



CONTECH[®]
ENGINEERED SOLUTIONS
A QUIKRETE[®] COMPANY

Pipe Solutions

CONTECH[®]
PIPE SOLUTIONS

PIPE SOLUTION APPLICATIONS

Contech delivers a diverse product line for varying service life, hydraulic and economic needs for a full range of pipe solutions. Each of these solutions is designed for hydraulic efficiency, ease of handling and installation, durability and economy.



SANITARY SEWER

From laterals to collection systems to final treatment and discharge, the corrosive properties of sanitary sewer systems combined with the environmental costs of leakage require piping systems that provide long service life and watertight joints. Contech's family of sanitary sewer products, from solid wall PVC SDR 23.5 and TRUSS PIPE® to A-2000™ PVC and DuroMaxx® SRPE, provide industry leading performance and 100 year+ service life at cost points that allow our customers to do more with ever shrinking budgets.

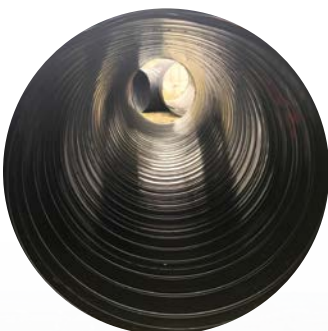


STORM SEWER

Storm sewer pipes provide drainage for groundwater and rainwater from parking lots, streets, roofs, and other impervious surfaces. Contech offers a wide range of storm sewer solutions to meet your project needs.

Solutions include well-known products such as ULTRA FLO®, Smooth Cor™, A-2000™ and DuroMaxx® to assure the ideal drainage plan for your particular challenge.

- Proven Performance
- Structural Strength
- Longer Lengths & Lighter Weights
- Smooth Interior Improves Hydraulic Capacity
- Custom Fittings & Coatings



CULVERTS & DRAINAGE

For over 100 years of proven performance, Contech has been manufacturing the best solutions for culverts and drainage projects. Contech delivers a wide range of pipe materials, coatings, and gage thicknesses to meet your specific project needs.

Available in round to pipe-arch shapes up through 144-inch diameter, we have a variety of options. Benefits include:

- Increased Hydraulics
- Improved Appearance
- Cost-effective Installation
- Low Maintenance
- Prefabricated Beveled / Step-Beveled Ends for Practical End Treatment
- Steel Flared End Sections to Prevent Inlet/Outlet Erosion

Offering unparalleled pipe solutions to meet YOUR project needs. From concept to installation, Contech is here to help!



RELINE

With over 70 years of relining experience and 15 reline products, Contech Engineered Solutions provides permanent, fully structural solutions based on time-proven design methods. Properly assessing the condition of the host pipe combined with expert knowledge of structural design & hydraulic analysis is what we do. The result – the right solution for your project needs - done right, on time and under budget.



AGRICULTURE & IRRIGATION

Contech pipe products have been utilized on agricultural sites for decades. From ditch and canal applications to low pressure water conveyance pipelines to general drainage needs, our polyvinyl chloride (PVC) pipe, corrugated metal pipe (CMP), and steel reinforced polyethylene (SRPE) products will provide the perfect solution for you.



STORAGE

With budget and site constraints, large diameter overflow projects can be tough for many agencies. DuroMaxx steel reinforced polyethylene (SRPE) pipe offers larger diameter solutions that are predictable with high-strength for deep covers, shape and deflection control and, of greater importance, resistance to corrosive effluent. Benefits include:

- Permanent watertight storage
- Up to 10.8 psi rating
- Unlimited size range – 10,000 to 1,000,000+ gallons



CORRUGATED METAL PIPE (CMP) SOLUTIONS

HEL-COR® CORRUGATED STEEL PIPE (CSP)

Helically corrugated HEL-COR pipe, available in round and pipe-arch shapes, has decades of proven performance. It is manufactured with locked seams with annular corrugated ends.

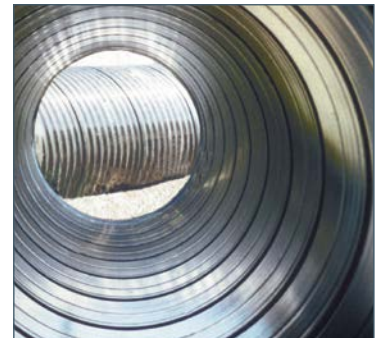
Durability requirements are addressed by a wide choice of materials: Galvanized Steel, Aluminized Steel Type 2 and Polymer-Coated steel. Standard fittings include tees, wyes, elbows, saddle branches, reducers and manifolds for detention systems. Manholes and catch basins are fabricated to meet specific job requirements.

As a vertical construction shaft liner, HEL-COR CSP, with or without ring beam stiffeners, can be supplied in diameters up to 192".



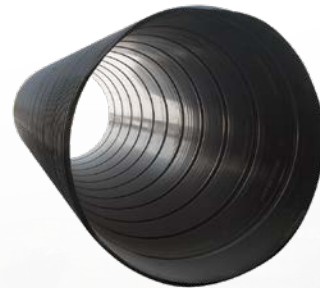
ULTRA FLO® SPIRAL RIB PIPE

ULTRA FLO pipe combines the installation and durability advantages of metal or aluminum corrugated pipe with superior hydraulics—a Manning's n of 0.012, which is equal to other smooth wall pipe. Installation savings result from the long length of ULTRA FLO, light weight and smaller outside diameter than RCP or HDPE.



SMOOTH COR™ CORRUGATED STEEL PIPE (CSP)

Smooth Cor pipe has an exterior shell of corrugated steel and a hydraulically smooth interior steel liner. The liner is continuously attached to the exterior shell along the lock seam. Both liner and shell are coated with a durable polymer film for outstanding long term service life. Smooth Cor is more hydraulically efficient than conventional corrugated metal pipe. With fewer joints and smoother interior surface, it outperforms reinforced concrete pipe.



CORLIX® CORRUGATED ALUMINUM PIPE (CAP)

CORLIX pipe provides a predictable service life of more than 75 years when installed in the recommended soil/water environment. It is ideal for municipal storm sewers, underground stormwater detention systems or any standard drainage project that must withstand corrosive environments.



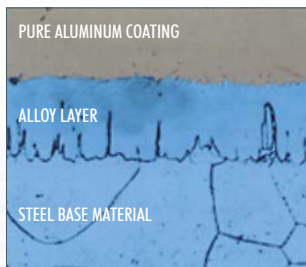


PIPE COATINGS

ALUMINIZED TYPE 2 (ALT2)

Corrugated pipe is fabricated from steel that has been hot-dipped in commercially pure aluminum. Over 50 years of field-testing conducted by the Army Corps of Engineers confirms that ALT2 corrugated steel pipe offers 75 years or more of maintenance free service life in the environmental ranges of pH 5-9 with resistivities as low as 1,500 ohm-cm.

ALT2 Provides Multiple Layer Protection



Photomicrograph courtesy of AK Steel Corporation.

- *Aluminum Oxide Barrier* - Forms in hard & soft water
- *Aluminum Layer* - Corrosion resistant / Cathodic protection
- *Thick Alloy Layer* - Abrasion resistant / Pit arrestor

POLYMER-COATED

Contech corrugated steel pipe with heavy-gage polymer coating offers long-term protection for storm drains and culverts. Even under harsh conditions, polymer coating protects against abrasion and corrosion to provide 100 years of service life in recommended environments.

This tough film, bonded to both the inside and outside of Contech corrugated steel pipe, serves as a protective barrier—resisting corrosion from acids, salts and alkalis found in today's storm sewers and culverts.

GALVANIZED

Galvanizing is the most widely used and most economical metallic coating for corrugated steel pipe. Galvanizing protects and extends service life. In addition to forming a physical barrier against corrosion, the zinc coating sacrifices itself slowly by galvanic action to protect the base steel. This action continues as long as any zinc remains. The design life of galvanized pipe—installed in a corrosive environment—can be extended by coating the pipe with asphalt.

Polymer-Coated Pipe is capable of 100-Year protection against abrasion and corrosion in recommended environments.

CORRUGATED METAL PIPE (CMP) PROPERTIES

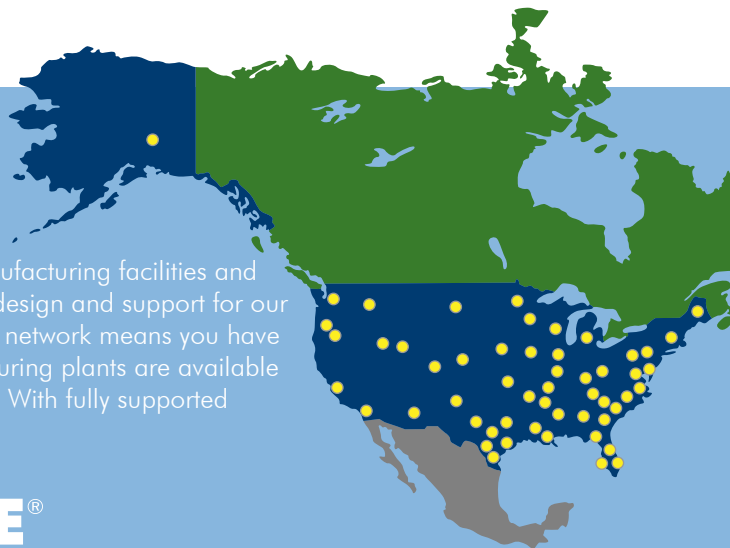
PRODUCT*	DIAMETER	MATERIAL	MANNING'S N	STANDARD LENGTHS	MINIMUM COVER**
HEL-COR® 2-2/3" x 1/2"	12" - 60"	Galvanized Steel Aluminized Steel Aluminum Polymer Coated Steel	.012 - .020	20' - 40'	12" or Span/8
HEL-COR® 5" x 1"	48" - 144"	Galvanized Steel Aluminized Steel Aluminum	.022 - .025	20' - 40'	12" or Span/8
HEL-COR® 3" x 1"	48" - 144"	Polymer Coated Steel	.022 - .027	20' - 40'	12" or Span/8
ULTRA FLO® (Spiral Rib) 3/4" x 3/4" x 7.5"	18" - 120"	Galvanized Steel Aluminized Steel Aluminum Polymer Coated Steel	0.012	20' - 40'	12" or Span/8
Smooth Cor™ (Double Wall) 3" x 1" Shell 2-2/3" x 1/2" Shell Smooth Liner	18" - 144"	Aluminized Steel Polymer Coated Steel	0.012	20' - 40'	12" or Span/8
CORLIX® 2-2/3" x 1/2"	12" - 72"	Aluminum	0.010 - 0.021	20' - 40'	12" or Span/8
CORLIX® 3" x 1"	30" - 120"		0.019 - 0.022	20' - 40'	12" or Span/8

* HEL-COR and CORLIX also available in 6" to 10" diameters in 1 1/2 x 1/4" corrugation.

** H 20 and H 25 minimum cover is measured from top of pipe to bottom of flexible pavement or top of rigid pavement.

NATIONWIDE MANUFACTURING FOOTPRINT

Contech oversees the activities of seven Regional Offices, nearly 40 manufacturing facilities and hundreds of sales and technical support specialists offering engineering design and support for our bridge, pipe, earth stabilization, and stormwater solutions. Our extensive network means you have a local team to support your site infrastructure needs. Contech manufacturing plants are available throughout the nation for quick turnaround delivered directly to your site. With fully supported national coverage, Contech is there when you need us.



MOBILE PIPE®

For remote site applications or large system manufacturing, **MOBILE PIPE® modular mill** can be delivered to the site location on trucks and assembled on-site for fast and cost-effective steel pipe manufacturing. MOBILE PIPE can produce HEL-COR®, ULTRA FLO® and Smooth Cor™ corrugated metal pipe in a variety of sizes. Diameters from 3 to 16 feet and lengths up to 35 feet can be accommodated.

SLOTTED DRAIN™

Slotted Drain combines the benefits of corrugated metal pipe with a high-performance inlet. Installed flush with the pavement, it quickly collects stormwater runoff from roadways and other paved surfaces. A standard 20' length of Slotted Drain can intercept up to 50% more runoff than most standard 2' x 2' grate inlets.



Slotted Drain Applications

- Curb inlets
- Airport aprons, taxiways, hangars and de-icing areas
- Railroad intermodal facilities with heavy wheel loads
- Shoulder and median barrier drains including temporary highway conveyance
- Inlet system across driveways
- Pedestrian thoroughfares, malls and bicycle paths
- Parking lots and other continuous paved surfaces

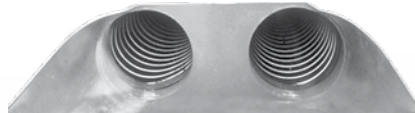


END SECTIONS

Contech End Sections provide improved hydraulics and an attractive finish for culverts and storm sewer outfalls. End Sections require less maintenance and are available in round and pipe arch shapes.

Proven Performance & Less Maintenance

- Offers 1:1 connections for many pipe materials
- Prevents erosion for all sizes of culvert inlets and outlets
- Improves inlet/outlet efficiencies versus square ends



JOINTS AND FITTINGS

Standard fittings such as tees, wyes, elbows, saddle branches, manifolds and reducers are available for Contech Pipe and Pipe-Arches. Special fittings, including manholes and catch basins, can be fabricated to meet your needs.

Contech also offers the HUGGER® Joint. This joint uses an annular corrugation to fully engage each annular pipe end for 360°. When used with optional rubber O-ring gaskets, the HUGGER Joint is the industry's tightest.



STEEL REINFORCED POLYETHYLENE (SRPE) PIPE SOLUTIONS

DUROMAXX® SRPE TECHNOLOGY

*The Strength of Steel.
The Durability of Plastic.*

It is the ideal combination of materials that makes DuroMaxx an exceptional pipe. 80 ksi steel reinforcing ribs provide the strength, and pressure-rated polyethylene (PE) resin provides the durability. This combination of materials results in an extraordinarily strong and durable pipe. DuroMaxx is designed with a smooth inner wall for outstanding hydraulic capacity and provides the properties you can count on for long-term service and performance in the most demanding environments.

Lifelong Performance

DuroMaxx steel reinforced ribbed profile wall construction will not creep or buckle. The built-in capacity of the high strength steel eliminates concerns presented by other similar alternatives and is available in diameters ranging from 30" to 120".

- High Performance Pressure Rated Resins
- 10.8 psi QuikJoint® with UHP Technology
- Steel Reinforced Watertight Joints
- Cost-Effective
- Lightweight
- Easy to Install

**Fully Nested DuroMaxx
Offers Additional Cost-Savings**



DuroMaxx®
STEEL REINFORCED PE TECHNOLOGY



Multiple Joint Options

DuroMaxx QuikJoint® with UHP (ultra high performance) Technology achieves a level of joint performance that sets it apart from conventional pipe products. QuikJoint® is designed to meet, exceed, and maintain the highest standards of performance when tested in accordance with ASTM D3212 and offers in-ground testing. Additional options include: soil tight (ST) and welded coupler (WC) joints.



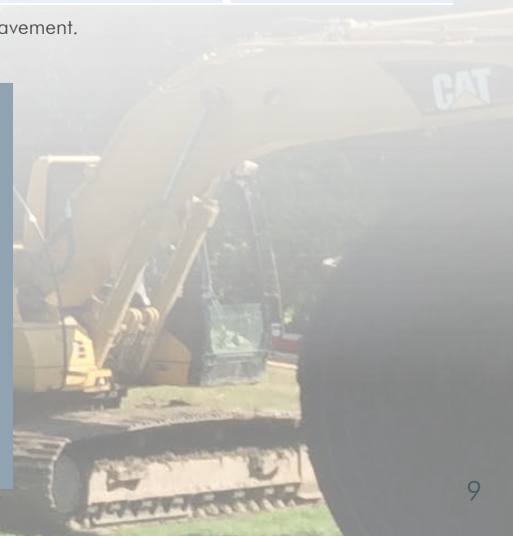
Hydraulic Performance

High flow rates are achieved with a smooth polyethylene waterway wall for optimal savings. Target flow rates can be assured with DuroMaxx by contacting your local Contech sales engineer for the appropriate information. Manning's n values will range between 0.011 to 0.013, depending on velocity and flow rate.

PRODUCT	DIAMETER	MATERIAL	MANNING'S N	STANDARD LENGTHS	MINIMUM COVER*
DuroMaxx® Class 1 of ASTM F2562	30" - 120"	Steel Reinforced Polyethylene	0.012	14' or 24'	Ø 30" - Ø 60" - 12" Ø 66" - Ø 78" - 18" Ø 84" - Ø 96" - 24" Ø 108" - 30" Ø 120" - 36"

* H 20 and H 25 minimum cover is measured from top of pipe to bottom of flexible pavement or top of rigid pavement.

DuroMaxx® SRPE is manufactured in accordance with ASTM F2562 and AASHTO MP-20.



POLYVINYL CHLORIDE (PVC) SOLUTIONS

A-2000™ SANITARY SEWER & DRAINAGE PIPE

Contech A-2000 is a profile wall pipe with a smooth interior and corrugated exterior, designed for high stiffness (46 psi minimum) to withstand trench loads. It features excellent hydraulic properties with a Manning's n of 0.009 and tight joints that prevent root penetration and leakage. Made from high-quality PVC, A-2000 is abrasion and corrosion resistant, and unaffected by acidic or alkaline soils and chemicals in sewage discharge. This pipe offers superior advantages and cost-effective value compared to traditional sewer and drainage products.



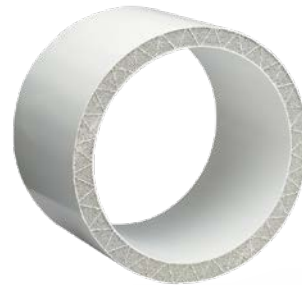
A2™ LINER PIPE

A2 Liner Pipe, available in 12"-36" diameters, is an extension of A-2000 profile-wall pipe technology and is used for rehabilitation applications. With its high stiffness and gasketed STAB-JOINT®, it is ideal for relining deteriorated storm and sanitary sewers where minimal site excavation is desired. Its ultra-smooth interior often increases the hydraulic performance of the existing system.



TRUSS PIPE®

Contech TRUSS PIPE, available in 8"-15" diameters, is a composite pipe designed for gravity-flow sanitary sewer systems. Its double-wall construction, reinforced by a truss-type system filled with lightweight concrete, ensures superior deflection control. Made from PVC, TRUSS PIPE offers excellent resistance to chemicals commonly found in sanitary sewage.



SOLID WALL PVC

Contech solid wall plastic pipes provide ease of construction, hydraulic efficiency, corrosion and chemical resistance and watertight joints for building durable drainage and sewer systems, such as sanitary sewers, house service and lateral pipes, leachate collection systems, and roadway/runway underdrains.

	PRODUCT	DIAMETER	MATERIAL	MANNING'S N	STANDARD LENGTHS	MINIMUM COVER*
PVC	A-2000™ PVC ASTM F949	4" - 36"	PVC Resin (12454)	0.009	12.5', 14' or 22'	12"
	A2™ Liner Pipe (Rehabilitation) PVC Composite	12" - 36"	PVC Resin (12454)	0.009	10' or 20'	12"
	TRUSS PIPE® ASTM D2680	8" - 15"	PVC Resin (12454) Lightweight Mearlcrete	0.009	12.5'	12"
	Solid Wall PVC SDR 23.5 ASTM D3034	4" and 6"	PVC Resin (12454)	0.009	14'	12"

** H 20 and H 25 minimum cover is measured from top of pipe to bottom of flexible pavement or top of rigid pavement.



THE CONTECH ADVANTAGE

Supporting every aspect of your project, from concept to installation, Contech is here to help! Our extensive network of local experts offers you comprehensive project management, technical support, and customer service.



AGENCY/REGULATORY GUIDANCE

Our team is ready to provide you with expert advice and assistance on local regulatory requirements, resulting in faster approvals.



SOLUTION DEVELOPMENT

Our engineers can review your requirements, weigh all options, and recommend the optimal solution to integrate with your site designs.



TECHNICAL EXPERTISE

Our engineers assist by providing product-specific engineering calculations such as hydraulics, buoyancy, foundation reactions, and unit sizing.



COST ESTIMATES

We can quickly provide engineers cost estimates to assist with your solution selection process.



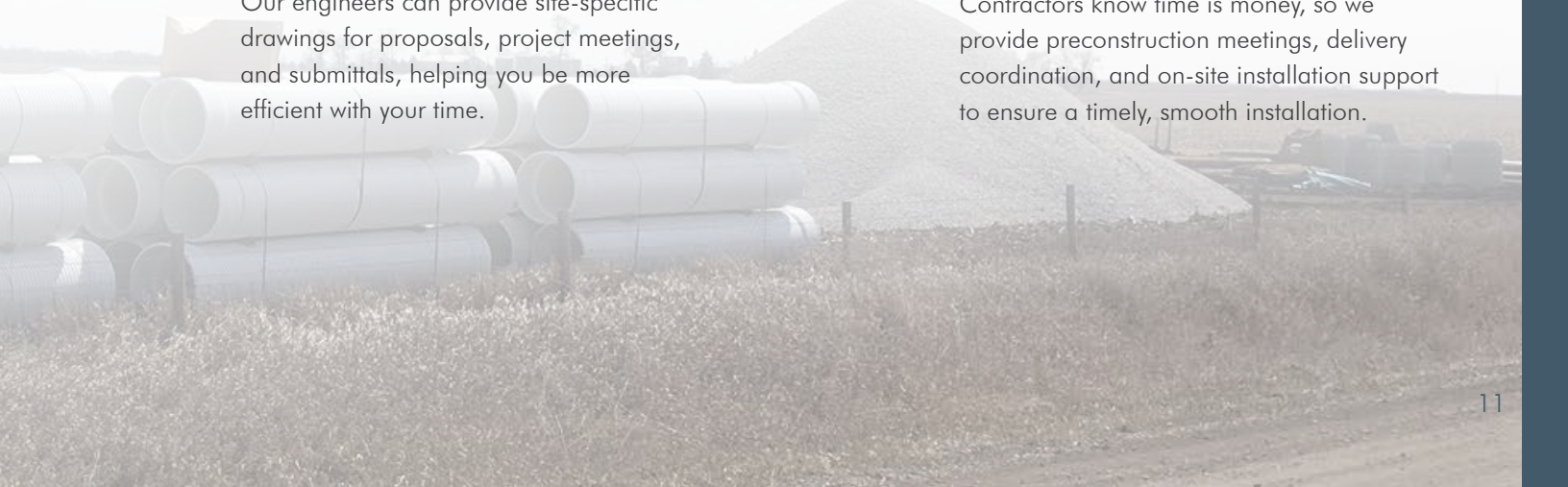
SITE SPECIFIC DRAWINGS

Our engineers can provide site-specific drawings for proposals, project meetings, and submittals, helping you be more efficient with your time.



ON-SITE ASSISTANCE

Contractors know time is money, so we provide preconstruction meetings, delivery coordination, and on-site installation support to ensure a timely, smooth installation.





Contech® Engineered Solutions provides innovative, cost-effective site solutions to engineers, contractors and developers on projects across North America. Our portfolio includes bridges, drainage, erosion control, retaining wall, sanitary sewer and stormwater management products.



STORMWATER SOLUTIONS



PIPE SOLUTIONS



STRUCTURE SOLUTIONS

FOR MORE INFORMATION CALL:

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