

AQUA HD

Separation & Filtration Systems

APPLYING WATER TREATMENT AND PARTICLES REMOVAL FOR POSTHARVESTING IN TEA FARMS – THE COST BENEFITS AND GAINS



THE CHALLENGES

In tea manufacturing, water is extensively used. Clean fresh water is a critical part of quality tea and is also a necessity for tea plantations employees. Supplying clean and fresh water in tea manufacturing is required for:

- Post harvesting process water
- Tea farmers are responsible for providing their employees with a safe and healthy environment including supplying access to clean drinking water and adequate accessible sanitation facilities.

These requirements, however, are a major concern for tea farmers and therefore many of them are looking for ways to increase the re-use of water because of the limited availability and cost of clean water as well as increasing the usage of the water sources available to them.

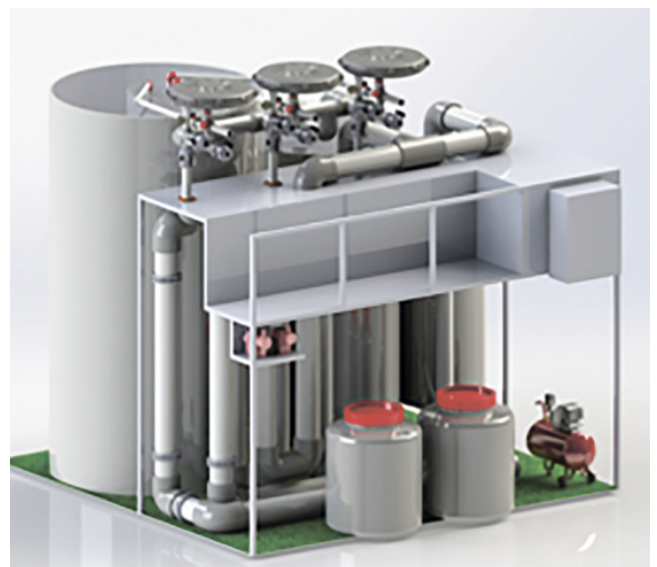
In order to optimize water consumption, AQUA HD has developed a particle removal system for implementation in the packing houses. AQUA HD's innovative and cost-effective water separation solution handles multi-stage treatments in one go for an all-around more efficient solution. Our technology removes a wide range of organic and inorganic suspended solids, equipped to deal with heavy loads of soil and it enables elimination of impurities with no reduction in efficacy.

OUR SOLUTION

AQUA HD's will enable the re-use of water during fruit and vegetables processing and packaging by improving the quality of the water entering the reservoir and allowing access and use of any source of water for irrigation. Most importantly, the system will recycle up to 80-90 percent of the wastewater used in the packaging process.

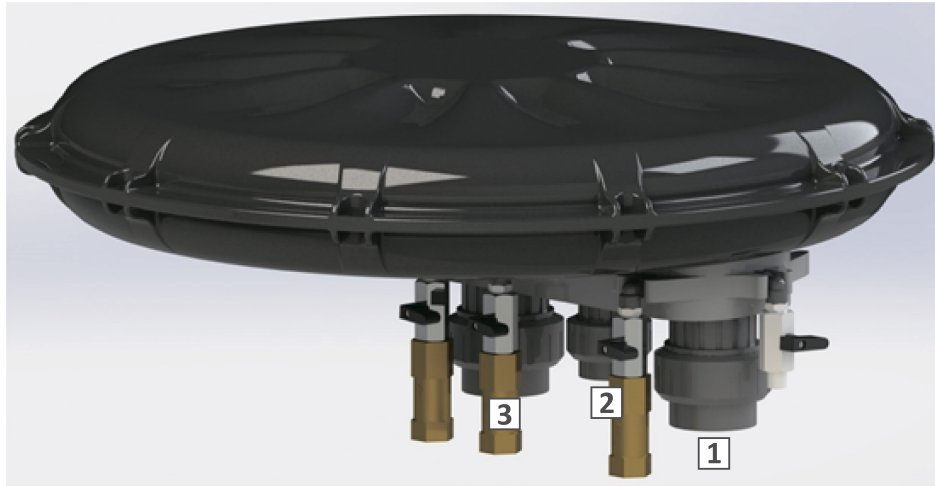
AQUA HD's system is able to address wastewater treatment challenges in the following ways:

- **High removal rate.** The solution is capable of removing 80-90% particles from 0.5-2000 micron of suspended solids from water with heavy dirt loads.
- **Highly effective.** It can separate a vast spectrum of highly variable particles without a significant reduction in effectiveness.
- **Simple installation.** The solution is designed as a plug and play system that can be easily integrated into any existing site.
- **Small footprint.** The solution is compact and requires minimal space, resulting in a very small footprint.
- **Low energy demand.** The solution has low energy consumption.
- **Reliable.** There are no moving parts in the separation units, nor is there any screen or disc used to stop and collect the particles, increasing operation reliability.



HOW AQUA HD'S SYSTEM WORKS

The technology behind the product is based on utilizing and controlling centrifugal and drag forces with high and marginal laminar flow in a way that hasn't been done before.



HOW IT WORKS

Water enters through the collective manifold and is divided equally between the separation units where the particles are separated out. The separated particles are then collected in a particle trap that leads to the outlet point. The treated water is then directed to another outlet point.

CONTROL

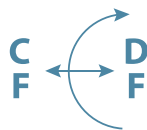
The system's flow and pressure are controlled and managed by a control board.

BACKWASH

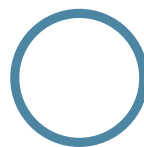
The cleaning process is based on an integrated program using water and compressed air. This achieves effective backwash cleaning and also savings in the amount of water used.



NO MOVING
PARTS



CONTROLLING DRAG
AND CENTRIFUGAL
FORCES



NO FILTER ELEMENTS
(SCREEN OR DISK)



VERY SMALL
FOOTPRINT