

Hydro-Static[®] Screen

High Capacity
Wet Weather Screen

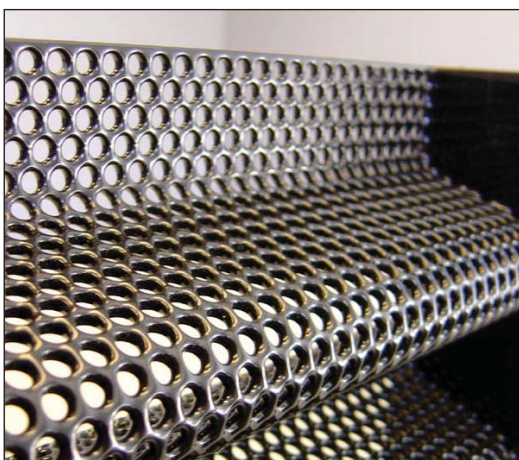
Cost effective floatables control system with partial cleansing capabilities

APPLICATIONS

- CSO sites with infrequent spills
- Floatables control within collection systems
- Retrofits or new CSO screening facilities

ADVANTAGES

- No power required
- No moving parts
- Economical screening solution
- Patented flow-modifying components provide partial cleansing
- Removal of debris down to 4mm in two directions
- Mesh screen panels are coated in a non-stick polymer
- Mesh screen panels are corrugated to increase flow-through capacity

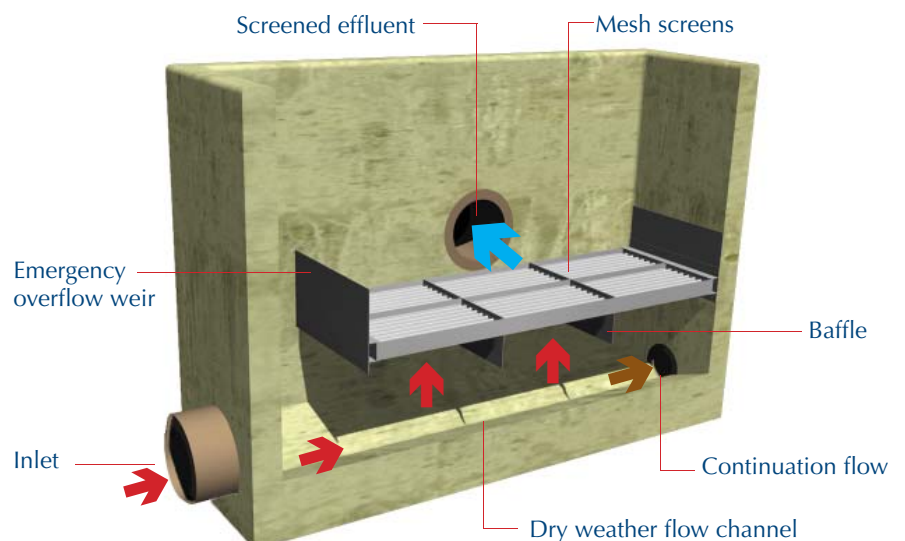


Debris does not stick to the polymer coated corrugated mesh screens.

The **Hydro-Static Screen** is a non-powered screening technology suitable for sites with infrequent overflows.

With a small footprint and a low capital cost, the **Hydro-Static Screen** offers an economically sustainable screen for projects with limited budgets.

Up Flow Configuration Shown



HOW IT WORKS

During dry weather conditions the flow to the treatment works will pass underneath the screens in the dry weather flow channel.

In a storm event the inflow rate to the chamber will exceed the outflow rate causing water levels to rise within the chamber and spill through the screens.

The **Hydro-Static Screen** is mounted over the dry weather flow channel so that the flow passes up and through the screen during a storm event (red arrows). Solids and floatables are trapped below the screen and returned to the sanitary continuation flow (brown arrow). Screened effluent is discharged to a receiving waterway (blue arrow).

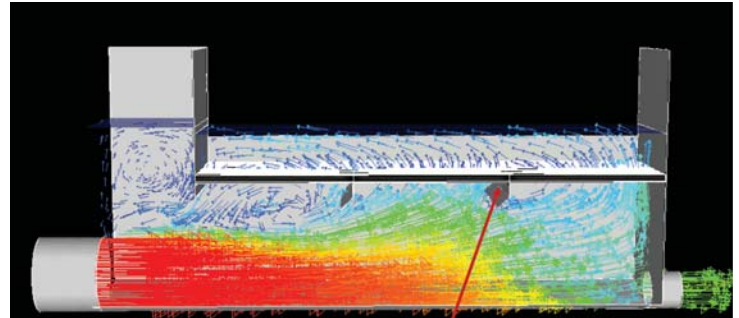
An emergency overflow weir is incorporated into the screen should the peak design flow be exceeded.

Maintenance

Patented flow-modifying baffles provide partial cleansing in the Up Flow configuration minimizing maintenance requirements.

The mesh screen panels are coated in a non-stick polymer to keep debris from sticking to the screen.

The **Hydro-Static Screen** is unique because of flow modifying components which enhance the naturally occurring recirculation patterns and therefore reduce the blinding effect when the screen is in operation.



Recirculation of flow paths shown through CFD modeling of the Hydro-Static® Screen

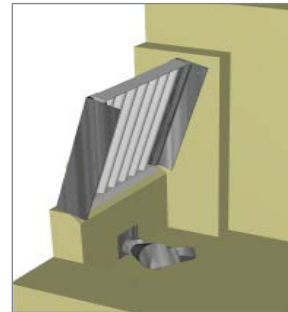
Configurations

The **Hydro-Static Screen** is available as either an Up Flow Screen or a Through Flow Screen.



Up Flow Screen

The **Up Flow Hydro-Static Screen** in the Upflow configuration is mounted horizontally over the dry weather flow channel so that the flow passes up and through the screen in a storm event.



Through Flow Screen

The **Through Flow Hydro-Static Screen** is offset from the vertical to encourage screenings to drop away from the corrugated mesh once the storm has subsided.

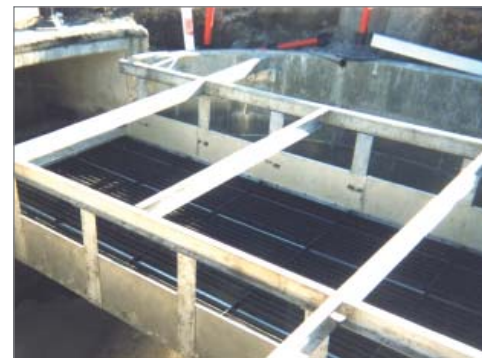
Design Requirements

The **Hydro-Static Screen** is offered as a package with the components pre-installed in a pre-cast concrete chamber.

The **Hydro-Static Screen** is sized for a loading rate of 148 gpm/ft² (100 l/s/m²).

Further design considerations include:

- Site details
- Wet weather flow rates
- Spill frequency



The Hydro-Static® Screen is well suited for retrofits.

For more information please call our office toll free at 800.848.2706 or inquire at www.hydro-international.biz.