



Site Survey instructions

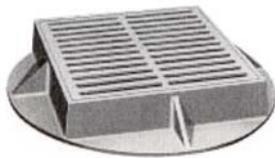
This section will assist you in the simple process of selecting the appropriate StormSack size and model for your specific application. To complete this task you will need to be able to:

- 1) Identify various styles of Catch Basin storm sewer grates and mounting frames
- 2) Understand what is meant by “Clear Space” and how its dimensions are calculated

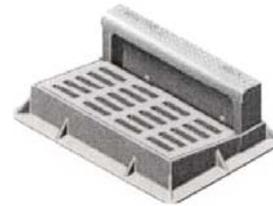
The process begins with a brief overview of catch basin types and terminology followed by a quick look at the StormSack; how it's positioned, system components and finally how to do the survey.

The StormSack Stormwater-filtering system is designed to fit into an existing parking lot or roadside storm sewer commonly called a “Catch Basin”. The StormSack can be adapted to fit into catch basin designs that feature 1) a flat Grated opening, or 2) a Combination design featuring a flat grate with an open curb box.

Flat Grate

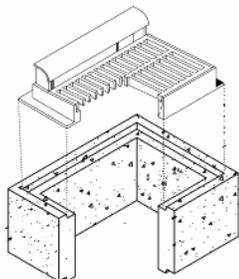


Combination



Both catch basin designs feature a frame with a metal grate and a masonry or concrete underground vault.

The metal frame/grate supports traffic loads and protects the storm water system by keeping large objects out of the vault. The grate is kept in place by a frame, which can be made out of cast iron or metal angle irons inserted directly into concrete. The vault below the grate collects and temporarily stores surface water runoff before directing it into the storm water system.



The StormSack filter is suspended from the grate frame down inside the opening to the vault intercepting and filtering the surface runoff of sediments and floating debris before it passes into the storm water system.

The standard StormSack is composed of 2 parts:

	<p>All StormSacks have a high strength aluminum mounting frame which provides attachment points for the replaceable, Geotextile filtering bag and the flange mounting kits which adapt the StormSack to various catch basin grate/frame systems.</p> <p>The images below show the Frame with 3-styles of mounting flange</p>	
		
<p>Type A: Fits Flat grate Storm sewer drains (drop inlets) that are flush with the surrounding surfaces</p> <p>Grates are usually plate steel with consistent thickness across the entire span without ribs.</p> <p>Grates may have locking tabs! Also, Type A flange kits require the least amount of depth below the grate</p>	<p>Type C: Fits Flat grate storm sewer drains (drop inlets) without curb boxes like the Type A. However the Grate material is typically cast Iron and features deep ribbing for added strength.</p> <p>The mounting flanges have a “Z” section shape which positions the StormSack down and away from the ribs</p>	<p>Type E: Fits Combination or grate with rear curb box style storm sewer inlets.</p> <p>Grate material can be either steel or cast iron</p>

With the catch basin style identified the next step will be to measure “Clear Space”.

Clear Space is simply the area inside the frame mounting ledges. This area must be clear because it will eventually be occupied by the StormSack.

In the image to the right, you can see the 4-sided steel grate support frame that is inset into the road surface. This frame sits on top of a concrete vault (see image on page 1). To calculate clear space you measure the length and width of the space BETWEEN the ledges and the depth of the vault below the BOTTOM of the ledge.



Any pipes, bricks or concrete that extends into this clear space must be removed prior to installation. If you can imagine a flat, plane surface extending across the width of one of the ledges and extending straight down to the bottom of the vault, anything that breaks that plane surface within the first 12 to 18 inches should be removed.

Now with this understanding of **Catch basin styles** and **Clear Space** you are ready to proceed with a Site Installation Survey.

Site Installation Survey:

Prior to ordering, the perspective catch basin must be surveyed to determine the drain type (Flat or combination), the depth to the bottom of the vault, grate dimensions (Width x Length x Thickness) and available "Clear Space".

1. The drain style is easily observable. StormSacks fit Flat grate or combination style storm sewer drains
2. The depth should be measured from the bottom of the frame to the vault floor. Approximately 30" is required.
3. When measuring the grate be sure to measure the grate thickness as this can interfere with the installation. Due to road load requirements, catch basin grates, especially the larger sizes are cast with deep ribs extending downward below the mounting frame. To accommodate this ribbing, the Fabco StormSack can be equipped with deep drop flange mounting kits. For Flat grates use kit "C" for Combination style drains use kit "E". For Steel grates or grates with even thickness use kit "A".
4. As the StormSack hangs down under the grate, the Geotextile bag occupies most of the available volume or space within the first 12" of depth. We call this "**Clear Space**", in other words space that can be occupied by the StormSack without interfering with the grate and without contacting objects protruding from the vault into the "**Clear Space**". Examples of objects that can protrude into the space and potentially contact the stormSack body are: the frame or ledge that supports the grate itself, drainage pipes, masonry ledges, and climbing steps.



Finally, during the survey procedure, examine the catch basin vault. Fabco recommends cleaning the catch basin vault to remove any collected sediments, trash or other debris, prior to installation. And don't forget "Clear Space" the walls of the chamber should be relatively flat and straight with little or no protrusions from tree roots, drainage pipes, loose bricks or other objects especially within the first 12 to 18 inches.

When you have recorded all the pertinent measurements, refer to the StormSack sizes & capacities table in the brochure. To select the appropriate size:

- 1) Select one of the 3 width ranges (21-24", 25-30" & 31-36") that covers the actual width you measured during the survey
- 2) Move down the width column from top to bottom until you locate a length range (six ranges) that covers the length you measured.
- 3) The intersection of the Width column and the Length column defines the precise StormSack that will fit your grate / Open Space measurements
- 4) Once you have selected the StormSack size, select one of the 3 standard mounting "flanges (A, C or E) based on the catch basin sewer style.
- 5) Note: The StormSack design is very flexible in terms of width, length and depth. If you do not see a size that fits your requirements contact Fabco Industries for availability of Custom sizes and configurations.