

Technical Services: Tel: (866) 500-4768 / Fax: (401) 781-7317 www.grinnell.com

Grinnell Mechanical Products Figure 770 Rigid Coupling

General Description

The Figure 770 Rigid Coupling provides a rigid joint by firmly gripping along the circumference of the pipe grooves. The Figure 770 Rigid Coupling is a proven dependable method of joining pipe and is an economical alternative to welding, threading or using flanges. It is capable of pressures up to 1000 psi (69,0 bar) depending on pipe size and wall thickness.

NOTE

Rigid Couplings are recommended for low temperature and vacuum applications.

WARNING

The Figure 770 Rigid Coupling described herein must be installed and maintained in compliance with this document, in addition to the standards of any other authorities having jurisdiction. **Failure to do so may impair the performance of this device.**

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

Technical Data

Sizes

2" to 12" (DN50 to DN300)

Maximum Pressure See Figure 1.

Housing

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

Protective Coatings

- Non-lead orange paint
- RAL red (optional) non-lead paint
 Hot dipped galvanized conforming
- to ASTM A-153

Bolt/Nuts

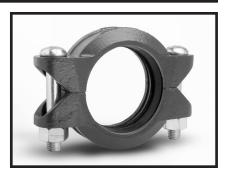
Track Head Bolts - conforming to ASTM A-183, Zinc Plated, (Min. Tensile = 110,000 psi/758,422 kPa) Metric - conforming to ASTM F568M

Gasket

(specify when ordering)

- Grade "E" EPDM, green color code -30°F (-34°C) to +230°F (+110°C)
- Tri-seal 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)
- Grade "O" Fluoroelastomer, blue color code
 +20°F (-7°C) to +300°F (+149°C)
- Grade "L" Silicone, red gasket -30°F (-34°C) to +350°F (+177°C)

(See Data Sheet G610 for aid in selecting proper gasket.)



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Nominal ANSI Inches DN	Pipe Size O.D. Inches (mm)	Max.† Pressures psi (bar)	Max.† End Load Lbs. (kN)	Max.*‡ End Gap Inches (mm)	Nomi A Inches (mm)	nal Dimen B Inches (mm)	sions C Inches (mm)	Cou Qty.	upling Bolts Size** Inches (mm)	Approx. Weight Lbs. (kg)
2	2.375	1000	4,430.1	0.14	3.53	5.72	1.88	2	5/8 x 2-3/4	4.3
DN50	(60,3)	(69,0)	(19,71)	(3,6)	(89,7)	(145,3)	(47,8)		M16 x 70	(2,0)
2 ½	2.875	1000	6,491.8	0.14	4.06	6.00	1.88	2	5/8 x 3-1/2	5.0
DN65	(73,0)	(69,0)	(28,88)	(3,6)	(103,1)	(152,4)	(47,8)		M16 x 89	(2,3)
3	3.500	1000	9,621.1	0.14	4.78	6.76	1.88	2	5/8 x 3-1/2	5.3
DN80	(88,9)	(69,0)	(42,79)	(3,6)	(121,4)	(171,7)	(47,8)		M16 x 89	(2,4)
4	4.500	1000	15,904.3	0.25	6.01	8.50	2.10	2	3/4 x 4-1/4	7.7
DN100	(114,3)	(69,0)	(70,74)	(6,4)	(152,7)	(215,9)	(53,3)		M20 x 108	(3,5)
6	6.625	1000	34,471.6	0.25	8.51	11.25	2.10	2	7/8 x 5-1/2	16.2
DN150	(168,3)	(69,0)	(153,33)	(6,4)	(216,2)	(285,8)	(53,3)		M22 x 140	(7,3)
8	8.625	800	46,741.0	0.25	10.93	13.75	2.60	2	1 x 5-1/2	24.0
DN200	(219,1)	(55,2)	(207,90)	(6,4)	(277,6)	(349,3)	(66,0)		M24 x 140	(10,9)
10	10.750	800	72,610.1	0.25	13.46	16.00	2.60	2	1 x 6-1/2	32.0
DN250	(273,0)	(55,1)	(322,97)	(6,4)	(341.9)	(406,4)	(66,0)		M24 x165	(14,5)
12	12.750	800	102,141.0	0.25	15.52	18.00	2.60	2	1 x 6-1/2	40.0
DN300	(323,9)	(55,1)	(454,32)	(6,4)	(394,2)	(457,2)	(66,0)		M24 x165	(18.1)

* Maximum available gap between pipe ends. Minimum gap = 0.

 Maximum pressure and end load are total from all loads based on standard weight steel pipe. Pressure ratings and end loads may differ for other pipe materials and/or wall thickness. Contact Tyco Fire & Building Products for details.

** Gold color coded metric bolt sizes for DN50 - DN300 couplings are available upon request

‡ Max End Gap and Deflection is for cut grooved standard weight pipe. Values for roll grooved pipe will be 1/2 that of cut grooved.

> FIGURE 1 NOMINAL DIMENSIONS FIGURE 770 RIGID COUPLING

Limited Warranty

Products manufactured by Tyco Fire & Building Products (TFBP) 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 TFBP. No warranty is given for products or components manufactured by companies not affiliated by ownership with TFBP 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 TFBP to be defective shall be either repaired or replaced, at TFBP's sole option. TFBP neither assumes, nor authorizes any person to assume for it, any other obligation in connection with the sale of products or parts of products. TFBP shall not be responsible for system design errors or inaccurate or incomplete information supplied by Buyer or Buyer's representatives.

In no event shall TFBP 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 TFBP was informed about the possibility of such damages, and in no event shall TFBP'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

When placing an order, indicate the full product name. Please specify the quantity, size, (ANSI inch size or pipe O.D.), figure number, type of gasket:

- Grade "E" EPDM
- Grade "E" EPDM Tri-Seal
- Grade "T" Nitrile
- Grade "O" Fluoroelastomer
- Grade "L" Silicone

Grinnell Mechanical Products, valves, accessories and other products are available throughout the U.S., Canada, and internationally, through a network of distribution centers. You may write directly or call 800-558-5236 for the distributor nearest you.

General Notes: 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. Always read and understand the installation instructions (IH-1000). Never remove any piping component or correct or modify any piping deficiencies without first depressuring and draining the system. Material and gasket selection should be verified to be compatible for the specific application.



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