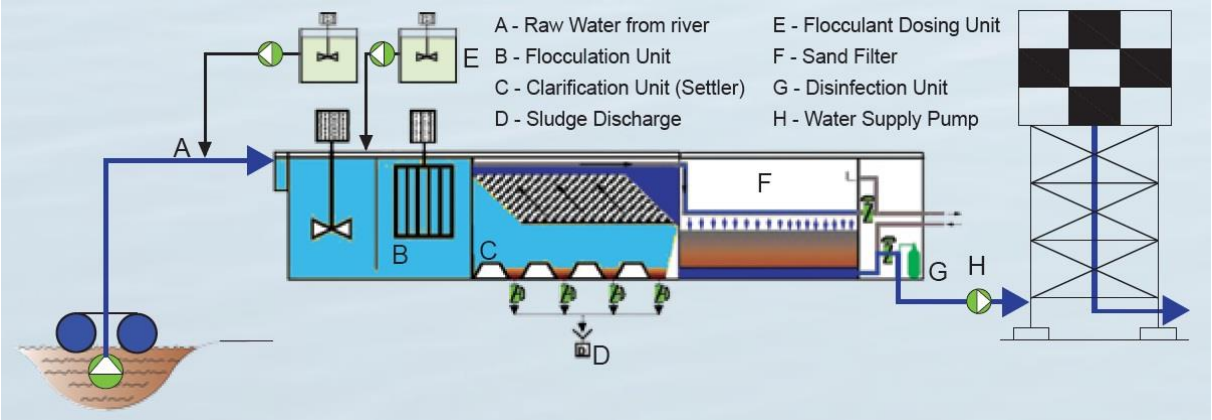
Containerized Treatment Plants for Potable Water

The containerized PWTP is a cost effective packaged portable plant that meets WHO and other international treated water standards. It is easy to operate, consumes less energy and can be delivered in short notice.



It combines all necessary components for coagulation, flocculation, clarification, filtration and disinfection in a compact system. Its versatile design makes it ideal for potable water treatment and can be used as advanced treatment of wastewaters or to reduce suspended solids, phosphorus and other contaminants like heavy metal.

Head Office:93H. EL-AHRAM Gardens GATE 3-GIZA
Tel: +202 33808119 **Fax:** +202 3380812
E-mails: info@edmco.co **website**: www. edmco.co

TREATMENT PROCESS

1- Coagulation :

The raw water is fed through a serpentine pipe flocculator. Coagulating chemicals are injected in the pipe to be mixed with the raw water. Coagulants promote collisions between the small suspended particulates enabling them to form large flocs that settle easily in the clarifier leaving behind clear with very low turbidity.

2- Flocculation :

The coagulated water enters the flocculation tank. A coagulant aid or polymer can be added to strengthen the floc bonding. Slow stirring motion in the flocculation chamber forms collision between the forming precipitates and the remaining contaminant particles to form larger flocs.

3- Clarification : The coagulated and flocculated water is evenly distributed at the bottom of the lamella settler using well designed distribution laterals. The large surface area of the tube settler causes the flocs to settle by gravity to the bottom thickening zone.

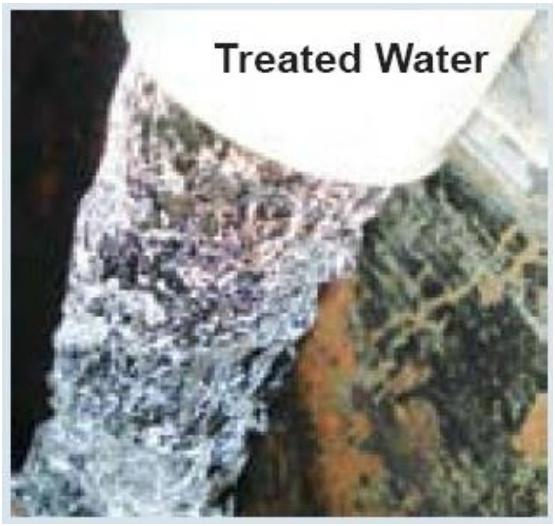
The sludge is periodically withdrawn through an automatic valve. Clarified water is collected from the clarifier surface through perforated tubes.

4- Filtration :

Clarified water enters the high rate gravity filter for removal of the remaining finer solid particles. Based on the application, the filter media can be dual media or multi-media. The water passes through the layers of the media and passes an underdrain system. The filter is backwashed intermittently depending on the influent turbidity of the raw water.

5- Disinfection :

Disinfection can be with liquid or gas chlorine. Ultra-violet disinfection can also be used.



FEATURES :

- Pre engineered complete system in ISO containers
- Small foot print
- Simple operation and low maintenance requirements
- Low energy consumption
- Working on gravity sand filter and lamella settler principle
- Higher throughputs possible through modular arrangement of units
- European quality components
- Fast delivery and start-up due to the mobile concept
- Very good price-performance ratio
- Highly stable process that produces quality water even during peaks
- Effectively removes turbidity, suspended solids, colour, odour and TOC
- Produces highly pure water that meets WHO Drinking Water standards

APPLICATIONS :

- Potable water for cities and villages
- Process water treatment
- Lakes water purification
- Grey water treatment

OPTIONAL EQUIPMENT TO CUSTOMIZE THE SYSTEM :

Many options can be provided to suit the site, such as:

- Pre-settling unit for highly turbid water
- Pontoon to carry the feeding pumps
- Power generator
- Storage tanks as ground or elevated tower
- Portable small laboratory for quality testing
- Containerized operator rooms
- Skid mounted pumps alternatives as self priming

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