

GRINNELL Mechanical Products

Figure 780

Grooved Snap Coupling

General Description

The GRINNELL Figure 780 Grooved Snap Coupling is designed for quickly connecting and disconnecting cut or rolled grooved piping systems. By utilizing a hinged lever mechanism, grooved piping segments are joined quickly and securely without nuts and bolts. Coupling housing segments are locked in place by securing the lever handle with a split pin. Coupling sizes 5 inch through 8 inch (DN125 to DN200) feature a cross-ribbed housing design for extra strength.

⚠ WARNING

Never remove any piping component nor correct or modify any piping deficiencies without first de-pressurizing and draining the system. Failure to do so may result in serious personal injury, property damage, and/or impaired device performance.

It is the Designer's responsibility to select products suitable for the intended service and to ensure that pressure ratings and performance data are not exceeded. Material and gasket selection should be verified for compatibility with the specific application. Always read and understand the installation instructions.

The products described herein must be installed and maintained in compliance with this document, as well as with the applicable standards of the Approval agency, in addition to the standards of any other authorities having jurisdiction. Failure to do so may result in serious personal injury or impair the performance of these devices.

The owner is responsible for maintaining their mechanical system and devices in proper operating condition. The installing contractor or device manufacturer should be contacted with any questions.

Snap couplings are not recommended for services where excessive shock-loads are present.

Snap couplings are factory assembled to tight safety tolerances. Therefore, some people may have difficulty opening and closing the couplings by hand. Using a leverage pipe can help open or close couplings more easily. A leverage pipe can be fabricated from an appropriate length of 1/2 or 3/4 inch schedule 40 pipe.

This coupling provides a unique two-step closing feature that partially locks then closes the coupling, helping to minimize the opportunity for personal injury. Pushing the lever handle initially snaps the housing segments together. Continuing to push the lever handle then smoothly locks the coupling into position.

Technical Data

Sizes

1-1/2 inch to 8 inch (DN40 to DN200)

Maximum Pressure

300 psi (20,7 bar)

Housing and Lever Handle

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

Finish

- Black electro-deposition coated (standard)
- Hot dipped galvanized (optional)

Toggle Links

Plated Carbon Steel conforming to ANSI C1010 or C1020

Hinge Pin

Case-hardened Carbon Steel conforming to ANSI C1212

Rivet

Carbon Steel conforming to ANSI C1010



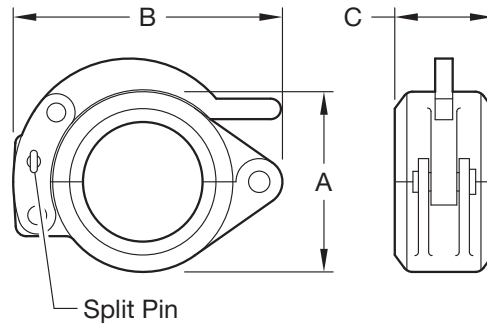
Split Pin

Carbon Steel Wire Rod conforming to ASTM A 421

Gasket Materials

- Grade "E" EPDM, green color code
-30°F (-34°C) to +230°F (+110°C)
- Grade "T" Nitrile, orange color code
-20°F (-29°C) to +180°F (+82°C)

Refer to data sheet G610 for more gasket information.



Nominal Pipe Size		Max. Working Pressure psi (bar)	Max. End Load Lbs. (kN)	Max. End Gap Inches (mm)	Nominal Dimensions			Deflection		Approx. Weight Lbs. (kg)
ANSI Inches DN	O.D. Inches (mm)				A Inches (mm)	B Inches (mm)	C Inches (mm)	Degrees per coupling	Inches/ Foot (mm/m)	
1-1/2 DN40	1.900 (48,3)	300 (20,7)	851 (3,8)	0.06 (1,6)	2.95 (75,0)	4.65 (118,0)	1.85 (47,0)	3°48'	0.80 (66,4)	2.2 (1,0)
2 DN50	2.375 (60,3)	300 (20,7)	1,329 (5,9)	0.06 (1,6)	3.39 (86,0)	4.76 (121,0)	1.89 (48,0)	3°31'	0.74 (61,5)	2.4 (1,1)
2-1/2 DN65	2.875 (73,0)	300 (20,7)	1,947 (8,7)	0.06 (1,6)	3.62 (92,0)	5.91 (150,0)	1.89 (48,0)	2°30'	0.52 (43,7)	3.1 (1,4)
- DN65	3.000 (76,1)	300 (20,7)	2,121 (9,4)	0.06 (1,6)	3.62 (92,0)	5.91 (150,0)	1.89 (48,0)	2°24'	0.50 (41,9)	3.1 (1,4)
3 DN80	3.500 (88,9)	300 (20,7)	2,886 (12,8)	0.06 (1,6)	4.69 (119,0)	6.42 (163,0)	1.89 (48,0)	2°24'	0.50 (41,9)	4.0 (1,8)
4 DN100	4.500 (114,3)	300 (20,7)	4,771 (21,2)	0.13 (3,2)	6.50 (165,0)	8.07 (205,0)	2.05 (52,0)	3°12'	0.67 (55,9)	5.9 (2,7)
- DN125	5.500 (139,7)	300 (20,7)	7,127 (31,7)	0.13 (3,2)	7.44 (189,0)	9.96 (253,0)	2.05 (52,0)	2°37'	0.55 (45,7)	10.8 (4,9)
5 DN125	5.565 (141,3)	300 (20,7)	7,289 (32,4)	0.13 (3,2)	7.44 (189,0)	9.96 (253,0)	2.05 (52,0)	2°36'	0.54 (45,4)	10.8 (4,9)
- DN150	6.500 (165,1)	300 (20,7)	9,955 (44,3)	0.13 (3,2)	8.39 (213,0)	10.94 (278,0)	2.05 (52,0)	2°14'	0.47 (39,0)	12.8 (5,8)
6 DN150	6.625 (168,3)	300 (20,7)	10,341 (46,0)	0.13 (3,2)	8.50 (216,0)	11.06 (281,0)	2.05 (52,0)	2°10'	0.45 (37,8)	12.8 (5,8)
8 DN200	8.625 (219,1)	300 (20,7)	17,528 (78,0)	0.13 (3,2)	10.95 (278,0)	14.02 (356,0)	2.44 (62,0)	1°40'	0.35 (29,1)	20.5 (9,3)

Pressure ratings listed are cold water pressure or maximum working pressure within the service temperature range of the gasket used in the coupling.

Maximum working pressures and end loads listed are total of internal and external pressures and loads based on Sch. 40 steel pipe grooved in accordance with Standard Cut Groove or Roll Groove Specifications.

**FIGURE 1
NOMINAL DIMENSIONS FIGURE 780 GROOVED SNAP COUPLING**

Limited Warranty

Products manufactured by Tyco Fire Suppression & Building Products (TFSBP) 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 TFSBP. No warranty is given for products or components manufactured by companies not affiliated by ownership with TFSBP or for products and components which have been subject to misuse, improper installation or maintenance, corrosion, or other external sources of damage. Materials found by TFSBP to be defective shall be either repaired or replaced, at TFSBP's sole option. TFSBP neither assumes, nor authorizes any person to assume for it, any other obligation in connection with the sale of products or parts of products. TFSBP shall not be responsible for system design errors or inaccurate or incomplete information supplied by Buyer or Buyer's representatives.

In no event shall TFSBP 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 TFSBP was informed about the possibility of such damages, and in no event shall TFSBP'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 Mechanical Products are available globally through a network of distribution centers. Visit www.grinnell.com for the nearest distributor.

When placing an order, indicate the full product name. Specify Figure 780, quantity, size (ANSI inch size or pipe O.D.), finish, and gasket materials.

