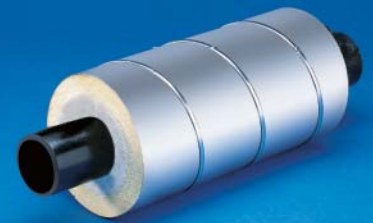


PERMA-PIPE® / RICWIL®

Preinsulated Piping Systems

Mid-Temp Hi-Gard®

- Aboveground
- Maintenance Free
- Jacketed Piping Systems



Mid-Temp Hi-Gard[®]

Aboveground, Maintenance Free, Jacketed, Piping Systems

PERMA-PIPE[®]/RICWIL[®]'s Mid-Temp Hi-Gard[®] piping system provides system owners with superior Btu savings in addition to an efficient high quality labor-saving method for the distribution of fluids aboveground at temperatures of 250°F and higher.

The maintenance free design solves the problem of corrosion under insulation. PERMA-PIPE's 90% closed cell polyurethane foam bonds to the high temperature insulation, thus eliminating the path by which moisture can travel.

Prefabricated and preinsulated, this piping system provides maximum Btu efficiency. The combination of high temperature insulation and polyurethane foam makes Btu savings possible and provides superior Btu savings over conventional field insulated systems. Eliminating the need to insulate and jacket pipe in the rack decreases project construction time and labor costs. Further savings occur when an electric heat tracing system is added to the piping system. Temperature control of the product flow results in Btu savings that lower electrical and energy usage requirements.

Mid-Temp Hi-Gard is furnished in a variety of systems to satisfy insulation and jacket needs. Each yields a piping system of superior quality for aboveground applications, indoors and outdoors. The system design, along with the preinsulated and prefabricated fitting assemblies, prevents maintenance problems; therefore, saving downtime and maintenance costs.

The protective outer jacket material is available in aluminum, fiberglass, HDPE, stainless or galvanized steel. The Mid-Temp Hi-Gard system is supported directly from the jacket instead of the service pipe, thus eliminating the potential for corrosion at the supports.

PERMA-PIPE delivers a complete system to the job site, which results in lower installation costs. A Mid-Temp Hi-Gard piping system rewards an owner with lifelong savings in maintenance and energy usage.

For applications lower than 250°F, use PERMA-PIPE/RICWIL's Lo-Temp Hi-Gard[®] insulated piping system.

SPECIFICATIONS

General Characteristics

All piping systems for service at ____°F installed aboveground as shown on plans shall be a PERMA-PIPE/RICWIL Mid-Temp Hi-Gard preinsulated and prefabricated piping system with all necessary fittings, expansion loops and accessories, etc., as specified.

Protective Jacket

Jacket material shall be as specified and shall be sufficiently sized to allow for desired insulation thickness for optimum performance of the system.

Standard Jacket

Filament Wound Polyester Fiberglass	.080 min
Aluminum	22 gauge*
Galvanized Steel & Plastic Coated	24 gauge*
Galvanized Steel	
High Density Polyethylene	.080 min
Stainless Steel	26 gauge*

*Heavier jackets available upon request. Plastic coated steel available in a variety of colors.

Insulation

Inner layer of insulation shall be either FOAMGLAS[®], perlite or calcium silicate. Outer insulation shall be 90-95% closed-cell polyurethane with 2 lb/ft³ nominal density and thermal conductivity (k) of 0.18 Btu-in/hr/ft²/°F at 73°F.

Service Pipe

Pipe shall be as specified for desired service.

Fittings

Prefabricated and preinsulated elbows, loops and tees shall be furnished and installed where shown on plans and shall consist of pipe, insulation and jacket conforming to the same specifications as specified for straight runs.

Tracing

Electric heat tracing shall be supplied and provide a maintenance temperature of ____°F and shall be factory-applied as an integral part of all straight runs and fittings. Method of electric heat tracing shall be (Skin Effect Current Tracing, Stereo Heat[®], Heat Tape) as designed and applied by PERMA-PIPE/RICWIL.

System Support and Anchor

Anchors shall be prefabricated and furnished as an integral part of the total system. External supports shall be provided by the installer.

Installation

All pipes and accessories shall be installed in accordance with the manufacturer's recommendations. The services of a factory-trained field service instructor shall be required during all critical stages of installation and testing.

PERMA-PIPE[®]

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