



**Monster Separation Systems®**

 **JWC  
Environmental®**  
Trust Monster Quality™





# Bandscreen Monster®

Monster Separation Systems®



This system offers incredibly high capture rates and is able to remove a wider variety of solids, particularly small debris, better than traditional screens. It can also be used to protect high-tech Membrane Bioreactors.

The rotating panels are positioned parallel to the flow and as wastewater enters the screen it flows through the perforated screening panels. Easy to retrofit into existing channels and installs at a 90° inclination.

## Unique Flow Design

- Zero carryover and the highest capture rate of all screens\*
- Perforated openings capture twice as much debris as bar screens
- Perforated UHMW inserts limit hair pinning (*replaceable*) with stainless steel frame

## Enhanced Cleaning System

- Spray bar keeps the screen's panels clear

## Heavy-Duty Stainless Steel Roller Chains

- Stainless steel construction ensures long life
- Roller chains track smoothly in UHMW guides

## Options

- Monster Blind Diagnostic System (patented) detects, automatically modifies operation to enhance performance and alerts operators of potential screen blinding situations
- Chain Elongation System - this system not only tells you when to let up the chain but also tells you how much

## Equipment Sizing

**Screen panel hole size:** ø 1, 2, 3 or 6mm perforations

**Minimum wash water head at spray jets:** 3.4 bar

**Depths:** Up to 12.2m

## Materials of Construction

**Screen structure:** 304 or 316 stainless steel

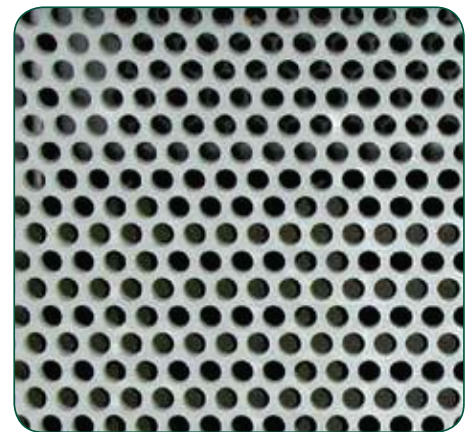
**Screen panels:** UHMW plates, 3, 6, 10mm thick mounted into a stainless steel frame



*This empty channel makes it easier to view the unique screen configuration.*



*A pair of Bandscreen Monsters operating at a wastewater treatment plant in Hawaii.*



*A view of the UHMW perforated screen panels*

\* UK-WIR Screen Evaluation Comparative Report 1999-2011





# Photo Gallery

Bandscreen Monster® Installations



*Bend, Oregon*



*Cambridge Springs, Pennsylvania*



*Schofield, Hawaii*



*Burley, Idaho*



*Missouri River, Montana*



*JEA Naussa County, Florida*



*Lodi, California*



# Bar Screen Monster®

Monster Separation Systems®



Self-contained and submersible

The highly efficient Bar Screen Monster uses a reciprocating rake to screen out debris in headworks and pump stations. It is designed to provide quick removal of heavy slugs of debris in order to protect downstream processes.

## Heavy Duty Design

- All Stainless steel construction
- Completely self-contained and shipped fully assembled and ready to operate
- Completely enclosed above the operating floor level with easy to remove stainless steel guards
- The pin rack system can be removed from the side frame in 1.2m sections, and individual rollers and bushings can be removed.

## Submersible Drive Motor

- 0.7 kW fully submersible, explosion proof brake motor
- Requires lower headroom

## Stainless Steel Bar Rack

- Curved sill plate at base of the bar rack forms a path for rake
- Individual bars can be replaced and requires no welding

## Equipment Sizing

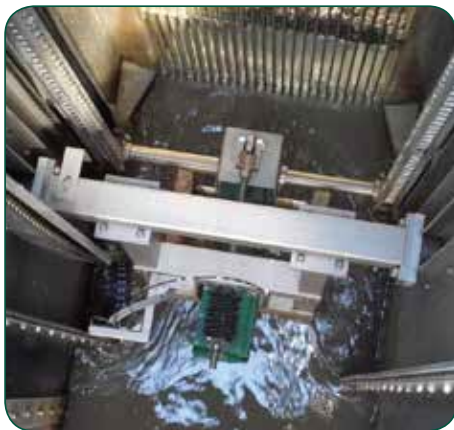
**Bar spacings:** From 10mm and up

**Widths:** From 0.76m to 2m

**Depths:** up to 4.5m

**Angle:** 80, 85 or 90 degree inclination

**Bar types:** Rectangular or Tapered Bars



*Protects downstream processes*



*Requires lower headroom and smaller installation area*



*Completely self-contained and shipped fully assembled and ready to operate*





# Chain & Rake Monster®

Monster Separation Systems®



This highly efficient continuously raked bar screen is used in headworks, pump stations and storm overflows where large concentrations of debris are expected. The Chain and Rake Monster is designed to provide quick removal of heavy slugs of material in order to protect downstream processes.

Replaceable rake teeth are bolted to the rake support which is bolted to the chain on each side. They pass through a bottom guide track which avoids the necessity of sprockets and bearings in the sewage flow increasing system life. For units that are 6m and deeper JWC has a design for sprockets in the bottom to help reduce the loads on the chain.

## Heavy Duty Design

- All stainless steel construction
- Completely self-contained and shipped fully assembled and ready to operate (or as required by the job site)
- Completely enclosed above operating floor level with easy to remove stainless steel guards

## Stainless Steel Bar Rack

- Curved sill plate at base of grid forms path for rakes
- Available with bar spacings from 1/4" (6mm) and up
- Efficient debris removal by pivoted wiper with UHMW blade

## Options

- Optional pivoting frame allows access to the entire unit from the operating floor level
- Chain Elongation System - this system not only tells you when to let up the chain but also tells you how much
- Hinged covers with clear inspection windows

## Equipment Sizing

**Bar spacings:** From 1/4" (6mm) and up

**Widths:** From 2' to 8.5' (0.6m to 2.4m)

**Depths:** Up to 15.2m

**Angle:** 70° to 90° degree inclination; 75° standard

**Bar types:** Rectangular or Tapered Bars



*Completely enclosed above operating floor level with easy to remove stainless steel guards*



*Able to handle large concentrations of heavy debris*



*A Chain and Rake Monster Discharges into an optional Screenings Washer Monster for a cleaner, drier discharge*



# Finescreen Monster®

Monster Separation Systems®



The Finescreen Monster incorporates a continuous band of stainless steel panels or optional StapleGuard ultra high molecular weight (UHMW) polyethylene perforated panels attached to heavy-duty stainless steel roller chains. Panels available with 3 or 6mm openings. Stainless steel rollers track in UHMW guides at the bottom of the screen, thus eliminating the need for sprockets or bearings submerged in the wastewater flow.

## Advanced Design

- Completely stainless steel
- UHMW side seals and bottom sealing strip prevent debris from passing around the screen

## Enhanced Cleaning System

- Two-stage process with modular brushing system and wash water jets help ensure the screen remains clean and clear
- Brush tension is controlled by an easy to adjust pivot

## Ease of Maintenance

- Easy to lift access covers and easy to reach assembly allows simple fine tuning

## Staple Guard UHMW Polyethylene Perforated Panels (optional)

- Reduces stapling (or hair pinning) on the panels
- Highly abrasion, wear and corrosion resistant

## Options

- Monster Blind Diagnostic System (patented) detects, automatically modifies operation to enhance performance and alerts operators of potential screen blinding situations
- Optional pivoting frame allows access to the entire screen from the operating floor level
- Optional Chain Elongation System

## Equipment Sizing

**Screen panel hole size:**  $\varnothing$  3 or 6mm holes

**Depth:** Up to 12.2m

**Width:** .6 to 2.4m

**Angle:** 60° to 80° inclination; 70° standard



*Exclusive StapleGuard panels are made of UHMW and are corrosion resistant (optional).*



*Solids are captured on the perforated panels and conveyed to the discharge level.*



*Dual Finescreen Monster removing solids and feeding a sluice*





# Photo Gallery

Finescreen Monster® Installations



*Las Vegas, Nevada*



*Rowlett Creek, Texas*



*Collier County, Florida*



*Bartlow, Florida*



*Mesquite, Texas*



*South Davis, Utah*



*Waco, Texas*

## Monster Separation System Options

### Chain Elongation Monitoring *(patent pending)*

- This automated software package alerts operators when to adjust the chain

### Optional Monster Blind Diagnostic System *(patented)*

- Detects and alerts operators of potential screen blinding situations

### Exclusive Easy Pivoting

- Optional pivoting frame allows access to the entire unit from the operating floor level (Chain and Rake and Finescreen)

### Custom Made Sluices

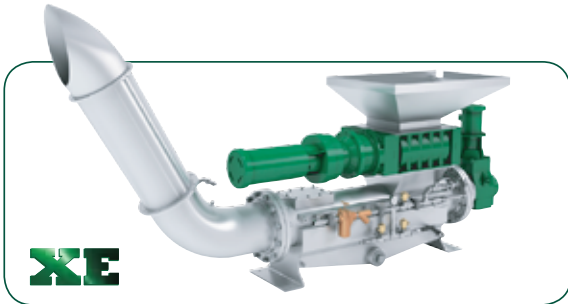
- Multiple sluice configurations for easy distribution of solids to dumpsters and optional Screenings Washer Monster



Custom sluice configurations



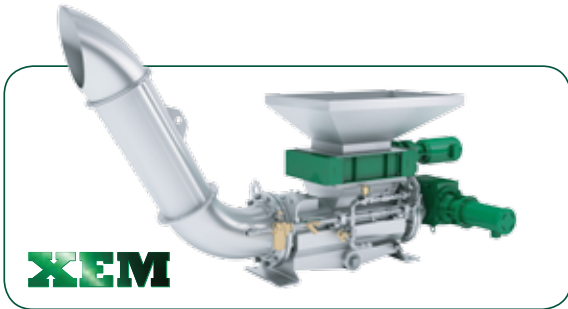
Patented Monster Blind Diagnostic System detects "blinding"



Screenings Washer Monster XE turns material from this...

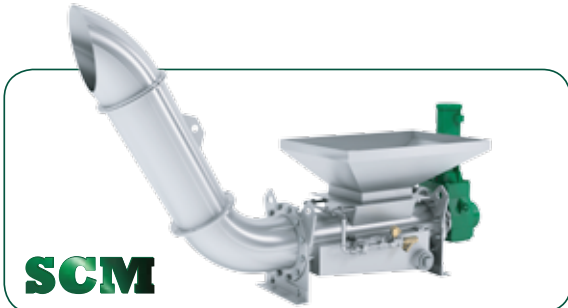


...to this! It takes a Monster to get screenings this clean!



## Screenings Washer Monster Options

- Roller base
- Custom hopper sizes and discharge lengths
- Muffin or Macho Monster Dual Shafted Grinder



Model	Type	Output
XE	Automated Grind / Wash / Compact	Cleanest
XEM	Grind / Wash / Compact	Clean
SCM	Compactor	Compact



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