

INWASOL

Intelligent Water Solutions

Containerized Treatment Plant for Potable Water



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Intelligent Water Solutions GmbH

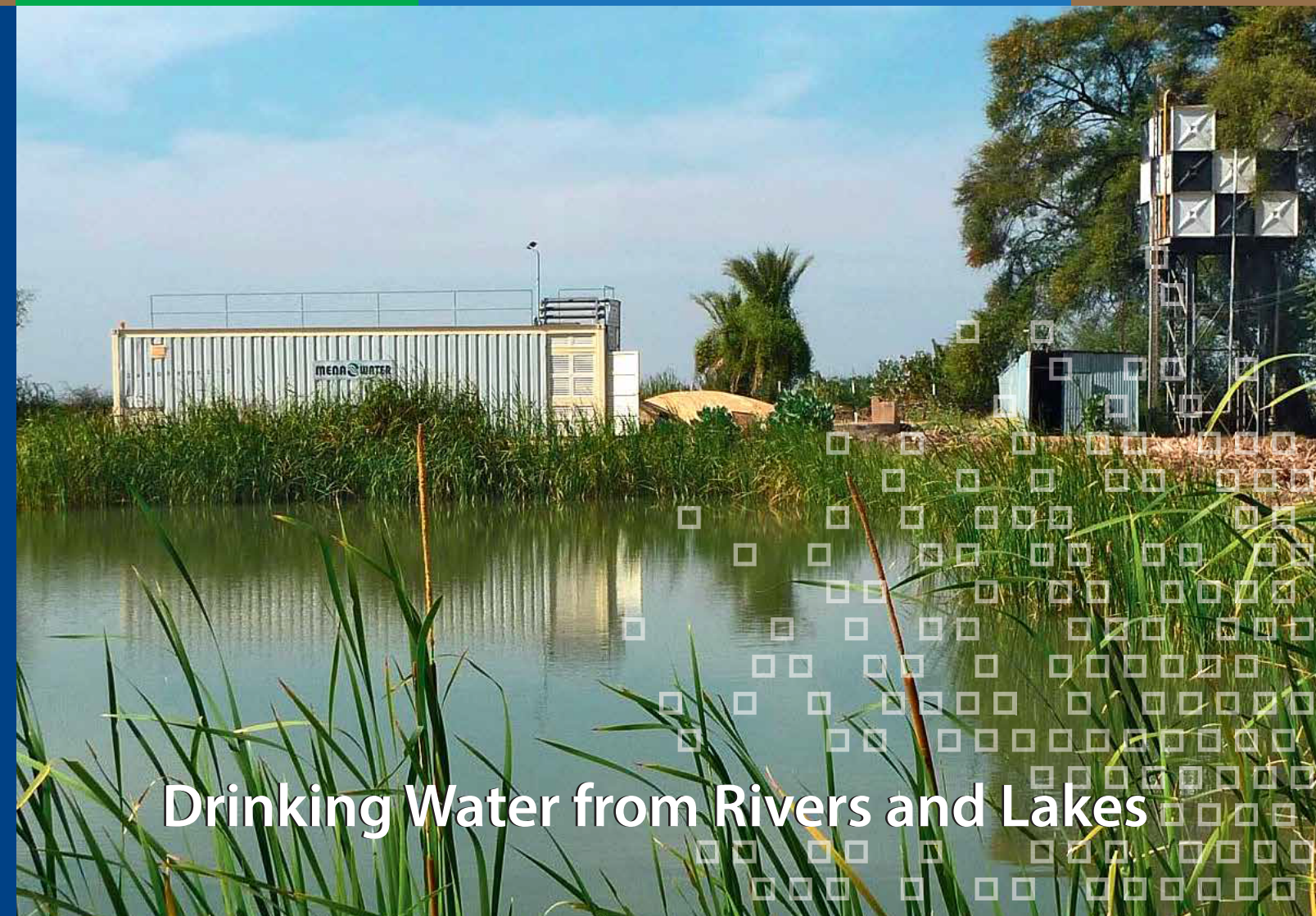
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Drinking Water from Rivers and Lakes



INWASOL – Safe Drinking Water Containers

INWASOL drinking water plant Alsoqya is a cost effective packaged 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.

DESCRIPTION

Alsoqya is a containerized plant that combines all the necessary components for coagulation, flocculation, clarification, filtration and disinfection in a compact system. Its versatile design makes it ideal for potable water treatment and industrial process water and also can be used as advanced treatment of wastewater or to reduce suspended solids, phosphorus and other contaminants like heavy metal.

COAGULATION

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

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.

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The sludge is periodically withdrawn through an automatic valve.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.

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 under-drain system.

The filter is backwashed intermittently depending on the influent turbidity of the raw water.

DISINFECTION

INWASOL uses an innovative and highly effective water disinfection technology from REDO Water Systems.

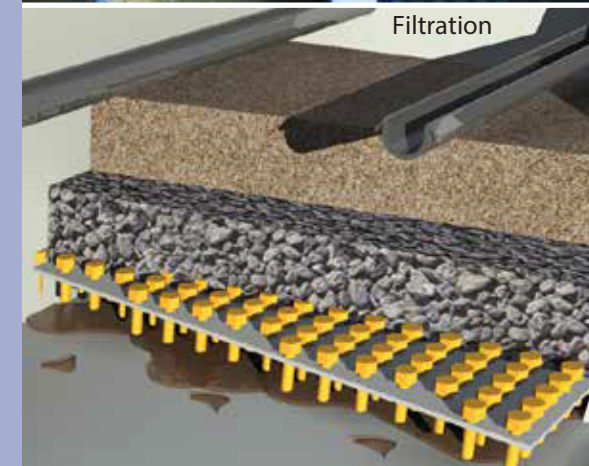
FEATURES

- 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.

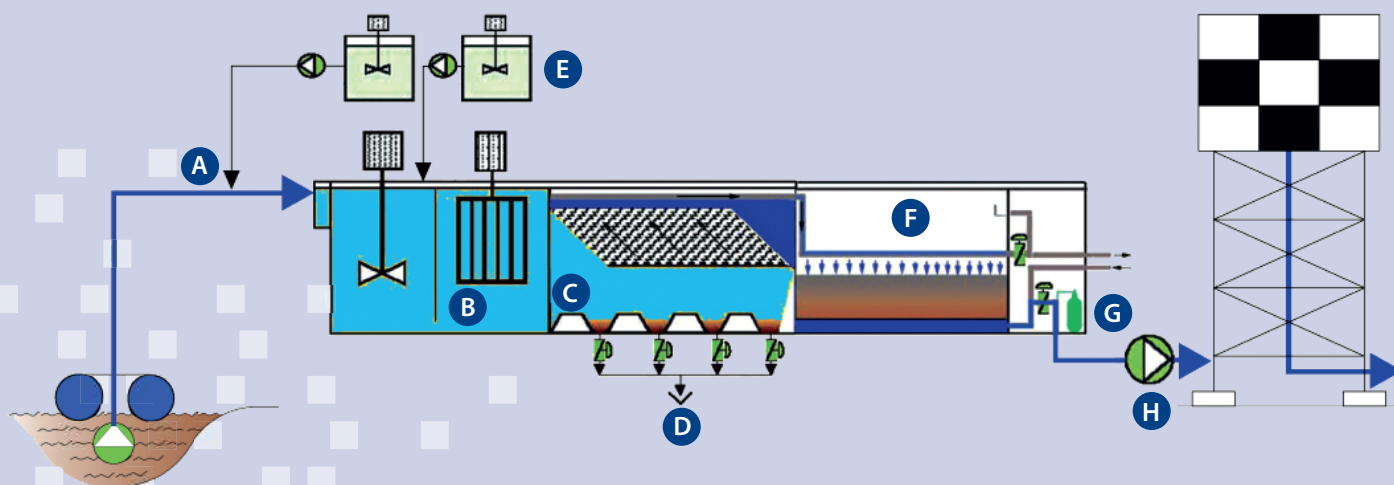
- Highly stable process that produces quality water even during peaks.
- Effectively removes turbidity, suspended solids, color, odor and TOC.
- Produces highly pure water that meets WHO Drinking Water standards.

APPLICATIONS

- Potable water for cities and villages.
- Process water treatment.
- Grey water treatment.



- A - Raw Water Intake
- B - Flocculation Unit
- C - Clarification Unit (Settler)
- D - Sludge Discharge
- E - Chemical Dosing Unit
- F - Sand Filter
- G - Disinfection Unit
- H - Water Supply Pump



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 water quality testing
- Containerized operator rooms
- Skid mounted pumps alternatives as self-priming

PLANT DATA FOR DIFFERENT THROUGHPUTS

| MODEL: ALSOQYA | MWSQ 20 | MWSQ 40 | MWSQ 60 | MWSQ100 |
|-------------------------------|---------------|---------------|---------------|---------------|
| Capacity in m ³ /h | 20 | 40 | 60 | 100 |
| Capacity in m ³ /d | 500 | 1000 | 1500 | 2500 |
| Arrangement | 20' container | 40' container | 40' container | 40' container |

Other sizes on demand