

SPIRAL-THERM

METAL JACKETED PIPING SYSTEM



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THERMACOR'S SPIRAL-THERM is a metal jacketed, factory-fabricated, pre-insulated piping system for above ground and tunnel piping applications. The system is designed with a specified carrier pipe, closed cell high temperature polyisocyanurate or standard closed cell polyurethane foam insulation, and a spiral wound metal jacket. The jacket, either aluminum, galvanized steel, or stainless steel, is manufactured with a rubber o-ring into the locking seams to create a watertight jacket.

Carrier Pipe

- As Specified

Spiral Wound Jacket With Watertight Rubber O-Ring Sealed Seam

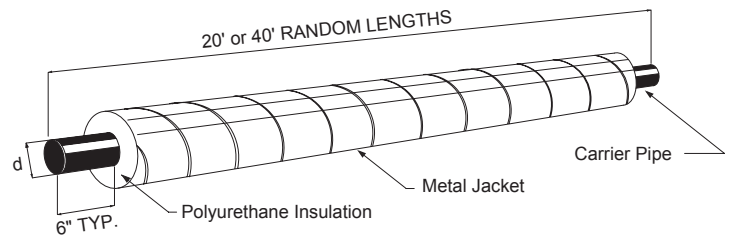
- Aluminum, Galvanized Steel, or Stainless Steel
- Internal or External Seam

Polyurethane Insulation

- Density > 2.0 lbs/ft³
- "K" Factor ≤ 0.15 Btu-in/hr-ft²-°F @ 75°F
- Compressive Strength > 30 psi
- Closed Cell Content $\geq 90\%$ @ 75°F

Polyisocyanurate Insulation

- Density > 2.7 lbs/ft³
- "K" Factor 0.17 Btu-in/hr-ft²-°F @ 75°F, ≤ 0.30 Btu-in/hr-ft²-°F @ 366°F
- Compressive Strength > 30 psi @ 75°F
- Closed Cell Content $\geq 85\%$
- Minimum Thickness $\geq 2.5"$



SPECIFICATION GUIDE *

GENERAL

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

SERVICE PIPE

The carrier or service pipe shall be A-53, Grade B, ERW, Standard Weight for pipe sizes 2" and larger and A106/ A53, Grade B, seamless, standard weight for pipe sizes 1.5" and smaller. All carbon steel pipe shall have ends cut square and beveled for gasket coupling joints. Straight sections shall be supplied in 20 or 40 foot random lengths with cutbacks to allow for coupling at the field joints.

INSULATION

Insulation of the service pipe shall be rigid polyurethane foam with a minimum 2.0 lbs/ft³ density, 90% minimum closed cell content, and a "K" factor not higher than .16 at 75°F per ASTM C518. The polyurethane foam 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.

JACKET

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

FITTINGS

Fittings shall be butt-welded steel. The fittings are uninsulated and anchored with concrete thrust blocks. Fittings are thrust blocked at all changes of direction and pipe size changes. Thrust block design and sizing is the responsibility of the design engineer. Steel fittings are to be coated with brush applied mastic provided by Thermacor.

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 between pipe sections are joined using ductile iron couplings. (*At the Engineer's option*, joints may be jacketed with an HDPE split sleeve and sealed with a heat shrink sleeve to prevent the ingress 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 SANDALE UTILITY PRODUCTS.*

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