

SIMPLE. STRONG. LONG LASTING.



FREQUENTLY ASKED QUESTIONS

Why does Ductile Iron pipe have superior corrosion resistance over typical steel pipe?

The superior corrosion resistance of Ductile Iron pipe is a result of the external zinc layer (200 g/m² minimum) and acrylic barrier topcoat applied over the zinc. The zinc is sacrificial to the Ductile Iron pipe, while the topcoat acts as an additional protective layer. The interior surface of water piping is lined with a thin layer of cement-mortar to eliminate internal pipe corrosion within the normal ranges of water pH. (Air piping uses an epoxy lining.) The entire pipe is essentially sealed from the normal influences of internal and external corrosion. This combination of external coatings and internal linings results in the long life of the pipe.

How is Ductile Iron pipe joined together and sealed from leakage?

The proprietary VRS-T[®] Restrained Joint is designed with bell and spigot ends sealed by a thick rubber gasket. The tight manufacturing specifications produce a joint that is leak-free over the entire range of operating pressures (up to 1,450 psi). Inherent in the joint design is the ability to accommodate deflection up to 5° without having to use fittings or making field cuts. The joint is locked in place with Ductile Iron “joggles” (locking segments). All Ductile Iron pipe and fittings use the VRS-T[®] Restrained Joint.





Does installation of water and air hydrants require drilling and welding the Ductile Iron pipe?

No welding is required. A snowmaking hydrant fitting (Part A) with a 2" female NPT thread is available for all pipe sizes for a direct hydrant connection to the pipe. The fitting can be oriented at the desired angle and threaded with a 90° street elbow to which the hydrant is attached. For lateral runs a "tee" fitting (Part MMB) is available for all pipe sizes. The lateral pipe is directly inserted into the MMB fitting and the lateral run completed with an end fitting (Part P, which includes a 2" female NPT thread).

How is the Ductile Iron pipe connected to existing steel piping?

The Ductile Iron pipe is connected to steel snowmaking pipe with a US standard ASME/SAE flanged adapter (Part F or Part EU). The flanged adapters are available in a variety of inch sizes and pressure classes (Class #150 to Class #600).

How does Ductile Iron pipe accommodate sharp angles and bends?

A wide variety of bend fittings (PART MK and PART MMK, 22° through 90°) for all pipe sizes are available to handle any conceivable field piping situation. Each TRM joint allows up to 5° of deflection, allowing the pipe to follow normal ski trail contours.

How does Ductile Iron pipe transition from a larger to a smaller pipe size?

The transition from a larger to a smaller pipe size is accomplished by using a reducer (PART MMR), which is available in a wide variety of reducing diameters.

Must a Ductile Iron pipe system be installed by a contractor?

Absolutely not! Our system is designed to be installed easily with in-house personnel with a minimum of training (provided by U.S. Snow Pipe). The system requires a recommended crew size of three, along with a medium sized excavator and operator. With a little experience and proper staging of the pipe, it is possible to lay and assemble 600 ft. to 1,000 ft. of Ductile Iron pipe per day, depending on diameter and slope conditions.

What is Ductile Iron?

Although chemically similar to Gray Iron of low phosphorous content, Ductile Iron incorporates significant casting refinements, additional metallurgical processes, and superior quality control. After a desulfurizing treatment, magnesium is added, which in turn is followed by a post-inoculation treatment with a silicon base alloy. These steps cause a profound change in the manner that the carbon, as a graphite, is formed during the solidification of the iron. Instead of the interlaced flake form found in Gray Iron, the graphite develops myriads of isolated spheroids. The matrix becomes relatively continuous, thereby greatly increasing the strength, ductility and impact resistance of the metal.

The strength of the Ductile Iron used in commercial piping (minimum yield strength = 42,000 psi and minimum tensile strength = 60,000 psi) is comparable to one of the higher grades (X42 API 5L) of steel pipe commonly specified for snowmaking piping.

www.ussnowpipe.com

Toll-free: 866.DIP.PIPE

U.S. Snow Pipe is part of U.S. Pipe & Foundry Co., exclusive licensee of the TRM® VRS-T® Ductile Iron Pipe System in North America