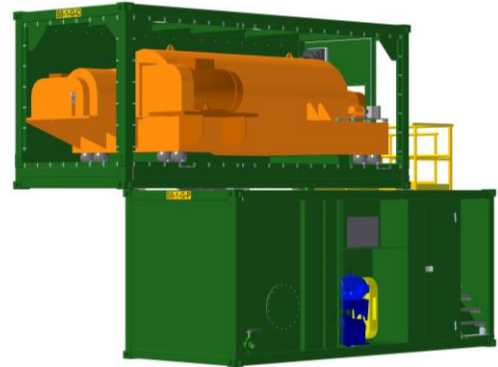


## S5-1-G CENTRIFUGE

The S5-1-G is the flagship electric mobile centrifuge in PSD's fleet. Built with quality, high strength components and featuring ceramic protection of the scroll tips and an ability to process high density fluids, makes it very much at home in the most demanding of roles on modern day construction sites. The S5-1-G centrifuge can be used to maintain and prolong the life of support fluid when operated in de-silt mode, or to destroy waste fluid when used in flocculation mode. The versatility and solids handling capacity of the S5-1-G make it suitable for 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. The centrifuge and its standard flocculation plant can be transported on 3 No. 40ft trucks.



### TECHNICAL DATA

<b>Maximum fluid throughput capacity:</b>	Up to 130m <sup>3</sup> /hr of ideal low density fluids in de-silt mode, but typically up to 90m <sup>3</sup> /hr of drilling fluids with silts or with low density flocculated solids. High density fluids are fed to the centrifuge at lower rates, typically up to 30 m <sup>3</sup> /hr for fluids of 1.25g/cm <sup>3</sup> density.
<b>Maximum solids removal rate:</b>	Up to 16 tonnes/hr of ideal, easily separated solids but typically up to 12 tonnes/hr of silts or flocculated solids.
<b>Rotating assembly:</b>	Bowl: 1.1m diameter 3.3m long with hard faced discharge ports and internal wear strips. Main bearings are oil lubricated and cooled by a monitored oil conditioning and delivery system. Scroll: Twin start, 300mm pitch, ceramic tipped scroll driven by a heavy duty planetary gearbox. Scroll bearings are manually grease lubricated as part of the scheduled maintenance programme.
<b>'G' force:</b>	Variable up to 610 at 1000rpm.
<b>Centrifuge feed:</b>	Typically the S5-1-G centrifuge is fed dirty fluid directly into the centrifuge module by a high capacity L150 positive displacement peristaltic pump which is powered and controlled from the centrifuge control system. Dilution, Flocculant dosing and Electrolyte dosing peristaltic pumps can also be powered and controlled from the centrifuge control system, simplifying centrifuge operation.
<b>Solids discharge:</b>	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 bunded muck pit. In de-silt mode, solids will appear sloppy as the silt sized particles are extremely small. In flocculation mode, solids are bound together by the flocculant, may appear stiffer and stack.
<b>Fluid discharge:</b>	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.
<b>Transport size:</b>	2 No. units each 6058x2438x2591mm (1CC container size), complete with ISO corner castings, plus separate ancillary items: Main drive motor plate and motor, feed pipe, pumps, platforms, safety handrails etc
<b>Weight (dry):</b>	Power house module at 8 tonnes, Centrifuge module at 22 tonnes (when assembled with Main drive motor).
<b>Operating weight (wet):</b>	Up to 41 tonnes (stand-alone i.e. not including pumps or flocculant system).
<b>Operating size:</b>	8208mm (L) x 2860mm (W) x 5200mm (H) stand alone, or typically approx. 12700mm (L) x 600mm (W) x 5200mm (H) with an adjacent flocculant mixing plant and pumps.
<b>Access to centrifuge module:</b>	Via internal staircase.
<b>Control:</b>	PLC control system with HMI operator interface for ease of operation, located inside the secure power house control room.
<b>Power:</b>	323kW installed power (with all feed and dosing pumps) running at 380-415V, 50Hz, 3 phase and earth (no neutral required).
<b>Estimated running current:</b>	242A per phase.
<b>Estimated starting current:</b>	252A per phase.
<b>Main drive (Bowl) motor:</b>	160kW electric motor with inverter control.
<b>Scroll drive:</b>	55kW electric motor with inverter control driving a heavy duty planetary gearbox connected to the twin start scroll.
<b>Feed pump:</b>	Typically, L150 peristaltic pump with 37kW inverter controlled motor with power fed from the centrifuge.
<b>Flocculant dosing pump:</b>	Typically, LM100 peristaltic pump with 22kW inverter controlled motor with control and power from the centrifuge.
<b>Dilution pump:</b>	Typically, LM100 peristaltic pump with 22kW inverter controlled motor with control and power from the centrifuge.
<b>Electrolyte dosing pump:</b>	Typically an externally powered LM100 (22kW) or PP68 (11kW) inverter controlled peristaltic pump with control from the centrifuge.
<b>Discharge pump:</b>	Metso HM100 centrifugal, with overhead mounted, inverter controlled, 22kW motor.
<b>Noise emission:</b>	74 dB at 5m.