DIPRA MINUTE

Strength and Durability for Life®

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Highlighted here are some common questions regarding installation of Ductile iron pipe.

View All Installation FAQs

Q: Can Ductile iron pipe be used for directional drilling and other trenchless applications?

A: Yes. Ductile iron pipe can, and has been used for both directional drilling and microtunneling installations. Standard (belled) Ductile iron pipe, manufactured in accordance with ANSI/AWWA C151/A21.51, has been installed by utilities using various pipe pushing methods and directional drilling. The methods involve forming a hole a little larger than the outside diameter of the pipe joint. The Ductile iron pipe is then pushed or pulled through the hole. When the pipe is pulled into position, restrained joints are utilized.

Download the "Horizontal Directional Drilling With Ductile Iron Pipe" Brochure

Q: Does it matter which direction the bells face in reference to the direction of flow?

A: No. The design of the joint types available for Ductile iron pipe results in a very “clean” interior joint surface, with no significant protrusions into the field of flow. Therefore, the direction of the bells is not functionally related to the direction of flow within the main. It is common practice — but not mandatory — to lay pipe with the bells facing the direction in which work is progressing. When the main is being laid up a slope, for example, the pipe is frequently laid with the bells facing uphill for ease of installation.

Download the "Ductile Iron Pipe Joints and Their Uses" Brochure

Q: How do I install Ductile iron pipe in unstable soils – e.g., pipe on supports, restrained joint systems with anchors on each side of the unstable soil area, etc.?

A: One method of installing Ductile iron pipe in unstable soils is to install the pipe on piers or pilings above or underground. Because of the flexibility of the joints, Ductile iron pipe supported at intervals usually requires that at least one support be placed under each length of pipe for stability.

Another method is to lay restrained joint pipe through the unstable soil area and anchor the pipeline on both sides outside of said area. The anchoring may be achieved by means of concrete abutments, or by continuing the restrained joint pipe an adequate distance beyond the unstable soil. In such an installation, consideration needs to be given to – among other things – maximum joint deflections, maximum axial force, anchor design, etc.

Our Regional Engineers are at the ready to answer your questions about the use and specification of Ductile iron pipe. Click here to “Ask an Engineer.”

Thank you,
Patrick Hogan
President, DIPRA