

DUPERON®

## FLEXRAKE® HD PLATFORM HEAVY DUTY SCREENING

The FlexRake Heavy Duty platform is engineered to be the first line of defense for open channel applications where debris size and velocity may be unpredictable. The simple design easily manages a wide range of debris variations from aquatic vegetation and tree branches to general refuse like mattresses and oil drums, without shutdown. Its reliability and unmatched adaptability translate into everyday turbine, intake or pump protection and reliable performance in events of magnitude.

### THE DUPERON DIFFERENCE

#### FLEXIBLE DESIGN

- *Adapts to a range of unpredictable flow and debris conditions without operator intervention*

#### IMPROVED WORKER SAFETY

- *With no lower sprocket, there is no in-channel maintenance. The FlexRake is serviceable from the deck, eliminating diving or confined space entry. Automated system protects workers from manual raking*

#### RELIABLE OPERATION

- *Designed for 24/7 operation. Units can stand idle for long periods, yet reliably respond when needed during a storm or debris event*

#### LOW COST OF OWNERSHIP

- *Fractional horsepower, few parts, minimal maintenance; the FlexRake is easy to install, own, and operate by your own crew*

#### UNINTERRUPTED WATER FLOW

- *Continuously cleans the entire intake with multiple scrapers to avoid blinding and headloss to ensure water keeps moving*



# DUPERON® FLEXRAKE® HD

## ADAPTIVE TECHNOLOGY™

Duperon Corporation's roots are deep in the flood control and stormwater sector. From seasonal runoff to 100-year storms, open channel trash rakes must operate dependably. This makes reliability the key issue for automatic trash rakes/bar screen systems.

## PROVEN STANDARD OF SIMPLICITY

In 1995, Duperon invented the FlexRake and transformed the water and wastewater industry

### HOW THE FLEXRAKE WORKS



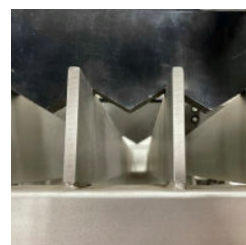
**1**  
The FlexLink™ articulates to a 90 degree angle, closing on the drive pin. Once closed, the sprocket drives the link system forward.



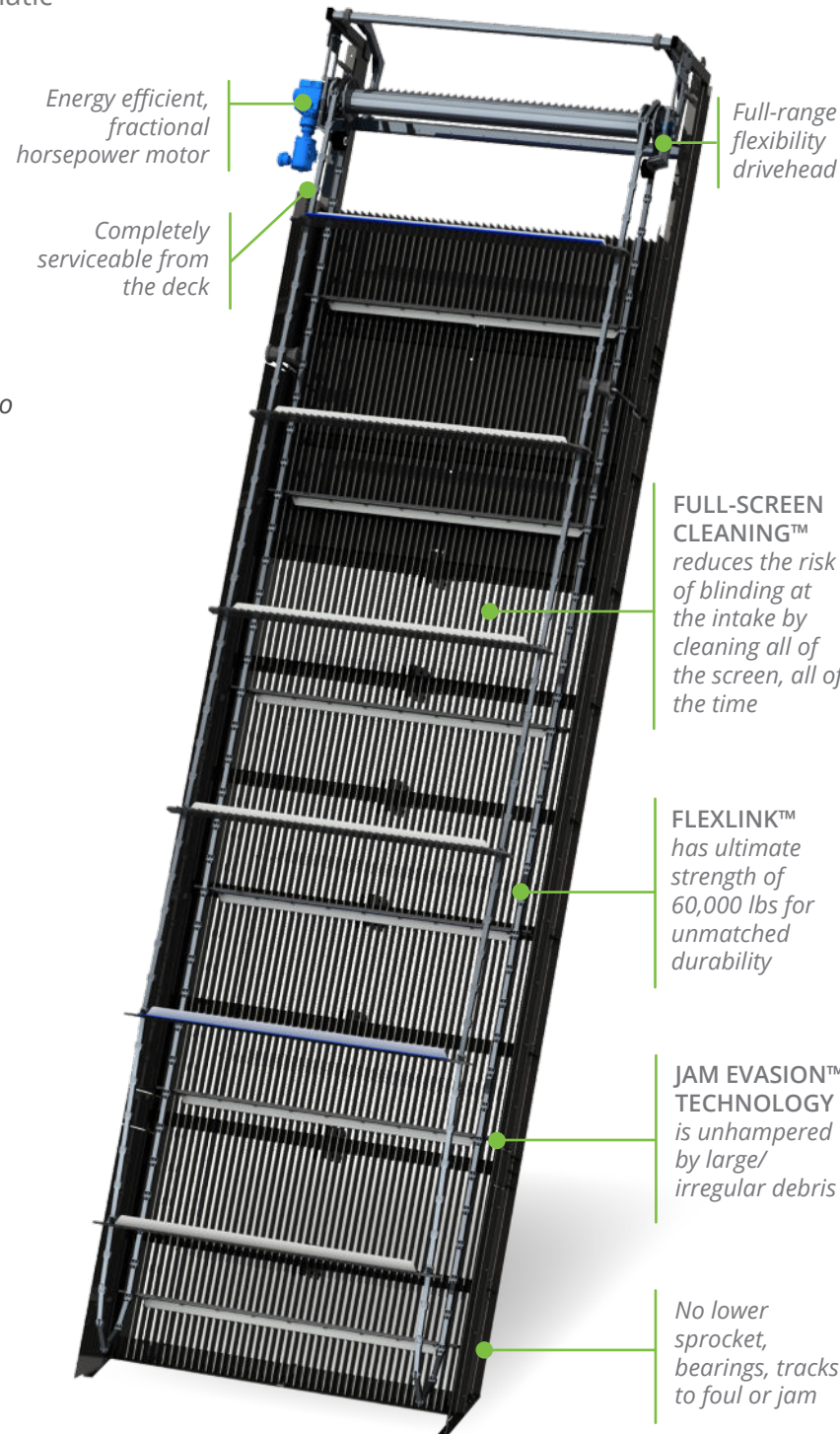
**2**  
As it leaves the drive sprocket, the FlexLink locks into a solid bar, forming its own frame.



**3**  
The FlexLink forms its own rotating framework at the bottom of the channel.



**4**  
Serrated scrapers penetrate into the bar screen, optimizing debris removal



Energy efficient, fractional horsepower motor

Completely serviceable from the deck

Full-range flexibility drivehead

FULL-SCREEN CLEANING™ reduces the risk of blinding at the intake by cleaning all of the screen, all of the time

FLEXLINK™ has ultimate strength of 60,000 lbs for unmatched durability

JAM EVASION™ TECHNOLOGY is unhampered by large/irregular debris

No lower sprocket, bearings, tracks to foul or jam

## DUPERON® FLEXLINK™

The achievement of mechanical simplicity requires the design of one part doing more. The simplicity of the Duperon FlexRake is possible through the multi-functioning action of one part: the FlexLink. This innovative design allows the link to function as a frame, lower sprocket, and connection point for scrapers, driven by a single sprocket. Since it is not trapped by a fixed path of travel, the FlexLink also allows the entire raking mechanism to flex, pivot and discharge large or irregular shaped debris that makes its way into the channel. The FlexLink assures reliable, adaptable, and trouble-free pump protection through its long product life cycle.

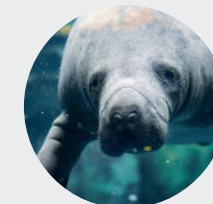


### THE FLEXRAKE® WAS INVENTED TO OFFER A SIMPLE RAKING DEVICE that solved the challenges of screening open channels, intakes and rivers such as:

- Long cycle times across intakes that don't keep up during storm or debris events when they're needed most
- Submerged sprockets that were subject to fouling, jamming, in-channel maintenance and even required divers to repair
- Static trashracks that required workers to manually clean, often in dangerous weather events and hazardous physical conditions
- Unreliable and maintenance-intensive designs

### FLEXRAKE® FRHD MODEL

- 1 in - 4 in bar openings (and greater)
- UHMW-PE serrated scrapers
- Fully assembled option



**WILDLIFE - FRIENDLY**  
The FlexRake® HD received Manatee Safe designation from the US Army Corps of Engineers (USACE), US Fish & Wildlife Services (FWS) and Florida Fish and Wildlife Conservation Commission (FWC)

# FLEXRAKE® RAKE ONLY (FRO) RETROFIT OPTION

The FlexRake FRO is designed to mount onto existing bar racks with openings of ½ inch to 4 inches wide. UHMW-PE scrapers are custom-fit to clean the existing bar rack.

### COST-EFFECTIVE AUTOMATION

Installs on existing manual bar racks or can replace existing technology for cost-effective and automated debris removal

### CUSTOMIZABLE

Engineered to fit your existing bar rack and the unique needs of your site



Side fab mounting for Rake Only model



I-Beam mounting for Rake Only model

## PRODUCT DATA

### FLEXRAKE® HD

### FLEXRAKE® FRO

BAR OPENINGS	1 in - 4 in	site dependent
BAR SHAPE	Rectangular	site dependent
SCRAPER CONFIGURATION	UHMW-PE serrated scrapers	UHMW-PE scrapers – configuration dependent on site and application
MATERIAL OF CONSTRUCTION	A36 steel, with Duperon® standard coating or hot-dipped galvanized. Available in 304 or 316 SSTL	Uses existing trash rack or bar screen
ANGLE OF INSTALLATION	Optimum: 30 degrees from vertical. Range from vertical to 45 degrees, dependent upon site conditions	Uses existing trash rack or bar screen
UNIT WIDTH	2 ft to 12 ft	
UNIT LENGTH	10 ft to 100 ft	
LIFTING CAPACITY	1,000 lbs, 3,000 lbs option available	
CLEANING FREQUENCY	2.3 ft/minute	
TYPICAL MOTOR	1/4 HP 1 PH, 115/230 VAC or 3 PH, 230/460 VAC, weatherproof motor	
STANDARD CONTROLS	Packages range from simple start/stop to sophisticated automation. Motor overload protection provided.	
OPERATION OPTIONS	Continuous/manual, automatic with timer, float, SCADA, differential/high-level sensing options with I/O as needed	
APPLICATIONS	<ul style="list-style-type: none"> <li>• Open channel</li> <li>• Water intakes</li> <li>• Coarse screens</li> <li>• Irrigation canals</li> <li>• Hydroelectric</li> <li>• Flood control</li> <li>• Stormwater pump stations</li> <li>• Wastewater</li> <li>• Combined sewer overflows</li> </ul>	