DERRICK®

SOLIDS CONTROL

FOR CIVIL CONSTRUCTION

LETTER FROM THE FAMILY

Founded by H. William Derrick Jr. in 1951, Derrick® Corporation was created to solve some of the most challenging mechanical separation needs of the Mining Industry. At the heart of our present-day offering resides the Integrated Vibratory Motor which was invented by our founder and gave life to an entire line of innovative separation technology. To this day, our pioneering spirit pulses through the organization and inspires development of our leading-edge solutions.

Over the years, we have experienced exponential growth, expanding from our Mining roots to Oil & Gas Drilling, Civil Construction, Industrial, and other challenging industries worldwide. Our robust installed base and expansive network of thousands of cohesive individuals are located across the globe.

Our success is fully dependent on people. Priority one is to serve our global families; our tenured employees, multi-national partners, and surrounding communities. Our unique, close-knit culture and shared, long-term outlook is not only paramount to our success, but to the success of all integral stakeholders.

We thank you for expressing interest in our organization and look forward to being of service to you in the future.

H. William Derrick Jr. (1917-1992)

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THE GLOBAL LEADER IN SCREENING TECHNOLOGY

Serving the Drilling and Tunneling Industries

Derrick has offered premium slurry separation and desanding equipment to the worldwide Microtunneling, Horizontal Directional Drilling, Large Diameter Tunneling, Slurry Wall/Foundation Drilling, Water Well Drilling, and other civil construction industries for over 30 years. Throughout this time, Derrick has remained dedicated to complete in-house manufacturing of every machine, screen panel, and tank system. Each unit is created and assembled at Derrick's Buffalo, New York headquarters facility.

Equipment Makes the Difference

Drilling or tunneling performance is directly related to the overall cleaning ability of the separation equipment. Drilled solids remaining in the slurry have numerous adverse effects on the overall operation, significantly reducing its profitability. Consequently, selecting the proper separation equipment for your fleet is just as critical as choosing the correct drill or tunnel boring machine. Derrick answers this critical need with innovative, high performance solids control equipment proven time and time again to increase the rate of advance while reducing:

- Non-production time
- Hauling and disposal of solids-laden drilling fluid
- Cost of drilling fluid and chemicals
- Water usage and hauling
- Wear on downstream pumps, plumbing, and other equipment
- Environmental impact

Derrick Innovations

1951
First Derrick Four Bearing Integrated Vibratory Motor

1977
Sandwich Screen® (SWG) Panel and Sandwich Shaker

1984
Flo-Line Cleaner and Perforated Wear Plate (PWP™) Screen Panel

1989
Polyurethane Screen Panel

1990
HI-G® Dewatering Machine (High G Linear Motion Shaker)

1995
Pyramid® (PMD®) Screen Panel

1997
Pyramid Plus™ (PMD+™) Screen Panel and Super G® Integrated Vibratory Motor

2004
Super G2® Integrated Vibratory Motor

2006
API RP 13C Compliant Screens

2007
DE-7200™ VFD™ Centrifuge

2008
HI-Cap Shaker

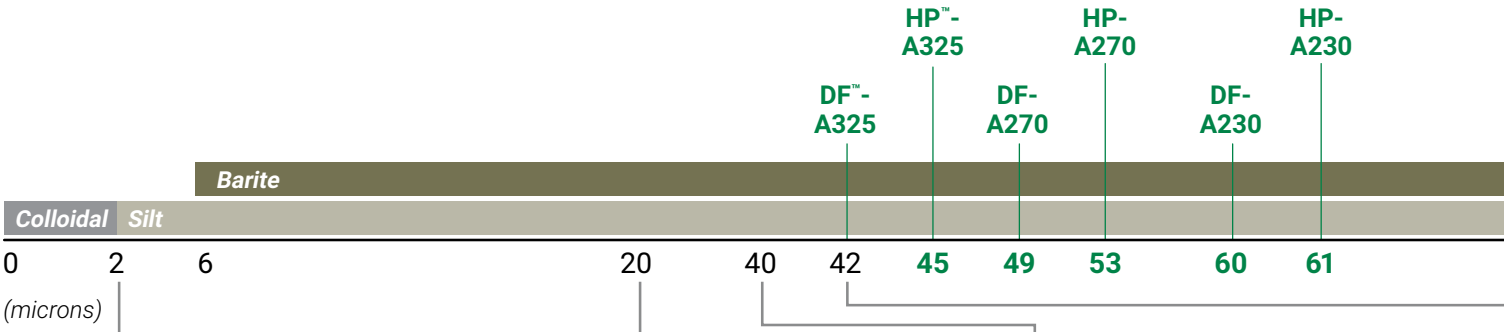
2011
Hyperpool® Shaker

1955

When Derrick began operations in 1951, few could have anticipated its future exponential growth. Over the ensuing years, Derrick evolved from its humble beginnings into the renowned Global Family it is today. The company's sustained, profitable growth is most visibly noted in the expansion of its facilities, which have increased well over 360,000 sq. ft. (3340 sq. m.).

SUMMARY

OF SOLIDS CONTROL EQUIPMENT



DE-7200 CENTRIFUGE

Separation Particle Size:

>**2 microns (unflocculated)**

0 µm (flocculated)

Primary Application:
Fine Silt and Clay Removal, and Dewatering

DESILTER

Separation Particle Size:
20-74 microns

Primary Application:
Silt Removal

DESANDER

Separation Particle Size:
40-100 microns

Primary Application:
Sand Removal

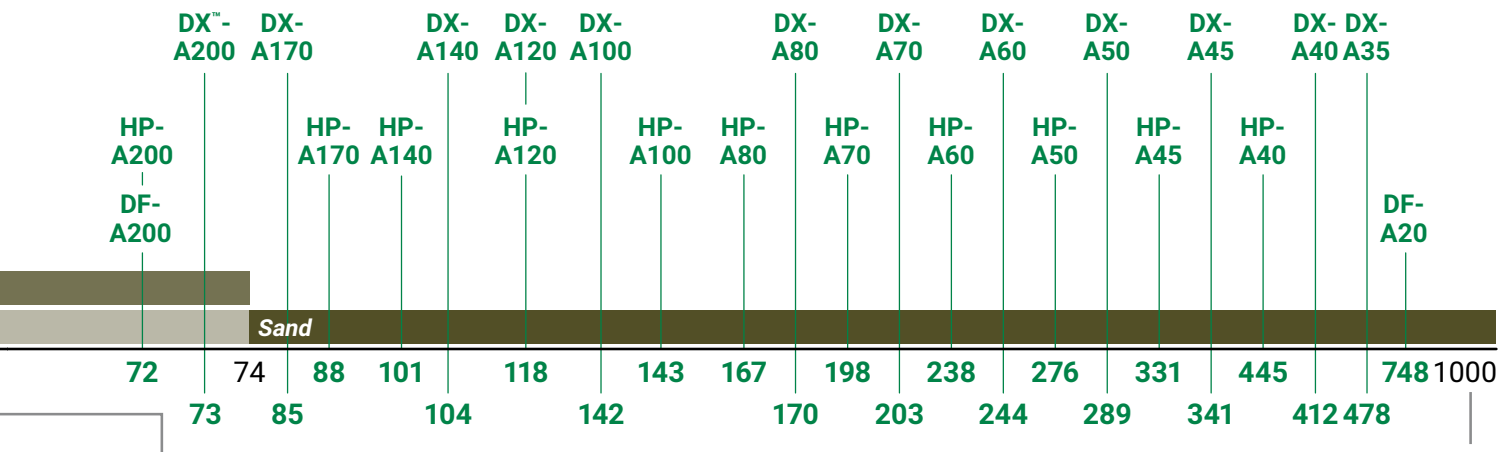
DE-1000 CENTRIFUGE

Separation Particle Size:

>**2 microns (unflocculated)**

0 µm (flocculated)

Primary Application:
Fine Silt and Clay Removal, and Dewatering



HYPERPOOL

Separation Particle Size:

>**42 microns**

Primary Application:
Gravel, Sand, Oversized Clay Chunks

FLO-LINE PRIMER 258™

Primary Application:
Gumbo Clay Removal

MUD CLEANER

Separation Particle Size:

>**42 microns**

Primary Application:
Desanding and Desilting with Dewatering Screen

GUMBO REMOVAL

Flo-Line Primer 258™

The Flo-Line Primer 258 utilizes a screen belt conveyor system to separate hydrated clays and large drilled cuttings from drilling fluid. This allows finer screens to be installed on the primary shakers, leading to lower dilution and operating costs. The Flo-Line Primer 258 is used in place of scalping shakers. The synthetic screen belt is available in 5, 10, and 20 square mesh weave.

With a 1.5 HP electric motor driving a variable speed gearbox, the Primer allows ample adjustment for changes to solids loading. Rotating nylon brushes located at the discard end cleans the screen belt to eliminate blinding issues associated with sticky clays. The feed box comes with built-in non-pressurized bypass. Access doors allow for easy clean out of the hopper, which simplifies screen belt replacement and allows inspection of the feed end roller. Optional features include custom hoods and custom hopper for oversize outlet.

Flo-Line Primer 258

Flo-Line Primer II

Flo-Line Primer II™

The Flo-Line Primer II™ utilizes a removal cartridge screen belt conveyor system to separate hydrated clays and large drilled cuttings from drilling fluid. This allows finer screens to be installed on the primary shakers, leading to lower dilution and operating costs. The Primer II is used in place of scalping shakers. Two types of screen belts can be used on the Primer II, a stainless steel chain or a synthetic mesh screen belt. The opening sizes available for the chain are 1/2" x 1" and 1" x 1". The synthetic screen belt is available in 5, 10, and 20 square mesh weave.

With a 1.5 HP electric motor driving a variable speed gearbox, the Primer II allows ample adjustment for changes to solids loading. When the chain belt cartridge is utilized, the sprocket roller on the discard end cleans the openings in the chain to eliminate blinding issues associated with sticky clays. When the synthetic belt cartridge is utilized, rotating nylon brushes located at the discard end cleans the screen belt. The feed box has a built-in non-pressurized bypass. Access doors allow for easy clean out of the hopper, replacing the synthetic belt and the inspection of the feed end roller or sprockets. Optional features include vapor extraction hoods, custom hoods, and custom hopper for oversize outlet.

HI-CAP™

The Derrick HI-Cap shaker offers over 57 sq. ft. of screen surface on a single unit which allows tunneling and other civil contractors unmatched shaker performance with minimal footprint. This is accomplished by utilizing our true, high G linear motion shaker design, coupled with Derrick's Polyweb® urethane screen surfaces. Its characteristic high open area allows for maximum fluid and solids handling capacity. Polyweb screens are virtually non-blinding and outlast comparable wire cloth surfaces many times over.

HI-Cap

FEATURES & BENEFITS

W Series Vibratory Motors

- Zero maintenance
- Powerful, quiet, dual vibratory motors apply high G performance
- Internal oil lubrication (One-year warranty)

Polyweb® Urethane Screens

- High open area for maximum flow capacity
- Unique non-blinding design for optimum efficiency and performance
- Long lasting – 10 to 15 times longer than woven wire panels

Optional Screen Angle Adjustment

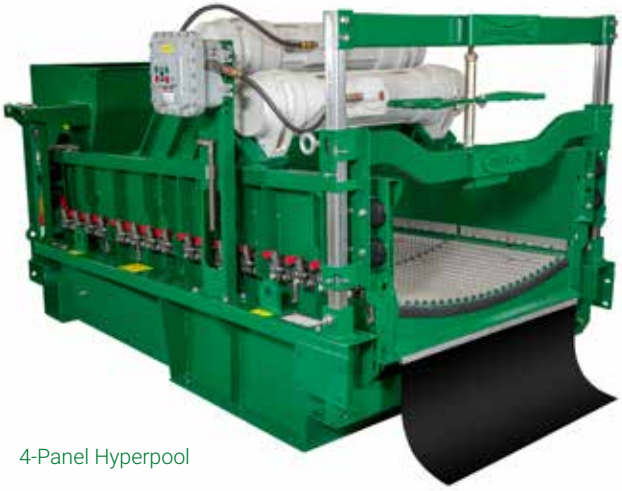
- Adjustable screen angle while drilling from -3° to +3° for optimum capacity, screen life, and efficiency
- Manual single point ratcheting system allows one man operation and optimization

HYPERPOOL®

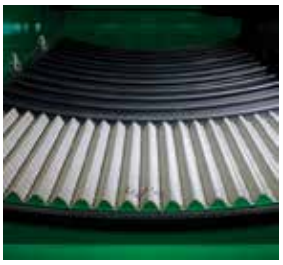
Backed by 70 years of cost-effective solutions plus award-winning service, the Derrick Hyperpool shaker is the latest in a long line of products designed expressly to exceed the demanding needs of today's civil construction operations.

With its compact footprint, industry-leading processing capacity, solids bypass prevention, and low maintenance cost, the Hyperpool is well suited for all drilling applications where performance and modularity are required. The Hyperpool is designed to bring maximum value to the customer.

By combining multiple shakers on a single modular design, the Hyperpool dual and triple units offer increased capacity in a compact footprint. Optimum flexibility is provided by the box feeder/Flo-Divider, which permits distribution of feed slurry equally to each shaker screen frame. A bypass pipe with integrated butterfly valves connects all hopper discharge outlets.



4-Panel Hyperpool



Concave Screen Bed

Screen Compression Pins

Triple Hyperpool Unit with Integrated Flo-Divider™

FEATURES & BENEFITS

Health, Safety, & Environment (HSE)

- Easy screen inspection, removal, and installation
- Low sound production (74 +/- 4 dBA)
- Optional vapor extraction covers protect operating personnel and surrounding equipment from vapors emitted during the screening process (dependent on customer provided HVAC exhaust system)
- Optional self-locking splash covers provide clean operating environment
- Light-weight screen panels make for easy installation

Concave Screen Bed

- Eliminates bypass of solids under screen panels
- Fluid centering technology increases capacity up to 35% over competitive equipment
- Increased efficiency in a smaller footprint
- Compression fit bed material requires no hardware

Screen Compression System

- Less than 45-seconds per screen panel change
- Fast, secure panel retention
- Single-side operation, available in either left or right side

Pyramid® Screen Technology

- Pyramid and Pyramid Plus screens offer up to 45% more API RP 13C non-blanked screen area over conventional shakers delivering greater efficiency
- Compliant with industry-standard API RP 13C (ISO 13501)

Super G® Integrated Vibratory Motors

- Zero maintenance
- Powerful, quiet, dual vibratory motors apply high G performance
- Two options - Super G or Super G2
- Standard Super G has greased-for-life bearings (Two-year warranty)
- Optional Super G2 has continuous recirculating internal oil lubrication system (Three-year warranty)

Single Point Screen Angle Adjustment

- Adjustable screen angle while drilling from +2° to +8° for optimum capacity, screen life, and efficiency
- Manual single point system allows one man operation and optimization while drilling

Mud Cleaner

- Up to twenty 4” hydrocyclones
- Up to three 10” hydrocyclones
- Optional individual shutoff valve for each 4" hydrocyclone

Hyperpool
Mud Cleaner

FLO-LINE CLEANER™ SERIES

Proven in the field for over 20 years, Derrick's Flo-Line Cleaner shakers embody an industry-proven balance of product dependability and enhanced performance. Designed with the customer in mind, the Flo-Line Cleaner offers user-friendly technology such as light-weight screens, adjustable screen angle while drilling, and single-side screen tensioning.

The Flo-Line Cleaner's modular design allows for versatile configuration as a durable flow line shaker, high performance mud cleaner, or even as a drying shaker.

FLC 503 Drying Shaker

FLC 424

FLC 504 Drying Shaker

FLC 2000

FLC 423

FEATURES & BENEFITS

Health, Safety, & Environment (HSE)

- Easy screen inspection, removal, and installation
- Low sound production (74 +/- 4 dBA)
- Light-weight screen panels make for easy installation

Pyramid Screen Technology

- Pyramid and Pyramid Plus screens offer more API RP 13C non-blanked screen area over conventional shakers, delivering greater efficiency
- Compliant with industry-standard API RP 13C (ISO 13501)

Polyweb Screen Technology

- Polyweb urethane screens offer up to three times more open area than conventional screen surfaces
- Anti-blinding properties make it feasible to screen materials previously considered difficult or even impossible to screen
- Compatible with the FLC 2000, FLC 423, and FLC 424

Super G Integrated Vibratory Motors

- Zero maintenance
- Powerful, quiet, dual vibratory motors apply high G performance
- Super G has greased-for-life bearings (Two-year warranty)

Single Point Screen Angle Adjustment

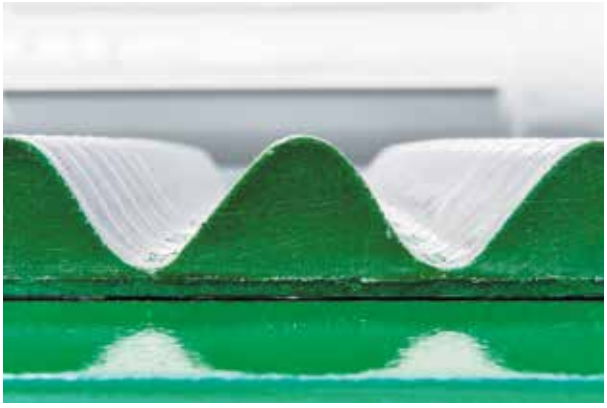
- Adjustable screen angle while drilling for optimum capacity, screen life, and efficiency
- Single point system allows one man operation and optimization while drilling

Mud Cleaner

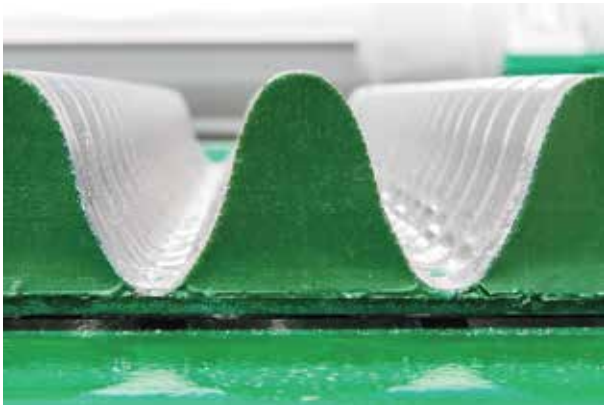
- Up to twenty 4” hydrocyclones
- Up to three 10” hydrocyclones
- Optional individual shutoff valve for each 4" hydrocyclone

Pyramid® and Pyramid Plus™ Screens (PMD® and PMD+™)

Derrick has revolutionized screening technology with the patented Pyramid (PMD) and Pyramid Plus (PMD+) screens. These revolutionary three-dimensional screens offer the benefits of traditional flat multi-layered screens while adding a significant increase in usable screen area. The result is a screen that increases fluid handling capacity. Pyramid and Pyramid Plus screens provide an easy, cost effective increase in shaker performance. Designed with the latest technology, Pyramid screens allow rigs to screen finer earlier in the drilling process, thus significantly reducing mud and disposal costs. All Derrick screens are API RP 13C compliant.



PMD



PMD+

Exclusive Benefits

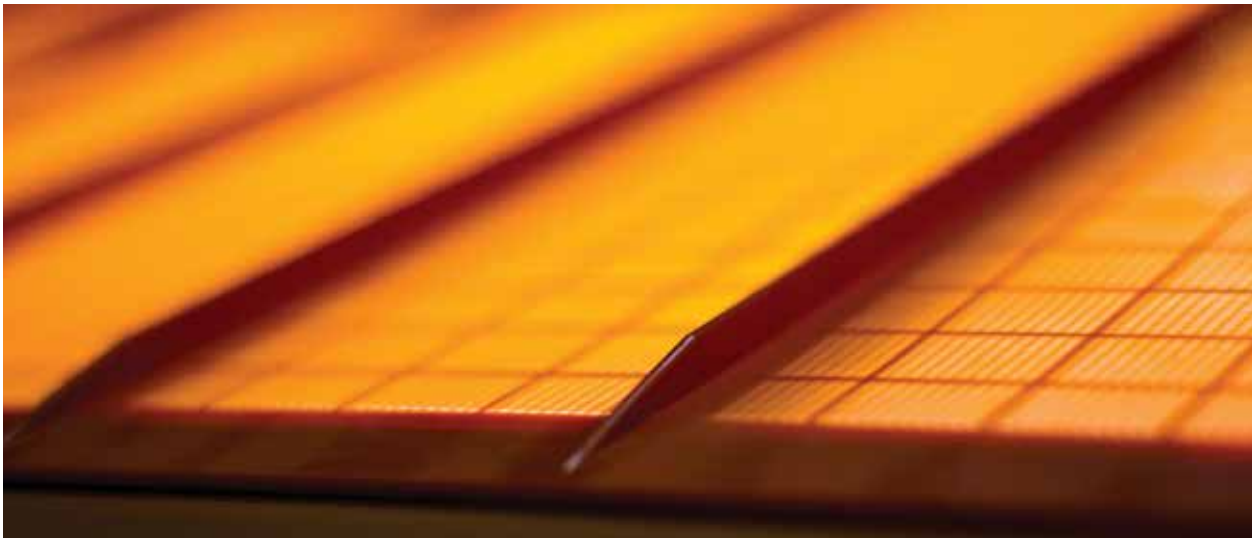
- Increased shaker capacity
- Enhanced permeability
- Makes fine separations
- Fits existing shakers
- Screen finer faster
- Drier cuttings

Screen Shape and Conductance

Gravity and vibration force the solids into the corrugated screen's troughs, thus allowing more fluid to pass through the top of the screen.

Corrugated Pyramid Screen
Enhanced Permeability

Conventional Flat Screen
Solids Impede Fluid Flow

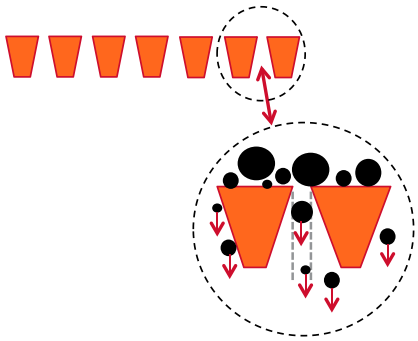


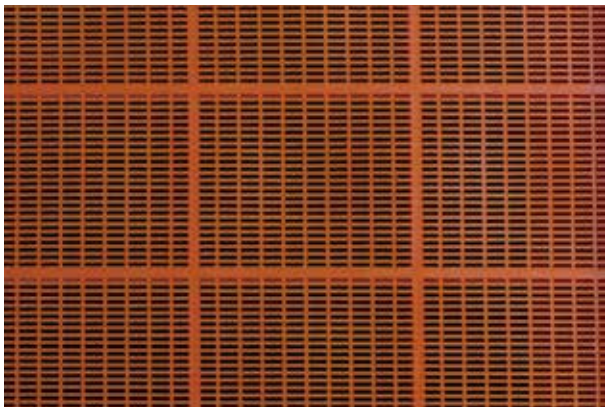
Polyweb® Screens

Fine mesh Polyweb urethane screen surfaces provide up to three times more open area than conventional urethane screen surfaces. While all urethane screen panels are well known for their abrasion resistance, only Derrick's Polyweb urethane screens combine long life with high open area, capacity, and performance rivaling that of conventional woven wire screens. The anti-blinding properties of the screen now make it feasible to screen materials previously considered difficult or even impossible to screen. Currently, panel openings as fine as 325 mesh (45 microns) and open areas ranging from 35 to 45% are available.

Polyweb

Slotted Openings Prevent Blinding





REPLACEMENT SCREEN PANELS
FOR DERRICK SHAKERS

"PMD and PMD+ screens provide our customers the ability to utilize a smaller cleaning system with a single deck to remove their solids loads on HDD projects. The PMD+ is gaining the reputation as the 'go to' screens in our industry to maximize cleaning performance."

Richard Levings
Director of Product Development, American Augers

Hyperpool Series for Derrick Hyperpool Shakers

Derrick's Hyperpool performance is optimized through the installation of Pyramid screens, permitting the use of finer mesh sizes at higher capacities. The Hyperpool's innovative screen compression system drives the center of the screen panel downward, firmly sealing the screen panel to the screen frame. Compression benefits include extended screen life, improved conveyance, elimination of ultra fine solids bypassing under screen panels, and faster and more user-friendly screen changes than any other shaker in the Derrick product line.

Hyperpool Series Screen

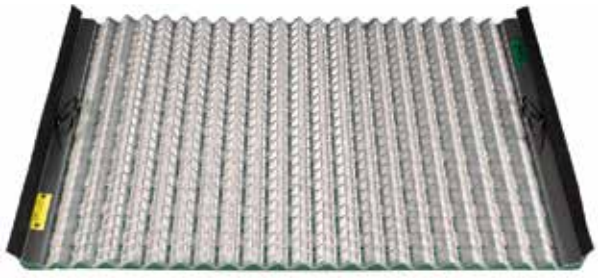
API RP 13C (ISO 13501)
Non-Blanked Open Screen Area

	PMD	PMD+
Hyperpool	22.64 sq. ft.	30.76 sq. ft.

COMPRESSION SYSTEM

500 Series for Derrick Flo-Line Cleaner 500 Shakers

Derrick's 500 Series screens, available in Pyramid, Pyramid Plus, and PWP panels are used on all FLC 500 series shale shakers. The FLC 500's innovative single-side tensioning system reduces screen panel replacement time to less than one minute per panel on average. This faster, easier, and more reliable screen panel tensioning is provided by tensioning fingers and two Quick-Lok 1/2-turn tensioning bolts on each screen panel.



Pyramid (PMD) 500 Series Screen

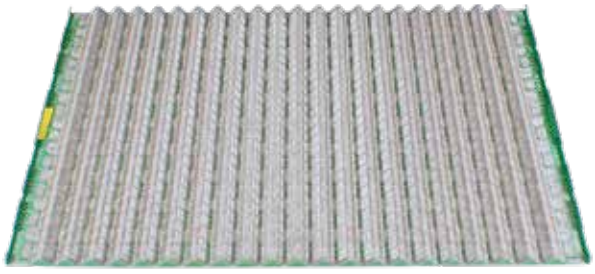
API RP 13C (ISO 13501)
Non-Blanked Open Screen Area

	PWP	PMD	PMD+
FLC 513	12.15 sq. ft.	21.27 sq. ft.	29.40 sq. ft.
FLC 514	16.20 sq. ft.	28.36 sq. ft.	39.20 sq. ft.

TENSIONING SCREEN SYSTEM

48x30 Series for Derrick Flo-Line Cleaner 2000 Shakers

Derrick's 48 x 30 screens fit all Derrick FLC 2000™ 3- and 4-panel shale shakers, FLC with AWD, FLC Plus™, HI-G® Dryer and the Cascade 2000. They are available in Pyramid, Pyramid Plus and PWP panels. Fast, easy and reliable screen panel tensioning is provided by two pairs of Rapid-Change draw bolts on each side of each screen panel.



Pyramid (PMD) 48x30 Series Screen

API RP 13C (ISO 13501)
Non-Blanked Open Screen Area

	PWP	PMD	PMD+
FLC 2000 3-Panel	15.90 sq. ft.	20.55 sq. ft.	28.41 sq. ft.
FLC 2000 4-Panel	21.20 sq. ft.	27.40 sq. ft.	37.88 sq. ft.

TENSIONING SCREEN SYSTEM

DERRICK SEPARATION EQUIPMENT USED IN CIVIL AND UNDERGROUND CONSTRUCTION HAS PROVEN TO REDUCE OPERATING AND DISPOSAL COSTS, WHILE INCREASING PRODUCTION.

Derrick separation technology offers unmatched solids removal performance. Using this equipment and innovative screen technology, customers continuously recycle and re-use drilling fluid, while also controlling drilled solids and impact on the environment.

Further removal of ultra fine drilled solids is performed by the Derrick decanting centrifuge. When required, polymer dosing systems can be integrated with the centrifuge to remove solids down to 0µm to help facilitate mud disposal.

MUD AGITATORS

DE-AG™ Mud Agitator

Derrick mud agitators include an explosion-proof, "C" faced motor, reduction gearbox (helical-bevel gears for horizontal agitators or all helical gears for vertical units), impeller, and shaft with assembly bushings. Motors range from 5 to 30 HP and may be supplied in several power configurations.

Attaching the motor directly to the gearbox protects correct alignment that can increase bearing life and provides 95 percent efficiency in power transfer to the impeller. Using this superior design surpasses standard worm drive gear assemblies by 30 percent, allowing Derrick agitators to do the same work at far less horsepower. By unitizing the motor and gearbox, weight and space requirements are reduced. Horsepower, mechanical configuration, impeller diameter, and shaft length are customized to tank dimensions and maximum mud weights. Available horsepower ratings* are: 5, 7.5, 10, 15, 20, 25, and 30.

*Horsepower is de-rated for 50Hz power configuration.

Horizontal
Mud Agitator

Vertical Mud Agitator

CENTRIFUGAL PUMPS

Horizontal Package

Overhead Belt Drive Package

Centrifugal Pumps

Derrick offers a complete line of centrifugal pumps to accommodate a full variety of drilling applications. Sizes range from 3 x 2 to 8 x 6. Bare pumps, horizontal packages, and overhead belt drive configurations are available. Explosion proof electric motors are available up to 200 HP in 1200, 1800, or 3600 RPM.

Horizontal packages are skidded, as shown, and include the Derrick Premium 250 pump, explosion proof electric motor, and coupling with OSHA type guard. Starters are optional.

Overhead belt drive packages are skidded, as shown, and include the Derrick Premium 250 pump, an explosion proof electric motor, belts and sheaves, and OSHA type belt guard. Starters are optional.

12' MINI SEPARATION SYSTEM

Mini Separation System

The Mini Separation System offers ultra-fine separation in a very small footprint. Coarse mesh scalping is achieved by the lower deck of the Derrick FLC 423 linear motion shaker, which is outfitted with long life, high open area, fine Polyweb urethane screen panels. Screen underflow is then processed through ten 4" Derrick desilting cones. Cone underflow is routed onto the top deck which is typically outfitted with fine Pyramid screens with openings in the API 140 to 200 range. Cleaned fluid is then returned to the excavation.

12-MSS (Discharge)

12-MSS (Feed Side)

VIBRATORY MOTORS

Proven to dramatically increase liquid/solids separation, the Super G series vibratory motors produce superior conveyance due to their high G characteristics. Increased fluid-handling capacities using fewer shakers is only part of the reason for their success on drilling rigs. Screening finer, earlier in the drilling process, significantly reduces mud and disposal costs. The Super G series vibratory motors are built with Derrick's superior electrical components, which are renowned in the industry for durability. High performance and exceptional durability make the Super G series vibratory motors an asset to any drilling program.

Super G3™ and Super G2® Integrated Vibratory Motors

Both the Super G3 and Super G2 vibratory motors feature a patented continuous, internal recirculation lubrication system that provides long life, reduced repair costs, and robust maintenance free operation. In addition to greatly extending the life of the vibratory motor, the hydrodynamic cushioning effect on bearing surfaces created by this unique lubrication system reduces friction, wear, heat, and sound (measured at 74 +/- 4 dBA). Sealed, continuous recirculation of lubricating oil maintains a fresh film of oil on all bearing surfaces at all times and prevents entry of contaminants. Both the Super G3 and Super G2 vibratory motors carry a three-year warranty.

Super G2 Vibratory Motor

Super G® Integrated Vibratory Motors

Featuring permanently lubricated bearings that eliminate the need for a remote lubrication system, Derrick Super G vibratory motors reduce both repair costs and maintenance requirements. These grease-filled bearings also result in significantly lower sound output with a measured level of 74 +/- 4 dBA. Super G vibratory motors carry a two-year warranty.

Super G Vibratory Motor

HYDROCYCLONES

Inline Vertical Desander

Inline Incline Desander

10 Inch Inline Desanders

Derrick desanders make separations between 40 and 100 microns and offer the flexibility of mounting either one, two, or three 10" desander cones over a cone underflow pan. The underflow can be discarded or directed onto a vibrating screen for further processing. Derrick desanders are also available in vertical or inclined manifold stand-alone models, or for inclined mounting on Derrick shakers.

4 Inch Round or Inline Desilters

The Derrick round and inline desilters are designed to remove silt-sized solids (20 to 74 microns) from drilling fluids. Derrick's round desilters are simple to operate and easy to maintain. Optional shutoff valves on each round desilter cone inlet permit individual cone removal and inspection without interrupting operation of the desilter. The Derrick inline desilter is designed for use in areas thawt cannot accommodate the spatial requirements for the premium round desilter configuration. Both the round and inline desilters are available in a variety of sizes up to 20 cone models. Available cone quantity dependent on machine type.

Derrick's polyurethane hydrocyclone offers a high volume 4" cone, while providing contractors an economical replacement for less efficient older equipment. Derrick's unique uni-body construction eliminates excess parts and seams where excessive wear can occur. Derrick's 4" desilter cones are available with ceramic inserts for extreme service.

Inline Vertical Desilter

Round Desilter

DE-7200™ SERIES

FEATURES & BENEFITS

Bowl

- High volumetric flow rates provide processing capacity for the most demanding applications
- Driven by a 150 HP motor, the bowl attains 3112 G's at 3200 RPM to separate fine solids at high feed rates
- High speed and high capacity enable maximum solids removal efficiency and finest cut points

Conveyor and Gearbox

- Axial and radial combination conveyor increases throughput and reduces fluid turbulence at liquid end of bowl for increased solids settling
- With 88,507 in-lb maximum torque and 60 HP motor, the conveyor handles high solids volume without overloading or packing off

Control System

- Control cabinet is separated from the centrifuge for flexibility during installation
- Multiple control panel options available for Hazardous and non-hazardous locations
- Variable frequency drive control for ultimate operational flexibility and performance optimization
- Load sensing and feed pump control automatically adjusts feed rate for optimal processing efficiency

DE-7200 with B1 Control Cabinet

DE-7200
SPECIFICATIONS

DE-7200			
CENTRIFUGE			
Type:	Decanter (continuous flow)		
Bowl Inside Diameter:	21.4" (544 mm)		
Bowl Effective Length:	72" (1829 mm)		
High G Maximum:	3112 G's		
Maximum Bowl Speed:	3200 RPM		
Conveyor Differential Speed Range:	1-90 RPM		
CONVEYOR			
Type:	Axial/Radial Hybrid		
Lead Direction:	Left Hand		
Movement Related to Bowl:	Lagging		
GEARBOX			
Type:	Two Stage - planetary		
Ratio:	50.3:1		
Torque Maximum:	10kNm/88,507 in lb		
ELECTRICAL			
Bowl Drive:	150 HP (111 KW) Motor and VFD		
Conveyor Drive:	60 HP (45 KW) Motor and VFD		
Pump Drive:	30 HP (22 KW) VFD		
Control System:	Intuitive color operator interface with PLC control and dedicated Operator Interface terminal		
OPTIONS	**A1**	**B1**	**B2**
Electrical Configurations:	400/480VAC or 600VAC Input	480 VAC Input	480 VAC Input
Electrical Cabinet:	Class I, Division 1	NEMA 3R	NEMA 3R
RA Electrics:	Class I, Division 1	Class I, Division 1	Class I, Division 2

A1 Control Cabinet

B1/B2 Control Cabinet

DE-7200 A1 CONTROL CABINET

DE-1000™ SERIES

FEATURES & BENEFITS

DE-1000™ LP (Low Profile) VFD Dual Voltage

- Driven by a 50 HP motor, the bowl attains up to 2575 G's at 3600 RPM to separate fine solids at high feed rates
- 24,782 in-lbs maximum conveyor torque with 52:1 gearbox and 20 HP conveyor drive motor
- Modular, low profile construction allows control cabinet and centrifuge to be installed separately or as a single unit
- Bowl, conveyor, and feed pump all VFD-controlled
- Automatic load sensing and feed pump control
- Capable of operating on 380-480V 3 phase at 50/60Hz without any loss in performance
- Can be deployed around the world without changing electrical components or motors

DE-1000 LP VFD A1 Dual Voltage

DE-1000™ SERIES

FEATURES & BENEFITS

DE-1000 FHD™ (Full Hydraulic Drive) Dual Voltage

- Driven by a 50 HP motor, the bowl attains up to 2300 G's at 3400 RPM to separate fine solids at high feed rates
- 18,800 in-lbs maximum conveyor torque with Rotodiff hydrostatic conveyor drive
- Independent adjustment of bowl speed and conveyor differential speed for optimal performance
- Automatic feed pump cycling and conveyor boost reduce the likelihood of rotating assembly overload and associated operational downtime
- Automatic safety shutdown for hydraulic fluid high temperature, high pressure, or low fluid level
- Capable of operating on 380-480V 3 phase at 50/60Hz without any loss in performance
- Can be deployed around the world without changing electrical components or motors

DE-1000 FHD Dual Voltage

DE-1000 LP GBD™ (Gearbox Drive)

- Driven by a 50 HP motor, the bowl attains up to 3180 G's at 4000 RPM at 60Hz and up to 2100 G's at 3250 RPM at 50Hz to separate fine solids at high feed rates
- Offers limited operational flexibility with fixed conveyor differential speed and bowl speed adjustment requiring sheave change
- Budget-priced offering for applications with consistent feed slurries
- Compact footprint and lightweight, allowing four units to fit in standard 40 foot container
- Reduced transportation, shipping costs, and ease of installation on smaller rigs and job sites

DE-1000 LP GBD

DE-1000
SPECIFICATIONS

DE-1000 SERIES			
CENTRIFUGE	**VFD**	**FHD**	**GBD**
Type:	Decanter (continuous flow)	Decanter (continuous flow)	Decanter (continuous flow)
Bowl Inside Diameter:	14" (356 mm)	14" (356 mm)	14" (356 mm)
Bowl Effective Length:	49" (1238 mm)	49" (1238 mm)	49" (1238 mm)
Bowl Material:	316 Stainless Steel	316 Stainless Steel	316 Stainless Steel
High G Maximum:	2575 G's	2300 G's	3180 G's
Maximum Bowl Speed:	3600 RPM	3400 RPM	4000 RPM
Conveyor Differential Speed Range:	1-100 RPM	3-90 RPM	Fixed speed based on gearbox ratio
CONVEYOR			
Standard Type:	Helical - Radial	Helical - Radial	Helical - Radial
Optional Type:	Helical - Axial	Helical - Axial	Helical - Axial
Lead Direction:	Left Hand	Left Hand	Left Hand
Movement Related to Bowl:	Lagging	Lagging	Lagging
GEARBOX			
Type:	Two Stage - Planetary	Roto - Differential	Two Stage - Planetary
Ratio:	52:1	N/A	52:1 or 125:1
Torque Maximum:	24,782 in·lb (2800 N·m)	18,800 in·lb (2124 N·m)	17,400 in·lb (1965 N·m) for 52:1 25,000 in·lb (2824 N·m) for 125:1 Gearbox
ELECTRICAL			
Bowl Drive:	50 HP (37 KW) Motor and VFD	50 HP (37 KW) Motor	50 HP (37 KW) Motor
Conveyor Drive:	20 HP (15 KW) Motor and VFD	Hydraulic	N/A
Pump Drive:	15 HP (11 KW) VFD	N/A	N/A
Control System:	Intuitive color operator interface with PLC control and dedicated Operator Interface terminal	Independent hydraulic control valves and associated pressure gauges for bowl and conveyor speeds	On/Off control panel for centrifuge and feed pump
Voltage:	380-480V, 600V	380-480V, 600V	380V, 480V, 600V
OPTIONS	**A1**		
Electrical Configurations:	400/480VAC or 600VAC Input		
Electrical Cabinet:	Class I, Division 1		
RA Electrics:	Class I, Division 1		
	B1, B2		
Electrical Configurations:	480 VAC Input		
Electrical Cabinet:	NEMA 3R		
RA Electrics:	**B1:** Class I, Division 1 **B2:** Class I, Division 2		

Award-Winning Service

Service engineers assist customers with installation, operation, and maintenance concerns, frequently solving problems over the phone. But when necessary, a team responds directly to the customer site to correct a problem. Concise, detailed, fully illustrated, easy-to-understand technical documentation is used by customers and our Service and Support team. Most questions can be answered in the pages of these comprehensive documents that are provided to customers in both printed and electronic formats. Information includes instructions for installing, operating, servicing, and maintaining Derrick equipment.

Offering around-the-clock field support, the Derrick Service department is dedicated to responding rapidly and providing efficient service and support. Close attention to customer needs is provided by thoroughly trained technical service, support experts, and Derrick's "always available" attitude.

WEIGHTS & DIMENSIONS

Flo-Line Primers

EQUIPMENT		DIMENSIONS				
Model	**Options**	**Width in (mm)**	**Length in (mm)**	**Height in (mm)**	**Weir Height in (mm)**	**Weight lbs (kg)**
Flo-Line Primer 258	Standard	53-3/4 (1365)	159 (4039)	51 (1295)	37-3/16 (945)	3100 (1406)
	VE (Vapor Extraction)		159-1/8 (4042)	58-5/16 (1480)		3300 (1497)
Flo-Line Primer II	Standard		114-3/4 (2915)	60-9/16 (1530)		3300 (1497)
	VE (Vapor Extraction)		115 (2921)	66-1/16 (1678)		3500 (1588)

Shakers

EQUIPMENT			DIMENSIONS				
Model	**Options**		**Width in (mm)**	**Length in (mm)**	**Height in (mm)**	**Weir Height in (mm)**	**Weight lbs (kg)**
HI-Cap	Box Feeder		88-15/16 (2259)	213-1/2 (5423)	107-3/4 (2737)	N/A	10000 (4536)
	Weir Feeder			239-1/4 (6077)		N/A	
Hyperpool	Box Feeder	None	69-5/8 (1768)	101-3/4 (2585)	63-13/16 (1620)	37-5/8 (956)	3600 (1633)
		3/20 Cones	80 (2032)	123-13/16 (3145)	109 (2769)		7300 (3311)
	Weir Feeder	None	69-5/8 (1768)	118-3/16 (3002)	63-13/16 (1620)	36-3/4 (933)	3700 (1678)
		3/20 Cones	80 (2032)	123-13/16 (3145)	109 (2769)		7400 (3357)
	Low Weir Feeder		69-5/8 (1768)	118-1/4 (3003)	61 (1550)	19-15/16 (507)	3700 (1678)
Dual Hyperpool	Integrated Flow Divider	None	157-1/4 (3994)	118-11/16 (3015)	63-13/16 (1620)	44-5/8 (1133)	9300 (4218)
		3/20 Cones	160 (4064)	124-5/8 (3166)	109-3/16 (2769)		13000 (5897)
Triple Hyperpool	Integrated Flow Divider	None	240 (6096)	118-11/16 (3015)	63-13/16 (1620)		13300 (6033)
		3/20 Cones	242-3/4 (6166)	124-3/16 (3154)	108-7/8 (2766)		17200 (7802)
Flo-Line Cleaner 503	Box Feeder	None	68-3/4 (1746)	102 (2591)	74 (1880)	41-7/16 (1052)	3400 (1542)
		3/20 Cones	80 (2032)	125 (3175)	109 (2769)		7300 (3311)
	Weir Feeder	None	64-3/4 (1645)	118-5/16 (3005)	74 (1880)	39-11/16 (1008)	3600 (1633)
		3/20 Cones	80 (2032)	126-5/16 (3208)	109 (2769)		7500 (3402)
	Low Weir Feeder		64-3/4 (1645)	121-3/16 (3078)	74 (1880)	25-3/8 (645)	3600 (1633)
Flo-Line Cleaner 504	Box Feeder	None	68-3/4 (1746)	129-7/16 (3288)	82-1/2 (2096)	41-7/16 (1052)	3800 (1724)
		3/20 Cones	80 (2032)	144-7/16 (3669)	109 (2769)		7800 (3538)
	Weir Feeder	None	64-3/4 (1645)	145-13/16 (3704)	82-1/2 (2096)	39-11/16 (1008)	4000 (1814)
		3/20 Cones	80 (2032)		109 (2769)		8000 (3629)
	Low Weir Feeder		64-3/4 (1645)	148-11/16 (3777)	77-5/16 (1964)	25-3/8 (645)	4100 (1860)
Flo-Line Cleaner 2000 3-Panel	Box Feeder	None	74-3/16 (1884)	95-9/16 (2427)	63-3/16 (1605)	39-3/4 (1010)	4100 (1860)
		2/16 Cones	80 (2032)	125 (3175)	104-1/8 (2645)		7500 (3402)
		20 - 4" Cones		114-13/16 (2917)	98-1/4 (2495)		6400 (2903)
	Weir Feeder	None	74-3/16 (1884)	121-1/16 (3075)	63-3/16 (1605)		4300 (1950)
Flo-Line Cleaner 2000 4-Panel	Box Feeder	None		123-1/16 (3126)	74-5/8 (1895)	42-3/4 (1086)	5300 (2404)
		3/20 Cones	80 (2032)	142-13/16 (3627)	106-3/8 (2702)		9000 (4082)
		20 - 4" Cones			100-1/2 (2553)		8000 (3629)
	Weir Feeder	None	74-3/16 (1884)	149-1/16 (3786)	74-5/8 (1895)	42 (1067)	5300 (2404)
Flo-Line Cleaner 423	Box Feeder	None	67-1/4 (1708)	96 (2438)	76 (1931)	N/A	3800 (1724)
Flo-Line Cleaner 424		None		124-1/8 (3153)	76-7/16 (1942)	N/A	4200 (1905)

WEIGHTS & DIMENSIONS

Hydrocyclones

EQUIPMENT			DIMENSIONS				
Model	**Options**		**Width in (mm)**	**Length in (mm)**	**Height in (mm)**	**GPM (LPM) at 75 ft. head**	**Weight lbs (kg)**
Desilters	Round	10 Cones	65 (1651)	69 (1753)	63-1/8 (1603)	700 (2650)	2300 (1043)
		12 Cones				840 (3180)	2400 (1089)
		16 Cones	78-9/16 (1995)	80 (2032)	67-1/2 (1715)	1120 (4240)	2500 (1134)
		20 Cones				1400 (5300)	2700 (1225)
	Inline/Vertical	10 Cones	32 (813)	70 (1778)	55-5/16 (1405)	700 (2650)	1000 (454)
		12 Cones				840 (3180)	1100 (499)
		16 Cones		86 (2184)	59-7/16 (1510)	1120 (4240)	1200 (544)
		20 Cones		102 (2591)	63-3/8 (1610)	1400 (5300)	1600 (726)
Desanders	Inline/Vertical	2 Cones	74-1/4 (1886)	39 (991)	89-7/8 (2283)	1000 (3785)	1400 (635)
		3 Cones				1500 (5678)	1500 (680)
	Incline	2 Cones / 25˚	62 (1575)	71-3/4 (1822)	39-7/8 (1013)	1000 (3785)	2000 (907)
		2 Cones / 30˚		68-5/16 (1735)	47-1/2 (1207)		
		2 Cones / 35˚			51-1/16 (1297)		
		3 Cones / 25˚		71-3/4 (1822)	39-7/8 (1013)	1500 (5678)	2100 (953)
		3 Cones / 30˚		68-5/16 (1735)	47-1/2 (1207)		
		3 Cones / 35˚			51-1/16 (1297)		

Centrifuges

EQUIPMENT		DIMENSIONS			
Model	**Options**	**Width in (mm)**	**Length in (mm)**	**Height in (mm)**	**Weight lbs (kg)**
DE-7200 VFD (Variable Frequency Drive)	Centrifuge	62-1/4 (1581)	162-3/4 (4121)	84-15/16 (2157)†	14200 (6441)
	Electrical Control Cabinet A1	37-9/16 (954)	77 (1956)	67 (1702)	2500 (1134)
	Electrical Control Cabinet B1/B2	35 (889)	70 (1778)	84 (2134)	1940 (880)
DE-1000 LP VFD (Variable Frequency Drive)	Low Profile Centrifuge/Cabinet	67-1/16 (1703)†	159-13/16 (4059)	66-3/4 (1695)†	7300 (3311)
	Electrical Control Cabinet A1	54-11/16 (1389)	40 (1016)	50-1/16 (1272)	1500 (680)
	Electrical Control Cabinet B1/B2	35 (889)	70 (1778)	84 (2134)	1940 (880)
DE-1000 FHD (Full Hydraulic Drive)	Dual Voltage Centrifuge	83-1/2 (2121)†	115-3/8 (2931)	70 (1778)†	8925 (4048)
DE-1000 LP GBD (Gearbox Drive)	Low Profile Centrifuge	69-15/16 (1776)†	110 (2794)	66-1/8 (1680)†	5200 (2359)

† Centrifuge Bowl Cover Open

The Derrick Family is a community comprised of thousands of individuals in countries around the globe. We share a collective interest in **Community Enrichment** through our avid support of industry associations and charitable organizations. Aware of our worldwide impact, we support the recovery of natural resources in the most energy-efficient manner, placing vital importance on **Global Sustainability**. Our **Award-Winning Service** department works around-the-clock to provide unparalleled support to customers around the world.

Our pioneering spirit is best demonstrated by our long-term commitment to **Continuous Innovation** which drives manufacturing of our **Leading-Edge Solutions**. Clients partner with us to overcome their most difficult fine-separation challenges and we deliver with our team of **World-Class Technologists**, many of whom have been with us for well over two decades. Our vertically integrated approach ensures product dependability and reinforces our **Quality Commitment**.

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15630 Export Plaza Drive
Houston, Texas 77032 U.S.A.
Office: (281) 590-3003
Toll Free: (866) DERRICK
Fax: (281) 590-6187
Email: info@derrick.com
www.Derrick.com

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