

## **Which Pipe joint is right for you?**

There are a variety of \_\_\_\_\_ iron pipe joints on the market, each designed to handle the pressures and loads of the challenging conditions that installers encounter every day. It may sound simple, but the way your pipe is \_\_\_\_\_ is critical to the long-term success of your project. I'm Chris Howe, McQueen Ductile, sales representative for Utah and Colorado. On this episode of Iron Strong. We're looking at what type of ductile iron pipe joint is right for you.

There are joints that restrain pipe against \_\_\_\_\_ forces and heavy loads. Joints designed to make access and disassembly easy. Joints that can be deflected more than 4ft. Some joints can span a distance greater than the pipe length. Other joints can be assembled on a barge and lowered onto a riverbed.

Whatever challenge you face \_\_\_\_\_ flows, extreme temperatures, heavy loads or exotic environments there is a ductile iron pipe joint that's right for your application.

So now let's discuss the most common pipe joints in use today. First up, non restraint joints. One of the simplest to install is a tightened push on joint used primarily in \_\_\_\_\_ applications. Push on pipe creates full circumference radial compression of the gasket between the bell and spigot to form a watertight seal. Once the joint is assembled, you may deflect the pipe.

The easiest way to add restraint to a tightened joint is with restraint gaskets. Each manufacturer has a \_\_\_\_\_ design, but they all employ locking teeth embedded in the gasket that prevent the pipes from pulling apart. Be sure the restraint gasket you choose is approved for use by your pipe manufacturer when stronger restraint is required. For above ground applications, we recommend a boltless restraint push on joint we call the Tr Flex. They have a deeper bell.

Use a standard gasket and custom design locking segments to restrain the pipe against a welded bead on the spicket. Tr Flex joints require a minimal labour and time to assemble. They are optimal for various installations like buried high pressure pipe, horizontal directional drill and pipe bursting, subaqueous lines, aerial spans and bridges, or pipe on supports. You can't go wrong using the Tr Flex restraint joint.

\_\_\_\_\_ are commonly used in treatment plants and industrial applications, or when a line requires valves or fittings. Fittings are necessary when there is a change in direction greater than the pipe joint can accommodate. In a short span, there are mechanical joint fittings for varying degrees of change. They can be \_\_\_\_\_ adjacently to provide whatever angle your scenario requires. Mechanical joints are easily recognized by the gland and the bolts that encircle them.

Non restraint mechanical joints use a single standard gland. The gland is tightened against the bell by torquing the bolts to the proper spec, compressing the gland and gasket to form a watertight seal. Like push on joints, mechanical joints may be deflected after they are assembled.

The flange joint was one of the earliest joint designs. Modern versions thread a ductile iron flange onto a ductile iron pipe for maximum strength and durability. Used above ground, oiling flange pipe is common in treatment plants. The joints are rigid and do not deflect or expand. Ground shift would easily damage the \_\_\_\_\_.

The watertight seal is formed by tightening bolts to the correct spec, compressing a gasket between two flange pipes. Custom length spools can be fabricated to meet specific project needs. A special variation of flange joints are longspan pipe. As the name suggests, the pipe can be extended beyond

standard nominal lay lengths and require \_\_\_\_\_ supports than conventional di. Pipe group joints use a Ushaped coupling to connect pipes that have a locking channel cut into them.

Inside the coupling, a gasket is compressed against the pipe to form the seal. These joints are most commonly used in above ground applications like sprinkler and fire suppression systems. They are rarely used underground. Groove joints are available in flex or rigid configurations.

This joint describes itself. Ball and socket, also called river crossing pipe, allows for the greatest degree of deflection of any pipe joint up to four and a half feet of offset for an 18 foot length of pipe ranging from twelve to 15 degrees per joint. Its components are machined to precise dimensions, providing optimal deflection \_\_\_\_\_. The structure and strength of the specialized joint is designed to withstand the water current and settle unharmed to the bottom of the waterway. On its own, the joint's deflection capability allows the pipe to be assembled on the riverbank or on a barge and slid or lowered into place.

The joints deflect as needed to conform to the bottom.

The newest innovation in pipe joint technology is earthquake resistant ductalion pipe. Er, dip or seismic joints can compensate for major changes to a pipeline from expansion or contraction, and deflection in regions \_\_\_\_\_ to earthquake and other ground shifting forces such as liquefaction and flooding. Each pipe manufacturer has their own seismic joint design with unique characteristics and capabilities. A fully restrained ductile iron line with seismic couplings will withstand the soil's continual changes. Thanks for joining me on this review of ductile iron pipe joints.