

Solid Control Package



This solid control package consists of sand collector, purifying tank, cycling tank, mud tank, shale shaker, desander, desilter, shear pump, centrifuge, mud gas separator, vacuum degasser, mud agitator and mixing hopper with handrail, passage and anti-explosive circuit. It can be used to adjust the contents of drilling mud to ensure its property.

Features

- ※ The solid control system complies with SY/T6276 and ISO/CD14690 “Health, Safety, environmental protection and environmental management system of Petroleum industry”. The process and equipment comply with API13C and relating standards and regulations.
- ※ The solid control system has five-phase purification equipment as shale shaker, vacuum degasser, desander, desilter and centrifuge for the purification and circulation of the drilling liquid. It is designed to guarantee the smooth performance of separation, circulation, injection and confection of the drilling liquid. It is also designed to solve accidents in special circumstances and store drilling liquid as well.
- ※ The solid control system meets the requirement of drilling process.
- ※ The solid control system is explosion proof, anti-corrosion and leakage proof.
- ※ The solid control system applies to environment with ambient temperature from -35°C to +55°C, and humidity ≤90% (+20°C) .
- ※ The solid control system can be shipped by road, railway and sea, handled with crane and customized handling equipment, and can be hauled in the well site as well.
- ※ The electric apparatus is DIIBT4 explosion proof, while the motor is out-of-door explosion proof motor.
- ※ Adopted Standards:

SY5305 “General technical conditions for welding of petroleum drilling machinery ”

SY5301 “General technical conditions for cast pieces of carbon steel and normal alloy of petroleum drilling machinery”

SY5308 “General technical conditions for painting of petroleum drilling machinery”

Main Technical Parameters

Model	Volume (m ³)	Capacity (m ³)	Power (kW)
GK70	450	450	450
GK50	320	320	400
GK40	270	270	450
GK32	200	200	150
GK20	200	200	134
CYNG-280	100	80	201
GKJG70-1	32.5	100	159.5

Shale Shaker



It used for solid-phase separation in drilling fluid circulating system.

Features

- ※ The linear shale shaker adopts linear trajectory and the number of sieve mesh is 60 – 200.
- ※ The maximum handling capacity is 50L/S.
- ※ The mesh screen and Derick could be exchanged.
- ※ A sententious anti-splashing system is provided.
- ※ A hydraulic screen-box-obliquity adjustment system is adopted.
- ※ Stainless-steel screen box and buffer tank could be selected.
- ※ Fluorocarbon coating has the performance of multiple anticorrosion and long service life.

Main Technical Parameters

Model	YZU30-4	
Amplitude	A ≥ 6mm (single amplitude)	
Screen Box Obliquity	-1° ~ +5° (electromotion adjustment)	
Capacity (L/s)	50	
Screen Size (mm)	1053 × 697 × 3	
Overall Dimension (mm)	4000 × 3000 × 1430	
Weight (kg)	3200	

Mud Gas Separator



Main Technical Parameters

Mud Gas Separator	Model	NQF-1200	Vacuum Degasser	Model	ZCQ1/4	ZCQ1/6
	O.D.	1200mm		Capacity	3 m ³ /min	4 m ³ /min
	Working Pressure	1.6MPa		Vacuum Level	0.3~0.4	0.5~0.7
	Capacity	350~400m ³ /h		Ratio	1.67	-
	O.D. of Feeding Pipe	4"		Power of Vacuum Pump	3 kW	5.5 kW
	O.D. of Discharge Pipe	8"		Power of Main Motor	15 kW	-
	O.D. of Gas Pipe	10"		Rota Speed (rpm)	876	-
	Overall Dimension	3000×2500×7500mm		Overall Dimension (mm)	1800×800×1400	2200 × 1800 × 1600
Weight	4500kg	Weight	920kg	1700kg		

Desander



It can be used for solid-phase separation in drilling fluid circulating system.

Features

- ※ The optimized distribution of cyclone velocity field makes separation ability better and range of separated granularity wider.
- ※ The underflow port of cyclone is pressed-umbrella-shaped so the wet-bottom spigot product makes particles in separation zone quickly flow out and reduces blocking in underflow port.
- ※ The advanced balanced elliptical shale shaker is adopted – the balanced elliptical shale shaker has big handling capacity, small noises and mesh screen of long service life.
- ※ The symmetrical liquid-feeding mechanism makes the liquid flow of cyclone have reasonable distribution and stable operation.
- ※ The frame strength of mesh screen is good, the tension apparatus adopts rigid tension, and the service life of the mesh screen is long.

Main Technical Parameters

Spec. and Qty. of cyclones	∅ 300×2
Working Pressure	0.4Mpa
Diameter of Separated Granularity	40~74μm
Capacity	180~240m ³ /h
Inlet/Outlet Size	DN150×200mm

Desilter



It can be used for solid-phase separation in drilling fluid circulating system.

Features

- ※ The optimized distribution of cyclone velocity field makes separation ability better and range of separated granularity wider.
- ※ The underflow port of cyclone is pressed-umbrella-shaped so the wet-bottom spigot product makes particles in separation zone quickly flow out and reduces blocking in underflow port.
- ※ The advanced balanced elliptical shale shaker is adopted – the balanced elliptical shale shaker has big handling capacity, small noises and mesh screen of long service life.
- ※ The symmetrical liquid-feeding mechanism makes the liquid flow of cyclone have reasonable distribution and stable operation.
- ※ The frame strength of mesh screen is good, the tension apparatus adopts rigid tension, and the service life of the mesh screen is long.

Main Technical Parameters

Spec. and Qty. of cyclones	∅ 100×10
Working Pressure	0.4Mpa
Diameter of Separated Granularity	20~50μm
Capacity	≤200m ³ /h
Inlet/Outlet Size	DN150×200mm

Centrifuge



It can be used for the separation of ultra fine solid particles in drilling fluid circulating system.

Features

- ※ Length-diameter ratio is big and separation factor is high, which ensures ultrafine solid particles in drilling fluid fully settle.
- ※ The section of rotary drum contacting materials is made of quality stainless steel and has high corrosion-resisting properties.
- ※ All the inner screws adopt pendant structures and are inlaid with carbide alloy, have large handling capacity and are highly abrasion resistant.
- ※ The anti-explosion classification of electric appliance is D II BT4.
- ※ High/mid-speed centrifuge could be supplied in package and meet requirements of drilling at abroad.
- ※ Differential has high degree of accuracy and long service life.
- ※ Frequency-conversion centrifuge could be made in accordance with user need.

Main Technical Parameters

Item	Parameters
Dia. of Rotary Drum (mm)	500
Length of Rotary Drum (mm)	1000
Rota Speed of Rota Drum (rpm)	1800
Screw Form	uniline, laevorotation
Differential Rotation Speed (rpm)	29
Separation factor	1120
D50 (separation point) (μm)	10
Max. Capacity (density<1.2) (m ³ /h)	50
Main Motor Power (kW)	30
Rated Speed of Main Motor (rpm)	1470
Subsidiary Motor Power (kW)	7.5
Rated Speed of Subsidiary Motor (rpm)	970
Overall Dimension (mm)	2660X1670X1400
Gross Weight (kg)	2230

Mud Agitator



It can be used for solid-phase separation in drilling fluid circulating system.

Features

- ※ Electric machine of agitator adopts horizontal installation and reducing mechanism adopts single-stage arc column gear worm decelerator, so that efficiency is very high.
- ※ Shaft gland adopts special mechanism and resolves problem of unreliable shaft gland.
- ※ The agitator has low barycenter, good stability, good shock absorption effect, small external dimensions and stable operation
- ※ The direct connection gets rid of such intermediate link as coupling, which makes structure simple and performance reliable.

Main Technical Parameters

Model	NJ7.5	NJ11	NJ15
Motor Power (kW)	7.5	11	15
Impeller Speed (rpm)	58		
Qty. of Impeller (pcs)	4		
Weight (kg)	409	550	600
Dia. of Impeller (mm)	φ860	φ1000	φ1080
Mounting height of impeller (mm)	400~800		
Axial Dia. of Impeller (mm)	73		

Sand Pump



It can be used to feed drilling fluid to desander, desilter and mixer in solid control system with the feature of good sealing quality and high efficiency.

Main Technical Parameters

Model		SB150
Displacement	(m ³ /h)	260~310
Lifting Capacity	(m)	25~40
Rota Speed	(rpm)	1450
Motor Power	(Kw)	37/55/75 kW is available
Efficiency		0.65
Inlet/Outlet	(mm)	DN200 × 150
Weight	(kg)	750