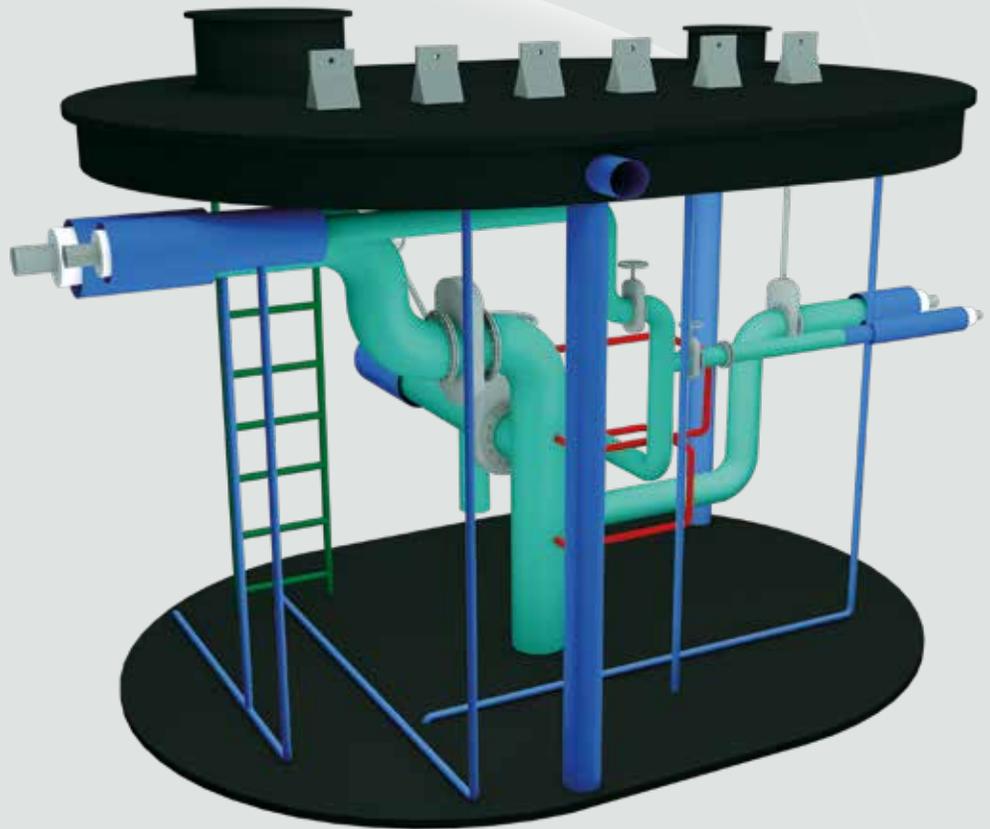


SPECIALTY SERIES

ENGINEERED STEEL MANHOLES



PARTNERS IN EXCELLENCE



AN ECONOMICAL ALTERNATIVE

A manhole is a unit installed underground that provides the main access to the utilities of a district heating & cooling piping system, sewer, stormwater, or drainage system to inspect, modify, clean, and maintain these underground systems.

Traditionally, the most common manholes is made from concrete. Over time groundwater can infiltrate the concrete manhole through open cracks, joints, and around pipe penetrations. Further, defects show up as leaking pipe systems and insulation failure, corroded pipe and valves, and broken or cracked frames causing significant damage and costly repairs to the system.

Given the high cost of repairs and system maintenance, PERMA-PIPE prefabricated engineered steel manholes are the best economical alternative to concrete material.

PERFORMANCE

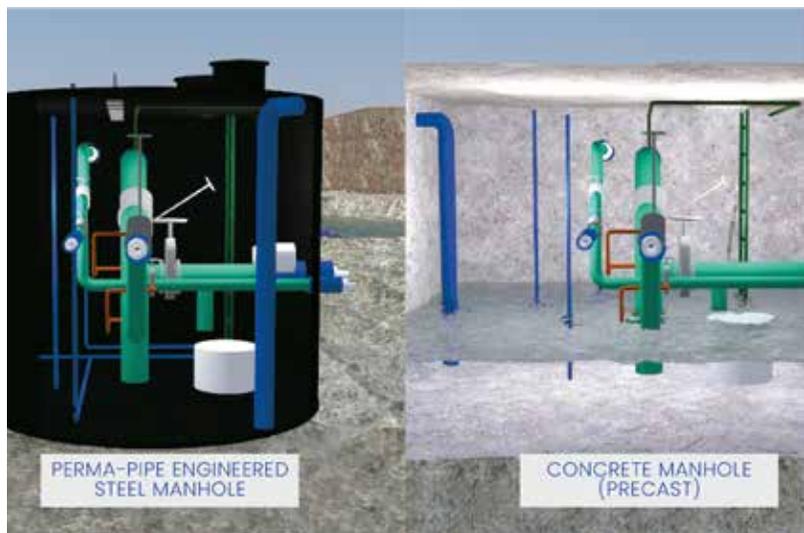
PERMA-PIPE's custom-engineered steel manholes are prefabricated and pre-insulated, providing outstanding strength and durability, 100% watertight built to stay dry, and ready to install. It reduces installation and life-cycle maintenance costs over traditional concrete manholes.

PERMA-PIPE steel manholes are designed with one-inch vents welded to the conduit ends for convenient moisture inspection. If the conduit is wet, it can be drained, the insulation dried and the conduit air-tested to be watertight. This feature benefits the operator to reduce onsite time and labor maintenance costs.

FEATURES

For long-term quality, durability, and performance value, PERMA-PIPE's prefabricated engineered steel manholes are the best solution for any application:

- Pre-engineered to customer's specifications
- Smaller footprint than precast concrete
- Fully assembled and tested with all valves and other equipment installed as required
- 100% watertight and breathable
- Piping and valves are pre-insulated and air testable to ensure water tightness
- Sealed wall penetrations
- Outer surface is coated with spray-applied urethane for corrosion protection
- Faster installation time
- Factory quality controlled and tested
- Engineering capability to retrofit a failing existing vault or manhole
- Same warranty as to the piping system



PERMA-PIPE ENGINEERED STEEL MANHOLE

CONCRETE MANHOLE (PRECAST)

SOLUTIONS

PERMA-PIPE custom-engineered steel manholes prevent underground systems from groundwater infiltration, overflow, reduce system maintenance, and pavement settling around the manhole. Each steel manhole is designed to the customer's specifications and project requirements. They are delivered to the jobsite complete, ready to install, quickly and easily with all the factory pretested valves, fittings, insulation, and other equipment in place to reduce overall construction costs.



PERMA-PIPE understands the need to meet operational and environmental challenges beyond the piping system, and we offer turnkey services that our clients can trust. We plan, engineer, provide material consultation, design assistance and calculations, prefabrication services, and project management to limit the environmental and safety concerns from start to finish of a piping project.

PARTNER WITH PERMA-PIPE

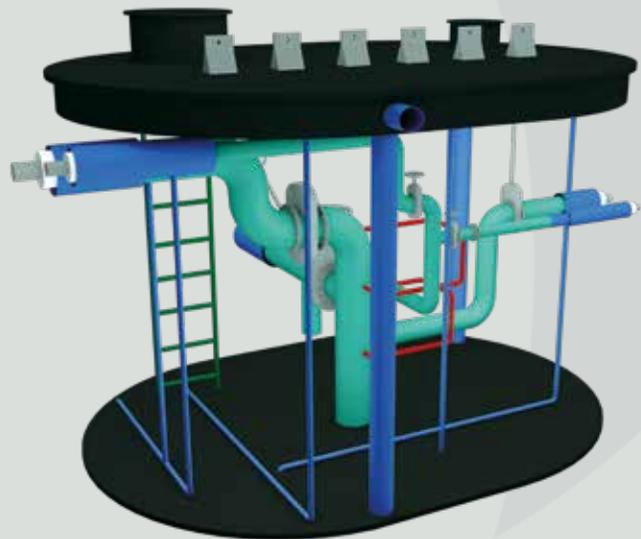
PERMA-PIPE International Holdings, Inc. (NASDAQ:PPIH) is a global engineered pipe services company offering core competencies in anti-corrosion coatings, insulation solutions, containment systems, leak detection systems, engineering support, field service, and custom fabrication.

When you do business with PERMA-PIPE, you are partnering with a company that has served the industry for over 100 years and has vast experience in all the markets we serve. You are not just buying a long-lasting, reliable piping system; you are also investing in a partnership with a company that stands behind its products and services while providing lasting peace of mind.

ENGINEERED STEEL MANHOLES STANDARD DESIGN FEATURES

Solutions are available for any application.

Available in standard sizes from 4 feet (1 meter) to 10 feet (3 meters) in diameter and can be built to varying height requirements.





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 permapipe.com

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