

PVC PIPING SYSTEMS FOR HDD AND OTHER TRENCHLESS APPLICATIONS

TerraBrute® CR



M U N I C I P A L S Y S T E M S

**AWWA C900 PRESSURE PIPE
SYSTEMS FOR POTABLE WATER
AND SEWER APPLICATIONS**

**100mm – 300mm
4" – 12"**

We Build Tough Products for Tough Environments®

TERRABRUTE® CR TRENCHLESS

THE MISSING LINK IN YOUR TOTAL PVC PIPING SYSTEM

TOTAL PVC PIPING SYSTEM ENGINEERED FOR HDD

Engineered for Horizontal Directional Drilling (HDD) and other trenchless applications, TerraBrute® CR is a 100% non-metallic, AWWA C900 PVC pressure pipe system. Non-corroding and installation friendly, TerraBrute CR allows you to standardize on PVC throughout your potable water and sewer infrastructure. Whether you're using open-cut or trenchless methods, there are no more problems matching materials and couplings. No more butt fusion equipment headaches. No more surprises.

HIGHEST PULL STRENGTH AVAILABLE

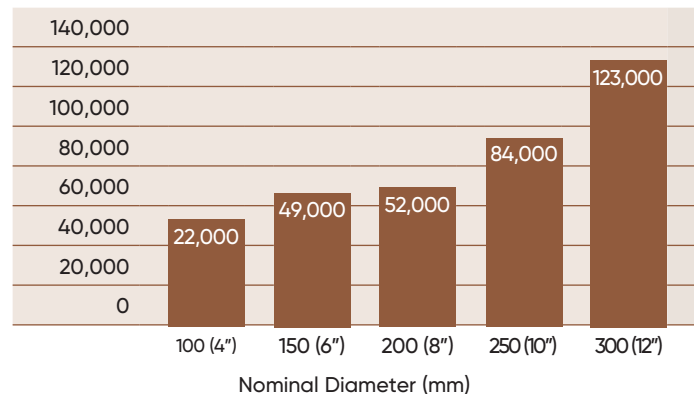
Developed in consultation with leading trenchless technology research experts, and rigorously tested in the field, TerraBrute CR trenchless PVC pressure pipe easily withstands the high tensile and bending forces that occur during HDD and other types of trenchless installation.

TerraBrute CR's patented non-metallic "ring-and-pin" gasketed joint design outperforms all other restrained PVC pipe joints on the market, providing more than twice the pull strength of other HDD systems – up to 120,000 lbs. for 300mm / 12" pipe. Unlike competing square-shoulder designs, TerraBrute CR's rounded bell shoulders slide by roots, rocks and other debris that can protrude into the borehole. And unlike HDPE, TerraBrute CR requires no relaxation time before installation of fittings or services.

TerraBrute® CR is manufactured from pipe certified to the following standards:



TerraBrute CR Ultimate Pulling Force (lbs)



These ultimate load values were calculated using a semi-empirical design method derived at the University of Western Ontario and verified by laboratory testing. A safety factor of 2:1 should be applied to account for the combined tensile and bending loads associated with HDD applications.

Dimensions of TerraBrute CR Pipe

Nominal Diameter		Pressure Rating (2:1 safety factor)	Max Outside Diameter (Bell OD)		Avg Internal Diameter	
mm	in	psi	mm	in	mm	in
100	4	305	165	6.49	104	4.09
150	6	305	230	9.06	149	5.87
200	8	235	288	11.33	204	8.03
250	10	235	355	14.00	250	9.84
300	12	235	416	16.36	297	11.69

TerraBrute CR's larger internal diameters, compared to HDPE pipe, provide the same hydraulic performance usually with one size smaller pipe, saving on material costs.

“TerraBrute CR is the result of many years of research into the use of PVC pipes in HDD applications. The new non-corroding, locking joint design enables TerraBrute CR to enter new applications while maintaining the high tensile strength and bending radius of the original TerraBrute.”

Dr. Erez Allouche,
Louisiana Tech University



CORROSION RESISTANT

The new, non-metallic, "ring-and-pin" configuration of TerraBrute CR PVC pressure pipe offers complete corrosion resistance. The plastic "ring" is designed as two half rings for ease of installation and comes complete with the "pins" ready for insertion creating a strong, locking joint.

PROVEN PERFORMANCE

Pressure rated in excess of 200 psi, TerraBrute CR delivers the superior strength and corrosion resistance you've come to expect from our Blue Brute pressure pipe, along with the ability to absorb the underground shear and flexure stresses that occur in buried applications.

PROVEN COMPATIBILITY

TerraBrute CR trenchless PVC pipe is designed for total compatibility with your municipal system. Connections can be made with standard PVC CIOD fittings, direct tapped couplings or standard service saddles. Repair and handling techniques are the same as for any AWWA PVC pressure pipe.

PROVEN JOINING SYSTEM

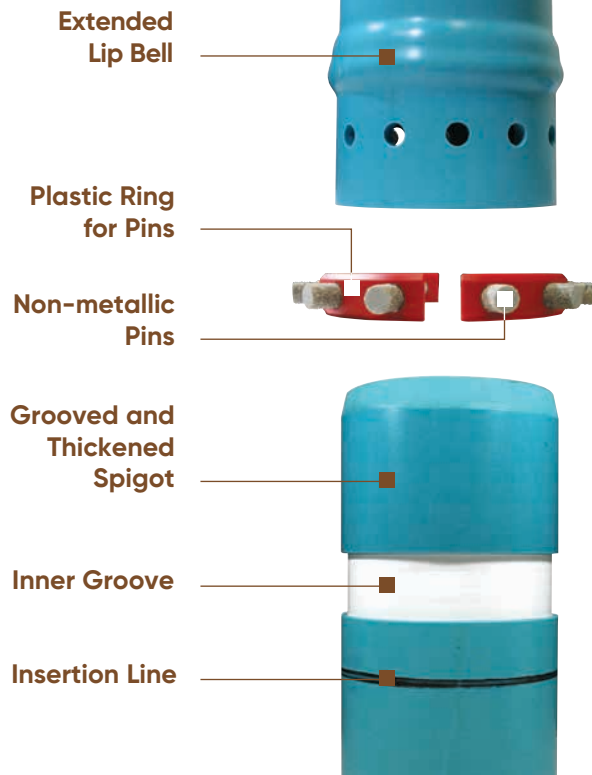
Based on our gasketed bell and spigot design, proven through years of service in the field, the TerraBrute CR joint is rated at many times the pressure rating of the pipe. And unlike competing coupling joints, the TerraBrute CR joint has been specially engineered to deliver the highest pull strength safety factors in the industry for HDD applications.

FAST AND EASY JOINT ASSEMBLY

Unlike butt fusion or electrofusion joining methods used with HDPE pipe, TerraBrute CR requires no expensive equipment or special installer training. Because pipe segments are assembled during pullback operations, pipe stringing is eliminated. Assembly time for a 300mm / 12" TerraBrute CR joint is typically less than five minutes.

TerraBrute® CR

NEW NON-METALLIC "RING AND PIN" GASKETED JOINT DESIGN



IDEAL TERRABRUTE CR APPLICATIONS

BRIDGE CROSSINGS

TerraBrute CR's unique "new non-metallic ring-and-pin" joint design provides for easy installation in non-HDD applications where traditional butt fusion techniques would be difficult – such as this span of suspended pressure pipe installed beneath a busy roadway bridge.



ROAD CROSSINGS

TerraBrute CR is ideally suited for short drilling projects where existing structures cannot be disturbed – such as under busy highways, roads and intersections where you connect to PVC pipes.



URBAN CENTERS

Because TerraBrute CR can be assembled segmentally just before entering the borehole, projects take up less space in restricted urban areas, compared to the long strings of pipe typical with conventional PVC and HDPE installations.



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About the IPEX Group of Companies

As leading suppliers of thermoplastic piping systems, the IPEX Group of Companies provides our customers with some of the world's largest and most comprehensive product lines. All IPEX products are backed by more than 50 years of experience. With state-of-the-art manufacturing facilities and distribution centers across North America, we have established a reputation for product innovation, quality, end-user focus and performance.

Markets served by IPEX group products are:

- Electrical systems
- Telecommunications and utility piping systems
- PVC, CPVC, PP, ABS, PEX, FR-PVDF and PE pipe and fittings (1/4" to 48")
- Industrial process piping systems
- Municipal pressure and gravity piping systems
- Plumbing and mechanical piping systems
- PE Electrofusion systems for gas and water
- Industrial, plumbing and electrical cements
- Irrigation systems

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A policy of ongoing product improvement is maintained. This may result in modifications of features and/or specifications without notice.



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