TERRABRUTE® CR

PVC piping systems for trenchless applications













Features and Benefits

- Fully-restrained integral-bell joint
- High deflection profile gasket with field proven leak-free performance
- Gasket available in Nitrile rubber for contaminated soil applications
- Meets the performance requirements of AWWA C900
- Meets NSF 61 Certification for Drinking Water System Components
- Corrosion-resistant, non-metallic ring-and-pin configuration
- Fast and easy joint assembly
- Rounded bell shoulders slide by roots, rocks, and other debris that can protrude into the bore hole
- Segmented assembly requires less space for insertion pits
- Ease of reconnection to standard PVC pipe at transition points

Installations

Trenchless

- Horizontal directional drilling (HDD)
- Sliplining
- Jack-and-bore carrier pipe

Open-cut restrained-joint

Experience

Over 1,000,000 feet installed

In-service installations since 2002



Pipe Engineering Data

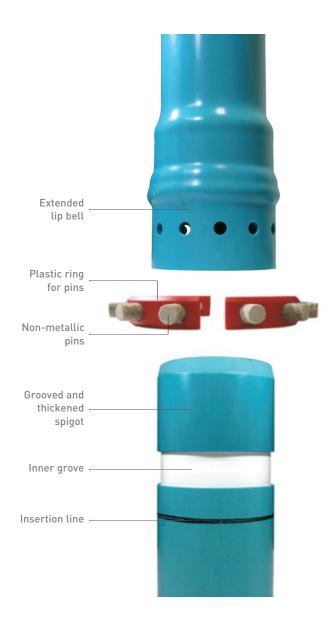
| Dimensi | | | | | |
|-----------|----|--------------|-----------------|-----------------|-------------------|
| Size (in) | DR | Bell OD (in) | Pipe OD (in) | Avg. ID (in) | Weight (lb/ft) |
| 4 | 14 | 6.49 | 4.80 | 4.09 | 3.3 |
| 6 | 14 | 9.06 | 6.90 | 5.87 | 6.8 |
| 8 | 18 | 11.33 | 9.05 | 8.03 | 9.3 |
| 10 | 18 | 14.00 | 11.10 | 9.84 | 13.8 |
| 12 | 18 | 16.36 | 13.20 | 11.69 | 20.2 |
| 14 | 18 | 19.20 | 15.30 | 13.50 | 26.9 |
| 16 | 18 | 21.60 | 17.40 | 15.35 | 36.8 |
| 18 | 18 | 24.10 | 19.50 | 16.66 | 44.8 |
| 20 | 18 | 26.80 | 21.60 | 18.46 | 55.3 |
| 24 | 18 | 31.70 | 25.80 | 22.02 | 79.2 |

| Bend Radius | | Joint Deflection | | Pull Force | |
|--------------|-----------------------------|------------------|-----------------------------------|--------------|-----------------------------|
| Size (in) | Minimum Bend Radius (ft) | Size (in) | Maximum Joint Deflection (deg) | Size (in) | Safe Pulling Force (lbs) |
| 4 | 100 | 4 | 5.7 | 4 | 11,200 |
| 6 | 144 | 6 | 4.0 | 6 | 24,700 |
| 8 | 189 | 8 | 3.0 | 8 | 25,800 |
| 10 | 231 | 10 | 2.5 | 10 | 42,100 |
| 12 | 275 | 12 | 1.5 | 12 | 61,800 |
| 14 | 327 | 14 | 1.5 | 14 | 80,000 |
| 16 | 382 | 16 | 1.0 | 16 | 100,000 |
| 18 | 458 | 18 | 1.0 | 18 | 130,000 |
| 20 | 573 | 20 | 1.0 | 20 | 160,000 |
| 24 | 1146 | 24 | 0.5 | 24 | 195,000 |

| Pressures | | Critical Buckling | | | |
|--------------------|--------------------------|--------------------|----------------------------------|--|--|
| Dimension Ratio | Pressure Rating (psi) | Dimension Ratio | Critical Buckling Pressure (psi) | | |
| 14 | 305 | 14 | 426 | | |
| 18 | 235 | 18 | 190 | | |







Notes

- Safe pulling force based on a safety factor of 2.0
- Bend radius based on pipe OD to allow for fittings installation, repairs, and maintenance
- Available in 20' lengths
- Other pressure classes are available upon request





Underground Solutions, Inc. 858.679.9551 www.undergroundsolutions.com

Underground Solutions, Inc. provides infrastructure technologies for power, water and wastewater applications. TerraBrute® CR is a trademark of IPEX Branding, Inc. Underground Solutions® is the registered trademark of Aegion Corporation and its affiliates.