

Grinnell Grooved Fire Protection Products

Figure 705

Flexible Coupling

General Description



See Fire Protection Submittal Sheet for Pressure Rating and Listing/Approval Information

The Figure 705 Flexible Coupling is capable of pressures up to 300 psig (2068 kPa) depending on pipe size and wall thickness when used in fire protection services. It provides a dependable method of joining pipe and is suitable for use in a variety of applications.

Rigid Couplings are recommended for dry pipe and freezer applications.

WARNING

The Figure 705 Flexible Coupling described herein must be installed and maintained in compliance with this document, as well as with the applicable standards of the National Fire Protection Association, 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 fire protection system and devices in proper operating condition. The installing contractor or sprinkler manufacturer should be contacted with any questions.

Technical Data

Figure: 705

Sizes: 1¼" - 12"

Approvals: UL, FM, ULC, VdS, and LPCB; See Fire Protection Submittal Sheet for exact Listing / Approval information.

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

Protective Coatings:

- Non-lead orange paint
- Fire brigade 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 "A" EPDM violet color code ambient to +150°F (+66°C) for fire protection systems. Not recommended for hot water systems.
- Tri-seal (Grade "E" EPDM), green color code.
- Prelubricated (Grade "A" EPDM)

(See Data Sheet TFP1895 for aid in selecting proper gasket)

Ordering Procedure

When placing an order, indicate the full product name. Please specify the quantity, figure number, type of gasket, Grade "A" EPDM, Prelubricated (Grade "A" EPDM) or Grade "E" EPDM Tri-Seal, and size.

Grinnell Grooved Piping 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 215-362-0700 for the distributor nearest you.

Care and Maintenance

The owner is responsible for the inspection, testing, and maintenance of their fire protection system and devices in accordance with the applicable standards of the National Fire Protection Association (e.g., NFPA 25), in addition to the standards of any authority having jurisdiction. The installing contractor or product manufacturer should be contacted relative to any questions. Any impairment must be immediately corrected.

It is recommended that automatic sprinkler systems be inspected, tested, and maintained by a qualified Inspection Service.

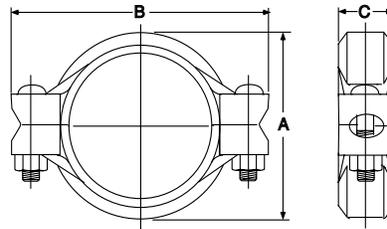
Limited Warranty

Products manufactured by Tyco Fire Products 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 Tyco Fire Products. No warranty is given for products or components manufactured by companies not affiliated by ownership with Tyco Fire Products or for products and components which have been subject to misuse, improper installation, corrosion, or which have not been installed, maintained, modified or repaired in accordance with applicable Standards of the National Fire Protection Association (NFPA), and/or the standards of any other Authorities Having Jurisdiction. Materials found by Tyco Fire Products to be defective shall be either repaired or replaced, at Tyco Fire Products' sole option. Tyco Fire Products neither assumes, nor authorizes any person to assume for it, any other obligation in connection with the sale of products or parts of products. Tyco Fire Products shall not be responsible for sprinkler system design errors or inaccurate or incomplete information supplied by Buyer or Buyer's representatives.

IN NO EVENT SHALL TYCO FIRE PRODUCTS 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 TYCO FIRE PRODUCTS WAS INFORMED ABOUT THE POSSIBILITY OF SUCH DAMAGES, AND IN NO EVENT SHALL TYCO FIRE PRODUCTS' 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.

Figure 705 Grooved Coupling



Pipe		Max. *‡ End Gap Inches mm	Max. † Pressure psi kPa	Max. † End load Lbs. N	Nominal Dimensions			Deflection ‡		Bolt Size** Dia. x Lg.	Net Wt. Lbs. Kg.
Size	O.D. Inches mm				A Inches mm	B Inches mm	C Inches mm	°Per Coupling	Inches/ Foot mm/m		
1¼"	1.660 42.4	0.13 3.3	300 2,068	649 2,887	2.56 65.0	4.19 106.4	1.81 46.0	4° - 19'	0.90 75.0	¾" x 2¼" M10 x 57	1.5 0.7
1½"	1.900 48.3	0.13 3.3	300 2,068	850 3,781	2.75 69.9	4.44 112.8	1.81 46.0	3° - 46'	0.79 65.8	¾" x 2¼" M10 x 57	1.6 0.7
2"	2.375 60.3	0.13 3.3	300 2,068	1,328 5,907	3.25 82.6	4.88 124.0	1.88 47.8	3° - 1'	0.63 52.5	¾" x 2¼" M10 x 57	1.7 0.8
2½"	2.875 73.0	0.13 3.3	300 2,068	1,947 8,660	3.69 93.7	5.50 139.7	1.88 47.8	2° - 29'	0.52 43.3	¾" x 2¼" M10 x 57	2.0 0.9
76.1mm	3.000 76.1	0.13 3.3	300 2,068	2,120 9,430	4.00 101.6	5.75 146.1	1.88 47.8	2° - 23'	0.50 41.7	M12 x 76	3.1 1.4
3"	3.500 88.9	0.13 3.3	300 2,068	2,885 12,832	4.38 111.3	6.50 165.1	1.88 47.8	2° - 3'	0.43 35.8	½" x 3" M12 x 76	3.0 1.4
108.0mm	4.250 108.0	0.25 6.4	300 2,068	4,256 18,931	5.50 139.7	7.50 190.5	2.06 52.3	3° - 22'	0.70 58.3	M12 x 76	4.2 1.9
4"	4.500 114.3	0.25 6.4	300 2,068	4,769 21,213	5.69 144.5	7.75 196.9	2.06 52.3	3° - 11'	0.67 55.8	½" x 3" M12 x 76	4.0 1.8
133.0mm	5.250 133.0	0.25 6.4	300 2,068	6,494 28,885	6.56 166.6	9.50 241.3	2.06 52.3	2° - 44'	0.56 46.7	M16 x 83	7.2 3.3
139.7mm	5.500 139.7	0.25 6.4	300 2,068	7,127 31,701	6.81 173.0	9.75 247.7	2.06 52.3	2° - 36'	0.56 46.7	M16 x 83	7.2 3.3
5"	5.563 141.3	0.25 6.4	300 2,068	7,288 32,417	6.88 174.8	9.75 247.7	2.06 52.3	2° - 35'	0.54 45.0	⅝" x 3¼" M16 x 83	7.0 3.2
159.0mm	6.250 159.0	0.25 6.4	300 2,068	9,204 40,939	7.56 192.0	10.31 261.9	2.06 52.3	2° - 17'	0.48 40.0	M16 x 83	7.4 3.4
165.1mm	6.500 165.1	0.25 6.4	300 2,068	9,950 44,258	7.75 196.9	10.69 271.5	2.06 52.3	2° - 12'	0.46 38.3	M16 x 83	7.1 3.2
6"	6.625 168.3	0.25 6.4	300 2,068	10,336 45,975	7.94 201.7	10.69 271.5	2.06 52.3	2° - 10'	0.45 37.5	⅝" x 3¼" M16 x 83	7.1 3.2
216.3mm	8.500 216.3	0.25 6.4	300 2,068	17,024 75,723	10.07 255.8	13.50 342.9	2.31 58.7	1° - 40'	0.35 29.2	M20 x 121	12.4 5.6
8"	8.625 219.1	0.25 6.4	300 2,068	17,519 77,925	10.19 258.8	13.56 344.4	2.50 63.5	1° - 40'	0.35 29.2	¾" x 4¾" M20 x 121	14.5 6.6
10"	10.750 273.0	0.25 6.4	250 1,724	22,679 100,876	12.69 322.3	16.38 416.1	2.63 66.8	1° - 20'	0.28 23.3	1" x 6½" M24 x 165	28.0 12.7
12"	12.750 323.9	0.25 6.4	250 1,724	31,903 141,905	14.94 379.5	18.88 479.6	2.63 66.8	1° - 7'	0.23 19.2	1" x 6½" M24 x 165	36.5 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 on other pipe materials and/or wall thickness. Contact Tyco Fire Products for details. See Fire Protection Equipment Submittal Sheet for Listing and Approval pressure ratings.

** Gold color coded metric bolt sizes are available upon request.

‡ Max End Gap and Deflection is for cut grooved standard weight pipe. Values for roll grooved pipe will be ½ that of cut grooved.

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 is 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 depressurizing and draining the system. Material and gasket selection should be verified to be compatible for the specific application.



Certified Company