







# Trenchless Curved Silt Fence — Now there's a better way to provide perimeter erosion and sediment control.

Traditional solutions like silt fences and compost socks pose high costs for installation, maintenance and disposal. Worse yet, they're prone to failure if trenching and backfilling is not done properly. Introducing a better way to work — the revolutionary Trenchless Curved Silt Fence:

✓ No trenching or post hole digging — Patent-pending sand tube and T-post system is quick and easy to install; superior performance at minimal cost

✓ Convenient transport — 24-foot kit weighs less than 130 pounds; load onto an ATV for easy on-site handling

Reusable hardware — Save costs from site to site by keeping and redeploying the main components; just replace the fabric

✓ No sharp wire or fence parts — All components are thoughtfully designed for long useful life and installer safety

Our innovative "curved" design redirects hydrostatic force for at least **380% more tipping stability** than a super silt fence (see back page for details).



PIG® Trenchless Curved Silt Fence									
Item #	Description	Storage Bag	Ft./Fencing	Sand Tubes	Ground Stakes	T-Posts	Bottom Plates	Top Brackets	Retainer Pins
SRD564	56-foot kit with 4 foot spacing (290 lbs)	1	56	14	_	15	15	15	30
SRD568	56-foot kit with 8 foot spacing kit (250 lbs)	1	56	14	7	8	15	8	16
SRD244	24-foot kit with 4 foot spacing (130 lbs)	1	24	6	-	7	7	7	14
SRD248	24-foot kit with 8 foot spacing kit (111 lbs)	1	24	6	3	4	7	4	8

Patent pending

# Installation



Unroll the silt fence fabric on the ground with the gray panel facing up. The 5" sand tube pocket, with post holes, should be toward the fill slope.



Insert sand tubes into tube pockets between the post holes in the fabric.



Start T-posts in holes between sand tubes (studded side facing fill slope), with the white end facing up. Set with a driver, pounder or sledgehammer.



Drop bottom plate over end of post and place retainer clip on top. Finish driving T-post until bottom plate is tight and flush with ground, sealing tube pockets in place.



For 4' spacing, drive a T-post into every post hole. For 8' spacing, drive T-posts into fence ends then alternate every 4' with ground stakes and T-posts. (Use washers with ground stakes.)



Place angled top bracket on top of T-posts and pin into place. Ensure that the open side faces the fill slope.



Fold top edge of fabric over bracket, aligning prepunched holes in fabric with the top two holes in the bracket. (The bottom six holes are unused.)



Feed two 75# zip ties through the fabric, into the bracket and back through the fabric.



Tighten zip ties. The fabric will not be tight horizontally or vertically to allow the self-supporting curve to function.

## **PIG Trenchless Curved Silt Fence**

#### **APPLICATION**

Install downslope of all disturbances in existing ground and parallel to existing contours. Install silt fence on level grade.

	Maximum Slope Length (ft) Above Fence							
Slope Percent	8 ft. T-Post Spacing 25" Design Height 12" Post Depth	4 ft. T-Post Spacing 28" Design Height 18" Post Depth						
2 (or less)	500	1000						
5	250	550						
10	150	325						
15	100	215						
20	70	175						
25	55	135						
30	45	100						
35	40	85						
40	35	75						
45	30	60						
50	25	50						

Both ends should extend at least 8 feet upslope at 45° to the main fence alignment.

#### **DEFINITION**

A temporary barrier of curved geotextile (filter fabric) with sand tubes attached to supporting t-posts to remove sediment from runoff below disturbed areas.

#### **PURPOSE**

Controls sheet flow runoff from small disturbed areas where the discharge is to a stable area.

#### LIMITATIONS

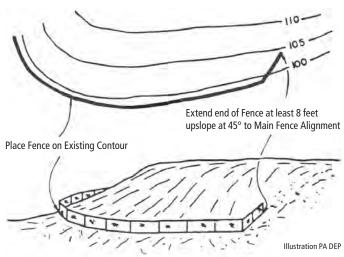
- Do not use in areas of concentrated flow (e.g. channels, swales, erosion gullies, across pipe outfalls, or as inlet protection, etc.).
- Heavy vegetation should be removed prior to installation. The fence can be used on rocky slopes if enough preparation is made to ensure good contact of the sand tube with the underlying soil along its entire length.
- Trenchless Curved Silt Fence should not be installed on uncompacted fills or in extremely loose soils (e.g. sandy loam) since this will likely result in undermining of the fence.
- Traffic shall not be permitted to cross the sand tubes.
- Should be installed at least 8 feet from the toe of fill slopes.

#### **MAINTENANCE**

- Accumulated sediment shall be removed when it reaches 11" high on T-posts. There are sediment removal lines on the studded T-post stakes for easy identification.
- The Trenchless Curved Silt Fence shall be inspected weekly and after each runoff event. Damaged sections shall be repaired or replaced within 24 hours of inspection.
- Perform all preventive and remedial maintenance work including clean-out, repair & replacement — immediately following inspection.
- Maintenance and inspection must be continued until the site is permanently stabilized.
- Upon stabilization of the area, the fabric, sand tubes, T-posts, stakes, bottom plates, angled top brackets and pins shall be removed. Fabric shall be properly disposed. Sand tubes, T-posts, stakes, bottom plates, angled top brackets and pins in good working condition can be reused on future installations.

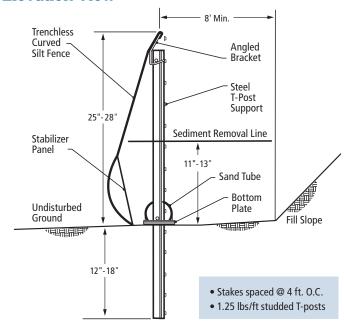
#### **SEDIMENT BARRIER ALIGNMENT**

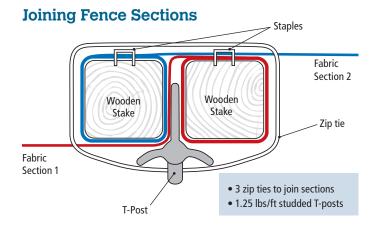
#### **Plan View**



NOTE: T-posts are positioned on the fill slope side (see below)

#### **Elevation View**





# **Product Data & Comparison**

# Engineered and manufactured to the highest standard in Tipton, PA.

The PIG Trenchless Curved Silt Fence overcomes the disadvantages of traditional silt fences and compost socks with a patented design that includes the best features of both.

The "curved" fence is modeled after the onion tanks from World War II fueling and water storage depots. This self-supporting design increases tipping stability compared to a vertical wall.

New Pig's ground-hugging sock technology anchors the base of the fence with a sand tube encased by a hydrophobic outer scrim laminated to a polypropylene woven layer. The outside scrim keeps the sand tube from absorbing water, so it resists water logging and freezing, both while in storage and in use. The woven layer provides durability and resistance to drops, punctures and tears, similar to sand bags.

Product Data									
Property	Test Method	English Units							
	Modified for Two-Ply	Average	Roll Value	Typical					
		Gray Layer	Black Layer	Two-Ply	Units				
		MD CD	MD CD	MD CD					
Grab Tensile Strength	ASTM D-4632	160 149	167 132	335 245	lbs				
Grab Tensile Elongation	ASTM D-4632	22 15	23 20	24 11	%				
Trapezoid Tear	ASTM D-4633	76 77	70 81	139 123	lbs				
Mullen Burst	ASTM D-3786	344	315	625	lbs				
Puncture	ASTM D-4833	84	104	195	lbs				
A.O.S.	ASTM D-4751	30	30	50	U.S. Sieve				
Permittivity	ASTM D-4491	0.431	0.264	0.18	sec <sup>-1</sup>				
Water Flow Rate	ASTM D-4491	32.4	16.4	13.5	gal/min/ft²				
UV Resistance (500 hrs)	ASTM D-4355	70	80	97	%				
Slurry Flow Rate ASTM 5141				0.464	gal/min/ft²				
Filtering Efficiency ASTM 5141				96.3	%				
Soil Retention Effectiveness	ASTM D-7351			94.26	%				
Seepage Effectiveness	ASTM D-7351			91.07	%				

## **Product Comparison**

Property	Property PIG Trenchless Curved Silt-Fence		Traditional Silt-Fence			Compost Sock		
	8-foot Spacing	4-foot Spacing	Standard	Reinforced	Super Silt			
Fabric Width (in)	36	39	30	42	42			
Design Height Above Grade (in) <sup>1</sup>	25, 36 Fabric	28, 39 Fabric	18	30	33	18	24	32
Effective Height (in) <sup>2</sup>	22, 30 Fabric	25, 33 Fabric	15	27	33	15	19	26
Maintenance Height (in)	11	11	7.5	13.5	16.5	7.5	9.5	13
Maximum Slope Length (<2% grade)	500	1000	150	500	1000	1000	1300	1650
Maximum Slope Length (50% grade)	25	50	10	25	50	55	65	75
Trenchless Installation	✓	✓				1	1	1
Reusable Hardware	✓	✓						
Section Packaging	✓	✓	✓	✓				
Section Lengths (ft)	56	56	100	100	50 Chainlink	45		
Sections Per Pallet	6	6	25	25	6	1		
Length Per Pallet (ft)	336	336	2500	2500	300	45		
Pallet Weight (lbs)	1440	1680	650	900	775	1500		
Stakes Per Pallet	48	90	275 to 425	275 to 425	31	5		
Stake Spacing (ft)	8	4	8	8	10	10	8 to 10	8 to 10
Stake Type	Rail Steel T-Post	Rail Steel T-Post	Wooden	Wooden	Galvanized	Wooden	Wooden	Wooden
Dry Weight (lbs/ft)	4.3	5	0.26	0.45	2.6	28	45	80
Dry Disposal Weight (lbs/ft)	0.5	0.5	0.26	0.45	2.6	28	45	80

<sup>&</sup>lt;sup>1</sup> After settling, sagging and trenching losses, Keener et al, 2006

<sup>&</sup>lt;sup>2</sup> 50% of effective height, Filtrexx® TechLink Research Summary #3311

# **Tipping Stability Comparison**

	Traditional Silt Fence		Trenchless Curved Silt Fence					
Ponding Height (inches)	Stake Spacing (feet)	Tipping Force (pounds-force)	Ponding Heightt (inches)	Stake Spacing (feet)	Tipping Force (pounds-force)	Greater Stability (%)		
15	8	162	15	8	65	149%		
18	8	8 281		8	165	70%		
21	8	446	21	8	311	43%		
24	8	666	24	8	511	30%		
27	8	948	22	8	358	165%		
30	8	1300	25	8	598	117%		
	Super Silt Fence		Trenchless Curved Silt Fence					
Ponding Height (inches)	Stake Spacing (feet)	Tipping Force (pounds-force)	Ponding Height (inches)	Stake Spacing (feet)	Tipping Force (pounds-force)	Greater Stability (%)		
30	10	1625	25	4	299	443%		
33	33 10 2163		28	4	451	380%		



Self-supporting onion tank design provides at least 380% more tipping stability compared to super silt fence.

## Who is New Pig Energy?

New Pig Energy (NPE) is a subsidiary of New Pig Corporation, the world leader in industrial absorbents and liquid management since 1985. NPE has been operating since 2011, specializing in durable, composite liners for multi-operation use with certified

high-traction work surfaces. NPE has installed over 116 million square feet of product to help the Oil & Gas Industry protect their workers and the environment.







**New Pig Energy** 

Secondary Containment from the Leak & Spill Experts.

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