

SUPERCLEAN® 130C

The SUPERCLEAN® 130C is a complete mud cleaning plant with desanding and desilting capability. The SUPERCLEAN® 130C will process mud at rates of up to 130m³/hr (575 U.S. gpm.) The unit has a heavy duty hollow section steel frame with twistlock corner castings, all built to the dimensions of a standard type 1CC, 20 foot freight container. The machine is normally used mounted directly above a container sized mud storage tank. All pipework, shaker underflow tanks, header tanks and mud flow control systems are permanently installed on the unit. The machine is equipped with a galvanised steel, open mesh work deck and has a fold down front access platform fitted with guard rails. The overall size of the unit is 6058x2438x2591mm high.

Mud is supplied to the SUPERCLEAN® 130C by means of a riser pipe fitted at the rear of the machine. The solids discharge off the long front face of the plant and the cleaned fluids drop into the tank upon which the unit mounts. After being fed to the SUPERCLEAN 130C, mud is discharged onto a positively inclined, double-deck, orbital-motion, primary shaker, dressed with woven wire, hook strip screens. A Denver Orion 150x100E centrifugal pump with hardened impeller and pump casing, driven by a 22kW, 50Hz electric motor through pulleys and belts feeds mud to 8 No. high performance, 5" narrow taper hydrocyclones. A VSM100 linear motion shaker, which uses 4 No. pre-tensioned screen panels, is used to dewater the hydrocyclone underflows. The screen panels are normally of 30 to 120 mesh, but can be as fine as 300 mesh if ultra-fine desilting is required. A rotary air compressor with 3-phase electric motor drive is used for the inflation of the patented pneumatic screen clamping system on the VSM100 shaker. An electric control panel, complete with incoming power isolator, star delta starter for the pump, Direct On-Line starters for the two shakers and the compressor, lost phase detection, wrong phase rotation protection and overloads is mounted within the unit. There is a separate housing for a 3kW single-phase transformer used for lighting and low power auxiliary equipment.

The SUPERCLEAN® 130C can deal with widely varying feed rates and the amount of mud being discharged for re-use is automatically regulated to equal the rate of mud supplied to the machine. The machine can be used for a wide variety of applications including coarse solids removal, desanding, desilting, mud recovery or solids recovery. The characteristics of the discharges can be controlled by making adjustments to the feed rate, the mesh size of the primary shaker screens, hydrocyclone vortex diameters, hydrocyclone discharge nozzle diameters, pump discharge pressure and the mesh sizes of the pre-tensioned panels of the VSM100 dewatering shaker. The ability to control these parameters within a single piece of equipment sets the SUPERCLEAN® series of mud cleaners apart from other mud cleaners and desanders and enables the SUPERCLEAN® machines to be tuned to meet the requirements of the client. The mud cleaning effect of the plant can be further enhanced by the use of a centrifuge to treat the underflow from the secondary shaker. The centrifuge would remove from the mud many of the ultra-fine solids that cannot be separated by woven wire mesh screens.



TECHNICAL DATA

Fluid throughput capacity:	up to 130m ³ /hr of mud having a Marsh Funnel viscosity of <100 seconds per U.S. Quart.
Solids removal rate:	up to 20 tonnes/hr on the primary shaker and up to 18 tonnes/hr on the secondary shaker.
Transport size:	6058x2438x2591mm high, complete with twistlock castings
Weight:	9 tonnes. The machine can be transported as a standard type 1CC container.
Operating size:	6058x3000x5200mm high when mounted on a type 1CC container sized tank.
Power:	380-415V, 50Hz, 3-phase and earth no neutral is required.
Starting current:	160A per phase.
Running current:	50A.
Generator:	Normally an 85KVA generator would be required to run this machine.
Hydrocyclone feed pump:	Svedala 150x100 centrifugal with 22kW motor with star-delta starting.
Primary shaker:	1 No. 4kW motor with Direct-On-Line starting.
Secondary shaker:	2 No. 2kW motors with Direct-On-Line starting.
Compressor:	3kW motor with Direct-On-Line starting.
Lighting & small tools:	1 No. 220V, 3kW, single phase transformer for lighting and small tools.
Noise emissions:	75 dB at 5m.