

# Bull Shark Through Flow Screen

- ✓ Low headloss
- ✓ All stainless steel fabrication
- ✓ Grid opening options from 1 to 75 mm

No submerged sprockets, bearings or bushings

Large particle removal

Continuously cleaned

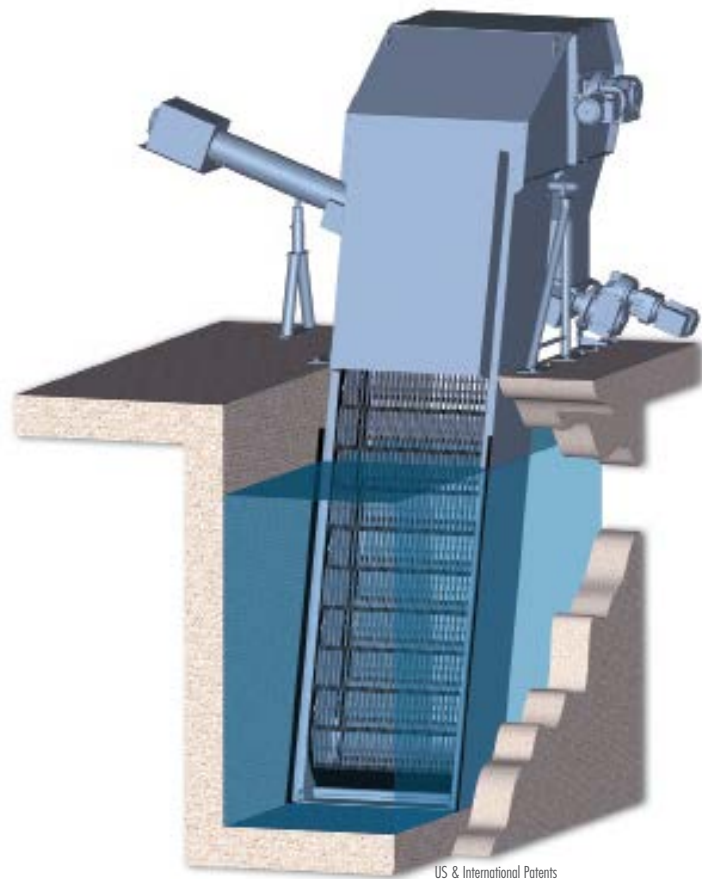
Excellent for prison applications

Easy installation and maintenance with all mounting and access above channel

Low profile bottom shoe and brush limit headloss and screen bypass

Low friction UHMWPE surfaces reduce wear and operation costs

Stainless steel links and supported panels are significantly stronger than plastic hooks and unsupported panels



## STANDARD - Features & Benefits

Practical design and material selection provide reliable and efficient operation

Direct drive uses no chains or sprockets

No rotating brushes required

Pivots from channel for easy flow bypass

Neoprene channel seals

Only two grease fittings per screen

Fully enclosed for operator safety

Custom designed per application

**HYDRO-DYNE**  
ENGINEERING

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## OPTIONAL - Products & Accessories

Low Flow, Heavy Duty, Super Duty and Front Discharge models

T304, T316 and specialty stainless steels

Stainless steel laced links, wire mesh and perforated panel or UHMWPE perforated panel grid openings

Cold weather protection

Spray wash or dry unloading

Controls are offered from basic operation to sophisticated automation

Electric, hydraulic or explosion proof drives

## ADDITIONAL - Compactors & Conveyors

for dewatering and conditioning of screenings

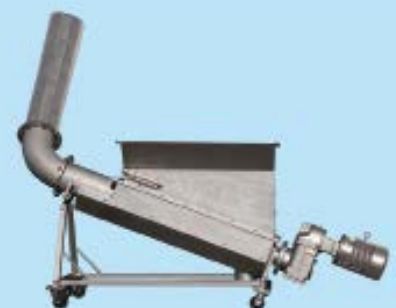
Shafted and shaftless flights

Returns organics and wash water to channel

Collects and conveys screenings for disposal

Compactors reduce disposal weight and volume, while bagging units can contain odor

Screenings meet strict landfill requirements



# Bull Shark Through Flow Screen

## Technical Information

### Nomenclature

C = channel width  
 D = depth of flow  
 D<sub>1</sub> = depth of grid  
 G = grid width  
 Q = flow  
 h = headloss  
 V<sub>1</sub> = inlet velocity  
 V<sub>2</sub> = exit velocity  
 eff = grid efficiency

### Example Calculation of Existing Channel

Given: C = 3' D = 6' V<sub>1</sub> = 2 fps  
 G = C - 6" = 30"  
 Q = C (D) V<sub>1</sub> = 36 ft<sup>3</sup>/s = 23.27 mgd

To determine headloss for a 6 mm grid with clean screen find:  
 Open Area = G (D<sub>1</sub>) eff = 9.43 ft<sup>2</sup>  
 V<sub>2</sub> = Q/Open Area = 3.82 fps  
 h = (V<sub>2</sub><sup>2</sup> - V<sub>1</sub><sup>2</sup>) / 0.186  
 h = 1.97 in

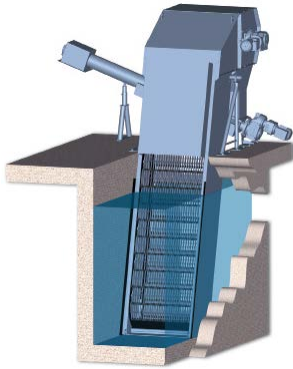
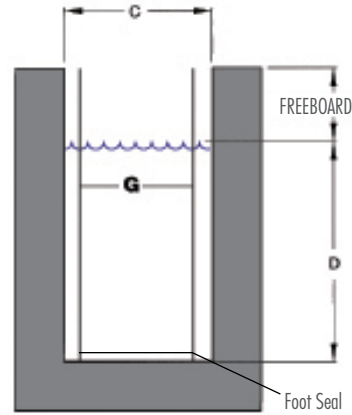
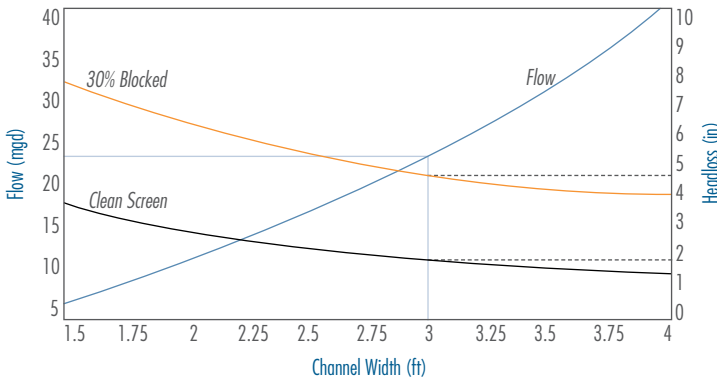
### Recommendations for Designing a Channel

Maintain V<sub>1</sub> above 2 fps to ensure scouring  
 Keep V<sub>1</sub> acceptable during off-peak flows by setting D = 2 (C)  
 Channel Depth = D + 12" freeboard  
 Narrower grid openings will reduce efficiency

$$\text{Grid eff} = \frac{\text{Grid Open Area}}{\text{Grid Total Area}} \quad \text{Screen eff} = \frac{\text{Grid Open Area}}{\text{Flow Area}}$$

Grid Open Area = Grid Total Area - Grid Closed Area  
 (due to spacers and grid elements)

Flow area = (C) (D)  
 Grid Width (G) = Channel Width (C) - 5" for C ≤ 30"  
 Grid Width (G) = Channel Width (C) - 6" for C ≤ 48"



Bull Shark - Original & Low Flow Series

### Open Area Percentages of Laced Link Screen Grid

3 mm	4 mm	5 mm	6 mm	9 mm	12 mm	15 mm							
62.2%	43.6%	67.1%	46.9%	67.1%	46.9%	69.8%	48.8%	72.4%	50.7%	75.7%	53.0%	77.8%	54.4%

Bull Shark - Heavy Duty Series

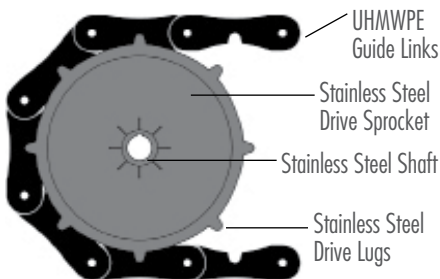
9 mm	12 mm	15 mm	20 mm	25 mm	50 mm	75 mm							
70.7%	49.5%	75.0%	52.5%	77.8%	54.5%	79.5%	55.7%	80.6%	56.4%	85.8%	60.0%	87.7%	61.4%

Bull Shark - Super Duty Series

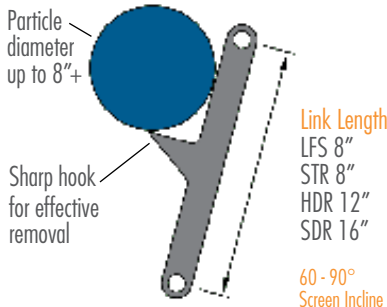
65.6%	45.9%	64.9%	45.4%	68.8%	48.1%	73.2%	51.2%	76.1%	53.3%	80.4%	56.3%	83.6%	58.5%
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Legend - Opening Size 0% Blocked 30% Blocked

### Grid Drive Sprocket



### Stainless Steel Links



### Bull Shark Screen

