

PRODUCT SPECIFICATION

CERTA-FLO® PVC GRAVITY SEWER PIPE

Certa-Lok® Restrained Joint Integral Bell

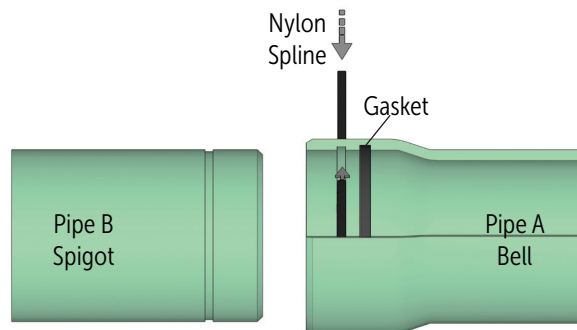
With features and specifications uniquely suited to Horizontal Directional Drilling (HDD) and Static Pipe Bursting applications, Certa-Flo restrained-joint PVC pipe is an ideal product choice for municipal sewer system repair projects as well as new construction. Certa-Flo delivers exceptional value, from fast and easy installation through long, dependable service life.

Certa-Flo PVC pipe features Certa-Lok®, the industry original non-metallic mechanically restrained joint system designed for use in gravity sewer systems. Certa-Flo PVC pipe is made in iron pipe size (IPS) outside diameters and meets all performance requirements.

Certa-Lok pipe provides a restrained joint by utilizing precision-machined grooves on the pipe and in the integral bell which, when aligned, allow a spline to be inserted, resulting in a fully circumferential restrained joint that locks the pipes together. A flexible elastomeric gasket in the integral bell provides a hydraulic seal.

INSTALLATION METHODS

- Horizontal Directional Drilling (HDD)
- Static Pipe-bursting
- Laser Guided Boring
- Open-cut



SHORT FORM SPECIFICATION

Pipe Standard:	ASTM D2241
Diameter Std.:	Iron Pipe Size (IPS)
Nominal Sizes:	4", 6", 8", 10", 12"
Dimension Ratios & Pipe Stiffness:	SDR 26 – 115 psi SDR 21 – 224 psi
Lay Length:	10', 20'
Color:	Green
Pipe Compound:	ASTM D1784 Cell Class 12454
Pipe Joint Std.:	ASTM D3212
Max. Angular Joint Deflection:‡	0.5°
Gasket Standard:	ASTM F477
Gasket Material Offering:	See Table
Installation Std.:	ASTM D2321

‡See Installation Guide for more information.

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CERTA-FLO PIPE DIMENSIONS

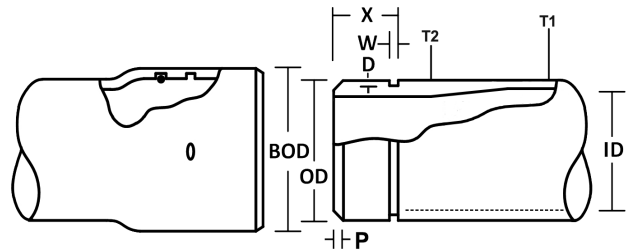
Nom. Size	Outside Diameter (OD)	SDR	Pipe								
			Min. Wall Thickness (T1)	Spigot Wall Thickness (T2)	Flow Internal Diameter (ID)	X	W	D	P	BOD	Weight (lb/ft)
4"	4.500	21	0.214	0.335	4.072	3.000	0.375	0.135	0.241	5.112	2.0
6"	6.625	21	0.316	0.485	5.993	3.000	0.375	0.135	0.241	7.500	4.4
8"	8.625	21	0.410	0.625	7.805	3.163	0.500	0.145	0.634	9.750	7.2
10"	10.750	26	0.413	0.530	9.924	3.500	0.500	0.215	0.634	11.790	9.0
12"	12.750	26	0.490	0.625	11.770	3.500	0.500	0.215	0.634	13.970	12.6

Notes:

1. These dimensions are for estimating purposes only. All dimensions are in inches unless otherwise specified.
2. SDR = Standard Dimension Ratio
3. Pipe Stiffness determined using ASTM D2412 at 5% deflection. This is a property that defines the pipe's ability to resist external loading.
4. Maximum Pull Force based on actual testing and includes 2:1 safety factor.
5. Internal diameter calculated using nominal outside diameter and minimum wall thickness.
6. Additional wall thickness provides additional joint strength in machined areas. This has been calculated to have a negligible effect on flow performance.
7. Contact Technical Services for assistance with mandrel sizing.

PERFORMANCE DATA

Nom. Size	SDR	Pipe Stiffness (psi)	Min. Bend Radius (ft)	Max. Pull Force (lbf)	Max. % Change per 20' Stick
4"	21	224	75.0	6,500	13.30
6"	21	224	100	8,200	9.10
8"	21	224	144	15,500	7.00
10"	26	115	179	18,500	5.60
12"	26	115	213	22,000	4.73



CERTA-FLO ACCESSORIES

Application	Nom. Size	Splines				Gaskets			
		Material	Size	Length	Part Number	Material	Shape	Size	Part Number
Permanent Standard*	4"	Nylon	0.250 Dia.	18	S4518RN0	NBR	Round	0.240	OR040YMPI
	6"	Nylon	0.250 Dia.	24	S0624RN0	NBR	Round	0.313	OR060YMPI
	8"	Nylon	0.313x0.313	32	S0832SN1	NBR	Round	0.400	OR080YMPI
	10"	Nylon	0.375x0.375	39	S1039SN0	IR/SBR	Round	0.438	OR100YMPI
	12"	Nylon	0.375x0.375	46	S1246SN0	IR/SBR	Round	0.438	OR120YMPI

Some or all of these products are protected by patents. Visit www.westlakepipe.com/patents for more information.