



SmartDitch

The SmartDitch[®] System

The Most Versatile Channel Lining Solution
for Water Flow Control

- Drainage Control
- Erosion Control
- Stormwater Control
- Irrigation Control
- Spill Control

SmartDitch

INTRODUCING SmartDitch®

SmartDitch is a leak-free channel lining system engineered to control and direct the flow of water or critical fluids. Made from proven UV resistant HDPE, SmartDitch's unique corrugated design helps regulate the flow of water from flat to steep grades so that the drainage and flow patterns designed are maintained.



SmartDitch comes in sizes for nearly any application. Choose from 12" depth trapezoidal, 24" depth trapezoidal, 24" depth semi-circular or the expandable MegaDitch. Its ribbed design provides strength and exceptional flow control. Its flexible, yet light weight construction makes SmartDitch ideal for difficult to access, uneven terrain or steep slopes.

The Most Versatile Channel Lining Solution for Water Flow Control

The versatility of SmartDitch makes it the best solution for many applications. The multiple sizes and fittings make designing for even the most complex situation cost effective and easy. In addition to traditional channel design, the SmartDitch system is often specified to form defined ditches to control erosion and catch loose sediment. SmartDitch is also used for both permanent and temporary applications, and in-ground, as well as above-ground, temporary flow diversions.



SmartDitch sections are efficiently shipped on pallets and are easy to transport. The product is available in three colors: black, green and sand. The SmartDitch system takes 'versatility' one step further with specially-engineered fittings such as multi-directional sections, gate valves, transitions, flared inlets/outlets and bulkheads (shown). All are designed to broaden the range of use and tie into existing drainage systems.

SmartDitch is Engineered for Quick Installation



A light-duty backhoe is all that is needed to dig the shallow trench in preparation for the SmartDitch installation.



SmartDitch is light enough to be hand-carried to the trench, and allows for easy transport to areas where vehicle access is limited.



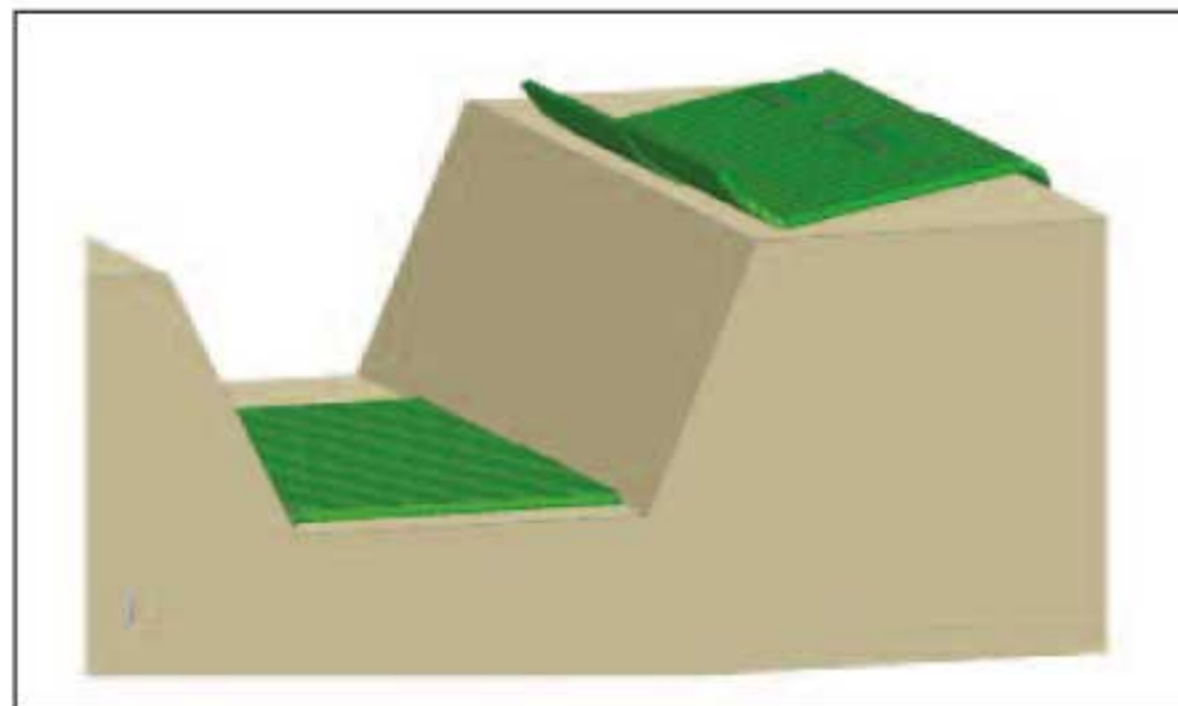
SmartDitch sections, manufactured in 8' - 10' lengths, are ready for joining in the shallow trench or above the ground and set into place.



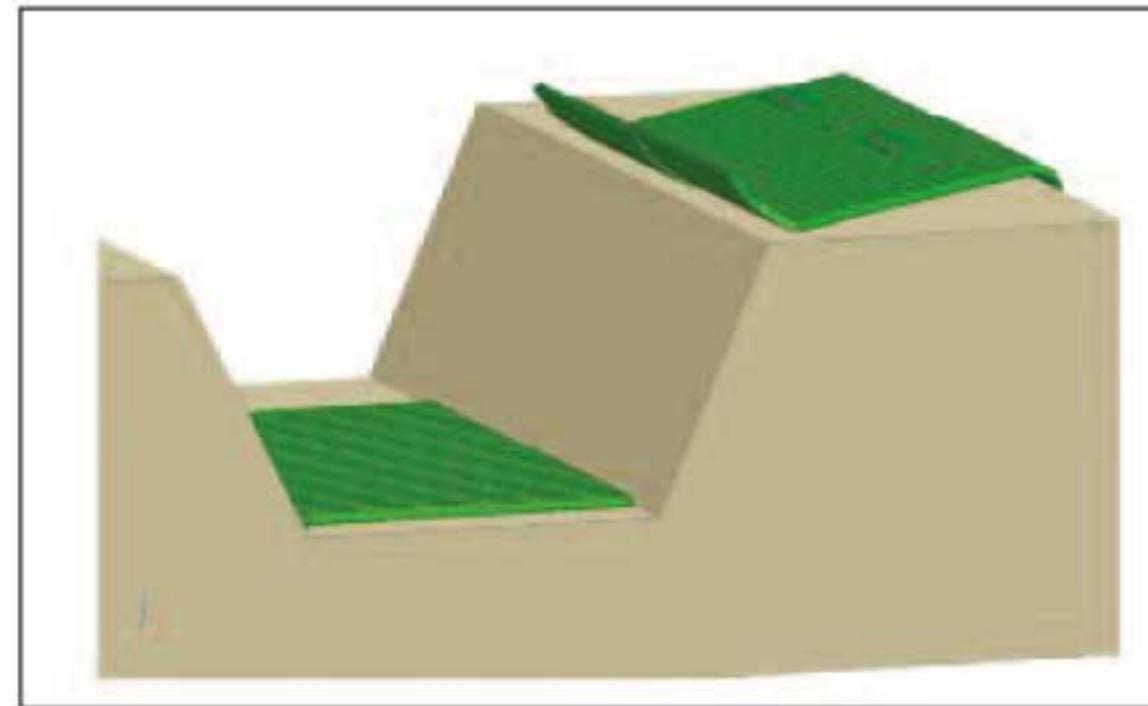
The SmartDitch anchoring system installs quickly and secures the system into the ground.

MegaDitch Allows For Expandable Design

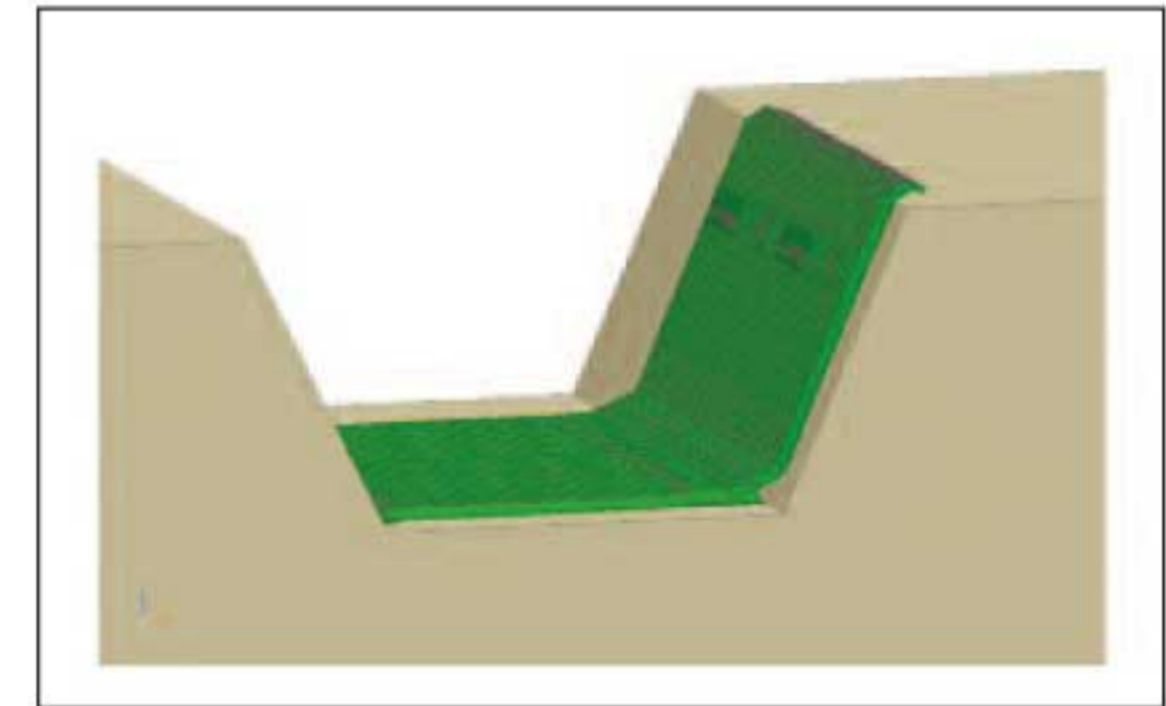
SmartDitch MegaDitch is an expandable channel lining system engineered with adjustable sidewalls to conform to the variety of slopes and grades. The base and wall sections are connected for maximum expandability and fit both flat-bottom and V bottom channel profiles. Multiple bases and sidewall sections can be connected to any designed length or width. The same easy installation methods, anchoring system and principles used to install 12" and 24" Trapezoidal SmartDitch also apply to MegaDitch. A concrete anchoring system is available for rehabilitation projects.



Overlapping base sections placed over the existing channel floor to the desired length and width.



Wall sections are lowered into position. Sections are overlapped until desired height is achieved.



MegaDitch is anchored into place with the same cable/anchoring system as the standard SmartDitch products.

Flow Performance You Can Count On

Slope %	12" TRAPEZOID		24" TRAPEZOID		24" SEMI CIRCULAR		MegaDitch (1 base; 1 sidewall @ 1:1 side slopes; flow depth of 2.25')	
	Flow cfs	Velocity fps	Flow cfs	Velocity fps	Flow cfs	Velocity fps	Flow cfs	Velocity fps
0.50	6.17	3.09	28.04	4.52	5.41	3.10	114.59	6.26
1.00	8.72	4.38	30.50	4.91	7.66	4.38	124.65	6.81
2.50	10.61	5.32	48.23	7.77	9.31	5.33	197.06	10.76
5.00	15.00	7.53	68.20	10.99	13.17	7.53	278.73	15.22
7.50	18.37	9.22	85.53	13.46	16.13	9.23	341.38	18.64
10.00	21.21	10.65	96.46	15.54	18.62	10.66	394.19	21.53
15.00	25.98	13.04	118.13	19.03	22.81	13.05	482.78	26.37
20.00	30.00	15.06	136.41	21.98	26.34	15.07	557.47	30.45

Use the SmartDitch flow calculator tool for MegaDitch flow calculations at www.smartditch.com

Applications

- ▶ Landfill erosion and control
- ▶ Public Works and Municipal drainage projects
- ▶ Highway and transportation erosion control
- ▶ Residential drainage and storm water flow control
- ▶ Industrial site stormwater and spill control
- ▶ Irrigation and water conservation district drainage programs
- ▶ Construction site stormwater treatment
- ▶ Mining site run off applications
- ▶ Dewatering efforts to meet EPA recharge regeneration



Benefits

- ▶ Excellent flow properties
- ▶ Eliminates sidewall erosion and the subsequent sediment that can end up in the ditch
- ▶ Does not erode, crack or corrode when exposed to weather, erosion, or freeze/thaw cycles
- ▶ Engineered with self-scouring rib design that helps keep channels clear and reduces ditch maintenance
- ▶ The HDPE material withstands abrasive flows, corrosion and even the most aggressive chemical attacks
- ▶ Ease of installation — no special tools required
- ▶ A light-duty backhoe is all that is needed for longer trench runs
- ▶ Light weight and easy to transport
- ▶ Use in lieu of earthen ditch, rip rap or concrete
- ▶ Provides years of maintenance free service
- ▶ Can be used to rehabilitate existing concrete ditches
- ▶ Manufactured in the USA



SmartDitch System – Engineered by Penda Corporation

SmartDitch is manufactured by North America's largest and most advanced plastics production operations – Penda Corporation. As the #1 heavy-gauge thermoforming manufacturer in North America, Penda channels its expertise in plastic engineering and manufacturing into three market-leading businesses:

- ▶ Truck bed liners and tonneau covers for both Original Equipment Manufacturers (OEM) and aftermarket
- ▶ Aftermarket HDPE thermoformed water management solutions
- ▶ Custom solutions for manufacturers of every kind

Penda is a global leader in materials research, product development and manufacturing, with an over 40-year heritage of developing and producing award-winning products.



For More Information

SmartDitch is manufactured in the U.S.A. It is a safe, economical, long-lasting, and environmentally sound solution to stormwater management and erosion control. For more information on the SmartDitch HDPE Channel Lining System contact:

