

Scope

This specification designates the requirements for 4- through 36-inch I.D. Prinsco GOLDFLO® pipe for use in gravity-flow drainage applications.

Pipe Requirements

Prinsco GOLDFLO pipe shall have annular exterior corrugations with a smooth interior allowing for a Manning’s “n” design value of 0.012 and shall meet the following standards:

- 4- through 10-inch shall meet AASHTO M252, Type S
- 12- through 36-inch shall meet ASTM F2306 or AASHTO M294, Type S

Materials

GOLDFLO pipe and fabricated fittings shall be manufactured using High Density Polyethylene (HDPE) meeting the minimum requirements of cell classification of 424420C for 4- through 10-inch diameters and 435400C for 12- through 36-inch diameters, as defined and described in ASTM D3350 except the carbon black content shall be 2 - 4%.

The HDPE pipe material for 12- through 36- inch diameter pipe shall be tested for slow crack growth resistance using the notched constant ligament-stress (NCLS) test as specified in sections 9.4 and 5.1 of AASHTO M294 and ASTM F2306, respectively. Average failure time of the five test specimens shall not be less than 24 hours.

Joint Performance

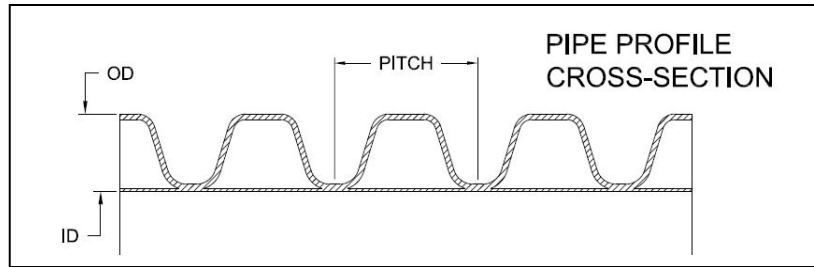
GOLDFLO pipe shall be joined using soil-tight coupling bands covering at least two full corrugations on each end of the pipe. Standard joint connections shall meet the soil-tight joint requirements of AASHTO M252, M294, or ASTM F2306. Gaskets, when applicable, shall meet the requirements of ASTM F477 and shall be installed by the manufacturer. An approved joint lubricant, available from the manufacturer, shall be applied to the bell and gasket of gasketed joints during installation. GOLDFLO joints shall be assembled in accordance with the manufacturer’s requirements.

Fittings

Fittings shall meet the requirements of AASHTO M252, M294, or ASTM F2306. Standard fittings are available as listed on Prinsco’s website www.prinsco.com and custom fittings may be fabricated to customer specific requirements.

Physical Pipe Dimensions

Nominal ID (in)	Approximate OD (in)	Length (ft)	Corrugation Pitch (in)	Approximate Weight/foot (lb)	Min. Pipe Stiffness @ 5% Deflection (psi)
4"	4.8	20	.67	0.5	50
6"	7.1	20	.80	1.0	50
8"	9.5	20	1.00	1.7	50
10"	11.9	20	1.30	2.6	50
12"	14.5	10, 20	2.00	3.3	50
15"	17.7	10, 20	2.67	4.5	42
18"	21.5	10, 20	3.00	6.3	40
24"	28.2	10, 20	4.00	10	34
30"	34.7	12, 20	4.00	15	29
36"	40.6	12, 20	4.70	19	22.5



Installation

Pipe and fittings shall be installed in accordance with ASTM D2321 and Prinsco's published installation guidelines. Minimum cover heights for AASHTO H-25 loads shall be 12" for 4- through 48-inch diameter pipe and 18" for 60-inch pipe. The minimum cover shall be measured from the top of the pipe to the bottom of flexible pavement or to the top of rigid pavement. Contact your local Prinsco representative or visit www.prinsco.com for the latest installation guidelines.

Reference Specifications

This specification references the latest edition and revisions of the following standard specifications:

- AASHTO M252 – *Standard Specification for Corrugated Polyethylene Drainage Pipe*
- AASHTO M294 – *Standard Specification for Corrugated Polyethylene Pipe, 300- to 1500-mm (12- to 60-in.) Diameter*
- ASTM F2306 – *Standard Specification for 12 to 60-in. (300 to 1500 mm) Annular Corrugated Profile-Wall Polyethylene (PE) Pipe and Fittings for Gravity-Flow Storm Sewer and Subsurface Drainage Applications*
- ASTM D3350 – *Standard Specification for Polyethylene Plastics Pipe and Fittings Materials*
- ASTM D477 – *Standard Specification for Elastomeric Seals (Gaskets) for Joining Plastic Pipe*
- ASTM D2321 – *Standard Practice for Underground Installation of Thermoplastic Pipe for Sewers and Other Gravity-Flow Applications*