



# Deflective Screening Device

A Stormwater Separation Solution



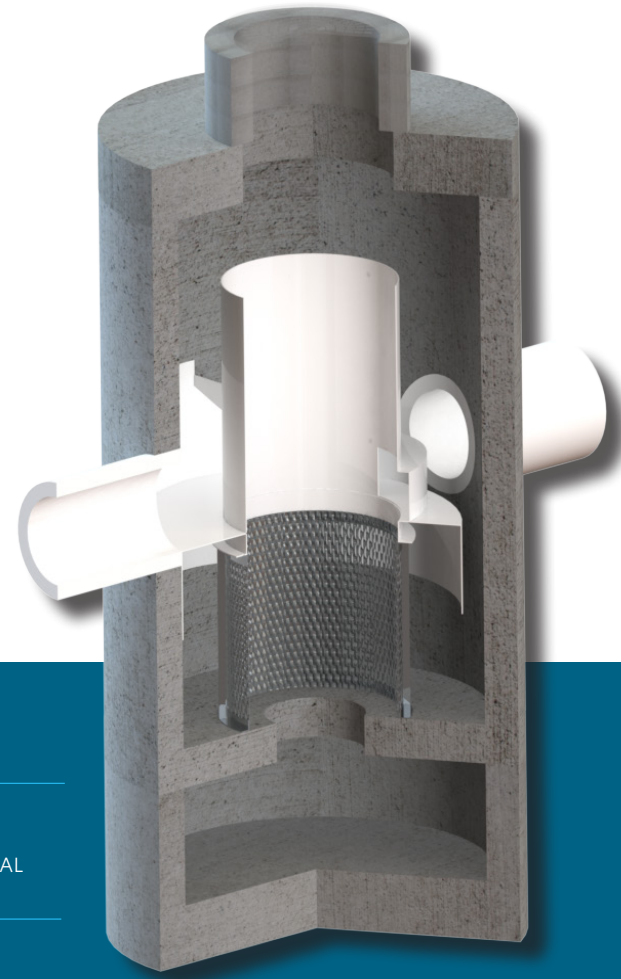
# OVERVIEW

The Bio Clean Deflective Screening Device (DSD) is a highly effective screening hydrodynamic separator designed to meet Full Trash Capture requirements along with providing efficient hydrodynamic separation.

The device is highly reliable, as it has no moving parts and provides great longevity due to the use of highly durable materials. The DSD utilizes a unique and effective non-clogging screening design that ensures high treatment flow rates are maintained between maintenance intervals. The special screen has opposite facing openings from the flow direction of incoming stormwater. As water enters the treatment chamber, it spins in a clockwise direction which creates a continuous cleaning effect against the surface of the screen.

In addition to efficient trash capture utilizing a screen that captures 100% of particles down to 5 mm, its simple design allows for 80% TSS removal efficiencies for a particle size distribution typically found in stormwater runoff. The system also offers an internal bypass and efficient capture and retention of free loading oils and floatable trash.

In addition, the system can accept multiple inflow pipes at various angles for easy placement. Designed for easy cleaning, the system can be maintained with a standard vacuum truck without access into the system.



## PERFORMANCE

**100%**  
REMOVAL  
OF TRASH

**90%**  
REMOVAL OF  
HYDROCARBONS

**80%**  
REMOVAL  
OF TSS

## ADVANTAGES

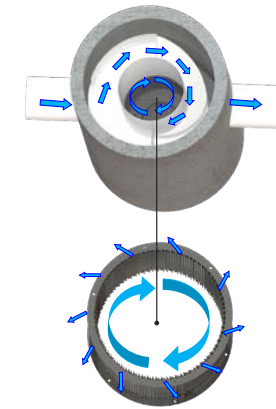
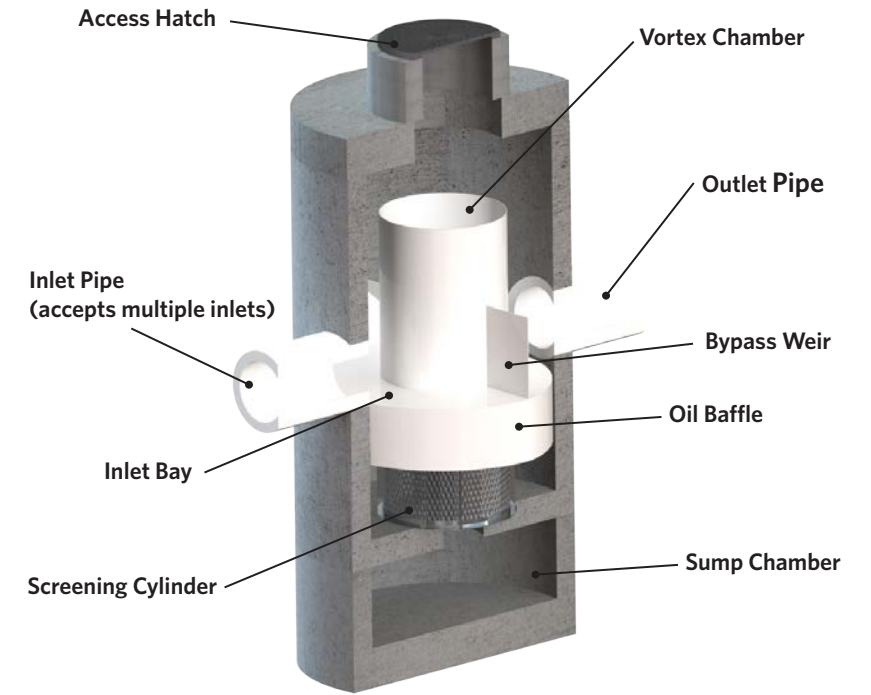
- MEETS FULL TRASH CAPTURE REQUIREMENTS
- EASIEST SEPARATOR TO MAINTAIN WITH EASY ACCESS TO SUMP CHAMBER USING STANDARD VAC HOSE
- NON-CLOGGING SCREENING TECHNOLOGY
- IN-LINE DESIGN ALLOWS FOR INTERNAL HIGH FLOW BYPASS
- 100% NONCORROSIVE INTERNAL COMPONENTS
- LOW COST ALTERNATIVE TO MORE EXPENSIVE DEFLECTIVE SHIELD SEPARATORS
- MADE IN THE USA

# OPERATIONS

Stormwater runoff may enter the DSD via one or more inlet pipes or by grated inlet. Water enters the inlet bay where it is directed to the curved inlet channel. This channel is curved and directs flow into the vortex chamber at an increased velocity along its inner wall creating a clockwise -flowing vortex.

This vortex helps to capture all trash, debris, and suspended solids in the center of the chamber. It continues downward into the screening cylinder area of the device. The water flow caused by the vortex creates a "self-cleaning" effect along the surface of the screen preventing clogging of the screen. As treated water passes through the screen, it rises toward the outlet.

The oil baffle traps and retains oils, grease, and other hydrocarbons from flowing toward the outlet. Flows above the screen capacity bypass over the weir and straight to the outlet pipe, preventing any scouring of previously captured trash or sediment during higher flows.



Screening openings face the opposite direction from the flow path preventing clogging of the screens and allowing for continuous self-cleaning.

# SPECIFICATIONS

MODEL #	DIAMETER (ft.)	TREATMENT FLOW RATE (cfs)	SURFACE AREA (sq. ft.)
DSD-48-2418	4	0.7	12.6
DSD-60-2424	5	1.1	19.6
DSD-60-2430	5	1.6	19.6
DSD-72-3624	6	2.0	28.3
DSD-72-3636	6	3.0	28.3
DSD-96-4836	8	4.5	50.2
DSD-96-4848	8	6.0	50.2
DSD-120-6758	10	11.0	78.5
DSD-120-6764	10	14.0	78.5
DSD-144-8484	12	25.0	113.0
DSD-144-94102	12	38.0	113.0



# INSTALLATION



Installing the DSD is quick and easy. The system is composed of a base section, middle riser with holes for pipe connections and internals pre-installed, a top, risers to bring access to finish surface, and access covers.



Installation of the system follows the same procedures as standard manhole installation. We carry the structures in inventory allowing for short lead times to meet your project schedule.

# MAINTENANCE



The DSD can be accessed from the finish surface and cleaned using a standard vacuum truck.

Access into the sump chamber below is provided through the separation cylinder. With trash and sediment centralized in this area, maintenance can be quickly completed to reduce overall cleaning costs.

**Bio Clean**  
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