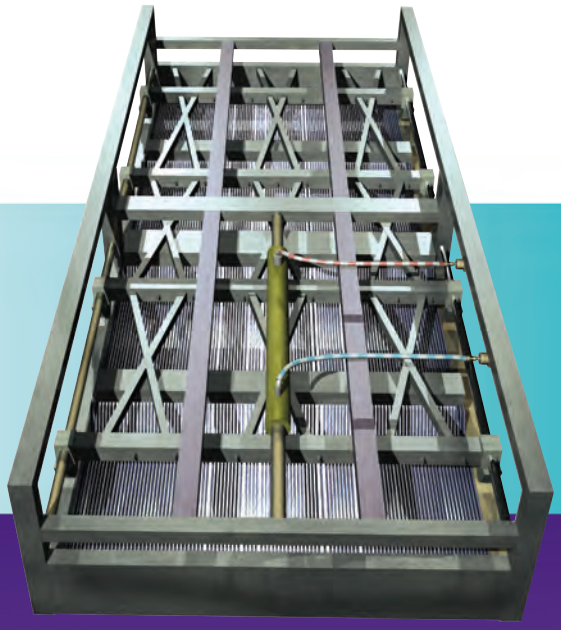
Raked Bar Screen

Efficient, reliable, and cost-effective screening system for large combined sewer overflows (CSOs), wet-weather storage facilities, pump-station overflows, or plant by-passes



PWTech™
PROCESS WASTEWATER TECHNOLOGIES LLC

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PROCESS DESCRIPTION

The Raked Bar Screen incorporates a horizontal fixed stainless steel bar-rack and a TIVAR* screen comb. The bars are continually raked by the hydraulically driven comb assembly.

- An ultrasonic level meter monitors the upstream water level.
- The screen bars are set at the same level as the overflow weir. A level signal alerts the the comb to begin its raking operation before the overflow occurs.
- The flow is upward through the screen bars.
- The TIVAR combs rake back and forth on a continuous basis to keep the screen face clear. Screenings are retained in the continuation flow.
- When the water level drops below the overflow weir, the sensor signals the screen to stop. The screen cleans itself, and resets automatically for the next overflow.

PATENTED FEATURES

Manufactured in modules, a framed structure houses the screen bars, as well as the hydraulically-driven cleaning assembly. The hydraulic power pack operates a double-acting cylinder, while pressure solenoid switches handle the bidirectional control of the control combs. Patented features of the Raked Bar Screen that distinguish its performance and reliability include:

1. Recessed release zones at every 1/2 meter of screen length where flow is blocked to give trash and debris a place to release back into the main flow channel.
2. Modular construction–screens are built up by assembling 1.2 meter (52 inch) modules to give the required screen area. This bar length eliminates the need for retensioning with temperature changes.
3. One screen can handle flow rates from 3 to 100 mgd.
4. 3/16, 1/4. 5/16, 3/8, and 1/2 inch (4, 6, 8, 10, and 12 mm) bar spacings.

HORIZONTAL VS. VERTICAL

The screen modules are installed horizontally onto the storm discharge weir. Use of horizontally configured screens ensures that all flows, high or low, are screened with minimum velocities through the screen. The entire flow is in contact with the screen so that the perpendicular flow path screens more efficiently.

The horizontal orientation has the least impact possible on the hydraulic grade line (HGL)–typically only 2 to 6 inches over existing conditions.

Horizontal orientation assures equal loading across the surface and thus symmetrical distribution of forces on the cleaning rakes. This minimizes jamming and breaking of comb times.

MAINTENANCE

The Raked Bar Screen requires minimal maintenance. All maintenance can be performed from the top/clean water side of the screen.

The screen, which is continually raked by a hydraulically driven cleaning mechanism, allows water to pass through to overflow while retaining the screenings within the flow headed to interceptor sewer and on to the wastewater treatment plant.

Available in your area from:

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PROCESS WASTEWATER TECHNOLOGIES LLC

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