

GRINNELL G-FIRE Figure 40-5 Strap (Pipe Outlet)

General Description

The Figure 40-5 Strap is an economical alternative to welded pipe outlets on steel pipe. The Figure 40-5 Strap can be used with full lengths of pipe and eliminates threading and welding, decreasing waste and installation time. The Figure 40-5 Strap can be used in wet, dry pipe, and deluge systems.

NOTICE

The Figure 40-5 Strap described herein must be installed and maintained in compliance with this document, and with the applicable standards of the National Fire Protection Association, in addition to the standards of any authorities having jurisdiction. Failure to do so may impair the performance of this device.

Owners are responsible for maintaining their fire protection system and devices in proper operating condition. The installing contractor or sprinkler manufacturer should be contacted with any questions.

Technical Data

Approvals

UL, FM, ULC, and VdS

Refer to the Fire Protection Submittal Sheet TFP1800 for exact listing and approval information.

Maximum Working Pressure

175 psi (12,1 bar)

Housing

Ductile iron conforming to ASTM A536, Grade 65-45-12

Protective Coatings

Clear rust inhibitive coating

Bolts/Nuts

• ANSI

The U-bolt is made from carbon steel conforming to ASTM A 307 Grade A and zinc-electroplated conforming to ASTM B 633.

The flange nuts are made from carbon steel conforming to ASTM A 563 Grade A, and zinc electroplated per ASTM B 633.

• Metric

The gold colored carbon steel U-bolt conforms to ASTM F68 Class 4.8 and zinc electroplated per ASTM B 633.

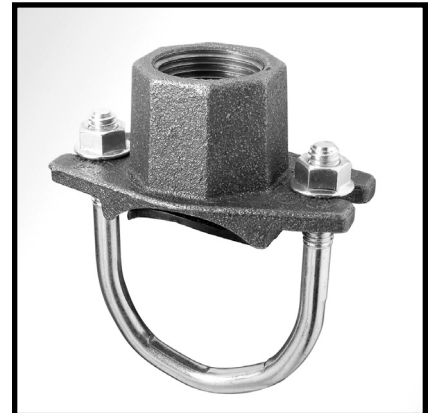
The gold colored flange nuts are carbon steel conforming to ASTM A-563M Class 9, and zinc electroplated per ASTM B 633.

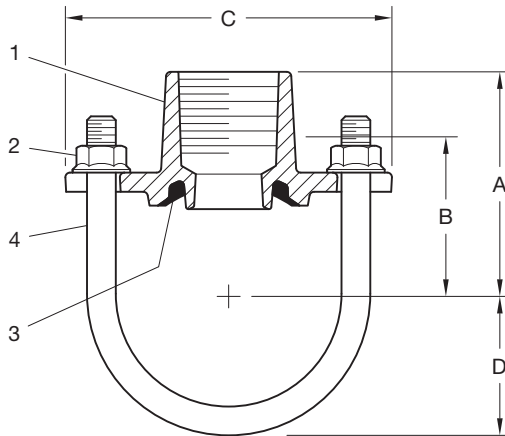
- Stainless Steel U-Bolts and Nuts are available upon request.

Gasket

Grade "E" EPDM Green color code

Refer to data sheet TFP1895 for additional gasket information.





Item	Description
1	Housing
2	Flanged Nut
3	Gasket
4	U-Bolt

FIGURE 40-5 STRAP

Nominal Run Size ANSI Inches DN	O.D. Inches (mm)	Outlet Size NPT	Nominal Dimensions Inches (mm)				Approx. Weight Lbs. (kg)
			A	B	C	D	
1-1/4 DN32	1.660 (42,2)	1/2	2.00 (50,8)	1.50 (38,1)	3.50 (88,90)	1.20 (30,5)	0.84 (0,4)
		3/4	2.00 (50,8)	1.50 (38,1)	3.50 (88,90)	1.20 (30,5)	0.88 (0,4)
		1	2.31 (58,7)	1.68 (42,7)	3.50 (88,90)	1.20 (30,5)	1.13 (0,5)
1-1/2 DN40	1.900 (48,3)	1/2	2.12 (53,8)	1.62 (41,1)	3.50 (88,90)	1.32 (33,5)	0.84 (0,4)
		3/4	2.12 (53,8)	1.62 (41,1)	3.50 (88,90)	1.32 (33,5)	0.88 (0,4)
		1	2.43 (61,7)	1.80 (45,7)	3.50 (88,90)	1.32 (33,5)	1.13 (0,5)
2 DN50	2.375 (60,3)	1/2	2.36 (59,9)	1.86 (47,2)	3.74 (95,0)	1.55 (39,4)	0.88 (0,4)
		3/4	2.36 (59,9)	1.86 (47,2)	3.74 (95,0)	1.55 (39,4)	0.95 (0,4)
		1	2.67 (67,8)	2.04 (51,8)	3.74 (95,0)	1.55 (39,4)	1.16 (0,5)
2-1/2 DN65	2.875 (73,0)	1/2	2.61 (66,3)	2.11 (53,6)	4.25 (108,0)	1.80 (45,7)	0.90 (0,4)
		3/4	2.61 (66,3)	2.11 (53,6)	4.25 (108,0)	1.80 (45,7)	0.99 (0,5)
		1	2.92 (74,2)	2.29 (58,2)	4.25 (108,0)	1.80 (45,7)	1.21 (0,5)

Outlet Hole Size is 1-3/16 inch (30,2 mm).

Outlet threads conforming to ISO 7-1 are available. Contact Tyco Fire Suppression & Building Products.

FIGURE 1
FIGURE 40-5 STRAP (PIPE OUTLET)
NOMINAL DIMENSIONS

Installation / Assembly Instructions

NOTICE

Always read and understand the instructions. Never remove any piping component without verifying that the system is depressurized and drained.

Pipe Preparation

1. The hole size for all Figure 40-5 Straps shall be 1-3/16 Inches (30,2 mm).
2. Drill the hole on the pipe center-line.
3. Remove any sharp or rough edges from the hole or upper housing contact area. Examine the gasket seating surface on the pipe to verify all loose debris, dirt, chips, paint and any other foreign material such as grease are removed.

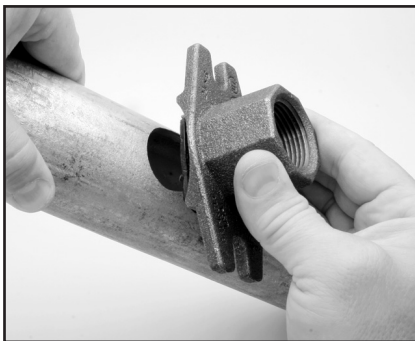
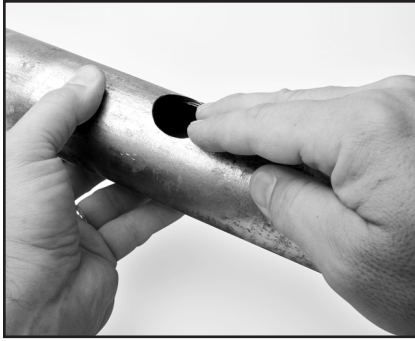
Installation

Verify that the gasket grade is correct for the application intended. Refer to data sheet TFP1895 for additional gasket information.

1. Check for proper gasket positioning in housing. Gasket lubrication is not required on this product for wet systems. For dry pipe or and freezer applications a petroleum free silicone lubricant is recommended.
2. To assemble the strap on the pipe, remove the "U" bolt. Place the outlet housing over the hole in the pipe. Verify that the housing spike is positioned in the hole.
3. Insert the "U" bolt into the coupling and rotate the nuts clockwise until finger tight.
4. Alternate between bolts when tightening nuts until properly torqued.

NOTICE

Over-torqueing can damage thin wall pipe and will not increase sealing efficiency. For proper bolt torques, refer to the table below.



Fitting Size ANSI Inches	Equivalent Ft. Length (1 inch Sch. 40 pipe)
1-1/4 x 1	8
1-1/2 x 1	6
2 x 1	
2-1/2 x 1	4

Hazen Williams coefficient = 120

The 1 inch outlets can be used with a nipple leading directly to a sprinkler. These fittings should be used for hydraulically calculated systems only.

**TABLE A
FIGURE 40-5 FRICTION LOSS**

Pipe Schedule	Bolt Torque Range Ft.-Lbs. / (Nm)
Schedule 5	15 - 20 (20 - 27)
Schedule 10	25 - 30 (34 - 41)
Schedule 40	25 - 30 (34 - 41)

**TABLE B
FIGURE 40-5 BOLT TORQUE
SPECIFICATIONS**

Care and Maintenance

NOTICE

Before closing a fire protection system main control valve for maintenance work on the fire protection system that it controls, obtain permission to shut down the affected fire protection system from the proper authorities and notify all personnel who may be affected by this action.

Responsibility lies with sprinkler owners for the inspection, testing, and maintenance of their fire protection system and devices in compliance with this document, as well as with the applicable standards of the National Fire Protection Association (for example, NFPA 25), in addition to the standards of any other authorities having jurisdiction. Contact the installing contractor or sprinkler manufacturer regarding any questions.

Automatic sprinkler systems are recommended to be inspected, tested, and maintained by a qualified inspection service in accordance with local requirements and/or national code.

Limited Warranty

Products manufactured by Tyco Fire Protection Products (TFPP) are warranted solely to the original Buyer for ten (10) years against defects in material and workmanship when paid for and properly installed and maintained under normal use and service. This warranty will expire ten (10) years from date of shipment by TFPP. No warranty is given for products or components manufactured by companies not affiliated by ownership with TFPP or for products and components which have been subject to misuse, improper installation, corrosion, or which have not been installed, maintained, modified or repaired in accordance with applicable Standards of the National Fire Protection Association, and/or the standards of any other Authorities Having Jurisdiction. Materials found by TFPP to be defective shall be either repaired or replaced, at TFPP's sole option. TFPP neither assumes, nor authorizes any person to assume for it, any other obligation in connection with the sale of products or parts of products. TFPP shall not be responsible for sprinkler system design errors or inaccurate or incomplete information supplied by Buyer or Buyer's representatives.

In no event shall TFPP be liable, in contract, tort, strict liability or under any other legal theory, for incidental, indirect, special or consequential damages, including but not limited to labor charges, regardless of whether TFPP was informed about the possibility of such damages, and in no event shall TFPP's liability exceed an amount equal to the sales price.

The foregoing warranty is made in lieu of any and all other warranties, express or implied, including warranties of merchantability and fitness for a particular purpose.

This limited warranty sets forth the exclusive remedy for claims based on failure of or defect in products, materials or components, whether the claim is made in contract, tort, strict liability or any other legal theory.

This warranty will apply to the full extent permitted by law. The invalidity, in whole or part, of any portion of this warranty will not affect the remainder.

Ordering Procedure

GRINNELL Products are available globally through a network of distribution centers. For the nearest distributor, visit www.grinnell.com. When placing an order, indicate the full product name.

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Figure 40-5, (size), (quantity) and, P/N (below).

1-1/4" x 1/2 NPT	STP1305ES
1-1/4" x 3/4 NPT	STP13075ES
1-1/4" x 1 NPT	STP1310ES
1-1/2" x 1/2 NPT	STP1505ES
1-1/2" x 3/4 NPT	STP15075ES
1-1/2" x 1 NPT	STP1510ES
2" x 1/2 NPT	STP2005ES
2" x 3/4 NPT	STP20075ES
2" x 1 NPT	STP2010ES
2-1/2" x 1/2 NPT	STP2505ES
2-1/2" x 3/4 NPT	STP25075ES
2-1/2" x 1 NPT	STP2510ES