

CD 500 HV Centrifuge



The CD 500 High Volume (HV) centrifuge is a high-powered centrifuge designed for exceptional low gravity solids (LGS) separation and barite recovery in operations where large feed rates are a requirement.

The CD 500 HV centrifuge has been designed to process large volumes of fluids, improve barite recovery and produce solids that meet environmental regulations for disposal. Automatic PLC monitoring and adjustment compensates for varied drilling conditions and maintains maximum solids/fluids separation throughout the drilling operation.

The CD 500 HV centrifuge recovers valuable drilling fluid and barite while reducing the total volume of drilling waste that must be transported for injection, disposal or remediation.

By recovering more fluid and producing drier cuttings with a smaller volume, the CD 500 HV centrifuge helps operators reduce their drilling waste and disposal volumes.

Features

Performance

- Quasi-Axial scroll
- High bowl speed
- Double feed chamber
- Open ended and slotted feed tubes
- Oil forced lubricated main bearings
- Variable bowl, scroll and pump speed
- Split pillow blocks
- PLC control
- Stainless steel rotating assembly
- Perfectly balanced rotating assembly
- Tungsten carbide tiles (scroll)

Safety

- Vibration sensor
- Torque limiter
- Micro switches on vessel and guards
- Bearing temperature sensors
- Pressure sensors ⁽¹⁾
- Hydraulic oil temperature sensor ⁽¹⁾
- Speed sensors ⁽¹⁾

(1) Only on Fully Hydraulic Drive types

Benefits

Performance

- Quasi-Axial scroll provides an increased flow area which minimizes the turbulence for an improved separation efficiency and a high fluid handling capacity
- High bowl speed assures a high G-Force, solids removal efficiency, finest cut points and a high clarification capacity
- Double feed chamber and open ended/slotted feed tubes assure better configuration for barite recovery or LGS removal
- Reduced bearing wear and maintenance requirements
- Complete control of G-Force for improved separation efficiency
- Split pillow blocks for increased protection against contamination, extended material life and easier maintenance
- Programmable Logic Controller (PLC) provides continuous monitoring and automatic shut-down of all critical parameters while providing automatic control to avoid centrifuge plugging

Technical specifications for the CD-500 HV Centrifuge

CD 500 HV VFD
CD 500 HV FHD

CD 500 HV SL VFD
CD 500 HV SL FHD

All dimensions are expressed in inches (millimeters).

Specifications

Performance

- Hydraulic Capacity: 674 GPM (2,551 LPM)
- Operating Speed: 3,200 rpm
- G-Force: 2,656 G
- Sigma Value: 49,589 ft² (4,607 m²)
- Solids Discharge: 53 GPM (12.0 m³/h)

Rotating Assembly

- Bowl Diameter: 18.6 in. (472 mm)
- Bowl Length: 67.5 in. (1,715 mm)
- Pond Depth: 2.2, 2.6, 3.0 in. (56, 66, 76 mm)
- Scroll Type: Single Lead Quasi Axial Flow
- Scroll Pitch: 5.12 in. (130 mm)
- Main Bearings: Oil Lubricated
- Internal Bearings: Grease Lubricated
- Feed Tube: Open Ended [LGS Removal] Slotted [Barite Recovery]

Rotating Assembly Material

- Bowl: Stainless Steel Duplex A890
- Scroll: Stainless Steel Duplex A890 AISI 304
- Scroll Flights: Tiles; Tungsten Carbide
- Discharge Bushings: Tungsten Carbide

Gearbox

- Type: Planetary [Model; ZG 3700/10]
- Gear Ratio: 80:1
- Torque, maximum: 6,269 ft-lb (8,500 Nm)
- Differential Range: 1 to 40 rpm
- Weight: 474 lbs (215 Kg)

Nozzle Schedule

- Liquid Discharge: 8 in. Victaulic
- Solids Discharge: 31.9 x 17.7 in. (810 x 450 mm)
- Feed Tube: 2 in. [ANSI B 16.5]

VFD Type

- Power: 400/460 V - 50/60 Hz, 3 Phase
- Main Drive Motor: 100 Hp (75 kW)
- Back Drive Motor: 30 Hp (22 kW)

FHD Type

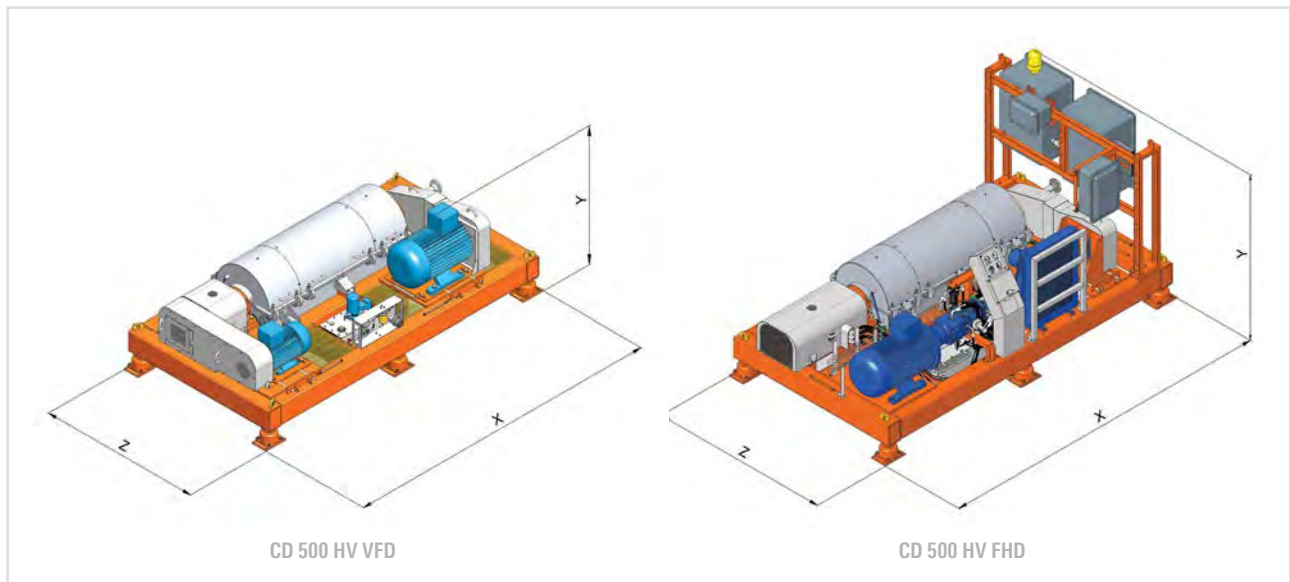
- Power: 400/460 V - 50/60 Hz, 3 Phase
- Main Drive Motor: 120 Hp (90 kW)
- Hydraulic Pump: Variable Displacement Pump

Certification

- CD 500 HV VFD: ATEX CE Ex II 2G c b IIB T3 or Class I, Division 1 hazardous areas for USA and Canada
- CD 500 HV FHD: ATEX CE Ex II 2G c b IIB T3
- CD 500 HV SL VFD: ATEX CE Ex II 2G c b IIB T3 or Class I, Division 1 hazardous areas for USA and Canada
- CD 500 HV SL FHD: ATEX CE Ex II 2G c b IIB T3

Dimensions and Weights

	X	Y	Z	Weight
■ CD 500 HV VFD:	155.4 in. (3,946 mm)	47.8 in. (1,215 mm)	79.5 in. (2,020 mm)	11,023 lbs (5,000 Kg)
■ CD 500 HV FHD:	163.2 in. (4,146 mm)	90.2 in. (2,290 mm)	87.4 in. (2,220 mm)	14,330 lbs (6,500 Kg)



Technical specifications for the CD-500 HV Centrifuge

CD 500 HV VFD
 CD 500 HV FHD

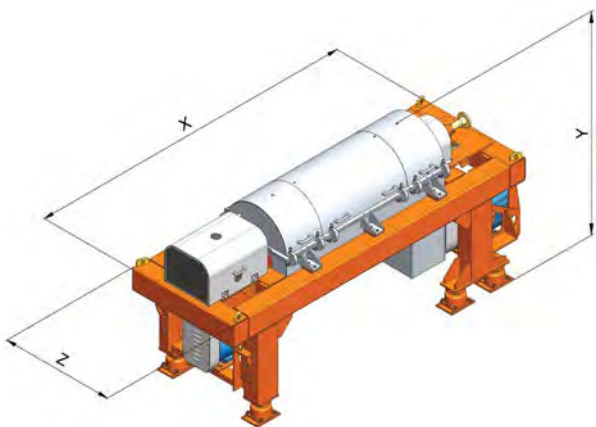
CD 500 HV SL VFD
 CD 500 HV SL FHD

All dimensions are expressed in inches (millimeters).

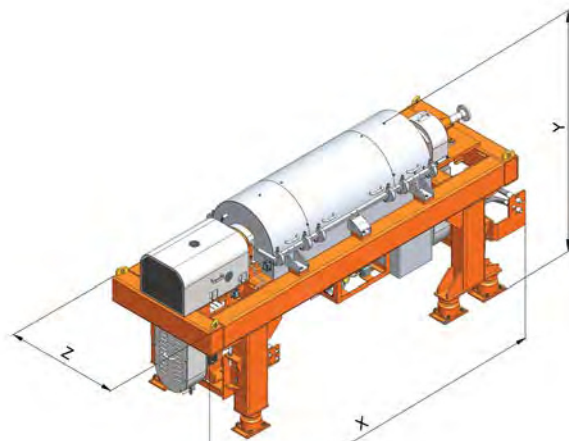
Specifications

Dimensions and Weights (Continued)

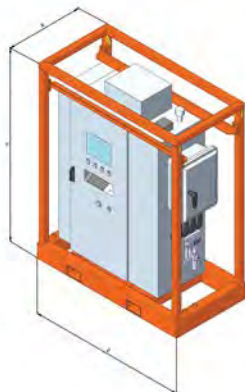
	X	Y	Z	Weight
■ CD 500 HV SL VFD	163.3 in. (4,149 mm)	76.1 in. (1,934 mm)	48.4 in. (1,230 mm)	11,023 lbs (5,000 Kg)
■ CD 500 HV SL FHD [Centrifuge Module]	157.9 in. (4,010 mm)	76.3 in. (1,937 mm)	47.6 in. (1,210 mm)	10,417 lbs (4,725 Kg)
■ CD 500 HV SL FHD [Hydraulic Module]	129.9 in. (3,300 mm)	90.2 in. (2,290 mm)	68.5 in. (1,740 mm)	6,989 lbs (3,170 Kg)
■ VFD Control Panel [ATEX]	41.3 in. (1,050 mm)	98.4 in. (2,500 mm)	82.7 in. (2,100 mm)	3,527 lbs (1,600 kg)
■ VFD Control Panel [UL]	48.0 in. (1,219 mm)	90.0 in. (2,286 mm)	102.0 in. (2,591 mm)	2,640 lbs (1,198 kg)



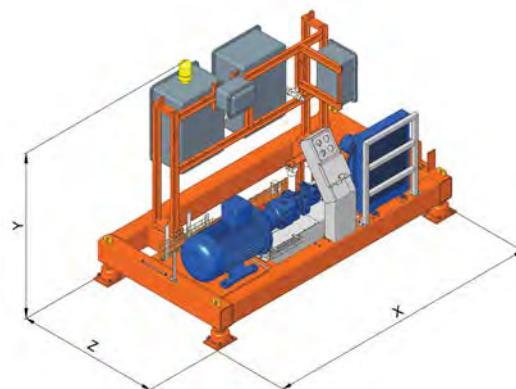
CD 500 HV SL VFD



CD 500 HV SL FHD
[Centrifuge Module]



VFD Control Panel



CD 500 HV SL FHD
[Hydraulic Module]