

SPECIFICATIONS

Golf Filter

I. Specifications

Coverage: The Golf Filter provides full treatment of influent stormwater, at rated flows, is conveyed to the filter. The filter will retain all trash and debris, sediments, hydrocarbons, nitrates, phosphorus and other pollutants entering the filter.

Non-Corrosive Materials: All components of the filter system, including mounting hardware, fasteners, support brackets, filtration material, and support frame are constructed of non-corrosive materials. Filtration box structure is manufactured of marine grade fiberglass, gel coated for UV protection. Filtration Box screen is manufactured from Flattened expanded stainless steel sheet ¾ No. 13; Open area = 75%; Grade = 304 Stainless Steel. Fasteners that attach the shelf system to the filter box are stainless steel. Filtration Box Screen holds a series of booms containing absorbent media to capture pollutants. No polypropylene, monofilament netting or fabrics shall be used in the product.

Durability: The Golf Filter filtration box is constructed of all Marine Grade Fiberglass, gel coated for UV protection. The Filtration Box Screen and Internal Metal Cage are manufactured of stainless steel screen and support structures are of proven durability, with an expected service life of at least 10 to 15 years. The filter and mounting structures are of sufficient strength to support water, sediment, and debris loads when the filter is full, with no slippage, breaking, or tearing. All filters are warranted for a minimum of five (5) years.

Oil Absorbent Media: The Filter is fitted with Bio Sorb, an absorbent media for removal of petroleum hydrocarbons from influent, and so placed in the filter assembly to treat influent at rated flow. Absorbent media is easily replaceable in the filter, without the necessity of removing fixed mounting brackets or mounting hardware. Hydrocarbon media is placed in a separate trough located at the top of the filter unit. The hydrocarbon media encompasses the total perimeter of the unit and lie horizontal for maximum absorption. Other filter media can be used in place of the Bio Sorb to target various pollutants of concern.

Overflow Protection: The drain filter is designed so that it does not inhibit storm flows entering the inlet, or obstruct flow through the catch basin during peak storm flows.

Filter Bypass: Water will not bypass the filter at low flows, nor bypass through attachment and inlet contact surfaces at low flows.

Pollutant Removal Efficiency: The golf filter is designed to capture high levels of trash and litter, grass and foliage, sediments, hydrocarbons, grease and oil. The filtered flow maximum capacity is 295 G.P.M. Other targeted pollutants such as fertilizers and pesticides can be filtered by exchanging the absorbent media to Granulated Activated Carbon, Perlite, Zeolite, etc.

Filter Media Replacement: Removal and replacement of the booms containing the absorbent media is accomplished without the necessity of removing mounting bolts, support frames, etc. The top of the Interior Metal Cage assembly is loosened to remove the existing booms. The plastic ties can be cut and the used booms removed and new booms installed and secured with new ties.

II. Installation

Installation: The filter will be securely installed inline, with contact surfaces sufficiently joined together so that no filter bypass can occur at low flow. All anchoring devices and fasteners are installed within the interior of inflow pipe. The filter can be easily accessed by opening the access hatch.

Installation Notes:

1. Bio clean environmental services, inc. Golf Filter shall be installed pursuant to the manufacturer's recommendations and the details on this sheet.
2. The Golf Green/Inline Filter shall be installed on a bed of rock, a depth of 4 inches so the filter sits on top of the rock at a level of: Depending on the model size. For the 36-36-34 Square Model, it is 34 inches to the top of the hole. The bottom of the outflow pipe shall be 15" from the bottom of the rock bed. The bottom of the invert pipe shall be 11 inches from the top of the surface. The filter shall be placed so that the hatch is level with the surface. See diagram for details on specific model sizes: 27-27-24, 36-36-34, 48-48-44 and 60-60-54
3. The Bio Clean Golf Filter shall provide coverage of entire inflow pipe, to direct all flow through filter.
4. Golf Filter structure shall be manufactured of marine grade fiberglass, gel coated for ultraviolet protection.

5. Golf Filter fine screen and coarse containment screen shall be manufactured of stainless steel.

III. Maintenance

Maintenance: The filter is designed to allow for the use of manual or vacuum removal of captured materials in the Filtration Box Structure and Filtration Box Screen. Filters can be cleaned and vacuumed from access hatch. The interior of the Filtration Box Structure is accessed by removing the 2" stainless hex head bolts and lifting the hatch. The media booms should be inspected and removed if they need replacing. They need to be replaced at least once a year. The media booms should be removed by cutting the plastic ties and removing the booms. The captured pollutants can be removed by manually removing the trash and debris, sediment and foliage. The captured pollutants can be removed by vacuuming the filter with any standard vacuum truck. They are serviceable by centrifugal compressor vacuum units without causing damage to the filter or any part of the mounting and attachment hardware during normal cleaning and maintenance. Replace the media booms by installing and securing with plastic ties. Close and bolt the hatch.

Maintenance Notes:

1. Bio Clean Environmental Services, Inc. recommends cleaning and debris removal maintenance a minimum of four times per year, and replacement of media booms a minimum of once per year.
2. Following maintenance and/or inspection, the maintenance operator shall prepare a maintenance/inspection record. The record shall include any maintenance activities performed, amount and description of debris collected, and condition of media filter.
3. The owner shall retain the maintenance/inspection record for a minimum of five years from the date of maintenance. These records shall be made available to the governing municipality for inspection upon request at any time.
4. Remove all trash, debris, organics, and sediments collected by the filter.
5. Evaluation of the hydrocarbon boom shall be performed at each cleaning. If the boom is filled with hydrocarbons and oils, or other targeted pollutants, it should be replaced. If not sure of condition of media booms, replacement should be done as not to allow targeted pollutants to escape the filter. Attach new boom to filter with plastic ties.
6. Transport all debris, trash, organics and sediments to approved facility for disposal in accordance with local and state requirements.
7. The absorbent media boom is classified as hazardous material and will have to be picked up and disposed of as hazardous waste. Hazardous material can only be handled by a certified hazardous waste trained person (minimum