

SEG

**Wastewater Treatment Plant
Carton, flexo ink
50 m³ / day**

Proposal

GreenFloat

Wastewater specification – water base Ink with approx. 0.7 % suspended solids, typical wastewater sample has to be analyzed by SEG prior to acceptance of order.

Inlet COD is approx. 15000 ppm.

1. Description:

Ultra compact plant designed to meet the most stringent pollution standard.

Continuous & automatic (PLC controlled), containerized installation.

Sludge is accumulated in a disposal container, placed under the decanter.

2. Process. See process diagram:

2.1 Storage and feeding management

Raw untreated wastewater collected from all locations within the plant into a common buffer storage tank of a volume of about one day of operation.

The buffer tank must be mixed during the GreenFloat operation.

EJ will control the mixing device by the main GreenFloat controller and will instruct further requirements after receipt of order.

The GreenFloat treats the wastewater and reduces levels of suspended solids, COD and BOD.

The purification process is started by pressing the start button and continues until the buffer tank(s) are emptied.

The flow is continuously adjusted, according the actual wastewater generation rate or determined, manually, by the operator.

2.2 Clarification with counter current Air Flotation (COCUF)

Our unique COCUF System works on the counter current principle. This principle ensures excellent solids separation in an easily controllable process.

The main components are the circular stainless steel vessels, divided into two zones: flocculation and separation, its geometry design ensures premium solids separation and sludge thickening. The hydraulic circuit is very simple employed full aeration principle, fine bubbles production is controlled by the diaphragm expansion valve, that also ensure constant expansion pressure at variable flow operation.

The thickened sludge is accumulated at the COCUF top section and skimmed of by the rotating scraper.

2.3 Sludge Dewatering

Sludge treatment is an essential stage in any wastewater treatment solution.

The centrifuge dewatering process will further increase the dry solids (DS) content of the sludge from 8% to approx. 30%. The sludge then is suitable for disposal.

2.4 Control & power system

The GreenFloat is a fully controlled system, all actuator and accessories are wired to the main power & control cabinet, from where all the treatment processes are executed and monitored by the PLC program.

Hardware	PLC, and MMI interface.
Display	Panel mount – touch screen
Interface	From touch screen

Full MMI control, dynamic process with variable process flow rate, per wastewater viability.
Start / Stop capability with no effluent quality deterioration.

EJ can connect various customer auxiliaries, per specific request.

3. Specifications

Inlet:

Capacity	- 2.2 ton / hr
Solids inlet	- 0.8 % MAX. (after coagulation)
COD total inlet	- Approx. 15000 ppm

Outlet:

Non soluble COD reduction	- > 95%
TSS	- > 95% reduction
Color	- clear
Sludge	- 25 -30% DS

Generals:

Floor area	-6 X 6 minimum
Max height	-2.5 m
Mounting weight	-Approx. 2.5 ton

Chemicals:

Coagulant	-Organic 200 – 500 ppm
Flocculent	-Liquid polyelectrolyte 10 – 50 ppm
Acid / Bas	-To be defined

Electricity:

Consumption	-Approx. 12 kW (including buffer mixing)
Protection	-IP 55

Air:

Pressure	-6 Bar minimum, 8 bar maximum
Consumption	-Approx. 40 Lit \ min

Water, fresh:

Pressure	-3 bar minimum
Consumption	-4 - 20 Lit \ hr

Operation:

Operation	-< 1 hr \ day
Maintenance	-< 4 hr \ week

Environment condition:

Indoor	
Temp.	above 5 C

4. Scope of supply

COCUF cell Ø 1.6 m, SS 304

Container – marine modified – SS Floor, with folding middle door.

Pressure / coagulation mixed vessel 300 Li, SS 304, certified

Coagulation vessel mixing pump

High pressure, process, progressive cavity, Seepex or EQ

Diaphragm expansion valve DOROT Israel, 1 ½ “

4X dosing pump (including one for base or acid)

Automatic liquid flocculent preparation unit

Centrifuge – Peralisi BABY II

Sludge conveyor – SS under the centrifuge

Stand for centrifuge – SS 304

1X pH control set

Control cabinet - PLC, Siemens, and touch screen interface and dynamic process control terminal including MMI software.

Pneumatic control panel

Piping fittings and valves as required

Documentation and manuals

Not included

Civil works, crane operation, chemical tanks and preparation.

Customer will prepare: Agitated buffer tank, surface, power, wastewater inlet, water, air connections – per SEG specifications.

Installation commissioning and training

Client Supply

- All licenses and permits required by the client's country for carrying out this project
- All Vat Payments, taxes and levies due in the client's country
- Qualified erection and installation personnel in the quantity and skills required.
- Transportation, Erection, lifting and installation equipment as necessary
- Qualified operators to be trained in operating and maintaining the system

5. Price in US\$ ExWorks

Installation, commissioning and training will be paid separately – 550 US& per day.

6. Terms of payment

7. Delivery

12 weeks from receiving first payment.

8. Spare parts:

We will supply various spare parts, as tubes for peristaltic pumps, some fittings for air and water connection, some electrical and control spare parts.

The list will be provided with the GreenFloat manuals.

9. Equipment warranty

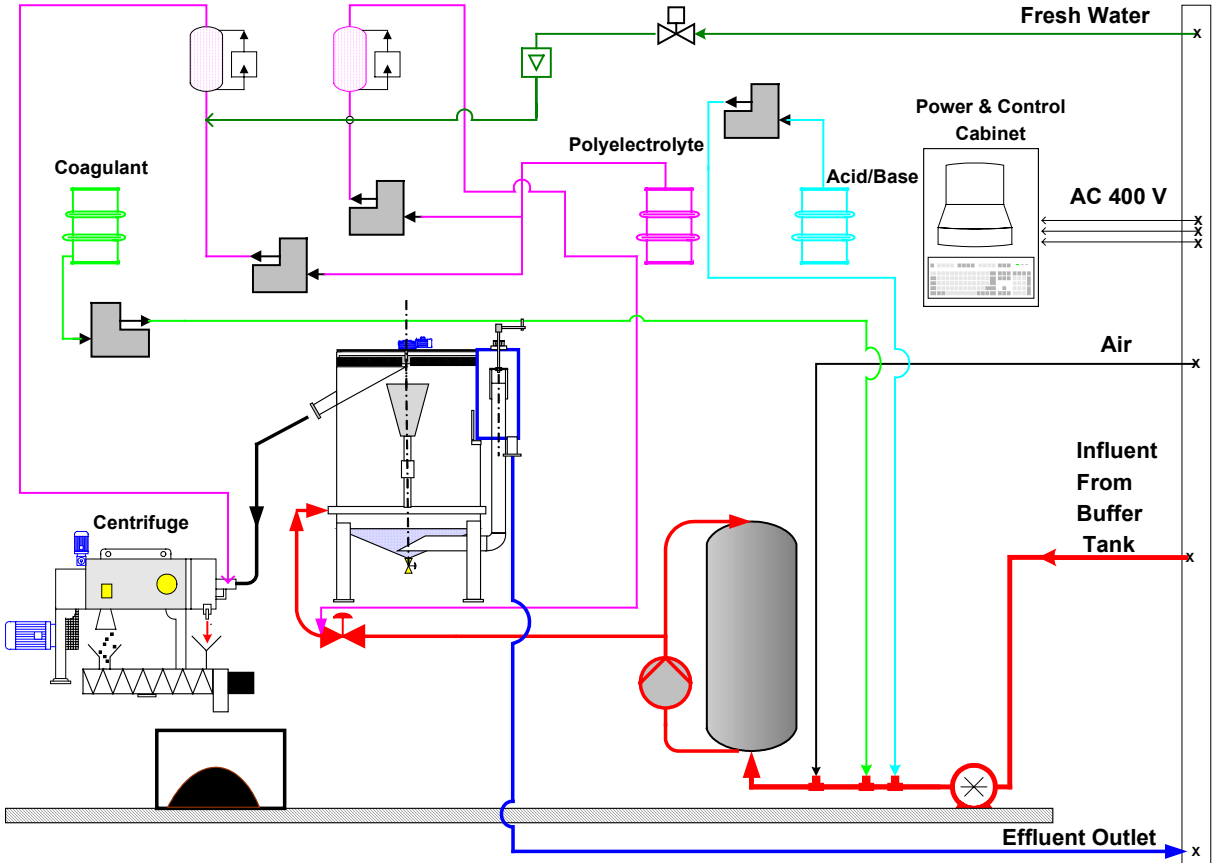
The system supplied is covered by SEG warranty against breakage under normal operation and is valid for 12 months from delivery of goods.

10. Validity

The conditions of this agreement are valid for 30 days form date at head of this document unless signed beforehand, in which case it will be considered a fully binding agreement.

In this event that the document is not signed by the parties within 30 days then it bill be considered null and void.

Process diagram:



Layout

