

S3-01-G CENTRIFUGE

The S3-01-G electric mobile centrifuge is the most compact in PSD's fleet. Built with quality, high strength components and featuring a high speed bowl, it is well-equipped for use in the most demanding of roles on modern day construction sites, particularly when operated in de-silt mode to extend the life of a support fluid. The S3-01-G can also be used in flocculation mode for destruction of waste fluid, and the centrifuge and its standard flocculation plant can be transported on 1 No. 40ft truck, are easy to install and to maintain, and are suited to any application with fine solid dispersal in the support fluid which cannot be removed by normal desanding plant operations, including but not limited to HDD, tunnelling, diaphragm walling and soil washing.



TECHNICAL DATA

Maximum fluid throughput capacity:	Up to 13m ³ /hr of ideal low density fluids in de-silt mode, or with low/medium density flocculated solids. High density fluids are fed to the centrifuge at lower rates, typically up to 8 m ³ /hr for fluids of 1.25g/cm ³ density.
Maximum solids removal rate:	Up to 4 tonnes/hr of ideal, easily separated solids but typically up to 3 tonnes/hr of silts or flocculated solids.
Rotating assembly:	Bowl: 0.53m diameter by 2.27m long with hard faced discharge ports and internal wear strips. Main bearings are manually grease lubricated as part of the scheduled maintenance programme. Scroll: Twin start, stainless steel, hard faced tipped scroll driven by a heavy duty planetary gearbox. Scroll bearings are manually grease lubricated as part of the scheduled maintenance programme.
'G' force:	Variable up to 1425 at 2200rpm.
Centrifuge feed:	Typically the S3-1-G centrifuge is fed dirty fluid directly into the centrifuge module by a PP68 positive displacement peristaltic pump which is powered and controlled from the centrifuge control system. Flocculant dosing and Electrolyte dosing peristaltic pumps can also be powered and controlled from the centrifuge control system, simplifying centrifuge operation.
Solids discharge:	After separation, the solids phase is discharged by gravity from the underside of the centrifuge module which cantilevers over the power house module. Solids can be discharged directly into a skip, or directly into a banded muck pit.
Fluid discharge:	After separation, the fluid phase (centrate) is discharged by gravity into the discharge tank inside the power house module. The automatic centrifugal discharge pump can then be used to transfer the cleaned fluid from the centrifuge.
Transport size:	1 No. unit 6058x2438x2591mm (1CC container size), complete with ISO corner castings.
Weight (dry):	Power house module with centrifuge and PP68 feed pump at 14 tonnes complete. Power house module: 7 tonnes Centrifuge: 6 tonnes PP68 feed pump: 1 tonne
Operating weight (wet):	Up to 32 tonnes (stand-alone i.e. not including pumps or flocculant system).
Operating size:	7624mm (L) x 3160mm (W) x 3870mm (H) stand alone, or typically approx. 10400mm (L) x 6500mm (W) x 3870mm (H) with an adjacent flocculant mixing plant and pumps
Access to centrifuge module:	Via internal staircase.
Control:	PLC control system with HMI operator interface for ease of operation, located inside the secure power house control room.
Power:	83kW installed power (with all feed and dosing pumps) running at 380-415V, 50Hz, 3 phase and earth (no neutral required).
Estimated running current:	75A per phase.
Estimated starting current:	91A per phase.
Main drive (Bowl) motor:	45kW electric motor with inverter control.
Scroll drive:	15kW electric motor with inverter control driving a heavy duty planetary gearbox connected to the twin start scroll.
Feed pump:	Typically, PP68 peristaltic pump with 11kW inverter controlled motor with power fed from the centrifuge.
Flocculant dosing pump:	Typically, an externally powered PP55 peristaltic pump with 7.5kW inverter controlled motor with control from the centrifuge.
Electrolyte dosing pump:	Typically an externally powered PP55 peristaltic pump with 7.5kW inverter controlled motor with control from the centrifuge.
Discharge pump:	Metso HM100 centrifugal, with overhead mounted, inverter controlled, 7.5kW motor.
Noise emission:	65 dB at 5m.