

River Water Treatment System (USSU Water Clarifier Unit – US-WCU)

High quality water is becoming scarce and more expensive across the world, which is leading to more private initiatives to treat water. Supplying the needs of cities as well as industrial requirement is a vital role for water treatment engineering.

The technologies and available methods used are; coagulation, flocculation, simple or lamella settling (clarifier & sedimentation), pressurized or gravity filtration for enhancing the clarity of water. Than finally we use disinfection systems for WCU packages.

US-WCU system capacities are from 50 m³/h – 1000 m³/h. Easy to operate and easy for maintenance.



Coagulation

Adding certain chemicals to water can modify suspended solids and colloidal materials, which will not precipitate on its own, causing flocs to grow in size and precipitate more easily. Dosing chemical, rate of chemical, mixer type and capacity are very important point for the efficiency of coagulation.



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Flocculation

After coagulation, flocs tend to accrete or bind together into larger flocs. This can be assisted by slow mixer either mechanically or with air bubbles or hydraulic mixing system. Mixer is the most important point for the flocculation not to breakdown the flocs.



Sedimentation

After flocculation, flocs are ready to settle down. If you also design lamella settler inside your clarifier unit, efficiency will be higher. For the USSU PVC lamella, please contact our company. All design parameters are carefully designed by our engineers for the highest efficiency of clarifier unit.

Filtration

Finally, any flocs or particles which have not settled out by gravity can be removed from water by filtration. For WCU system we generally use electrical or pneumatic butterfly valves for the automation of filters. Filters shall be horizontal or vertical type. Vertical type filters start from 900 mm diameter, up to 3400 mm. Standard horizontal filters are 5 meter, 6 meter, 7 meter, 10 meter and 12 meter in length.

Disinfection

Gas or liquid chlorination systems are used for disinfection of the water. Both chemicals are used for pre and final disinfectant for river water systems.

