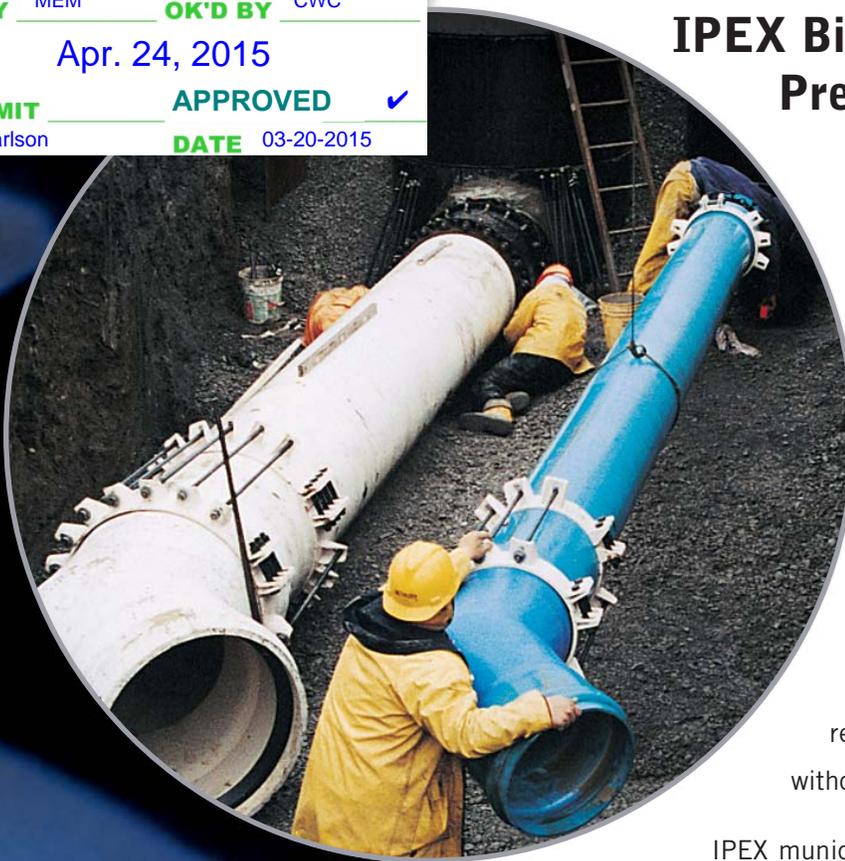


MUNICIPAL PRESSURE PIPING SYSTEMS

Vermont Agency of Transportation
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Apr. 24, 2015
RESUBMIT APPROVED ✓
BY C. Carlson DATE 03-20-2015



IPEX Big Brute™ and Blue Brute™ Pressure Piping Systems

PVC Pressure Systems manufactured to AWWA and CSA Standards

**Big Brute™ 14" – 48" (350 mm – 1200 mm),
AWWA C905 and CSA Standards**

**Blue Brute™ 4" – 12" (100 mm – 300 mm),
AWWA C900 and CSA Standards**

Designed for municipal applications, Big Brute™ and Blue Brute™ systems deliver superior strength with corrosion resistant performance and the ability to flex without damage.

IPEX municipal pressure piping systems are made with a high-strength, high-impact PVC compound, allowing them to perform even under high traffic loads and deep burial conditions.

For applications involving potable water, irrigation systems, or sewage forcemains, IPEX municipal systems offer the lowest break rate of any pipe material.

Blue Brute fittings are injection molded and are even tougher than the pipe. Injection molded Blue Brute fittings have a wall thickness 125% larger than SDR18 pipe, and custom-made fabricated fittings are wrapped with a tough layer of fiberglass for extra protection.

Proven in tough North American climates for over 50 years, IPEX PVC pipe, fitting and valve systems have an established track record of performance.

BIG BRUTE™

BLUE BRUTE™



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Key features include:

- **Corrosion-proof Performance**

Big Brute and Blue Brute systems are immune to corrosion from aggressive soils and galvanic action.

- **Superior Hydraulics**

The glass-like finish of PVC reduces friction losses and eliminates the tuberculation common in iron pipes. As a result, pumping costs are reduced and water quality is maintained.

- **Cast Iron Outside Diameter (CIOD)**

Blue Brute and Big Brute systems are manufactured with a cast iron outside diameter (CIOD). This is compatible with waterworks valves, appurtenances and restrainers.

- **Bottle-tight Joints, Removable Gaskets**

IPEX's patented gasket system not only withstands many times the rated system pressure, but also withstands full vacuum pressures. The unique removable gasket system allows special oil-resistant (nitrile) gaskets to be easily installed when working in contaminated soils.

- **Third-party Certification**

All IPEX municipal systems are certified to CSA B137.2. or B137.3., as applicable. In addition, Big Brute and Blue Brute systems have Factory Mutual approval and Underwriter's Laboratories (ULI and ULC) listings.

Pressure Classes vs. Pressure Ratings

Water distribution systems normally consist of smaller diameter pipes 4" - 12" (100 mm – 300 mm) with many connections, taps, bends, valves, hydrants and other appurtenances. As a result, pipes in this size range are referred to by their pressure class. Pressure classes are defined in AWWA C900 and include a 2.5:1 safety factor for pressure, and a 2 ft/s (0.6 m/s) guideline for surge allowance. IPEX's Blue Brute adheres to this standard.

Conversely, larger diameter transmission pipes 14" - 48" (350 mm - 1200 mm) are grouped by pressure rating. A pressure rating as defined in AWWA C905 includes a 2:1 safety factor, which is more appropriate for larger diameter pipes. Big Brute conforms to this standard.

AWWA C900 governs smaller water distribution systems pipes, while AWWA C905 governs larger diameter transmission pipe. All sizes adhere to the CSA B137.3 standard which recommends a 2:1 safety factor for both distribution and transmission applications.

Pressure Classes and Ratings

Note that these classes and ratings are extremely conservative. For instance, the minimum burst pressure for IPEX DR 18 pipe is 755 psi, but the pipe routinely withstands over 1000 psi.

Dimension Ratio	Pressure Class	Pressure Rating
14	200	305
18	150	235
25	100	165
32.5	N/A*	125
41	N/A*	100
51	N/A*	80

*Not manufactured in 4" - 12" (100 mm – 300 mm) sizes

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1040 N. Meridian Rd., P.O. Box 1556, Youngstown, Ohio 44501 Phone: (330) 799-3333
www.trumbull-mfg.com Toll Free: 1-800-677-1799 FAX: (330) 797-3215

DETECTABLE WARNING TAPE
For Locating Non-Metallic Pipes Buried Underground

Tape is manufactured of an aluminum core encased in plastic.

Stocked in 1,000 foot rolls in standard industry colors:



Trumbull Item No.	Color	Legend	Width	Length of Roll	Weight per 1000 Ft. Roll
364-4950	Blue	Buried Water Line Below	2"	1000'	5.0#
364-4951	Green	Buried Sewer Line Below	2"	1000'	5.0#
364-4955	Blue	Buried Water Line Below	3"	1000'	7.5#
364-4956	Green	Buried Sewer Line Below	3"	1000'	7.5#
364-4966	Blue	Buried Water Line Below	6"	1000'	15.0#
364-4967	Green	Buried Sewer Line Below	6"	1000'	15.0#

For installations 30" or shallower, 2" wide tape should be used. For deeper installations, 3" tape should be used.

Use electronic pipe/cable locators for best results and not valve box or metal locators.



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