

PLASTICS PIPE INSTITUTE
HIGH TEMPERATURE DIVISION
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APPLICATIONS FOR CROSS-LINKED POLYETHYLENE (PEX) PIPE SYSTEMS

Drinking water plumbing systems

PEX pipe is the choice of more and more specifiers and contractors for hot and cold water distribution systems because of its distinct advantages over both metal and rigid polymer pipes. It's versatile, flexible, durable and more resistant to corrosion damage than copper.

Radiant floor heating systems

Hydronic radiant floor heating employs heated water flowing through flexible PEX pipes inside or under the floor. The heated surface then functions as a radiator, warming a room and all objects and people in it. This type of heating provides superior comfort and efficiency compared to traditional forced-air convection heating. The heating profile is much more uniform, meaning fewer cold/hot spots.

Municipal water service pipe

Because PEX pipe is more flexible than other piping materials, it ensures high-impact resistance with normal backfill, so PEX pipe will not crush or collapse. And lower thermal conductivity means deep-frost freezing may be delayed or prevented completely. PEX pipe is resistant to freeze damage, lessening the chance of splitting or cracking. It connects to standard compression joint valves and fittings, so it's easy and convenient to install. And it can be up to half the cost of copper – a significant savings for budget-constrained city planners.

Snow and ice melt

PEX pipe can be used to create a hydronic system designed to augment the removal of snow and ice by circulating a heat transfer fluid (usually antifreeze and water) through pipes installed within outdoor surfaces. Benefits include reduced maintenance costs, no snow removal costs, reduced liability and obvious convenience.

Turf conditioning

PEX pipe is installed within the soil layer of the turf and fluid is circulated at varying temperatures to gently warm the roots to provide optimal root zone temperature. Extends the growing season of natural grass surfaces in applications such as golf courses, greenhouses and other sports field surfaces. Similar systems are also used in greenhouse applications with bedding plants and other foliage.