

# Grinnell®

## **GRINNELL Figure 772 Grooved Rigid Coupling 1-1/4 Inch – 24 Inch (DN32–DN600) Sizes 1/2 Inch (M12) Bolt for 2–4 Inch (DN50–DN100) Sizes**

### **General Description**

The GRINNELL Figure 772 Grooved Rigid Coupling provides a rigid joint by firmly gripping along the circumference of the pipe grooves. An economical alternative to welding, threading or using flanges, the Figure 772 Grooved Rigid Coupling is a proven dependable method of joining pipe. It is capable of pressures up to 750 psi (51,7 bar) depending on pipe size and wall thickness. The Figure 772 Grooved Rigid Coupling is UL Listed for grounding and bonding; it is suitable for bonding systems with a maximum service entrance capacity of 200 amps. For further details, contact the Technical Services department.

This data sheet provides dimensional information on the 1/2 in. Bolt Coupling for nominal pipe sizes 2 to 4 in. (DN50 to DN100). For information on the 3/8 in. Bolt Coupling for nominal pipe sizes 2 to 4 in. (DN50 to DN100), refer to technical data sheet G140.

#### **NOTICE**

*The GRINNELL Figure 772 Grooved Rigid Coupling described herein must be installed and maintained in compliance with this document, as well as with the applicable standards of the Approval agency, in addition to the standards of any other authorities having jurisdiction. Failure to do so may result in serious personal injury or impair the performance of these devices.*

*Never remove any piping component nor correct or modify any piping deficiencies without first de-pressurizing and draining the system. Failure to do so may result in serious personal injury, property damage, and/or impaired device performance.*

*The designer is responsible for selecting products suitable for the intended*

#### **IMPORTANT**

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

*service and to ensure that pressure ratings and performance data are not exceeded. Verify that material and gasket selection are compatible with the specific application. Always read and understand the installation instructions.*

*The owner is responsible for maintaining their mechanical system and devices in proper operating condition. Contact the installing contractor or product manufacturer with any questions.*

### **Technical Data**

#### **Approvals**

UL and ULC Listed  
FM Approved  
VdS Approved  
LPCB Certified

#### **Sizes**

1-1/4 in. to 24 in.  
DN32 to DN600

#### **Maximum Pressure**

Refer to Table A

#### **Housing**

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

#### **Finish**

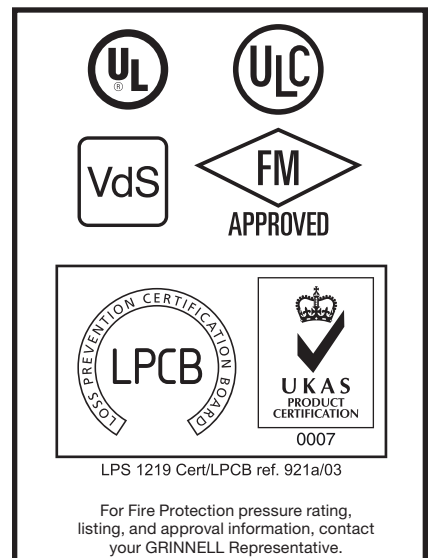
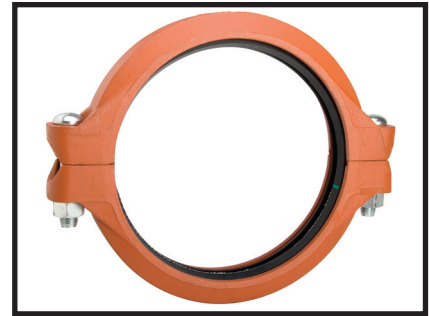
- Orange non-lead paint (standard)
- Red non-lead paint
- Hot-dipped Galvanized conforming to ASTM A 153

#### **Bolts/Nuts**

- ANSI:  
Carbon Steel oval neck track head bolts 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.

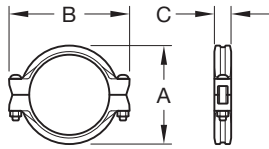
Carbon Steel heavy hex nuts conform to the physical properties of ASTM A 183 Grade 2 and SAE J995 Grade 5. Bolts and nuts are zinc-electroplated conforming to ASTM B 633.

Stainless Steel Bolts and Nuts are available upon request.

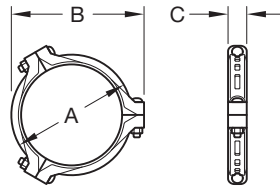


- Metric:  
Carbon steel oval neck track head bolts (Gold color coded) are heat-treated and conform to the physical properties of ASTM F 568 M with a minimum tensile strength of 760 MPa.

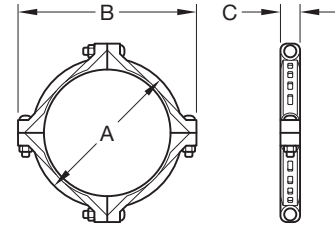
Carbon Steel heavy hex nuts conform to the physical properties of ASTM A 563 M Class 9. Bolts and nuts are zinc-electroplated conforming to ASTM B 633.



Size 1-1/4 in. - 12 in. (DN32 - DN300)



Size 14 in. - 18 in. (DN350 - DN450)



Size 20 in. - 24 in. (DN500 - DN600)

Pipe Size		Max. <sup>b</sup> Pressures psi bar	Max. <sup>b</sup> End Load Lbs kN	Max. <sup>a, d</sup> End Gap Inches mm	Nominal Dimensions			Coupling Bolts		Approx. Weigh Lbs kg
Nominal ANSI Inches DN	O.D. Inches mm				A Inches mm	B Inches mm	C Inches mm	Qty.	Size <sup>c</sup> Inches metric	
1-1/4 32	1.660 42,4	750 51,7	1,623 7,22	0.06 1,5	2.75 69,9	4.38 111,3	1.81 46,0	2	3/8 x 2-1/4 M10 x 57	1.0 0,5
1-1/2 40	1.900 48,3	750 51,7	2,127 9,46	0.08 2,0	3.00 76,2	4.62 117,3	1.81 46,0	2	3/8 x 2-1/4 M10 x 57	1.0 0,5
2 50	2.375 60,3	750 51,7	3,323 14,78	0.188 4,8	3.41 87	5.70 145	1.9 48	2	1/2 x 3 M12 x 76	2.9 1,32
2-1/2 65	2.875 73,0	750 51,7	4,869 21,66	0.188 4,8	3.97 101	6.30 160	1.9 48	2	1/2 x 3 M12 x 76	3.3 1,50
- 65	3.000 76,2	750 51,7	5,301 23,58	0.188 4,8	4.10 104	6.43 163	1.9 48	2	1/2 x 3 M12 x 76	3.6 1,64
3 80	3.500 88,9	750 51,7	7,216 32,10	0.188 4,8	4.60 117	6.93 176	1.9 48	2	1/2 x 3 M12 x 76	3.7 1,68
4 100	4.500 114,3	750 51,7	11,928 53,06	0.188 4,8	5.80 147	8.07 205	1.9 48	2	1/2 x 3 M12 x 76	4.3 1,95
- 125	5.500 139,7	750 51,7	17,819 79,26	0.19 4,8	7.02 178,3	9.72 246,9	2.06 52,3	2	- M16 x 83	7.5 3,4
5 125	5.563 141,3	750 51,7	18,229 81,09	0.19 4,8	7.09 180,1	9.71 246,6	2.04 51,8	2	5/8 x 3-1/4 M16 x 83	7.5 3,4
- 150	6.500 165,1	700 48,2	23,228 103,18	0.19 4,8	8.09 205,5	10.53 267,5	2.13 54,1	2	- M16 x 83	7.6 3,4
6 150	6.625 168,3	700 48,2	24,130 107,34	0.19 4,8	8.09 205,5	10.53 267,5	2.13 54,1	2	5/8 x 3-1/4 M16 x 83	7.6 3,4
8 200	8.625 219,1	600 41,4	35,056 155,94	0.19 4,8	10.56 268,2	13.56 344,4	2.62 66,5	2	3/4 x 4-3/4 M20 x 121	18.0 8,2
10 250	10.750 273,0	500 34,5	45,381 201,87	0.13 3,3	12.84 326,1	16.41 416,8	2.62 66,5	2	1 x 6-1/2 M24 x 165	24.6 11,2
12 300	12.750 323,9	400 27,6	51,071 227,17	0.13 3,3	15.41 391,4	18.84 478,5	2.62 66,5	2	1 x 6-1/2 M24 x 165	42.0 19,1
14 350	14.000 355,6	350 24,1	53,878 239,66	0.13 3,3	16.68 423,7	20.38 517,6	2.93 74,4	3	1 x 5-1/2 <sup>e</sup>	48.0 21,7
16 400	16.000 406,4	350 24,1	70,372 313,03	0.13 3,3	18.50 469,9	22.64 575,1	2.93 74,4	3	1 x 5-1/2 <sup>e</sup>	52.1 23,6
18 450	18.000 457,2	350 24,1	89,064 396,18	0.25 6,4	21.31 541,3	25.12 638,0	3.06 77,7	3	1 x 5-1/2 <sup>e</sup>	68.0 30,8
20 500	20.000 508,0	350 24,1	109,956 489,11	0.25 6,4	23.50 596,9	27.88 708,2	3.06 77,7	4	1-1/8 x 5-3/4 <sup>e</sup>	89.0 40,4
24 600	24.000 609,6	350 24,1	158,336 704,31	0.25 6,4	27.63 707,8	32.00 812,8	3.19 81,0	4	1-1/8 x 5-3/4 <sup>e</sup>	96.0 43,5

**Notes:**

- a. Maximum available gap between pipe ends. Minimum gap = 0.
- b. 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 your GRINNELL Representative.
- c. Gold color coded metric bolt sizes for DN32 - DN300 couplings are available upon request.
- d. Maximum End Gap is for cut grooved standard weight pipe. Values for roll grooved pipe will be 1/2 that of cut grooved.
- e. Available in ANSI bolt sizes only.

**TABLE A**  
**GRINNELL FIGURE 772 GROOVED RIGID COUPLING**  
**DIMENSIONS**

### **Gaskets**

- 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)

*Recommended for use in low temperature and vacuum systems*

- Grade “L” Silicone,  
Red gasket,  
-30°F to 350°F (-34°C to 177°C)
- Grade “T” Nitrile,  
Orange color code,  
-20°F to 180°F (-29°C to 82°C)
- Grade “O” Fluoroelastomer,  
Blue color code,  
20°F to 300°F (-7°C to 149°C)

For proper gasket selection, refer to Technical Data Sheet G610.

## **Ordering Procedure**

GRINNELL Products are available globally through a network of distribution centers.

Specify Figure 772 Grooved Rigid Coupling, quantity, pipe size (Nominal ANSI or O.D.), finish (Orange, Red, or Galvanized) and type of gasket:

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