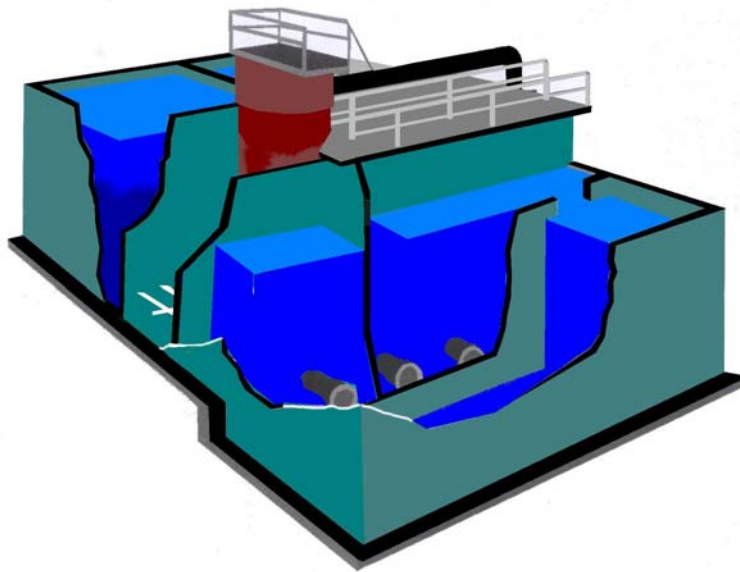


epeco

packaged compact waste water treatment plants



epST-iic series



- Capacity: 100-400 m³/day
- Compact Systems
- Activated Sludge Process
- In steel structure for above ground installation

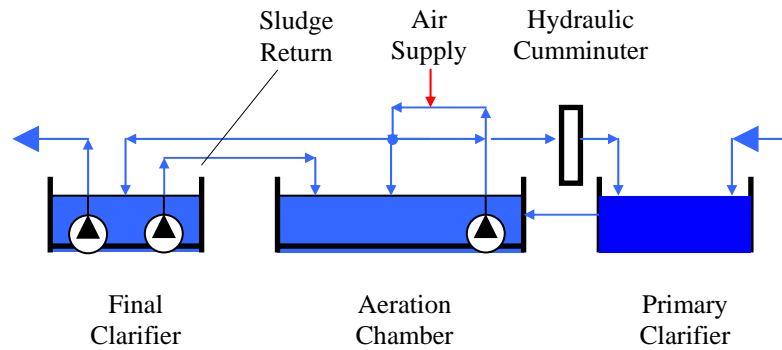
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Reliability

epST -iic wastewater treatment plants are continuous flow activated sludge systems which are operated on a batch basis. Turbulent aeration of incoming sewage and batch treatment of the bio-mass are achieved in separate aeration and settling chambers.



The discharged effluent is a completely odorless, almost clear in color and with a substantial reduction (up to 95%) of both suspended solids and biological loads. Normal automatic batching cycle is (3) hours, however, the plant is equipped with both “Batch Transfer” and “Batch –Reserve” manual systems which allow for peak intakes and frequent dispatching with no sacrifice of quality or efficiency. **epST -iic** plants are totally enclosed systems and there are absolutely no odor or noise released. It can be installed very close to the residence buildings “even at the basement” with no noise, smell or any other problem. As a result of aerobic digestion, pollutants are rapidly settling and removed by a high rate built-in clarifier. A small part of this activated sludge is returned to the reactor as an additional source of activated bacteria.

Manufacturing

epST -iic equipment and pipeworks are factory built, assembled and tested. They are delivered to sites; fully packaged and ready for quick installation.

epST -iic standard steel tanks made of modular components (circular or rectangular configurations) are erected in site in short time. Alternatively, concrete tanks are built (cast in site) quickly by standard formworks.

Options

epST -iic plants are available with several optional items that meet every application and operating conditions. Auxiliary air supply, pumping stations, gas chlorination, UV sterilization, tertiary filtration, preliminary clarifiers, cumminutors, equalizing tanks and many other options are available upon request.

Simplicity

epST -iic wastewater treatment plants are very simple in construction. No special tools or equipment are required to build. No special skills are required to



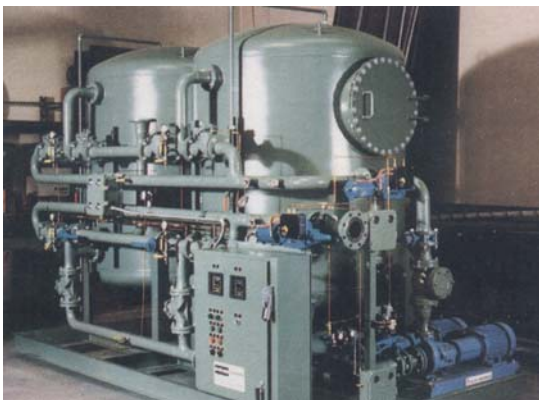
Versatility

epST -iic wastewater treatment plants are highly versatile. Higher capacities are possible by building a system with parallel units. Future expansion is also possible by adding parallel units.

Process

epST-iic wastewater treatment plants are compact activated sludge process that can be constructed under ground or above ground. **epST-iic** plants can be constructed in concrete or steel works. Raw waste is collected in the lift station where it is pumped by macerating pumps that grind the large sized waste into powder sized particles. The macerated waste water is pumped to the aeration chamber where the waste water is circulated while adding fine air bubbles (extensively aerated). The fully mixed and aerated waste is an optimum environment for aerobic bacteria to grow. The aerobic bacteria will consume the biological matter then oxidized by the excessive air into carbon dioxide.

This will reduce the biological contamination accordingly. The surface water flows by gravity next high rate clarifier, where the settleable matter is allowed to settle. Part of the settleable matter is returned to the aeration chamber as activated sludge to support the aerobic bacteria. The clear surface water is allowed to flow by gravity to the chlorination chamber, where chlorine is added for sterilization. The chlorinated water is further treated in tertiary filtration plant, where fine suspended particles, odor and smell is removed. The product-filtered water is suitable for irrigation. Excess sludge is pumped to the sludge holding tank which is disposed periodically.



Tertiary Treatment

Tertiary Treatment (TT) is coupled to the main **epST -iic** to allow for product water with suspended solids 5 mg/liter and biochemical oxygen demand 5 mg/liter or better.

Applications

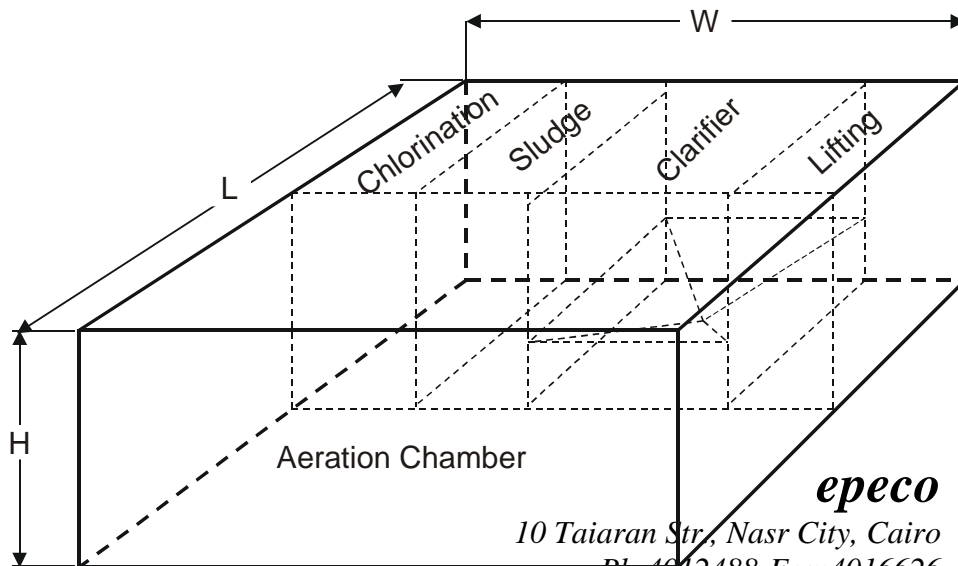
epST -iic plants are perfectly used where shocking biological or intermittent loads are anticipated.

- Residential Compounds
- Military Barracks
- Sports Clubs
- Hotels & Restaurants
- Food Processing , Pharmaceutical , Petrochemical, Chemical, Textile, Pulp & Paper, Plastics Industries and more.



Performance C100-C400 Range

		C 100	C 150	C 200	C 250	C 300	C 350	C 400
Average Daily Flow	<i>m³/d</i>	100	150	200	250	300	350	400
Peak Flow	<i>m³/hr</i>	10.4	15.6	20.8	26	31.2	36.5	41.7
Inflow BOD	<i>mg/l</i>	400	400	400	400	400	400	400
Inflow SS	<i>mg/l</i>	400	400	400	400	400	400	400
BOD pollution	<i>kg/day</i>	40	60	80	100	120	100	120
Outflow BOD	<i>mg/l</i>	30	30	30	30	30	30	30
Outflow SS	<i>mg/l</i>	30	30	30	30	30	30	30
Dimensions L	<i>m</i>	8.6	10.6	10.6	12.6	12.6	12.6	14.6
W		9	9	11	11	13	15	15
H		3.5	4.5	4.5	4.5	4.5	4.5	4.5
Power Rating	<i>kw</i>	15	20	25	30	35	40	45
Power Supply (v/ph/hz)		380/3/50						



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