



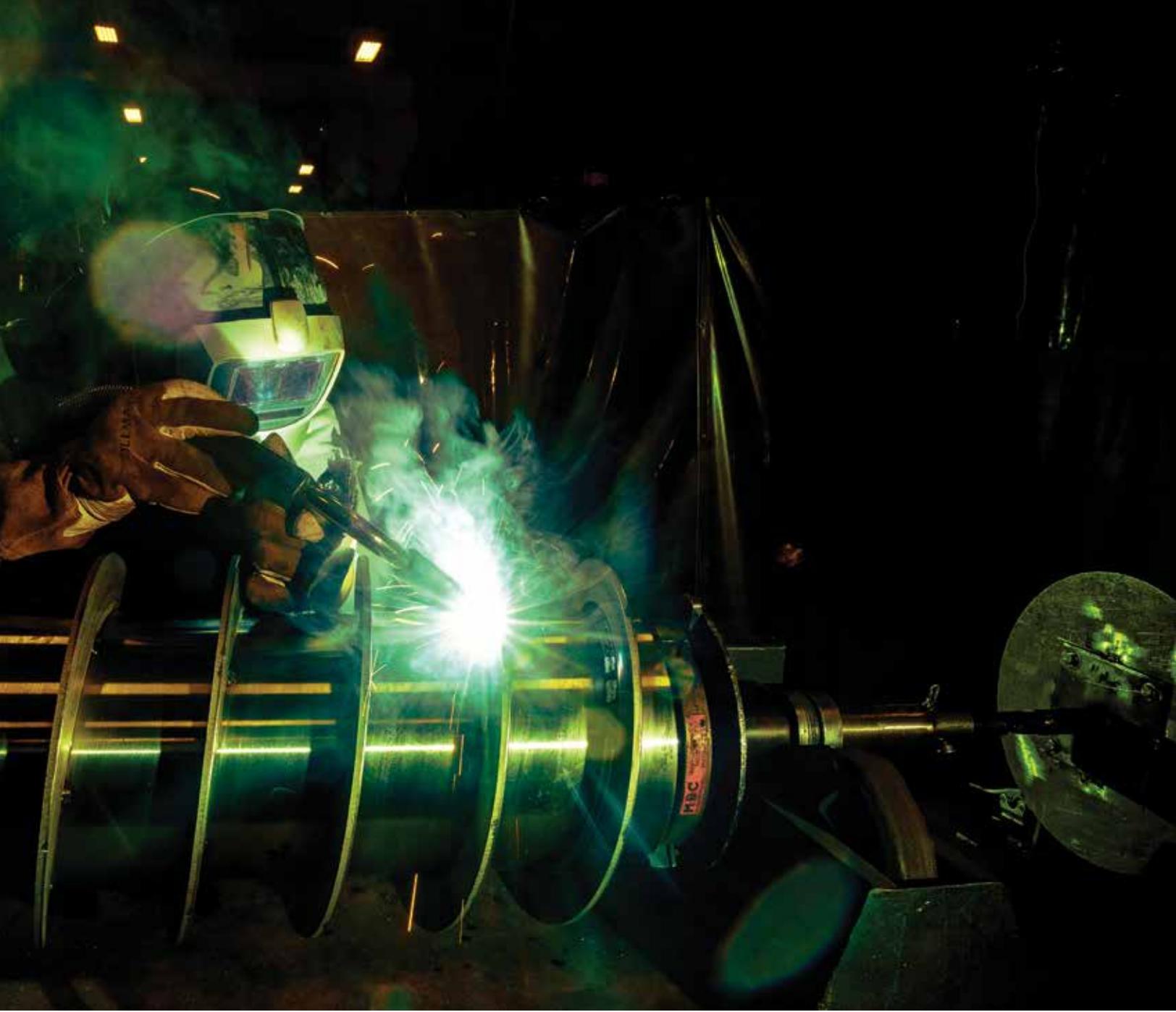
DE-SERIES™ CENTRIFUGES

DE-SERIES CENTRIFUGES

Coupled with 70 years of industry leading experience in Solids Control, the Derrick® centrifuge line offers the flexibility and dependability of efficient solids-liquid separation. With safety, reliability, and capacity as a few of the key features of a Derrick centrifuge, this product offers the operator the ability to make on the fly adjustments with the Variable Frequency Drive (VFD™) technology and remote monitoring and operating capabilities.

The rugged design inherent with every Derrick centrifuge allows operators to receive the benefits of maximizing solids removal efficiency while providing unmatched durability in the most challenging environments and applications. Derrick centrifuges are manufactured to serve a variety of markets within the Mining & Industrial, Oil & Gas Drilling, and Civil Construction industries.





VFD™ (VARIABLE FREQUENCY DRIVE)

VFD Control

- Allows independent adjustment of bowl speed, conveyor differential speed, and feed rate at the control cabinet
- Enables on-the-fly control of centrifuge parameters for optimal solids removal efficiency in a wide variety of applications



Automated Load Sensing and Feed Pump Control

- Provides automated process optimization
Dynamically adjusts feed rate based on bowl and conveyor torque
- Ensures maximum processing rate as conditions change
- Prevents rotating assembly overload and associated downtime
- Safe, consistent, and reliable performance for unattended operation



Automated Start Up and Shut Down Routines

- Controls all motor acceleration during start up and shut down to ensure safe operation, protecting equipment and personnel
- Includes automatic clean out during shutdown to remove process material from the rotating assembly, extending life and reducing maintenance requirements

Real-Time Diagnostics

- Issues detailed alarm and fault messages to facilitate troubleshooting, reducing maintenance time and cost
- Monitors and logs operating speeds, feed rate, motor and gearbox torque, main bearing temperatures and machine vibration levels
- Automatic maintenance alerts for bearing and motor grease, case cleanout and gearbox oil changes





DERRICK[®]

DE-7200 A1 CONTROL CABINET

REMOTE MONITOR AND CONTROL OPTIONS



Enables Remote Access to the Centrifuge Control System

- Monitor and control all operating parameters
- View bowl/conveyor motor torque, feed rate, and bearing temperature trends
- Access setup, diagnostics, and status screens

Allows Operators to Locate Outside Hazardous Working Environments

- Provides safe working environment
- Reduces personnel exposure to potentially harmful conditions

Enables Offsite Technical Support and Assistance

- Monitor performance and ensure quality control
- Assist in troubleshooting to minimize downtime
- Optimize centrifuge parameters for maximum solids removal efficiency



Option #1: Separate HMI

- Standalone touchscreen operator interface for non-hazardous locations only
- Hazardous location operator interface also available
- Offers full control of centrifuge from another onsite location
- Wired Ethernet connection (copper or fiber optic options)

Option #2: Profibus Connection

- Connects a single centrifuge to end-user's control system
- End-user programs and designs centrifuge control screens in their control center
- Ideal for integration of a single unit into a larger package (e.g. a VFD controlled dewatering package or mud treatment system)

Option #3: Wireless Connection

- Connects a single centrifuge to customer's PC or laptop via web portal
- Includes cellular modem with wireless antenna for offsite access
- Includes hardwired router to allow direct connection onsite
- Allows a user to remotely monitor multiple centrifuges simultaneously
- Ideal for land rig installations and small fleets

Option #4: Cloud-Based Fleet Management

- Connects multiple centrifuges via wireless or hardwire connection to internet with GPS tracking
- Uploads and stores data on cloud server
- Allows access to entire fleet through single website
- Enables offsite personnel to locate, manage, monitor, and control all units
- Provides custom report generation tools
- Ideal for large, geographically dispersed fleets

FOUR REMOTE MONITOR AND CONTROL OPTIONS PROVIDE FLEXIBILITY FOR DIFFERENT APPLICATIONS AND INSTALLATIONS



DE-1000 LP VFD A1 Control Cabinet

CONSTRUCTION



Engineered for High Volume Solids Removal

- Large feed chambers to handle high feed rates
- Robust flight design to convey large quantities of high density solids
- Steep and short beach to enable high volume solids discharge
- Designed to handle heavy weight drilling fluids and support high circulating rates in oil & gas drilling
- Designed to process feed slurries with highly abrasive solids in mining and aggregate operations
- Designed to manage high feed rates and solids loading for civil construction applications

Built for Durability and Reliability

- Fully stainless rotating assemblies, both bowl and conveyor, to prevent corrosion and increase asset longevity in harsh operating conditions
- Conveyor flights have tungsten carbide tiles to protect from wear and damage
- Conveyor features hardened/replaceable feed nozzles and feed accelerator to extend conveyor life
- Bowls have hardened/replaceable solids discharge inserts and plows to reduce repair costs
- Built to last with minimal repair costs and downtime, reducing total cost of ownership

AWARD-WINNING SERVICE & HSE



Award-Winning After Sales Service

- One-year Derrick warranty provides protection against defects in materials and workmanship
- 24-hour on-call technical support ensures timely assistance
- Dedicated centrifuge technicians available to deploy worldwide for repair and service
- Derrick factory repair and remanufacture with nine-month warranty
- Separately available commissioning service to help start new operations and jobs
- Multiple levels of training available: operator, electrical and mechanical maintenance, operational theory and optimization

Health, Safety, & Environment (HSE)

- Machine available in NEC, IECEx and ATEX hazardous location configurations
- Purged control cabinet (A1) available for Class I Div. 1 hazardous locations
- Lift assist for case covers to prevent personnel injury
- Automatic shutdown for high vibration and motor overload to protect equipment from damage and protect personnel from harm
- Guards and covers on all rotating components to prevent personnel injury
- Detailed equipment manuals and equipment labeling for safe operation

DE-7200™ VFD

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-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 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

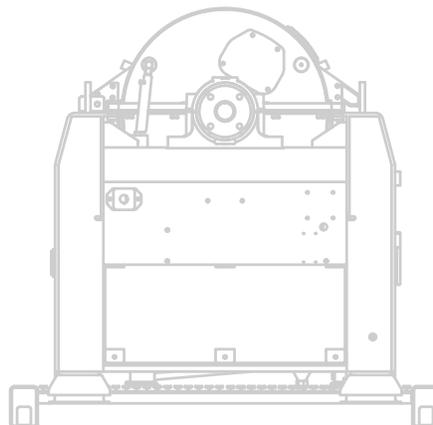
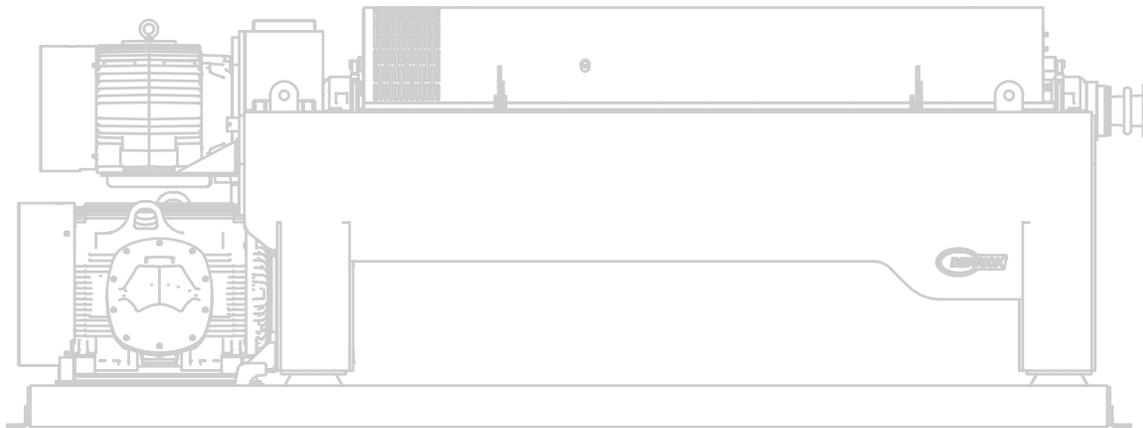
DE-1000 SERIES			
CENTRIFUGE	VFD	FHD	GBD
Type:	Decanter (continuous flow)	Decanter (continuous flow)	Decanter (continuous flow)
Bowl Inside Diameter:	14" (356 mm)	14" (356 mm)	14" (356 mm)
Bowl Effective Length:	49" (1238 mm)	49" (1238 mm)	49" (1238 mm)
Bowl Material:	316 Stainless Steel	316 Stainless 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		

WEIGHTS & DIMENSIONS

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

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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**.



**GLOBAL FAMILY.
PIONEERING TECHNOLOGY.™**

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