

HOMOGENIZER WATER RECYCLING SYSTEM

REDUCE WATER USE BY UP TO 97%



Homogenizers in typical continuous processing environments are cooled and lubricated by clean, running water to keep them from overheating. This water has traditionally been sent directly to the drain. This wasted water can be as much as 2 million gals/7,500 m³ per year (based on homogenizer water flow of 6 GPM, 18 hours per day, 6 days per week, 52 weeks per year).

The Homogenizer Water Recycling System (HWRS) allows facilities to capture used water, sanitize, cool and return the water back to the homogenizer to be used again and again. This virtually eliminates water use on homogenizers, upholding sustainability initiatives and significantly reducing costs.

Water reduction, increased sustainability

- Recycles up to 97% of the water required by homogenizers at up to 10 GPM (2,270 LPH)
- Provides cost-saving potential due to water costs
- Reduces exposure to water availability challenges

Process quality water produced

- Pasteurized Milk Ordinance (PMO) Specifications for Category I Water and 3A Standards
- Failsafe controls for continuous operation
- Built-in homogenizer leak detection
- Continuous water quality measurement
- Water temperature control

Seamless integration

- Fits APV® and other brand homogenizers
- Compact
- Self-contained controls



The HWRS is comprised of two elements: A Tank Skid and a Sanitation Skid

The tank skid is placed next to the homogenizer where it collects used lubrication and cooling water. During its collection, the tank skid continuously monitors incoming water quality and provides preliminary treatment.

As long as the water remains in tolerance for quality, the water is pumped to the sanitation skid. In the sanitation skid, water is filtered, further sanitized, monitored and cooled. The water then returns to the homogenizer's water inlet.

The system utilizes redundant water quality sensors to monitor for impurities. If the water is outside of set quality tolerances, the system will reject the water and will supply city/municipal water to the homogenizer instead of recycling. Redundant valves and programming methods are used to ensure the homogenizer always has water for cooling.

Users have the ability to set alarm parameters within the system which can communicate system alarms, homogenizer product leakage and other customizable notifications.

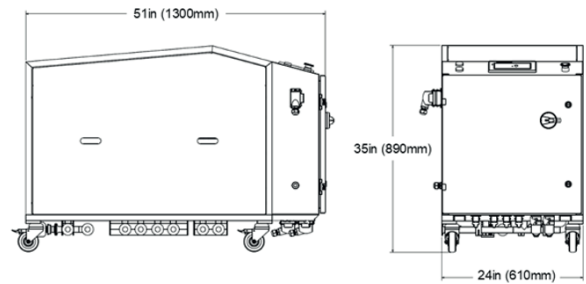
Standard features

- Plug-and-Play with automatic functionality
- Homogenizer leak detection notification
- Washdown construction
- Modular and mobile
- HMI with remote access and control capability
- Ethernet port for status and quality parameters
- Redundant water quality safety protocols
- Sanitary quick fittings for piping connections
- Variable temperature output
- Glycol or chill water capability
- 380-480V or 200/240V / 3 phase / 50 or 60 Hz

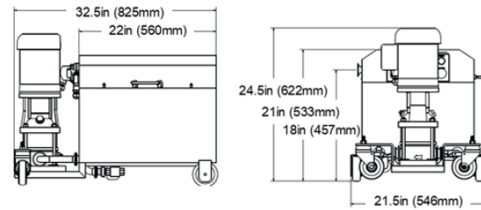
Models

MODEL	OPERATING PARAMETERS
HWRS-S Single	(1) water recycling line to (1) homogenizer
HWRS-SPLUS Single +	(2) water recycling lines to (1) homogenizer, differentiated temperature outputs (lubrication and cooling water)
HWRS-D Dual (2 Tank Skids)	(2) water recycling lines to (2) different homogenizers, differentiated temperature outputs
SKID	FUNCTIONALITY
Sanitation Skid	<ul style="list-style-type: none"> Up to 75 ft / 22 m from tank skid Filters, sanitizes with UV and cools water Inbuilt PLC controls and alarms Failsafe connection to process water supply
Tank Skid	<ul style="list-style-type: none"> Water collection and screening Monitors water temperature, turbidity and total dissolved solids Out-of-tolerance water goes to drain

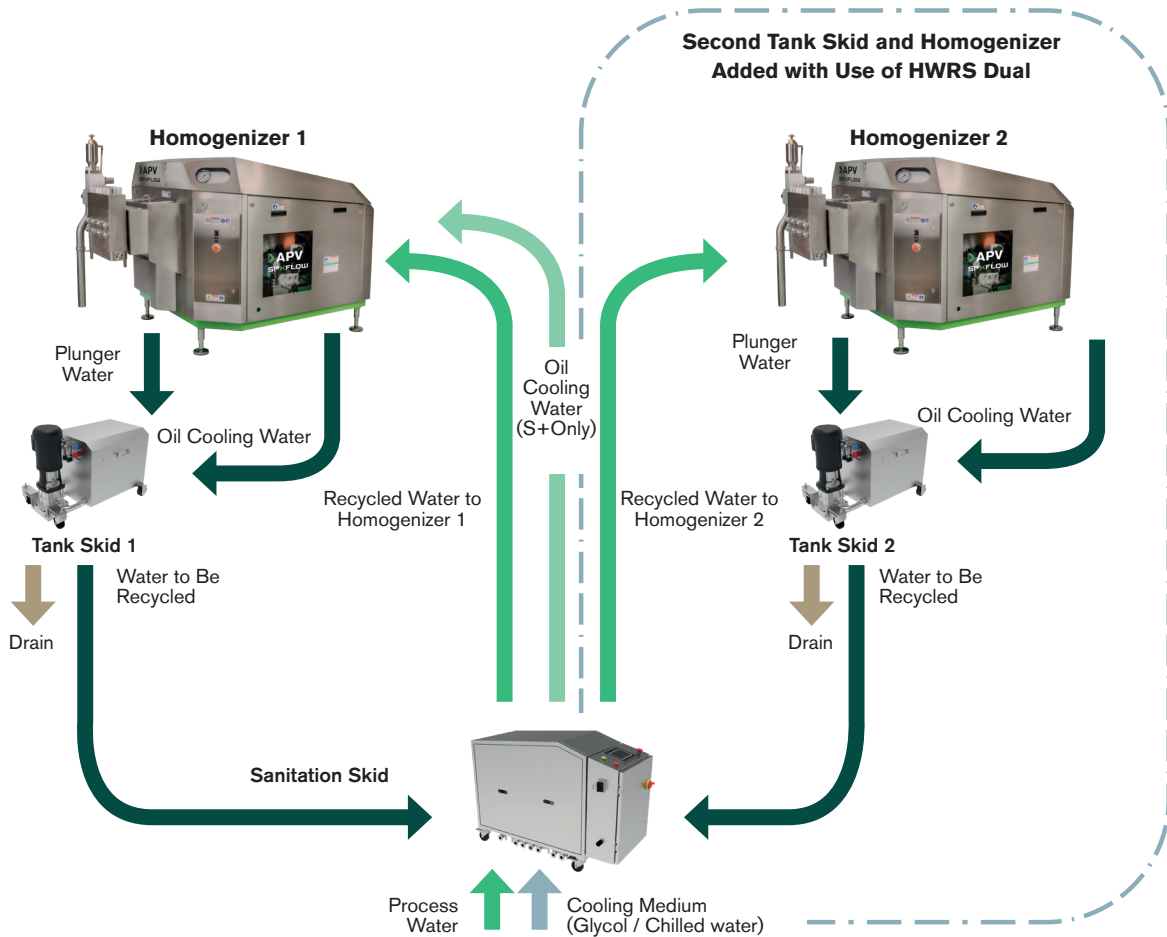
SANITATION SKID



TANK SKID



SYSTEM SCHEMATIC



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