

## BioClean<sup>®</sup> Full Grate Inlet Filter Installation Manual



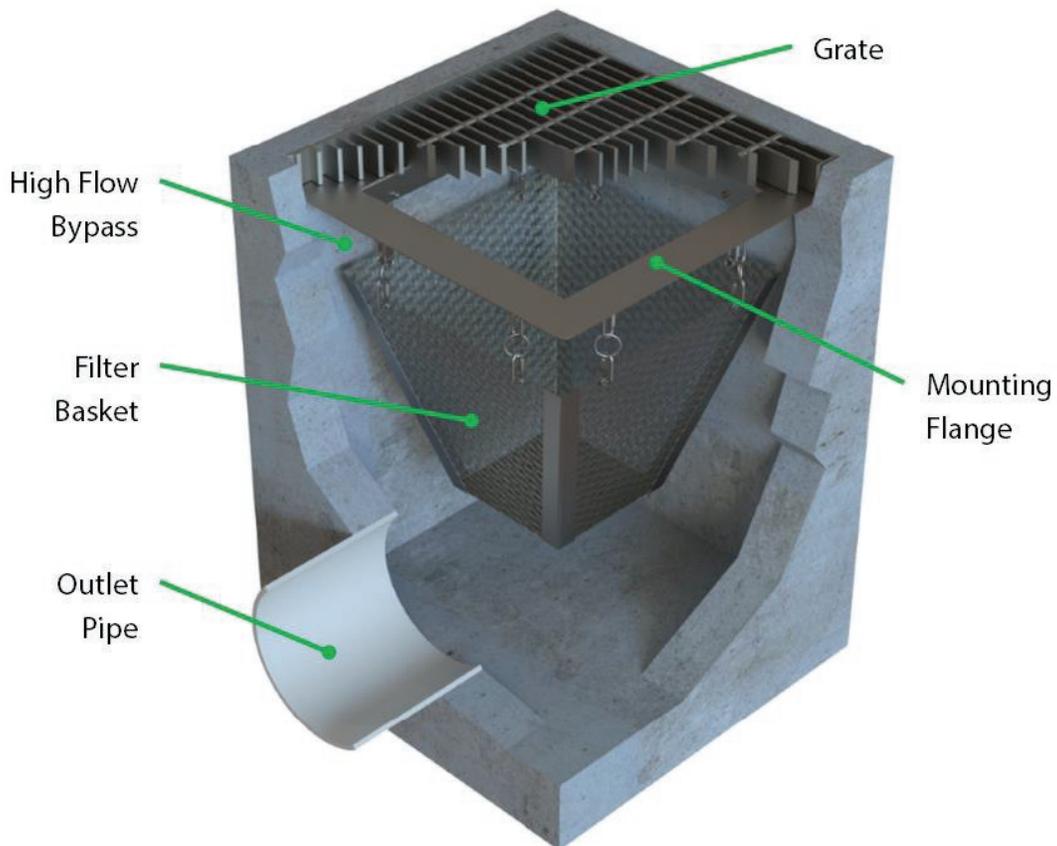
**BIO CLEAN® FULL CAPTURE GRATE INLET FILTER  
INSTALLATION MANUAL**

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## OVERVIEW

Contech's Bio Clean® Full Capture Grate Inlet Filter is a stormwater catch basin filter designed to remove trash, debris, sediments, particulates, and hydrocarbons (with hydrocarbon boom add-on). The filters are available at various sizes and depths, allowing them to fit in any grated catch basin inlet. The filter is generally mounted under the grate flange but can also be mounted below the grate to the wall of the basin. This configuration is recommended in areas with "direct traffic" ratings such as roads with higher speed traffic. The flange is cut to size allowing for quick and simple installation.



Filter Diagram



### WARNING

Confined space entry may be required. Contractor to obtain all equipment and training to meet applicable local and OSHA regulations regarding confined space entry. It is the Contractor's or entry personnel's responsibility to always proceed safely.

## SAFETY NOTICE AND PERSONAL SAFETY EQUIPMENT

Jobsite safety is a topic and a practice addressed comprehensively by others. The inclusions here are merely reminders of whole areas of Safety Practice that are the responsibility of the Owner(s), Manager(s), and Contractor(s). OSHA and Canadian OSH, Federal, State/Provincial, and Local Jurisdiction Safety Standards apply on any given site or project. The knowledge and applicability of those responsibilities is the Contractor's responsibility and outside the scope of Contech Engineered Solutions.



Ear Protection



Safety Boots



Gloves



Hard Hat



Eye Protection



Ventilation and Respiratory Protection



Maintenance and Protection of Traffic Plan

## **DELIVERY**

Various delivery options are available. Please coordinate with the local company representative for details.

## **INSPECTION**

Inspection of the Bio Clean® Grate Inlet Filter and all associated parts shall be conducted at time of delivery by the site Engineer/Inspector and the Contractor. Any non-conformance to approved drawings or damage to any part of the system shall be documented on the Contech shipping ticket.

## **CATCH BASIN PREPARATION**

The Contractor is responsible for providing adequate and complete safety measures including fall protection, gas monitoring, and other safety equipment when installing the Bio Clean® Grate Inlet Filter.

The Contractor shall adhere to all jurisdictional and/or OSHA safety rules during installation of the filter.

The Contractor or Owner is responsible for appropriately barricading the catch basin from traffic in accordance with local codes.

## **INSTALLATION NOTES**

Each Bio Clean® Grate Inlet Filter shall be installed according to the locations, elevations, and other details shown on the approved drawings. Any modifications to the elevation, location, or other details shall be at the direction of and approved by the Engineer.

It is recommended that the catch basin is properly cleaned and inspected for any damage prior to installing the Grate Inlet Filter. The filter rests on the grate flange or on undermounts mounted to the walls of the catch basin using concrete wedge anchors.

Unless otherwise noted, all hardware and fasteners must be stainless steel. Under no circumstances shall galvanized or zinc-plated hardware or fasteners be used.

## TOOLS CHECKLIST

The following tools are recommended for this installation. Other tools may be necessary based on product configuration or site conditions. Always wear appropriate PPE such as gloves and safety glasses during installation.



Impact Driver or Ratchet  
and 7/16" Socket



Hammer Drill and  
1/4" Concrete Bit



Tape Measure



Hammer



Angle Grinder and  
Cutoff Disk



Marker



Caulk Gun and  
Sikaflex 1A



Level



Traffic Control



Manhole Hook

## PARTS AND HARDWARE CHECKLIST

The following parts and hardware are required for this installation. Ensure all pieces are present and free from damage or defects before beginning assembly. Check the Project Drawings for any project-specific configuration notes.



Filter Basket

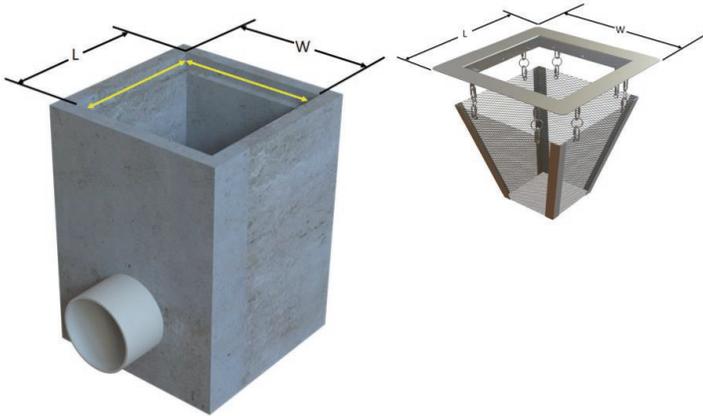


Wedge Anchors  
1/4" x 2-1/4"  
(Undermount Install Only)



Undermounts  
(Undermount Install Only)

## INSTRUCTIONS | OPTION 1 - MOUNTING ON GRATE FLANGE (PREFERRED METHOD)



### 1. MEASURE CATCH BASIN AND FILTER FLANGE

Measure to ensure the filter will properly and fully fit the catch basin opening. Once the grate is removed, use a tape measure to check the dimensions (length and width) of the grate frame lip. Next, check the dimensions (length and width) of the filter mounting flange. The mounting flange should be approximately 1/4" to 1/2" shorter than the grate frame lip ID.



### 1. TRIM FILTER FLANGE

If the mounting flange is too large it will need to be trimmed to fit. First, use a tape measure, straightedge, and marker to draw a cutting line. Then, cut the flange using an angle grinder with cutoff disk, making sure to use proper PPE such as protective eyewear. After cutting ensure that any sharp or protruding edges are ground smooth. Once cut, check the dimensions again to verify they are accurate and that the filter will properly fit.

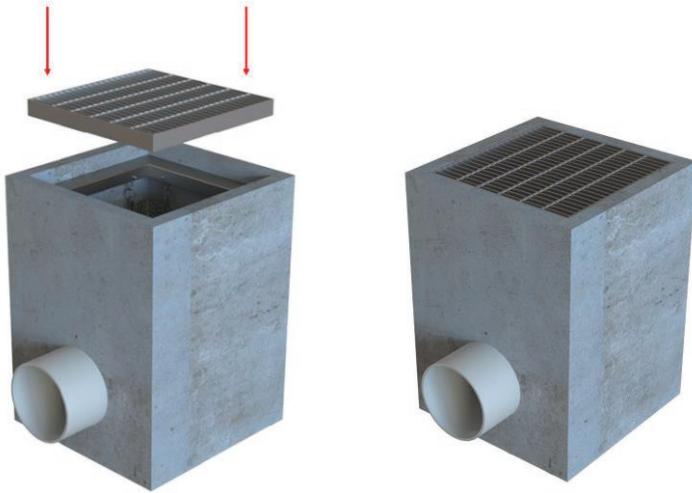
Caution: sharp edges may cause injury.



### 2. INSTALL FILTER

Clean the grate frame lip of any debris, then simply set the filter into place, resting the mounting flange on the grate frame lip. It is recommended that gloves are worn and proper lifting techniques are used. Larger filters may require two people to set in place. Do not drop the filter into place. Center the filter in the grate frame so any gaps are even on all four sides.

## INSTRUCTIONS | OPTION 1 - MOUNTING ON GRATE FLANGE (PREFERRED METHOD)

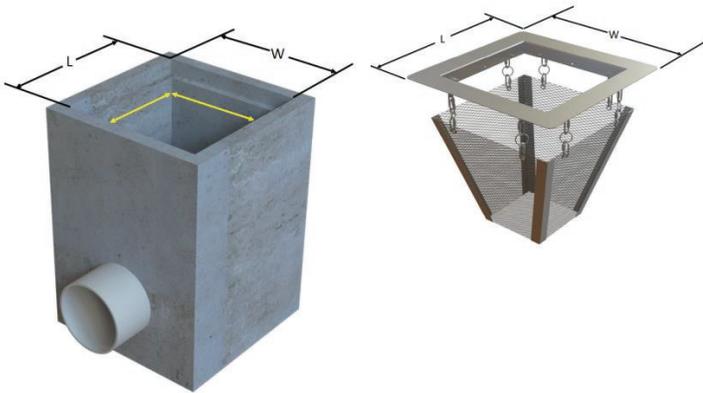


### 3. FINISH INSTALLATION

Installation is now complete. Be sure to remove all tools, seal up the catch basin by replacing the grate, and take down any traffic control. Ensure the install site is returned to its original condition.

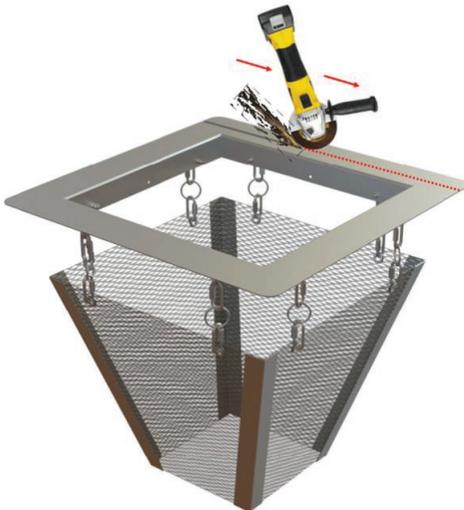
## INSTRUCTIONS | OPTION 2 – UNDERMOUNT CONFIGURATION

### 1. MEASURE CATCH BASIN AND FILTER FLANGE



Measure to ensure the filter and undermounts will properly and fully fit the catch basin opening. Once the grate is removed, use a tape measure to pull the dimensions (length and width) of the catch basin ID below the grate flange. Next, check the dimensions (length and width) of the filter mounting flange. The filter mounting flange should be approximately 1/4" to 1/2" shorter than the catch basin ID. Finally, check the length of each undermount - there should be two longer pieces and two shorter pieces, with the shorter pieces sized to fit between the long ones. Ensure the undermounts are arranged correctly when checking fit.

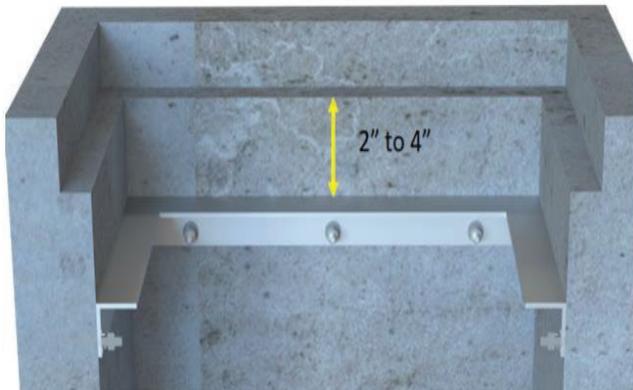
### 1. TRIM FILTER FLANGE AND UNDERMOUNTS



If the mounting flange or undermounts are too large they will need to be trimmed to fit. First, use a tape measure, straightedge, and marker to draw a cutting line. Then, cut the flange or undermounts using an angle grinder with cutoff disk, making sure to use proper PPE such as protective eyewear. After cutting ensure that any sharp or protruding edges are ground smooth. Once cut, check the dimensions again to verify they are accurate and that the filter and undermounts will properly fit.

Caution: sharp edges may cause injury.

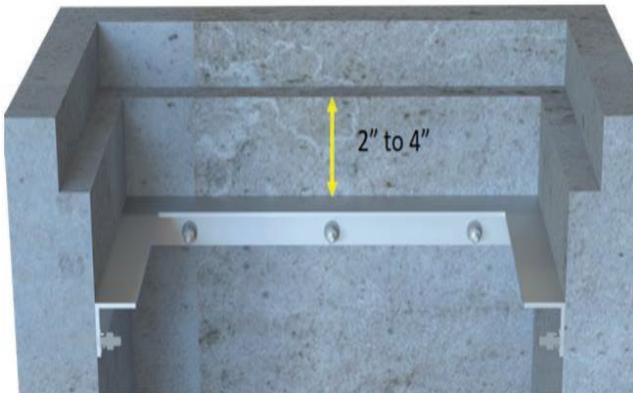
### 2. MARK INSTALL LOCATION



Using a tape measure and chalk or a large marker, draw a guideline 2" to 4" below the edge of the grate flange on all four sides of the basin walls. Ensure the lines are level.

The short undermounts are sized to fit between the long ones. Ensure the undermounts are arranged correctly when checking fit and before installation.

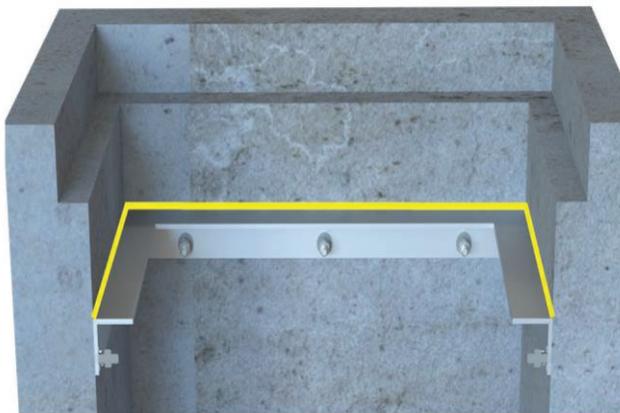
## INSTRUCTIONS | OPTION 2 – UNDERMOUNT CONFIGURATION



### 3. INSTALL UNDERMOUNTS

Orient the first undermount so the holes are on the bottom and align the top edge with the guideline (see picture). While holding the undermount in place drill holes 2" deep at each location where there is a pre-drilled hole. After each hole is drilled insert a wedge anchor into the hole. When all holes have been drilled drive the wedge anchors tight and tighten the nuts.

Repeat this process for the other three undermounts.



### 4. APPLY SEALANT

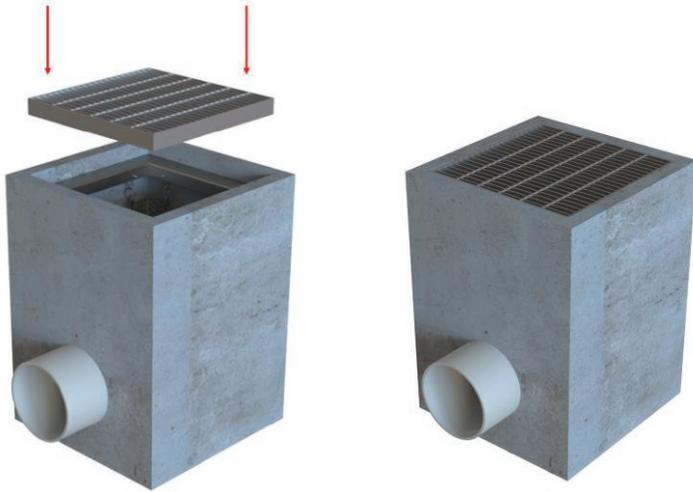
When all undermounts have been installed, apply Sikaflex-1A sealant where the tops of the undermounts meet the catch basin walls. All such joints must be fully filled with sealant and made completely watertight.



### 5. INSTALL FILTER

Clean the undermounts of any debris, then simply set the filter into place, resting the mounting flange on the undermounts. It is recommended that gloves are worn and proper lifting techniques are used. Larger filters may require two people to set in place. Do not drop the filter into place. Center the filter on the undermounts so any gaps are even on all four sides.

## INSTRUCTIONS | OPTION 2 – UNDERMOUNT CONFIGURATION



### 6. FINISH INSTALLATION

Installation is now complete. Be sure to remove all tools, seal up the catch basin by replacing the grate, and take down any traffic control. Ensure the install site is returned to its original condition.





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