



# SUPERSTACK<sup>®</sup>

## 8-DECK WET SIZING MACHINE



## Maximizing Efficiency in Resource Recovery

Derrick® Corporation has once again redefined high capacity, high efficiency, fine particle wet screening with the introduction of the SuperStack®. With 8 decks operating in parallel and innovative Front-to-Back (FTB) tensioning system, the SuperStack has a demonstrated **capacity up to 3 times that of the best fine screens currently available**. All of this added capacity comes with only a slight increase in the space required per machine, significantly reducing the total capital and installation cost as well as OPEX for any screening installation.

The Derrick SuperStack is built to last and backed by a worldwide support team.



8-Deck  
SuperStack®

## Solutions to your most challenging fine sizing problems:

- Improve efficiency and capacity in closed grinding circuits
- Improve final concentrate grade and recovery
- Improve size classification and product quality of mineral concentrates
- Reduce impurities in fine iron concentrates (e.g. silica, alumina)
- Pumping and pipeline protection by removing coarse and abrasive particles
- Fine coal de-sliming to reduce ash content
- High-capacity trash removal

Contact your Derrick representative for more information!

# KEY BENEFITS



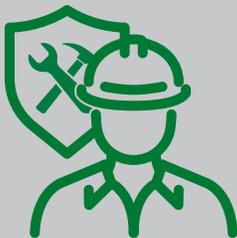
## Rapid Return on Investment

- Improve product recovery
- Maximize plant capacity
- Increase product grade and value



## Low Total Cost of Ownership

- Proven lower OPEX
- Low equivalent annual capital cost
- Minimal structural requirements due to smaller footprint at high capacities



## Industry Leading Technology and Support

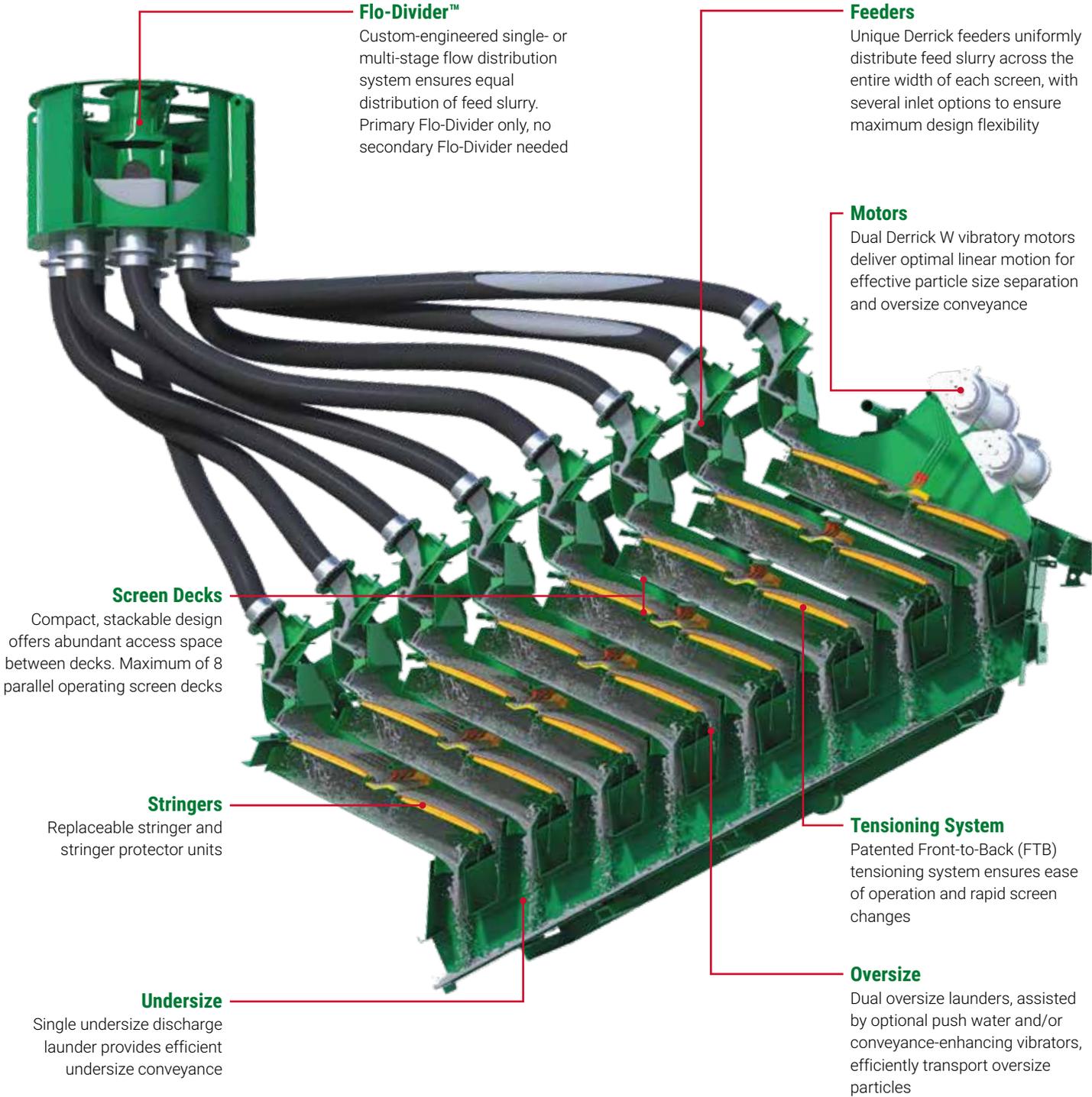
- The world leader in fine screening innovations
- Highest capacity fine screen, up to 3 times the capacity of the best fine screens currently available
- Global team with hundreds of years' experience
- Award-winning technical support available 24 / 7
- State-of-the-art test laboratory with full scale equipment



## Health, Safety, and Environment (HSE)

- Totally enclosed, lubricated-for-life vibratory motors
- Low power consumption (5kW/h)
- Lightweight, easy to install screen panels
- Exceptionally low maintenance (<1 minute per screen panel change)
- Maximize efficiency in resources recovery

# OPERATING PRINCIPLES



# FEATURES & BENEFITS



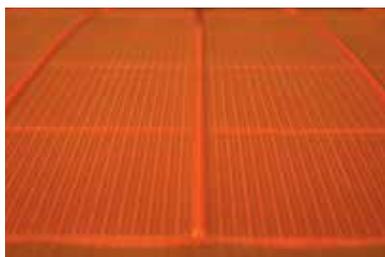
Feeders



Optional Repulp Spray System



Easy Access Screen Decks



Polyweb Urethane Screens



Optional Oversize Launder Vibrators

## 1. Flo-Divider™

- Equalizes feed flow from source(s) to each deck for optimal separation efficiency
- Dart valves allow flow to be stopped to one or more outlets

## 2. Feeders

- Urethane pockets built into each feeder distribute feed slurry uniformly across the entire width of the screen
- Easily removed front cover facilitates maintenance and debris removal
- Interior lining options available for different feed characteristics

## 3. Derrick Integrated Vibratory Motors

- Low sound production
- Internal oil lubrication system provides many years of maintenance-free operation

## 4. Repulp Spray System

- Increase screening efficiency without increasing deck length
- Spray bars designed to dispense water into repulp wash troughs
- Added free water helps undersize material pass through screen panels
- Replaceable rubber repulp wash troughs

## 5. Screen Decks

- Screen beds crowned in the direction of flow rather than side to side, resulting in increased capacity with more effective utilization of the entire screen width
- Time required to replace screen panels is significantly reduced with innovative Front-to-Back (FTB) screen panel tensioning system
- Robust design with abrasion-resistant urethane screen frame coating for extended useful life
- Accepts Derrick long-life, high-open-area, anti-blinding Polyweb® urethane screen surfaces
- Unique, patented technology available only from Derrick

## 6. Polyweb® Urethane Screen Panels

- Full range of polyurethane panels with apertures ranging from 53 micron to 6.2mm
- Specialized formulations to cope with various temperature and chemical environments
- Unique non-blinding design for optimal efficiency and capacity
- Long lasting—commonly 4 to 12 months
- Long slot and short slot designs with up to 45 percent open area

## 7. Optional Oversize Launder Vibrators

- Dual oversize launders (one per side)
- Oversize conveyance assisted by push water or optional vibrators
- Easily accessible for inspection and maintenance

# FRONT-TO-BACK (FTB) TENSIONING

*Derrick proudly introduces the latest innovation in fine screening technology, Front-to-Back (FTB) screen tensioning.*

## Increase Capacity

Customers using the Derrick SuperStack report significant capacity increases over their previous screening equipment. These increases are attributed to the rotation of each screen section's crown 90 degrees, parallel to material flow. This change in crown direction assures an even distribution of material across the entire width of the screen and engages 100 percent of the screening surface. It also minimizes migration of oversize particles to the outside edges of the screening deck. This even distribution of material leads to increased panel life by reducing panel wear caused by oversize solids conveying in concentrated areas.

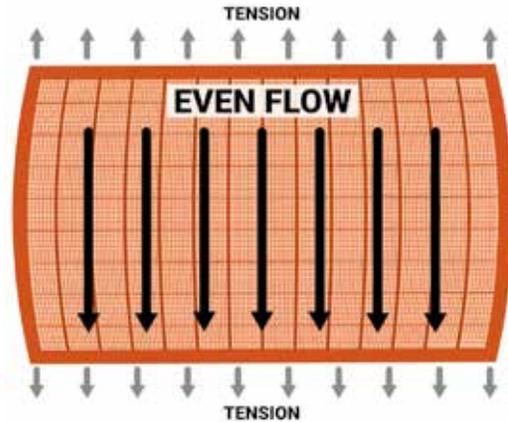
## Reduce Screen Panel Change Time

Customers report the ability to change screen panels extremely fast—typically less than 1 minute per screen panel. Using a single long-handled wrench, the operator turns a rotating tension bar assembly to draw each screen panel into tension. A single locking nut is then tightened to secure the applied tension.

## Four Fast, Easy Steps to Install Screen Panels

1. Hook the panel at the discharge end (front) onto the edge of the screen bed section.
2. Hook the opposite end of the panel onto the tension bar at the feed end (back).
3. Rotate the tensioning nut to apply the desired tension.
4. Tighten the locking nut to secure panel tension.

## Front-to-Back Screen Tensioning



Screen frame crown parallel to material flow.



Installation of Polyweb Urethane Panel



Polyweb Urethane Panel Installed on Superstack



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**"TIME REQUIRED TO  
CHANGE URETHANE  
PANELS IS CUT  
BY 75%, REDUCING  
LABOR COSTS."**

**-PLANT MANAGER**

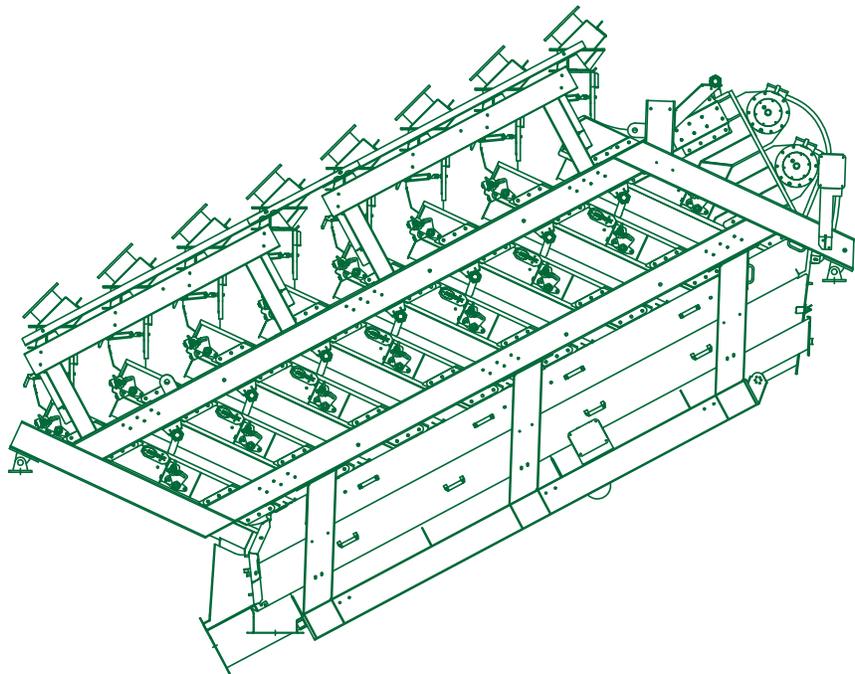
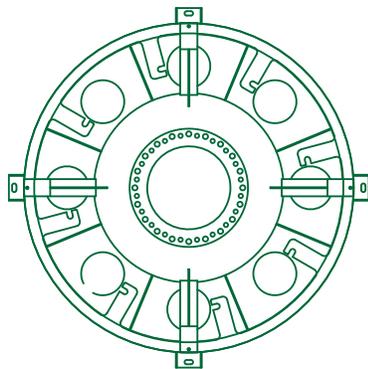
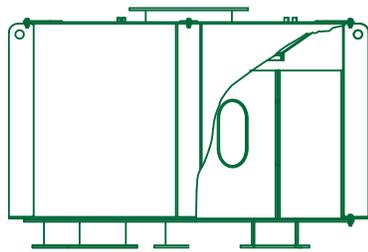
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# WEIGHTS & DIMENSIONS

EQUIPMENT		DIMENSIONS			
Model	Width in (mm)	Length in (mm)	Height in (mm)	Maximum Dynamic Load LBf (KN)	Static Load/Weight lbs (kg)
<b>Eight-Deck SuperStack</b>	73-7/8 (1876)	229-11/16 (5834)	176-1/16 (4472)	300LBf (1.6KN) @ 40 Hz	20000 (9091)
Model	Diameter	Type	Height in (mm)	Width in (mm)	Weight lbs (kg)
<b>Flo-Divider</b>	60"	8-Way	52 (1321)	72-1/2 (1816)	2650 (1202)
	72"	8-Way	59-3/4 (1518)	83-1/2 (2121)	2650 (1202)
	72"	16-Way	59-3/4 (1518)	83-1/2 (2121)	2650 (1202)
	84"	16-Way	54-3/4 (1391)	96-3/16 (2443)	4500 (2041)

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