tuco Fire Suppression & Building Products

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Grinnell Mechanical Products Figure 707 Flexible Coupling

General Description

The Figure 707 Flexible Coupling is capable of pressures up to 1000 psi (69,0 bar) depending on pipe size and wall thickness. It provides a dependable method of joining pipe and is suitable for use in a variety of applications.

NOTICE

Rigid Couplings are recommended for low temperature and vacuum applications. See Grinnell Figure 770 (G138), or 772 (G140) Coupling.

The Figure 707 Flexible Coupling described herein must be installed and maintained in compliance with this document and the standards of any 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

1" to 24" (DN40 to DN600)

Maximum Pressure See Figure 1.

Approvals

UL, FM, ULC, VdS, & LPCB

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.)





and approval information, contact Tyco Fire & Building Products.

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Pipe Nominal ANSI Inches DN	Size O.D. Inches (mm)	Max.† Pressures psi (bar)	Max.† End Load Lbs. (kN)	Max.*‡ End Gap Inches (mm)	Deflec Degrees per coupling	tion ‡ Inches/ Foot (mm/m)	Nomin A Inches (mm)	B Inches (mm)	C Inches (mm)	Cou Qty.	Size** Inches (mm)	Approx. Weight Lbs. (kg)
1 DN25	1.315 (33,7)	1000 (69,0)	1,360.0 (6,10)	0.13 (3,3)	5°26'	1.14 (98,4)	2.38 (60,5)	4.00 (101,6)	1.81 (46,0)	2	1/2 x 3 M12 x 76	2.0 (0,9)
1-1/2 DN40	1.900 (48,3)	1000 (69,0)	2,835.3 (12,61)	0.13 (3,3)	3°46'	0.79 (65,8)	2.97 (75,4)	4.63 (117,6)	1.81 (46,0)	2	1/2 x 3 M12 x 76	2.5 (1,1)
2 DN50	2.375 (60,3)	1000 (69,0)	4,430.1 (19,71)	0.13 (3,3)	3°1'	0.63 (52,5)	3.54 (89,9)	5.25 (133,4)	1.88 (47,8)	2	1/2 x 3 M12 x 76	3.0 (1,4)
2-1/2 DN65	2.875 (73,0)	1000 (69,0)	6,491.8 (28,88)	0.13 (3,3)	2°29'	0.52 (43,3)	4.06 (103,1)	5.75 (146,1)	1.88 (47,8)	2	1/2 x 3 M12 x 76	3.5 (1,6)
_ DN65	3.000 (76,1)	1000 (69,0)	7,068.6 (31,44)	0.13 (3,3)	2°23'	0.50 (41,7)	4.19 (106,4)	5.75 (146,1)	1.88 (47,8)	2	M12 x 76	3.7 (1,7)
3 DN80	3.500 (88,9)	1000 (69,0)	9,621.1 (42,80)	0.13 (3,3)	2°3'	0.43 (35,8)	4.69 (119,1)	6.38 (162,1)	1.88 (47,8)	2	1/2 x 3 M12 x 76	4.0 (1,8)
4 DN100	4.500 (114,3)	1000 (69,0)	15,904.3 (70,75)	0.25 (6,4)	3°11'	0.67 (55,8)	5.95 (151,1)	8.25 (209,6)	2.06 (52,3)	2	5/8 x 3-1/4 M16 x 83	7.0 (3,2)
5 DN125	5.563 (141,3)	1000 (69,0)	24,305.7 (108,12)	0.25 (6,4)	2°35'	0.54 (45,0)	7.08 (179,8)	10.00 (254,0)	2.06 (52,3)	2	3/4 x 4-3/4 M20 x 121	10.5 (4,8)
_ DN150	6.500 (165,1)	1000 (69,0)	33,183.1 (147,61)	0.25 (6,4)	2°12'	0.46 (38,3)	8.19 (208,0)	11.25 (285,8)	2.06 (52,3)	2	M20 x 121	12.5 (5,7)

* 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 DN40 - 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.

• Only available in ANSI bolt sizes.

FIGURE 1 (1 OF 2) NOMINAL DIMENSIONS FIGURE 707 FLEXIBLE COUPLING

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Pipe Size		Max.t	Max.†	Max.*‡ End	Deflection ‡		Nominal Dimer			Coupling Bolts		Approx.
ANSI Inches DN	O.D. Inches (mm)	Pressures psi (bar)	End Load Lbs. (kN)	Gap Inches (mm)	Degrees per coupling	Inches/ Foot (mm/m)	A Inches (mm)	B Inches (mm)	C Inches (mm)	Qty.	Size** Inches (mm)	Weight Lbs. (kg)
6 DN150	6.625 (168,3)	1000 (69,0)	34,471.6 (153,34)	0.25 (6,4)	2°10'	0.45 (37,5)	8.30 (210,8)	11.25 (285,8)	2.06 (52,3)	2	3/4 x 4-3/4 M20 x 121	12.5 (5,7)
8 DN200	8.625 (219,1)	800 (55,1)	46,741.0 (207,91)	0.25 (6,4)	1°40'	0.35 (29,2)	10.68 (271,3)	14.00 (355,6)	2.47 (62,7)	2	7/8 x 6-1/2 M22 x 165	23.5 (10,7)
10 DN250	10.750 (273,0)	800 (55,1)	72,610.1 (322,99)	0.25 (6,4)	1°20'	0.28 (23,3)	13.06 (331,7)	16.44 (417,6)	2.63 (66,8)	2	1 x 6-1/2 M24 x 165	33.0 (15,0)
12 DN300	12.750 (323,9)	800 (55,1)	102,141.0 (454,35)	0.25 (6,4)	1°7'	0.23 (19,2)	15.39 (390,9)	18.84 (478,5)	2.63 (66,8)	2	1 x 6-1/2 M24 x165	37.0 (16,8)
14 DN350	14.000 (355,6)	300 (20,7)	46,181.4 (205,43)	0.25 (6,4)	1°2'	0.22 (18,3)	16.67 (423,4)	20.38 (517,7)	2.94 (74,7)	2	1 x 5-1/2●	44.0 (20,0)
16 DN400	16.000 (406,4)	300 (20,7)	60,318.6 (268,31)	0.25 (6,4)	0°54'	0.19 (15,8)	18.83 (478,3)	22.64 (575,1)	2.94 (74,7)	3	1 x 5-1/2●	52.1 (23,6)
18 DN450	18.000 (457,2)	300 (20,7)	76,340.7 (339,58)	0.25 (6,4)	0°48'	0.17 (14,2)	21.31 (541,3)	25.12 (638,0)	3.06 (77,7)	3	1 x 5-1/2●	68.0 (30,8)
20 DN500	20.000 (508,0)	300 (20,7)	94,247.8 (419,23)	0.25 (6,4)	0°43'	0.15 (12,5)	23.47 (596,1)	27.88 (708,2)	3.06 (77,7)	4	1-1/8 x 5-3/4●	89.0 (40,4)
24 DN600	24.000 (609,6)	250 (17,2)	113,097.3 (503,08)	0.25 (6,4)	0°36'	0.13 (10,8)	27.58 (700,5)	32.00 (812,8)	3.19 (81,0)	4	1-1/8 x 5-3/4•	96.0 (43,5)

* 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 DN40 - DN300 couplings are available upon request

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• Only available in ANSI bolt sizes.

FIGURE 1 (2 OF 2) NOMINAL DIMENSIONS FIGURE 707 FLEXIBLE 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

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-1000M). Never remove any piping component or correct or modify any piping deficiencies without first depressurizing and draining the system. Material and gasket selection should be verified to be compatible for the specific application.

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