

Screen gross solids and floatables at small and medium-size CSO facilities.

The Hydro-Jet® Screen is a high-capacity combined sewer overflow and wet weather screen that is both efficient and self-sufficient. Self-cleaning, with no moving parts and no power requirements, the Hydro-Jet® Screen provides screening at high hydraulic throughput in a small footprint, reducing site space requirements and maintenance costs.

The system requires very little maintenance, making it ideal for small to medium-size remote or satellite CSO sites.

Applications

- Retrofits of existing CSO facilities.
- New CSO facilities.
- Remote and satellite treatment sites.
- Floatables control for CSOs and collection systems.

Benefits

Get high performance in a small footprint

Hydro-Jet® Screen is a compact system that works extremely efficiently, allowing a high hydraulic throughput in a small CSO site space.

Cut maintenance costs

The Hydro-Jet® Screen has no moving parts and no power requirements, meaning that the risk of breakage or downtime is very low. Further, the coated screen panel prevents grease buildup and blinding to ensure that the system continues to function optimally, and the screen is kept clean by a dynamic backwashing system produced by the hydraulic head present within the sewer system.



Performance

Screening:

- The Hydro-Jet® Screen provides 6 mm, 2 directional screening.

Maximum loading rate:

- Maximum recommended loading rate is 200 l/s/m², which equates to 150 l/s per screen panel.

Design Data

The Hydro-Jet® Screen is typically designed for a loading rate of 200 l/s/m². Other parameters include:

- Design inflow rate.
- Design pass on flow to treatment.
- Design spill flow.
- Design maximum top water level in main channel.
- Maximum acceptable top water level in screenings return chamber.
- Maximum acceptable top water level in siphon discharge chamber.

Screen size:

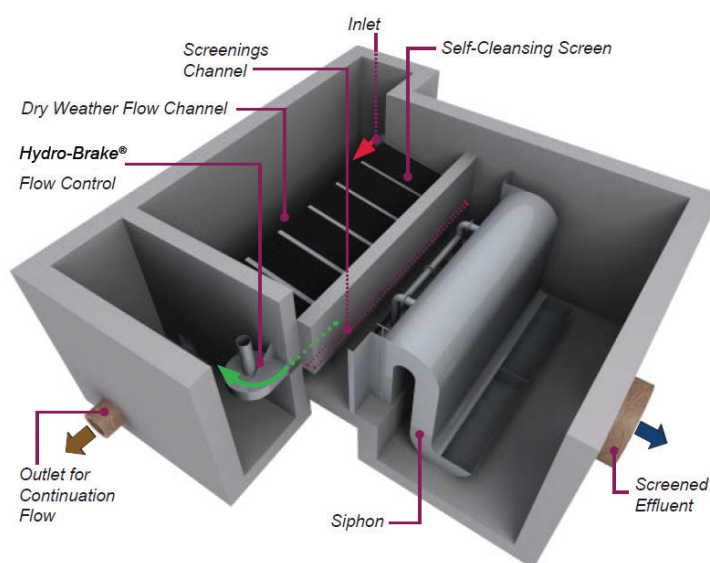
- Flows from 1-450 l/s can generally be accommodated within a rectangular chamber. Due to the size of the siphon required, flows greater than 450 l/s will require an L-shaped chamber configuration.

Screen weight:

- Each screen panel (1.215 x 0.641 m) is 20 kg.

How it Works

- 1) Dry weather flows pass through the Hydro-Jet® Screen chamber (red arrow) via the dry weather channel and continues to a downstream treatment plant (brown arrow).
- 2) During wet weather events, the flow increases as runoff drains into the combined sewer system. The water level in the dry weather flow channel rises as the flow control limits the flow passed through the continuation flow outlet.
- 3) Water in the dry weather flow channel rises until it spills over the weir wall and flows down through the angled self-cleansing screen.
- 4) 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.
- 5) Debris is lifted off the screen and carried down the screenings channel, which is returned to the continuation flow (green arrow).
- 6) When the water level crests the siphon, the screened effluent is discharged to the receiving water body (blue arrow) while drawing down the water level in the overflow spillway.



Maintenance

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Make it Smart:

Add Hydro-Logic® Event Duration Monitoring, telemetry and alerts to help you make better water decisions.

Learn more

To learn more about how the Hydro-Jet® Screen can help you to make better water management decisions, visit hydro-int.com, search **Hydro-Jet Screen** online or contact us:

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