	—
1 1/2 x 1 1/4	2.25	2.39	2.68	0.67	0.70	0.36	0.52
1 1/2 x 1	2.25	2.39	2.68	0.58	0.70		
1 1/2 x 3/4	—	—	—	—	—	—	—
1 1/2 x 1/2	—	—	—	—	—	—	—
2 x 1 1/2	2.32	2.68	3.28	0.70	0.75	0.40	0.44
2 x 1 1/4	2.32	2.39	3.28	0.67	0.75	0.40	0.45
2 x 1	2.32	1.95	3.28	0.58	0.75	0.40	0.44
2 x 3/4	2.32	1.63	3.28	0.50	0.75	0.40	0.45
2 x 1/2	2.32	1.63	3.28	0.43	0.75	0.40	0.48
2 1/2 x 2	2.63	3.28	3.86	0.75	0.92	0.18	0.56
2 1/2 x 1 1/2	2.63	3.28	3.86	0.70	0.92	0.18	0.59
3 x 2 1/2	—	—	—	—	—	—	—
3 x 2	2.88	3.28	4.62	0.75	0.98	0.29	0.68
3 x 1 1/2	2.88	3.28	4.62	0.70	0.98	0.24	0.72
4 x 3	—	—	—	—	—	—	—
4 x 2 1/2	—	—	—	—	—	—	—
4 x 2	—	—	—	—	—	—	—
6 x 4	—	—	—	—	—	—	—





No. 20 Tee



No. 10 Elbow

1.0 PRODUCT DESCRIPTION

Available Sizes

- ¾ – 60"/20 – 1500 mm

Maximum Working Pressure

- Fitting pressure ratings are equivalent to the pressure ratings of the coupling used to install them.

Application

- Connects pipe, provides change in direction and adapts sizes or components.
- Supplied with Victaulic OGS grooves.
- Exclusively for use with Victaulic couplings, valves, accessories and pipe which feature ends formed with the Victaulic OGS groove profile.

Pipe Materials

- Carbon Steel or Stainless Steel

NOTE

- These fittings are not intended for use with Victaulic plain end couplings. Intended for use only in grooved piping systems. When connecting wafer or lug type butterfly valves directly to Victaulic fittings using Style 741 or Style 743 flange adapters, be sure to check disc clearance dimensions with I.D. dimension of fitting.

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

System No.		Location	
Submitted By		Date	

Spec Section		Paragraph	
Approved		Date	

1.0 PRODUCT DESCRIPTION (Continued)

Other Fitting Styles



AGS - Advanced Groove System
from 14 – 60"/350 – 1500 mm
[Publication 20.05](#)



Ductile Iron for AWWA size pipe
[Publication 23.05](#)



Stainless Steel
[Publication 17.16](#)



XL fittings for abrasive services
[Publication 07.07](#)



Galvanized
[Publication 07.01](#) for Original Groove Fittings
[Publication 20.05](#) for AGS Fittings



Aluminum
[Publication 21.03](#)



Extra Heavy EndSeal "ES"
[Publication 07.03](#)



Shouldered Ends
[Publication 07.06](#)



Copper
[Publication 22.04](#)



Plain End
[Publication 14.04](#)

2.0 CERTIFICATION/LISTINGS



NOTES

- When supplied as “hot dip galvanized” the following fittings are UL Classified in accordance with ANSI/NSF 61 and for use on cold +86°F/+30°C potable water service and ANSI/NSF 372: No. 10 90° Elbow, No. 11 45° Elbow, No. 12 22 ½° Elbow, No. 13 11 ¼° Elbow, No. 100 90° Long Radius Elbow, No. 110 45° Long Radius Elbow, No. 20 Tee, No. 25 Tee with Grooved Branch, No. 30 45° Lateral, No. 60 Cap, No. 50 Concentric Reducers, No. 51 Eccentric Reducers.
- The following Victaulic fittings are VdS approved: No.10 90° Elbow, No.11 45° Elbow, No.20 Tee and No.60 Cap.
- The following Victaulic fittings are LPCB approved: No.10 90° Elbow, No.11 45° Elbow, No.12 22 ½° Elbow, No.13 11 ¼° Elbow, No.30 45° Lateral, No.30-R Reducing Lateral, No.100 Long Radius Elbow, No.110 Long Radius Elbow, No.20 Tee, No.35 Cross, No.60 Cap, No.25 Reducing Tee, No.33 True Wye, No.50 Concentric Reducer, No.51 Eccentric Reducer and No.29M Tee with Threaded Branch.

3.0 SPECIFICATIONS - MATERIAL

Fitting: (specify choice)

Standard: Ductile iron conforming to ASTM A-536, Grade 65-45-12.

Optional: Segmentally welded steel as shown under nipples

Nipples: (specify choice)

¾ – 4”/20 – 100 mm: Carbon steel, Schedule 40, conforming to ASTM A-53, Type F

5 – 6”/125 – 150 mm: Carbon steel, Schedule 40, conforming to ASTM A-53, Type E or S, Gr. B

8 – 12”/200 – 300 mm: Carbon steel, Schedule 30 or 40, conforming to ASTM A-53, Type E or S, Gr. B

Flanged Adapter Nipples: (specify choice)

Class 125 Flange: Cast iron conforming to ANSI B-16.1

Class 150 Flange: Carbon steel conforming to ANSI B-16.5, raised or flat face

Class 300 Flange: Carbon steel conforming to ANSI B-16.5, raised or flat face

Fitting Coating: (specify choice)

Standard: Orange enamel

Optional: Hot dip galvanized and others. Some fittings supplied electroplated as standard – see product specifications

Flanged Adapter Nipple Coating: (specify choice)

Standard: None (Unfinished)

Optional: Orange enamel, hot dip galvanized and others

4.0 DIMENSIONS

Flow Data

(Frictional Resistance)

The chart expresses the frictional resistance of various Victaulic fittings as equivalent feet of straight pipe. Fittings not listed can be estimated from the data given, for example, a 22½° elbow is approximately one-half the resistance of a 45° elbow. Values of mid-sizes can be interpolated.

Size		Dimensions					
Nominal Size inches DN	Actual Outside Diameter inches mm	90° Elbows		45° Elbows		Tees	
		No. 10 Std. Radius feet meters	No. 100 1 ½ D Long Radius feet meters	No. 11 Std. Radius feet meters	No. 110 1 ½ D Long Radius feet meters	Branch feet meters	Run feet meters
1 DN25	1.315 33.7	1.7 0.5	—	0.8 0.2	—	4.2 1.3	1.7 0.5
2 DN50	2.375 60.3	3.5 1.1	2.5 0.8	1.8 0.5	1.1 0.3	8.5 2.6	3.5 1.1
DN65	3.000 76.1	4.3 1.3	—	2.1 0.7	—	10.8 3.3	4.3 1.3
3 DN80	3.500 88.9	5.0 1.5	3.8 1.2	2.6 0.8	1.6 0.5	13.0 4.0	5.0 1.5
	4.250 108.0	6.4 2.0	—	3.2 0.9	—	15.3 4.7	6.4 2.0
4 DN100	4.500 114.3	6.8 2.1	5.0 1.5	3.4 1.0	2.1 0.6	16.0 4.9	6.8 2.1
	5.250 133.0	8.1 2.5	—	4.1 1.2	—	20.0 6.2	8.1 2.5
DN125	5.500 139.7	8.5 2.6	—	4.2 1.3	—	21.0 6.4	8.5 2.6
5	5.563 141.3	8.5 2.6	—	4.2 1.3	—	21.0 6.4	8.5 2.6
	6.250 159.0	9.4 2.9	—	4.9 1.5	—	25.0 7.6	9.6 2.9
	6.500 165.1	9.6 2.9	—	5.0 1.5	—	25.0 7.6	10.0 3.0
6 DN150	6.625 168.3	10.0 3.0	7.5 2.3	5.0 1.5	3.0 0.9	25.0 7.6	10.0 3.0
8 DN200	8.625 219.1	13.0 4.0	9.8 3.0	6.5 2.0	4.0 1.2	33.0 10.1	13.0 4.0
10 DN250	10.750 273.0	17.0 5.2	12.0 3.7	8.3 2.5	5.0 1.5	41.0 12.5	17.0 5.2
12 DN300	12.750 323.9	20.0 6.1	14.5 4.4	10.0 3.0	6.0 1.8	50.0 15.2	20.0 6.1
14 DN350	14.000 355.6	24.5 ¹ 7.5	15.8 4.8	18.5 ¹ 5.6	11.0 3.4	70.0 21.3	23.0 7.0
16 DN400	16.000 406.4	28.0 ¹ 8.5	18.0 5.5	21.0 ¹ 6.4	13.0 4.0	80.0 24.4	27.0 8.2
18 DN450	18.000 457.0	31.0 ¹ 9.5	20.0 6.1	23.5 ¹ 7.2	14.0 4.3	90.0 27.4	30.0 9.1
20 DN800	20.000 508.0	34.0 ¹ 10.4	22.5 6.9	25.5 ¹ 7.8	16.0 4.9	100.0 30.5	33.0 10.1
24 DN600	24.000 610.0	42.0 ¹ 12.8	27.0 8.2	29.5 ¹ 9.0	19.0 5.8	120.0 36.6	40.0 12.2

AGS fittings available up to 60"/1500 mm. Contact Victaulic for details.



¹ Fitting flow data for 14-24"/350-600 mm size No. 10 and No. 11 Elbows is based on fittings for Style 07 and 77 couplings. For flow data on AGS fittings (No. W10 and No. W11 Elbows), refer to [publication 20.05](#).

4.1 DIMENSIONS

Elbows

No. 10 90° Elbow

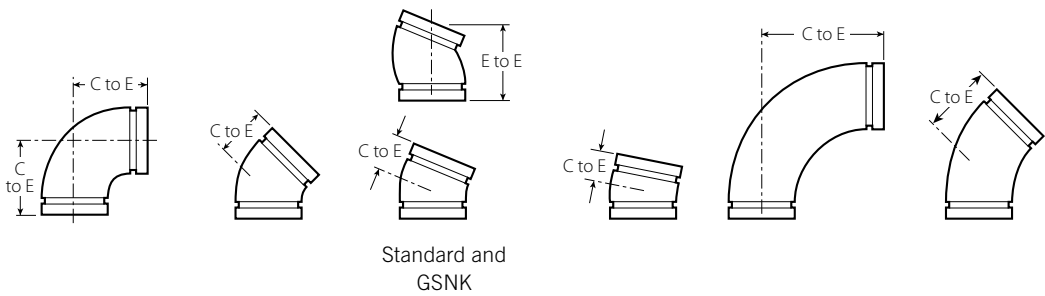
No. 11 45° Elbow

No. 12 22½° Elbow

No. 13 11¼° Elbow

No. 100 90° Long Radius Elbow

No. 110 45° Long Radius Elbow



Standard and GSNK

Size		No. 10 90° Elbow		No. 11 45° Elbow		No. 12 22½° Elbow		No. 13 11¼° Elbow		No. 100 90° Long Radius Elbow		No. 110 45° Long Radius Elbow	
Nominal	Actual Outside Diameter	C to E	Approx. Wgt. (Each)	C to E	Approx. Wgt. (Each)	C to E	Approx. Wgt. (Each)	C to E	Approx. Wgt. (Each)	C to E	Approx. Wgt. (Each)	C to E	Approx. Wgt. (Each)
inches DN	inches mm	inches mm	lb kg	inches mm	lb kg	inches mm	lb kg	inches mm	lb kg	inches mm	lb kg	inches mm	lb kg
¾ DN20	1.050 26.9	2.25 57	0.5 0.2	1.50 38	0.5 0.2	1.63 (sw) 41	—	1.38 (sw) 35	—	2.50 (sw) 64	0.4 0.2	1.88 (sw) 48	0.3 0.1
1 DN25	1.315 33.7	2.25 57	0.6 0.3	1.75 44	0.6 0.3	3.25 ² 83	0.6 0.3	1.38 (sw) 35	0.3 0.1	2.88 (sw) 73	0.6 0.3	2.25 (sw) 57	0.5 0.2
1¼ DN32	1.660 42.4	2.75 70	1.0 0.5	1.75 44	0.9 0.4	1.75 44	0.8 0.4	1.38 (sw) 35	0.5 0.2	3.25 (sw) 83	1.1 0.5	2.38 (sw) 60	0.7 0.3
1½ DN40	1.900 48.3	2.75 70	1.2 0.5	1.75 44	0.9 0.4	1.75 44	0.8 0.4	1.38 (sw) 35	0.5 0.2	3.63 (sw) 92	2.2 1.0	2.50 (sw) 64	1.3 0.6
2 DN50	2.375 60.3	3.25 83	1.8 0.8	2.00 51	1.3 0.6	1.88 48	1.2 0.5	1.38 35	1.0 0.5	4.38 111	2.5 1.1	2.75 70	1.8 0.8
2½ DN65	2.875 73.0	3.75 95	3.2 1.5	2.25 57	2.2 1.0	4.00 ² 102	2.3 1.0	1.50 38	1.1 0.5	5.13 130	3.4 1.5	3.00 76	2.8 1.3
3 DN80	3.000 76.1	3.75 95	3.7 1.7	2.25 57	3.4 1.5	2.25 57	—	1.50 38	—	—	—	—	—
3½ DN90	3.500 88.9	4.25 108	4.5 2.0	2.50 64	3.1 1.4	4.50 ² 114	3.1 1.4	1.50 38	2.1 1.0	5.88 149	6.0 2.7	3.38 86	4.9 2.2
4 DN100	4.000 101.6	4.50 114	5.6 2.5	2.75 70	4.3 2.0	2.50 (sw) 64	4.0 1.8	1.75 (sw) 44	2.7 1.2	—	—	—	—
4½ DN120	4.500 114.3	5.00 127	7.1 3.2	3.00 76	5.6 2.5	2.88 73	5.6 2.5	1.75 44	3.6 1.6	7.50 191	12.3 5.6	4.00 102	7.3 3.3
5 DN125	4.250 108.0	5.00 127	11.0 5.0	3.00 76	5.6 2.5	—	—	—	—	—	—	—	—
6 DN150	5.000 127.0	5.25 (sw) 133	10.0 4.5	3.13 (sw) 79	6.0 2.7	3.50 (sw) 89	6.6 3.0	1.88 (sw) 48	4.2 1.9	—	—	—	—
7 DN175	5.563 141.3	5.50 140	11.7 5.3	3.25 83	8.3 3.8	2.88 (sw) 73	7.8 3.5	2.00 (sw) 51	5.0 2.2	9.25 (sw) 235	18.0 8.2	4.88 (sw) 124	14.8 6.7
8 DN200	5.250 133.0	5.50 140	11.7 5.3	3.25 83	8.3 3.8	—	—	—	—	—	—	—	—
9 DN225	5.500 139.7	5.50 140	11.7 5.3	3.25 83	8.3 3.8	2.88 73	—	2.00 51	—	—	—	—	—
10 DN250	6.625 168.3	6.50 165	17.2 7.8	3.50 89	10.8 4.9	6.25 ² 159	12.2 5.5	2.00 51	7.0 3.2	10.75 273	30.4 13.8	5.50 140	17.4 7.9
11 DN275	6.250 159.0	6.50 165	18.6 8.4	3.50 89	10.8 4.9	—	—	—	—	—	—	—	—
12 DN300	6.500 165.1	6.50 165	15.5 7.0	3.50 89	9.8 4.4	3.13 79	11.4 5.2	2.00 51	7.4 3.4	10.75 (sw) 273	29.0 13.2	5.50 (sw) 140	19.0 8.6

² Gooseneck design, end-to-end dimension fittings in this size, contact your nearest Victaulic sales representative.

³ For 14"/350 mm and larger roll grooved systems, Victaulic offers the Advanced Groove System (AGS). For pricing and availability of cut groove fittings in this size, contact your nearest Victaulic sales representative.

⁴ Chinese standard sizes

(s) = Carbon Steel Direct Roll Groove (OGS)

(sw) = Carbon Steel Segmentally Welded

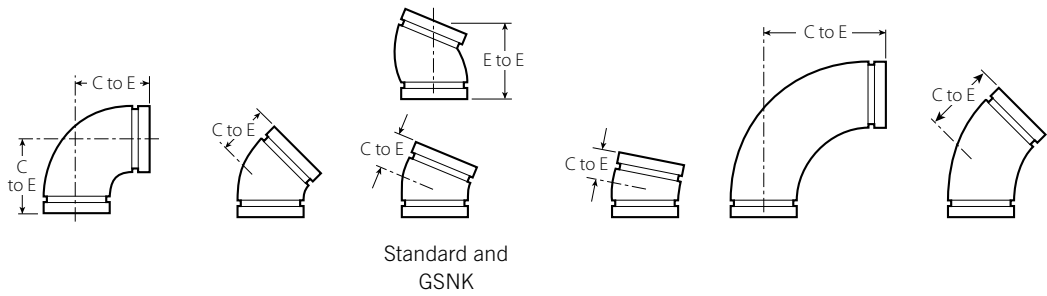
NOTE

- All fittings are ductile iron unless otherwise noted with an (sw) or (s).

4.1 DIMENSIONS (Continued)

Elbows

- No. 10** 90° Elbow
- No. 11** 45° Elbow
- No. 12** 22 1/2° Elbow
- No. 13** 11 1/4° Elbow
- No. 100** 90° Long Radius Elbow
- No. 110** 45° Long Radius Elbow



Size		No. 10 90° Elbow		No. 11 45° Elbow		No. 12 22 1/2° Elbow		No. 13 11 1/4° Elbow		No. 100 90° Long Radius Elbow		No. 110 45° Long Radius Elbow	
Nominal	Actual Outside Diameter	C to E	Approx. Wgt. (Each)	C to E	Approx. Wgt. (Each)	C to E	Approx. Wgt. Each	C to E	Approx. Wgt. (Each)	C to E	Approx. Wgt. (Each)	C to E	Approx. Wgt. (Each)
inches DN	inches mm	inches mm	lb kg	inches mm	lb kg	inches mm	lb kg	inches mm	lb kg	inches mm	lb kg	inches mm	lb kg
8 DN200	8.625 219.1	7.75 197	29.9 13.6	4.25 108	20.4 9.3	7.75 ² 197	20.0 9.1	2.00 51	10.1 4.6	14.25 362	66.0 30.0	7.25 184	36.0 16.3
10 DN250	10.750 273.0	9.00 229	63.3 28.7	4.75 121	37.5 17.0	4.38 (sw) 111	30.0 13.6	2.13 54	11.8 5.3	15.00 381	107.0 48.5	6.25 159	57.0 25.9
12 DN300	12.750 323.9	10.00 254	74.0 33.6	5.25 133	66.7 30.3	4.88 (sw) 124	40.0 18.1	2.25 57	29.3 13.3	18.00 457	156.0 70.8	7.50 191	90.0 40.8
14 ³ DN350	14.000 355.6	14.00 356	136.0 61.7	5.75 146	65.0 29.5	5.00 (sw) 127	46.0 20.9	3.50 (sw) 89	32.0 14.5	21.00 (s) 533	164.0 74.4	8.75 222	82.0 37.2
	14.843 377.0	14.84 377	149.3 67.7	6.13 156	82.0 37.2	—	—	—	—	—	—	—	—
16 ³ DN400	16.000 406.5	16.00 406	171.0 77.6	6.63 168	88.0 39.3	5.00 (sw) 127	58.0 26.3	4.00 (sw) 102	42.0 19.1	24.00 (s) 610	210.0 95.3	10.00 (s) 254	100.0 45.4
	16.773 426.0	16.75 425	198.6 90.1	7.00 178	101.3 45.9	—	—	—	—	—	—	—	—
18 ³ DN450	18.000 457.2	18.00 457	228.0 103.4	7.50 190	108.0 50.0	5.50 (sw) 140	65.0 29.5	4.50 (sw) 144	53.2 24.1	27.00 (s) 686	273.0 123.8	11.25 (s) 286	135.0 61.2
	18.898 480.0	18.88 480	291.0 132.0	7.83 200	141.7 64.3	—	—	—	—	—	—	—	—
20 ³ DN500	20.000 508.0	20.00 508	298.0 135.2	8.25 210	138.0 62.6	6.00 (sw) 152	78.6 36.0	5.00 (sw) 127	65.0 29.5	30.00 (s) 762	343.0 155.6	12.50 (s) 318	174.0 78.9
	20.866 530.0	20.88 530	355.0 161.0	8.63 219	179.0 81.2	—	—	—	—	—	—	—	—
24 ³ DN600	24.000 609.6	24.00 610	438.0 198.7	10.00 254	221.0 100.2	7.00 (sw) 178	140.0 63.5	6.00 (sw) 152	60.0 27.2	36.00 (s) 914	516.0 234.1	15.00 (s) 381	251.0 113.9
	24.803 630.0	24.80 630	545.0 247.2	10.25 261	255.2 115.7	—	—	—	—	—	—	—	—
14 – 60 350 – 1500	For AGS fitting information, see publication 20.05												

² Gooseneck design, end-to-end dimension fittings in this size, contact your nearest Victaulic sales representative.

³ For 14"/350 mm and larger roll grooved systems, Victaulic offers the Advanced Groove System (AGS). For pricing and availability of cut groove fittings in this size, contact your nearest Victaulic sales representative.

(s) = Carbon Steel Direct Roll Groove (OGS)

(sw) = Carbon Steel Segmentally Welded

NOTE

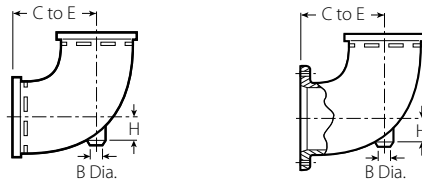
- All fittings are ductile iron unless otherwise noted with an (sw) or (s).

4.2 DIMENSIONS

Reducing Base Support Elbow

No. R-10G Grv. x Grv.

No. R-10F Grv. x Flange



Size		No. R-10 Reducing Base Support Elbow			Approx. Weight Each		
Nominal Size inches DN		C to E inches mm	H inches mm	B Diameter inches mm	Grv. x Grv. lb kg	Grv. x Flange lb kg	
6 DN150	x	4 DN100	9.00 229	1.25 32	1.50 38	19.0 8.6	33.0 15.0
		5 DN125	9.00 229	1.50 38	1.50 38	23.0 10.4	38.0 17.2
8 DN200	x	6 DN150	10.50 267	2.13 24	1.50 38	33.0 15.0	52.0 23.6
10 DN250	x	8 DN200	12.00 305	2.40 61	1.50 38	61.0 27.7	88.0 39.9

4.3 DIMENSIONS

Adapter Elbow

No. 18 90° Adapter Elbow

No. 19 45° Adapter Elbow

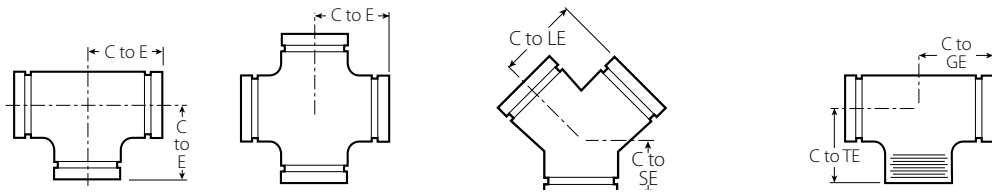


Size		No. 18 90° Adapter Elbow ⁵			No. 19 45° Adapter Elbow ⁵		
Nominal Size inches DN	Actual Outside Diameter inches mm	C to GE inches mm	C to TE inches mm	Approximate Weight (Each) lb kg	C to GE inches mm	C to TE inches mm	Approx. Weight (Each) lb kg
¾ DN20	1.050 26.9	2.25 57	2.25 57	0.5 0.2	1.50 38	1.50 38	0.5 0.2
1 DN25	1.315 33.7	2.25 57	2.25 57	0.5 0.2	—	—	—
1¼ DN32	1.660 42.4	2.75 70	2.75 70	0.9 0.4	—	—	—
1½ DN40	1.900 48.3	2.75 70	2.75 70	1.1 0.5	1.75 44	1.75 44	0.9 0.4
2 DN50	2.375 60.3	3.25 83	4.25 108	2.5 1.1	—	—	—
2½	2.875 73.0	3.75 95	3.75 95	3.0 1.4	2.25 57	2.25 57	2.3 1.0
3 DN80	3.500 88.9	4.25 108	6.00 152	5.8 2.6	2.50 64	4.25 108	5.0 2.3
3½ DN90	4.000 101.6	4.50 114	6.25 159	8.0 3.6	5.25 133	5.25 133	8.8 4.0
6 DN150	6.625 168.3	6.50 165	6.50 165	17.6 8.0	3.50 89	3.50 89	12.7 5.8

⁵ Available with British Standard Pipe Threads, specify "BSP" clearly on order.

4.4 DIMENSIONS

Tees, Crosses and True Wyes



Size		No. 20 Tee			No. 35 Cross (sw)		No. 33 True Wye (sw)			No. 29M Tee with Threaded Branch		
Nominal inches DN	Actual Outside Dimeter inches mm	C to E inches mm	Approx. Weight (Each) lb kg	C to E inches mm	Approx. Weight (Each) lb kg	C to LE inches mm	C to SE inches mm	Approx. Weight (Each) lb kg	C to GE inches mm	C to TE inches mm	Approx. Weight (Each) lb kg	
3/4 DN20	1.050 26.9	2.25 57	0.6 0.3	2.25 57	0.9 0.4	2.25 57	2.00 51	0.7 0.3	2.25 57	2.25 (sw) 57	0.6 0.3	
1 DN25	1.315 33.7	2.25 57	1.0 0.5	2.25 57	1.3 0.6	2.25 57	2.25 57	1.1 0.5	2.25 57	2.25 57	1.0 0.5	
1 1/4 DN32	1.660 42.4	2.75 70	1.5 0.7	2.75 70	2.1 1.0	2.75 70	2.50 64	1.5 0.7	2.75 70	2.75 70	1.5 0.7	
1 1/2 DN40	1.900 48.3	2.75 70	2.0 0.9	2.75 70	2.5 1.1	2.75 70	2.75 70	1.8 0.8	2.75 70	2.75 70	2.0 0.9	
2 DN50	2.375 60.3	3.25 83	3.0 1.4	3.25 83	3.8 1.7	3.25 83	2.75 70	2.5 1.1	3.25 83	4.25 108	3.0 1.4	
2 1/2 DN65	2.875 73.0	3.75 95	4.3 2.0	3.75 95	6.1 2.8	3.75 95	3.00 76	4.3 2.0	3.75 95	3.75 95	4.3 2.0	
3 DN80	3.500 88.9	4.25 108	6.8 3.0	4.25 108	10.5 4.8	4.25 108	3.25 83	6.1 2.8	4.25 108	6.00 152	6.8 3.1	
3 1/2 DN90	4.000 101.6	4.50 (sw) 114	7.9 3.6	4.50 114	11.5 5.2	4.50 114	3.50 89	9.6 4.4	4.50 114	4.50 (sw) 114	7.9 3.6	
	4.250 108.0	5.00 127	15.5 7.0	—	—	—	—	—	5.00 127	5.00 (sw) 127	15.5 7.0	
4 DN100	4.500 114.3	5.00 127	11.9 5.4	5.00 127	15.8 7.2	5.00 127	3.75 95	9.8 4.4	5.00 127	7.25 184	11.9 5.4	
4 1/2 DN120	5.000 127.0	5.25 (sw) 133	15.0 6.8	5.25 133	18.5 8.4	—	—	—	5.25 133	5.25 (sw) 133	15.0 6.8	
	5.250 133.0	5.50 140	17.8 8.1	—	—	—	—	—	5.50 140	5.50 (sw) 140	17.8 8.1	
DN125	5.500 139.7	5.50 140	17.8 8.1	—	—	—	—	—	5.50 140	5.50 (sw) 140	17.8 8.1	
5	5.563 141.3	5.50 140	17.8 8.1	5.50 140	20.0 9.1	5.50 140	4.00 102	15.0 6.8	5.50 140	5.50 (sw) 140	17.8 8.1	
	6.250 159.0	6.50 165	27.1 12.3	—	—	—	—	—	6.50 165	6.50 (sw) 165	27.1 12.3	
	6.500 165.1	6.50 165	22.0 10.0	6.50 165	28.0 12.7	—	—	—	6.50 165	6.50 (sw) 165	22.0 10.0	
6 DN150	6.625 168.3	6.50 165	25.7 11.7	6.50 165	28.0 12.7	6.50 165	4.50 114	22.3 10.1	6.50 165	6.50 (sw) 165	25.7 11.7	
8 DN200	8.625 219.1	7.75 197	47.6 21.6	7.75 197	48.0 21.8	7.75 197	6.00 152	36.0 16.3	7.75 197	7.75 197	47.6 21.6	
10 DN250	10.750 273.0	9.00 229	99.0 44.9	9.00 229	121.5 55.1	9.00 229	6.50 155	69.9 31.7	9.00 229	9.00 229	99.0 44.9	
12 DN300	12.750 323.9	10.00 254	133.0 60.3	10.00 254	110.0 49.9	10.00 254	7.00 178	80.0 36.3	10.00 254	10.00 254	133.0 60.3	

⁶ For 14"/350 mm and larger roll grooved systems, Victaulic offers the Advanced Groove System (AGS). For pricing and availability of cut groove fittings in this size, contact your nearest Victaulic sales representative.

⁷ Chinese standard sizes

(s) = Carbon Steel Direct Roll Groove (OGS)

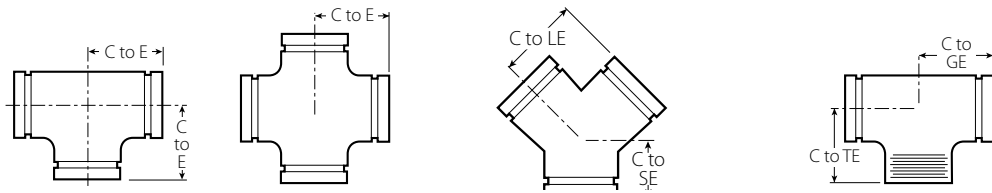
(sw) = Carbon Steel Segmentally Welded


NOTE

- All fittings are ductile iron unless otherwise noted with an (sw) or (s).

4.4 DIMENSIONS (Continued)

Tees, Crosses and True Wyes



Size		No. 20 Tee		No. 35 Cross (sw)		No. 33 True Wye (sw)			No. 29M Tee with Threaded Branch		
Nominal inches DN	Actual Outside Dimeter inches mm	C to E inches mm	Approx. Weight (Each) lb kg	C to E inches mm	Approx. Weight (Each) lb kg	C to LE inches mm	C to SE inches mm	Approx. Weight (Each) lb kg	C to GE inches mm	C to TE inches mm	Approx. Weight (Each) lb kg
14 ⁶ DN350	14.000 355.6	11.00 (sw) 279	145.0 65.8	11.00 279	198.0 89.8	11.00 279	7.50 191	134.2 60.8	—	—	—
	377.0	11.50 292	145.0 65.8	—	—	—	—	—	—	—	—
16 ⁶ DN400	16.000 406.4	12.00 (sw) 305	186.0 84.4	12.00 305	250.0 113.4	12.00 305	8.00 203	167.0 75.7	—	—	—
	426.0	13.00 300	186.0 84.4	—	—	—	—	—	—	—	—
18 ⁶ DN450	18.000 457.0	15.50 (sw) 394	260.0 117.9	15.50 394	350.0 158.8	15.50 394	8.50 216	234.0 106.1	—	—	—
	480.0	14.63 372	256.0 116.1	—	—	—	—	—	—	—	—
20 ⁶ DN500	20.000 508.0	17.25 (sw) 438	336.0 152.4	17.25 438	452.0 205.0	17.25 438	9.00 229	281.0 127.5	—	—	—
	530.0	15.38 (sw) 391	339.0 153.8	—	—	—	—	—	—	—	—
24 ⁶ DN600	24.000 610.0	20.00 (sw) 508	592.0 268.5	20.00 508	795.0 360.6	20.00 508	10.00 254	523.0 237.2	—	—	—
	630.0	17.38 (sw) 441	473.0 214.5	—	—	—	—	—	—	—	—
14 – 60 DN350 – DN1500	For AGS fitting information, see publication 20.05 										

⁶ For 14"/350 mm and larger roll grooved systems, Victaulic offers the Advanced Groove System (AGS). For pricing and availability of cut groove fittings in this size, contact your nearest Victaulic sales representative.

(s) = Carbon Steel Direct Roll Groove (OGS)

(sw) = Carbon Steel Segmentally Welded

NOTE

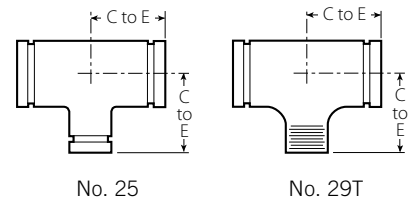
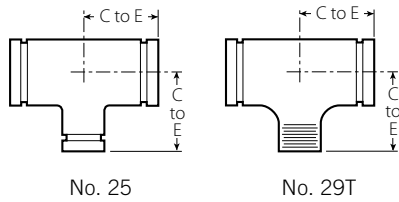
- All fittings are ductile iron unless otherwise noted with an (sw) or (s).

4.5 DIMENSIONS

Reducing Tee

No. 25 Grooved Branch

No. 29T Threaded Branch



Size			No. 25 Std.	No. 29T w/ Thd. Branch	Approx. Weight (Each) lb kg	
Nominal Size inches DN			C to E inches mm	C to E inches mm		
1 DN25	x	1 DN225	2.25 (sw) 57	2.25 (sw) 57	1.0 0.5	
1 ¼ DN32	x	1 ¼ DN32	2.75 (sw) 70	2.75 (sw) 70	1.3 0.6	
1 ½ DN40	x	1 ½ DN40	¾ DN20	2.75 (sw) 70	2.75 (sw) 70	1.5 0.7
			1 DN25	2.75 (sw) 70	2.75 (sw) 70	1.5 0.7
			1 ¼ DN32	2.75 (sw) 70	2.75 (sw) 70	1.7 0.8
2 DN50	x	2 DN50	¾ DN20	3.25 83	3.25 83	2.5 1.1
			1 DN25	3.25 83	3.25 83	2.7 1.2
			1 ¼ DN32	3.25 (sw) 83	3.25 (sw) 83	1.8 0.8
			1 ½ DN40	3.25 83	3.25 (sw) 83	3.0 1.4
2 ½	x	2 ½	¾ DN20	3.75 (sw) 95	3.75 (sw) 95	3.9 1.8
			1 DN25	3.75 95	3.75 (sw) 95	3.8 1.7
			1 ¼ DN32	3.75 95	3.75 95	4.2 1.7
			1 ½ DN40	3.75 95	3.75 95	3.9 1.8
			2 DN50	3.75 95	3.75 (sw) 95	4.5 2.0
3 DN80	x	3 DN80	¾ DN20	4.25 (sw) 108	4.25 (sw) 108	5.7 2.6
			1 DN25	4.25 108	4.25 108	6.1 2.8
			1 ¼ DN32	4.25 108	4.25 108	8.0 3.6
			1 ½ DN40	4.25 108	4.25 (sw) 108	6.5 2.9
			2 DN50	4.25 108	4.25 (sw) 108	6.2 2.8
			2 ½	4.25 108	4.25 (sw) 108	6.4 2.9

Size			No. 25 Std.	No. 29T w/ Thd. Branch	Approx. Weight (Each) lb kg				
Nominal Size inches DN			C to E inches mm	C to E inches mm					
4 DN100	x	4 DN100	¾ DN20	5.00 (sw) 127	5.00 (sw) 127	8.0 3.6			
			1 DN25	5.00 127	5.00 127	7.8 3.5			
			1 ¼ DN32	5.00 (sw) 127	5.00 (sw) 127	9.6 4.4			
			1 ½ DN40	5.00 127	5.00 127	10.2 4.6			
			2 DN50	5.00 127	5.00 127	11.2 5.1			
			2 ½	5.00 127	5.00 127	11.4 5.2			
			3 DN80	5.00 127	5.00 127	11.6 5.3			
			5 DN125	x	5 DN125	1 DN25	5.50 (sw) 140	5.50 (sw) 140	14.0 6.4
						1 ½ DN40	5.50 (sw) 140	5.50 (sw) 140	14.3 6.5
						2 DN50	5.50 (sw) 140	5.50 (sw) 140	14.5 6.6
2 ½	5.50 140	5.50 (sw) 140				15.2 6.9			
3 DN80	5.50 140	5.50 (sw) 140				16.6 7.5			
4 DN100	5.50 140	5.50 (sw) 140				16.7 7.6			
6 DN150	x	6 DN150	1 DN25	6.50 (sw) 165	6.50 (sw) 165	23.0 10.4			
			1 ½ DN40	6.50 (sw) 165	6.50 (sw) 165	24.0 10.9			
			2 DN50	6.50 165	6.50 165	21.6 9.8			
			2 ½	6.50 165	6.50 165	21.4 11.7			
			3 DN80	6.50 165	6.50 165	26.5 12.0			
			4 DN100	6.50 165	6.50 165	25.0 11.3			
6 ½ DN165.1	x	6 ½ DN165.1	3 DN80	6.50 165	6.50 (sw) 165	24.0 10.9			
			4 DN100	6.50 165	6.50 (sw) 165	25.0 11.3			

⁸ For 14"/350 mm and larger roll grooved systems, Victaulic offers the Advanced Groove System (AGS). For pricing and availability of cut groove fittings in this size, contact your nearest Victaulic sales representative.

⁹ Cast fitting available. Contact Victaulic for details.

(s) = Carbon Steel Direct Roll Groove (OGS)

(sw) = Carbon Steel Segmentally Welded

⁸ For 14"/350 mm and larger roll grooved systems, Victaulic offers the Advanced Groove System (AGS). For pricing and availability of cut groove fittings in this size, contact your nearest Victaulic sales representative.

⁹ Cast fitting available. Contact Victaulic for details.

(s) = Carbon Steel Direct Roll Groove (OGS)

(sw) = Carbon Steel Segmentally Welded



MERIT MANUFACTURING CORPORATION

319 Circle of Progress • Pottstown, Pennsylvania 19464-3811

Tel 610-327-4000 • Fax 610-970-9282

Fax Toll Free 800-543-7013 • www.meritmfg.com

SUBMITTAL SHEET

Merit Weld-Miser™ Tee-Let® Welding Outlet Fittings

Merit Weld-Miser™ Tee-Let® Welding Branch Outlet Fittings offer the user a high strength, low cost forged threaded and grooved line of fittings specifically designed and manufactured to be installed on schedules 5 thru 10, proprietary thin wall flow pipe and standard wall pipe.

Merit Tee-Lets are forged steel welding outlet fittings. The material used in manufacture meets the chemical and physical requirements of ASTM A 53, Grades A or B, Type E, Tee-Lets employ a low weld volume design to provide for either a partial or full penetration weld employing a single pass with minimum burn-through and pipe distortion. Weld Miser Tee-Lets are recommended for use on proprietary thin wall, schedules 5, 10 and 40 pipe. Threads comply with ANSI B1.20.1 or ISO7/1. They are UL Listed and FM Approved for use conforming to the requirements of Bulletin 13 1999 of the National Fire Protection Association. When used in fire sprinkler systems, Tee-Lets are rated for 300 psi. When used in mechanical systems, maximum pressures are calculated using criteria developed for ASME B31 piping code. Send for details if required.



Factory Mutual System APPROVED

PRODUCT APPROVALS

Tee-Let Welded Outlet Fitting (UL VIZU — EX3788, FM Approval Guide Chapter 1 – Pipe Fittings)

Outlet Model	Outlet Pipe Size (Inch)	Header Pipe Size (Inch)	Rated Pressure (psig)
Tee-Let Type A (F-Threaded End)	1/2, 3/4, 1	1/2 - 8 (Sch. 10, 40)	300
	1 1/4, 1 1/2, 2, 2 1/2, 3, 4	1/2 - 4 (Sch. 5, DynaFlow)	
	2	4 (EZ-Flow)	
	2, 4	6 (EZ-Flow)	
Tee-Let Type C (Grooved End)	1 1/4 - 8	1 1/4 - 8 (Sch. 10, 40)	300
	2 1/2 - 8	1/2 - 4 (Sch. 5, DynaFlow)	
Tee-Let Type C/R (Roll Grooved End)	1 1/4 - 6	1 1/4 - 8 (All Schedules)	300

1) Size on size (ie 2 x 2) Tee-Lets are not FM Approved 2) FM rated working pressure when welded on Sch. 5 or nonthreadable lightwell pipe is 175 psi.

PROJECT: _____

ARCHITECT / ENGINEER: _____

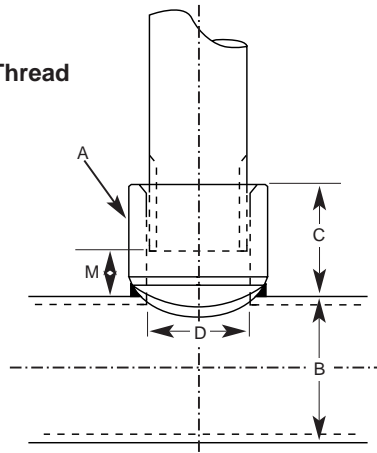
CONTRACTOR: _____ **PHONE:** _____

ADDRESS: _____

NOTES: _____

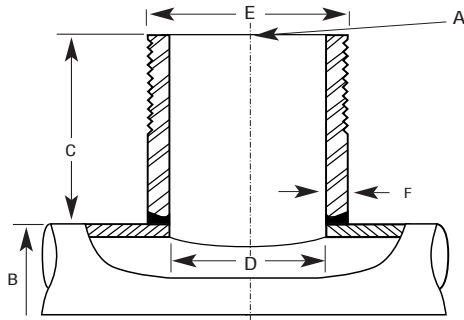
APPROVAL:

Type A
Female Thread

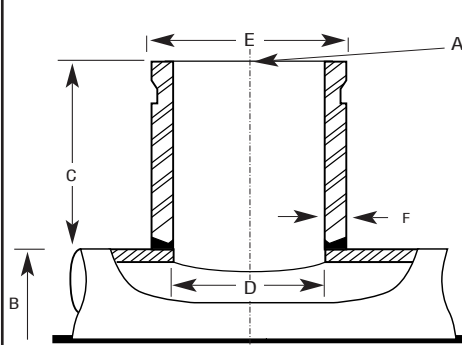


Part Number BSPT	Nominal Outlet Size A	Nominal Header Size B	Outlet Length Size C	Inside Diameter Size D	Make up Size M	Weight Each Lb. / kgs	Part Number BSPT	Nominal Outlet Size A	Nominal Header Size B	Outlet Length Size C	Inside Diameter Size D	Make up Size M	Weight Each Lb. / kgs
				In. / mm							In. / mm		
1002002	1/4 x	1-1/4 - 8				0.080	1015040	2- 1/2 x	4	1.625	1.610	0.875	0.477
-	6 x	6 - 200				0.04	1115040		100	41.3	40.9	22.2	.022
1005012	1/2 x	1-1/4 - 1-1/2	1.063	0.700	0.500	0.171	1015050		5 - 8	1.625	1.610	0.875	0.477
-	13 x	32 - 40	27.0	17.8	12.7	0.08	1115050		125 - 200	41.3	40.9	22.2	.022
1005015		1-1/2 - 2	1.063	0.700	0.500	0.171	1020020	2 x	2	1.750	2.067	0.875	0.857
-		40 - 50	27.0	17.8	12.7	0.08	1120020	50 x	50	44.5	52.5	22.2	0.38
1005020		2 - 2-1/2	1.063	0.700	0.500	0.171	1020025		2-1/2	1.750	2.067	0.875	0.829
-		50 - 65	27.0	17.8	12.7	0.08	1120025		65	44.5	52.5	22.2	0.38
1005025		2-1/2 - 8	1.063	0.700	0.500	0.169	1020030		3	1.750	2.067	0.875	0.829
-		65 - 200	27.0	17.8	12.7	0.08	1120030		80	44.5	52.5	22.2	0.39
1007012	3/4 x	1-1/4 - 1-1/2	1.125	0.900	0.500	0.260	1020040		4	1.750	2.067	0.875	0.800
-	19 x	32 - 40	28.6	22.9	12.7	0.12	1120040		100	44.5	52.5	22.2	0.36
1007015		1-1/2 - 2	1.125	0.900	0.500	0.260	1020050		5	1.750	2.067	0.875	0.743
-		40 - 50	28.6	22.9	12.7	0.12	1120050		125	44.5	52.5	22.2	0.34
1007020		2 - 2-1/2	1.125	0.900	0.500	0.260	1020060		6	1.750	2.067	0.875	0.743
-		50 - 65	28.6	22.9	12.7	0.12	1120060		150	44.5	52.5	22.2	0.34
1007025		2-1/2 - 8	1.125	0.900	0.500	0.256	1020080		8	1.750	2.067	0.875	0.743
-		65 - 200	28.6	22.9	12.7	0.12	1120080		200	44.5	52.5	22.2	0.34
1010012	1 x	1-1/4 - 1-1/2	1.250	1.145	0.500	0.331	1025025	2-1/2 x	2-1/2	2.215	2.469	1.125	1.250
1110012	25 x	32 - 40	31.8	29.1	12.7	0.15	1125025	65 x	65	54.0	62.7	28.6	0.55
1010015		1-1/2 - 2	1.250	1.145	0.500	0.331	1025030		3	2.215	2.469	1.125	1.200
1110015		40 - 50	31.8	29.1	12.7	0.15	1125030		80	54.0	62.7	28.6	0.55
1010020		2 - 2-1/2	1.250	1.145	0.500	0.320	1025040		4	2.215	2.469	1.125	1.150
1110020		50 - 65	31.8	29.1	12.7	0.15	1125040		100	54.0	62.7	28.6	0.52
1010025		2-1/2 - 3	1.250	1.145	0.500	0.314	1025050		5	2.215	2.469	1.125	1.150
1110025		65 - 80	31.8	29.1	12.7	0.14	1125050		125	54.0	62.7	28.6	0.52
1010030		3 - 4	1.250	1.145	0.500	0.309	1025060		6	2.215	2.469	1.125	1.150
1110030		80 - 100	31.8	29.1	12.7	0.14	1125060		150	54.0	62.7	28.6	0.52
1010050		5 - 8	1.250	1.145	0.500	0.291	1025080		8	2.215	2.469	1.125	1.150
1110050		125 - 200	31.8	29.1	12.7	0.13	1125080		200	54.0	62.7	28.6	0.52
1012012	1- 1/4 x	1-1/4 - 1-1/2	1.375	1.490	0.500	0.432	1025030	3 x	3	2.500	3.068	1.500	3.100
1112012	32 x	32 - 40	34.9	37.8	12.7	.019	-	80 x	80	63.5	77.9	38.1	1.41
1012015		1-1/2 - 2	1.375	1.490	0.500	0.421	1025040		4	2.500	3.068	1.500	3.100
1112015		40 - 50	34.9	37.8	12.7	.019	-		100	63.5	77.9	38.1	1.41
1012020		2 - 2-1/2	1.375	1.490	0.500	0.421	1025050		5	2.500	3.068	1.500	3.100
1112020		50 - 65	34.9	37.8	12.7	.019	-		125	63.5	77.9	38.1	1.412
1012025		2-1/2 - 3	1.375	1.490	0.500	0.411	1025060		6	2.500	3.068	1.500	3.100
1112025		65 - 80	34.9	37.8	12.7	.019	-		150	63.5	77.9	38.1	1.412
1012030		3 - 4	1.375	1.490	0.500	0.389	1025080		8	2.500	3.068	1.500	3.100
1112030		80 - 100	34.9	37.8	12.7	.018	-		200	63.5	77.9	38.1	1.41
1012050		5 - 8	1.375	1.490	0.500	0.389	1040040	4 x	4	3.000	4.026	2.000	5.000
1112050		125 - 200	34.9	37.8	12.7	.018	-	4 x	100	76.2	102.3	50.8	2.27
1015015	1- 1/2 x	1-1/2	1.625	1.610	0.875	0.477	1040050		5	3.000	4.026	2.000	5.000
1115015	40 x	40	41.3	40.9	22.2	.022	-		125	76.2	102.3	50.8	2.27
1015020		2	1.625	1.610	0.875	0.477	1040060		6	3.000	4.026	2.000	5.000
1115020		50	41.3	40.9	22.2	.022	-		150	76.2	102.3	50.8	2.27
1015025	2-1/2	1.625	1.610	0.875	0.477		1040080		8	3.000	4.026	2.000	5.000
1115025		65	41.3	40.9	22.2	.022	-		200	76.2	102.3	50.8	2.27
1015030		3 - 4	1.625	1.610	0.875	0.477							
1115030		80 - 100	41.3	40.9	22.2	.022							

Type B
Male Thread
Standard Weight



Type C
Cut Groove
Standard Weight

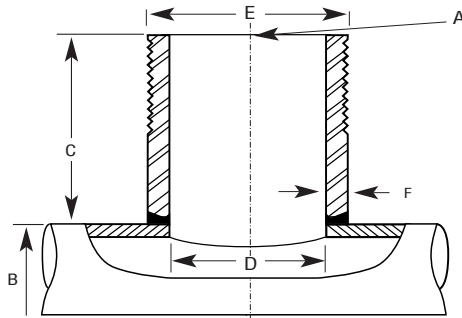


Male Thread Std. Wt.	Cut Groove Std. Wt.	Roll Groove Sch. 10	Nominal Outlet Size A	Nominal Header Size B	Outlet Length Size C	In. / mm Inside Diameter Size D	Outside Diameter Size E	F Wall Thickness Std. Wt.	Weight Each Lb. / kgs
1310012	2010012	2210012	1 x	1-1/4 - 1-1/2	3	1.049	1.315	0.133	1.500
			25 x	32 - 40	80	26.6	33.4	3.4	30
1310015	2010015	2210015		1-1/2 - 2	3	1.049	1.315	0.133	1.500
				40 - 50	80	26.6	33.4	3.4	30
1210020	2010020	2210020		2 - 2-1/2	3	1.049	1.315	0.133	1.500
				50 - 65	80	26.6	33.4	3.4	30
1310025	2010025	2210025		2-1/2 - 4	3	1.049	1.315	0.133	1.500
				65 - 100	80	26.6	33.4	3.4	30
1310050	2010050	2210050		5 - 8	3	1.049	1.315	0.133	1.500
				125 - 200	80	26.6	33.4	3.4	30
1312012	2012012	2212012	1-1/4 x	1-1/4	3	1.368	1.660	0.140	1.500
			32 x	32	80	34.7	42.2	3.6	30
1312015	2012015	2212015		1-1/2	3	1.368	1.660	0.140	1.500
				40	80	34.7	42.2	3.6	30
1212020	2012020	2212020		2 - 2-1/2	3	1.368	1.660	0.140	1.500
				50 - 65	80	34.7	42.2	3.6	30
1312025	2012025	2212025		3 - 4	3	1.368	1.660	0.140	1.500
				80 - 100	80	34.7	42.2	3.6	30
1312050	2012050	2212050		5 - 8	3	1.368	1.660	0.140	1.500
				125 - 200	80	34.7	42.2	3.6	30
1315015	2015015	2215015	1-1/2 x	1-1/2	3	1.610	1.900	0.145	1.500
			40 x	40	80	40.9	48.3	3.7	30
1215020	2015020	2215020		2	3	1.610	1.900	0.145	1.500
				50	80	40.9	48.3	3.7	30
1315025	2015025	2215025		2-1/2	3	1.610	1.900	0.145	1.500
				65	80	40.9	48.3	3.7	30
1315030	2015030	2215030		3 - 4	3	1.610	1.900	0.145	1.500
				80 - 100	80	40.9	48.3	3.7	30
1315050	2015050	2215050		5 - 8	3	1.610	1.900	0.145	1.500
				125 - 200	80	40.9	48.3	3.7	30
1320020	2020020	-	2 x	2	3	2.067	2.375	0.154	1.500
			50 x	50	80	52.5	60.3	3.9	30
1320025	2020025	-		2-1/2	3	2.067	2.375	0.154	1.500
				65	80	52.5	60.3	3.9	30
1320030	2020030	-		3	3	2.067	2.375	0.154	1.500
				80	80	52.5	60.3	3.9	30
1320035	2020040	-		4	3	2.067	2.375	0.154	1.500
				100	80	52.5	60.3	3.9	30
1320050	2020050	-		5	3	2.067	2.375	0.154	1.500
				125	80	52.5	60.3	3.9	30
1320060	2020060	-		6	3	2.067	2.375	0.154	1.500
				150	80	52.5	60.3	3.9	30
1320080	2020080	-		8	3	2.067	2.375	0.154	1.500
				200	80	52.5	60.3	3.9	30

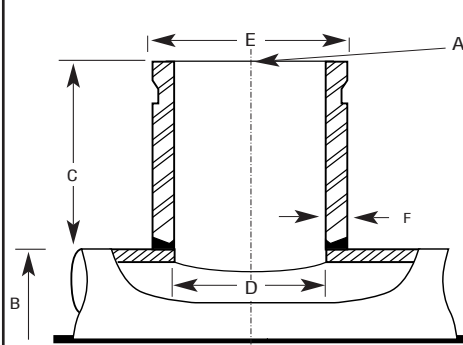
Note: Tee-lets are manufactured to fit size-on-size, that is the contoured shape on a given Tee-Let is made to fit perfectly on the first listed header size. If installed on the second header size marked on the fitting, a slight gap of approximately 1/32" will appear along the longitudinal centerline of the header. For example, a 1" x 2 - 2-1/2" Tee-Let, is a 1" outlet fitting manufactured to fit perfectly on the 2" header size listed, while leaving a 1/32" gap along the longitudinal centerline of the 2-1/2" size. If a perfect fit is required for a 2-1/2" header pipe, then a 1" x 2-1/2 - 3" Tee-let would be ordered. Size consolidations are employed to reduce inventory and provide for greater flexibility.

Merit Weld-Miser Tee-Let Welding Outlet Fittings

Type B
Male Thread
Standard Weight



Type C
Cut Groove
Standard Weight



Male Thread Std. Wt.	Cut Groove Std. Wt. Metric	Roll Groove Sch. 10	Nominal Outlet Size A	Nominal Header Size B	Outlet Length Size C	Inside Std. Wt. Size D	Inside Schedule Size D	In. / mm		F Wall Thickness		Weight Each Lb. / kgs
								Inside Diameter Size E	Std.	Sch. 10		
1325025	2025025 2125025	2225025	2-1/2 x 65 x	2-1/2 65	3 80	2.469 62.7	2.635 67.0	2.875 76.2	0.203 5.0	0.120 3.0	1.500 30	
1325030	2025030 2125030	2225030		3 80	3 80	2.469 62.7	2.635 67.0	2.875 76.2	0.203 5.0	0.120 3.0	1.500 30	
1325035	2025040 2125040	2225035		4 100	3 80	2.469 62.7	2.635 67.0	2.875 76.2	0.203 5.0	0.120 3.0	1.500 30	
1325050	2025050 2125050	2225050		5 125	3 80	2.469 62.7	2.635 67.0	2.875 76.2	0.203 5.0	0.120 3.0	1.500 30	
1325060	2025060 2125060	2225060		6 175	3 80	2.469 62.7	2.635 67.0	2.875 76.2	0.203 5.0	0.120 3.0	1.500 30	
1325080	2025080 2125080	2225080		8 200	3 80	2.469 62.7	2.635 67.0	2.875 76.2	0.203 5.0	0.120 3.0	1.500 30	
1330025	2030025	2230025	3 x 80 x	3 80	3 80	3.068 78.0	3.260 83.0	3.500 88.0	0.216 5.0	0.120 3.0	1.500 30	
1330030	2030030	2230030		3-1/2 85	3 80	3.068 78.0	3.260 83.0	3.500 88.0	0.216 5.0	0.120 3.0	1.500 30	
1330035	2030035	2230035		4 100	3 80	3.068 78.0	3.260 83.0	3.500 88.0	0.216 5.0	0.120 3.0	1.500 30	
1330050	2030050	2230050		5 125	3 80	3.068 78.0	3.260 83.0	3.500 88.0	0.216 5.0	0.120 3.0	1.500 30	
1330060	2030060	2230060		6 150	3 80	3.068 78.0	3.260 83.0	3.500 88.0	0.216 5.0	0.120 3.0	1.500 30	
1330080	2030080	2230080		8 200	3 80	3.068 78.0	3.260 83.0	3.500 88.0	0.216 5.0	0.120 3.0	1.500 30	
1340040	2040040	2240040	4 x 100 x	4 100	4 100	4.026 102.0	4.260 108.0	4.500 114.0	0.237 6.0	0.120 3.0	1.500 30	
1340050	2040050	2240050		5 125	4 100	4.026 102.0	4.260 108.0	4.500 114.0	0.237 6.0	0.120 3.0	1.500 30	
1340060	2040060	2240060		6 150	4 100	4.026 102.0	4.260 108.0	4.500 114.0	0.237 6.0	0.120 3.0	1.500 30	
1340080	2040080	2240080		8 200	4 100	4.026 102.0	4.260 108.0	4.500 114.0	0.237 6.0	0.120 3.0	1.500 30	
-	2060060	2260060	6 x 150 x	6 150	4 100	6.065 155.0	6.357 161.5	6.625 168.3	0.280 7.1	0.134 3.0	1.500 30	
-	2060080	2260080		8 200	4 100	6.065 155.0	6.357 161.5	6.625 168.3	0.280 7.1	0.134 3.0	1.500 30	
-	2080080	2280080	8 x 200 x	8 200	4 100	7.981 203.0	8.329 212.0	8.625 213.0	0.322 8.0	0.148 3.0	1.500 30	

Note: Tee-lets are manufactured to fit size-on-size, that is the contoured shape on a given Tee-Let is made to fit perfectly on the first listed header size. If installed on the second header size marked on the fitting, a slight gap of approximately 1/32" will appear along the longitudinal centerline of the header. For example, a 1" x 2 - 2-1/2" Tee-Let, is a 1" outlet fitting manufactured to fit perfectly on the 2" header size listed, while leaving a 1/32" gap along the longitudinal centerline of the 2-1/2" size. If a perfect fit is required for a 2-1/2" header pipe, then a 1" x 2-1/2 - 3" Tee-let would be ordered. Size consolidations are employed to reduce inventory and provide for greater flexibility.



Deacon Industrial Supply Company, Inc.

Merit Tee-Let Distributors of Welding Outlet Fittings in PA
215-256-1715 <http://www.deaconind.com> sales@deaconind.com

HANGERS

Fig. 92

Universal C-type Clamp (Standard Throat)

Size Range: 3/8" and 1/2"

Material: Ductile iron, hardened steel cup point set screw and locknut.

Finish: Plain or Galvanized

Service: Recommended for use under roof installations with bar joist type construction, or for attachment to the top or bottom flange of structural shapes where the vertical hanger rod is required to be offset from the edge of the flange and where the thickness of joist or flange does not exceed 3/4".

Approvals: Complies with Federal Specification A-A-1192A (Type 19 & 23) WW-H-171-E (Type 23), ANSI/MSS SP-69 and MSS SP-58 (Type 19 & 23).
UL, ULC Listed and FM Approved.

How to size: Size of clamp is determined by size of rod to be used.

Installation: Follow recommended set screw torque values per MSS-SP-69 (See table on page 233)

Features:

- They may be attached to horizontal flanges of structural members in either the top beam or bottom beam positions.
- Secured in place by a cup-pointed Set Screw tightened against the flange.
A Jam Nut is provided for tightening the Set Screw against the Body Casting.
- Thru tapping of the body casting permits extended adjustment of the threaded rod.
- Can be used with Fig 89X retaining clip for seismic applications.

Ordering: Specify rod size, figure number, name of clamp and finish.

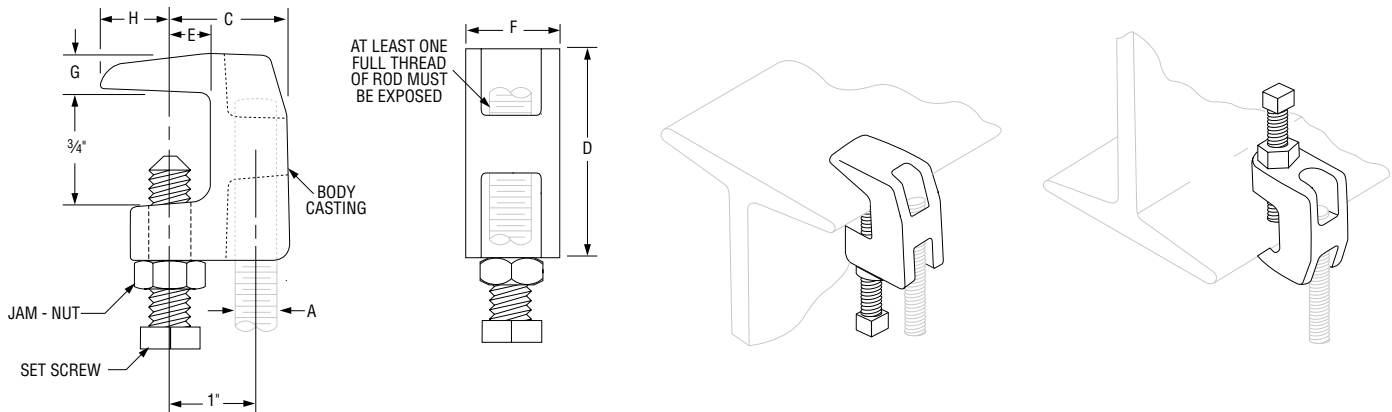


FIG. 92: LOAD (LBS) • WEIGHT (LBS) • DIMENSIONS (IN) • TORQUE (IN-LBS)

Rod Size A	Set Screw Size	Torque Value	Max Loads ■		Weight	C	D	E	F	G	H
			Top	Bottom							
3/8	3/8	60	500	250	0.34	1 5/16	1 9/16	9/16	1 3/16	3/8	1/2
1/2	1/2	125	950	760	0.63	1 3/8	1 13/16	1/2	1 1/16	7/16	23/32

■ Maximum temperature of 450° F

PROJECT INFORMATION		APPROVAL STAMP
Project:		<input type="checkbox"/> Approved
Address:		<input type="checkbox"/> Approved as noted
Contractor:		<input type="checkbox"/> Not approved
Engineer:		Remarks:
Submittal Date:		
Notes 1:		
Notes 2:		

Fig. 146

Continuous Threaded Rod

Size Range: 1/4" through 1 1/2" Stocked in six, ten, and twelve foot lengths. Other even foot lengths can be furnished to order.

Material: Carbon steel or Stainless Steel Gr 304

Threads: National Coarse (USS), rod threaded complete length.

Finish: Plain or Zinc Plated (Hot-Dip Galvanized optional)

Maximum Temperature: 650° F.

Ordering: Specify rod diameter and length, figure number, name and finish.

Note: The acceptability of galvanized coatings at temperatures above 450°F is at the discretion of the end user.

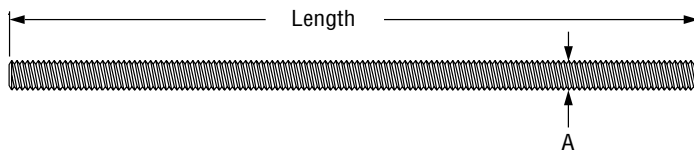


FIG. 146:
LOADS (LBS) • WEIGHTS (LBS) • DIMENSIONS (IN)

Rod Size A	Threads per Inch	Max Load 650° F	Weight per Ft.
1/4	20	240	0.12
3/8	16	730	0.30
1/2	13	1,350	0.53
5/8	11	2,160	0.84
3/4	10	3,230	1.20
7/8	9	4,480	1.70
1	8	5,900	2.30
1 1/4	7	9,500	3.60
1 1/2	6	13,800	5.10

Note: Other rod sizes available upon request. Class 2 fit is available upon request.

PROJECT INFORMATION		APPROVAL STAMP	
Project:		<input type="checkbox"/> Approved	
Address:		<input type="checkbox"/> Approved as noted	
Contractor:		<input type="checkbox"/> Not approved	
Engineer:		Remarks:	
Submittal Date:			
Notes 1:			
Notes 2:			

Fig. 69

Adjustable Swivel Ring, Tapped Per NFPA Standards

Size Range: 1/2" through 8"

Material: Carbon steel

Finish: Galvanized

Service: Recommended for suspension of non-insulated **stationary** pipe line.

Maximum Temperature: 650° F

Approvals: Complies with Federal Specification A-A-1192A (Type 10), WW-H-171-E (Type 10), ANSI/MSS SP-69 and MSS SP-58 (Type 10). UL Listed and FM Approved (Sizes 3/4" - 8").

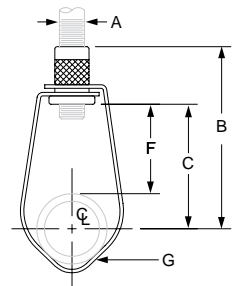
Features:

- Threads are countersunk so that they cannot become burred or damaged.
- Knurled swivel nut provides vertical adjustment after piping is in place.
- Captured swivel nut in the 1/2" through 6" sizes. The capture is permanent in the bottom portion of the band, allowing the hanger to be opened during installation if desired, but not allowing the nut to fall completely out.

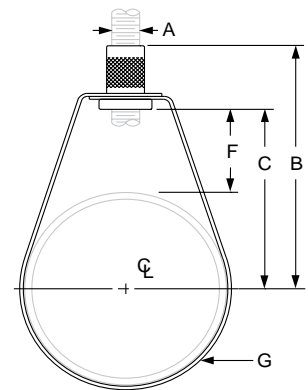
Ordering: Specify size, figure number and name.

Note: The acceptability of galvanized coatings at temperatures above 450°F is at the discretion of the end user.

Metric nut available upon request. Non-captured nut also available upon request.



1/2" through 1" pipe



1 1/4" through 8" pipe

FIG. 69: LOADS (LBS) • WEIGHT (LBS) • DIMENSIONS (IN)

Pipe Size	Max Load	Weight	Rod Size A	B	C	F	G Width
1/2	300	0.10	3/8	2 7/8	2	1 9/16	5/8
3/4		0.10		2 3/4	1 7/8	1 5/16	
1		0.10		2 9/16	1 11/16	1	
1 1/4		0.10		2 5/8	1 3/4	7/8	
1 1/2		0.10		2 3/4	1 7/8		
2		0.11		3 1/4	2 3/8	1 1/8	
2 1/2	525	0.20	1/2	4	2 3/4	1 5/16	3/4
3		0.20		3 13/16	2 15/16	1 3/16	
4	650	0.30	1/2	4 11/16	3 13/16	1 9/16	1
5	1,000	0.54		5 5/16	4 3/8		
6		0.65		6 11/16	5 9/16	2 1/4	
8		1.00		8	7	2 11/16	

Note: Reflects changes in rod diameter from previously published data per recent revisions in MSS-SP-58 & 69

PROJECT INFORMATION		APPROVAL STAMP	
Project:		<input type="checkbox"/> Approved	
Address:		<input type="checkbox"/> Approved as noted	
Contractor:		<input type="checkbox"/> Not approved	
Engineer:		Remarks:	
Submittal Date:			
Notes 1:			
Notes 2:			

MISCELLANEOUS

Job Name _____
 Job Location _____
 Engineer _____
 Approval _____

Contractor _____
 Approval _____
 Contractor's P.O. No. _____
 Representative _____

Series 757DCDA, 757NDCDA

Double Check Detector Assemblies

Sizes: 2½" – 10"

Series 757DCDA, 757NDCDA Double Check Detector Assemblies are used to prevent backflow of non-health hazard pollutants that are objectionable but not toxic, from entering the potable water supply system. The 757DCDA, 757NDCDA may be installed under continuous pressure service and may be subjected to backpressure and backsiphonage. Series 757DCDA, 757NDCDA is used primarily on fire line sprinkler systems when it is necessary to monitor unauthorized use of water.

Features

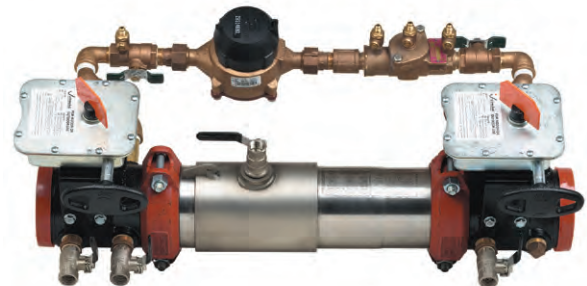
- Extremely compact design
- 70% Lighter than traditional designs
- 304 (Schedule 40) stainless steel housing & sleeve
- Groove fittings allow integral pipeline adjustment
- Patented tri-link spring check provides lowest pressure loss
- Unmatched ease of serviceability
- Available with grooved butterfly valve shutoffs
- May be used for horizontal, vertical or N pattern installations
- Replaceable check disc rubber

Specifications

The Double Check Detector Assembly shall consist of two independent tri-link check modules within a single housing, sleeve access port, four test cocks and two drip tight shutoff valves. Tri-link checks shall be removable and serviceable, without the use of special tools. The housing shall be constructed of 304 Schedule 40 stainless steel pipe with groove end connections. Tri-link checks shall have reversible elastomer discs and in operation shall produce drip tight closure against reverse flow caused by backpressure or backsiphonage. The bypass assembly shall consist of a meter, which registers in either gallon or cubic measurement, a double check backflow assembly and required test cocks. Assembly shall be a Watts Series 757DCDA, 757NDCDA.



757DCDAOSY



757DCDABFG



757NDCDAOSY

NOTICE

The information contained herein is not intended to replace the full product installation and safety information available or the experience of a trained product installer. You are required to thoroughly read all installation instructions and product safety information before beginning the installation of this product.

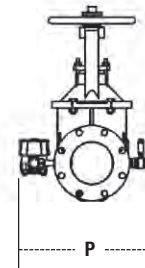
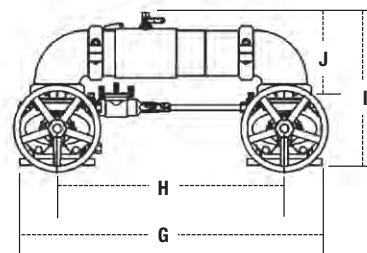
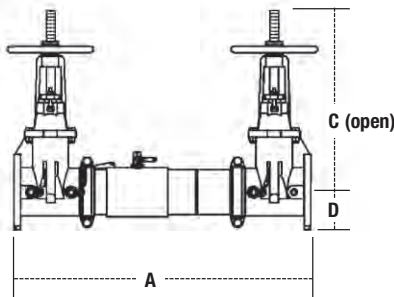
Available Models

Suffix:

- OSY – UL/FM outside stem and yoke resilient seated gate valves
- BFG – UL/FM grooved gear operated butterfly valves with tamper switch
- *OSY FxG – Flanged inlet gate connection and grooved outlet gate connection
- *OSY GxF – Grooved inlet gate connection and flanged outlet gate connection
- *OSY GxG – Grooved inlet gate connection and grooved outlet gate connection

Available with grooved NRS gate valves - consult factory*
 Post indicator plate and operating nut available - consult factory*
 *Consult factory for dimensions

Dimensions – Weight



Materials

Housing & Sleeve: 304 (Schedule 40) Stainless Steel
 Elastomers: EPDM, Silicone and Buna-N
 Tri-link Checks: Noryl®, Stainless Steel
 Check Discs: Reversible Silicone or EPDM
 Test Cocks: Bronze Body Nickel Plated
 Pins & Fasteners: 300 Series Stainless Steel
 Springs: Stainless Steel

Pressure – Temperature

Temperature Range: 33°F – 140°F (0.5°C – 60°C)
 Maximum Working Pressure: 175psi (12.1 bar)

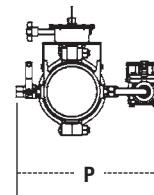
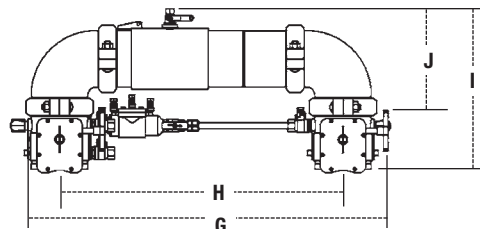
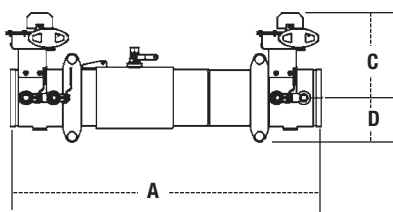
Approvals

- Approved by the Foundation for Cross-Connection Control and Hydraulic Research at The University of Southern California (FCCCHR-USC)
- AWWA C510-97



757DCDA, 757NDCDA

SIZE	DIMENSIONS												WEIGHT							
	A		C (OSY)		D		G		H		I		J		P		757DCDA		757NDCDA	
in.	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	lbs.	kgs.	lbs.	kgs.
2½	30¾	781	16¾	416	3½	89	29¼	738	21½	546	15½	393	8¼	223	13¾	335	139	63	147	67
3	31¾	806	18¾	479	3⅞	94	30¼	768	22¼	565	17⅞	435	9⅞	233	14½	368	159	72	172	78
4	33¾	857	22¾	578	4	102	33	838	23½	597	18½	470	9⅞	252	15¾	386	175	79	198	90
6	43½	1105	30⅞	765	5½	140	44¾	1137	33¼	845	23¾	589	13¼	332	19	483	309	140	350	159
8	49¾	1264	37¾	959	6⅞	170	54⅞	1375	40⅞	1019	27¼	697	15⅞	399	21¼	538	494	224	569	258
10	57¾	1467	45¾	1162	8⅞	208	66	1676	49½	1257	32½	826	17¾	440	24	610	795	361	965	438



757DCDABFG, 757NDCDABFG

SIZE	DIMENSIONS												WEIGHT							
	A		C		D		G		H		I		J		P		757DCDABFG		757NDCDABFG	
in.	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	lbs.	kgs.	lbs.	kgs.
2½	27¾	705	8	203	3½	89	29⅞	759	21½	546	14⅞	379	8¼	223	13	330	70	32	78	35
3	28¾	718	8⅞	211	3⅞	94	30¼	779	22¼	565	15¼	392	9⅞	233	13½	343	68	31	81	37
4	29	737	8⅞	227	3⅞	94	31⅞	811	23½	597	16¼	412	9⅞	252	14	356	75	34	98	44
6	36½	927	10	254	5	127	43⅞	1097	33¼	845	19⅞	500	13¼	332	14½	368	131	59	171	78
8	42¾	1086	12¼	311	6½	165	51⅞	1297	40⅞	1019	23¾	592	15⅞	399	18¾	462	275	125	351	159

Noryl® is a registered trademark of General Electric Company.

Capacity

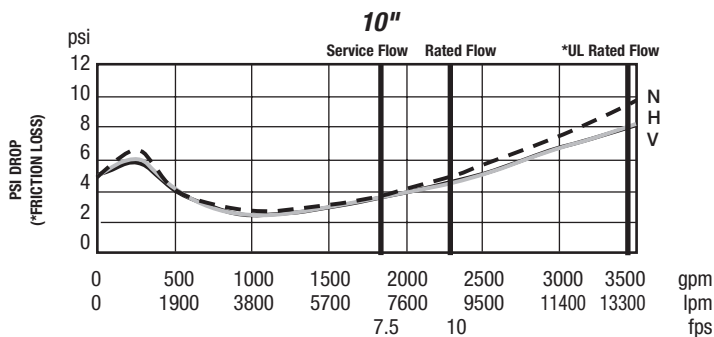
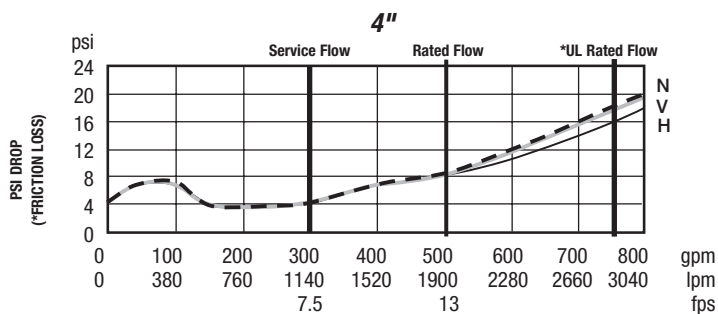
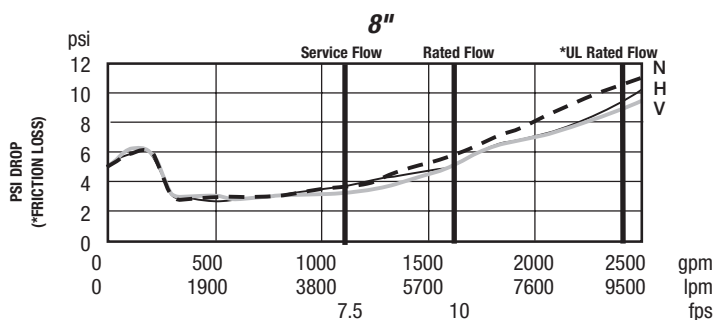
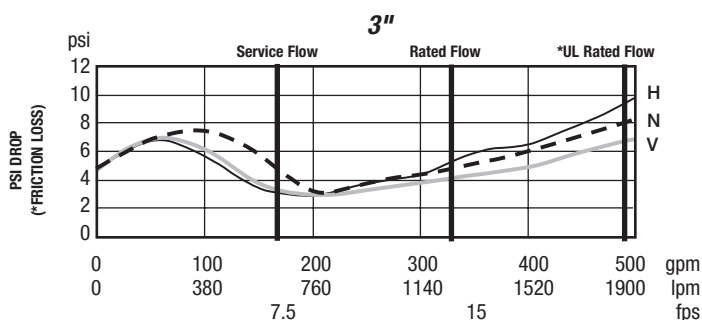
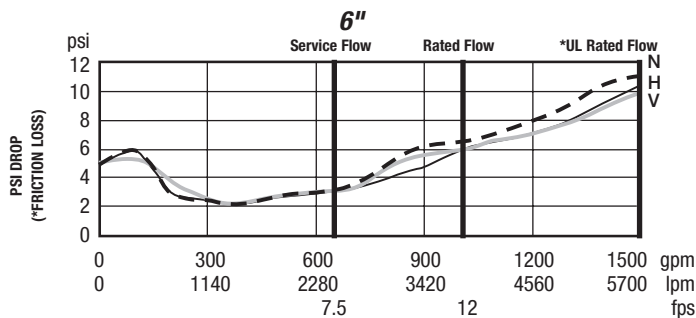
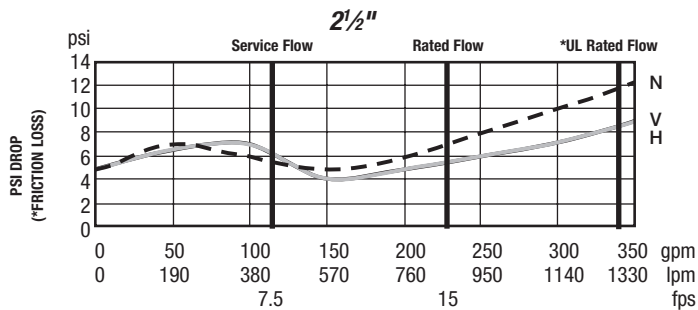
Series 757DCDA, 757NDCDA flow curves as tested by Underwriters Laboratory.

Flow characteristics collected using butterfly shutoff valves

_____ Horizontal _____ Vertical - - - - - N - Pattern

Flow capacity chart identifies valve performance based upon rated water velocity up to 25fps

- Service Flow is typically determined by a rated velocity of 7.5fps based upon schedule 40 pipe.
- Rated Flow identifies maximum continuous duty performance determined by AWWA.
- UL Flow Rate is 150% of Rated Flow and is not recommended for continuous duty.
- AWWA Manual M22 [Appendix C] recommends that the maximum water velocity in services be not more than 10fps.



NOTICE

Inquire with governing authorities for local installation requirements

WARNING

It is illegal to use this product in any plumbing system providing water for human consumption, such as drinking or dishwashing, in the United States. Before installing standard material product, consult your local water authority, building and plumbing codes.



USA: T: (978) 689-6066 • F: (978) 975-8350 • Watts.com
Canada: T: (905) 332-4090 • F: (905) 332-7068 • Watts.ca
Latin America: T: (52) 81-1001-8600 • Watts.com



GUARDIAN

FIRE EQUIPMENT, INC.
MIAMI, FL

Ph. 800.327.6584 • Fax 800.827.3869

DETAIL AND SUBMITTAL SHEET

6300 Series - Fire Dept. Inlet Connections - Bodies

Project/Location: _____

Date: _____

Architect/Engineer: _____

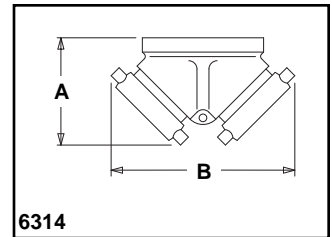
Qty: _____

Contractor: _____

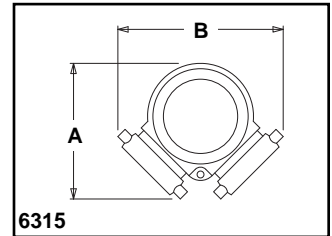
Appropriate Selection

Used as auxiliary connections through which the fire department can pump water to supplement existing water supplies. Provides 250 GPM flow (minimum), per 2 1/2" inlet.

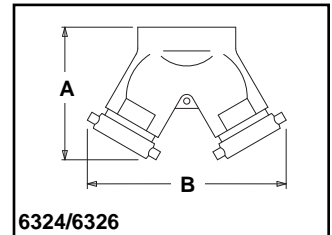
Two and three-way - inlet connections feature clappered brass bodies (straight or angle pattern), with female hose thread swivel inlets and female outlets. Cast brass construction, standard.



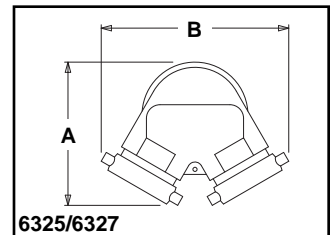
6314



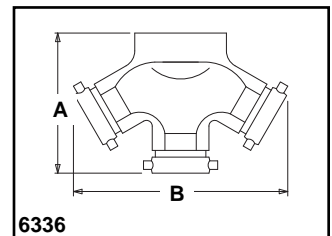
6315



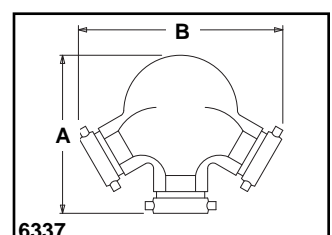
6324/6326



6325/6327



6336



6337

Two and Three-Way Connections					
Model No.	Outlet	Size	Clappers	A	B
<input type="checkbox"/> 6314*	Back	4" x 2 1/2" x 2 1/2"	1	5 1/2"	8 1/8"
<input type="checkbox"/> 6315*	Angle	4" x 2 1/2" x 2 1/2"	1	8 1/8"	8 3/4"
<input type="checkbox"/> 6324	Back	4" x 2 1/2" x 2 1/2"	2	7 9/32"	11 21/32"
<input type="checkbox"/> 6325	Angle	4" x 2 1/2" x 2 1/2"	2	8 31/64"	11 21/32"
<input type="checkbox"/> 6326	Back	6" x 2 1/2" x 2 1/2"	2	7 1/4"	10 1/2"
<input type="checkbox"/> 6327	Angle	6" x 2 1/2" x 2 1/2"	2	10"	10 1/2"
<input type="checkbox"/> 6336**	Back	6" x 2 1/2" x 2 1/2" x 2 1/2"	3	10 1/2"	13 3/4"
<input type="checkbox"/> 6337**	Angle	6" x 2 1/2" x 2 1/2" x 2 1/2"	3	11 1/2"	14 1/2"

Body Lettering	
<input type="checkbox"/> AUTO SPKR	<input type="checkbox"/> STANDPIPE
<input type="checkbox"/> Blank (unlettered)	

*Auto Spkr lettering only ** Blank (Unlettered) only

Optional Finish: -B Polished Brass
 -C Rough Chrome Plated
 -D Polished Chrome Plated

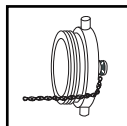
Threads: NST
 Other

Plugs with Chains and Break Caps - Used to keep fire dept. inlet connections free of debris and protect female threads.

Plugs with Chains

Model No.	Size	Type
<input type="checkbox"/> 6404	2 1/2"	Brass

Optional Finish:
 -B Polished
 -C Rough Chrome Plated
 -D Polished Chrome Plated



Threads: NST
 Other

Break Caps

Model No.	Size	Type
<input type="checkbox"/> 6406	2 1/2"	Aluminum
<input type="checkbox"/> 6407	2 1/2"	Plastic

Adjustable Plugs

Model No.	Size	Type
<input type="checkbox"/> 6408	2 1/2"	Aluminum
<input type="checkbox"/> 6409	2 1/2"	Plastic



TECHNICAL DATA

SPRINKLER WRENCHES AND CABINETS

The Viking Corporation, 210 N Industrial Park Drive, Hastings MI 49058

Telephone: 269-945-9501 Technical Services: 877-384-5464 Fax: 269-818-1680 Email: techsvcs@vikingcorp.com

1. DESCRIPTION

A. Sprinkler Cabinets

Viking sprinkler cabinets are metal enclosures constructed to store an emergency supply of spare sprinklers and a sprinkler installation wrench.

NFPA 13 requires a representative number of each type and temperature rating of sprinkler head to be kept in a cabinet on the premises. NFPA 13 also requires a special sprinkler wrench to be provided in the cabinet. This allows for immediate removal and replacement of sprinklers that have operated or that have become damaged.

Stock of spare sprinklers should include sprinklers of all the types and temperature ratings as are installed in the sprinkler system, in the following quantities:

Number of Sprinklers in the System	Minimum Number of Spare Sprinklers Required
Under 300	6
300-1,000	12
Over 1,000	24

B. Sprinkler Wrenches

Viking sprinkler wrenches are special installation tools specifically designed for use with the various Viking sprinklers and spray nozzles. The appropriate wrenches must be used with the indicated sprinklers and nozzles to provide the proper leverage when tightening sprinklers or nozzles and to minimize slippage during installation.

Using wrenches other than the ones designated for installation may damage the sprinkler. Refer to Tables 2a and 2b and the appropriate sprinkler or spray nozzle data page for the correct installation wrenches that must be used.

Wrenches 10896W/B, 07297W/B, 05118CW/B, 13635W/B, and 16888M/B provide the amount of leverage needed to tighten sprinklers and spray nozzles into pipe fittings while preventing sprinkler damage. No additional tools are necessary with these wrenches.

The following wrenches require a separate 1/2" ratchet (not available from Viking) to provide the correct amount of leverage: 08336W/B, 10366W/B, 07565W/B, 11663W/B, 13032W/B, 13577W/B, 13619, 15466, 13623W/B, 15467W/B, 15209W/R, 13655W/B, 14031, 14047W/B, 16208W/R, and 16267.

The internal diameters of sprinkler wrenches 08336W/B, 10366W/B, 15209W/R, 16036W/B, 16208W/R, and 16267 are designed for use with the sprinkler contained in the protective shell. (A protective shell should be retained in the spare sprinkler cabinet.)

Wrench part number 10551W/B is required for threading institutional escutcheon plates onto institutional sprinklers. Wrench part number 10729 is a 2-1/2" (63.5 mm) C-C face spanner wrench used for removing institutional escutcheon plates from institutional sprinklers (refer to the DISASSEMBLY section of institutional sprinkler technical data pages).

Wrench part number 15915 is optional for removing protective sprinkler caps and for installing E-1 and F-1 Escutcheons on frame style pendent sprinklers from the floor by attaching a length of 1" diameter CPVC tubing to the tool. Refer to Technical Bulletin Form No. 051808.

2. LISTINGS AND APPROVALS

Refer to the specific sprinkler or spray nozzle technical data pages for sprinkler listings and approvals.

3. TECHNICAL DATA

Specifications:

Sprinkler Cabinets: Designed with four 3/16" diameter holes in back. Spacing of mounting holes: 3-1/2" (88.9 mm) length, 3-1/2" (88.9 mm) height. The sprinkler cabinet should be located adjacent to the main system riser.

Material Standards:

Sprinkler Cabinets: Cold Rolled Steel. Finish: Painted high-gloss red enamel interior and exterior, chrome plated door knob.

Wrenches: Ductile Iron, Steel, Acetal, or 50% glass filled nylon (for head cabinet wrenches)

Viking Technical Data may be found on
The Viking Corporation's Web site at
<http://www.vikinggroupinc.com>.
The Web site may include a more recent
edition of this Technical Data Page.



TECHNICAL DATA

SPRINKLER WRENCHES AND CABINETS

The Viking Corporation, 210 N Industrial Park Drive, Hastings MI 49058

Telephone: 269-945-9501 Technical Services: 877-384-5464 Fax: 269-818-1680 Email: techsvcs@vikingcorp.com

Ordering Information: (Also refer to the current Viking price list.)

A. Sprinkler Cabinets

1. Determine appropriate cabinet from Table 1 on this page for use with the specific model/number of sprinklers to be contained in the cabinet.
2. Specify cabinet part number and quantity needed.

B. Sprinkler Wrenches

1. Determine the appropriate wrench for use with the given sprinkler or spray nozzle model from Tables 2a and 2b.
2. Specify the wrench part number and quantity needed.

NOTE: Sprinklers and sprinkler wrenches are not supplied with the cabinets; they must be ordered separately.

4. INSTALLATION

Refer to the appropriate sprinkler or spray nozzle technical data page.

5. OPERATION

Refer to the sprinkler or spray nozzle technical data page for the particular model used.

6. INSPECTIONS, TESTS AND MAINTENANCE

Refer to NFPA 25 for Inspection, Testing and Maintenance requirements.

7. AVAILABILITY

The Viking sprinkler wrenches and cabinets are available through a network of domestic and international distributors. See The Viking Corporation web site for the closest distributor or contact The Viking Corporation.

8. GUARANTEE

For details of warranty, refer to Viking's current list price schedule or contact Viking directly.

For Sprinkler Models:	Cabinet Capacity	Cabinet Part No.	Size		
			Length	Height	Depth
Viking frame style sprinklers	6 sprinklers	01724A Available since 1971.	10-3/16" (259 mm)	4-11/16" (103 mm)	2-9/16" (65 mm)
Viking frame style sprinklers, ESFR K14 sprinklers, K16.8 pendent sprinklers, and K25.2 EC sprinklers	12 sprinklers (6 K25.2 EC sprinklers)	01725A Available since 1971.	10-3/16" (259 mm)	8-9/16" (217 mm)	2-9/16" (65 mm)
Viking concealed and flush style sprinklers, ESFR K25.2 and K22.4 pendent sprinklers, and K19.6 CMSA sprinklers	5-6 sprinklers	01731A Available since 1971.	13-13/16" (351 mm)	5-11/16" (144 mm)	3" (76 mm)
High Challenge® Sprinklers, upright ESFR sprinklers, and Intermediate Level Sprinklers	6 sprinklers	03985A Available since 1977	12-5/8" (321 mm)	9-1/8" (232 mm)	4-1/8" (105 mm)

Table 1: Sprinkler Cabinets



TECHNICAL DATA

SPRINKLER WRENCHES AND CABINETS

The Viking Corporation, 210 N Industrial Park Drive, Hastings MI 49058

Telephone: 269-945-9501 Technical Services: 877-384-5464 Fax: 269-818-1680 Email: techsvcs@vikingcorp.com

IMPORTANT NOTES

The sprinkler cabinet should be easily accessible.

The sprinkler cabinet must not be exposed to corrosive atmospheres or temperatures above 100 °F (38 °C).

The stock of spare sprinklers should include an adequate number of sprinklers of each type and temperature rating.

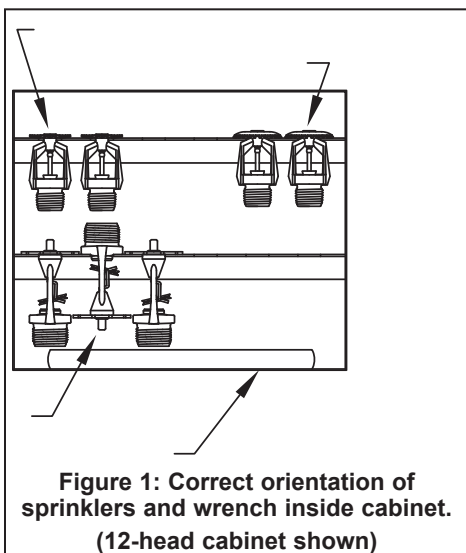
The stock of sprinklers must be in good condition.

A sprinkler wrench of the appropriate type must be included in the cabinet.

Orient sprinklers and sprinkler wrench as indicated in Figure 1 below.

CAUTION: When replacing automatic sprinklers in an existing system, be sure to replace with sprinklers of the correct type, thread size, orifice size, temperature rating, and finish.

IMPORTANT: Always refer to Bulletin Form No. F_091699 - Care and Handling of Sprinklers. Also refer to the appropriate sprinkler data page. Viking sprinklers and spray nozzles are designed to be installed in accordance with the latest edition of Viking technical data, the latest standards of NFPA, FM Global, LPCB, APSAD, VdS or other similar organizations, and also with the provisions of governmental codes, ordinances, and standards whenever applicable. The use of certain types of sprinklers may be limited due to occupancy and hazard. Refer to the Authority Having Jurisdiction prior to installation.



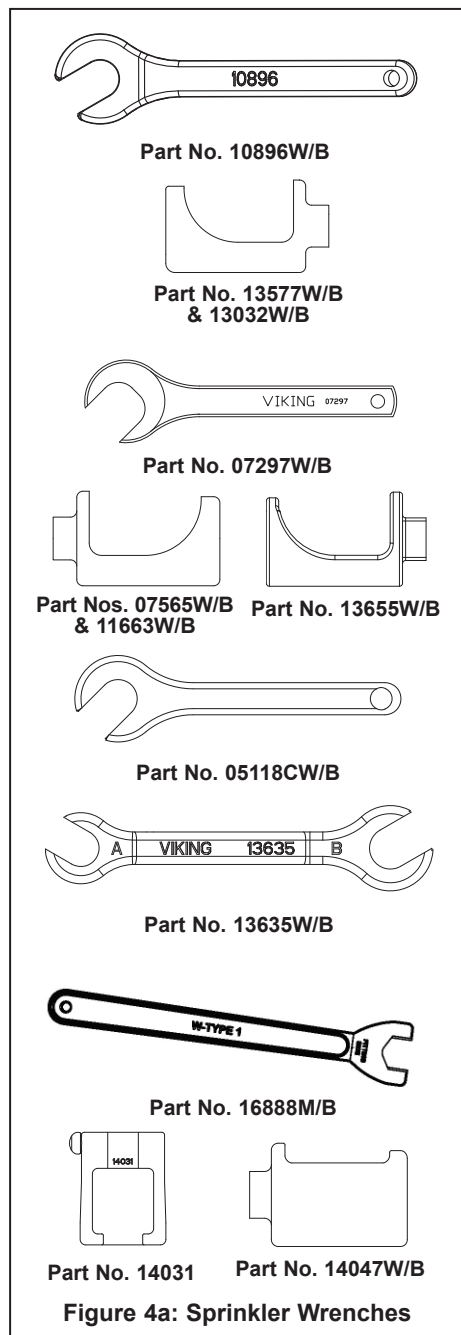


TECHNICAL DATA

SPRINKLER WRENCHES AND CABINETS

The Viking Corporation, 210 N Industrial Park Drive, Hastings MI 49058
 Telephone: 269-945-9501 Technical Services: 877-384-5464 Fax: 269-818-1680 Email: techsvcs@vikingcorp.com

For Sprinkler Models:	Use Wrench:
Frame-style sprinklers and spray nozzles	10896W/B Available since 2000 or 05000CW/B*
Wax coated sprinklers and domed concealed pendent sprinklers	13577W/B Available since 2006 replaces 07398W*
Recessed horizontal sidewall sprinklers with protective shields, domed concealed horizontal sidewall sprinklers, and recessed pendent sprinklers	13655W/B Available since 2006
Coated and recessed ECOH K14 sprinkler	13032W/B Available since 2004
Standard adjustable and plain barrel dry sprinklers, K16.8 and ECOH K14 sprinklers	07297W/B Available since 1991
Recessed and domed concealed dry sprinklers	07565W/B Available since 1991
High Challenge® sprinklers, upright ESFR sprinklers, and ELO sprinklers**	05118CW/B Available since 1981
Coated, recessed, and domed concealed ELO sprinklers	11663W/B Available since 2001
Pendent K14 and K16.8 ESFR sprinklers	13635W/B double ended (use Side A) Available since 2006, or 10285W/B*
Pendent K25.2, K22.4 ESFR sprinklers and K19.6 CMSA Sprinkler VK592	13635W/B double ended (use Side B) Available since 2006, or 12143W/B*
Upright EC K25.2 sprinklers	16888M/B Available since 2011
QR and EC Concealed Sprinklers VK461, VK462, VK463, VK464, VK465, VK632, and VK634 (also optional for cap removal)	14031† Available since 2006
QR and EC Concealed Sprinklers VK461, VK462, VK463, VK464, VK465, VK632, and VK634	14047W/B (heavy duty) Available since 2006
Residential Concealed Sprinklers VK456, VK457, VK474, and VK488 (also optional for removal of protective caps)	13619† (red) Available since 2006
*Wrench no longer available. May still be used until wrench replacement is necessary. **ELO sprinklers manufactured before Dec. 2001 use wrench part number 07297W/B (07565W/B for coated and recessed). †Ideal for sprinkler cabinets.	
Table 2a: Sprinkler Wrenches	





TECHNICAL DATA

SPRINKLER WRENCHES AND CABINETS

The Viking Corporation, 210 N Industrial Park Drive, Hastings MI 49058
 Telephone: 269-945-9501 Technical Services: 877-384-5464 Fax: 269-818-1680 Email: techsvcs@vikingcorp.com

For Sprinkler Models:	Use Wrench:
Residential Concealed Sprinklers VK456, VK457, VK474, and VK488	13623W/B (heavy duty) Available since 2006
Residential Concealed HSW Sprinkler VK480	16267† or 16208W/R (heavy duty) Available since 2010
Mirage® QR ELO Concealed Sprinklers VK636 and VK469 (also optional for removal of protective caps)	15466† Available since 2009
Mirage® QR ELO Concealed Sprinklers VK636 and VK469	15467W/B (heavy duty) Available since 2009
Mirage® Concealed and flush style sprinklers	08336W/B (heavy duty) Available since 1993
Mirage® Concealed and flush style sprinklers	10366W/B† Available since 1998
Residential Flush Pendent Sprinklers VK476 and VK478	15209W/R (heavy duty) Available since 2009
Recessed Flush Dry Sprinklers VK482	18315 (heavy duty) Available since 2014
Mirage® and Freedom® Concealed Sprinklers VK461, VK462, VK463, VK464, VK465, VK469, VK474, VK632, VK634, VK636, and VK488 (optional concealed cover installer tool)	14412†, or 14867 for the large diameter cover, Available since 2007
Shipping Cap Remover/ Escutcheon Installer (optional***)	15915† Available since 2010
Institutional style flush sprinklers (for installation of the escutcheon plate)	10551W/B Available since 1999
Institutional style flush sprinklers (spanner wrench for escutcheon plate removal)	10729 Available since 1999
***Allows removal of sprinkler caps and installation of E-1 and F-1 escutcheons on frame style pendent sprinklers from the floor. †Ideal for sprinkler cabinets.	
Table 2b: Sprinkler Wrenches	

