FINE SCREENING SOLUTIONS
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, multinational 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.
The Derrick Family
Derrick is a community which consists of co-workers, distributors, sales representatives, and customers. Our universal presence is comprised of thousands of individuals in countries around the globe. As our business continues to expand, we maintain the tight-knit corporate culture established by our founder.

Community Enrichment
We see our surrounding communities as an extension of our family, and we share a collective interest in giving back. This is exemplified by our avid support of industry associations and numerous charitable organizations.

World-Class Technologists
From field-trained personnel to advanced-degree engineers, our diverse development team collaborates to build technologically superior solutions. Whether offshore or onshore, in a mill or on a rig - they represent the most knowledgeable world-class separation technologists in the industry.

Quality Commitment
Our vertically integrated approach allows for the complete control of all aspects of product design and manufacturing. This comprehensive process ensures product dependability and enables us to offer long-lasting products which require minimal maintenance.

Global Sustainability
We support the recovery of natural resources in the most energy-efficient manner, placing vital importance on waste reduction and energy conservation. Our objective to increase our clients’ operational performance within a smaller environmental footprint is evident throughout our offering.

Award-Winning Service
We understand the importance of supporting our family. Our dedicated service team provides unparalleled global support. Numerous industry awards substantiate this heightened commitment to meeting our customers’ evolving needs.

Continuous Innovation
Our pioneering spirit is best demonstrated by our research and development team’s long-term commitment to continuous innovation. This mindset dates back to our founder’s invention of the first Integrated Vibratory Motor and Sandwich Screen® Technology. Our quest to perpetually reinvent ourselves is exemplified by our ever-growing portfolio of U.S. and foreign patents.

Leading-Edge Solutions
Our customers partner with us to overcome their most difficult fine-separation challenges. Design and Applications Engineers combine their mechanical and industry knowledge with our innovative Separation Technology to provide customers with state-of-the-art solutions to meet their ever-changing needs.

PIONEERING TECHNOLOGY®
The capacity of five separate fine particle wet screening machines in the footprint of one! The Derrick Stack Sizer® redefines fine particle wet screening, offering high capacity and exceptional efficiency in minimal space. Consisting of up to five individual screen decks positioned one above the other and operating in parallel, the Stack Sizer provides a unique combination of high capacity and efficiency that sets the Stack Sizer far above the nearest competition. Operators worldwide are using the Stack Sizer in a wide variety of applications and capitalizing on the numerous benefits of these remarkable machines to earn significant returns.

A 3-deck Stack Sizer drop-in replacement is now available for current users of Derrick Multifeed Screens. With up to two times the capacity, the Stack Sizer Multifeed retrofit has a similar footprint and is designed with the same oversize and undersize discharge points, eliminating the need for any piping or launder changes. If your machine has reached the end of its useful life, this is the perfect upgrade and will allow you to take advantage of all the features and benefits of Stack Sizer technology with minimal installation costs.

### FEATURES & BENEFITS

**1. Screen Decks**
- Up to five decks stacked one above the other operate in parallel, giving high capacity in minimal space
- Easy access for maintenance, servicing, and replacement of screen panels
- Simple drawbolt tensioning system permits all panels to be changed on a five-deck machine in about 30 to 40 minutes
- Urethane screen frame coating provides abrasion resistance

**2. Derrick Integrated Vibratory Motors**
- Low sound production
- Dual 2.5 HP (1.9 kW) Super G® vibratory motors are standard on the Stack Sizer providing uniform linear motion over the entire screen width and length of all screen decks
- Super G motors offer maintenance-free, greased-for-life bearings (Two-year warranty)
- Optional Super G2® vibratory motors offers a continuous recirculating internal oil lubrication system (Three-year warranty)

**3. Polyweb® Urethane Screen Panels**
- Up to 45 percent open area for maximum flow capacity
- Full range of openings down to 325 mesh (45 microns) permits screening from coarse to super fine particles
- Unique non-blinding design for optimum efficiency and performance
- Long Lasting – 6 to 12 months is common

**4. Flo-Divider™**
- Equalizes feed flow from source to each deck for optimal separation efficiency
- Custom-designed to meet process and layout requirements
- Available in wide range of discharge outlets from 2-way to 15-way
- Equipped with dart valves to stop the flow to one or more outlets
- Optional low profile inline Flo-Divider is available to accommodate height restrictions

**5. Feeders**
- Urethane pockets built into the feeder create a uniform distribution of feed slurry across the entire width of the screen
- Easily removed front cover facilitates maintenance and debris removal
- Inlet pipe configurations custom designed, if needed, to meet equipment layout requirements
- Rubber-lined for long life

**6. Repulp Spray System (Optional)**
- 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
Derrick Linear Motion machines have a long history of performing in trash screening and wet scalping applications. They are designed for high volumetric capacity when fed dilute slurry with a low percentage of oversize solids. This performance characteristic is achieved by the use of Derrick vibratory motors rotating in opposite directions creating high G-force, true linear motion causing forward, uphill conveyance of solids out of the fluid pool that forms near the feed end of the machine. Head or pressure from the liquid pool enhances the fluid throughput through the screen panels. The high G-force acceleration and uphill movement of the solids promote the production of an oversize fraction that is consistently stackable and conveyable.

When fitted with high G-force Derrick vibratory motors and fed thickened slurry, typically from hydrocyclone underflow, the Linear Motion machines perform a dewatering function that enhances the removal of free liquid from the oversize solids.

Four sizes of Linear Motion machines are available to meet the variable screening capacity needs of the industrial minerals, precious metals, industrial wastewater and municipal wastewater industries. Abrasion resistant urethane coatings and sealed-for-life Derrick vibratory motors assure long-life, low maintenance operation. The machines’ versatile design allows for the use of both traditional wire and Derrick anti-blinding, high open area Polyweb urethane screen panels. The combination of these features ensure outstanding wet screening and dewatering performance with minimal operator involvement.

1. Health, Safety & Environment (HSE)
   - Low sound production
   - Easy screen panel inspection, removal and installation
   - Light-weight screen panels for easy installation

2. Multiple Machine Sizes & Configurations
   - Available in 3 ft x 8 ft (0.9 x 2.4 m), 4 ft x 8 ft (1.2 x 2.4 m), 4 ft x 10 ft (1.2 x 3.0 m) and 5 ft x 14 ft (1.5 x 4.3 m) sizes
   - Multiple feed box styles available
   - Provides wet screening/dewatering capability for a wide range of mass and volumetric feed capacities
   - Open design allows visual inspection of screen panels

3. Spray Wash Water System
   - Wash water spray bars with multiple nozzle styles
   - Enhances removal of fines from oversize fraction

4. Traditional Convex Screen Bed
   - Allows use of both Derrick Polyweb urethane screen panels as fine as 325 mesh (45 microns) and traditional wire screen panels as fine as 400 mesh (38 microns)
   - Fast, easy screen panel installation and tensioning with sealing, rapid change bolt assemblies

5. Derrick Integrated Vibratory Motors
   - Zero maintenance
   - Low sound level
   - Three options available – Super G, Super G2, or W vibratory motors
   - Powerful, quiet and low energy consumption
   - Super G has greased-for-life bearings
   - Optional Super G2 has continuous recirculating internal oil lubrication system

6. Coatings & Linings
   - Zinc Rich Enamel Primer with Enamel Top Coat exterior/interior coating for low abrasion applications
   - 100% solids urethane coating for vibrating screen frame for high abrasion applications
   - Bonded rubber, nitrile rubber and 100% solids urethane linings for feed boxes and discharge hoppers for high abrasion applications
HI-G® Dewatering Machine

The Derrick HI-G® Dewatering machine provides the most cost-effective solution to handling fine solids separation. Derrick HI-G Dewatering machines utilize a combination of small diameter hydrocyclones mounted over a Linear Motion machine to recover and dewater solids as fine as 325 mesh (45 microns). Numerous HI-G Dewatering machines can be found operating in sand, aggregate, coal, concrete, and graphite dewatering applications worldwide.

FEATURES & BENEFITS

Hydrocyclones
- Up to twenty 4" hydrocyclones
- Designed to remove silt-sized solids (20-74 microns)
- Optional individual shutoff valve for each 4" hydrocyclone

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

Polyweb Urethane Screens Panels
- 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

FLO-DIVIDER SYSTEM

An installation of multiple screening machines or a single screening machine with multiple feed points, such as Derrick Stack Sizer, requires a well-designed flow distribution system. Custom engineered to suit customer’s requirement, Derrick flow distributors are designed to split slurry flows into various numbers of equivalent streams having identical material in terms of mass flow, volumetric flow, slurry density, and particle size distribution.

Typical round flow distributor consists of an open cylindrical tank design with a center feed well surrounded by multiple discharge compartments around the circumference. These flow distributors are available from 2-way to 15-way in 24", 30", 42", 50", 60", 72" and 84" diameters, whereas rectangular shape flow splitters are available in 3 ft x 9 ft and 4 ft x 12 ft

Features & Benefits
- Equalizes feed flow from source to each deck for optimal separation efficiency
- Custom-designed to meet process and layout requirements
- Available in wide range of discharge outlets from 2-way to 15-way
- Equipped with dart valves to stop the flow to one or more outlets
- Optional low profile inline Flo-Divider is available to accommodate height restrictions
- Top or bottom feed
- Non-pressurized
Repulp Wet Sizing Screen

The Derrick Repulp Wet Sizing Screen is the solution for difficult to screen materials that require the oversize product fraction to meet tight quality specifications. The Repulp machine’s high speed, low amplitude motion coupled with its countercurrent spray wash water system effectively removes fine particles. It has a long history of producing high value products for numerous industrial mineral and metal industries. Numerous machines can be found worldwide screening silica sand, feldspar, coal, iron ore, gold ore and many other materials.

Three sizes of Repulp Wet Sizing Screens are available to meet the variable screening capacity needs of both the industrial mineral and precious metal industries. Abrasion resistant urethane coatings and sealed-for-life Derrick vibratory motors assure long-life, low maintenance operation. The machines’ versatile design allows for the use of both traditional wire and Derrick anti-blinding, high open area Polyweb urethane screen panels. The combination of these features ensure outstanding wet screening performance with minimal operator involvement.

Features & Benefits

1. Health, Safety & Environment (HSE)
   - Low sound production
   - Easy screen inspection, removal and installation
   - Light-weight screen panels for easy installation

2. Multiple Machine Sizes & Configurations
   - Available in 3 ft x 8 ft (0.9 x 2.4 m), 4 ft x 10 ft (1.2 x 3.0 m) and 5 ft x 14 ft (1.5 x 4.3 m) sizes
   - Single, double and triple undersize discharge hoppers available
   - Multiple feed box styles available
   - Provides wet screening capability for a wide range of mass and volumetric feed capacities
   - Open design allows visual inspection of screen panels

3. Repulp Wash Water System
   - Rubber lined troughs between each screen panel
   - Wash water spray bars with multiple nozzle styles
   - Enhances removal of fines from oversize fraction

4. Traditional Convex Screen Bed
   - Allows use of both Derrick Polyweb urethane and traditional wire screen panels as fine as 325 mesh (45 microns)
   - Fast, easy screen panel installation and tensioning with sealing, rapid change bolt assemblies

5. Derrick Integrated Vibratory Motors
   - Zero maintenance
   - Three options available – E3, Super G, or W vibratory motors
   - Powerful, quiet and low energy consumption
   - Super G has grease-for-life bearings (Two year warranty)
   - Linear motion mount available for use with Super G vibratory motors

6. Coatings & Linings
   - Zinc Rich Enamel Primer with Enamel Top Coat exterior/interior coating for low abrasion applications
   - 100% solids urethane coating for vibrating screen frame for high abrasion applications
   - Bonded rubber, nitrile rubber and 100% solids urethane linings for feed boxes and discharge hoppers for high abrasion applications
Derrick Corporation wet screening machines include a specialized unit for processing light, flaky, hard to convey solids. The Derrick Model 48-120W-4M High Shear Screener is a custom designed, open single-deck machine that can be operated in both non-hazardous and hazardous environments. This machine is typically used in wet sizing applications as fine as 325 mesh (45 microns) using Derrick Polyweb urethane screens for kaolin clay, mica, and fly ash.

**HIGH SHEAR SCREENER**

**FEATURES & BENEFITS**

1. Health, Safety & Environment (HSE)
   - Low sound production
   - Easy screen inspection, removal and installation
   - Light-weight screen panels for easy installation

2. Machine Design
   - 304 Stainless steel construction option
   - 37.5 degree machine angle with screen panel sections set at multiple downhill angles promoting thin, uniform slurry layer for positive conveyance of light and plate-like particles
   - Wash water spray bar system
   - Abrasion resistant bonded rubber lining option for feeder and discharge hoppers
   - Abrasion resistant urethane exterior coating option for vibrating screen frame and discharge hopper lining
   - Open design allows visual inspection of screen panels

3. Traditional Convex Screen Bed
   - Convex crown promotes consistent screen panel tension, increases screen panel life
   - Perpendicular-to-flow screen panel tensioning allows for use of Derrick Polyweb urethane and traditional wire screen panels
   - Rubber float mounts effectively isolate support frame from vibration of screen frame
   - Rapid change draw bolt/draw bar assemblies provides fast and easy screen panel changes
   - Derrick Polyweb urethane screens as fine as 325 mesh (45 microns)
   - Wire screens produce efficient fines removal from 40 mesh (425 microns) to 400 mesh (38 microns)

4. Derrick Integrated Vibratory Motor
   - Zero maintenance
   - E3 vibratory motor promotes positive conveyance of oversize particles
   - Powerful, quiet and low energy consumption
   - Greased-for-life bearings
TRADITIONAL DRY SCREENING

Derrick Dry Sizing machines have been providing the industrial minerals industry solutions for fine dry screening application for over 60 years. Traditional Derrick Dry Sizing machines have utilized high speed, low amplitude, vertical elliptical motion to solve countless difficult mineral sizing challenges. Derrick’s commitment to pioneering technology has resulted in the recent evolution of dry screening technology to include a new series of Derrick Polyweb dry urethane screen panels to provide long life, and anti-blinding surfaces. Numerous machines can be found worldwide screening silica sand, iron powder, nickel powder, crushed glass, coal, polyethylene pellets/resins and many other materials.

Derrick dry screening technology includes a combination of features that ensures outstanding dry screening performance for applications that require separations from approximately 1/2 inch (12.7 mm) to 400 mesh (38 microns). Each machine is manufactured with Derrick’s core principle – manufacture of a robust machine with operator-friendly operation that reduces operating costs through the use of long lasting, low-maintenance components.

FEATURES & BENEFITS

1. Health, Safety & Environment (HSE)
   - Low sound production
   - Full enclosures with hinged and clamped top covers and side access doors for dust suppression
   - Easy screen inspection, removal and installation
   - Light-weight screen panels for easy installation

2. Multiple Machine Sizes & Configurations
   - Traditional Single-Deck available in 3 ft x 8 ft (0.9 x 2.4 m), 4 ft x 10 ft (1.2 x 3.0 m), 4 ft x 12 ft (1.2 x 3.6 m), and 5 ft x 14 ft (1.5 x 4.3 m) sizes
   - Traditional Double-Decks available in 3 ft x 10 ft (0.9 x 3.0 m), 5 ft x 12 ft (1.5 x 3.6 m) and 5 ft x 14 ft (1.5 x 4.3 m) sizes
   - Multi-Deck machines are available with one, two, three or four 4 ft x 10 ft (1.2 x 3.0 m)
   - Single, double and triple Undersize discharge hoppers available
   - Multiple feed box styles available
   - Provides dry screening capability for a wide range of mass and volumetric feed capacities

3. Traditional Convex Screen Frame
   - Allows use of both Derrick Polyweb urethane and traditional wire screen panels
   - Fast, easy screen panel installation and tensioning with sealing, rapid change bolt assemblies
   - Unique non-blinding design for optimum efficiency and performance

4. Derrick Integrated Vibratory Motors
   - Zero maintenance
   - Multiple options available – E3, Super G, or W vibratory motors
   - Powerful, quiet and low energy consumption
   - Super G has greased-for-life bearings (Two-year Warranty)
Offering the most innovative hardware available in dry screening equipment, Derrick proudly introduces the latest in dry screening technology, the Front-To-Back (FTB) screen tensioning system. Increased capacity, improved efficiency, and extremely fast panel changes are all features of Derrick’s new FTB tensioning system.

Customers using the Derrick 4 ft x 10 ft FTB screen frame report capacity increases up to 50 percent with improved efficiencies in products ranging from 0.25 in (6.35 mm) down to 400 mesh (38 microns). Increases are attributable to rotating the screen panel tensioning 90 degrees, thereby positioning the crown of the screen parallel to the material flow. This change in crown orientation assures an even distribution of material across the entire width of the screen, increasing capacity and efficiency while reducing panel wear and virtually eliminating blinding.

Derrick Front-To-Back screen tensioning systems are not only fast and efficient but also cost effective. A new FTB screen frame is available for retrofit on most standard Derrick 4 ft x 10 ft (1.2 m x 3.0 m) machines. Although the conversion can be completed in less than a day, the resulting dramatic improvement is long-lasting.

**Screen Panel Changes in Four Simple Steps!**

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

1. **Health, Safety & Environment (HSE)**
   - Low sound production
   - Full enclosures with hinged and clamped top covers and side access doors for dust suppression
   - Easy screen inspection, removal and installation
   - Light-weight screen panels for easy installation

2. **Multiple Machine Sizes & Configurations**
   - Traditional Single-Deck and Double Deck available in 4 ft x 10 ft (1.2 x 3.0 m) sizes
   - Single, double and triple undersize discharge hoppers available
   - Multiple feed box styles available
   - Provides dry screening capability for a wide range of mass and volumetric feed capacities

3. **“Front-To-Back” Screen Frame**
   - Convex screen panel sections oriented parallel to material flow
   - Extremely fast, easy screen panel installation and tensioning with single tensioning point for each screen panel
   - Results in high capacity as a result of full-width dispersion of solids over entire length of vibrating screen frame
   - Can be fitted with various Derrick vibratory motors
   - Retrofit available for most standard Derrick 4 ft x 10 ft machines

5. **Derrick Integrated Vibratory Motors**
   - Zero maintenance
   - Multiple options available – E3 or Super G vibratory motors
   - Powerful, quiet and low energy consumption
   - Super G has greased-for-life bearings (Two-year warranty)
Derrick’s newly developed Multi-Deck Dry Screen is the high capacity, highly efficient dry fine screening machine in the world. Consisting of up to four decks, the Multi-Deck screening machine – with linear motion action produced by dual SG3 high speed low amplitude vibratory motors – and with Derrick’s high open area, non-blinding dry urethane screen surface technology, which is available in the size range from 4 mm down to 106 micron, has redefined the concept of dry fine screening. With ever-growing demand of high capacity and efficient dry screen, Multi-Deck Screening machine, coupled with highly innovative Polyweb screen technology will be the wave of the future for fine dry screens.

**MULTI-DECK DRY SCREENING**

**FEATURES & BENEFITS**

1. Health, Safety & Environment (HSE)
   - Low sound production
   - Full enclosures with hinged and clamped top covers and side access doors for dust suppression
   - Easy screen inspection, removal and installation
   - Light-weight screen panels for easy installation

2. Multiple Machine Sizes & Configurations
   - Machines are available with up to four 4 ft x 10 ft (1.2 x 3.0 m) decks all operating in parallel
   - Provides dry screening capability for a wide range of mass and volumetric feed capacities
   - Deck can be operated independently to make a different cut on each deck or in parallel to make the same cut on each deck

3. Multi-Deck Sizing Machines
   - Latest Derrick dry screening machine technology
   - Incorporates dual motor, true-linear motion that allows stacking of multiple single-deck machines
   - Designed for exclusive use of Derrick Polyweb urethane screen panels
   - Results in high capacity screening with a small floor footprint

4. Derrick Integrated Vibratory Motors
   - Zero maintenance
   - Super G3 vibratory motors
   - Powerful, quiet and low energy consumption
   - Sealed oil bath bearings
Floating Backing Wire

The Derrick Floating Backing Wire system now makes it practical to screen materials that would otherwise be impossible to screen due to their tendency to blind or bridge the screen panel openings. The Floating Backing Wire system consists of trays holding narrow pieces of coarse woven wire just below the screen panel surface. As the screen frame vibrates, the Floating Backing Wire bounces up against the back of the screen panel and knocks loose any particles clinging to screen panel. Used successfully with damp solids and materials that tend to cling to the screen surface, Derrick Floating Backing Wire is the ideal solution for difficult screening problems.

Sandwich Screens®

The Derrick Sandwich screen, which consists of two fine mesh screens supported by a coarser backing wire screen, is bound into a double fold, hook strip. Interference in the free openings is created by cross wires of the second screen. This layered effect prevents particles from lodging in the openings of the top sizing surface. The cut point is made by the combination of cross wires from both fine screen surfaces.

Standard Wire Screens

Derrick supplies square or slotted wire screen cloth in all standard meshes and wire diameters. These are designed with double fold, hook strip, box bindings for secure and easy installation.
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. 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 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. Super G vibratory motors carry a two-year warranty.

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 Linear Motion machines.

4 Inch Round or Inline Desilters

The Derrick round and inline desilters are designed to remove silt-sized (20 to 74 microns) solids from fluids. Derrick’s round desilters are simple to operate and easy to maintain. An optional shutoff valve 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 that 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 users 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.

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 FINE, 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 REPUTED IN THE INDUSTRY FOR DURABILITY. HIGH PERFORMANCE AND EXCEPTIONAL DURABILITY MAKE THE SUPER G SERIES VIBRATORY MOTORS AN ASSET TO ANY DRILLING PROGRAM.

HYDROCYCLONES

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 Linear Motion machines.

Derrick’s round and inline desilters are designed to remove silt-sized (20 to 74 microns) solids from fluids. Derrick’s round desilters are simple to operate and easy to maintain. An optional shutoff valve 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 that 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 users 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.
**DE-7200™ VFD**

The DE-7200 VFD™ (Variable Frequency Drive) centrifuge offers robust mechanical design coupled with advanced control technology. The stainless steel bowl and conveyor with hardened and replaceable wear parts reduce the total ownership cost and maintenance downtime. With a maximum of 2750 G’s at 3000 RPM bowl speed the DE-7200 separates fine solids from fluids, improving fluid rheology and thus performance. The DE-7200 features a 60 HP conveyor drive motor with 70,806 in-lbs gearbox torque, allowing it to maintain high feed rates while processing fluids with high solids content. With a 21.4” x 72” bowl capable of processing high-volumetric flow rates and removing large quantities of solids, the DE-7200 has the capacity needed for effective solids control on deep wells with high circulating rates and fast rates of penetration. Automatic load sensing and feed pump control dynamically adjusts the pump rate to maintain bowl or conveyor torque set point, enabling automated processing optimization and preventing rotating assembly overload. The DE-7200 is available with remote monitor and control capability, allowing the operator to be located outside of hazardous working environments and enabling offsite technicians to perform process optimization, quality control, and troubleshooting.

**DE-1000™ LP VFD Dual Voltage**

Combining the field-proven durability of the DE-1000 series rotating assembly with the same state-of-the-art control system as on the DE-7200, the DE-1000 LP (Low Profile) VFD is Derrick’s premium small bowl centrifuge offering. With PLC-controlled variable frequency drives controlling bowl and conveyor speed as well as feed rate, the DE-1000 LP VFD can be rapidly optimized for most efficient solids control in a wide range of applications. The automated control system adjusts feed rate based on centrifuge loading, ensuring the maximum solids removal without operator intervention. The DE-1000 VFD may also be controlled and monitored from a safe location offsite, protecting personnel from hazardous conditions onsite and allowing remotely located experts to assist in operation and maintenance. The unit features 24,782 in-lbs maximum conveyor torque with a 52:1 gearbox and a 20 HP motor driving the conveyor, enabling it to remove a large volume of solids. Reaching a maximum of 2575 G’s at 3600 RPM bowl speed, the DE-1000 VFD removes fine solids and improves fluid quality. The Low Profile (LP) is a modular design, allowing the control cabinet to be positioned separately from the centrifuge for the safety of equipment operators and increased flexibility for job site installations. The dual voltage electrical configuration (440V/3phase and 480V/3phase at 60Hz or 380V/3phase and 400V/3phase at 50Hz) allows the unit to operate around the world without changing electrical components or motors.

**DE-1000™ FHD Dual Voltage**

The DE-1000 FHD™ (Full Hydraulic Drive) is engineered and manufactured for performance, flexibility, reliability, and minimal maintenance. The full hydraulic drive control enables independent adjustment of the bowl speed and conveyor differential speed during processing, allowing the operator to adjust the centrifuge parameters for efficient solids removal as feed properties change throughout the process. With maximum centrifugal acceleration of 2300 G’s at 3400 RPM bowl speed and conveyor differential speed adjustment from 9-90 RPM, the DE-1000 FHD is effective in a wide range of applications. The DE-1000 FHD has two unique features that protect the rotating assembly from overload, feed pump cycling and conveyor boost system. During feed pump cycling, the centrifuge electrical system automatically shuts down the feed pump if the conveyor becomes overburdened. Should feed pump shut down fail to reduce load on the conveyor, the conveyor boost system automatically increases the conveyor differential speed to clear solids from the bowl. The stainless steel rotating assembly with hardend, replaceable wear parts extends the operating life of the DE-1000 FHD, minimizing repair cost and maintenance downtime. The dual voltage electrical configuration (440V/3phase and 460V/3phase at 60Hz or 380V/3phase and 415V/3phase at 50Hz) allows the unit to operate around the world without changing electrical components or motors.

**DE-1000™ LP GBD**

The DE-1000 LP (Low Profile) GBD (Gearbox Drive) offers consistent performance, high reliability, and minimal maintenance at low cost. The gearbox drive system with onboard operator controls ensures ease of use and is best suited for applications with consistent feed properties. Several drive motor sheaves are available to permit bowl speed adjustment up to 4000 RPM at 60Hz or up to 3250 RPM at 50Hz. This version of centrifuge can attain up to 3180 G’s. With two available gearbox ratios of 52:1 and 125:1, the gearbox may be changed to provide the best conveyor differential speed for the application. An overload clutch protects the gearbox, preventing costly damage to mechanical parts in event of rotating assembly overload. During startup, the 50 HP bowl motor is protected from damage by a soft start fluid coupling. To prevent equipment damage and protect personnel, the DE-1000 LP GBD has automatic safety shutdown for high vibration, centrifuge motor overload, or feed pump motor overload. Like the other DE-1000 series centrifuges, the DE-1000 LP GBD has excellent durability and low repair costs with a stainless steel rotating assembly and hardened, replaceable wear parts. The low profile design is compact and lightweight, reducing transportation and shipping costs.
For over 60 years—since the company’s founding by H. William Derrick Jr. in 1951—the Derrick Testing Laboratory has offered comprehensive testing and thorough reporting. A dedicated and fully equipped facility, the lab permits complete testing of both wet and dry samples under actual field conditions, on full size machines.

The Derrick test facility is an integral part of the applications process. There is no better way to determine machine performance than with the actual process material. It is invaluable for customer application efforts.

Computer modeling cannot account for particle variations like shape, density, and slurry viscosity. Every sample is different. Depending on the origin of the sample and comminution method, some particles may be needle like, while others more spherical still others thin and flat. These variations cause the materials to screen differently. For these reasons, the most reliable way to determine process performance is by testing in Derrick’s Testing Laboratory. Derrick applies state-of-the-art equipment to perform tests. Including magnetic flow meters accurate to 1% of the flow rate, automated control valves to maintain steady flow rates. Automated weigh belt feeders for feed control to dry equipment. In addition, each test is video recorded to document test programs.

Visiting Derrick Testing Laboratory allows observation of the high quality standards built into everything we do. When conducting your tests nothing is taken for granted. This process begins through direct communication with the Derrick Engineering team. Your data is essential and enables the Engineering team to determine the best Derrick equipment to achieve your specifications. Using this information a laboratory test procedure is prepared. A Derrick Application Engineer will help arrange sample shipment to our Buffalo New York testing laboratory.

Customer involvement is critical for determining the type, number of units and the location of the equipment in the process. Using this information a test procedure is prepared for the laboratory. After running Laboratory tests, a Derrick Engineer provides a comprehensive test report. The datasheets includes a size distribution, flow diagram depicting the feed characteristics, as well as quantities and percentages of the undersize and oversize materials. An explanation of all testing methods and procedures, along with the specific results from each stage of testing is provided.

The details of these results provides the information to confirm the correct Derrick equipment include the model, number of machines, recommended screen panels, and efficiency for each application. Derrick encourages your assistance and participation in the tests. Your knowledge and experience ensures your companies objectives are achieved.
### WEIGHTS & DIMENSIONS

#### Model

<table>
<thead>
<tr>
<th>Model</th>
<th>Options</th>
<th>Screen Frame</th>
<th>Angle Adjustment</th>
<th>Width in (mm)</th>
<th>Length in (mm)</th>
<th>Height in (mm)</th>
<th>Weight in lbs (kg)</th>
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<tbody>
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<td>36-10W-3</td>
<td>Linear Motion Screen</td>
<td>Low Weir Feeder</td>
<td>0º, +3º, +5º</td>
<td>55-1/4 (1402)</td>
<td>125 (3175)</td>
<td>68-7/16 (1798)</td>
<td>4000 (1814)</td>
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<tr>
<td>2SG48-10W-3</td>
<td>Linear Motion Screen</td>
<td>Low Weir Feeder</td>
<td>1º to +5º</td>
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<td>127-3/16 (3231)</td>
<td>88 (2235)</td>
<td>3500 (1597)</td>
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<td>Linear Motion Screen</td>
<td>Low Weir Feeder</td>
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<td>151-15/16 (3859)</td>
<td>88 (2235)</td>
<td>4000 (1814)</td>
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<td>2SG48-120W-4</td>
<td>Linear Motion Screen</td>
<td>MS Feeder 10º</td>
<td>-1º to +5º</td>
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<td>155-1/4 (3943)</td>
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<td>Low Weir Feeder</td>
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<td>179-15/16 (4570)</td>
<td>88 (2235)</td>
<td>4600 (2087)</td>
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<td>Chute Feeder</td>
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<td>213-1/2 (5422)</td>
<td>103-7/16 (2627)</td>
<td>10000 (4536)</td>
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<td>3-Panels 20 - 4&quot; Cones</td>
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<td>70-6/16 (1792)</td>
<td>115-9/16 (2933)</td>
<td>94-1/16 (2389)</td>
<td>5000 (2268)</td>
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<td>140-1/2 (356)</td>
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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.

We are a Global Family® focused on Pioneering Technology®.