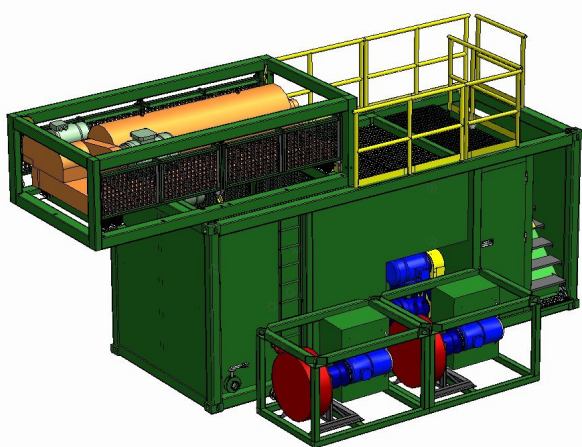


## S3-01-G CENTRIFUGE

The S3-01-G centrifuge is a high speed, long bowl, decanting centrifuge with a 530mm diameter, 2270mm long bowl, driven by a 45kW variable speed electric motor controlled by an inverter. The machine has a twin start stainless steel scroll conveyor driven through a high torque planetary gearbox by a 15kW inverter controlled electric motor. A full colour touch screen PLC is used to control the centrifuge and feed pump functions. The machine can develop up to 1425 'G' Force and can process fluids at rates of up to 25m<sup>3</sup>/hr, depending upon fluid properties and solids content and will separate solids down to approximately 9 microns in size. The scroll speed is variable up to 25 rpm differential speed and the operating programme provides automatic scroll speed boost when the torque exceeds the set parameters. The unit may also be used in conjunction with a flocculation system to partially dewater flocculated solids and with the appropriate treatment, remove virtually all of the solids from active or waste water-based muds. The centrifuge may be used for many applications ranging from desanding of drilling fluids, through silt removal to waste fluid clean-up.



The centrifuge and its motors are mounted on a heavy-duty hollow section steel frame measuring 4000 x 1800 x 1190 mm high. The inverters, electrical controls, touch screen PLC, inverter controlled discharge pump and centrate collection tank are all housed in the Powerhouse Module, which also incorporates a staircase for access to the upper level.

For use, the S3-01-G centrifuge mounts on top of a centrate collection tank with 1.6m of the centrifuge overhanging the tank so that the solids discharge is on the outside of the tank, while the liquid centrate discharges into the tank. 2 No. 68mm positive displacement peristaltic hose pumps, each with inverter speed control and 11kw motor are used to pump fluid to the centrifuge. The throughput capacity of each these 68mm pumps can be varied up to 13m<sup>3</sup>/hr. In operation, these pumps require positioning near to the centrifuge.

For transport, the S3-01-G centrifuge and feed pumps fit inside the centrate collection tank so that the whole unit may be transported as a standard type 1CC, 20 foot freight container complete with ISO corner castings.

The special features of infinitely variable speed control for the bowl and independent speed control of the scroll enable the performance of the centrifuge to be accurately matched to the task in hand. For the removal of relatively coarse solids, a low bowl speed would be used and an increase in discharge rate can be achieved by running the scroll at a high differential speed. For the separation of very fine solids, a high bowl speed would be needed and the retention time for solids within the centrifuge can be increased by running the scroll at a low differential speed. The pond depth within the centrifuge can be altered by the factory fitting of different height weir dams. The pond depth controls the length of the beach and influences the dryness of the discharge. The rate of feed of fluid to the unit is controlled by altering the speed of the peristaltic feed pump.

### TECHNICAL DATA:

<b>Centrifuge:</b>	Dimensions:	4000x1800x1190mm high.	Weight:	6 tonnes.
	Bowl diameter:	530mm.	Bowl length:	2270mm.
	Bowl drive power:	45kW electric motor with inverter speed control and soft start.		
	Scroll drive power:	15kW electric motor with inverter speed control and soft start.		
<b>Powerhouse:</b>	Dimensions:	6058x2438x2591mm high.	Weight:	9 tonnes.
	Power:	7.5kW .		
<b>Feed pumps:</b>	Dimensions:	each 1800x1200x1200mm high.	Weight:	each 1.5 tonnes.
	Power:	11kW electric motor with inverter speed control and soft start.		
<b>Running current:</b>	Not expected to exceed 150A at 380 to 415V, 50Hz.			
<b>Overall size:</b>	For transit:	6058x2438x2591mm high.	For work:	7624x3000x3800mm high plus feed pumps
<b>Weight:</b>	For transit:	18 tonnes.	For work:	32 tonnes.
<b>Total Power:</b>	Running current, including feed pump, of 140A, short term starting current of up to 335A. Supply cable is 3 phase & earth. The unit uses inverters and a supply without earth leakage protection is required.			
<b>Process capacity:</b>	Up to 24m <sup>3</sup> /hr with low viscosity fluids but more typically 16m <sup>3</sup> /hr.			
<b>Solids handling:</b>	Up to 6 tonnes/hr.			
<b>G Force:</b>	Variable up to 1425 'G' at 2200rpm.			
<b>Solids discharge:</b>	Beneath cantilever onto ground or into skip of client's supply.			
<b>Fluids discharge:</b>	To the centrate tank by gravity.			
<b>Noise emissions:</b>	65dB at 5m.			
<b>Access:</b>	By internal staircase to upper level.			