Hydro-Jet® Screen

High Capacity Wet Weather Screen

Hydro International®

Automated screening requires no power to operate.

The Hydro-Jet® Screen is a self-activating, self-cleansing, cost-effective wet weather screening system with no moving parts and no power requirements. A compact device with high hydraulic throughput, the Hydro-Jet® Screen is perfectly suited for small to medium size sites.

Benefits

- No power and no moving parts
- Self-cleansing and self-activating
- Corrugated screen panels increase capacity without increasing footprint
- Coated screen panel resists grease buildup
- Small footprint with low capital and life cycle costs
- All corrosion resistant materials of construction
- Built in emergency bypass

Applications

- Floatables retention for wet weather induced overflows
- Retrofit or new CSO / SSO screening facilities
- Retention of aesthetic pollutants prior to treatment or storage facilities

Performance

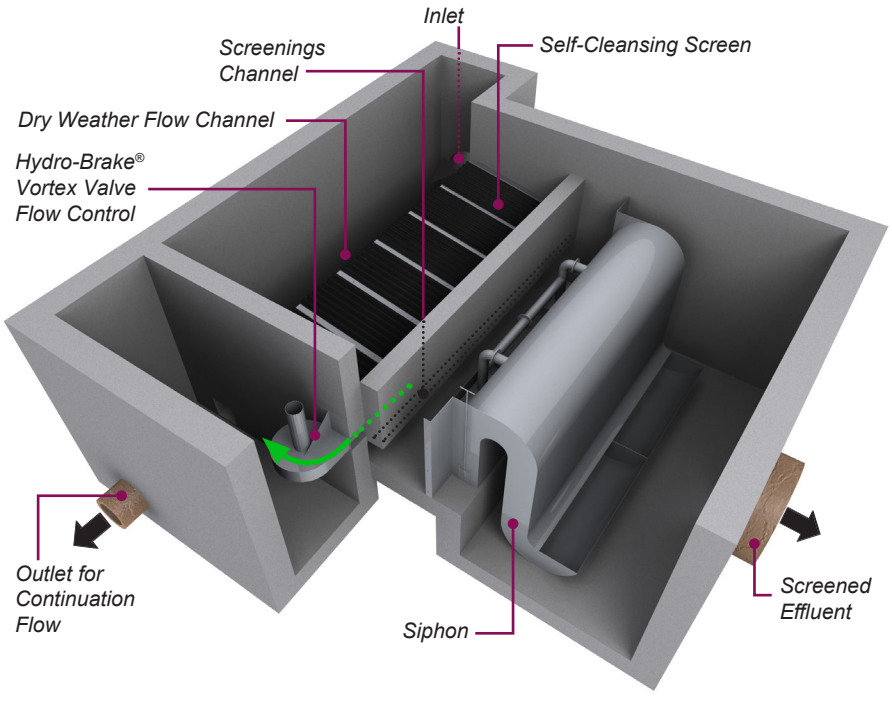
- Retains debris 4 mm in diameter
- No screening handling needed, debris stays in the collection system

How it Works

Dry weather flow passes through the Hydro-Jet® Screen chamber (red arrow) via the dry weather channel and continues to a downstream treatment plant (brown arrow).

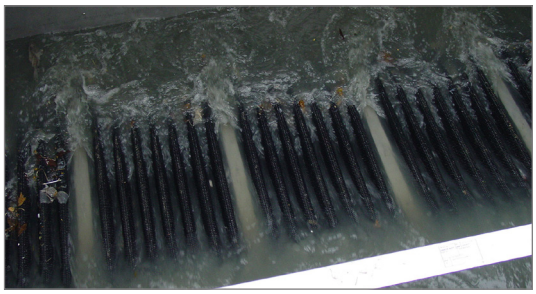
During wet weather events, the flow increases into the combined sewer system. The water level in the dry weather flow channel rises as the Hydro-Brake® Vortex Valve or other flow control mechanism limits the flow passed through the continuation flow outlet. Water in the dry weather flow channel rises until it spills over the weir wall and flows down through the angled self-cleansing screen.

As the water level under the screen rises to the crest of the siphon, the pocket of air trapped between the water surface and the screen creates a backwash mechanism. Debris is lifted off the screen and carried down the screenings channel, which is returned to the continuation flow (green arrow). The siphon breaks, discharging the screened effluent (blue arrow) to the receiving water body while drawing the water level in the overflow spillway down.



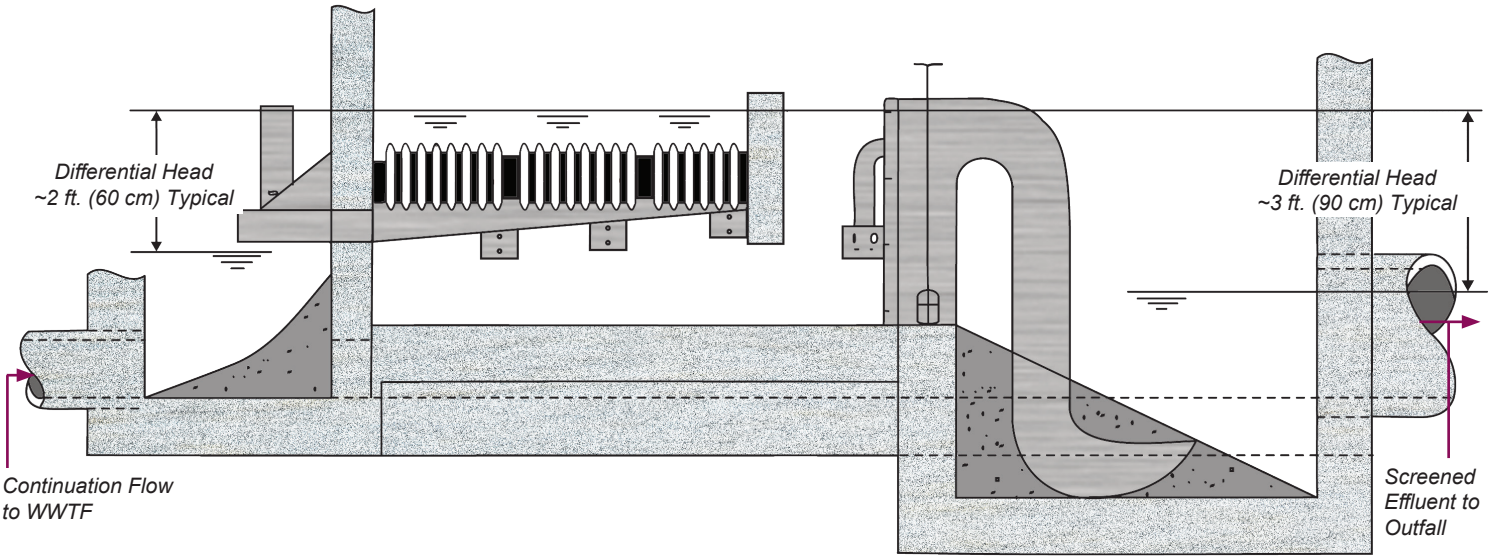
A unique design that optimizes performance.

Hydro-Jet Screen differs from conventional screening systems, flow is passed across the surface of the screen rather than perpendicular to the screen.



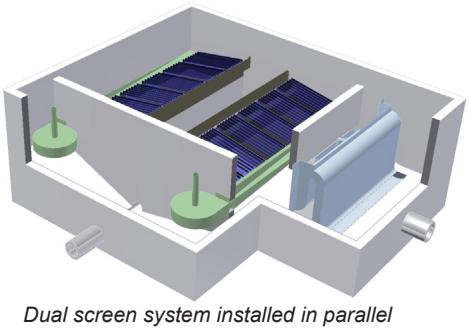
Continuous backwashing action cleans debris from screens.

Hydro-Jet® Screen Design

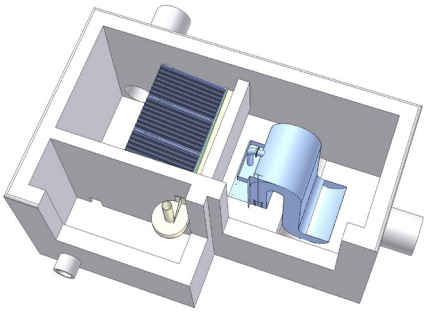


The diagram above highlights the maximum water levels which the Hydro-Jet® Screen can accommodate for proper operation.

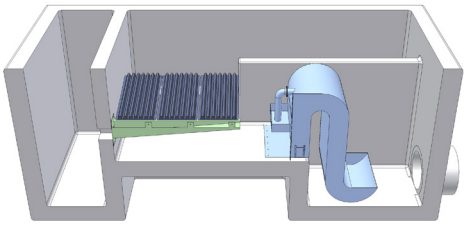
Configurations



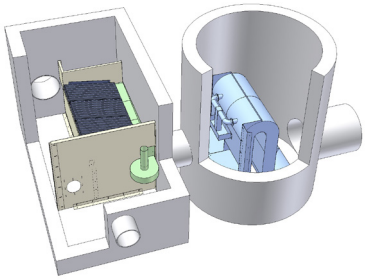
Dual screen system installed in parallel



L-Shaped configuration for larger sites



Rectangular configuration for small sites



Modified configuration for space constrained sites

Maintenance

The Hydro-Jet® Screen design incorporates a hydraulically operated siphon that regulates the self-cleansing dynamic backwashing system.

The Hydro-Jet® Screen should be visually inspected after the first two spill events and twice per year thereafter.

After a spill event the screen should be relatively clear of debris. If excessive debris is observed, a downstream surcharge condition is likely to have occurred. The screen should be hosed down and steps should be taken to reduce the top water level in the downstream sewer network.

Learn more

To learn more about how the **Hydro-Jet® Screen** can help, visit **hydro-int.com**, or contact us:

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