

## SU300DP DESILTER



The SU300DP is a compact desilter with a discharge pump. It is designed to work downstream of a "SUPERCLEAN", "SS" desanding unit or other suitable desander in civil engineering, slurry shield tunnelling and directional drilling applications and will process flowrates of up to 300m<sup>3</sup>/hr. The unit will separate sands and medium silts from bentonite fluid having a Marsh Funnel viscosity of less than 100 seconds per U.S. Quart. The SU300DP consists of two modules that are joined together for transport to form a standard 20 foot, type 1CC freight container, complete with twistlock corners. In use, the shaker module mounts above the pump tank module so that the site footprint is 3.5m by 2.5m with a height of 5.2m. Solids discharge is from the front 3.5m face, while access to the unit, pumps and stores compartment is from the rear. No side access or clearance is required.



The shaker module houses 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, both of which carry 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. There is a fold-down work platform for screen changing and maintenance. A tarpaulin is fitted to the front of the module to provide security and weather protection during use.

The pump tank module houses a Metso MM200 centrifugal pump with 55kW overhead motor and star-delta starting used to supply pre-screened fluid to the hydrocyclones. Another Metso MM200 with a 30kW overhead motor and inverter control is mounted within this module and is used to discharge the cleaned fluid from the machine. A lockable, walk-in stores is built into the pump tank module. This holds a small compressor and the electrical control equipment for the whole machine as well as providing secure storage space.

In use, the dirty fluid is supplied to an inlet at the rear of the pump tank module and passes to the dirty fluid compartment from where it is pumped to the hydrocyclones, mounted above the linear motion dewatering screen in the shaker module. The hydrocyclone overflow falls, by gravity, into the pump tank module for recycling or passes to the clean fluid compartment for discharge by the variable speed pump. The hydrocyclone underflow is dewatered by the shaker and solids are discharged off the front of the machine. The screen underflow returns to the tank for re-treatment. The shaker will handle up to 25 t/hr of suitable solids with the appropriate screens fitted to the shaker.



### TECHNICAL DATA

<b>Transport size:</b>	6058x2438x2591mm high. The machine can be transported as a standard container.
<b>Weight:</b>	13 tonnes, complete with twistlock fasteners at standard dimensions.
<b>Shaker module weight:</b>	6 tonnes.
<b>Pump tank module weight:</b>	7 tonnes.
<b>Operating size:</b>	3500x2500x5200mm high.
<b>Operating weight:</b>	20 tonnes (including fluid in tanks).
<b>Power:</b>	380-415V, 50Hz, 3-phase & earth, no neutral required.
<b>Generator:</b>	Normally a 180KVA generator would be required.
<b>Running current:</b>	120A.
<b>Starting current:</b>	400A per phase.
<b>Hydrocyclone feed pump:</b>	Metso MM200 centrifugal with 55kW motor with star-delta starting.
<b>Discharge pump:</b>	Metso MM200 centrifugal with 30kW motor with inverter control.
<b>Shaker:</b>	Inverter controlled with 2 No. 4kW motors.
<b>Compressor:</b>	3 kW motor with Direct-On-Line starting.
<b>Lighting &amp; small tools:</b>	1 No. 220V, 3kW, single phase transformer.
<b>Other:</b>	2 No. 32A, 3 phase auxiliary sockets.
<b>Fluid throughput capacity:</b>	Up to 300m <sup>3</sup> /hr. Fluid having a Marsh Funnel viscosity of less than 100 seconds/U.S. Quart.
<b>Solids removal rate:</b>	Up to 25 tonnes/hr.
<b>Noise emissions:</b>	70dB at 5m.