

## SU12DP DESILTER

The SU12DP is a compact desilter with a 'steady-state' discharge pump. It is designed to work downstream of a "SUPERCLEAN", "SS" de-sanding unit or other suitable desander in civil engineering, slurry shield tunnelling and directional drilling applications and will process flowrates of up to 180m<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 SU12DP 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. 4" oilfield type hydrocyclones, mounted above a VSM 100 linear motion, de-watering shaker. There is a fold-down work platform for screen changing and maintenance. The rear, sides and roof of the module are enclosed with exterior quality plywood and a tarpaulin is fitted to the front of the module to provide security and weather protection during use.

The pump tank module houses 2 No. Svedala 150x100 centrifugal pumps, each driven by a 30kW overhead electric motor. A lockable, walk-in stores compartment within the pump tank module houses the main control panel and discharge pump speed controller. The module contains tanks for dirty fluid, part-cleaned fluid and output fluid. The discharge pump is microchip controlled to automatically provide stabilised output flow, over a range of discharge heads. The rate of clean fluid discharge is equal to the average rate of fluid supply, less the removed solids.



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 de-watering 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 de-watered by the shaker and solids are discharged off the front of the machine. The screen underflow returns to the tank for re-treatment. The rate of solids separation can be up to 18 tonnes/hr with suitably sized solids.

### TECHNICAL DATA

<b>Fluid throughput capacity:</b>	Up to 180m <sup>3</sup> /hr of fluid with a Marsh Funnel viscosity of less than 100 seconds per U.S. Quart.
<b>Solids removal rate:</b>	Up to 18 tonnes/hr.
<b>Transport size:</b>	6058x2438x2591mm high. The machine can be transported as a standard container.
<b>Weight:</b>	11 tonnes, complete with twistlock fasteners at standard dimensions.
<b>Shaker module weight:</b>	5 tonnes.
<b>Pump tank module weight:</b>	6 tonnes.
<b>Operating size:</b>	3500x2500x5200mm high.
<b>Operating weight:</b>	20 tonnes (including fluid in the tanks).
<b>Power:</b>	415V, 50Hz, 3 phase and earth, no neutral is required. Normally a 150KVA generator would be required.
<b>Running current:</b>	110A.
<b>Starting current:</b>	240A per phase.
<b>Hydrocyclone feed pump:</b>	Svedala 150x100 centrifugal with 30kW motor with star-delta starting.
<b>Discharge pump:</b>	Svedala 150x100 centrifugal with 30kW motor with inverter control and soft start.
<b>Shaker:</b>	2 No. 2 kW motors with direct-on-line starting.
<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.