

Figure 705 Flexible Couplings


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 (-34°C to 177°C).


Ductile Iron Housing Specifications

- ASTM A 536 – Standard specification for ductile iron castings, Grade 65-45-12
- ASTM A 153 – Standard specification for hot-dip galvanizing

Bolt/Nut Specifications

- **ANSI:** Carbon steel oval neck bolts and nuts are heat-treated and conform to the physical properties of ASTM A 183 Grade 2 and SAE J429 Grade 5 with a minimum tensile strength of 110,000 psi (7584 bar). Carbon Steel heavy hex nuts conform to the physical properties of ASTM A 183 Grade 2 and SAE J995 Grade 5. Bolts and nuts are zinc-electroplated conforming to ASTM B 633.
- **Metric:** Carbon steel oval neck track head bolts (Gold color coded) are heat treated and conform to the physical properties of ASTM F 568 M with a minimum tensile strength of 760 MPa. Carbon Steel heavy hex nuts conform to the physical properties of ASTM A 563 M Class 9. Bolts and nuts are zinc-electroplated conforming to ASTM B 633.
- Stainless steel bolts and nuts are available upon request.

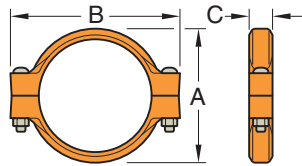
Coatings

- Orange – Non-lead paint (standard)
- Hot-Dipped, Zinc Galvanized (optional)

Gasket Specifications

- **Grade "E" EPDM** gaskets have a Green stripped color code identification and conform to ASTM D 2000 for service temperatures from -30°F to 230°F (-34°C to 110°C). They are recommended for hot water not to exceed 230°F (110°C), plus a variety of dilute acids, oil free air, and many chemical services. They are not recommended for petroleum services. For low temperature and vacuum systems, a **Tri-Seal Grade "E" EPDM gasket** with a rigid coupling is recommended.
- **Grade "T" Nitrile** gaskets have an Orange stripped color code identification and conform to ASTM D 2000 for service temperatures from -20°F to 180°F (-29°C to 82°C). They are recommended for petroleum products, vegetable oils, mineral oils, and air with oil vapors.
- **Grade "L" Silicone** gaskets have a Red stripped color code and conform to ASTM D 2000 for service temperatures from -30°F to 350°F (-34°C to 177°C). They are recommended for air without hydrocarbons, or dry heat.
- **Grade "O" Fluoroelastomer** gaskets have a Blue stripped color code and conform to ASTM D 2000 for service temperatures from +20°F to 300°F (-7°C to 149°C). They are recommended for oxidizing acids, petroleum products, hydraulic fluids, lubricants, and halogenated hydrocarbons.

PROJECT INFORMATION:		APPROVAL STAMP:
Project:		
Date:	Phone:	
Architect / Engineer:		
Contractor:		
Address:		
Notes:		

Figure 705 Flexible Couplings


Pipe Size		Max.† Pressures psi bar	Max.† End Load Lbs. kN	Max.*‡ End Gap Inches mm	Deflection ‡		Dimensions - Inches mm			Coupling Bolts Size (Qty. 2) Inches mm	Approx. Weight Lbs. kg
Nominal Inches mm	O.D. Inches mm				Degrees Per Coupling	Inches/Ft mm/m	A	B	C		
1	1.315	500	410	0.13							
25	33.7	34.5	1,86	3.3	5° 30'	1.16	2.24	3.94	1.81	3/8 x 1 3/4	1.3
						96.7	56.9	100.1	46.0	M10 x 44	0.6
1 1/4	1.660	500	1,082	0.13							
32	42.4	34.5	4,81	3.3	4° 19'	0.90	2.56	4.19	1.81	3/8 x 2 1/4	1.5
						75.0	65.0	106.4	46.0	M10 x 57	0.7
1 1/2	1.900	500	1,418	0.13							
40	48.3	34.5	6,30	3.3	3° 46'	0.79	2.75	4.44	1.81	3/8 x 2 1/4	1.6
						65.8	69.9	112.8	46.0	M10 x 57	0.7
2	2.375	500	2,215	0.13							
50	60.3	34.5	9,85	3.3	3° 1'	0.63	3.25	4.88	1.88	3/8 x 2 1/4	1.7
						52.5	82.6	124.0	47.8	M10 x 57	0.8
2 1/2	2.875	500	3,246	0.13							
65	73.0	34.5	14,43	3.3	2° 29'	0.52	3.69	5.50	1.88	3/8 x 2 1/4	2.0
						43.3	93.7	139.7	47.8	M10 x 57	0.9
76.1mm	3.000	500	3,534	0.13							
65	76.1	34.5	15,72	3.3	2° 23'	0.50	4.00	5.75	1.88	—	3.1
						41.7	101.6	146.10	47.8	M12 x 76	1.4
3	3.500	500	4,811	0.13							
80	88.9	34.5	21,39	3.3	2° 3'	0.43	4.38	6.50	1.88	1/2 x 3	3.1
						35.8	111.3	165.1	47.8	M12 x 76	1.4
108.0mm	4.250	500	7,093	0.25							
100	108.0	34.5	31,55	6.4	3° 22'	0.70	5.50	7.50	2.06	—	4.2
						58.3	139.7	190.5	52.3	M12 x 76	1.9
4	4.500	500	7,952	0.25							
100	114.3	34.5	35,35	6.4	3° 11'	0.67	5.69	7.75	2.06	1/2 x 3	4.0
						55.8	144.5	196.9	52.3	M12 x 76	1.8
133.0mm	5.250	450	9,741	0.25							
125	133.0	31.0	43,33	6.4	2° 44'	0.56	6.56	9.50	2.06	—	7.2
						46.7	166.6	241.3	52.3	M16 x 83	3.3
139.7mm	5.500	450	10,691	0.25							
125	139.7	31.0	47,56	6.4	2° 36'	0.55	6.81	9.75	2.06	—	7.2
						45.5	173.0	247.7	52.3	M16 x 83	3.3
5	5.563	450	10,938	0.25							
125	141.3	31.0	48,63	6.4	2° 35'	0.54	6.88	9.75	2.06	5/8 x 3 1/4	7.1
						45.0	174.8	247.7	52.3	M16 x 83	3.2
159.0mm	6.250	450	13,806	0.25							
150	159.0	31.0	61,41	6.4	2° 17'	0.48	7.56	10.31	2.06	—	7.4
						40.0	192.0	261.9	52.3	M16 x 83	3.4
165.1mm	6.500	450	14,932	0.25							
150	165.1	31.0	66,36	6.4	2° 12'	0.46	7.75	10.69	2.06	—	7.1
						38.3	196.9	271.5	52.3	M16 x 83	3.2
6	6.625	450	15,512	0.25							
150	168.3	31.0	68,97	6.4	2° 10'	0.45	7.94	10.69	2.06	5/8 x 3 1/4	7.1
						37.5	201.7	271.5	52.3	M16 x 83	3.2
216.3mm	8.500	450	25,535	0.25							
200	216.3	31.0	113,59	6.4	1° 40'	0.35	10.07	13.50	2.31	—	12.4
						29.2	255.8	342.9	58.7	M20 x 121	5.6
8	8.625	450	26,292	0.25							
200	219.1	31.0	116,89	6.4	1° 40'	0.35	10.19	13.56	2.50	3/4 x 4 3/4	14.5
						29.2	258.8	344.4	63.5	M20 x 121	6.6
10	10.750	350	31,767	0.25							
250	273.0	24.1	141,31	6.4	1° 20'	0.28	12.69	16.38	2.63	1 x 6 1/2	23.0
						23.3	322.3	416.1	66.8	M24 x 165	12.7
12	12.750	350	44,687	0.25							
300	323.9	24.1	198,78	6.4	1° 7'	0.23	14.94	18.88	2.63	1 x 6 1/2	36.5
						19.5	379.5	479.6	66.8	M24 x 165	16.6

* 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 GRINNELL Mechanical Products for details.

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

► Sizes are available to JIS standards. Contact GRINNELL Mechanical Products for details.

For information on larger sizes, European sizes or other alternative sizes, contact GRINNELL Mechanical Products.

See page 17 for coupling specifications and pages 247 - 254 for gasket information.