FERRO-THERM D.I.

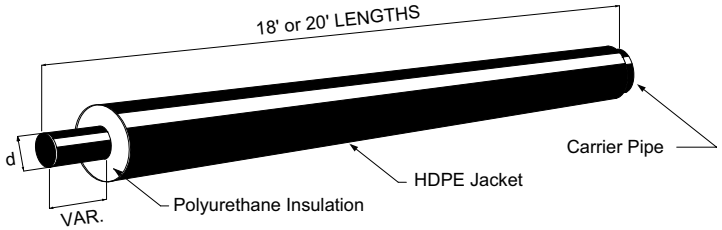
DUCTILE IRON PIPING SYSTEM

FERRO-THERM D.I.

THERMACOR'S FERRO-THERM D.I. is a factory-fabricated, pre-insulated piping system for below or above ground distribution of chilled water or domestic hot water. The system is designed with a Ductile Iron steel carrier pipe, closed cell polyurethane foam insulation, and a High Density Polyethylene (HDPE) jacket.

Carrier Pipe

- Class 50, Ductile Iron w/ EPDM Gaskets
- Class 51, Ductile Iron w/ EPDM Gaskets (4")



Polyurethane Insulation

• Density	> 2.0 lbs/ft³
• "K" Factor	≤ 0.18 Btu-in/hr-ft²-°F @ 75°F
• Compressive Strength	> 30 psi
• Closed Cell Content	≥ 90% @ 75°F

Jacket

- High Density Polyethylene (HDPE)

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SPECIFICATION GUIDE *

GENERAL

All underground and above ground piping materials transporting chilled water or domestic hot water shall be **FERRO-THERM D.I.** as manufactured by **THERMACOR PROCESS INC.** All straight pipe, fittings, anchors, insulating materials, and technical support shall be provided by the manufacturer.

SERVICE PIPE

The carrier or service pipe shall be ductile iron, pressure or special class as specified, in nominal lengths standard to the industry for the specified product. Pipe and fittings shall contain an internal cement lining and be coated inside and out with a bitumastic seal coat. Systems operating over 140°F shall not be coated internally. Pre-insulated pipe sections shall be insulated from the bell end to just short of the spigot insertion stop mark. Joints shall be bell and spigot, push-on type, with SBR gaskets for cold applications, or EPDM gaskets for applications operating over 160°F. Mechanical or restrained joints may be used if required by the project. Maximum operating temperature with EPDM gaskets is 250°F.

INSULATION

Insulation of the service pipe shall be rigid polyurethane foam with a minimum 2.0 lbs/ft³ density, 90% minimum closed cell content, a "K" factor not higher than .18 (Btu-in/hr-ft²-°F) at 75°F per ASTM C518, and shall be CFC-free. The polyurethane foam shall completely fill the annular space between the service pipe and jacket, and shall be bonded to both. Insulation shall be provided to the minimum insulation thickness specified within manufacturing tolerances.

JACKET

The outer protective jacket shall be extruded, black, high density polyethylene (HDPE). No FRP, HDUP, or tape jacket allowed.

FITTINGS

Fittings shall be ductile iron with gasket joint similar to that of the ductile iron pipe. Push-on and mechanical-joint style fittings are not insulated and concrete thrust blocks are poured at all changes of direction. *Thrust block design and sizing is the responsibility of the design engineer.* Restrained-joint fittings, when used with restrained-joint piping, are not to be thrust blocked and may be insulated with flexible urethane foam insulation, jacketed and then wrapped with polyethylene backed, pressure sensitive rubberized bitumen adhesive tape, 30 mils thick.

FIELD JOINTS

Service pipe shall be hydrostatically tested as per the Engineer's specification with a factory recommendation of 1.5 times the specified pressure of the system. Joints for D.I. pipe sections are push-on, mechanical, or restrained-joint type straight field. At the Engineer's option, joints may be jacketed with a split-sleeve and sealed with a heat shrink sleeve to prevent the ingression of moisture or debris. All jacketing materials shall be furnished by THERMACOR.

INSTALLATION

Installation of the piping system shall be in accordance with the manufacturer's instructions. Factory trained field technicians shall be provided for critical periods of installation, unloading, field joint instruction, and testing.

** For alternate specifications, please contact THERMACOR.*

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