



DUCTILE IRON PIPE BENEFITS



FLOW

The larger than nominal diameters and internal lining smoothness (C140) of Ductile Iron Pipe significantly reduces pumping costs. The comparisons of actual flow areas of commonly used pipe is shown on the table. The fact that more water can be moved through a Ductile Iron Pipe for a given amount of energy, may make it possible to specify a smaller nominal diameter to accomplish a required flow, or result in significantly reduced pumping costs.

**FLOW AREA COMPARISON COMMONLY USED PRESSURE PIPE
(Sq. In.)**

Diameter		Cement Lined D.I.	DR 18 PVC	DR 25 PVC	Series 160 HDPE	Series 100 HDPE	0.25" Wall Steel	Conc. Cyl. Pres.
in	mm							
8	200	56	51	54	38	45	52	-
12	300	123	108	116	83	98	118	-
18	450	274	236	253	164	194	240	254
24	600	489	413	443	293	345	458	452
36	900	1092	-	973	680	780	990	1018

LOW MAINTENANCE COSTS

Design engineers can predict ordinary earth loads, traffic loads and internal pressures to be encountered by underground pipe. But there are unpredictable influences on pipe loadings: swell pressures in certain clay soils, subsidence of support soil, uneven settlement, excessive water hammer, adjacent construction influences, vibrations, seismic activity, and frost penetration loads. Ductile Iron Pipe, because of its unusually high strength, ductility and impact resistance, has a proven history of handling all of these factors better than any other underground pipe material, thereby greatly reducing maintenance costs.

HIGH PRESSURE APPLICATIONS

Since 1975, 12" (300mm) Ductile Iron Pipe has been serving Manti, Utah, at an internal pressure of 1,100 psi without a single failure. This is more than three times the rated working pressure of 350 psi stated in ANSI/AWWA C150/A21.50 Standard. For high pressure applications, please contact Canada Pipe for information on maximum allowable pressures. In most cases, pressure capacity will greatly exceed pressure rating in the standard tables. For example, a 12" (300mm) Class 50 Ductile Iron Pipe with a nominal wall thickness of .31 inches, can withstand internal pressures up to 1,610 psi (based on minimum yield strength with all minus tolerances removed from the thickness). This 12" (300mm) pipe would not actually fail until the internal pressure exceeded 2,300 psi (based on minimum ultimate strength of 60,000 psi).

CUTTING AND TAPPING

Ductile Iron Pipe is completely field efficient. It can be cut to fit without loss of joint tightness and tapped safely and securely for residential services without the use of tapping saddles, which means even greater savings.

LOCATING

Underground Ductile Iron Pipe can be easily located with standard pipe locating equipment - an advantage in emergency situations.