



## FloGard®+PLUS Catch Basin Insert Filter by KriStar Enterprises

### Superior Performance in Catch Basin Filtration Systems



FloGard+Plus catches the trash and pollutants you're aware of, like plastic bottles, wrappers and grass clippings ... PLUS harmful hydrocarbons like grease and oil.

FloGard+Plus catch basin insert provides high performance removal efficiency. It provides solids filtration through a filter screen or filter liner PLUS hydrocarbon capture through a non-leaching absorbent material.

This innovative system effectively filters pollutants out of storm water, but does not impede maximum design flows thanks to its dual bypass features. And it does it all with a low installation and maintenance cost.

### Features

- Easy to install, inspect and maintain
- Easily retrofitted to existing drain catch basins - or used in new projects
- Economical and efficient
- Catches pollutants where they are easiest to catch (at the inlet)
- No standing water - minimizes vector, bacteria and odor problems
- Can be incorporated as part of a "Treatment Train"

### Benefits

- Lower installation, inspection and maintenance costs
- Versatile installation applications
- Higher return on investment
- Allows for installation on small and confined sites
- Minimizes vector, bacteria and odor problems
- Allows user to target specific pollutants



#### Filtering Flow

FloGard+PLUS is designed to capture sediment, debris, trash and oils/grease during low flows.



#### Initial Filtering High-Flow Bypass

Allows higher flows to bypass the device while retaining sediment and larger floatables (debris and trash).



#### Ultimate High-Flow Bypass

A unique feature that allows sustained maximum design flows under extreme weather conditions or when full containment has been met, while continuing to retain collected pollutants.

### FloGard+PLUS Test Results

Testing Agency	% TSS Removal	% Oil and Grease Removal
UCLA	80	70-80
U of Auckland Tonking & Taylor Ltd. (for city of Auckland)	78-95	N/A
U of Hawaii (for City of Honolulu)	80	N/A



## General Filter Configuration

FloGard+PLUS catch basin insert shall provide solids filtration through a filter screen or filter liner and hydrocarbon capture shall be effected using a non-leaching absorbent material contained in a pouch or similar removable restraint. Hydrocarbon absorbent shall not be placed at an exposed location at the entry to the filter that would allow blinding by debris and sediment without provision for self-cleaning in operation. Filter shall conform to the dimensions of the inlet in which it is applied, allow removal and replacement of all internal components, and allow complete inspection and cleaning in the field.

## Performance

Filter shall provide 80% removal of total suspended solids (TSS) from treated flow with a particle size distribution consistent with typical urban street deposited sediments. Filter shall capture at least 70% of oil and grease and 40% of total phosphorus (TP) associated with organic debris from treated flow. Unit shall provide for isolation of trapped pollutants, including debris, sediments, and floatable trash and hydrocarbons, from bypass flow such that re-suspension and loss of pollutants is minimized during peak flow events.

## Flow Capacity

Filter shall provide two internal high-flow bypass locations that in total exceed the inlet peak flow capacity. Filter shall provide filtered flow capacity in excess of the required "first flush" treatment flow. Unit shall not impede flow into or through the catch basin when properly sized and installed.

## Materials

Filter support frame shall be constructed of type 304 stainless steel. Filter screen, when used in place of filter liner, shall be type 304 or 316 stainless steel, with an apparent opening size of not less than 4 U.S. mesh. Filter liner, when used in place of filter screen, shall be woven polypropylene geotextile fabric liner with an apparent opening size (AOS) of not less than 40 U.S. mesh as determined by ASTM D 4751. Filter liner shall include a support basket of polypropylene geogrid with stainless steel cable reinforcement.

Filter shall be installed and maintained in accordance with manufacturer's general instructions and recommendations.

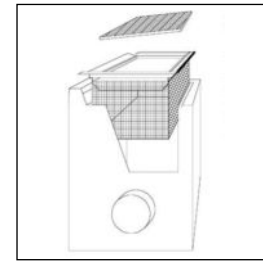
## Installation and Maintenance

Filter frame shall be rated at a minimum 25-year service life. All other materials, with the exception of the hydrocarbon absorbent, shall have a rated service life in excess of 2 years.

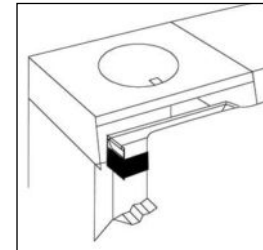
## FloGard+PLUS Competitive Feature Comparison

Evaluation of FloGard+PLUS Units (Based on flow-comparable units) (Scale 1-10, 10 being best)	FloGard+PLUS	Other Insert Filter Types**
Flow Rate	10	7
Removal Efficiency*	80%	45%
Capacity - Sludge and Oil	7	7
Service Life	10	3
Installation - Ease of Handling / Installation	8	6
Ease of Inspections & Maintenance	7	7
Value	10	2

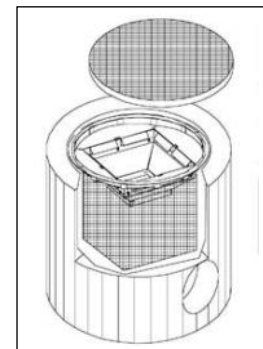
\*approximate, based on field sediment removal testing in urban street application \*\*average



**FloGard+PLUS  
Combination Inlet**



**FloGard+PLUS  
Curb Mount  
- Curb Inlet**



**FloGard+PLUS  
Round Grated Inlet**



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