



## **GRINNELL Figure 577 Grooved Lightweight Rigid Coupling 1-1/4 Inch to 8 Inch (DN32 to DN200) (Europe and Middle East Only)**

### **General Description**

The GRINNELL Figure 577 Grooved Lightweight Rigid Coupling provides a rigid joint by firmly gripping along the full circumference of the pipe grooves. Figure 577 Grooved Lightweight Rigid Couplings are a proven dependable method of joining pipe and are an economical alternative to welding, threading, or using flanges. It is capable of pressures up to 300 psi (20,7 bar) depending on pipe size and wall thickness.

#### **NOTICE**

*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.*

*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. Material and gasket selection should be verified to be compatible for the specific application. Always read and understand the installation instructions.*

*The GRINNELL Figure 577 Grooved Lightweight 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.*

*The owner is responsible for maintaining their mechanical system and devices in proper operating condition. The installing contractor or device manufacturer should be contacted with any questions.*

### **Technical Data**

#### **Approvals**

UL, FM, ULC, VdS, and LPCB

#### **Sizes**

1-1/4 Inch to 8 Inch (DN32 to DN200)

#### **Housing**

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

#### **Finish**

- Red non-lead paint
- Hot-dipped, Galvanized conforming to ASTM A 153

#### **Bolts/Nuts**

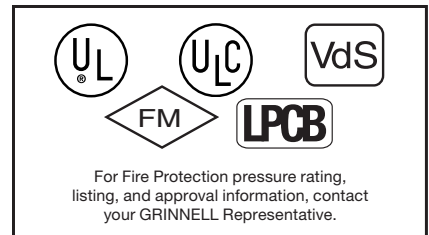
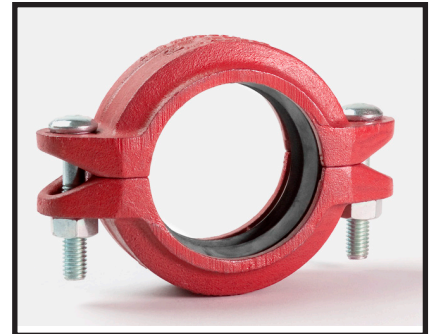
- ANSI: Carbon Steel oval neck track head bolts are heat-treated and conform to the physical properties of ASTM A 183 Grade 2 and SAE J429 Grade 5 with a minimum tensile strength of 110,000 psi.

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.



For Fire Protection pressure rating, listing, and approval information, contact your GRINNELL Representative.

# 10 YEAR LIMITED WARRANTY

Full warranty terms can be found on [www.grinnell.com](http://www.grinnell.com)

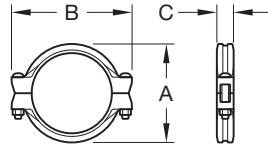
#### **Gaskets**

- 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 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 TFP1895.



**FIGURE 577**  
**GROOVED LIGHTWEIGHT**  
**RIGID COUPLING**  
**1-1/4" - 8" (DN32 TO DN200)**

| Pipe Size                       |                        | Max. †<br>Pressures<br>psi (bar) | Max. †<br>End Load<br>Lbs.<br>(kN) | Max. *‡<br>End Gap<br>Inches<br>(mm) | Nominal Dimensions  |                     |                     | Coupling Bolts |                          | Approx.<br>Weight<br>Lbs.<br>(kg) |
|---------------------------------|------------------------|----------------------------------|------------------------------------|--------------------------------------|---------------------|---------------------|---------------------|----------------|--------------------------|-----------------------------------|
| Nominal<br>ANSI<br>Inches<br>DN | O.D.<br>Inches<br>(mm) |                                  |                                    |                                      | A<br>Inches<br>(mm) | B<br>Inches<br>(mm) | C<br>Inches<br>(mm) | Qty.           | Size**<br>Inches<br>(mm) |                                   |
| 1-1/4<br>DN32                   | 1.660<br>(42,2)        | 300<br>(20,7)                    | 757<br>(3,37)                      | 0.06<br>(1,5)                        | 2.66<br>(68)        | 4.40<br>(112)       | 1.64<br>(42)        | 2              | 3/8 x 2-1/4<br>M10 x 57  | 1.3<br>(0,59)                     |
| 1-1/2<br>DN40                   | 1.900<br>(48,3)        | 300<br>(20,7)                    | 992<br>(4,41)                      | 0.06<br>(1,5)                        | 2.90<br>(74)        | 4.66<br>(118)       | 1.66<br>(42)        | 2              | 3/8 x 2-1/4<br>M10 x 57  | 1.5<br>(0,68)                     |
| 2<br>DN50                       | 2.375<br>(60,3)        | 300<br>(20,7)                    | 1,551<br>(6,90)                    | 0.06<br>(1,5)                        | 3.38<br>(86)        | 5.20<br>(132)       | 1.70<br>(43)        | 2              | 3/8 x 2-1/4<br>M10 x 57  | 1.8<br>(0,82)                     |
| 2-1/2<br>DN65                   | 2.875<br>(73,0)        | 300<br>(20,7)                    | 2,272<br>(10,11)                   | 0.06<br>(1,5)                        | 3.88<br>(99)        | 5.64<br>(143)       | 1.75<br>(44)        | 2              | 3/8 x 2-1/4<br>M10 x 57  | 2.0<br>(0,91)                     |
| –<br>DN65                       | 3.000<br>(76,2)        | 300<br>(20,7)                    | 2,474<br>(11,01)                   | 0.06<br>(1,5)                        | 4.00<br>(102)       | 5.78<br>(147)       | 1.75<br>(44)        | 2              | –<br>M16 x 83            | 2.0<br>(0,91)                     |
| 3<br>DN80                       | 3.500<br>(88,9)        | 300<br>(20,7)                    | 3,367<br>(14,98)                   | 0.06<br>(1,5)                        | 4.50<br>(114)       | 6.33<br>(161)       | 1.75<br>(44)        | 2              | 3/8 x 2-1/4<br>M10 x 57  | 3.3<br>(1,50)                     |
| 4<br>DN100                      | 4.500<br>(114,3)       | 300<br>(20,7)                    | 4,771<br>(21,22)                   | 0.06<br>(1,5)                        | 5.70<br>(145)       | 7.50<br>(191)       | 1.83<br>(46)        | 2              | 3/8 x 2-1/4<br>M10 x 57  | 3.3<br>(1,50)                     |
| –<br>DN125                      | 5.500<br>(139,7)       | 300<br>(20,7)                    | 7,127<br>(31,71)                   | 0.125<br>(3,2)                       | 6.80<br>(173)       | 8.75<br>(222)       | 1.91<br>(49)        | 2              | –<br>M12 x 76            | 5.3<br>(2,41)                     |
| 5<br>DN125                      | 5.563<br>(141,3)       | 300<br>(20,7)                    | 7,290<br>(32,43)                   | 0.125<br>(3,2)                       | 6.86<br>(174)       | 8.82<br>(224)       | 1.91<br>(49)        | 2              | 1/2 x 3<br>M12 x 76      | 5.3<br>(2,41)                     |
| –<br>DN150                      | 6.500<br>(165,1)       | 300<br>(20,7)                    | 9,955<br>(44,28)                   | 0.125<br>(3,2)                       | 7.80<br>(198)       | 9.75<br>(248)       | 1.91<br>(49)        | 2              | –<br>M12 x 76            | 5.7<br>(2,59)                     |
| 6<br>DN150                      | 6.625<br>(168,3)       | 300<br>(20,7)                    | 10,341<br>(46,00)                  | 0.125<br>(3,2)                       | 8.47<br>(215)       | 9.88<br>(251)       | 1.91<br>(49)        | 2              | 1/2 x 3<br>M12 x 76      | 5.9<br>(2,68)                     |
| 8<br>DN200                      | 8.625<br>(219,1)       | 300<br>(20,7)                    | 17,528<br>(77,97)                  | 0.125<br>(3,2)                       | 10.25<br>(260)      | 12.78<br>(325)      | 2.40<br>(61)        | 2              | 5/8 x 3-1/4<br>M16 x 83  | 11.7<br>(5,32)                    |

\* 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 your GRINNELL Representative.

\*\* Gold color coded metric bolt sizes for DN32 - DN200 couplings are available upon request.

‡ Max End Gap is for cut grooved standard weight pipe.

**TABLE 1**  
**GRINNELL FIGURE 577 GROOVED LIGHTWEIGHT RIGID COUPLING**  
**– DIMENSIONS –**

## **Care and Maintenance**

Before closing a fire protection system main control valve for maintenance work on the fire protection system that it controls, obtain permission to shut down the affected fire protection system from the proper authorities and notify all personnel who may be affected by this decision.

After placing a fire protection system in service, notify the proper authorities and advise those responsible for monitoring proprietary and/or central station alarms.

The owner is responsible for the inspection, testing, and maintenance of their fire protection system and devices in compliance with this document, as well as with the applicable standards of the National Fire Protection Association (for example, 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 impairments must be immediately corrected.

Automatic sprinkler systems are recommended to be inspected, tested, and maintained by a qualified Inspection Service in accordance with local requirements and/or national codes.

## **Ordering Procedure**

GRINNELL Products are available globally through a network of distribution centers. For the nearest distributor, visit [www.grinnell.com](http://www.grinnell.com). When placing an order, indicate the full product name.

Specify Figure 577 Grooved Lightweight Rigid Coupling, quantity, pipe size (Nominal ANSI or O.D.), finish (Red or Galvanized), and type of gasket:

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

