



WHITE WATER FILTER

HOW IT WORKS

The SWECO White Water Filter is an important concept in liquid solids separation. It utilizes high flow-rate, fine mesh centrifugal screening to remove all particles larger than the screen mesh opening, with no dependence on differences in specific gravity.

The incoming flow enters the unit with approximately 10 feet of hydraulic head. This flow travels up through the center feed pipe of the WWF and out horizontal distribution pipes to nozzles which present the feed tangentially against the inner surface of the revolving screens in a series of overlapping, thin layers of liquid.

A low centrifugal force is generated by the rotating screen cage sufficient to force the white water through the screens at high rates while allowing the rejected fibers to slough down the inner surface in a concentrated stream. This sloughing action is assisted by continuously operating, high pressure, external spray nozzles directed at the outside of the rotating screen and angled to facilitate the downward movement of the solids.

In addition to assisting in the sloughing process, the high

pressure sprays clean every screen opening several times each second. The back-spray liquid can be the screened white water from the WWF, so no fresh water need be used.

The combination of the rotational velocity of the screens and the impingement velocity of the influent make it possible for the screens to remove particles smaller than the mesh openings. The WWF is not designed to remove fillers and fine particles; however, these small elements generally don't create plugging problems.



CONSTRUCTION

Normal construction materials are 316 stainless steel or 304 stainless steel with all stainless steel internals.

Being a fine screening device, the WWF is normally equipped with screens ranging from 100 to 325 mesh, depending on the fiber size and where the recycled white water is going to be used. These mesh screens are normally supplied in stainless steel but synthetic textiles are also available.

We Put Technology In Motion™
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The Ultimate in White Water Recycling

FLOW SPLIT

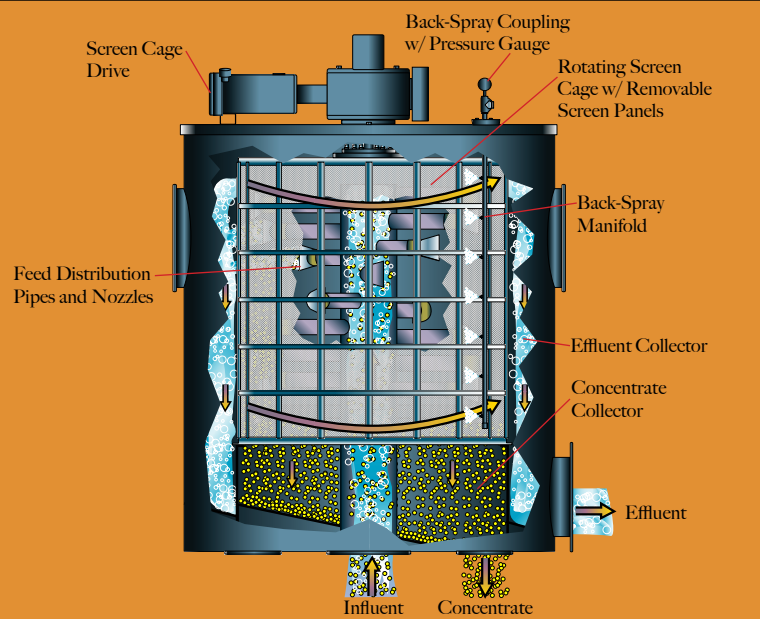
The White Water Filter discharges two streams; the filtered white water effluent and the rejected fibers called the concentrate. The quantity which passes through the screen versus the quantity rejected is termed the split. A 90/10 split means that, of the flow entering the unit, 90% passes through the screen as effluent and 10% is rejected as concentrate.

solids in the liquid and with the screen mesh. Low fiber concentrations (50-300 ppm) can result in splits from 90/10 to 95/5. As the fiber concentration in the feed increases, the percentage of concentrate increases. Coarse screens produce less concentrate volume than finer screens. The concentrate can easily be returned to the white water system for stock dilution.

Split varies with the amount and type of suspended

KEY FEATURES

- Produces shower quality water
- Allows water system close up with
 - Heat saving
 - Fiber saving
 - Reduced effluent treatment
 - Increased production due to higher machine operating temperature
- Capacity to 4000 gpm (900 m³/hr) per unit
- Insensitive to normal process fluctuations
- Non-plugging design
- High solids removal efficiency
- Needs almost no operating attention



SWECO WWF TYPICAL PERFORMANCE DATA

| TYPICAL APPLICATIONS | INLET SOLIDS RANGE lbs/1000 gal (kg/m ³) | CAPACITY RANGE GPM (m ³ /hr) | SCREEN MESH |
|---------------------------------|---|--|-------------|
| Fine Paper Machine Shower Water | 3.0 to 6.0 (0,36 to 0,72) | Up to 2000 (450) | 325 |
| Tissue Machine Shower Water | 3.0 to 5.0 (0,36 to 0,50) | Up to 2200 (500) | 200 |
| Vacuum Pump Seal Water | 0.2 to 0.6 (0,02 to 0,07) | Up to 3600 (815) | 165 |
| Save-All "Clear Leg" Water | 0.5 to 1.5 (0,06 to 0,18) | Up to 3600 (815) | 165 |



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