

S3-01-H CENTRIFUGE

The S3-01-H centrifuge is a high speed, long bowl, decanting centrifuge with a 530mm diameter, 2270mm long bowl, driven by a 30kW variable speed electric motor controlled by an inverter. The machine has a single start scroll conveyor turned by a Rotodiff hydraulic motor, driven by a variable speed hydraulic power pack with 18.5kW electric motor. The machine can develop up to 1425 'G' Force and can process fluids at rates of up to 20m³/hr, depending upon fluid properties and solids content and will separate solids down to approximately 9 microns in size. 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 muds through silt removal to waste mud clean-up.

The centrifuge and power pack is mounted on a heavy-duty hollow section steel frame measuring 3850x2000x1800mm high. The unit is complete with an electrical control panel with motor starters, ammeters and start-stop operating buttons and also has easily to use hydraulic controls for the scroll drive. For use, the S3-01-H 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. Process fluid is supplied to the centrifuge by means of a free standing variable speed positive displacement pump, powered from connections on the centrifuge electric panel. For transport, the S3-01-H centrifuge and feed pump 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 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:

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| Centrifuge: | Dimensions: | 3850x2000x1800mm high. | Weight: | 6 tonnes. |
| | Bowl diameter: | 530mm. | Bowl length: | 2270mm. |
| | Bowl drive power: | 30kW electric motor with inverter speed control and soft start. | | |
| | Scroll drive power: | 18.5 kW electro hydraulic variable speed power pack with star-delta starting. | | |
| | Running current | Not to exceed total of 87A at 380 to 415V, 50Hz. | | |
| Centrate tank: | Dimensions: | 6058x2438x2591mm high. | Weight: | 5 tonnes. |
| | Power: | NIL. | | |
| Feed pump: | Dimensions: | 2100x1800x1600mm high. | Weight: | 3 tonnes. |
| | Power: | 15kW electric motor with Star Delta starting. | | |
| Overall size: | For transit: | 6058x2438x2591mm high. | For work: | 6058x4000x4400mm high. |
| Weight: | For transit: | 14 tonnes. | For work: | 34 tonnes. |
| Total Power: | Running current, including feed pump, of 120A, short term starting current of up to 300A. Supply cable is 3 phase & earth. No earth leakage protection is provided. | | | |
| Process capacity: | Up to 20m ³ /hr with low viscosity fluids but more typically 15m ³ /hr. | | | |
| G Force: | Variable up to 1425 'G' at 2200rpm. | | | |
| Solids discharge: | Beneath cantilever onto ground or into skip of client's supply. | | | |
| Fluids discharge: | To the centrate tank by gravity. | | | |
| Noise emissions: | 65dB at 5m. | | | |