

## DUPERON® FLEXRAKE IQ<sup>2</sup>™ MAXIMUM RESILIENCY™



### SMART RAKING™ WITH A SMART BAR SCREEN™

The FlexRake IQ<sup>2</sup> provides the highest level of screening performance for normal operations and a new level of adaptability for peak flow management. By using smart enhancements to physically and operationally adapt to hydraulic and solid surges, the FlexRake IQ<sup>2</sup> delivers maximum resilience when you need it most.

## THE DUPERON DIFFERENCE

### SMART RAKING™

- Automated real-time response, enhanced solids capture and increased debris removal

### MAXIMUM CAPTURE

- Screens to the finest bar opening for normal operations and transitions to larger openings as required – matching the best capture rate for the flow rate in real-time

### ADDITIONAL THROUGHPUT & SAFETY FACTOR DURING PEAK FLOW

- Up to 40% increased hydraulic capacity when bar screen transforms to a wider opening

### MAINTAINS FLOW

- No process interruption with continuous cleaning during the open and close cycle between fine and larger openings

### UPGRADE EXISTING SITES TO FINER OPENINGS

- May allow for finer openings on existing sites while accommodating peak flows

# DUPERON® FLEXRAKE IQ<sup>2</sup>™ MAXIMUM RESILIENCY™

The original FlexRake technology transformed preliminary liquid/solids separation. The IQ Platform benchmarks the simple and reliable FlexRake design principles and adds next-generation smart features for a new level of adaptability.

The FlexRake IQ<sup>2</sup> combines three smart functions:

- 1 SMART LogIQ™**  
Responds to current debris loading and hydraulic conditions to optimize the screen field for the finest screening and operating speed automatically, without operator intervention.
- 2 SMART RAKING™**  
Proven FlexLink™ technology made its mark by eliminating lower sprockets, becoming its own frame, and operating without shutdowns from large debris. Redesigned components enhance screen cleaning and solids handling.
- 3 SMART BAR SCREEN™**  
Provides the safety factor of a coarse screen combined with the debris capture of a fine screen. Screen field automatically adjusts when flows demand more hydraulic capacity and recovers to the finest opening once the event subsides.



## 2 SMART RAKING™ ENHANCED SCREEN CLEANING



Re-engineered scraper provides up to 4x debris removal capacity and increased strength



Patent-pending re-engineered FlexLink™ is designed for additional speed and long product life



Rapid re-engagement removes large debris without shutdown to return scraper into the bar screen faster



Re-configured geometry of design allows for lowest possible engagement and better settled solids handling

## 3 SMART BAR SCREEN™ 2 SCREENS IN 1

- Opens as flow requires; matching best capture rate for the flow rate in real-time
- Allows up to 40% more screening area
- Automatically opens and closes without operator intervention
- Continuously cleans during open and close cycles to avoid blinding

Better capture and additional safety factor offers peace of mind in design and across the broadest range of conditions

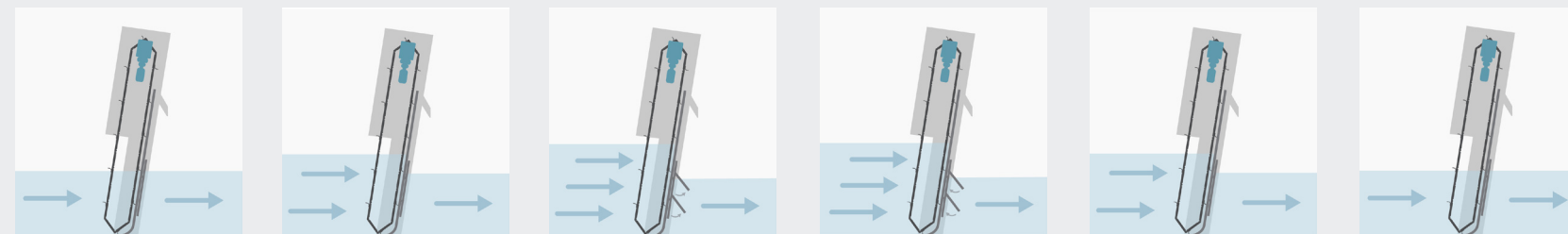


CLOSED POSITION  
finest screening



OPEN POSITION  
increased hydraulic capacity

## 1 SMART LogIQ™ SEQUENCE OF OPERATIONS



SITE CONDITIONS	FLOW	average flow	increasing flow and debris load	peak flow and/or heavy debris load	peak flow and/or heavy debris load	decreasing flow/debris load	average flow
	HEADLOSS	in range	increasing	increasing	decreasing	continues decreasing	in range
SMART RAKING™	SPEED	normal	increased as needed	increased	high	reducing	normal
SMART BAR SCREEN™	POSITION	closed	closed	open	closing	closed	closed
	SCREENING	finest	finest	larger	finest	finest	finest

## USACE DEFINITION OF RESILIENCE

Resilience is the ability to **ANTICIPATE, PREPARE** for and **ADAPT** to changing conditions and **WITHSTAND, RESPOND** to, and **RECOVER** rapidly from disruptions

(Executive Order 13563)

Backed by proven performance in more than 1800 installations and 25+ years of application experience, the FlexRake IQ<sup>2</sup> provides unrivaled resilience.



		FLEXRAKE®	FLEXRAKE IQ™ RESPONSIVE RESILIENCY	FLEXRAKE IQ <sup>2</sup> ™ MAXIMUM RESILIENCY
FLEXRAKE® DESIGN PRINCIPLES	Design simplicity	✓	✓	✓
	Multi-raking with no submerged sprocket, bearings or tracks	✓	✓	✓
	FlexLink™ Jam Evasion™ technology	✓	✓	✓
	25+ years of application experience	✓	✓	✓
	Low maintenance	✓	✓	✓
	Ease of operation	✓	✓	✓
	Long product life	✓	✓	✓
SMART LogIQ™	Automatically matches speed and discharge rate in real-time for changing channel conditions		✓	✓
SMART RAKING™	Up to 4x increased debris removal		✓	✓
	Increased speed capability		✓	✓
	Improved grit/rock handling		✓	✓
	Rapid re-engagement		✓	✓
SMART BAR SCREEN™	Up to 40% increased hydraulic capacity			✓
	Matches finest screen opening & flow rate for best capture			✓
	Increased safety factor			✓

## PRODUCT DATA

UNIT WIDTH	2 ft to 10 ft
UNIT LENGTH	Up to 100 ft
ANGLE OF INSTALLATION	Vertical to 45 degrees
MATERIALS OF CONSTRUCTION	Bars - Standard 304 SSSL, available in 316 SSSL Scrapers - 2205 Super Duplex SSSL
TYPICAL MOTOR	1 hp
CLEANING FREQUENCY	Entire screening field cleaned every 7 seconds at max speed
CONTROLS & OPERATIONS	Base packages range from differential level control to sophisticated automation
APPLICATIONS	Pump stations, influent bar screens, municipal headworks, combined sewer overflow facilities, and industrial applications
FINEST BAR OPENINGS	DURING DAILY FLOW (in) 0.25   0.625   0.75   1.00   1.25   1.50   1.75   2.00
LARGER BAR OPENINGS	DURING PEAK EVENT (in) 0.75   1.50   1.75   2.25   2.75   3.25   3.75   4.25