

6.1.1 Perimeter Control - Compost Filter Sock

Advanced Tubular Filters

PURPOSE & DESCRIPTION

Filtrex SiltSoxx® (Soxx) compost filter sock is a three-dimensional tubular sediment control and stormwater runoff filtration device typically used for **Perimeter Control** of sediment, on and around construction activities.

APPLICATION

Perimeter control is to be installed down slope of any disturbed area requiring erosion and sediment control and filtration from runoff. Perimeter control is effective when installed perpendicular to sheet or low concentrated flow, and in areas that silt fence is normally considered appropriate. Acceptable applications include:

- Site perimeters
- Above and below disturbed areas subject to sheet runoff, interrill and rill erosion
- Above and below exposed and erodable slopes
- Along the toe of stream and channel banks
- Around area drains or inlets located in a 'sump'
- On compacted soils where trenching of silt fence is difficult or impossible
- Around sensitive trees where trenching of silt fence is not beneficial for tree survival or may unnecessarily disturb established vegetation
- On frozen ground where trenching of silt fence is impossible
- On paved surfaces where trenching of silt fence is impossible

INSTALLATION

1. Perimeter control used for control of sediment in storm runoff shall meet Filtrex Soxx Mesh Material and Filtrex Certified FilterMedia specifications.
2. Contact info@mkbcompany.com for a current list of installers and distributors of Filtrex products.
3. Perimeter control will be placed at locations indicated on plans and in a manner as directed by the Engineer or Manufacturer.
4. Perimeter control should be installed parallel to the base of the slope or other disturbed area. In challenging conditions (i.e., 2:1 slopes), a second perimeter control shall be constructed at the top of the slope, or staking may be increased.
5. Effective Soxx height in the field should be as follows: 5" diameter Soxx = 4" high; 8" diameter Soxx = 6.5" high; 12" diameter Soxx = 9.5" high; 18" diameter Soxx = 14.5" high; 24" diameter Soxx = 19" high.
6. Stakes should be installed through the middle of the perimeter control on 10 ft (3m) centers, using nominal 2 in (50mm) by 2 in (50mm) by 3 ft (1m) wooden stakes. 5" diameter Soxx may use 1" (25 mm) x 1" (25 mm) x 18" (0.5 m) wooden stakes. In the event staking is not possible, i.e., when perimeter control is used on highly compacted soils or impervious surfaces, sand bags (or equivalent) may be used to stabilize Soxx, as long as effective height is not compromised. On impervious surfaces, concrete blocks (or equivalent) may be used behind the perimeter control to help stabilize during rainfall/runoff events.
7. Alternatively, stakes may be installed directly behind the Soxx at a 90-degree angle to level ground (regardless of slope angle), where stakes are in direct contact with the downslope side of Soxx. If high runoff or sediment accumulation is expected, staking through the Soxx may be required.
8. Staking depth for sand and silt loam soils shall be 12 in (300mm), and 8 in (200mm) for clay soils.
9. Loose compost may be backfilled along the upslope side of the

perimeter control, filling the seam between the soil surface and the device, improving filtration and sediment retention.

10. If the perimeter control is to be left as a permanent filter or part of the natural landscape, it may be seeded at time of installation for establishment of permanent vegetation. The Engineer will specify seed requirements.
 11. Perimeter control is not to be used in perennial, ephemeral, or intermittent streams.
- See design drawing schematic for correct installation (Figure 1.1).

INSPECTION & MAINTENANCE

Routine inspection should be conducted within 24 hrs of a runoff event or as designated by the regulating authority. Perimeter control should be regularly inspected to make sure they maintain their shape and are producing adequate hydraulic flow-through. If ponding becomes excessive, additional perimeter control may be required to reduce effective slope length or sediment removal may be necessary. Perimeter control shall be inspected until area above has been permanently stabilized and construction activity has ceased.

1. The Contractor shall maintain the perimeter control in a functional condition at all times and it shall be routinely inspected.
2. If the perimeter control has been damaged, it shall be repaired, or replaced if beyond repair.
3. The Contractor shall remove sediment at the base of the upslope side of the perimeter control when accumulation has reached 1/2 of the effective height of the Soxx, or as directed by the Engineer. Alternatively, a new perimeter control can be placed on top of and slightly behind the original one creating more sediment storage capacity without soil disturbance.
4. Perimeter control shall be maintained until disturbed area above the device has been permanently stabilized and construction activity has ceased.
5. The FilterMedia will be dispersed on site once disturbed area has been permanently stabilized, construction activity has ceased, or as determined by the Engineer.
6. For long-term sediment and pollution control applications, perimeter control can be seeded at the time of installation to create a vegetative filtering system for prolonged and increased filtration of sediment (contained vegetative filter strip). The appropriate seed mix shall be determined by the Engineer.

ADDITIONAL INFORMATION

For other references on this topic, including additional research reports and trade magazine and press coverage, visit mkbcompany.com

MKB Company, Technical Support
888-578-0777 | www.mkbcompany.com | info@mkbcompany.com
Call for complete list of international installers and distributors.

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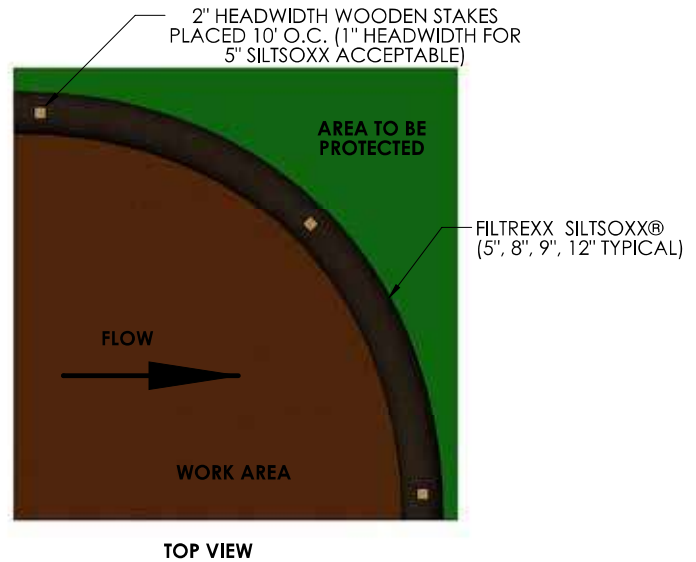
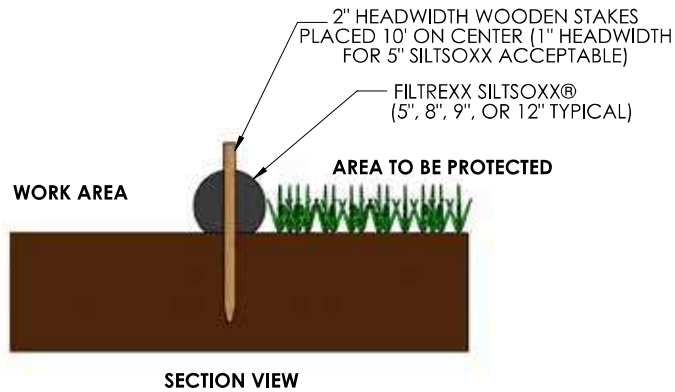
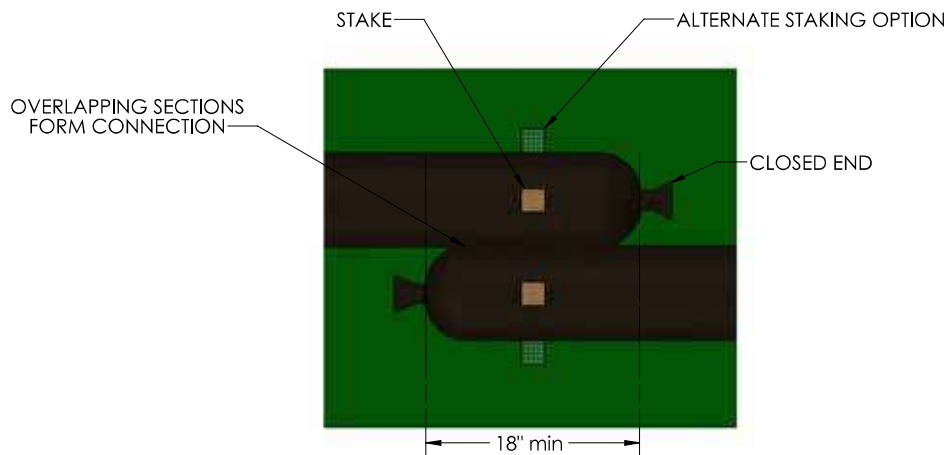
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Table 1.3. Maximum Slope Lengths for Filtrexx® Perimeter Control Based on a 1 in (25 mm)/24 hr Rainfall Event.

Slope Percent	Maximum Slope Length Above Sediment Control in Feet (meters)*					
	5 in (125 mm) Sediment control	8 in (200 mm) Sediment control	12 in (300 mm) Sediment control	18 in (450 mm) Sediment control	24 in (600mm) Sediment control	32 in (800mm) Sediment control
	4 in (100 mm)**	6.5 in (160 mm)**	9.5 in (240 mm)**	14.5 in (360 mm)**	19 in (480 mm)**	26 in (650 mm)**
2 (or less)	360 (110)	600 (180)	750 (225)	1000 (300)	1300 (400)	1650 (500)
5	240 (73)	400 (120)	500 (150)	550 (165)	650 (200)	750 (225)
10	120 (37)	200 (60)	250 (75)	300 (90)	400 (120)	500 (150)
15	85 (26)	140 (40)	170 (50)	200 (60)	325 (100)	450 (140)
20	60 (18)	100 (30)	125 (38)	140 (42)	260 (80)	400 (120)
25	48 (15)	80 (24)	100 (30)	110 (33)	200 (60)	275 (85)
30	36 (11)	60 (18)	75 (23)	90 (27)	130 (40)	200 (60)
35	36 (11)	60 (18)	75 (23)	80 (24)	115 (35)	150 (45)
40	36 (11)	60 (18)	75 (23)	80 (24)	100 (30)	125 (38)
45	24 (7)	40 (12)	50 (15)	60 (18)	80 (24)	100 (30)
50	24 (7)	40 (12)	50 (15)	55 (17)	65 (20)	75 (23)

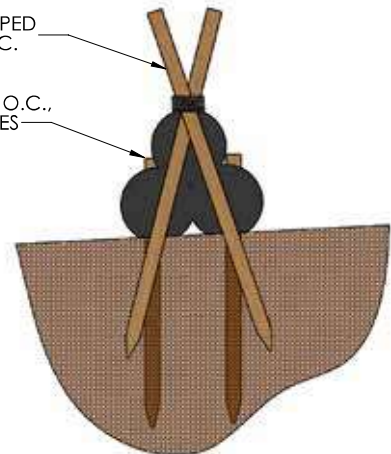
* Based on a failure point of 36 in (0.9 m) super silt fence (wire reinforced) at 1000 ft (303 m) of slope, watershed width equivalent to receiving length of sediment control device, 1 in/ 24 hr (25 mm/24 hr) rain event.

** Effective height of Sediment control after installation and with constant head from runoff as determined by Ohio State University.

Figure 1.1. Engineering Design Drawing for Perimeter Control**FILTREXX SILTSOXX®****COMPOST SOCK CONNECTION/ATTACHMENT DETAIL****FILTREXX® PYRAMID STAKING DETAIL**

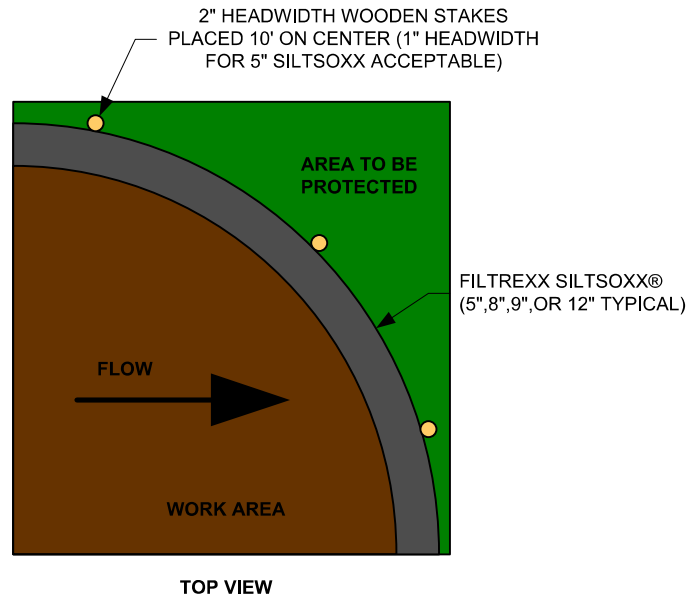
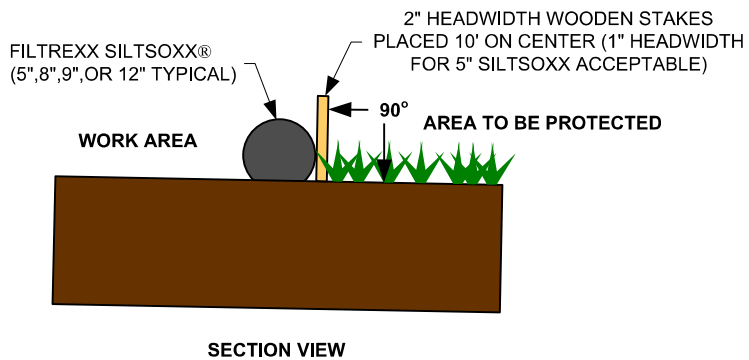
(2) 2"x2"x48+" HARDWOOD STAKES, WRAPPED TOGETHER WITH 16 GAUGE WIRE, 10' O.C.

2"x2"x36" HARDWOOD STAKE, 10' O.C., STARTING 5' FROM ANGLED STAKES



NOTES:

1. ALL MATERIAL TO MEET FILTREXX® SPECIFICATIONS.
2. SILT SOXX FILL TO MEET APPLICATION REQUIREMENTS.
3. COMPOST MATERIAL TO BE DISPERSED ON SITE, AS DETERMINED BY ENGINEER.

Figure 1.1. (continued) Engineering Design Drawing for Perimeter Control - Alternative Staking**FILTREXX SILTSOXX®****NOTES:**

1. ALL MATERIAL TO MEET FILTREXX® SPECIFICATIONS.
2. SILT SOXX FILL TO MEET APPLICATION REQUIREMENTS.
3. COMPOST MATERIAL TO BE DISPERSED ON SITE, AS DETERMINED BY ENGINEER.