ASTM C700 Extra-Strength Clay Pipe Specification Data

Specify Logan Clay Pipe

120-year-old pipe recently replaced to upsize the service line.

Over the Long-Term, VCP is the Best Value.

- **Longevity & Sustainability –** A demonstrated service life of over 200-years in the U.S. is the longest proven service life in the industry.
- **Operations & Maintenance –** Aggressive cleaning options reduce annual maintenance costs by reducing SSOs and dig-ups over the service life of the installation.
- **Accept No Substitute –** Specify Vitrified Clay Pipe according to ASTM C700.

Dimensions of Extra-Strength Logan Clay Pipe (ASTM C700)

Pipe Size (I.D.)		Available Lengths							Average O.D.*		Crushing Strength**		Nominal
Inches	MM	1'	2'	3'	4'	5'	6'	7'	Bell	Spigot	Lbs. per Linear Ft	KN per Linear M	Length of Wyes & Tees
4"	100	√	√		✓				7.05	4.81	2000	29.2	2'
6"	150	√	√	√	✓				10.51	7.48	2000	29.2	2'
8"	200	√	√	√		✓			12.60	9.69	2200	32.1	2'
10"	250	√	√	√		✓			15.46	12.12	2400	35.0	2'
12"	300	√	√	√			✓		18.15	14.54	2600	37.9	2'
15"	375	√	√	√				✓	22.28	18.14	2900	42.3	3'
18"	450	√	√	√				✓	26.91	21.59	3300	48.2	3'
21"	525	√	√	√				✓	31.00	25.48	3850	56.2	3'
24"	600	√	√	√				✓	35.45	29.05	4400	64.2	3'

✓ = Standard length for each dimension
√ = Also available in these lengths

* All measurements are +/- 2%
** Minimum crushing strength per ASTM C700

Product Variance Data

Pipe Size	Limit of Minus Variation (per foot)	Max. Difference in Length of Opposite Sides	I.D. Limit of Minus Variation from Nominal Size
4"	1/4"	5/16"	3/16"
6"	1/4"	3/8"	1/4"
8"	1/4"	7/16"	5/16"
10"	1/4"	7/16"	3/8"
12"	1/4"	7/16"	7/16"
15"	1/4"	1/2"	9/16"
18"	1/4"	1/2"	11/16"
21"	1/4"	9/16"	13/16"
24"	3/8"	9/16"	15/16"

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Logan Clay Products LLC

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Logan's ASTM C425 O-Ring Joint

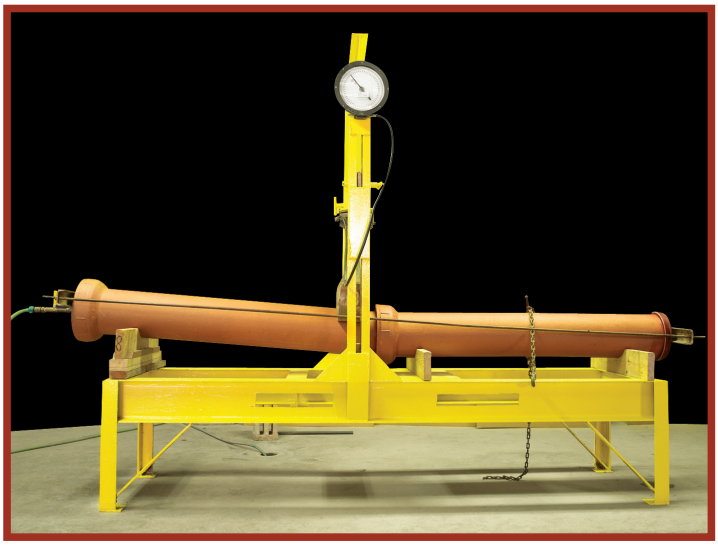
Field Tested—Field Proven

The clay pipe sewers installed early in our nation's history were not supplied with a joint. The installers joined pipe by applying tar or mortar in the trench. These joints allowed significant infiltration which was beneficial as it diluted the effluent and cleaned the lines. These sewers generally discharged into waterways without treatment.

As cities began treating sewage, infiltration became an expense. Logan Clay responded by introducing factory applied joints. Each generation of factory applied joints improved upon the last until the O-Ring joint was developed, achieving the leak-free performance that communities require.

The O-Ring joints on Logan Clay Pipe Products meet or exceed the standards established in ASTM C425 *Standard Specification for Compression Joints Vitrified Clay Pipe and Fittings.* This standard requires that the joint be "leak-free."

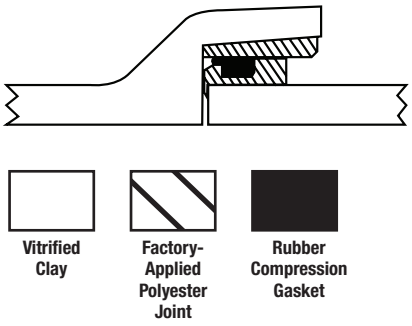
The Logan O-Ring joint has proven to be a reliable, watertight joint for more than 50 years. When installed in accordance with ASTM C12 specifications, our pipe and O-Ring joints eliminate the infiltration that was prevalent in early clay pipe lines.



For this test of 8-inch pipe, the pipe on the right provides the basis of a straight pipeline. The pipe on the left is intentionally misaligned to simulate a deflected joint. The bell end is 2 ½ inches higher than the spigot end (½-inch deflection per foot length). The spigot end is unsupported while a shear load of 1,200 lbs. (150 lbs. per inch diameter or 150 x 8 = 1,200 lbs.) is then applied from above. This combination simulates a field condition of both misalignment of the joint and improper support of the barrel. In this condition, the joint must withstand the 1,200 lbs. shear load while maintaining 4.3 psi of water pressure (10 ft. head) without leaking.

Deflection Allowed by ASTM Specification

Normal Diameter	Deflection of Pipe
4-12" (101-305 mm), inclusive	1/2" (42 mm)
15-24" (381-610 mm), inclusive	3/8" (31 mm)



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