Stormwater Treatment Solution for Industrial Applications and Environmentally Sensitive Areas
WHAT IS THE VERTICAL FLOW CLARIFIER?

The patented Vertical Flow Clarifier (VFC) from Jensen Stormwater Systems is a flexible and efficient stormwater treatment device for designers and engineers looking for a cost effective method to remove trash, fine sediments, petroleum hydrocarbons and neutrally buoyant debris from stormwater. The VFC is effective in a variety of applications as a single treatment unit or as part of a treatment train.

The concept of the VFC is based on performance perfected in water and wastewater treatment plants throughout the world.

HOW DOES THE VFC WORK?

The VFC is designed for maximum performance at the peak of the water quality design treatment flow to fully address pollutants of concern. The VFC allows for any inlet-outlet pipe geometry, both horizontally and vertically, to meet unique site and hydraulic constraints. The inlet pipe is connected to a center vertical stand pipe that surrounds a full depth well screen basket. This screen basket is the first treatment process, removing trash and coarse debris. Flow continues through the full depth screen to an annular space between the screen and stand pipe. Outlet ports near the bottom of the stand pipe initiate upward vertical flow where very fine sediments settle to the bottom. Detention in the clarifier allows floatable pollutants to rise to the surface.

Near the surface, a partially submerged baffle retains floatable contaminates, including petroleum hydrocarbons, that are retained by an absorbent boom material. Stormwater then flows under a continuous baffle and over a concentric v-notch weir, which catches neutrally buoyant debris.
VFC FEATURES

- Patented in the US
- A full capture device
- Proven removal of trash, coarse solids, fine sediments, oil and grease
- Effective retention of captured pollutants at high flows
- Adaptable for oil skimming or advanced water treatment systems

VFC BENEFITS

The VFC bypasses large storm events yet maximizes treatment while uniformly distributing flow through the interceptor. Designed for standard H-20 traffic or any special loading conditions, rail, airport or intermodal transportation facilities that may be required.

- Small footprint with variable VFC depth as needed
- Familiar manhole type installation
- Field adjustable for unforeseen site conditions in difficult construction areas
- Low head loss operation
- No moving parts or power requirements
- Cost effective treatment for multiple stormwater pollutant types
- Easy above ground monitoring of each pollutant of concern
- Low cost maintenance and simple pollutant removal with a standard vacuum truck

TYPICAL VFC APPLICATIONS

- New projects that need the best available technology in stormwater management
- Pre-treatment for rainwater/stormwater reuse or advanced water treatment systems, as well as for discharges to streams, ponds and lakes
- Pre-treatment for infiltration and bio-retention systems
- Stormwater system retrofits for urban/ redevelopment projects with shallow pipes and difficult site constraints
JENSEN STORMWATER SYSTEMS is part of a specialized water resources design group and a member of the JENSEN PRECAST family.

JENSEN PRECAST is one of the largest independently owned precast concrete manufacturers in the United States.

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