

# PIG Trenchless Curved Silt Fence — 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 patent-pending 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						
		Average Roll Value				Typical		Units
	Modified for Two-Ply	Gray Layer		Black Layer		Two-Ply		
		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/ft <sup>2</sup>
UV Resistance (500 hrs)	ASTM D-4355	70		80		97		%
Slurry Flow Rate	ASTM 5141					0.464		gal/min/ft <sup>2</sup>
Filtering Efficiency	ASTM 5141					96.3		%
Soil Retention Effectiveness	ASTM D-7351					94.26		%
Seepage Effectiveness	ASTM D-7351					91.07		%

### Product Comparison

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

<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 Height (inches)	Stake Spacing (feet)	Tipping Force (pounds-force)	Greater Stability (%)
15	8	162	15	8	65	149%
18	8	281	18	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	10	2163	28	4	451	380%

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



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