



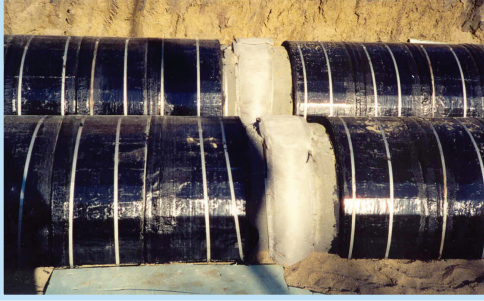
*Chilled water lines being installed for the University of Wisconsin, in Madison, WI*

## CHILLED WATER LINES

Many downtown areas or campus-style developments and institutions are designed to utilize a centralized climate control power source. These power sources will chill water for distribution to the various buildings, where the chilled water will provide the cooling needed to maintain a proper working temperature for each building's activities.

Two types of Concrete Pressure Pipe are ideal materials for delivering large volumes of chilled water between the power source and individual buildings or units. Those are Lined Cylinder Prestressed Concrete Pipe, (AWWA C301), and Bar-Wrapped Steel Cylinder Concrete Pipe, (AWWA C303). Both types of pipe are available in diameters from 16" and larger, depending on local pipe manufacturer capabilities.

The built-in passivation of steel from the Portland cement mortar and concrete helps assure Concrete Pressure Pipe will resist corrosion which could otherwise be induced by condensation on either the interior or exterior of the pipe, typically providing long-term maintenance-free pipe performance. Also, downtown areas and campus-style developments have congested utilities corridors in which the chilled water lines are to be installed. The custom-fabricated fittings and specials provided with Concrete Pressure Pipe can be built to navigate any size, angle, outlet diameter, or deflection required. Concrete Pressure Pipe also has the inherent strength to easily allow installation of the supply and return lines either in vertically or horizontally separated trenches. The adaptability required and custom design nature of chilled water pipe and fittings make Concrete Pressure Pipe uniquely suited for projects of this type.



*Insulation installed over Concrete Pressure Pipe chilled water lines.*

Typical chilled water supply pipe operating temperatures range from approximately 37°F to 40°F, with return lines expected temperatures approximately 15°F higher. These values will vary depending on the specific system requirements and performance. Many Concrete Pressure Pipe water lines continuously operate during northern winters at temperatures very near freezing, proving that the temperature requirements for chilled water lines are well within the performance range of Concrete Pressure Pipe with the usual polyisoprene rubber gasketed joints.

Chilled water systems will typically include isolating stainless steel heat exchangers between the distributions lines and supply systems to individual buildings. These heat exchangers isolate water flow in the distribution lines from that of the buildings to provide pressure separation from building circuits that will generally operate at a higher pressure than the distribution mains, and to prevent contamination of the looped water from the building chilled water.

## LEARN MORE

For more information about using Concrete Pressure Pipe for chilled water lines, speak with your Concrete Pressure Pipe supplier, or contact the American Concrete Pressure Pipe Association at **714.801.0298** or **[www.acppa.org](http://www.acppa.org)**.



**ACPPA Headquarters**  
T 714.801.0298  
email: [support@acppa.org](mailto:support@acppa.org)  
[www.acppa.org](http://www.acppa.org)