



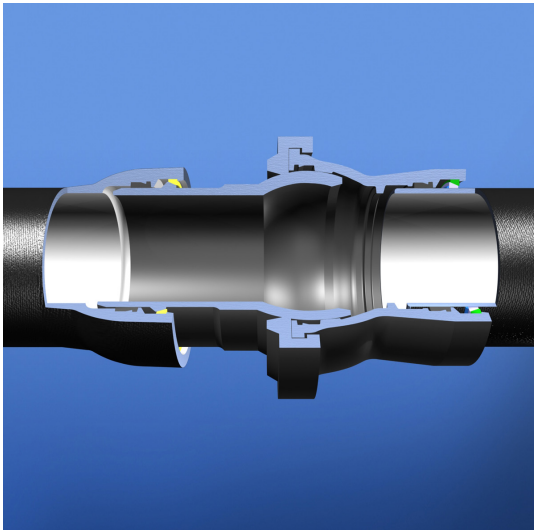
AMERICAN

DUCTILE IRON PIPE

THE RIGHT WAY

AMERICAN Flex-Lok® Joint Pipe 4"-12"

Now With Joint Flexibility to 25 Degrees

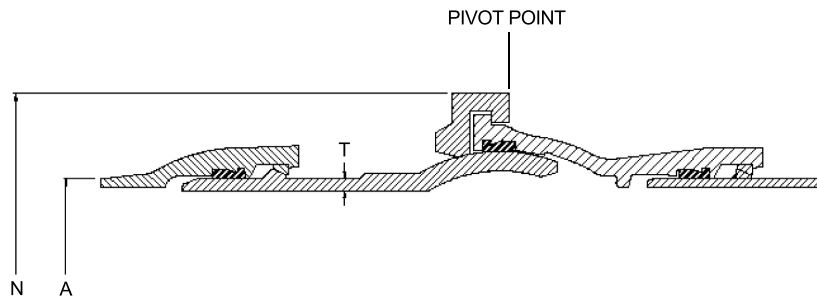


AMERICAN Combines Two Proven Joints For Even More Deflection To Meet Your Most Demanding Needs

AMERICAN has combined the Flex-Lok boltless ball joint and the Flex-Ring boltless restrained joint to now provide up to 25 degrees of deflection in sizes 4-inch through 12-inch. This rugged, boltless and flexible joint pipe is designed and manufactured for maximum performance in the toughest and most mechanically challenging installation conditions. The joint was created by adding the proven flexibility of AMERICAN's Flex-Ring® joint, which when combined with the traditional Flex-Lok ball joint can provide up to 25 degrees of flexible restraint. This new capability is ideally suited

for pipeline installations at river crossings; seismic zone transitions; transitions to structures, swamp and wetland crossings; raw water intakes and outfalls; and rugged terrain where extreme variable joint deflection may be required.

Consult with your AMERICAN sales professional for your project's needs. Flex-Lok and Flex-Ring joint ductile iron pipe meet all applicable requirements of AWWA C151 and C111.



Size in.	A in.	N in.	Laying Length* ft./in.	Maximum Joint Deflection	Maximum Safe End Pull in Tons†	Weight in Pounds			Underwater Weight Per Length Incl. Joint Materials†	
						Per Pipe Length	Per Length Incl. Joint Materials	Per Foot Incl. Joint Materials	Full of Air lb.	Full of Water lb.
4	4.80	11.79	21'-6"	25 °	121	311	427	22.3	311	427
6	6.90	13.91	21'-7"	25 °	135	370	638	33.4	370	638
8	9.05	16.38	21'-8"	25 °	149	396	826	46.2	396	886
10	11.10	18.84	21'-7-5/8"	25 °	163	418	1178	61.2	418	1178
12	13.20	21.56	21'-8-5/8"	25 °	176	577	1481	76.7	377	1481

**For more information on this and other AMERICAN products,
visit www.american-usa.com or call 800-442-2347.**



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AMERICAN Flex-Lok® Joint Pipe



AMERICAN Flex-Lok Joint Pipe is designed for your most challenging installation environments. In contrast to applications where other pipe are mis-applied, AMERICAN makes sure that Flex-Lok has the strength and flexibility for the intended application.

River Crossings – Where deep water and strong currents are encountered; in unstable channels and under flood stage conditions; where deep trenches, steep banks and other difficult approaches require special construction. At AMERICAN we make sure that Flex-Lok has the flexibility and toughness for river crossings, because this is THE RIGHT WAY to assure product sustainability.

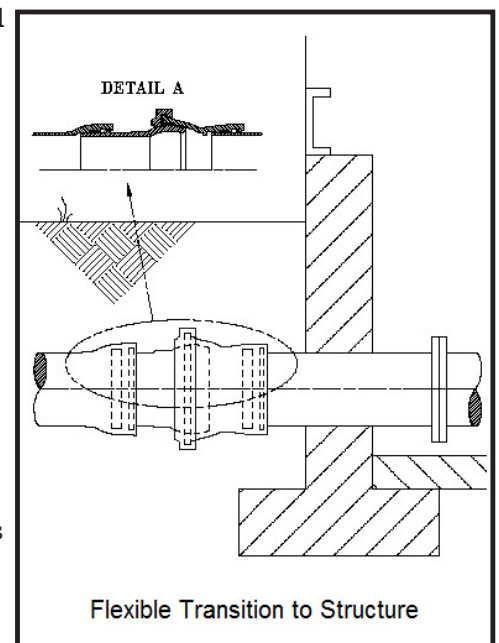
Seismic Zone Transitions and Transitions to Structures – Flex-Lok holds up to the job where significant ground movement due to earthquakes or where differential settlement can occur when transitioning from a direct bury installation into a fixed structure. These types of movements could break the backs of lower strength pipe materials. At AMERICAN we make sure that Flex-Lok has the beam strength, toughness, flexibility, and available extension for seismic transitions, because this is THE RIGHT WAY to assure product sustainability.

Swamp and Wetland Crossings, and Areas with Contaminated Soils – Where water and earth are subject to seasonal variations; where the underground pipeline must “give” with the subsurface movement caused by temperature change, moisture change and other factors that make it difficult to obtain a supporting pipe foundation. Flex-Lok is the enduring choice. At AMERICAN, we make sure that Flex-Lok has the ring stiffness, beam strength, flexibility and toughness for swamp and wetland crossings. And for installations in areas contaminated with chemicals that would penetrate the wall of plastic pipe, Flex-Lok is the best choice. We can also ensure that the joints have the appropriate gasket material for the situation. This is THE RIGHT WAY to assure system security and product sustainability.

Intakes and Outfalls – Where it is necessary to have a flexible intake or outfall pipeline, the level of which may be adjusted with the changing water levels, Flex-Lok is your adaptable choice. AMERICAN makes sure that Flex-Lok has the ring stiffness, beam strength, toughness, and flexibility required for repositioning the pipeline, because this is THE RIGHT WAY to assure product sustainability.

Other Considerations:

- **Permeation** – The entire pipe wall of Flex-Lok joint ductile iron pipe is impermeable to external contaminants. With the simple addition of the appropriate gasket material the pipe and joints provide a system that is suitable for exposure to aromatic hydrocarbons, gasoline, refined petroleum products, and most other chemicals and solvents, many of which are found in sediment.
- **Strength** – Elastic material – Ductile iron pipe – material with strength that is fully elastic up to the yield point of the material and these properties are unaffected by time or temperature. Indefinitely. Strength is not time dependent as it is with plastic materials that are visco-elastic.
- **Relatively little or no impact due to linear thermo-expansion.**
- **Easily located from surface.**



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