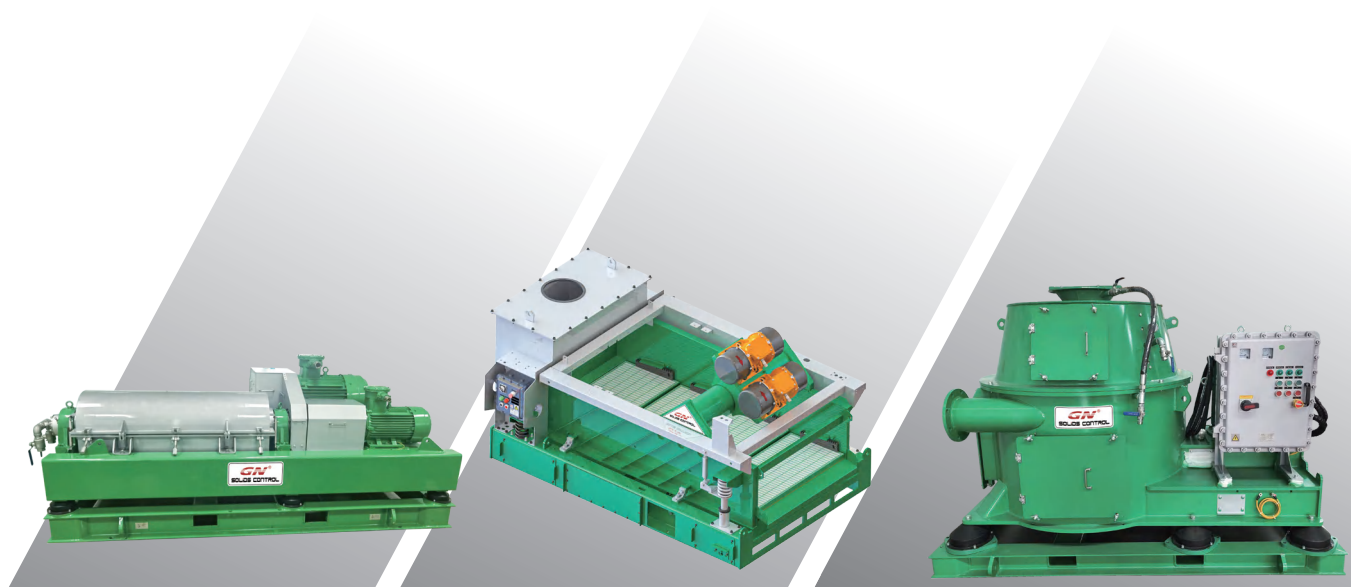


GN[®]
SOLIDS CONTROL



**SOLIDS CONTROL &
WASTE MANAGEMENT**

Hebei GN Solids Control Co.,Ltd

Content

| | |
|---|-----------|
| Part 1: Company Profile | 3 |
| Part 2: Decanter Centrifuge..... | 13 |
| Part 3: Shaker Screen | 23 |
| Part 4: Solids Control Equipment | 29 |
| 4.1 Shale Shaker | 29 |
| 4.2 Desander & Desilter | 33 |
| 4.3 Degasser | 36 |
| 4.4 Mud Agitator & Mud Gun..... | 39 |
| 4.5 Mud Mixing Hopper | 40 |
| 4.6 Mud Tank | 41 |
| Part 5: Waste Management Equipment | 42 |
| 5.1 Vertical Cuttings Dryer | 42 |
| 5.2 High G Drying Shaker | 43 |
| 5.3 Screw Conveyor | 44 |
| 5.4 Inclined Plate Clarifier | 45 |
| 5.5 Chemical Dosing Equipment..... | 46 |
| Part 6: Transfer Pumps | 47 |
| 6.1 Centrifugal Pump | 47 |
| 6.2 Shear Pump | 48 |
| 6.3 Screw Pump | 49 |
| 6.4 Submersible Slurry Pump | 50 |
| 6.5 Vacuum Pump | 51 |
| Part 7: Application | 52 |
| 7.1 Oil Gas Drilling Solids Control..... | 52 |
| 7.2 Drilling Waste Management | 53 |
| 7.3 Oil Sludge Treatment | 55 |
| 7.4 HDD Mud Recycling | 56 |
| 7.5 TBM & Bored Piling Mud Cleaning..... | 57 |
| 7.6 Industry Solids & Liquid Separation..... | 58 |

Part 1: Company Profile

1.1 Company Introduction

Hebei GN Solids Control Co., Ltd. has specialized in solids control and waste management equipment for over 17 years since 2008, positioning itself as a global leader in the manufacturing of such equipment. With three factories covering 110,000 square meters in China and branch offices providing services in the United States and Australia, GN is a National Key Little Giant Enterprise. Since 2010, we have held the American API Quality Management System Certification for 15 consecutive years and maintained ISO9001, ISO14001, and ISO45001 certifications from the China Classification Society. Our equipment is certified by EU CE, ATEX, Russia EAC, and International IECEx. Utilizing an ERP Cloud + CRM Cloud management system, we ensure digital control and quality traceability throughout production. Approximately 70% of our products are exported to over 70 countries worldwide.



1.2 GN Solids Control Strength



Rich Experience :

Since 2008, GN has accumulated **over 18 years** of expertise in researching, developing, and manufacturing solids control equipment. GN is recognized as a National Key Little Giant Company in 2024.



Robust Manufacturing Capabilities :

Occupying a total area of **110,000 square meters**, GN Solids Control boasts three primary manufacturing facilities equipped with cutting-edge machinery, including Automatic Welding Robot Workstations, Large Laser Cutting Machines, Advanced CNC Machining Centers, and Large Automatic Injection Molding Machines for shaker screens.



Well-established Management System :

GN has earned certifications for ISO 9001, ISO 14001, ISO 45001, as well as the American API Q1 Quality Management System. Additionally, GN's products have secured EU CE and ATEX certifications. GN utilizes an **ERP Cloud+CRM Cloud management system**.



Extensive Market Share :

Our products are exported to **more than 70 countries and regions globally**, gaining wide recognition from both domestic and international customers. Furthermore, we have established branches in Houston, USA, and Brisbane, Australia.

1.3 GN Tangshan Factory

1

Area of 80,000 m²
(860,000SF)



2

Office Size of 10,000 m²
(107,000SF)

3

Available for
equipment and
Package
Mud System



1.4 GN USA Facility

GN Solids America is a branch company of GN Solids Control China. GN Solids America is located in Houston, Texas. With our professional team and workshop and warehouse in Houston, TX, we can offer better service to the North and South American customers. In our Houston office, we have employees speaking Chinese, English and Spanish which help us to communicate with customers more smoothly.



1.5 GN Solids Australia

GN Solids Control Australia branch: GN Solids Australia is the first sub-company of a Chinese solid control equipment manufacturer registered within Australia domestically. The company is located in Brisbane, Australia. It has the functions of equipment and accessory storage, equipment maintenance and assembly, and office. GN Australia company provides equipment sales and leasing businesses.



1.6 GN Factory

1.6.1 Blanking Workshop



Large CNC Laser Pipe Cutting Machine



Large CNC Laser Plate Cutting Machine

1.6.2 Welding Workshop



Robot Welding Production Lines for Solids Control Equipment

1.6.3 CNC Machining Workshop



Centrifuge and Pumps Production by CNC lathe, CNC machining center and Balance Machine etc.

1.6.4 Coating Workshop



Include Sand and Ball Blasting Machine, Painting and Powder Coating Production Line (Control Ambient Air for High quality)

1.6.5 Assembly Shop



Available for Individual Equipment or Package Mud System Assembly

1.6.6 GN Langfang Factory



Langfang No.1 Factory

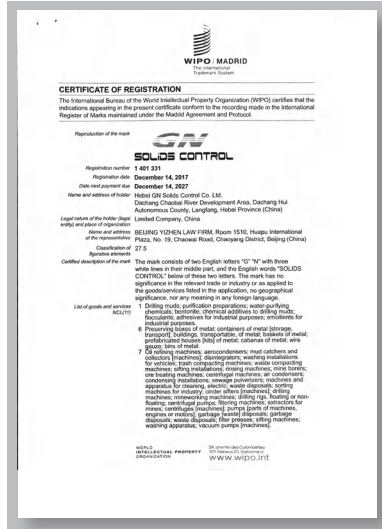
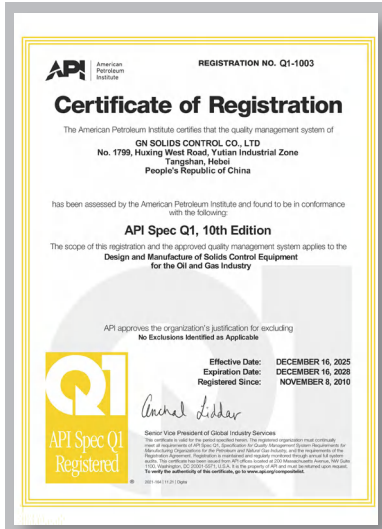


Langfang No.2 Factory

1.7 GN Certificates

- ISO9001 Quality Management Certificate
- ISO14001 Environment Management Certificate
- ISO45001 HSE Certificate
- America API Q1 Certificate
- International Trademark Certificate
- Europe CE Certificate
- China Explosion Proof Certificate
- International IECEx certificate
- Europe ATEX certificate
- National Small Giant Enterprise





Part 2: Decanter Centrifuge

2.1 GN Industry Decanter Centrifuge

GN designs and manufactures different sizes of decanter centrifuges for industry separation. Solid bowl decanter centrifuges have been operating according to the same basic principle since the 19th Century. GN centrifuge production line is from 9inch (220mm) bowl to 30inch (760mm) bowl, with bowl length and diameter ratio up to 4.2, and the adjustable G force is up to 3000G to meet different industries' separation applications.

GN design specific centrifuges according to specific separation tasks and the use of resilient, high-quality materials have improved the performance of the centrifuges.

Moreover, GN owns a branch for design PLC and electrical control system; this gives GN advantages in electrical components for measuring and control technology. The performance and availability of the decanter centrifuges or three-phase centrifuges are significantly improved by the control system.



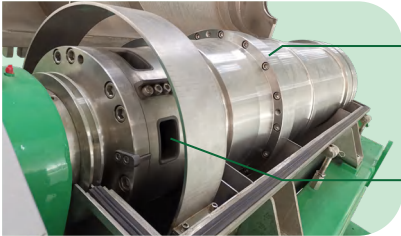
Main Function of GN Industry Centrifuges

- Dewatering sludge / mud and suspensions
- Thickening sludge or mud
- Clarifying different type liquids
- Separating 3-phase mixtures, i.e. two immiscible fluid phases and a solid phase
- Classifying solids in a wet suspension by grain size
- Separation of solids according to various densities

GN Centrifuge Main Application Industry

- Oil Gas Drilling Mud Solids Control
- Drilling Waste Management
- Oil Sludge Treatment
- HDD trenchless mud cleaning
- Bored Pile and TBM mud dewatering
- Waste water treatment
- Chemical and Pharmaceutical separation
- Mining industry separation
- Food and Beverage industry separation

2.1.1 GN Centrifuge Features



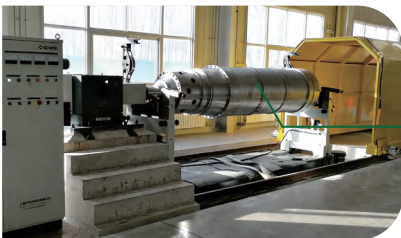
The bowl of GN centrifuge is made from Duplex Stainless Steel SS2205 or SS2304 by centrifugal casting which is better than SS304 or SS316.

The solids discharge port is made from Tungsten carbide inserts, the anti-abrasion will extend the life.

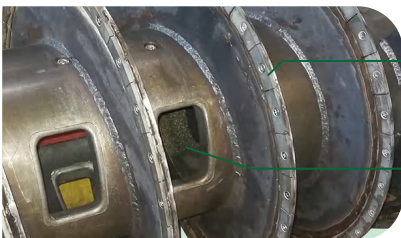


Flexible pond depth adjustment for different material separation.

The air-operated spring for assisting open of the cover with safety locking system.

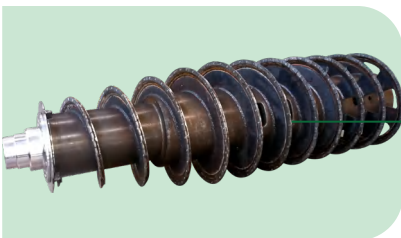


3 Stage balancing processes to maximize the balance of the centrifuge include 1800RPM low speed balancing and real operation high speed balancing as well as the assembly balancing.



The Screw is protected by interchangeable Tungsten Carbide Tiles for longer life and easy maintenance.

The mud distribution port is made from Tungsten carbide inserts, the anti-abrasion will extend the life for heavy mud.



The screw is made from stainless steel with heat treatment, and the opening impeller will improve the centrifuge capacity. Single Lead or double lead screw is optional.



Two motors in one side to give more space for the operator to do maintenance.

The bearings are premium SKF bearings for reliable and longer operation. The automatically lubrication system is available for option.

2.2 GN Centrifuge VFD Control Panel

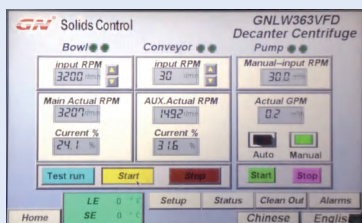
For the oil gas industry and mining industry, most of the time, the client need to use Explosion proof VFD control panel for hazardous area. GN developed the pressurized explosion proof VFD control panel to meet the IEC Ex, ATEX, and CNEX zone 1 and zone 2 applications.



- 3 VFD for bowl speed, differential speed, and pump capacity.
- The VFD brand is ABB or YASKAWA



- The positive pressurized VFD panel can be cooling by vertex tube or air conditioner to work for ambient Temp. up to +55 C degree.
- The VFD panel is optional for IEC Ex or ATEX or CNEX zone 1 or Zone 2 application.



- The HMI and PLC system for user-friendly operation and smart control and protection.
- It's optional for client to choose bearing temperature protection, vibration switch.

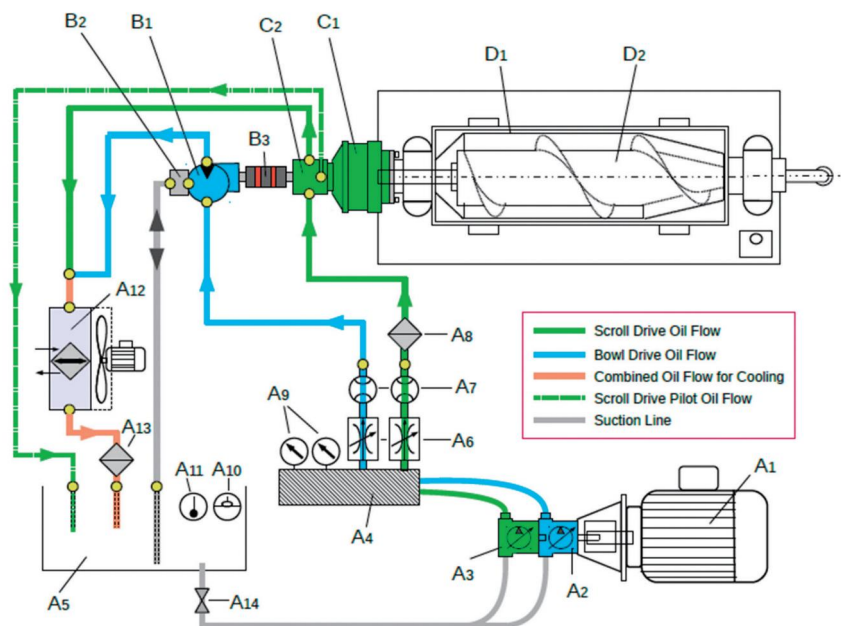
2.3 Fully Hydraulic Drive Centrifuge

GN Solids Control is a leading decanter centrifuge manufacturer. And Viscotherm and ROTODIFF® from Switzerland are leading brand for centrifuge hydraulic driving system. GN and Viscotherm have been jointly working together to develop the Full hydraulic drive centrifuge for international clients to meet the highest standard.

The advantage of the FHD centrifuge is for using in high temperature ambient for heavy mud with flexible bowl and differential speed. The compact one skid design makes it easier to rig up.



The full hydraulic system consists of A the Hydraulic Pump Unit, B the Bowl drive hydraulic motor, and C the Scroll drive (Rotodiff). The hydraulic pump unit A feeds hydraulic oil to the scroll drive C and the bowl drive B by means of two separate and individually independent operating circuits. An electric motor A1 drives the combined pumps A2 and A3. Each operating circuit is equipped with its own hydraulic pump and its own controls. The pump unit contains all setting devices and safety valves, as well as pressure gauges. With this system, the bowl's rotational speed as well as the scroll's differential speed may be manually adjusted independently from one another, continuously and infinitely variable during the centrifuge's operation.



A Hydraulic Pump Unit :

- A1 EEx Electric Motor
- A2 Variable Displacement Hydraulic Piston Pump, Bowl Drive
- A3 Variable Displacement Hydraulic Piston Pump, Scroll Drive
- A4 Controls A5 Oil Tank A7 Flow Meters
- A6 Variable Scroll Speed, Variable Bowl Speed
- A8 High Pressure Oil Filter
- A9 Pressure Gauges
- A10 Oil Level Gauge A11 Oil Temperature Gauge
- A12 Oil-Air Cooler A13 Return Line Oil Filter
- A14 Shut Off Valve

B Bowl Drive:

- B1 High Speed Hydraulic Piston Motor
- B2 Anti Cavitation Device
- B3 Semi-Flexible Coupling

C Scroll Drive:

- C1 Rotodiff Hydraulic Motor
- C2 Connection Block

D Centrifuge:

- D1 Centrifuge Bowl
- D2 Centrifuge Scroll

2.4 9 inch (220mm) Decanter Centrifuge

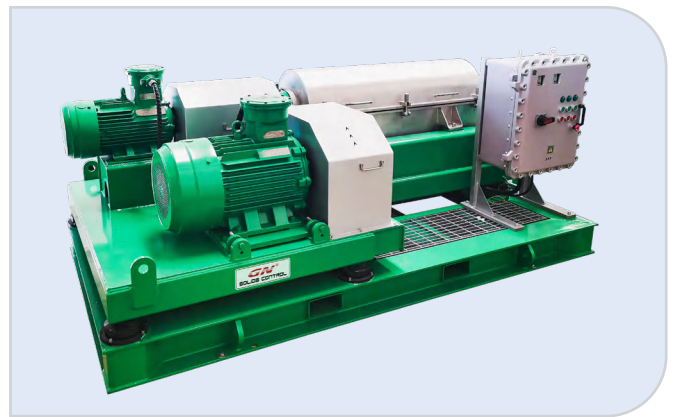
The 9 Inch Decanter Centrifuge is a baby centrifuge which is the one of the world smallest industry decanters. The bowl of the centrifuge is 9 inch (220mm). As the compact design, it is popular for client to use in small capacity or limited space application for solids and liquid separation. It is also considered to be the best choice for experiment testing with decanter centrifuge. GN 9 inch decanter centrifuge is optional in three types includes: fixed gear box drive, fully hydraulic drive, and variable frequency drive.



| Model | GNLW223D | GNLW224GT-VFD |
|------------------------|-----------------|-----------------|
| Max Capacity | 130 l/min | 130 l/min |
| Effective Capacity | 100 l/min | 100 l/min |
| Bowl Diameter | 9inch(220mm) | 9inch(220mm) |
| Bowl Length | 26.4inch(670mm) | 36.4inch(924mm) |
| Max Bowl Speed | 4500RPM | 5099RPM |
| Typical Bowl Speed | 3800RPM | 0-4500RPM |
| Max G Force | 2492G | 3200G |
| Typical G Force | 1777G | 2492G |
| Main Motor | 11KW(15HP) | 11KW(15HP) |
| Pump Size | N/A | 5.5KW(7.5HP) |
| Gearbox Torque (N · M) | 500N · M | 1400N · M |

2.5 14inch (360mm) Decanter Centrifuge

GN 14inch (360mm) decanter centrifuge is the most popular centrifuge for oil gas industry, it is popular for drilling mud treatment, and also it can be used for industry waste water treatment, oil sludge treatment, mining water treatment, chemical industry separation. GN 14 inch decanter centrifuge is optional in three types includes: fixed gear box drive, fully hydraulic drive, and variable frequency drive.



| Model | GNLW363D | GNLW363D-VFD | GNLW363D-FHD | GNLW364GT-VFD |
|-----------------------------|--|-----------------------------|-----------------------------|-----------------------------|
| Dive Mode | Fixed Speed | VFD | FHD | VFD |
| Bowl Diameter | 14inch(360mm) | 14inch(360mm) | 14inch(360mm) | 14inch(360mm) |
| Bowl Length | 50inch(1271mm) | 50inch(1271mm) | 50inch(1271mm) | 59.5inch(1512mm) |
| Designed Capacity | 200GPM(45m ³ /h) | 200GPM(45m ³ /h) | 200GPM(45m ³ /h) | 242GPM(55m ³ /h) |
| Typical Capacity | 132GPM(30m ³ /h) | 132GPM(30m ³ /h) | 132GPM(30m ³ /h) | 154GPM(35m ³ /h) |
| Max Bowl Speed | 3900RPM | 3900RPM | 3600RPM | 3986RPM |
| Typical Bowl Speed | 3200RPM | 0~3200RPM | 0~3200RPM | 0~3200RPM |
| Max G Force | 3063G | 3063G | 3063G | 3200G |
| Typical G Force | 2062G | 0~2062G | 0~2062G | 0~2062G |
| Cut Point | 2~5μm | 2~5μm | 2~5μm | 2~5μm |
| Differential Speed | 38RPM | 0~45RPM | 0~65RPM | 0~65RPM |
| Gearbox Torque | 3500 N·M | 3500 N·M | 3717 N·M | 3500 N·M |
| Gearbox Ratio | 57:1 | 57:1 | Hydraulic Gearbox | 57:1 |
| Main Motor | 37KW(50HP) | 37KW(50HP) | 45KW(60HP) | 37KW(50HP) |
| Back Drive Motor | 11KW(15HP) | 11KW(15HP) | N/A | 11KW(15HP) |
| Recommend Pump Motor | 7.5KW(11HP) | 7.5KW(11HP) | 7.5KW(11HP) | 7.5KW(11HP) |
| Remarks | Above Max capacity is for water, the treating capacity would be various as per different material conditions and customer required treating results. | | | |

2.6 18inch (450mm) Decanter Centrifuge

GN 18inch(450mm) decanter centrifuge is optional with 3 different bowl length. GNLW452 is an economic centrifuge, popular for drilling mud treatment. To meet different applications, the GNLW453 and GNLW454 is designed with longer bowl.

GN 18 inch decanter centrifuge is optional in three types includes: fixed gear box drive, fully hydraulic drive, and variable frequency drive.



| Model | GNLW452D | GNLW453D-VFD | GNLW454GT-VFD |
|-----------------------------|--|-----------------------------|-----------------------------|
| Bowl Diameter | 18inch(450mm) | 18inch(450mm) | 18inch(450mm) |
| Bowl Length | 43.5inch(1105mm) | 61inch(1540mm) | 74.5inch(1890mm) |
| Designed Capacity | 250GPM(57M ³ /h) | 352GPM(80m ³ /h) | 400GPM(90m ³ /h) |
| Typical Capacity | 176GPM(40m ³ /h) | 264GPM(60m ³ /h) | 300GPM(68m ³ /h) |
| Max Bowl Speed | 1800RPM | 3200RPM | 3452RPM |
| Typical Bowl Speed | 1800RPM | 0~2800RPM | 0~3200RPM |
| Max G Force | 815G | 2578G | 3000G |
| Typical G Force | 815G | 0~1973G | 0~2578G |
| Cut Point | 5~7μm | 2~5μm | 2~5μm |
| Differential Speed | 32RPM | 0~45RPM | 0~45RPM |
| Gearbox Torque | 3500 N·M | 7500 N·M | 7500 N·M |
| Gearbox Ratio | 57:1 | 35:1 | 57:1 |
| Main Motor | 45KW(60HP) | 55KW(75HP) | 55KW(75HP) |
| Back Drive Motor | N/A | 22KW(30HP) | 22KW(30HP) |
| Recommend Pump Motor | 11KW(15HP) | 15KW(20HP) | 15KW(20HP) |
| Remarks | Above Max capacity is for water, the treating capacity would be various as per different material conditions and customer required treating results. | | |

2.7 22inch(550mm) Decanter Centrifuge

GN 22inch (550mm) decanter centrifuge is widely used for different industries. It is the medium size centrifuge which has the normal capacity requirement for most of the applications. It is popular for drilling mud treatment, and also it can be used for industry waste water treatment, oil sludge treatment, mining water treatment, chemical industry and food industry separation.



| Model | GNLW553D-VFD | GNLW554GT-VFD |
|---------------------------|--|------------------------------|
| Bowl Diameter | 22inch(550mm) | 22inch(550mm) |
| Bowl Length | 71inch(1800mm) | 91inch(2310mm) |
| Designed Capacity | 500GPM(114m ³ /h) | 600GPM(136m ³ /h) |
| Typical Capacity | 400GPM(90m ³ /h) | 480GPM(108m ³ /h) |
| Max Bowl Speed | 3000RPM | 3132RPM |
| Typical Bowl Speed | 0-2500RPM | 0~2800RPM |
| Max G Force | 2719G | 3000G |
| Typical G Force | 0~1888G | 0~2412G |
| Cut Point | 2-5μm | 2~5μm |
| Differential Speed | 0~45RPM | 0~45RPM |
| Gearbox Torque | 12000 N·M | 12000 N·M |
| Gearbox Ratio | 35:1 | 35:1 |
| Main Motor | 90KW(120HP) | 90KW(120HP) |
| Back Drive Motor | 37KW(50HP) | 45KW(60HP) |
| Remarks | Above Max capacity is for water, the treating capacity would be various as per different material conditions and customer required treating results. | |

2.8 30inch(760mm) Decanter Centrifuge

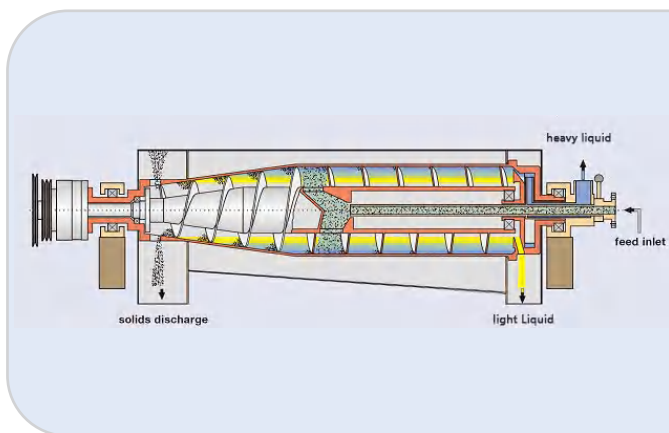
The GN 30 inch (760mm) bowl diameter decenter centrifuge is a big bowl centrifuge. With the bowl length and diameter ratio at 4.4:1, GN 30inch centrifuge can handle big volume fluids with one single unit. GN 30 inch decenter centrifuge is designed for best performance in Tunnel Boring Project Mud Cleaning, Dredging Slurry Separation, and Municipal Sewage Sludge in Purification Plants, Industry Waste Water Treatment. The tungsten carbide protection in the slurry distribution port or solids discharge port as well as the screw conveyor inside the bowl guarantee the GN 30 inch decenter centrifuge last longer.



| | |
|---------------------------|---|
| Model | GNLW764A-VFD |
| Bowl Diameter | 760mm |
| Bowl Length | 3328mm |
| Designed Capacity | 528GPM/120m ³ /h (Mud with 20% Solids Content) |
| Max Bowl Speed | 2612RPM |
| Typical Bowl Speed | 0-2200RPM |
| Max G Force | 2900G |
| Typical G Force | 0~2060G |
| Cut Point | 2-5μm |
| Differential Speed | 5~28RPM |
| Gearbox Torque | 25000 N·M |
| Gearbox Ratio | 38:1 |
| Main Motor | 160KW(217HP) |
| Back Drive Motor | 90KW(120HP) |
| Remarks | Above Max capacity is for reference only, the treating capacity would be various as per different material conditions and customer required treating results. |

2.9 3 Phase Decanter Centrifuge

The three-phase decanter centrifuge operation is based on the principle of sedimentation, that is, solid particles with specific liquid weight precipitate in a predetermined time. This principle can also be applied to two immiscible liquids with different specific gravities. When the material enters the high-speed rotating bowl, the material rotates synchronously with the bowl. Because of the different specific gravity, the centrifugal force is different. The solid particles with the larger specific gravity are subjected to the greatest centrifugal force, followed by the heavy phase liquid (such as water) and the light phase liquid (such as oil). So the centrifugal force is becoming less from outside to inside according to the magnitude of centrifugal force. A concentric solid layer and two liquid layers are formed. Solids are pushed out by the screw conveyor, and liquids are removed from their respective nozzles. Therefore, the application of three-phase decanter centrifuge can not only separate the solid in the material, but also separate the two-phase liquid with different specific gravity in the material, that is, Solid-liquid-liquid separation can be achieved.



3 Phase Decanter Centrifuge

| Model | GNLWS-364 | GNLWS-454 | GNLWS-554 |
|---------------|---|----------------------|---------------------|
| Type | Solids Liquid Liquid Separation | | |
| Bowl Dia | 360mm | 450mm | 550mm |
| Bowl Length | 1567mm | 1947mm | 2347mm |
| Capacity | 5 m ³ /h | 10 m ³ /h | 15m ³ /h |
| Max Speed | 3986 RPM | 3452 RPM | 3123 RPM |
| Max G Force | 3200 G | 3000 G | 3000 G |
| Diff. Speed | 0~30 RPM | 0~30 RPM | 0~30 RPM |
| Main Drive | 30 KW/22KW | 45KW/37 KW | 75KW/55KW |
| Back Drive | 7.5KW | 15 KW/11KW | 18.5KW/22KW |
| Lubrication | Grease type | Grease Type | Oil Lubrication |
| Oil Pump Size | N/A | N/A | 0.37 KW |
| Feed Material | Solids Less 10% and Particle Size less than 2mm | | |

Part 3: Shale Shaker Screen

3.1 GN Shaker Screen Factory

GN Solids Control is an international brand for solids control equipment and shaker screens with location in China, USA, Australia and Russia. GN Solids has advanced screen production and processing equipment, including welding robot, CNC punch machine, automatic injection molding machine, CNC heat-press, automatic glue machine, etc. GN Solids Control manufactures top quality replacement shaker screens according to API RP 13C standard for GN shakers and all other major brand shakers for the drilling industry.



GN Solids China



GN Solids America



GN Shaker Screen Factory



Frame Fabrication Machine



Shaker Screen Manufacture Machine



Screen Packed for Delivery

3.2 API RP13C Shaker Screen

GN Shaker Screen has been tested by third party lab according to API RP 13C standard(ISO13501). GN production quality management system has passed the API Q1 and ISO 9001. GN is one of the few companies provide high quality international standard shaker screens in the market.

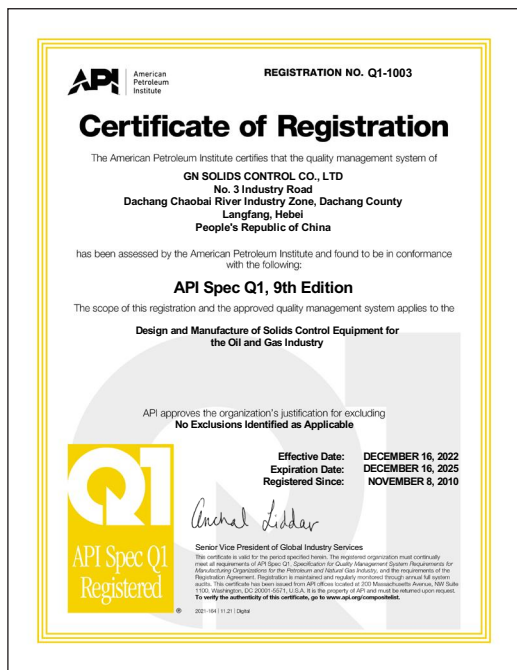
3.2.1 API RP 13 Third Party Test Data

TABLE 1
API RP 13C SHAKER SCREEN TEST RESULTS

| Label | LIMS | API Screen Designation | D100 (microns) | Screen Conductance (Kd/mm) | Estimated Non-Blanked Area (m ²) |
|--------|--------|------------------------|----------------|----------------------------|--|
| GLA020 | 237505 | 20 | 809.12 | 10.88 | 0.56 |
| GLA035 | 240158 | 35 | 538.61 | 9.69 | NT |
| GLA040 | 239462 | 40 | 438.52 | 8.64 | NT |
| GLA050 | 237507 | 50 | 284.57 | 5.17 | NT |
| GRA060 | 237508 | 60 | 268.12 | 4.10 | NT |
| GRA070 | 240155 | 70 | 202.63 | 3.33 | NT |
| GRA080 | 241746 | 80 | 193.15 | 2.76 | NT |
| GRA100 | 237511 | 100 | 164.81 | 2.66 | 0.51 |
| GRA120 | 241747 | 120 | 134.35 | 1.89 | NT |
| GRA140 | 237513 | 140 | 101.20 | 1.89 | NT |
| GRA170 | 237514 | 170 | 82.80 | 1.34 | NT |
| GRA200 | 237515 | 200 | 73.49 | 1.32 | NT |
| GRA230 | 240156 | 230 | 68.89 | 0.71 | NT |
| GRA270 | 240157 | 270 | 57.70 | 0.67 | NT |

You may contact GN sales person to get detail test report.

3.2.2 API Q1 and ISO9001 Certificate.



3.3 ASTM Mesh and API Cut Point

| ASTM Mesh and Cut Point | |
|-------------------------|------------------|
| D100 Cut Point | ASTM Single Mesh |
| 2000 microns | ASTM 10 Mesh |
| 1000 microns | ASTM 18 Mesh |
| 850 microns | ASTM 20 Mesh |
| 710 microns | ASTM 25 Mesh |
| 600 microns | ASTM 30 Mesh |
| 500 microns | ASTM 35 Mesh |
| 425 microns | ASTM 40 Mesh |
| 355 microns | ASTM 45 Mesh |
| 300 microns | ASTM 50 Mesh |
| 250 microns | ASTM 60 Mesh |
| 212 microns | ASTM 70 Mesh |
| 180 microns | ASTM 80 Mesh |
| 150 microns | ASTM 100 Mesh |
| 125 microns | ASTM 120 Mesh |
| 106 microns | ASTM 140 Mesh |
| 90 microns | ASTM 170 Mesh |
| 75 microns | ASTM 200 Mesh |
| 63 microns | ASTM 230 Mesh |
| 53 microns | ASTM 270 Mesh |
| 45 microns | ASTM 325 Mesh |
| 38 microns | ASTM 400 Mesh |

| API No. and Cut Point Table | |
|-----------------------------|---------|
| D100 Cut Point | API No. |
| > 1850.0 TO 2180.0 | API 10 |
| > 780.0 TO 925.0 | API 20 |
| > 462.5 TO 550.0 | API 35 |
| > 390.0 TO 462.5 | API 40 |
| > 275.0 TO 327.5 | API 50 |
| > 231.0 TO 275.0 | API 60 |
| > 196.0 TO 231.0 | API 70 |
| > 165.0 TO 196.0 | API 80 |
| > 137.5 TO 165.0 | API 100 |
| > 116.5 TO 137.5 | API 120 |
| > 98.0 TO 116.5 | API 140 |
| > 82.5 TO 98.0 | API 170 |
| > 69.0 TO 82.5 | API 200 |
| > 58.0 TO 69.0 | API 230 |
| > 49.0 TO 58.0 | API 270 |
| > 41.5 TO 49.0 | API 325 |
| >35.0 TO 41.5 | API 400 |

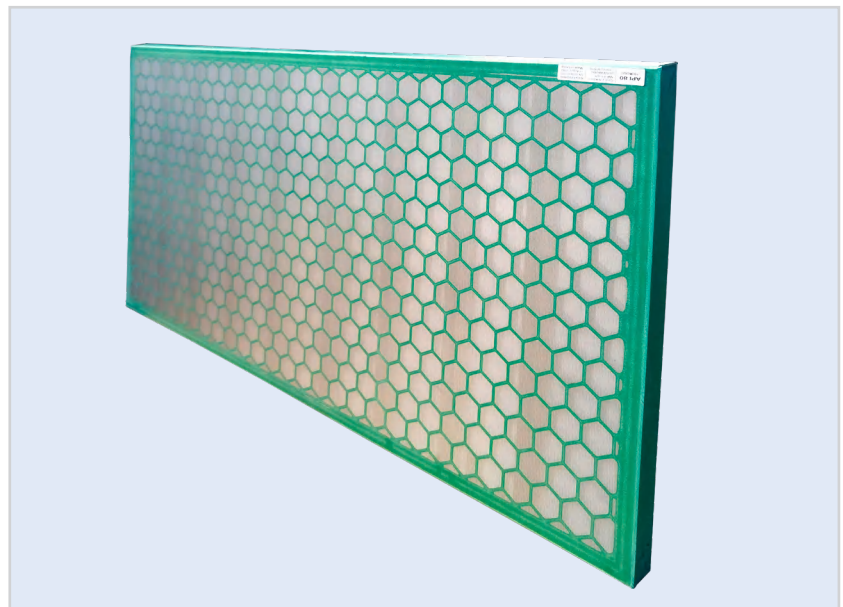
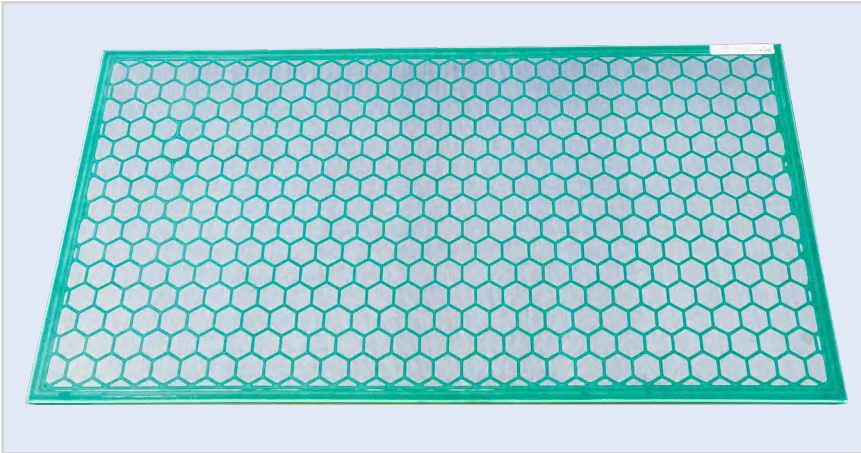
NOTE

1) ASTM is short for The American Society for Testing and Materials, ASTM E11:01 mesh equals to ISO 3310-1:2000 mesh. This method determines the cut point of single layer ASTM screen mesh size. For shaker screenmesh, normally means the surface screen mesh size. Whilst the shaker screen is usually a composition of 2 or 3 layers, the cut point of the first layer mesh is not equal to the final shaker screen cut point.

2) API is short for American Petroleum Institute, “API Number” is determined by API RP13C or ISO13501, the cut point is related to the combined 3-layer wire mesh test result. So before order, GN will need API number, or the cut point, to define a more proper shaker screen configuration.

3.4 Frame Shaker Screen

The frame shale shaker screen is a pre-tensioned screen, which is fixed on the drilling fluid shale shaker by a wedge-like compression device. According to the type of frame material, it can be divided into metal frame screen and composite frame screen. The metal frame screen is welded by metal materials, and the epoxy resin powder and the screen mesh are bonded to the frame through the plastic invasion process and the heat-pressing process. The composite frame screen is composed of metal skeleton and plastic through injection molding process, and then the screen mesh is bonded to the frame through heat-pressing process.

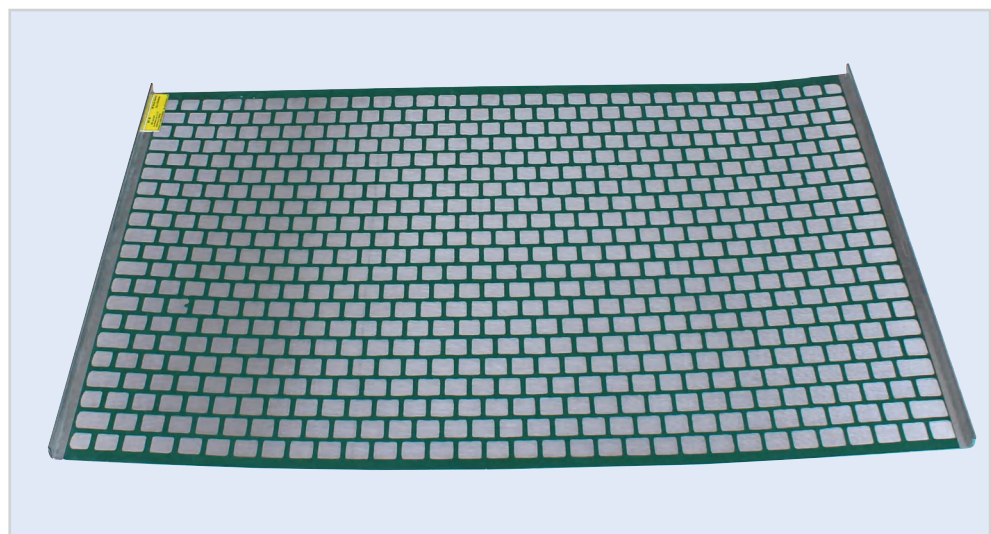
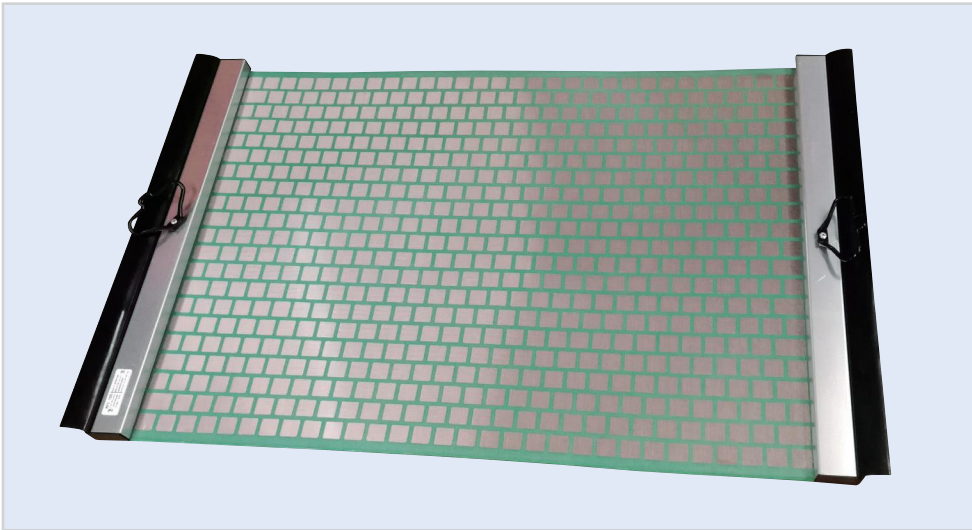


Frame shaker screen for shaker models:

- Fit for GN Shale Shaker: GNZS594,GNZS595,GNZS596,GNZS752 etc
- Fit for MI Swaco Shaker: Mongoose, MD-2/MD-3, BEM etc.
- Fit for NOV Brandt Shaker: Cobra, Venom, VSM-300, D380/D285P etc.
- Fit for other Shale Shaker: Fluids System 29x42, Elgin KPT and other brand shaker.

3.5 Flat Panel Hook Screen

When the flat hook shaker screen is installed on a shale shaker, the screen is hooked from the top of the screen or from the bottom of the screen by the tensioning mechanism. This type of shale shaker usually has a supporting beam to support the screen. The screen is tensioned by the joint action of the tensioning mechanism and the supporting beam. The flat hook shaker screen is usually made from a steel plate with punching holes. Then the plate is coated with plastic or epoxy resin powder, and finally the flat screen mesh is bonded to the plate by the heat-pressing process.

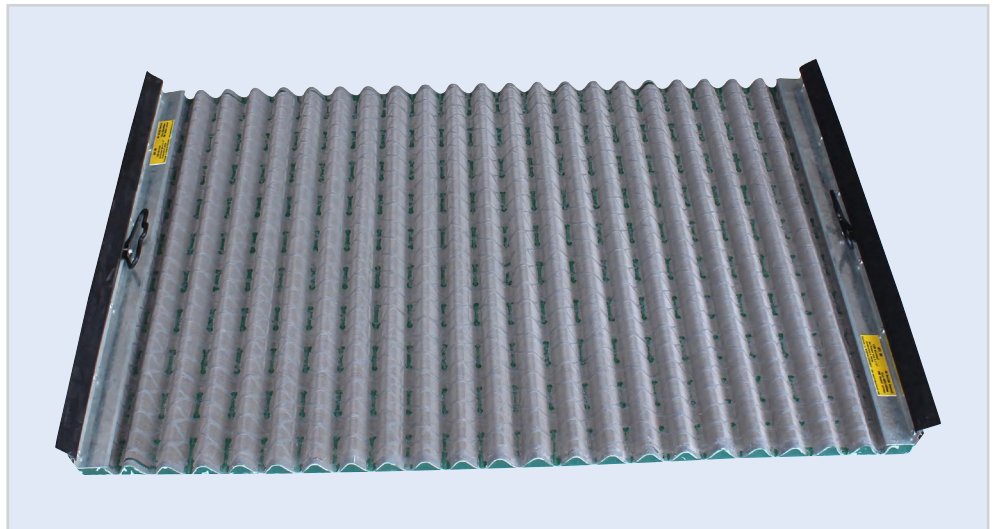
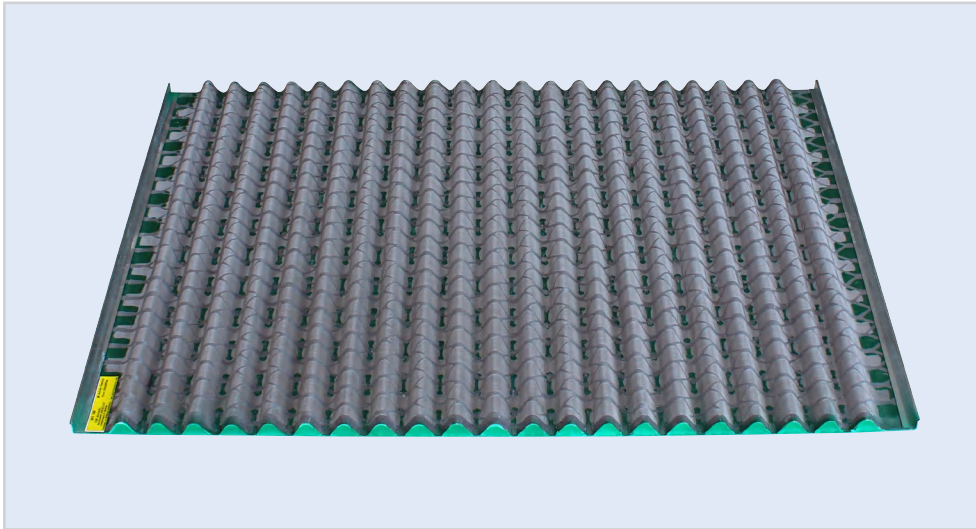


Flat Hook screen for shaker models:

- Fit for GN Shale Shaker: GNZS852, GNZS853 etc
- Fit for Derrick Shale Shaker: FLC2000, FLC500 (503/504) and others etc.
- Fit for MI Swaco Shaker: ALS
- Fit for other Shale Shaker: 700x1050mm or other customized dimension.

3.6 Corrugated Hook Screen

The installation of the wave hook shaker screen on the shale shaker is similar to the flat hook shaker screen. The wave screen is hooked from the top of the screen or from the bottom of the screen by the tensioning mechanism. The shale shaker is usually supported by the support beam. The screen is tensioned by the joint action of the tensioning mechanism and the support beam. The wave hook shaker screen is usually made from a steel plate with punching holes. Then the plate is coated with plastic or epoxy resin powder, and finally the wave screen mesh is bonded to the plate by the heat-pressing process.



Wave Shaker screen for shaker models:

- Fit for GN Shale Shaker: GNZS852, GNZS853 etc
- Fit for Derrick Shale Shaker: FLC2000, FLC500 (503/504) and others etc.
- Fit for other Shale Shaker: 700x1050mm or other customized dimension.

Part 4: Solids Control Equipment

4.1 Shale Shaker

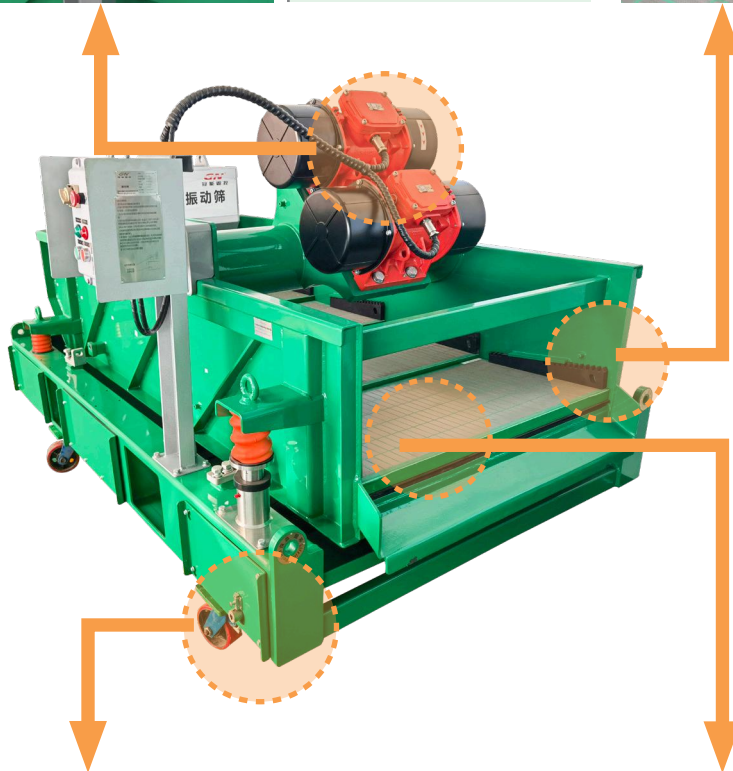
4.1.1 GN Shale Shaker Features



Italy OLI or US Martin Brand Vibration Motors
GN Ex Control panel with SIEMENS or Schneider Component



Pretentioned composite frame screen with Gear unit for fast screen change and longer screen life



1) Heavy Duty design and heat treatment for the shaker basket to get the adjustable G force up to 8.0G.

2) Patent shaker screen seal technology for avoiding fine solids bypass and to have easy maintenance.

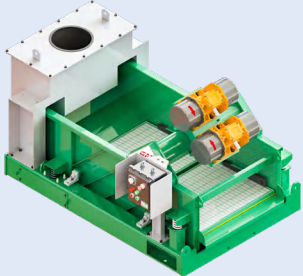
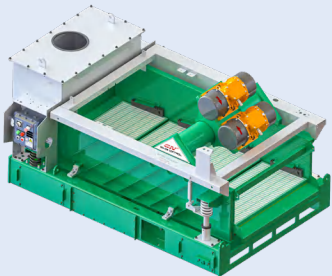
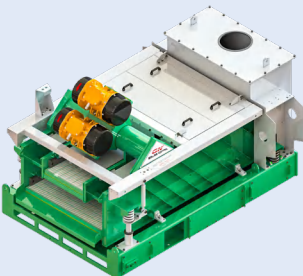


Mechanical Deck angle adjustment while working system to work reliably for different drilling fluids



Available to change to vacuum shaker by GN ViST Technology.

4.1.2 GN Shale Shaker Specs

| | |
|--|---|
|  | <p>GNZS752 series Mini shakers have been widely used in trench-less HDD, water well drilling, diamond core drilling etc., best option for compact system and low flow rate.</p> |
|  | <p>GNZS594 series single deck shale shaker is popular in oil gas drilling, big trench-less HDD projects, or other industry separation demand.</p> |
|  | <p>GNZS596 series double deck shaker is properly designed for piling, TBM, big oil gas rig, big trench-less project, or the industry separation for multi-phase separation.</p> |

| Model | GNZS752K | GNZS594K | GNZS595K | GNZS596K |
|---------------------|-----------------------------|------------------------------|------------------------------|---|
| Vibration Model | Linear Motion | Linear Motion | Linear Motion | Linear Motion |
| Reference Capacity | 45m ³ /h(200GPM) | 140m ³ /h(616GPM) | 175m ³ /h(770GPM) | 140m ³ /h(616GPM) |
| Vibration Motor | 2×1.0KW | 2×1.94KW | 2×1.94KW | 2×2.2KW |
| Screen Qty | 2pcs | 4pcs | 5pcs | 6pcs |
| Screen area | 1.35m ² | 2.73m ² | 3.41m ² | Top Deck:1.36m ² Bottom Deck:2.73m ² |
| Adjust G Force | ≤7.5G | ≤7.5G | ≤7.5G | ≤7.5G |
| Vibration Amplitude | 4.14~5.96mm | 4.14~5.96mm | 4.14~5.96mm | 4.14~5.96mm |
| Deck Angle Range | +2° | -1°+5°(Adjustable) | -1°+5°(Adjustable) | -1°+5°(Adjustable) |
| Feeding Type | Weir Feeder | Weir Feeder | Weir Feeder | Weir Feeder |
| Weir Height | 773mm | 958mm | 958mm | 1038mm |
| Weight | 1166Kg | 2138Kg | 2337Kg | 2428Kg |
| L×W×H(mm) | 2303×1610×1300 | 2970×1995×1619 | 3265×1995×1919 | 2970×1995×1669 |

4.1.3 ViST Vacuum Shaker Screen



| Item | Specs | Model No.: GNVIST-03B |
|-----------------------|--|---------------------------------|
| Supply Air Pressure | 0.7~1.0Mpa (100-150PSI) | |
| Air capacity required | 4.5 m ³ /min (160 CFM) | 8 m ³ /min (280 CFM) |
| Operation Shaker | For 1~2 Shakers | 3 Shakers |
| Applicable Mud | OBM,SBM,WBM | |
| Extra Fluids Recovery | 2000-3000 L / Day (By 1 Shaker with ViST On) | |
| Recovery Efficiency | 30%~50% | |
| Mud Temperature | -15 +85°C | |
| Suction Inlet | 2 Inch (3 Sets) | |
| Discharge Outlet | 2 Inch (1 Set) | |
| Air Supply Inlet | 1 Inch | |
| Dimension (Weight) | 1058x730x1068mm (350KG) | |
| Remarks | No Electricity, Air Operate, Adjustable Suction Time | |
| Weight(Kg) | 929 | |
| L×W×H(mm) | 1816×1657×1083 | |

Features

- ViST is Vacuum Screen Technology that working with shale shaker to reduce drilling waste and recycle drilling fluids.
- ViST was pending patent design developed by GN Solids Control from June, 2017. And in May, 2018, GN tested ViST with drilling fluids, which proved to be very efficient for recycling drilling fluids.
- The ViST Pan is installed under the last screen or mounted externally. And a suction hose is connected to ViST vacuum unit. The compressed air from AC or the rig air supply is required to generate suction on the last screen panel, recover additional fluids from the cuttings. It can reduce the liquid on the cuttings by 30-50%.
- In a result, ViST maximizes the volume of recovered and reused fluids while provides dryer cuttings. Dryer cuttings mean less drilling waste and more recovery drilling fluids, so ViST can save money for operators on drilling fluids and waste management.

4.1.4 Electric Vacuum Shale Shaker



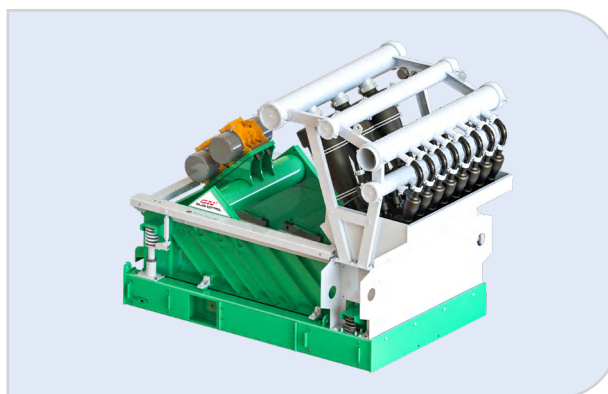
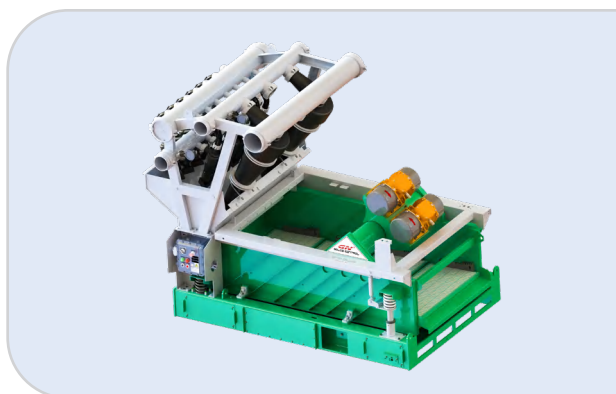
| Model | GNViST-594K | GNViST-595K |
|-----------------------------|---|-------------------|
| Screen Qty. | 4 pcs | 5 pcs |
| Screen Area | 2.72m ² | 3.4m ² |
| Power | 18.44KW | 18.84KW |
| G Force | ≤7.5G (Adjustable) | |
| Anti-Spraying | SS Anti-spraying unit (optional) | |
| Vibrate Motion | Linear / Dual Motion (optional) | |
| Negative Pressure | Pulse negative pressure/Continuous negative pressure (adjustable) | |
| Extra Drilling Mud Recovery | 2000-3000L/Day (average value when the vacuum is open) | |
| Suitable Mud | OBM, WBM, SBM | |
| Ex Standard | ExdIIBt4 | |

Features

- The negative pressure pump unit is combined with suction hopper to generate pulse negative pressure or continuous negative pressure at the bottom of the screen during the operation of the shale shaker, achieving a combined separation effect of vibration and negative pressure.
- The pulse frequency/time of negative pressure can be controlled by an independent control system within the negative pressure pump unit. The pulse negative pressure can be also switched to continuous negative pressure according to user needs.
- Control box of the vacuum shaker is similar with the traditional shale shaker's, can independently control the shaker and work independently with the negative pressure pump. In case of maintenance of the pressure pump, the negative pressure shale shaker can be used as a regular shaker.
- Modular design also facilitates the transformation of traditional shale shaker, removing negative pressure hopper and negative pressure pump unit, matching relevant pipelines, and installing them on traditional shaker to transform them into negative pressure vacuum shaker for use.
- Stainless steel splash prevention devices, as well as dual and triple vibrating screens, can be selected according to user needs.

4.2 Desander & Desilter

4.2.1 Mud Cleaner





| Model | GNZJ594K-S1S8NK | GNZJ594K-S2S12NK | GNZJ594K-S3S16NK |
|---------------------------|------------------------------|-------------------------------|-------------------------------|
| Treating Capacity | 120m ³ /h(528GPM) | 240m ³ /h(1056GPM) | 360m ³ /h(1584GPM) |
| Desanderr Cone | 10inch x 1each | 10inch x 2each | 10inch x 3each |
| Desilter Cone | 4inch x 8each | 4inch x 12each | 4inch x 16each |
| Feeding Size | 6 inch | 6 inch | 6 inch |
| Output Size | 8 inch | 8 inch | 8 inch |
| Working Pressure | 0.25~0.4MPa | 0.25~0.4MPa | 0.25~0.4MPa |
| Bottom Shale Shaker Specs | Bottom shaker model | DLS594K | DLS594K |
| | Vibration Mode | Linear Motion | Linear Motion |
| | Vibration Motor | 2×1.94kW | 2×1.94kW |
| | Screen area | 2.73m ² | 2.73m ² |
| | Deck Angle Range | -1°~+5°(Adjustable) | -1°~+5°(Adjustable) |
| Adjust G Force | ≤7.5G | ≤7.5G | ≤7.5G |
| Weight (Kg) | 2579 | 2649 | 2732 |
| L×W×H(mm) | 3117×1995×2325 | 3117×1995×2325 | 3117×1995×2325 |

Features


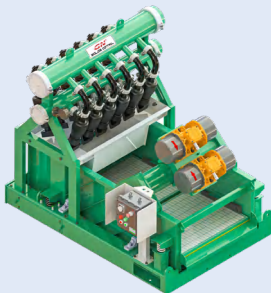
- The entire shaker deck undergoes heat treatment to relieve welding stress, enabling it to withstand high G force.
- The shaker screen is installed with a mechanical ratchet wrench gear for quick tightening, facilitating easy disassembly and ensuring long-lasting durability.
- The wedge blocks for tightening the screen mesh are made of nylon, providing high temperature resistance, corrosion resistance, and wear resistance.
- Vibration motor: Italian OLI brand.
- Polyurethane material is used for sealing between the shale shaker and screen, ensuring a long service life and easy replacement.
- The supporting rubber strips for the bottom frame of the vibration screen are made of stainless steel, offering strong corrosion resistance and a long service life.
- The electrical control box is made of aluminum alloy/stainless steel explosion-proof material, ensuring good sealing and strong corrosion resistance.
- The pre-tensioned shaker screen allows for convenient and quick disassembly and replacement.
- The mud outlet can be switched between bottom and side outlets, accommodating flexible installation on site.
- The angle of the shaker deck can be mechanically adjusted while working at both ends, adapting to different processing capacities.

4.2.2 Desander

| Desander Cut Point: + 40 Microns | Description |
|--|---|
|  | <p>Type: Desander without downstream drying shale shaker Model: GNZJW-2SJ / GNZJW-3SJ Application: For oil gas drilling un-weighted drilling mud. Features: Small footprint, economic choice, no consumable screens. Result: Wet cuttings, not recommended for Weighted mud and drying solids.</p> |
|  | <p>Type: Desander with GNZS752 Series Mini Shale Shaker Screen Area:1.4m² Model: GNZJ752K-M2SK Application: For oil gas drilling small drilling rig , CBM drilling, HDD, Water Well drilling. Features: Small footprint, economic choice, acceptable drying solids.</p> |

| Model | GNZJ752K-M2SK | GNZJW-2SJ | GNZJW-3SJ |
|---------------------------|-------------------------------|-------------------------------|-------------------------------|
| Treating Capacity | 240m ³ /h(1056GPM) | 240m ³ /h(1056GPM) | 360m ³ /h(1584GPM) |
| Desander Cone | 10"x 2 each | 10"x 2 each | 10"x 3 each |
| Feeding Size | 6 inch | 6 inch | 6 inch |
| Output Size | 8 inch | 8 inch | 8 inch |
| Working Pressure | 0.25~0.4MPa | 0.25~0.4MPa | 0.25~0.4MPa |
| Bottom Shale Shaker Specs | Bottom shaker model | DLS752K | N/A |
| | Vibration Mode | Linear Motion | |
| | Vibration Motor | 2×1.0KW | |
| | Screen area | 1.35m ² | |
| | Deck Angle Range | +2° | |
| | Adjust G Force | ≤7.5G | |
| Weight (Kg) | 1375 | 475 | 523 |
| L×W×H(mm) | 2124×1697×1888 | 2118×886×1901 | 2118×886×1901 |

4.2.3 Desilter

| Desilter : Cut Point +20 Microns | Description |
|--|---|
|  | <p>Type: Desilter without downstream drying shale shaker Model: GNZJW-12NJ / GNZJW-16NJ Application: For oil gas drilling un-weighted drilling mud. Features: Small footprint, economic choice, no consumable screens. Result: Wet cuttings, not recommended for Weighted mud and drying solids.</p> |
|  | <p>Type: Desilter with GNZS752 Series Mini Shale Shaker Screen Area: 1.4m² Model: GNZJ752K-M12NK Application: For oil gas drilling small drilling rig , CBM drilling, HDD, Water Well drilling. Features: Small footprint, economic choice, acceptable drying solids.</p> |

| Model | GNZJ752K-M12NK | GNZJW-12NJ | GNZJW-16NJ |
|---------------------------|-------------------------------|--------------------------------|--------------------------------|
| Treating Capacity | 240m ³ /h(1056GPM) | ≤240m ³ /h(1056GPM) | ≤360m ³ /h(1584GPM) |
| Desilter Cone | 4 inch x 12 each | 4 inch x 12 each | 4 inch x 16 each |
| Feeding Size | 6 inch | 6 inch | 6 inch |
| Output Size | 8 inch | 8 inch | 8 inch |
| Working Pressure | 0.25~0.4MPa | 0.25~0.4Mpa | 0.25~0.4Mpa |
| Bottom Shale Shaker Specs | Bottom shaker model | DLS752K | N/A |
| | Vibration Mode | Linear Motion | |
| | Vibration Motor | 2×1.0KW | |
| | Screen area | 1.35m ² | |
| | Deck Angle Range | +2° | |
| | Adjust G Force | ≤7.5G | |
| Weight | 1358Kg | 450Kg | 469Kg |
| L×W×H(mm) | 2124×1697×1803 | 2068×980×1520 | 2068×980×1520 |

4.3 Degasser

4.3.1 Vacuum Degasser



| Model | GNZCQ270B | GNZCQ360B |
|---------------------|-----------------------|-----------------------|
| Tank Diameter | 920mm | |
| Capacity | ≤270m ³ /h | ≤360m ³ /h |
| Vacuum Degree | -0.02 ~ -0.04Mpa | |
| Handling Efficiency | ≥95% | |
| Main Motor Power | 22kW | 37kW |
| Pump Motor Power | 7.5kW | |
| Rotation Speed | 700RPM | 860RPM |
| Ex Standard | ExdIIBt4/IECEX/ATEX | |
| Suction Size | DN150 | |
| Output Size | DN200 | |
| Weight | 1779mm | 1815mm |
| Dimension: mm | 2100x1605x1729mm | 2100x1605x1729mm |

Features

GNZCQ Series Vacuum Degassers are able to meet the needs of any applications, usually installed after the shakers. Each degasser effectively and efficiently removes gases from gas-cut mud, thus ensuring that the proper mud weight is pumped downhole. In doing so, the degassers are able to aid in the prevention of potential blowouts. Unlike the traditional vacuum degasser, GNZCQ vacuum degasser is a self-contained unit, GN Vacuum Degasser is monitored by level sensor to protect over suction of the fluids. The gas-cut mud is drawn into the degasser by a vacuum created by a re-generative vacuum without needing centrifugal pump . GN degasser can act as a big agitator for the drilling mud, which helps the treatment for desander and desilter.

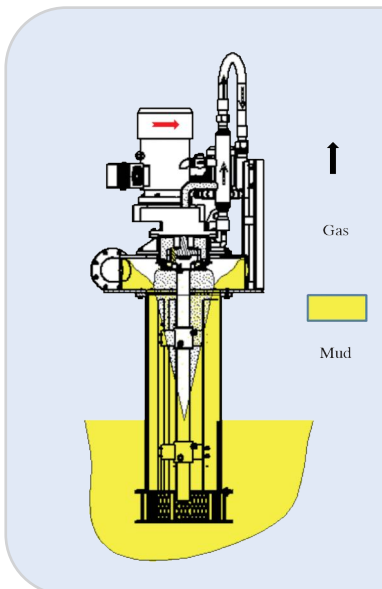
4.3.2 Centrifugal Degasser



| Model | GNLCQ300C |
|-----------------------|----------------------|
| Liquid Inlet Size | 20" |
| Liquid Outlet Size | 8" |
| Gas Outlet Size | 2" |
| Max Liquid Throughput | 300m ³ /h |
| Max Gas Removed | 30m ³ /h |
| Main Motor | 22Kw |
| Fan Motor | 2.2Kw |
| Weight | 1093kg |
| Dimension | 1148×1055×3430mm |

Features

GNLCQ300C centrifugal degasser is a new type degasser, specialized in processing gas cut drilling fluid. Normally it is installed after shale shaker and widely used in various solids control system, and it is very important for recovering mud weight, stabilize mud viscosity performance, reduce drilling cost. Meantime it can be used as a big power blender. Its advantages are large capacity, high rate of degassing, less area required, low energy consumption, easy operation and maintenance.



Working Principle:

Via the rotating impeller, the degasser sucks the drilling fluid into the vessel. The fluids will stay at a level higher than the gas cut drilling fluid and then a cylindrical liquid layer with inverted cone shape space in the middle will be formed. Drilling fluid is discharged from discharge port along a tangent line. With the impeller rotating, bubble breaks, gas will be extracted from liquid, and finally accumulate in the cone shape space as the lower density. Pressurizing unit(similar to exhaust fan) will suck air through the narrow channel between the air distribution disk and air separation ring into the discharge cone, and then gas manifold, braided hose and pressurized device to pressuring unit, finally discharge the gas out through pressuring device with pressure.

4.3.3 Mud Gas Separator



| Model | Tank Diameter | Capacity | Inlet | Outlet | Ventline | Weight | Dimension: |
|------------|---------------|---------------------------|-------|--------|----------|--------|------------------|
| GNZYQ1000A | 1000mm | 200~280 m ³ /h | 4" | 10" | 8" | 2411kg | 2265×2000×5681mm |

Features

GN Mud Gas Separator is designed for continued drilling in underbalanced conditions where dramatic pressure surges are normal. The GN Mud Gas Separator is manufacturing according to API and ISO Standard.

In dangerous "kick" conditions, the Mud Gas Separator allows operators to circulate the drilling fluid by removing large pockets of gas. The gas cut mud enters the flow line of the unit, where it hits a series of baffle plates. These baffle plates provide surface area for the dispersion of the gas cut mud. The mud is routed to solids control equipment for further processing while the separated gas travels to the flare line at the top of the unit to be vented at a safe distance from the rig and rig personnel.

4.4 Mud Agitator, Mud Gun

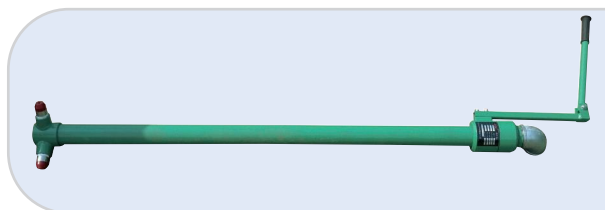
Mud Agitator



| Model | Motor | Speed | Impeller | Ratio | Weight | Dimension:mm |
|------------|-------|-------------------------|----------|-------|--------|---------------|
| GNJBQ030G | 3 | 60/72RPM (50Hz/60Hz) | 700 | 25:1 | 160 | 794x440x472.5 |
| GNJBQ055G | 5.5 | | 850 | | 240 | 960x540x598 |
| GNJBQ075G | 7.5 | | 950 | | 260 | 1065x540x616 |
| GNJBQ075GD | | | 850+700 | | 280 | |
| GNJBQ110G | 11 | | 1050 | | 360 | 1187x540x621 |
| GNJBQ110GD | | | 950+700 | | 380 | |
| GNJBQ150G | 15 | | 1100 | | 387 | 1287x640x683 |
| GNJBQ150GD | | | 1050+850 | | 415 | |
| GNJBQ185G | 18.5 | | 1200 | | 530 | 1307x640x698 |
| GNJBQ185GD | | | 1100+950 | | 560 | |
| GNJBQ220G | 22 | | 1200 | | 602 | 1287x640x683 |
| GNJBQ220GD | | | 1100+950 | | 630 | |

Remarks: Shaft and impeller will be provided by GN, but not including in the weight & dimension.

Mud Gun



| Model | GNNJQ80-3XA |
|------------------|-------------|
| Working Pressure | ≤6.4 Mpa |
| Rotation Degree | 360° |
| Nozzle Qty | 3 |
| Gun Diameter | 3 Inch |
| Connection Size | G3" |

4.5 Jet Mud Mixer

Mud Hopper



| Model | Pressure | Capacity | Nozzle | Inlet | Outlet | Weight | Dimension |
|---------|-------------|---|--------|-------|--------|--------|----------------|
| GNSLDSC | 0.25~0.4Mpa | 500-1500GPM (113-340m ³ /h) | 40mm | DN150 | DN150 | 174kg | 1100×680×949mm |
| GNSLDMC | | 200-500GPM (45-113m ³ /h) | 20mm | DN100 | DN100 | 113kg | 850×570×851mm |

Jet Mud Mixer



| Model | Capacity | Pressure | Motor | Inlet | Outlet | EX Standard | Weight | Dimension(mm) |
|------------|----------------------|-------------|--------|-------|--------|-------------------------|--------|----------------|
| GNSLH-750C | 320m ³ /h | 0.25~0.4Mpa | 75kW | DN200 | DN150 | EXdIIBt4/ IECEX/ATEX | 1785kg | 2200×1840×1150 |
| GNSLH-550C | 272m ³ /h | | 55kW | DN200 | DN150 | | 1675kg | 2200×1840×1100 |
| GNSLH-450C | 200m ³ /h | | 45kW | DN150 | DN150 | | 1475kg | 2200×1840×1135 |
| GNSLH-370C | 150m ³ /h | | 37kW | DN150 | DN150 | | 1460kg | 2200×1840×1135 |
| GNSLH-300C | 120m ³ /h | | 30kW | DN125 | DN150 | | 1380kg | 2200×1840×1100 |
| GNSLH-220C | 90m ³ /h | | 22kW | DN125 | DN100 | | 1167kg | 1850×1540×1000 |
| GNSLH-185C | 65m ³ /h | | 18.5kW | DN100 | DN100 | | 1147kg | 1850×1540×1030 |
| GNSLH-150C | 55m ³ /h | | 15kW | DN100 | DN100 | | 970kg | 1850×1540×1030 |
| GNSLH-110C | 45m ³ /h | | 11kW | DN100 | DN100 | | 950kg | 1850×1540×1030 |

Remarks: Electrical Control Cabinet should be quoted separately, not included.

4.6 Mud Tank



GN Solids Control designs and manufactures various types of tank including mud tank, water tank, oil tank, etc. GN Solids Control mud tanks are usually used to install solids control equipment, storage mud, mixing mud, etc. It meets utility request of the drilling solid control system, mud plant and solid-liquid separation system. According to different working conditions, mud tanks can be customized into horizontal mud tank, vertical mud tank and trailer mounted mud tank.

Part 5: Waste Management Equipment

5.1 Vertical Cuttings Dryer

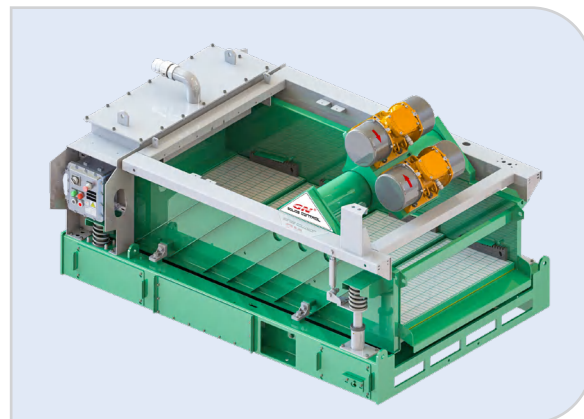
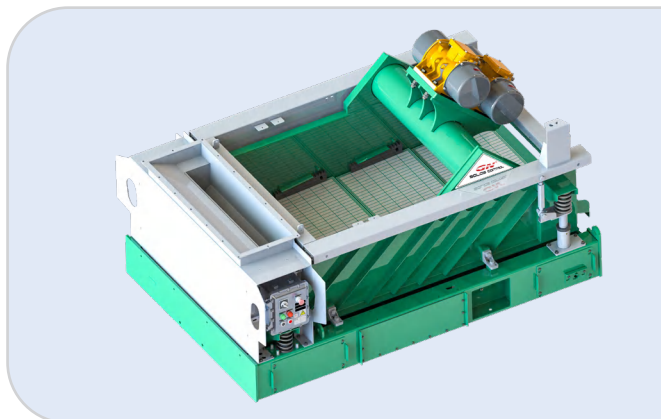


| Model: | GNCD930G | GNCD930G-VFD |
|---------------------------|-------------------------------|--------------|
| Treating Capacity: | 30~50Tons/H | |
| OOC output: | OOC≤5% | |
| Screen Max Diameter: | 930mm | |
| Screen Opening: | 0.25mm/0.35mm/0.5mm | |
| Rotation Speed: | 900RPM | 0-900RPM |
| G Force | 420G | 0-420G |
| Oil Tank capacity: | 48L | |
| Air Knife Input Pressure: | 0.69Mpa | |
| Air Knife Input Capacity: | 4.8m³/m | |
| Main Motor: | 55Kw(75HP)-4p, Exd II BT4 | |
| Back Motor | N/A | 11KW(15HP) |
| Oil Pump Motor: | 0.55Kw(0.75HP)-4p, Exd II BT4 | |
| Exd Standard | ExdIIBt4/IECEX/ATEX | |
| Weight | 4250kg | 4900kg |
| Dimension | 2685x1290x1723mm | |

Features

- More Application: Working for OBM and SBM.
- High G Force: Normal 420G @ 900RPM, optional to drive by VFD with variable speed.
- FAG Brand premium bearing.
- The Flights on the rotor is hard facing to HRC 65, longer life than our competitors.
- Special high pressure air knife design to clean the basket screen automatically to avoid the screen blinding especially for high viscosity mud and water based mud.

5.2 High G Drying Shaker

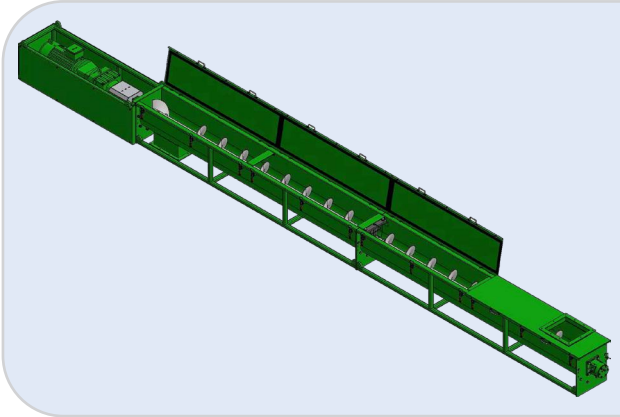


| | |
|---------------------|------------------------------|
| Model | GNZS594K-GZ |
| Vibration Model | Linear Motion |
| Reference Capacity | 140m ³ /h(616GPM) |
| Vibration Motor | 2×1.94kW |
| Screen Qty | 4 pcs |
| Screen area | 2.73 m ² |
| Adjust G Force | ≤8.0G |
| Vibration Amplitude | 4.38~6.32mm |
| Deck Angle Range | -1~+5°(Adjustable) |
| Feeding Type | Top Feeder |
| Weir Height | 1070mm |
| Weight (Kg) | 2064 |
| L×W×H(mm) | 2769×1995×1619 |

Features

- The entire shaker deck undergoes heat treatment to relieve welding stress, enabling it to withstand high G force.
- The shaker screen is installed with a mechanical ratchet wrench gear for quick tightening, facilitating easy disassembly and ensuring long-lasting durability.
- The wedge blocks for tightening the screen mesh are made of nylon, providing high temperature resistance, corrosion resistance, and wear resistance.
- Vibration motor: Italian OLI brand.
- Polyurethane material is used for sealing between the shale shaker and screen, ensuring a long service life and easy replacement.
- The supporting rubber strips for the bottom frame of the vibration screen are made of stainless steel, offering strong corrosion resistance and a long service life.
- The electrical control box is made of aluminum alloy/stainless steel explosion-proof material, ensuring good sealing and strong corrosion resistance.
- The pre-tensioned shaker screen allows for convenient and quick disassembly and replacement.
- The mud outlet can be switched between bottom and side outlets, accommodating flexible installation on site.
- The angle of the shaker deck can be mechanically adjusted while working at both ends, adapting to different processing capacities.

5.3 Screw Conveyor



| Model | Screw Diameter Inch/mm | Screw Length Ft/m | Capacity (Tons/Hour) | Motor Power (Kw) | Screw Speed (Rpm) |
|------------|---------------------------|----------------------|-------------------------|---------------------|----------------------|
| GNSC10B-24 | 10/250 | 24/7.3 | 15 | 4(5.4HP) | 50~70 |
| GNSC10B-36 | 10/250 | 36/11 | 15 | 5.5(7.5HP) | |
| GNSC10B-48 | 10/250 | 48/14.6 | 15 | 7.5(10HP) | |
| GNSC12B-24 | 12/315 | 24/7.3 | 20 | 5.5(7.5HP) | 50~70 |
| GNSC12B-36 | 12/315 | 36/11 | 20 | 7.5(10HP) | |
| GNSC12B-48 | 12/315 | 48/14.6 | 20 | 11(15HP) | |
| GNSC14B-24 | 14/350 | 24/7.3 | 30 | 7.5(10HP) | 50~70 |
| GNSC14B-36 | 14/350 | 36/11 | 30 | 11(15HP) | |
| GNSC14B-48 | 14/350 | 48/14.6 | 30 | 15(20HP) | |
| GNSC16B-24 | 16/400 | 24/7.3 | 45 | 11(15HP) | 50~70 |
| GNSC16B-36 | 16/400 | 36/11 | 45 | 15(20HP) | |
| GNSC16B-48 | 16/400 | 48/14.6 | 45 | 18.5(25HP) | |
| GNSC18B-24 | 18/450 | 24/7.3 | 45 | 15(20HP) | 50~70 |
| GNSC18B-36 | 18/450 | 36/11 | 45 | 18.5(25HP) | |
| GNSC18B-48 | 18/450 | 48/14.6 | 45 | 22 (30HP) | |

Remarks: According to clients requirement, GN can provide customized equipment.

Features

GN Solids utilizes a custom designed and constructed Screw Conveyor (Auger) as part of drilling waste management system. The Auger is designed with 12 feet per section which makes it a standard spare parts to interchange with each other. The anti-abrasive screw material lasts longer than our competitors. The Screw Conveyor (Auger) provides an efficient, low cost cuttings transport system for offshore and onshore drilling installations. The screw conveyor is manufactured to the highest safety standards and is fitted with protective grating or cover to prevent foreign objects for falling into the conveyor system, and to offer enhanced safety for all workers.

5.4 Inclined Plate Clarifier



| Model | Max Flow | Inlet | Outlet | Sludge Outlet | Sludge Volume | Weight (KG) | Dimension(mm) |
|-------------------|----------------------|---------|--------|---------------|---------------|-------------|----------------|
| GNIPC-07B | 7m ³ /h | 4" | 4" | 4" | 475 | 1460 | 1655x1655x1780 |
| GNIPC-14B | 14m ³ /h | 4" | 4" | 4" | 1025 | 2070 | 2495x1655x1780 |
| GNIPC-21B | 21m ³ /h | 4" | 4" | 4" | 770 | 2465 | 2465x1655x2315 |
| GNIPC-35B | 35m ³ /h | 4" | 4" | 4" | 1255 | 3320 | 3205x1655x2315 |
| GNIPC-41B | 41m ³ /h | 6" | 6" | 4" | 1580 | 3905 | 3685x1730x2315 |
| GNIPC-55B | 55m ³ /h | 6" | 6" | 4" | 2175 | 4865 | 4500x1730x2315 |
| GNIPC-69B | 69m ³ /h | 8"x8" | 8" | 4" | 3905 | 6555 | 4065x2595x2950 |
| GNIPC-86B | 86m ³ /h | 8"x8" | 8" | 4" | 4975 | 7880 | 4725x2595x2950 |
| GNIPC-103B | 103m ³ /h | 8"x8" | 8" | 4" | 2315 | 9070 | 5360x2595x2950 |
| GNIPC-120B | 120m ³ /h | 8"x8" | 8" | 4" | 3710 | 10340 | 6100x2595x2950 |
| GNIPC-137B | 137m ³ /h | 12"x10" | 10" | 4" | 3710 | 12295 | 4980x2695x4270 |
| GNIPC-154B | 154m ³ /h | 12"x10" | 10" | 4" | 3710 | 13350 | 5285x2695x4270 |
| GNIPC-188B | 188m ³ /h | 12"x10" | 10" | 4" | 3710 | 15740 | 5970x2695x4270 |
| GNIPC-222B | 222m ³ /h | 12"x10" | 10" | 4" | 3710 | 18385 | 6100x2695x4270 |
| GNIPC-273B | 273m ³ /h | 12"x10" | 10" | 4" | 3710 | 21390 | 6100x2695x4270 |

Features

GN Inclined Plate Clarifier (IPC) is a high performance Lamella plate for removal of settle-able solids in a variety of waste streams. The lamella plate is made of stainless steel.

GN IPC incorporates inclined plate settling surfaces pitched at a 55° angle from the horizontal with uniform plate spacing. Due to plate angle the solids slide down the plates into the sludge hopper below the plate pack. This simple, inexpensive design, combined with sludge conveyor Auger makes the GN IPC easy to install, operate and maintain. Chemical like polymer pretreatment often improves solids removal efficiency. The use of chemical flocculants with GNIPC is based on system efficiency, application contaminant characteristics and cost.

5.5 Chemical Dosing Equipment

GNDU2000 series 20ft container chemical dosing equipment is mainly used for mixing of flocculation, coagulation or de-emulsifier. It works together with dewatering centrifuge to separate the ultra-fine solids from the mud or waste water, to get clean water for industry applications; or support the separation of waste sludge.



| Model: GNDU-2000A | |
|--|---|
| Chemical Dosing System | Include 20ft container with decoration, electric control system, exhaust system, lighting system. |
| Three Chamber Automatic Dosing Unit Model: GN-2000S | Max powder adding capacity:1-6 Kg/Hr(Speed Adjustable) Tank Material: SS304 Hopper Volume:45 L Tank Capacity:2000L Output for concentration 0.1%:2000L/Hr, if aging time is 45 Min. Mud agitator: 3 sets Dosing pump: 2 sets, single pump capacity:2000L/h(adjustable) Dimension:2000x1400x1500mm Including Ex liquid level meter, Ex electromagnetic flow meter, Ex solenoid valve, relief valve, buffer, filter and pressure gauge, etc accessories. |
| Single tank chemical Dosing Unit Model: GN-2000L | Tank Material: Outer material is carbon steel, inner material is PE Dissolving Tank Volume: 2000L Dissolving Tank Dimension 1400x2200mm(Agitator included) Mud agitator: 1 set Dosing pump: 2 sets, single pump capacity:530L/h(adjustable) Attached with Magnetism rolling board level meter, relief valve, buffer, filter and pressure gauge, etc accessories. |

Part 6: Transfer Pumps

6.1 Centrifugal Pump



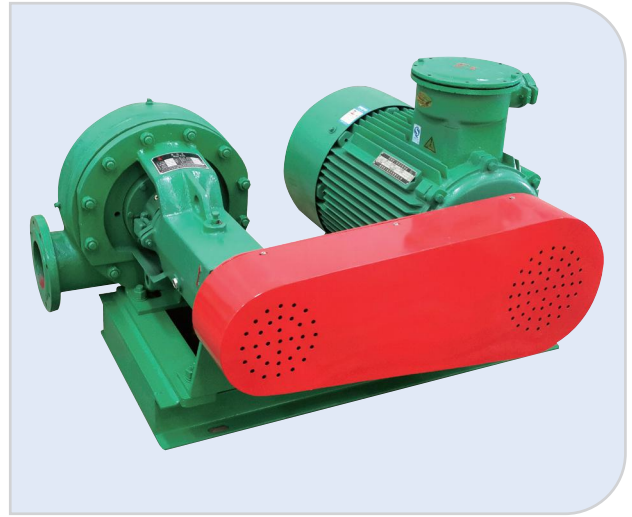
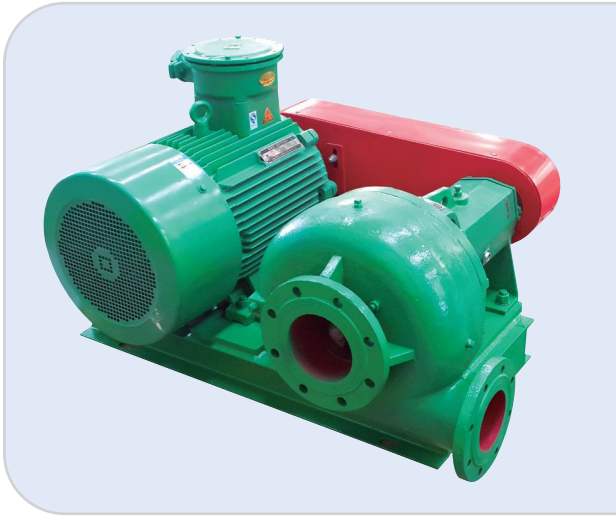
| Model | Flow | Lift | Motor | Speed | Impeller |
|----------------|----------------------|------|--------|---------------|----------|
| GNSB8×6C-13J | 320m ³ /h | 35m | 75kW | 1450RPM(50Hz) | 13in |
| GNSB8×6C-11J | | | | 1750RPM(60Hz) | 11in |
| GNSB8×6C-12J | 272m ³ /h | 35m | 55kW | 1450RPM(50Hz) | 12in |
| GNSB8×6C-10J | | | | 1750RPM(60Hz) | 10in |
| GNSB6×5C-12J | 200m ³ /h | 35m | 45kW | 1450RPM(50Hz) | 12in |
| GNSB6×5C-10J | | | | 1750RPM(60Hz) | 10in |
| GNSB6×5C-11J | 150m ³ /h | 30m | 37kW | 1450RPM(50Hz) | 11in |
| GNSB6×5C-9.5J | | | | 1750RPM(60Hz) | 9.5in |
| GNSB5×4C-12J | 120m ³ /h | 35m | 30kW | 1450RPM(50Hz) | 12in |
| GNSB5×4C-10.5J | | | | 1750RPM(60Hz) | 10.5in |
| GNSB5×4C-11J | 90m ³ /h | 30m | 22kW | 1450RPM(50Hz) | 11in |
| GNSB5×4C-9.5J | | | | 1750RPM(60Hz) | 9.5in |
| GNSB4×3C-11J | 65m ³ /h | 35m | 18.5kW | 1450RPM(50Hz) | 11in |
| GNSB4×3C-10J | | | | 1750RPM(60Hz) | 10in |
| GNSB4×3C-10J | 55m ³ /h | 28m | 15kW | 1450RPM(50Hz) | 10in |
| GNSB4×3C-9.5J | | | | 1750RPM(60Hz) | 9.5in |
| GNSB4×3C-9.5J | 45m ³ /h | 25m | 11kW | 1450RPM(50Hz) | 9.5in |
| GNSB4×3C-9J | | | | 1750RPM(60Hz) | 9in |
| GNSB3×2C-9J | 35m ³ /h | 35m | 7.5kW | 1450RPM(50Hz) | 9in |
| GNSB3×2C-8J | | | | 1750RPM(60Hz) | 8in |

Remarks: Spare Parts interchangeable with Mission pump.

Features:

GN SB Series Centrifugal pump is used for transferring drilling mud. It can be used as feeding pump for desander, desilter, or used as mixing pump for Jet Mud Mixer. Also it can be used as trip pump, and supercharging pump for rig mud pump. All GN model centrifugal pumps use tungsten carbide mechanical seal, with famous brand Bearing. And spare parts interchangeable with most of the international Brand pump which helps customer to source spare parts easily. Open impeller design that lowers axial thrust loads, and make it easier for installation, repair and maintenance.

6.2 Shear Pump



| Model | Flow | Lift | Motor | Speed | EX Standard | Weight | Dimension(mm) |
|---------------|----------------------|------|-------|---------|-------------------------|--------|-----------------|
| GNJQB6X5C-550 | 155m ³ /h | 32m | 55kW | 1900RPM | EXdIIBt4/ IECEX/ATEX | 965kg | 1333x1000x931mm |

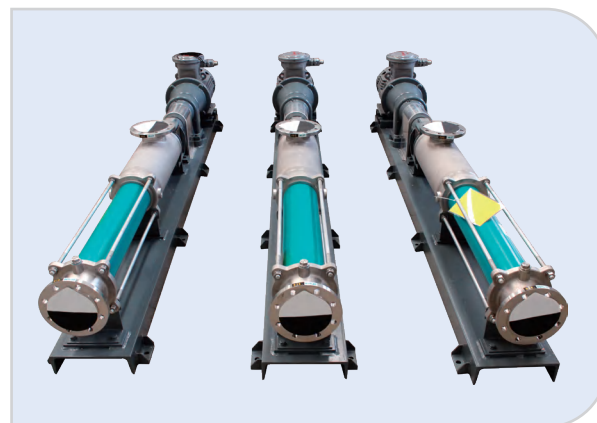
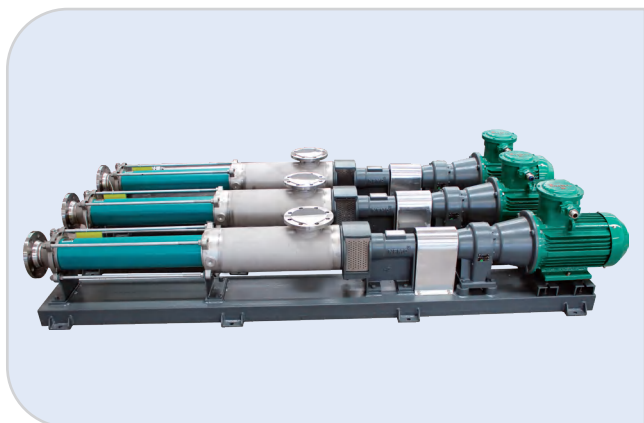
Features:

The GN shear pump reduces the cost of mixing polymers and clays while improving mud properties. Shearing the polymers eliminates fish eyes and prevents polymer chaining (long strings), which cannot pass through the shaker screens. The GN shear pump is available as a belt-driven or diesel-driven package including a hopper, mud gun, and transfer line orifice plate. A complete system with skid, tanks, and piping are also available.

GN Shear Pump impeller is specially designed to have a wider flow pass and smooth vanes, with larger flow area and smooth fluid pass, making the shear pump reach the internationally advanced level in shear pump efficiency and energy-saving, 10% higher than similar products. The shear pump has adopted a shell thicker than normal one, with rational pass and less turbulence.

GN Shear pump Impeller and shell are made of high wear resistant cast irons, with longer servicing life. The shear pump shaft has high strength that can bear certain load, reducing shafts deflection and extending seals service life; The shaft is lubricated with lubricants and lubricating grease and the oil seal is made of special structure and materials, suitable for high and low temperatures and complicated environment; Front opening structure is used for convenient installation, repair and maintenance.

6.3 Screw Pump



| Model | Flow | Pressure | Motor | Max Speed | Inlet | Outlet | Ex Standard | Weight | Dimension (mm) |
|------------|---------------------|----------|-------|-----------|-------|--------|-----------------------------|--------|----------------|
| GNG10-040C | 10m ³ /h | 0.3MPa | 4kW | 244RPM | DN80 | DN80 | EXdIIBt4/ IECEX/ ATEX | 245kg | 2245×320×550 |
| GNG20-055C | 20m ³ /h | 0.3MPa | 5.5kW | 210RPM | DN80 | DN80 | | 323kg | 2450×340×562 |
| GNG30-075C | 30m ³ /h | 0.3MPa | 7.5kW | 258RPM | DN100 | DN100 | | 386kg | 2761×370×600 |
| GNG40-110C | 40m ³ /h | 0.3MPa | 11kW | 252RPM | DN100 | DN100 | | 454kg | 3270×370×665 |
| GNG50-110C | 50m ³ /h | 0.3MPa | 11kW | 273RPM | DN125 | DN125 | | 608kg | 3790×400×782 |
| GNG60-150C | 60m ³ /h | 0.3MPa | 15kW | 225RPM | DN125 | DN125 | | 649kg | 3322×550×740 |
| GNG70-220C | 70m ³ /h | 0.3MPa | 22kW | 230RPM | DN150 | DN150 | | 875kg | 3740×420×785 |
| GNG80-220C | 80m ³ /h | 0.3MPa | 22kW | 283RPM | DN150 | DN150 | | 875kg | 3740×420×785 |
| GNG90-220C | 90m ³ /h | 0.3MPa | 22kW | 205RPM | DN150 | DN150 | | 875kg | 3740×420×785 |

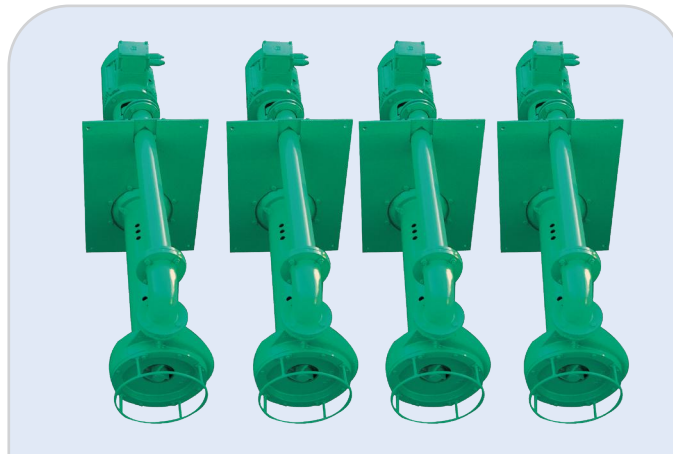
Features:

The GNG Series Positive Displacement Pump is a single screw pump. The pump is an ideal pump for feeding to decanter centrifuge without shearing or agitating the drilling mud. The main parts are screw shaft (rotor) and screw shaft bushing (stator). Because of the special geometry shape of the two parts, they form pressurize capacity separately. The fluids flow along with the shaft, inner flow speed is slow, capacity remains, pressure is steady, so it will not generate vortex and agitating. The shaft of the pump is made from Stainless steel, GNG series pump is available for option with complete stainless steel body,

It can drive by coupler, or adjust the speed by using variable speed motor, Triangle V-belt, gear box, etc. G series positive displacement pump is with less accessories, compact structure, small volume, easy maintenance, rotor and stator are wear parts of this pump, it is convenient to replace.

The stator is made of elastomeric material, so it has particular advantages than other pump to transfer the fluids of high viscosity and hard suspended particles included.

6.4 Submersible Slurry Pump



| Model | Capacity (m ³ /h) | Height (m) | Motor Power (kw) | Motor Rotating Speed (r/min) | Outlet (Diameter) |
|-----------------|------------------------------|------------|------------------|------------------------------|-------------------|
| GN50YZ20-18J | 20m ³ /h | 18m | 3kW | 1450RPM(50Hz) | DN50 |
| | | | | 1750RPM(60Hz) | |
| GN50YZ40-10J | 40m ³ /h | 10m | 5.5kW | 1450RPM (50Hz) | DN50 |
| | | | | 1750RPM (60Hz) | |
| GN80YZ50-20J | 50m ³ /h | 20m | 7.5kW | 1450RPM(50Hz) | DN80 |
| | | | | 1750RPM (60Hz) | |
| GN80YZ80-20J | 80m ³ /h | 20m | 11kW | 1450RPM(50Hz) | DN80 |
| | | | | 1750RPM (60Hz) | |
| GN100YZ100-30AJ | 90m ³ /h | 20m | 18.5kW | 1450RPM(50Hz) | DN100 |
| | | | | 1750RPM (60Hz) | |
| GN100YZ100-30J | 100m ³ /h | 30m | 22kW | 1450RPM(50Hz) | DN100 |
| | | | | 1750RPM (60Hz) | |
| GN100YZ100-30ZJ | 120m ³ /h | 31m | 30kW | 1450RPM(50Hz) | DN100 |
| | | | | 1750RPM (60Hz) | |
| GN100YZ160-38J | 160m ³ /h | 38m | 37kW | 1450RPM(50Hz) | DN100 |
| | | | | 1750RPM (60Hz) | |
| GN150YZ250-40AJ | 200m ³ /h | 30m | 45kW | 1450RPM(50Hz) | DN150 |
| | | | | 1750RPM (60Hz) | |
| GN150YZ250-40BJ | 250m ³ /h | 40m | 55kW | 1450RPM(50Hz) | DN150 |
| | | | | 1750RPM (60Hz) | |

Remarks: The weight and dimension is for the standard submersible length pump: 1.3m

Features:

GN YZ Series Submersible slurry pump is with structure of vertical single stage and single suction system overhung centrifugal pump, it is made of abrasion-resistant alloy, it can transfer medium with high concentration particle. The normal submersible length is 1.3m, customized length is available. There is no bearing and Gland Seal between impeller and pump body, so the slurry pump is maintenance-free and high temperature resistance, the slurry pump is the ideal centrifugal pump for feeding to decanter centrifuge, and feeding from mud pit for to the shale shakers on the mud system, it can also be used as feeding pump for desander and desilter.

6.5 Vacuum Pump

Waste vacuum pump, also named as solids transfer pump. With special structure design, it can be used at tough environment for solids transfer, high working performance and less maintenance. The pump can transfer material with high gravity and high density, solids content max. up to 80%.



GN Sludge Vacuum Pump Parameter

| Model | GNSP-40B | GNSP-20B | GNSP-10B |
|---------------------------------|--------------------------------|----------------------------------|---------------------------------|
| Max Capacity(m ³ /h) | 40m ³ /h | 20m ³ /h | 10m ³ /h |
| Inlet/Outlet Size(Inch) | 4"(114mm) | 4"(114mm) | 3"(89mm) |
| Vacuum Degree | 25"HG (Mercury Column) | 85Kpa/25 inch HG(Mercury Column) | |
| Max Suction Distance(m) | 50m | | |
| Max Discharge Distance(m) | 1000m | 500m | |
| Max Solids Content | 80% | | |
| Max Solids Size(mm) | 75mm | 50mm | |
| Pressure Request | 550Kpa~785Kpa (80~114PSI) | | |
| Air Demand | 17m ³ /min (600CFM) | 8m ³ /min(280CFM) | 4.3 m ³ /min(150CFM) |
| Weight(kg) | 892kg | 386kg | 320kg |
| Dimension: L×W×H(mm) | 1690×1468×1983mm | 1421×900×1448mm | 1283×800×1370mm |

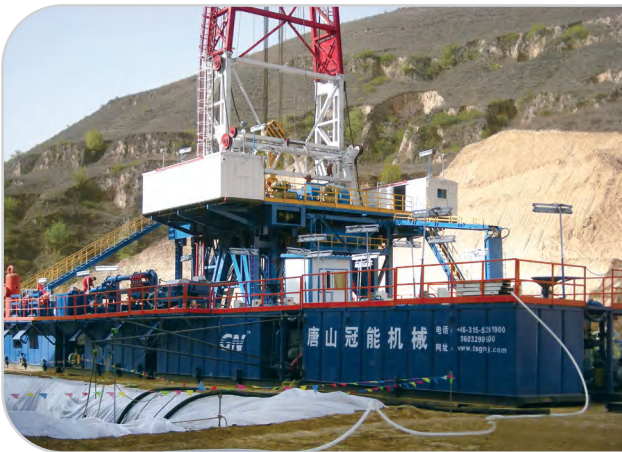
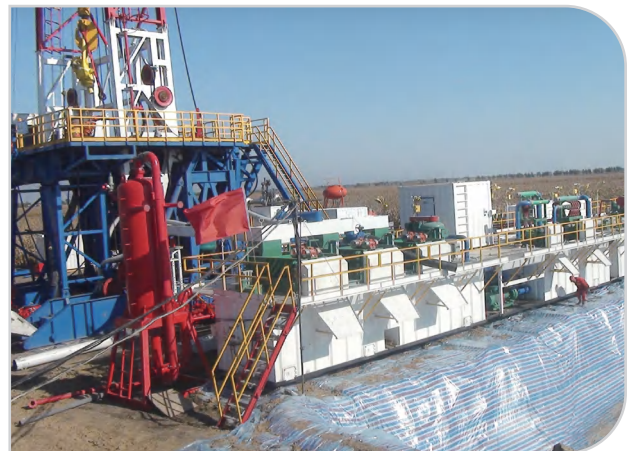
Material transfer applications

- 1) Waste mud and waste solids discharged from shale shaker, mud cleaner and centrifuge transfer
- 2) Drilling mud transfer
- 3) Waste pit cleaning
- 4) Hazardous waste recovery
- 5) Oil sludge, tank bottoms residual removal and transfer
- 6) Barge holdings and vessel bottom clean out
- 7) Bulk tank and silo transfer of material
- 8) Sand; Course, fine, conventional and frac sand
- 9) Diatomaceous earth
- 10) Animal waste etc.

Part 7: Industry Application

7.1 Oil & Gas Drilling Solids Control System

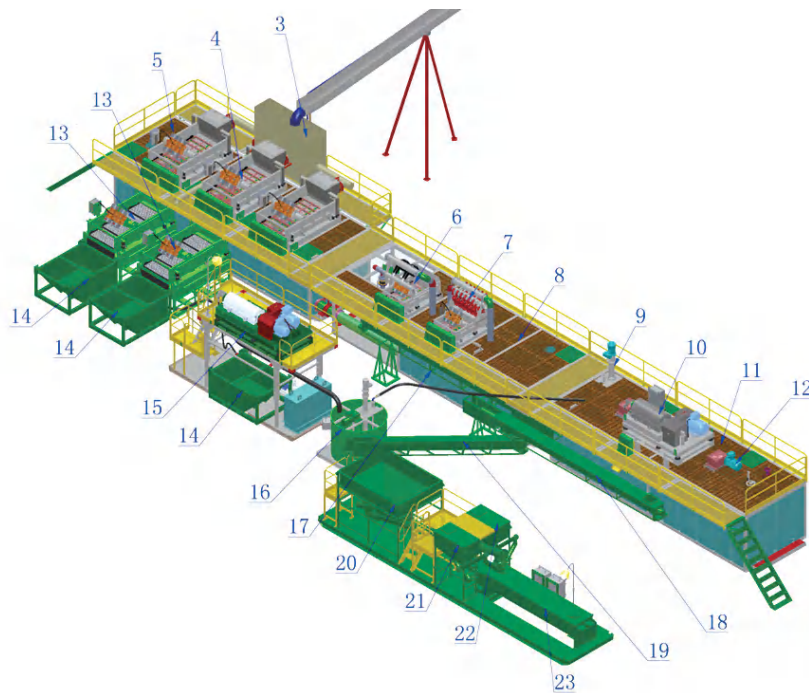
GN Solids Control manufactures all solids control equipment. Mud tanks are also designed and manufactured to compose whole mud systems to meet the demands of drilling rigs from 250HP to 3000HP. As a solids control manufacturer owns USA API and ISO certifications, GN Solids Control also certified by Europe CE for exporting to developed countries.



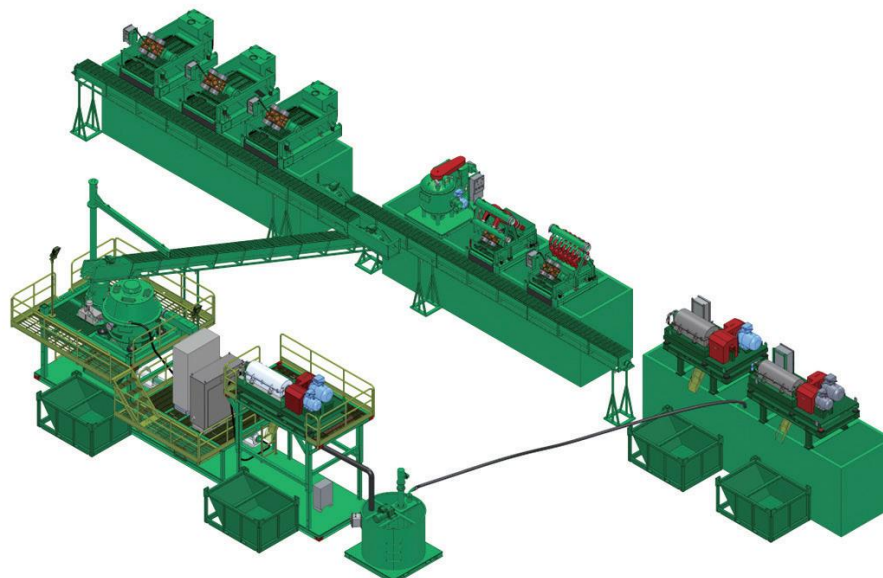
7.2 Drilling Waste Management System

GN Solids Control provides turnkey solutions for closed loop drilling mud and drilling waste management system. Key equipment includes Hi-G Shaker, Cuttings Dryer, Decanter Centrifuge, and Flocculating Dosing Unit. They can be used to treat WBM, OBM and SBM.

Typical WBM Treating System Layout



Typical OBM Treating System Layout



Drilling Waste Management Projects



European Treating Plant Project



Shell (Sichuan) Project



Siberia Russia Project



Africa OBM Treating Project



Inner Mongolia WBM Treating Project



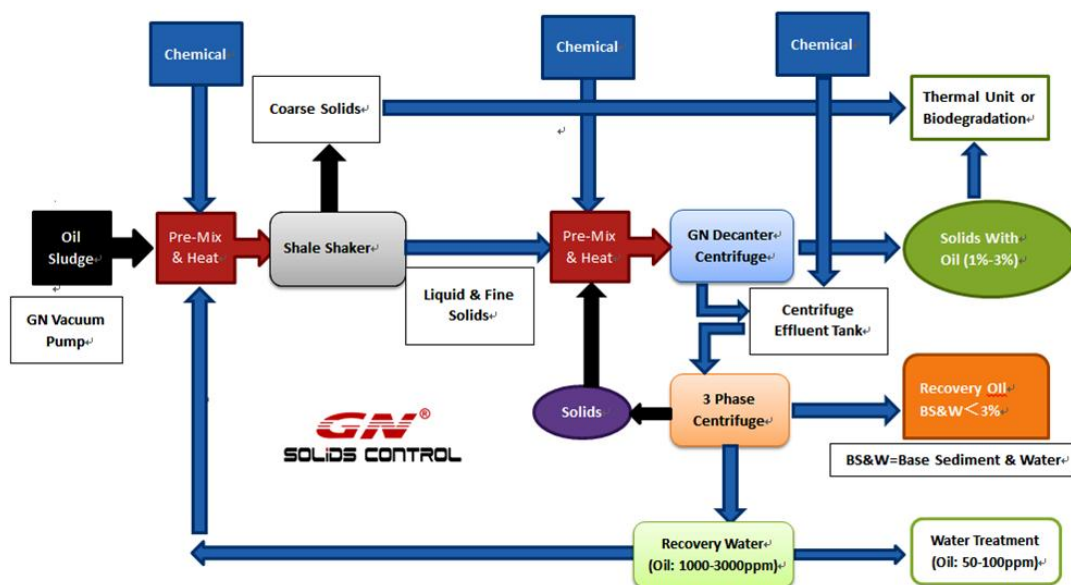
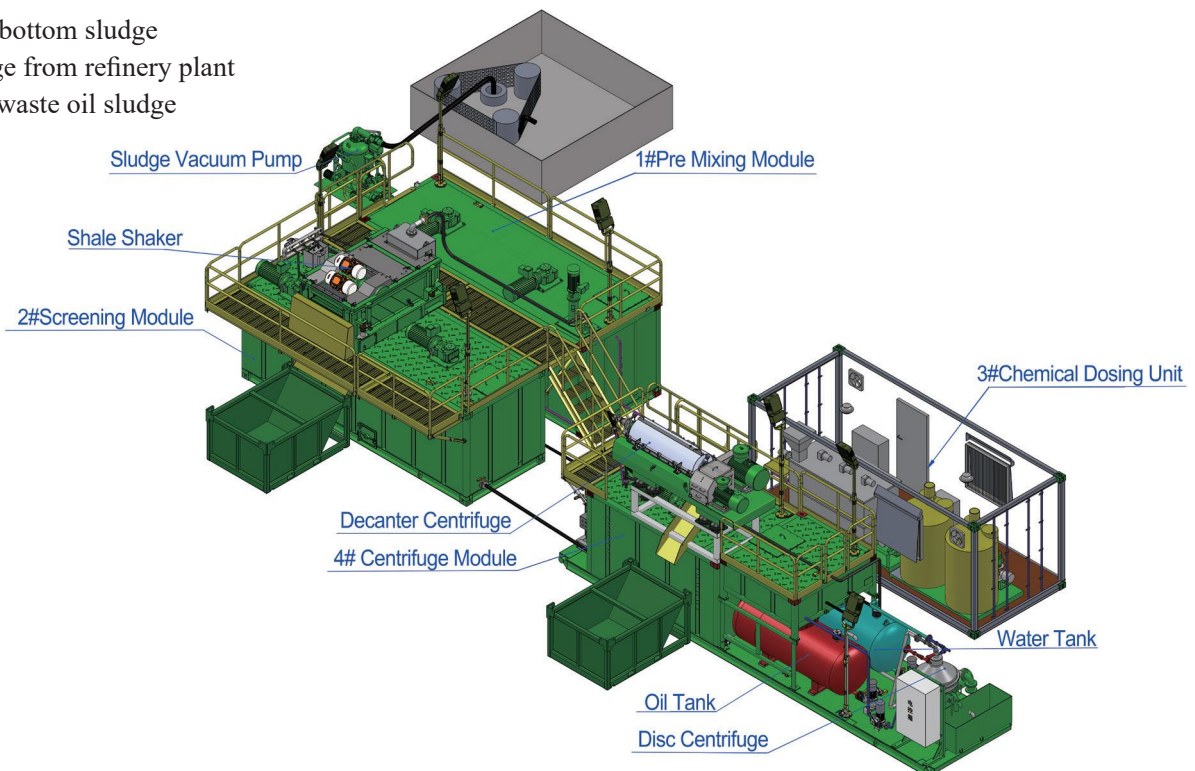
Argentina WBM Treating Project

7.3 Oil Sludge Treatment

GN Oil Sludge Treatment System uses chemicals to wash the oil sludge when heat to 60-70 C degree. After washing, the slurry is pumped to GN equipment to separate into oil, water and solids. The recycled water can be reused in the washing process, and the oil is clean enough to sell to the refinery company, the discharged solids with oil can be sent to bio-degradation or thermal unit for final disposal.

Typical Oily Sludge source:

- Oil tank bottom sludge
- Oil sludge from refinery plant
- Drilling waste oil sludge



7.4 Trenchless/HDD Mud Recycling System

GN is committed to research and develop trenchless mud recycling system, mud mixing system, decanter centrifuge etc. As an international famous brand, GN products have been exported to over 70 countries and regions, and GN has set up branches & service stations in Houston, USA and Brisbane, Australia along with global partners.



| Type | High Configuration | | | |
|-------------------|---------------------------------------|----------------------|----------------------|----------------------|
| System Function | Mud Recovery, Mud Mixing, Mud Storage | | | |
| Model No. | GNMS-200B | GNMS-400B | GNMS-600B | GNMS-800B |
| Capacity | 50 m ³ /h | 100m ³ /h | 150m ³ /h | 200m ³ /h |
| Separation Grades | 2 | 2 | 2 | 3 |
| Separation Size | 20 micron | 20 microns | 20 micron | 20 micron |
| System Volume | 5 m ³ | 8.5 m ³ | 15 m ³ | 19.5 m ³ |

Advantages of GN Recycling Equipment

- Preferred supplier of well-known rig manufacturers and contractors.
- Leading capabilities on both hardware and software, welcome for facility site visiting.
- Certified with US API, Europe CE and Russia CU-TR standard.
- High level material selected: stainless steel shaker deck bottom frame, Italy OLI vibration motor and Siemens electric components.
- Independent research and manufacturing on 4-Stage cleaning equipment: Shale Shaker, Desander, Desilter and Decanter Centrifuge.

7.5 TBM & Bored Piling Mud Cleaning

GN offers assembled-type mud cleaning systems for piling, TBM, and pipe jacking projects. Our production line encompasses models with capacities ranging from 120m³/h-500m³/h(Small Unit) and 1000m³/h- 3000m³/h(Big Unit). Furthermore, GN provides big bowl decanter centrifuges and chemical dosing systems for treating mud to achieve dischargeable water quality.



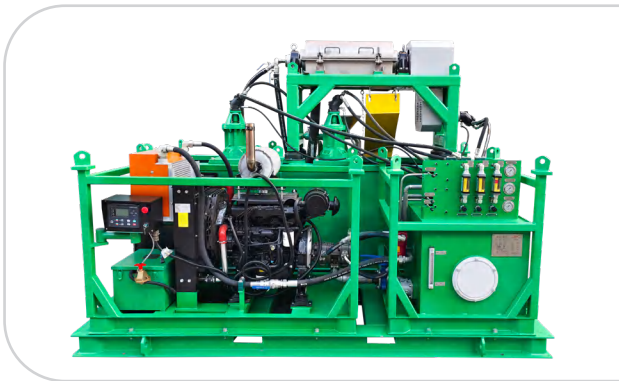
Bored Pile Desander



| Configuration Type | Economic Configuration | | |
|--------------------|------------------------|----------------------|----------------------|
| System Function | Mud Cleaning/Recycling | | |
| Model | GNMS-200K | GNMS-500K | GNMS-1000K |
| Capacity | 50m ³ /h | 120m ³ /h | 240m ³ /h |
| Cleaning Stage | 2 Stages | 2 Stages | 2 Stages |
| Treating Precision | 20μm | 40μm | 40μm |
| System Volume | 1m ³ | 1~5m ³ | 1.5m ³ |

7.6 Industrial Solids & Liquid Separation System

As a professional manufacturer of solids and liquid separation equipment, GN Solids Control provides many kinds of separation equipment includes vibration screen equipment, horizontal decanter centrifuge, hydro cyclone separation equipment, gravity settlement separation equipment, and 3-Phase separation equipment. According to different separation request, GN is able to provide customized solution to maximize the treating result and reduce the cost for customers' biggest profit.



Core Drilling Solids Removal Unit



Water well Track Mounted Mud System



Geothermal Well Drilling Mud Cleaning



Mining Slurry Solids and Liquid Separation



Dredging Slurry Solids and Liquid Separation



Hydrovac Slurry Treatment System

Equipment Separation Cut Point

| Particle Size (Microns) | 0-2 | 2-5 | 5-20 | 20-40 | 40-60 | 60-1000 | 1000-2000 | >2000 |
|---------------------------------|-----------------------|------------|--------------|-----------------------|-----------------------|------------------------------------|-----------|---------|
| Solids Control Stages | 4 th Stage | | | 3 rd Stage | 2 nd Stage | 1 st Stage | | |
| Shale Shaker | No | | | | API 270/325 | ≤API 230 | API 10/20 | ≤API 10 |
| Desander | No | | | | Yes | | | No |
| Desilter | No | | | Yes | | | No | |
| Decanter Centrifuge | Flocculant | High Speed | Middle Speed | Middle Speed | Low Speed | | | No |
| Inclined Plate Clarifier | Flocculant | Flocculant | Yes | | | | | |
| Vertical Cuttings Dryer | No | | | | | Solids Should be above 250 microns | | |
| Centrifugal Pump | Yes | | | | | | No | |

Remarks: The above table is for reference only.



GN Website



GN Video



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