

Grinnell®

Grinnell Mechanical Products Figure 705 Flexible Coupling

General Description

The GRINNELL Figure 705 Flexible Coupling is capable of pressures ranging from full vacuum to 500 psi (34.5 bar) depending on pipe size and wall thickness. Up to 40% lighter than the Figure 707 coupling, and available with various gasket materials, it provides a proven dependable method of joining pipe and is suitable for use in a variety of applications ranging from -30°F to 350°F.

GRINNELL Flexible Couplings allow for pipe rotational movement and/or angular misalignment which aids in system installation. These flexible couplings also allow for pipe axial movement providing the option to reduce stresses induced by pipe system thermal expansion and contraction. Flexible couplings can be used as system noise and vibration attenuators, an especially beneficial feature when used to connect a pump package.

NOTICE

The GRINNELL Figure 705 Flexible 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. Contact the installing contractor or product manufacturer with any questions.

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).

IMPORTANT

Refer to Technical Data Sheet G1100 for warnings pertaining to regulatory and health information.

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.

Technical Data

Sizes

1 in. through 12 in. (DN25 through DN300)

Maximum Pressure

Refer to Figure 1.

Approvals

UL and ULC Listed
FM Approved
VdS Approved
LPCB Certified

Housing

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

Protective Coatings

Orange Non-Lead Paint
RAL Red (optional) Non-Lead Paint
Hot-Dipped Galvanized conforming to
ASTM A153

Bolts/Nuts

Track Head Bolts:
Zinc Plated conforming to ASTM A183
Minimum Tensile = 10,000 psi (758,422 kPa)
(Metric conforming to ASTM F568M)
Stainless Steel Bolts and Nuts are
available upon request.

Gaskets

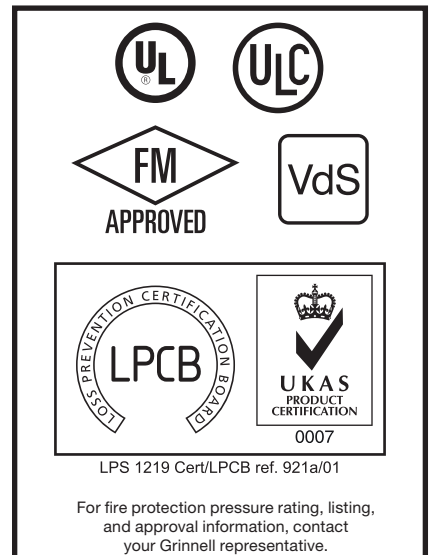
(Specify when ordering)

Grade "E" EPDM
Green Color Code
-30°F to 230°F (-34°C to 110°C)

Tri-Seal Grade "E" EPDM
Green Color Code
-30°F to 230°F (-34°C to 110°C)

Tri-Seal Grade "EN" EPDM
Copper Color Code
+86°F to 180°F (30°C to 82°C)

Grade "T" Nitrile
Orange Color Code
-20°F to 180°F (-29°C to 82°C)

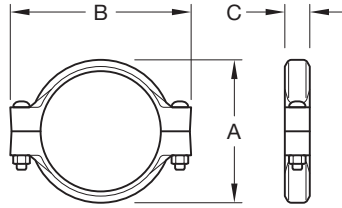


10
YEAR
LIMITED
WARRANTY

Grade "O" Fluoroelastomer
Blue Color Code
20°F to 300°F (-7°C to 149°C)

Grade "L" Silicone
Red Gasket
-30°F to 350°F (-34°C to 177°C)

(Refer to Technical Data Sheet G610 for aid in selecting proper gasket.)



Nominal Pipe Size		Maximum Pressure ¹ psi (bar)	Maximum End Load ¹ Lbs. (kN)	Maximum End Gap ^{* 2} Inches (mm)	Deflection ²		Nominal Dimensions			Coupling Bolts		Approx. Weight Lbs. (kg)
ANSI Inches DN	O.D. Inches (mm)				Degrees per coupling	Inches/ Foot (mm/m)	A Inches (mm)	B Inches (mm)	C Inches (mm)	Qty.	Size** Inches (mm)	
1 DN25	1.315 (33,7)	500 (34,5)	410.0 (1,86)	0.13 (3,3)	5° 30'	1.16 (96,7)	2.24 (56,9)	3.94 (100,1)	1.81 (46,0)	2	3/8 x 1-3/4 M10 x 44	1.3 (0,6)
1-1/4 DN32	1.660 (42,4)	500 (34,5)	1,082.1 (4,81)	0.13 (3,3)	4°19'	0.90 (75,0)	2.56 (65,0)	4.19 (106,4)	1.81 (46,0)	2	3/8 x 2-1/4 M10 x 57	1.5 (0,7)
1-1/2 DN40	1.900 (48,3)	500 (34,5)	1,417.6 (6,30)	0.13 (3,3)	3°46'	0.79 (65,8)	2.75 (69,9)	4.44 (112,8)	1.81 (46,0)	2	3/8 x 2-1/4 M10 x 57	1.6 (0,7)
2 DN50	2.375 (60,3)	500 (34,5)	2,215.1 (9,85)	0.13 (3,3)	3°1'	0.63 (52,5)	3.25 (82,6)	4.88 (124,0)	1.88 (47,8)	2	3/8 x 2-1/4 M10 x 57	1.7 (0,8)
2-1/2 DN65	2.875 (73,0)	500 (34,5)	3,245.9 (14,43)	0.13 (3,3)	2°29'	0.52 (43,3)	3.69 (93,7)	5.50 (139,7)	1.88 (47,8)	2	3/8 x 2-1/4 M10 x 57	2.0 (0,9)
- DN65	3.000 (76,1)	500 (34,5)	3,534.3 (15,72)	0.13 (3,3)	2°23'	0.50 (41,7)	4.00 (101,6)	5.75 (146,10)	1.88 (47,8)	2	M12 x 76	3.1 (1,4)
3 DN80	3.500 (88,9)	500 (34,5)	4,810.6 (21,39)	0.13 (3,3)	2°3'	0.43 (35,8)	4.38 (111,3)	6.50 (165,1)	1.88 (47,8)	2	1/2 x 3 M12 x 76	3.1 (1,4)
- DN100	4.250 (108,0)	500 (34,5)	7,093.1 (31,55)	0.25 (6,4)	3°22'	0.70 (58,3)	5.50 (139,7)	7.50 (190,5)	2.06 (52,3)	2	M12 x 76	4.2 (1,9)
4 DN100	4.500 (114,3)	500 (34,5)	7,952.2 (35,35)	0.25 (6,4)	3°11'	0.67 (55,8)	5.69 (144,5)	7.75 (196,9)	2.06 (52,3)	2	1/2 x 3 M12 x 76	4.0 (1,8)
- DN125	5.250 (133,0)	450 (31,0)	9,741.4 (43,33)	0.25 (6,4)	2°44'	0.56 (46,7)	6.56 (166,6)	9.50 (241,3)	2.06 (52,3)	2	M16 x 83	7.2 (3,3)
- DN125	5.500 (139,7)	450 (31,0)	10,691.2 (47,56)	0.25 (6,4)	2°36'	0.55 (45,5)	6.81 (173,0)	9.75 (247,7)	2.06 (52,3)	2	M16 x 83	7.2 (3,3)
5 DN125	5.563 (141,3)	450 (31,0)	10,937.6 (48,63)	0.25 (6,4)	2°35'	0.54 (45,0)	6.88 (174,8)	9.75 (247,7)	2.06 (52,3)	2	5/8 x 3-1/4 M16 x 83	7.1 (3,2)
- DN150	6.250 (159,0)	450 (31,0)	13,805.8 (61,41)	0.25 (6,4)	2°17'	0.48 (40,0)	7.56 (192,0)	10.31 (261,9)	2.06 (52,3)	2	M16 x 83	7.4 (3,4)
- DN150	6.500 (165,1)	450 (31,0)	14,932.4 (66,36)	0.25 (6,4)	2°12'	0.46 (38,3)	7.75 (196,9)	10.69 (271,5)	2.06 (52,3)	2	M16 x 83	7.1 (3,2)
6 DN150	6.625 (168,3)	450 (31,0)	15,512.2 (68,97)	0.25 (6,4)	2°10'	0.45 (37,5)	7.94 (201,7)	10.69 (271,5)	2.06 (52,3)	2	5/8 x 3-1/4 M16 x 83	7.1 (3,2)
- DN200	8.500 (216,3)	450 (31,0)	25,535.3 (113,59)	0.25 (6,4)	1°40'	0.35 (29,2)	10.07 (255,8)	13.50 (342,9)	2.31 (58,7)	2	M20 x 121	12.4 (5,6)
8 DN200	8.625 (219,1)	450 (31,0)	26,291.8 (116,89)	0.25 (6,4)	1°40'	0.35 (29,2)	10.19 (258,8)	13.56 (344,4)	2.50 (63,5)	2	3/4 x 4-3/4 M20 x 121	14.5 (6,6)
10 DN250	10.750 (273,0)	350 (24,1)	31,766.9 (141,31)	0.25 (6,4)	1°20'	0.28 (23,3)	12.69 (322,3)	16.38 (416,1)	2.63 (66,8)	2	1 x 6-1/2 M24 x 165	28.0 (12,7)
12 DN300	12.750 (323,9)	350 (24,1)	44,686.7 (198,78)	0.25 (6,4)	1°7'	0.23 (19,2)	14.94 (379,5)	18.88 (479,6)	2.63 (66,8)	2	1 x 6-1/2 M24 x 165	36.5 (16,6)

Notes:

1. 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 Protection Products (TFPP) for details.
 2. Maximum End Gap and Deflection is for cut grooved standard weight pipe. Values for roll grooved pipe will be 1/2 that of cut grooved.
- * Maximum available gap between pipe ends. Minimum gap = 0.
 ** Gold color coded metric bolt sizes are available upon request.

FIGURE 1
FIGURE 705 FLEXIBLE COUPLING
NOMINAL DIMENSIONS

Ordering Procedure

Grinnell mechanical products, valves, accessories and other products are available globally through a network of distribution centers.

Specify: Figure 705 Flexible Coupling, quantity, pipe size (Nominal ANSI or O.D.), finish (Orange, Red, or Galvanized), and type of gasket:

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