

# HYDRO-FLO™ SCREENS

## VERY LOW HEAD LOSS

**No SCREEN BYPASS  
OR CARRY-OVER**

**GRID OPENINGS  
FROM 1 – 25 MM**



- Stainless steel link or mesh screening
- Excellent MBR or sensitive process protection
- All stainless steel construction
- No submerged drive parts
- Convenient access for lubrication
- Up to 100 mgd with compact design
- Low operating and maintenance costs
- Totally enclosed for safety, aesthetics, and odor control
- Proprietary Hydro-Flo Bypass Gate™ eliminates the need for a separate bypass channel

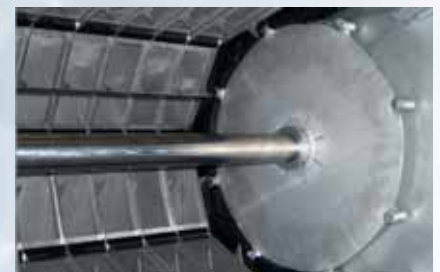
**Integral  
Washing Compactor™**  
for dewatering and  
conditioning of screenings



- Returns organics and wash water to channel
- Reduces disposal volume
- Conveys screenings for collection
- Reduces odor
- Screenings meet strict landfill requirements

### OPTIONAL FEATURES & ACCESSORIES

- 316 SS construction
- Controls – basic operation to complex automation
- Conveyors – shafted & shaftless
- Cold weather protection
- Patented, self cleaning channel filler plates
- *Hydro-Flo in a Box™* Septage Receiving Station



### Patented Drive Features

- Low friction slides
- Fractional hp requirements
- Only 2 grease fittings
- Grid does not touch drive or unloading mechanism
- Direct Drive – no chains or sprockets

**Quality  
Engineered**

**HYDRO-DYNE®**  
Engineering, Inc.  
[www.hydro-dyne.com](http://www.hydro-dyne.com)

**Quality  
Manufactured**

# Hydro-Flo™ 28

Model HF-28-30-117-1

Average Flow - 8.8 MGD

Opening Size - 1 mm



## Installation Specifications:

- Type of Flow- Influent for Water Treatment Plant
- Location- Membrane Bioreactor Plant in British Columbia, Canada

## Equipment Specifications:

- Screen Height- 117"
- Screen Width- 28"
- Screen Depth- 30"
- Screen Opening Size- 1 mm mesh
- Proprietary Hydro-Flo Bypass Gate™
- Controls- NEMA 4X 508A ULC listed control panel with: stainless enclosure, recycle timer, ultrasonic level sensor and controller, and variable frequency drive.



**Close up view of grid.  
The opening size of the  
mesh is 1 mm.**



**This grid drive sprocket design  
is unique to the Hydro-Flo. No  
chains are required, making it  
simple to operate and maintain  
while greatly reducing wear and  
horsepower requirements.**



**The rear of the  
screen features  
the Hydro-Flo  
Bypass Gate™. It  
is hinged for easy  
removal and al-  
lows flow bypass  
without removing  
the screen or  
unnecessary  
bypass channels.**



**Huge access panels provide ample access for  
inspection and maintenance of grid and spray header.**

# Hydro-Flo™ 74

Model HF-74-60-171-5

Average Flow - 88 MGD

Opening Size - 5mm



## Installation Specifications:

- Type of Flow- Industrial Wastewater from Cooling Tower
- Location- Aluminum Manufacturing Plant in Jamaica

## Equipment Specifications:

- Screen Height- 171"
- Screen Width- 74"
- Screen Depth- 60"
- Screen Opening Size- 5 mm laced links
- Wash water pump
- Spray wash water strainer
- Controls- NEMA 4X 508A UL listed control panel with: stainless enclosure, recycle timer, ultrasonic level sensor and controller, variable frequency drive, and automation for included wash water pump and strainer.



View of screen from grade level. The visible portion of the screen is above the channel. The remainder is below grade level.



**Discharge chute from front**



**Grid Close Ups**



**Automatic strainer for wash water**



**Pump for uptake of wash water behind the screen.**

# Hydro-Flo™ 38

with Washing Compactor™ and Screw Conveyor  
Model HF-38-24-236-3, WC-6-67-3 & SC-6-99  
Peak Flow - 14 MGD  
Opening Size - 3 mm



## Installation Specifications:

- Type of Flow- Influent for Municipal Wastewater
- Location- Wastewater Treatment Plant in California

## Equipment Specifications:

- Screen Height- 236"
- Screen Width- 38"
- Screen Depth- 24"
- Screen Opening Size- 3 mm laced links
- Washing Compactor Length- 67"
- Washing Compactor Diameter- 6"
- Screw Conveyor Length- 99"
- Screw Conveyor Diameter- 6"
- Proprietary Hydro-Flo Bypass Gate™
- Controls- NEMA 4X 508A UL listed control panel with: stainless enclosure, H-O-A switch for screen, Washing Compactor and Screw Conveyor, PLC with ethernet port for communication with plant SCADA, differential ultrasonic level sensor, timer, circuit breaker, fuse box, and surge suppressor.



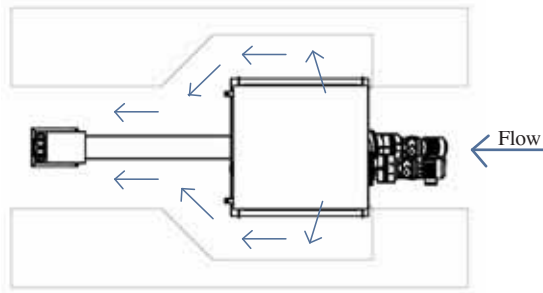
Close up views  
of grid and  
spray bar



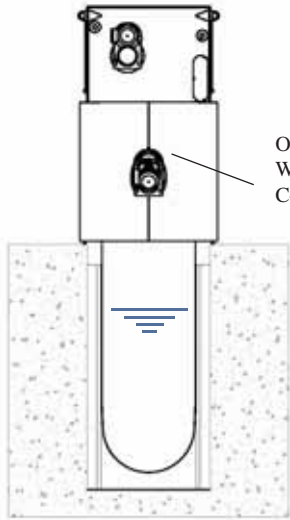
# HYDRO-FLO™ SCREENS

## Technical Information

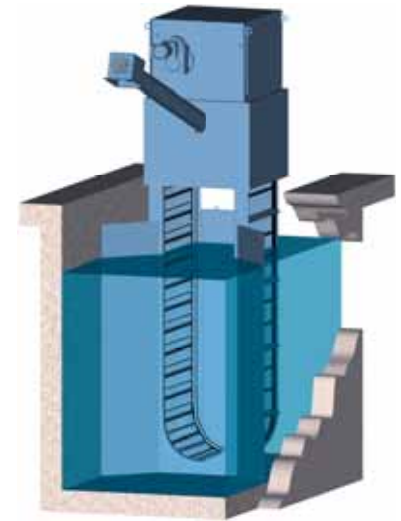
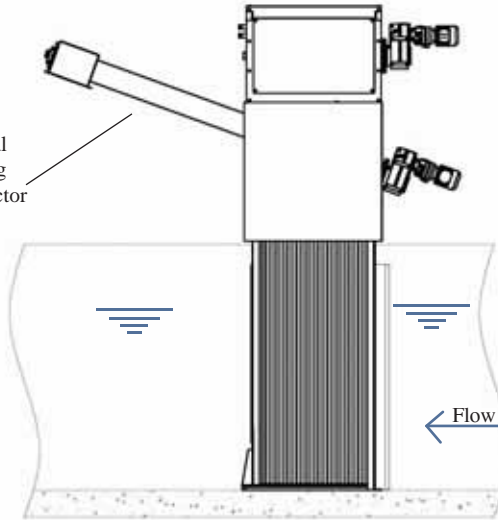
Hydro-Flo Screen – Top View



Front View



Side View



## Hydro-Flo Applications

### Municipal- Water and Wastewater

- Wastewater Treatment Plant Headworks
- Membrane Bioreactor (MBR) Protection
- Sludge Screening and Thickening
- Final Effluent Polishing
- Algae Removal
- Pump Stations

### Industrial-Wastewater

- Membrane Bioreactor (MBR) Protection
- Meat and Poultry Processing
- Chemical Processing
- Pulp and Paper
- Manufacturing
- Textile Mills
- Mining

### Industrial-Processes

- Membrane Bioreactor (MBR) Protection
- Cooling Water Intake- Power Generation
- Cooling Tower Scale Removal
- Irrigation System Protection
- Raw Water Intake

## Theory of Operation

*Fine screening with low headlosses is easily achieved with the Hydro-Flo's patented design. Flow passes into the screen and is diverted through the grid on each side of the unit. Stainless steel elements separate solids from the stream and lift screenings out of the channel. At the top of the unit a spray wash unloads the solids into the optional Washing Compactor. Organics and wash water are returned to channel, while solids are conveyed for disposal.*

*Stainless steel foot section prevents solids bypass, while screen design eliminates downstream problems caused by carry-over. Unlike traditional screens, all solids with diameters larger than screen opening sizes cannot pass under, through, or over screen. The proprietary Hydro-Flo Bypass Gate™ allows for simple flow bypass without additional channels or lifting equipment.*

## Open Area Percentages of Screen Grid

	Opening Size											
	1 mm	2 mm	3 mm	4 mm	5 mm	6 mm						
Hydro-Flo™ Mesh	36.1%	25.3%	42.2%	29.5%	48.5%	34.0%	53.1%	37.1%	54.2%	37.9%	55.3%	38.7%

	Opening Size																
	1 mm	2 mm	3 mm	4 mm	5 mm	6 mm											
Hydro-Flo™ Links	54.4%	38.1%	60.0%	42.0%	62.2%	43.6%	67.1%	46.9%	67.1%	46.9%	69.8%	48.8%					
	9 mm	10 mm	12 mm	15 mm	20 mm	25 mm	72.4%	50.7%	73.7%	51.6%	75.7%	53.0%	77.8%	55.7%	77.2%	54.0%	79.1%

LEGEND 0% Blocked 30% Blocked



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