

Weholite[®]

Large Diameter Structural Pipe



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Weholite® is a Large-Diameter, Structural Profile Wall pipe made from superior high-density polyethylene (HDPE) resin, manufactured to ASTM F-894 standards.

Engineered for gravity and low-pressure applications, it combines the raw material properties of HDPE with structural wall technology, resulting in a maintenance-free, lightweight pipe with exceptional loading capacity.

Applications

Infra Pipes manufactures Weholite®, from 18" (460mm) to 132" (3.35m) ID, and fittings for Combined Sewer Overflow (CSO)/Sanitary Sewer Overflow (SSO), Stormwater, Drainage and Roads, and Geothermal applications.

CSO and SSO

Weholite offers a versatile and permanent solution for addressing CSO/SSO storage systems, where stormwater flows often exceed the hydraulic capacity of the sewer system and treatment plant.

Stormwater & Wastewater

Weholite® is a durable solution for combined sewer overflows (CSOs), stormwater, wastewater treatment, and water storage systems, offering resistance to corrosion from H₂S and household chemicals. Weholite's heat-fused joining system provides a maintenance-free, leak-proof solution. Weholite stormwater and wastewater systems are custom-designed and fabricated to meet the specific and regulatory requirements of each project. Available in diameters of up to 11 feet (3.35m), this system can be used to significantly reduce the footprint required for storing and treating large volumes of stormwater and wastewater.



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Large Diameter Structural Pipe



Applications (Continued)

Drainage & Roads

Weholite® is used in culverts and storm drains for highway, railway, and airport applications. Weholite pipe offers enhanced hydraulic flow and unparalleled chemical and abrasion resistance when compared to other materials.

Geothermal Vaults

Geothermal Vaults are manufactured with High-Density Polyethylene Weholite® pipe, which conforms to ASTM F894. They are combined with high-quality components to provide the most efficient and long-lasting geothermal vaults on the market. Geothermal Vaults come prefabricated, which helps reduce cost and installation time for installers, and are custom-fabricated to meet the client's project-specific needs.



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Additional Applications

Industrial

Weholite® is resistant to corrosion, abrasion, and chemical exposure, including compounds released from industrial processes, waste disposal, and recycling.

Irrigation & Agriculture

Weholite® HDPE pipe is ideal for irrigation and low-pressure water conveyance. It suits applications such as river diversion and canal enclosure, as well as agricultural and underground irrigation systems, irrigation pipelines, and water conservation. Its strength, leak-free joints, and durability ensure long-lasting performance.

Hydroelectric

Weholite® is used in hydroelectric power systems as run-of-the-river penstock piping. Its lightweight nature simplifies transportation to remote sites and helps reduce installation costs.

Marine

Weholite® pipe is a durable, leak-proof, and chemically inert option for high-volume water intake in sewage, storm, industrial, and heating and cooling applications. For marine applications, the pipe can be assembled onshore, floated into place, and submerged as a single piece. It resists corrosion and zebra mussel fouling, making it an ideal choice for use in lakes and rivers.

ADDITIONAL APPLICATIONS

- Biofilters
- Gravity Sewers
- Water Intakes & Outfalls
- Pipe Rehabilitation & Relining



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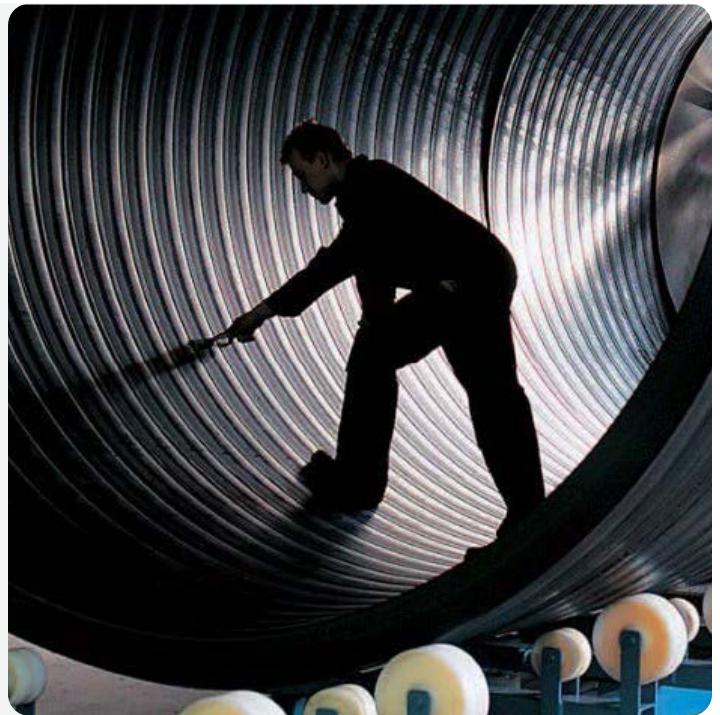
Engineered Systems

Fittings and Custom Configurations for Any Application

Infra Pipes Solutions offers a wide range of fabricated fittings to meet the requirements of nearly any piping system. Our comprehensive capabilities include headers, laterals, reducers, and tees, as well as designing custom fittings for your unique application. Weholite® can be easily fabricated into water, sewage, or CSO detention systems, inspection chambers, and manholes for sewage, storm, or industrial applications. Inspection chambers and manholes are available complete with ladders, platforms, benching, and the appropriate top designs for traffic or pedestrian loading.

QUANTITY MANAGEMENT

Infra Pipes Solution's Quantity Management systems address post-development peak flow, channel protection volumes, pre-post attenuation, and infiltration requirements. Large Diameter (up to 11' / 3.35m) manifold systems provide a cost-effective detention and retention solution with a projected 100+ year service life.



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Pump Stations and Manholes

Weholite®'s durability makes it the ideal choice for prefabricated pump stations and manhole applications, as it produces a sewage system that is virtually leak-free and is not susceptible to the corrosion often experienced in traditional sanitary sewage systems. Infinitely configurable, Weholite can provide vertical structures to address depth and hydraulic volume parameters.

Weholite Pump Stations can be designed to diameters of 11' (3.35m) and depths up to 55' (16.76m) and are delivered 'Turn Key' to the project location with all internal piping and fittings prefabricated. They are provided with corrosion-resistant OSHA ladders, platforms, benching, and custom top configurations to meet the loading requirements.

Storage Applications

Weholite® Tanks are available in a large array of sizes. All tanks can be outfitted with custom-fabricated components tailored to the specific design requirements of each job. Weholite tanks are ideal for storing water, stormwater, sewage, and chemicals.



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Weholite®'s superior HDPE resin and unique design, combined with ISO-certified production and engineering support, enable customizable, time-saving solutions with a projected 100-year service life that resist corrosion and degradation, resulting in low lifecycle costs.

Weholite® Advantages

Corrosion Resistance

HDPE is resistant to corrosion and biological growth, making it the preferred material for wastewater and harsh chemical environments. Weholite® is immune to H₂S and other chemicals commonly found in sanitary sewage systems. Its flexibility and strength are assets in dynamic soils and earthquake-prone areas.

Leak-Resistant Joints

Heat fusion joints provide a continuous, leak-free system that eliminates the risk of joint leakage. Fused joints are fully restrained, thereby reducing or eliminating the need for expensive thrust blocks. Weholite® offers a variety of joining methods that meet or exceed a project's tightness requirements. Field heat fusion welding, Weholite couplers, and threaded joints are designed to meet the unique demands of a wide range of applications.

Projected 100+ Year Service Life

The Plastics Pipe Institute (PPI), of which Infra Pipes is a proud member, promotes that the projected service life of HDPE pipe is 100+ years due to its advanced characteristics and properties. Weholite® offers unmatched performance and durability compared to other piping materials.



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Long Lengths

Available in lengths up to 50 feet (15.24m), Weholite[®] can significantly reduce installation time and minimize joints, making it ideal for large-scale water diversion, management, or detention above or below ground.

Light Weight

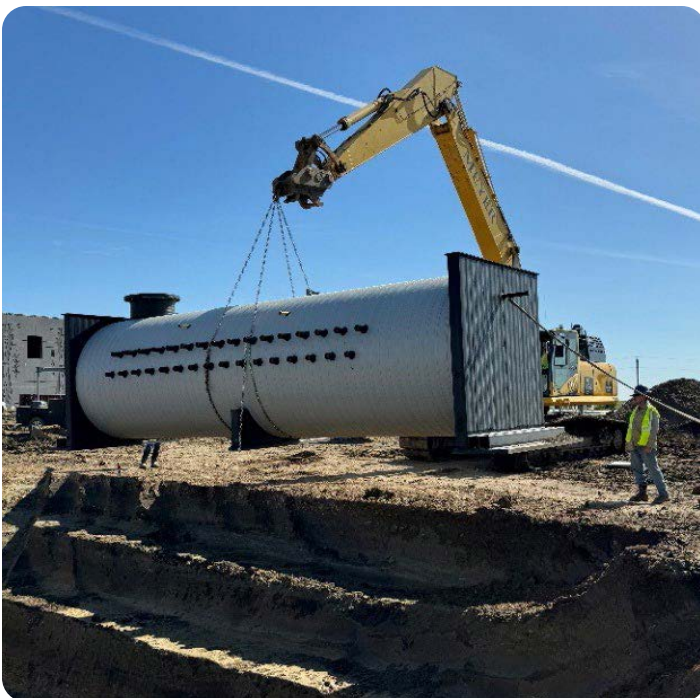
Weholite[®] pipe is lighter than comparably sized concrete and FRP pipes, offering ease of handling that results in savings on labour and equipment costs.

Easy Installation

Weholite[®] pipe is easier to handle and install compared to heavier pipes, resulting in cost savings during construction.

Cost Effective

Weholite[®] pipe offers chemical and physical benefits over FRP, concrete, and steel pipes. Its smooth interior maintains a smooth flow with a low Manning's roughness factor of 0.01 throughout the entire life cycle of the pipe. With HDPE lasting 100 years, Weholite ensures long, maintenance-free service.



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WEHOLITE® SIZE RANGES (IMPERIAL)			
Size (in)	Item Class	Spec	Avg. OD (in)
18	160	F894	20.4
19.5	160	F894	22.2
21	160	F894	23.7
24	160	F894	27.1
27	160	F894	30.4
30	160	F894	33.7
33	160	F894	36.7
33	250	F894	37.5
36	160	F894	40.5
36	250	F894	40.5
40	160	F894	44.5
40	250	F894	45.0
42	160	F894	47.0
42	250	F894	47.3
48	160	F894	53.0
48	250	F894	53.5
54	160	F894	59.5
54	250	F894	60.2
60	160	F894	66.2
60	250	F894	66.9
66	160	F894	72.2
66	250	F894	73.6
72	160	F894	78.9
72	250	F894	80.3
78	160	F894	85.6
78	250	F894	86.3
84	160	F894	91.6
84	250	F894	92.9
90	160	F894	97.6
90	250	F894	98.9
90	400	F894	100.3
96	160	F894	104.3
96	250	F894	105.6
96	400	F894	107.0
102	160	F894	110.0
102	250	F894	111.1
102	400	F894	113.0
108	160	F894	116.9
108	250	F894	118.3
108	400	F894	120.4
120	160	F894	129.6
120	250	F894	131.0
120	400	F894	133.8
132	160	F894	143.0
132	250	F894	144.4

WEHOLITE® SIZE RANGES (METRIC)			
Size (in)	Item Class	Spec	Avg. OD (in)
460	160	F894	516
495	160	F894	558
530	160	F894	600
610	160	F894	684
690	160	F894	768
760	160	F894	851
840	160	F894	932
840	250	F894	932
910	160	F894	1028
910	250	F894	1028
1016	160	F894	1130
1016	250	F894	1130
1070	160	F894	1181
1070	250	F894	1181
1220	160	F894	1341
1220	250	F894	1341
1370	160	F894	1509
1370	250	F894	1509
1520	160	F894	1662
1520	250	F894	1662
1680	160	F894	1825
1680	250	F894	1825
1830	160	F894	1989
1830	250	F894	1989
1980	160	F894	2152
1980	250	F894	2152
2130	160	F894	2315
2130	250	F894	2315
2290	160	F894	2478
2290	250	F894	2478
2290	400	F894	2478
2440	160	F894	2630
2440	250	F894	2630
2440	400	F894	2630
2590	160	F894	2793
2590	250	F894	2822
2590	400	F894	2870
2740	160	F894	2955
2740	250	F894	2955
2740	400	F894	2955
3050	160	F894	3280
3050	250	F894	3280
3050	400	F894	3280
3355	160	F894	3594
3355	250	F894	3594

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Online Pipe Design Tool

The Infra Pipes online design calculator evaluates your selection of pipe size and grade to suit the hydraulic capacity, internal pressures, thermal factors, and burial conditions of your application. Please visit our website and use our online design tool to determine the best Weholite® pipe size and class to suit your specific application, as well as for any other standard engineering calculations.

Online Pipe Calculator, v2024.04 Hello Nikhil Machado [Account](#) [Logout](#)
[Back to Infrapipes.com](#)

Home

This calculator has been revised in August 2018 to reflect updates to the temperature compensating factors, Weholite geometry, and minor other clarifications. Users should reassess any evaluations made prior to implementation of these revisions. Please choose from the following calculation modules, which are offered for both Weholite and Sclairpipe product offerings from Infra Pipe Solutions. If a particular module is not available or applicable for a given pipe type, there will be no GO button for it.

	Weholite	Sclairpipe
Pipe Pressure Rating		Go
Pressure Fluid Flow	Go	Go
Surge Assessment		Info
Gravity Flow	Go	Go
Thermal Effects	Go	Go
Support Spacing	Info	Go
Buried Pipe Design	Go	Go
Groundwater Flotation	Go	Go
Wall Buckling	Go	Go
Marine Installations	Info	Go
Safe Pull Strength	Info	Go
Allowable Bend Radii	Go	Go
Manhole Riser Design	Info	Info

Weholite
Profile wall PE Pipe for sewer, culvert and low pressure applications.

Sclairpipe
Solid wall PE pipe for pressure or gravity flow applications.

Pressure Fluid Flow [Back to Infrapipes.com](#) [Read More](#)

their viscosity, the roughness of the pipe wall surface, the size of the pipe, and the flow velocity. The Darcy-Weisbach equation is the generally accepted method for calculating pressure loss for liquid flow.

Loss (Hazen Williams) | P_f = Head Loss (Darcy Weisbach) | d = Inside Diameter

Solving for P_f = Head Loss (Hazen Williams)

Please fill in the values below:

L = Pipe Length: ft

C = Hazen Williams Constant:

Q = Flow Rate: USgpm

ID & RSC = Pipe Type:

[Calculate](#)

L = Pipe Length (ft)
 Di = Inside Diameter (in)
 Q = Flow Rate (USGPM)
 C = Hazen Williams Constant (see table from Hydraulics of Pipeline Systems)
 A = Area of Pipe based on Di
 V = Flow Velocity

This program is a supplement to Infra Pipe Solutions design brochures and the applicable specifications. The user is expected to have an understanding of the equations and the principles involved, their applicability and limitations. Use of this program is not intended to replace the evaluation and judgement of a professional engineer competent in this field. THE ENGINEERING PROPERTIES OF COMPETITIVE PROFILE WALL PIPE PRODUCTS VARY BY MANUFACTURER. Recommendations arising from use of this program to evaluate design conditions using Profile Wall Weholite Pipe are not applicable to products manufactured by others.

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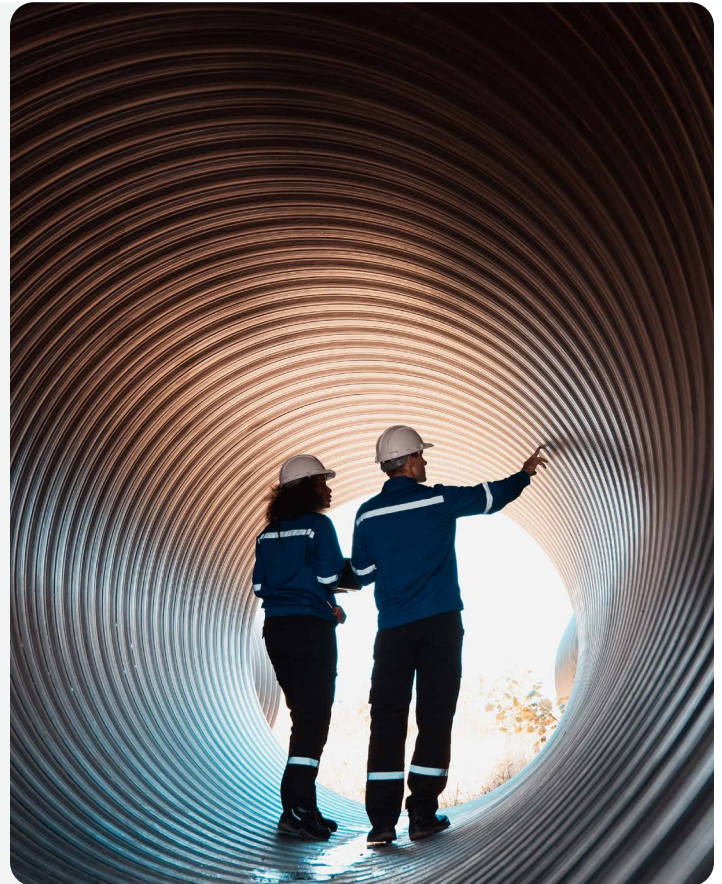
QUALITY ASSURANCE

Infra Pipes produces 18" (460mm) to 132" (3.35m) profile wall Weholite® pipe for a wide variety of applications.

All Infra Pipes products are manufactured from high-quality, high-strength resins, with complete quality control maintained throughout the entire production process, from raw materials to finished pipe products. Infra Pipes produces Weholite to the exacting standards of its quality management system, which is registered to ISO 9001:2015.

Our strict manufacturing specifications are verified daily, using precise dimensional controls and accelerated long-term hydrostatic testing. Our continuous quality control process assures long-term pipe performance.

Since the Weholite pipe is lightweight and flexible, it is easy to transport and install. Slight misalignments of the pipeline can be accommodated by bending the pipe itself. Long lengths of pipe can be ordered to reduce the number of joints and the associated time and expense of installation.



Simplified Material Handling

Infra Pipes produces 18" (460mm) to 132" (3.35m) profile wall Lightweight and long lengths reduce the material handling requirements at construction and storage sites. In addition, Weholite® has high axial (or beam) stiffness, allowing for long lengths to be lifted with conventional on-site construction equipment. The durable HDPE material helps minimize product damage due to handling.



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Joining Options for Gravity and Low-Pressure Pip Systems (up to 28 PSI)

Field-applied heat fusion connections are utilized for applications with low internal operating pressures. Fused joints provide reliable performance against leakage, resulting in a fully restrained system that eliminates the need for thrust restraints.

Joining Options for Slipline Systems

The threaded joint is a reliable and straightforward joining method, providing an economic solution for slip lining applications. Weholite® Threaded Joint allows maintenance crews and contractors to rehabilitate pipe systems at a fraction of the cost of replacement.



Grouting Reline Pipe

Weholite®'s high axial stiffness and resistance to hydrostatic collapse pressure, created during grouting, simplify the installation and grouting procedures when using this pipe to relin deteriorated highway culvert pipes. Relining offers substantial savings over replacing distressed pipes and avoids traffic disruption.

Pipe Installation

The bedding and backfill requirements for Weholite® pipe are consistent with those used for all plastic pipes. ASTM standard D2321, which applies to PE and PVC plastic pipes, is the accepted installation standard for Weholite installations.

Our Locations

Saskatoon, SK

Huntsville, ON

Mississauga, ON
(Headquarters)

Rockaway, NJ

Pryor, OK

Greenville, TN

Jacksonville, FL



Infra Pipes Solutions, Ltd.
905.585.0206 | infrapipes.com
customer.service@infrapipes.com