



**CONTECH**<sup>®</sup>  
ENGINEERED SOLUTIONS  
A QUIKRETE<sup>®</sup> COMPANY

# Hydrodynamic Separation



# The experts you need to solve your stormwater challenges



**Contech is the leader in stormwater solutions, helping engineers, contractors and owners with infrastructure and land development projects throughout North America.**

With our responsive team of stormwater experts, local regulatory expertise and flexible solutions, Contech is the trusted partner you can count on for stormwater management solutions.

## Your Contech Team



### **STORMWATER CONSULTANT**

*It's my job to recommend the best solution to meet permitting requirements.*



### **STORMWATER DESIGN ENGINEER**

*I work with consultants to design the best approved solution to meet your project's needs.*



### **REGULATORY MANAGER**

*I understand the local stormwater regulations and what solutions will be approved.*



### **SALES ENGINEER**

*I make sure our solutions meet the needs of the contractor during construction.*

**Contech is your partner in stormwater management solutions**



## Removing Pollutants using Hydrodynamic Separation

HDS systems play a vital role in protecting our waterways by removing high levels of sediment, trash, debris, and hydrocarbons from stormwater runoff.

Frequently used as end-of-pipe solutions, they are also used to provide stormwater quality treatment in places where space is limited.

HDS systems capture and retain a variety of stormwater pollutants and are very easy to maintain. These two key benefits have resulted in new uses for HDS technologies, such as pretreating detention, Low Impact Development, and green infrastructure practices, as well as other land-based stormwater treatment systems.

*Utilize high-performance hydrodynamic separation to effectively remove finer sediment, oil and grease, and floating and sinking debris.*

CASCADE  
separator®



SATURN  
SEPARATOR™

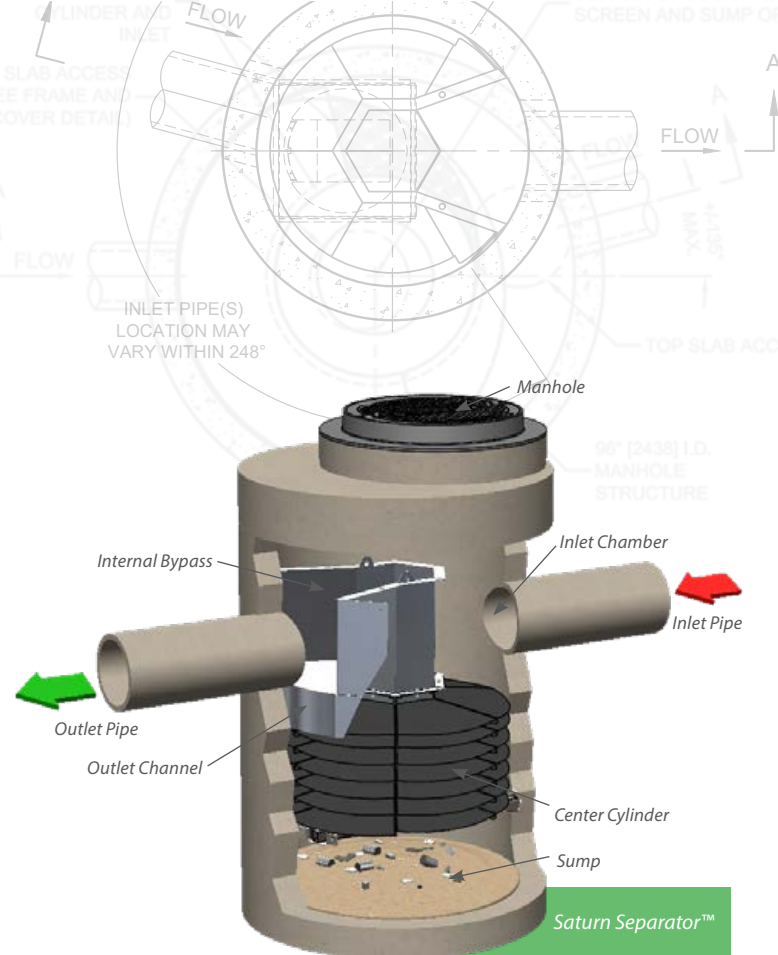
# Saturn Separator™

## NJDEP Certified for 50% TSS removal

The Saturn Separator™ is Contech's newest innovation in stormwater treatment, combining high-flow sediment capture with a compact footprint and easy, unobstructed access for maintenance.

What makes the Saturn Separator unique is its series of seven flow rings, which dissipate energy, prolong the flow path, and enhance sediment settling. The system is designed to handle high flow rates without scouring previously captured pollutants and includes an internal bypass for peak-flow storm events.

The result is a system that treats high flow rates in a small footprint, providing an efficient and economical solution for a wide range of sites.



Learn More:

[www.ContechES.com/saturn](http://www.ContechES.com/saturn)

| FEATURE                                             | BENEFIT                                                  | MANHOLE SIZE (FT) | TOTAL SUMP DEPTH | NJDEP 50% TSS MAX. TREATMENT FLOWRATE (CFS) |
|-----------------------------------------------------|----------------------------------------------------------|-------------------|------------------|---------------------------------------------|
| Unique flow rings                                   | Superior TSS removal, reduced system size and costs      | 4                 | 4.55             | 1.93                                        |
| Internal bypass                                     | Eliminates the need for a separate bypass structure      | 5                 | 6.15             | 3.02                                        |
| Clear access to sump and stored pollutants          | Fast, easy maintenance                                   | 6                 | 6.15             | 4.35                                        |
| Inlet area accepts wide range of inlet pipe angles* | Design and installation flexibility                      | 8                 | 8.15             | 7.73                                        |
| Accepts multiple inlet pipes*                       | Eliminates the need for separate junction structure      | 10                | 10.05            | 12.07                                       |
| Grate inlet option*                                 | Eliminates the need for a separate grate inlet structure |                   |                  |                                             |

\*Alternate inlet configurations are subject to local regulatory requirements.

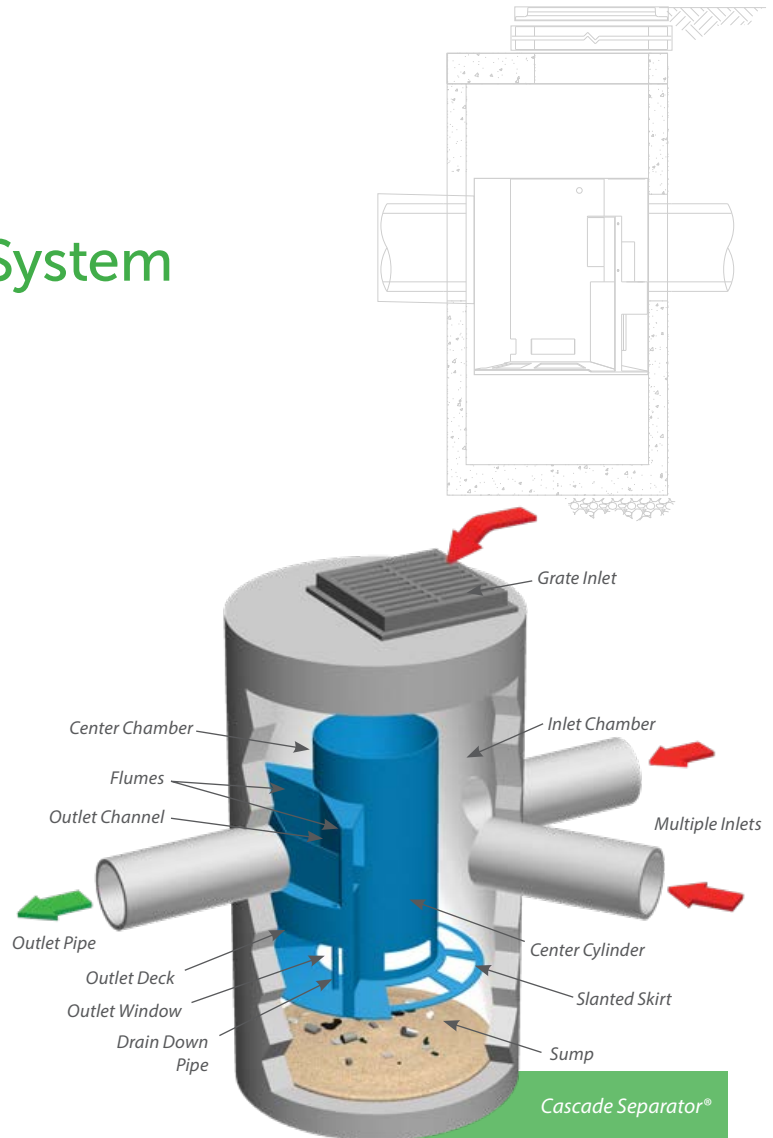
Industry leading hydraulic loading rate of 69 gpm/sf

# The Cascade Separator® System

## Advanced Sediment Capture Technology ...

The Cascade Separator® was developed by Contech's stormwater experts using advanced modeling tools and Contech's industry leading stormwater laboratory.

This innovative hydrodynamic separator excels at sediment capture and retention while also removing hydrocarbons, trash, and debris from stormwater runoff. What makes the Cascade Separator unique is the use of opposing vortices that enhance particle settling and a unique skirt design that allows for sediment transport into the sump while reducing turbulence and resuspension of previously captured material. These two factors allow the Cascade Separator to treat high flow rates in a small footprint, resulting in an efficient and economical solution for any site.



Learn More:

[www.ContechES.com/cascade](http://www.ContechES.com/cascade)

| FEATURE                                            | BENEFIT                                                  |
|----------------------------------------------------|----------------------------------------------------------|
| Unique skirt design & opposing vortices            | Superior TSS removal; reduced system size and costs      |
| Inlet area accepts wide range of inlet pipe angles | Design and installation flexibility                      |
| Accepts multiple inlet pipes                       | Eliminates the need for separate junction structure      |
| Grate inlet option                                 | Eliminates the need for a separate grate inlet structure |
| Internal bypass                                    | Eliminates the need for a separate bypass structure      |
| Clear access to sump and stored pollutants         | Fast, easy maintenance                                   |

## CASCADE MAINTENANCE

Cascade provides unobstructed access to stored pollutants, making it easy to maintain using a vacuum truck, with no requirement to enter the unit.

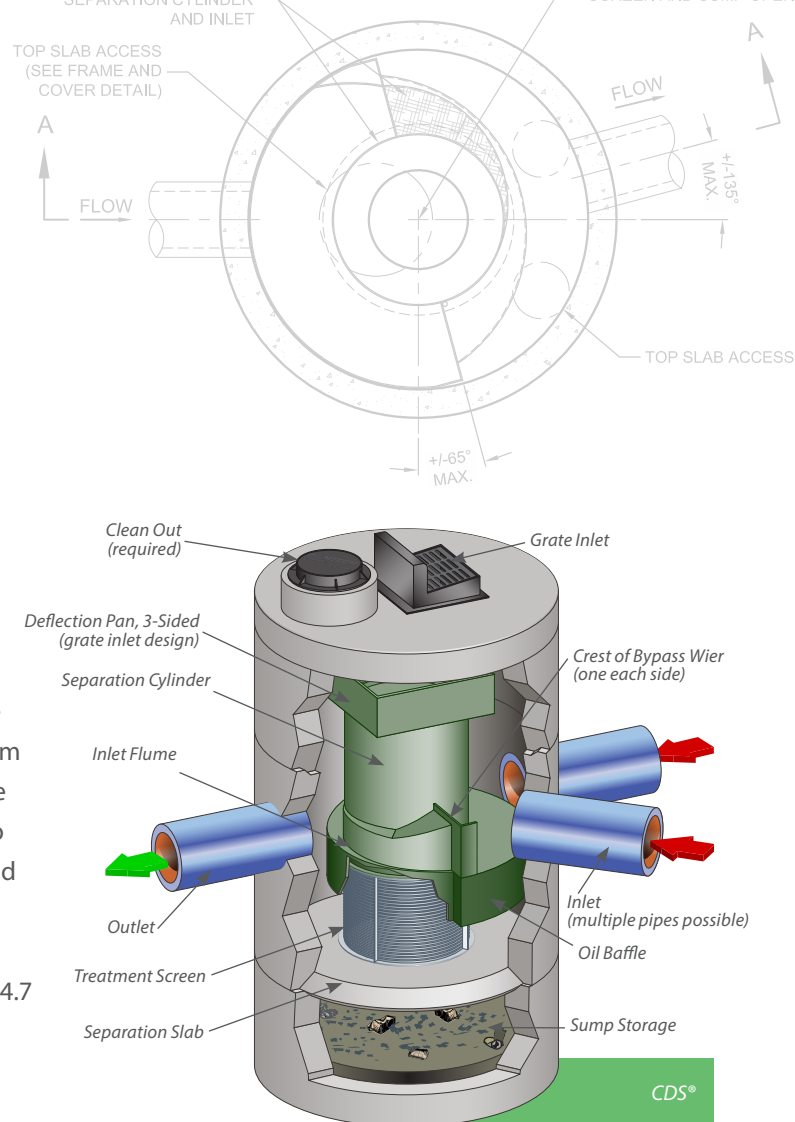
Setting new standards in Stormwater Treatment

# The CDS® System

## Superior Trash Removal ...

The CDS® is a hybrid technology that uses a combination of swirl concentration and indirect screening to separate and trap trash, debris, sediment, and hydrocarbons from stormwater runoff.

At the heart of the CDS system is a unique screening technology used to capture and retain trash and debris. The screen face is louvered so that it is smooth in the downstream direction. The effect created is called "Continuous Deflective Separation." The power of the incoming flow is harnessed to continually shear debris off the screen and to direct trash and sediment toward the center of the separation cylinder. This results in a screen that is self-cleaning and provides 100% removal of floatables and neutrally buoyant material debris 4.7 mm or larger, without blinding.



Learn More:  
[www.ContechES.com/cds](http://www.ContechES.com/cds)

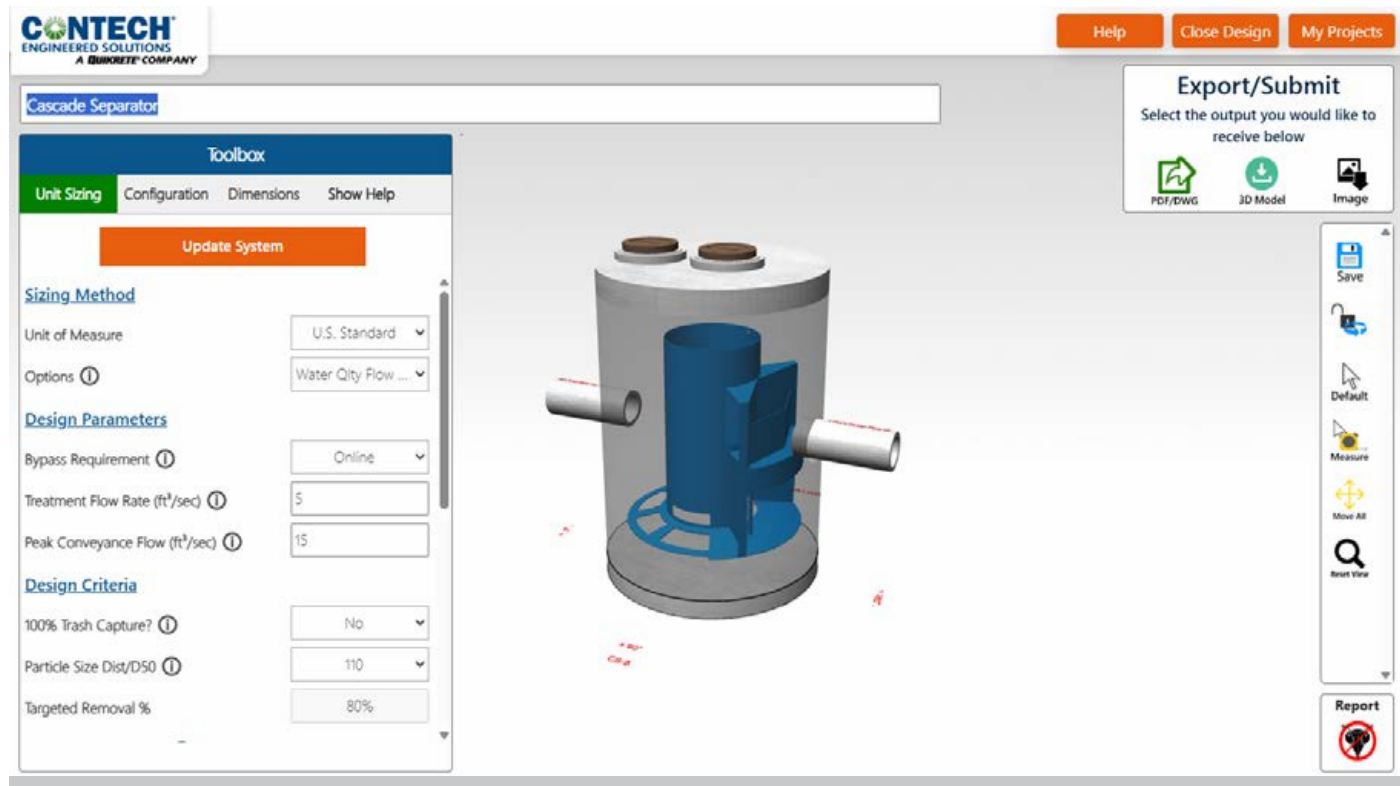
| FEATURE                                                                               | BENEFIT                                       |
|---------------------------------------------------------------------------------------|-----------------------------------------------|
| Captures and retains 100% of floatables and neutrally buoyant debris 4.7 mm or larger | Superior trash removal                        |
| Self-cleaning screen                                                                  | Ease of maintenance                           |
| Isolated storage sump eliminates scour potential                                      | Excellent pollutant retention                 |
| Internal bypass                                                                       | Eliminates the need for additional structures |
| Multiple pipe inlets and 90-180° angles                                               | Design flexibility                            |
| Clear access to sump and stored pollutants                                            | Fast, easy maintenance                        |

## SELECT CDS APPROVALS

- Washington Department of Ecology (GULD) – Pretreatment
- Canadian Environmental Technology Verification (ETV)
- California Statewide Trash Amendments Full Capture System Certified\*

\* The CDS System has been certified by the California State Water Resources Control Board as a Full Capture System provided that it is sized to treat the peak flow rate from the region specific 1-year, 1-hour design storm, or the peak flow capacity of the corresponding storm drain, whichever is less.

# Design Your Own Hydrodynamic Separator (DYOHDS™)



Learn More:

[www.ContechES.com/dyohds](http://www.ContechES.com/dyohds)

## Quickly prepare designs for estimates and project meetings ...

Engineers are always looking for new ways to quickly prepare designs for estimates and project meetings. Contech has developed an online tool to help with the hydrodynamic separation product selection process... the Design Your Own Hydrodynamic Separator (DYOHDS™) tool.

This free, online tool fully automates the layout process for identifying the proper hydrodynamic separator for your site. You can create multiple systems for each project while saving all project information for future use.

- Multiple sizing methods available.
- Site-specific questions ensure the selected unit will comply with site constraints.
- Multiple treatment options may be available based on regulations and site parameters.
- Follow up reports contain a site-specific design, sizing summary, standard detail, and specification.

A free, online tool to aid in the selection of a  
hydrodynamic separation solution.

# A partner you can rely on



STORMWATER  
SOLUTIONS



PIPE  
SOLUTIONS



STRUCTURE  
SOLUTIONS

Few companies offer the wide range of high-quality stormwater resources you can find with us — state-of-the-art products, decades of expertise, and all the maintenance support you need to operate your system cost-effectively.

## MANUFACTURING AMERICA'S INFRASTRUCTURE™

We manufacture engineered solutions for complex civil infrastructure challenges and create lasting value for project stakeholders through unrivaled expertise, support and workmanship.

To us, it's about being a trusted partner for project owners, engineers and customers while doing meaningful work that helps build our communities.

## TAKE THE NEXT STEP

For more information: [www.ContechES.com](http://www.ContechES.com)

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