

SUPERCLEAN® 220DP



The SUPERCLEAN® 220DP (SC220DP) is a very versatile high performance mud cleaner that can be used in a wide variety of applications in the civil engineering, diaphragm walling, tunnelling and drilling industries. The machine will handle a flowrate of up to 220m³/hr of mud having a Marsh Funnel viscosity of less than 70 seconds per U.S. Quart. The machine consists of two parts, a shaker module and a pump tank module. In use the shaker module mounts directly above the pump tank module. The site footprint is 6m x 4m with an overall height of 5.2m.

The shaker module houses a double deck linear motion primary shaker, with a steeply declined upper deck, and a horizontal lower deck. These can be dressed with either wedge wire or polyurethane screens dependent on the prevailing ground conditions, which can be used for the separation of rocks, gravels, clay-balls, large pieces of timber and roots etc. The shaker module also has mounted within it, 12 No. long bodied 5" desilting hydrocyclones and a high speed, linear motion shaker used for the dewatering of the underflow from these hydrocyclones. This shaker has two inclined decks, each using 4 No. pre-tensioned, woven stainless steel wire screen panels which are held in place by pneumatic clamping systems. The time required to change a set of screens with

this clamping system is usually just a few minutes and this makes the machine suitable for use when processing a wide variety of soil types. The top deck would usually be dressed with 52 or 84 mesh screens, and the lower deck with much finer screens of 165 to 200 mesh or perhaps even finer.

The primary shaker will separate up to 30 tonnes per hour of oversized solids, the hydrocyclone underflow de-watering shaker will handle up to 25 t/hr of suitable solids with the appropriate screens fitted to the shaker.

Each of the two modules of the SC220DP is built to the dimensions of a type 1CC 20 foot freight container, complete with twistlock corner castings, which makes them easy to transport and handle on site. The shaker module has a heavy duty hollow section frame, permanently enclosed on three sides and with a roof clad in marine quality plywood. A tarpaulin is fitted to the front in order to provide weather protection to the equipment and operator.

The pump tank module incorporates an internal staircase, control room with electrical panels and a small compressor. The tank unit houses some tank compartments and two Metso centrifugal pumps, one is used to supply mud to the 5" desilting hydrocyclones and the other pump is inverter controlled and is used for the discharge of the cleaned mud from the unit.



TECHNICAL DATA

Fluid throughput capacity:	up to 220m ³ /hr of mud having a Marsh Funnel viscosity of less than 70 seconds per U.S. Quart.
Solids removal rate, up to:	30t/hr on the primary shaker and 25 t/hr on the secondary shaker.
Transport size:	2 No. units each 6058x2438x2591mm high, complete with twistlock corner castings The machine can be transported as two standard type 1CC containers.
Weight:	Pump tank at 10 tonnes plus isolating transformer if fitted, shaker module at 10 tonnes.
Operating size:	6058x4000x5200mm high.
Power:	415V, 50Hz, 3 phase and earth no neutral is required.
Running current:	up to 200A. Starting current: 453A per phase.
Generator:	Normally a 180KVA generator would be required to run this machine.
Desilting feed pump:	Metso MM200 centrifugal with 55kW motor with star-delta starting.
Discharge pump:	Metso MM200 centrifugal with 30kW motor with inverter control.
Primary shaker:	4 No. 0.51kW motors with Inverter control.
Secondary shaker:	2 No. 4kW motors with inverter control.
Compressor:	3kW motor with direct-on-line starting.
Lighting & small tools:	1 No. 220V, 3kW, single phase transformer for lighting and small tools.
Noise emission:	74 dB at 5m.