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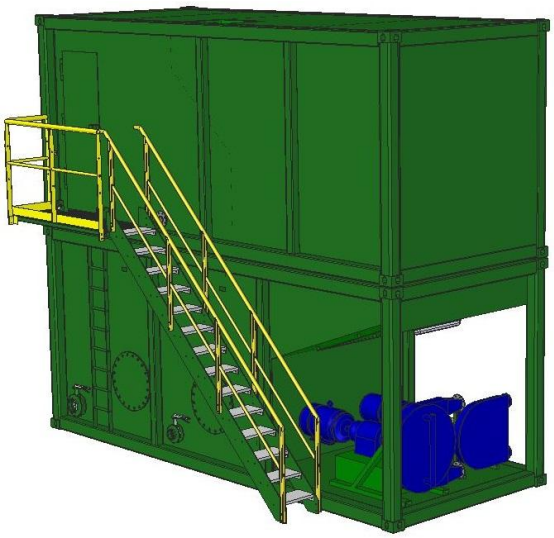
FLOCCULANT & ELECTROLYTE MIXING PLANT



The solid grade flocculant and electrolyte mixing plant is a purpose built unit for the mixing of anionic, cationic or non-ionic solids grade polymer with water for use as flocculants and granular electrolytes for the treatment of contaminated drilling fluids, dredges silts and clays, site dirty run off water, waste fluids, bentonite fluids and other civil engineering fluids.

The plant consists of a feeder unit (EFF-1) and a pumptank unit (EFT-1).

The feeder unit (EFF-1) unit consists of a stainless steel conical hopper and a square sided hopper. The stainless steel conical hopper will hold the contents of a standard 25kg sack of polymer. This hopper discharges to a screw feeder driven by a variable speed motor. The feeder discharges the solid grade polymer at the required rate in to a water stream where the grains of polymer are wetted before they fall under gravity in to the flocculant mixing tank below. The square sided hopper discharges the granular electrolyte under gravity directly into the electrolyte mixing tank. The control panel and pump inverters are located in the feeder unit. It has a 12m^3 built in water tank and forms a standard 20 foot container sized module, complete with ISO corner castings, for transport.

The pumptank unit (EFT-1) has 2 No. 8m^3 capacity mixing tanks, each with a vertical shaft agitator powered through a speed reduction box by a 4kW electric motor with DOL starting. The unit has a pump compartment with 2 No. peristaltic dosing pumps and forms a standard 20 foot container sized module, complete with ISO corner castings, for transport.

The mixing plant is designed to mix solid grade polymer flocculants and granular electrolytes with water to provide dilute solutions. The dilute solutions can then be dosed in to the flowline by the positive displacement, variable speed peristaltic pumps.

TECHNICAL DATA:

Electrical: The plant requires power at 380-415 volts, 50 Hz, 3 phase and earth. The plant is supplied with a 15m power cable. It is recommended that a generator of at least 75KVA capacity be used to run this plant. The plant does not have earth leakage protection. Power consumption is as follows.

	Power	Running current	Starting current
Agitators (2 No.):	4 kW	5.5 Amps	57 Amps
Feeder:	0.7 kW	0.8 Amp	5.9 Amps
PP65 Pump:	15 kW	18 Amps	29 Amps
LM50 Pump:	11 kW	11 Amps	22 Amps

Overall size: For transit: 2 No. 20 foot containers, each 6058x2438x2591mm high.
In use: 6058 x 3103 x 5200mm high (with 1 No. platform & staircase)

Weight: Transit: EFF-1: 7 tonnes; EFT-1: 10 tonnes
In use: Approx. 45 tonnes

Water inlet: 3” flanged inlet on unit
Flocculant outlet: LM50 pump (2” Bauer) and 1 No. low level 4” flanged outlet.
Electrolyte outlet: PP65 pump (2” Bauer) and 2 No. low level 6” flanged outlets.

Specification subject to change without notice. E&OE