

Multi-Tank Ultrasonic Cleaning Systems

Aquarius™

Atlantis™



BLACKSTONE~NEY
ULTRASONICS

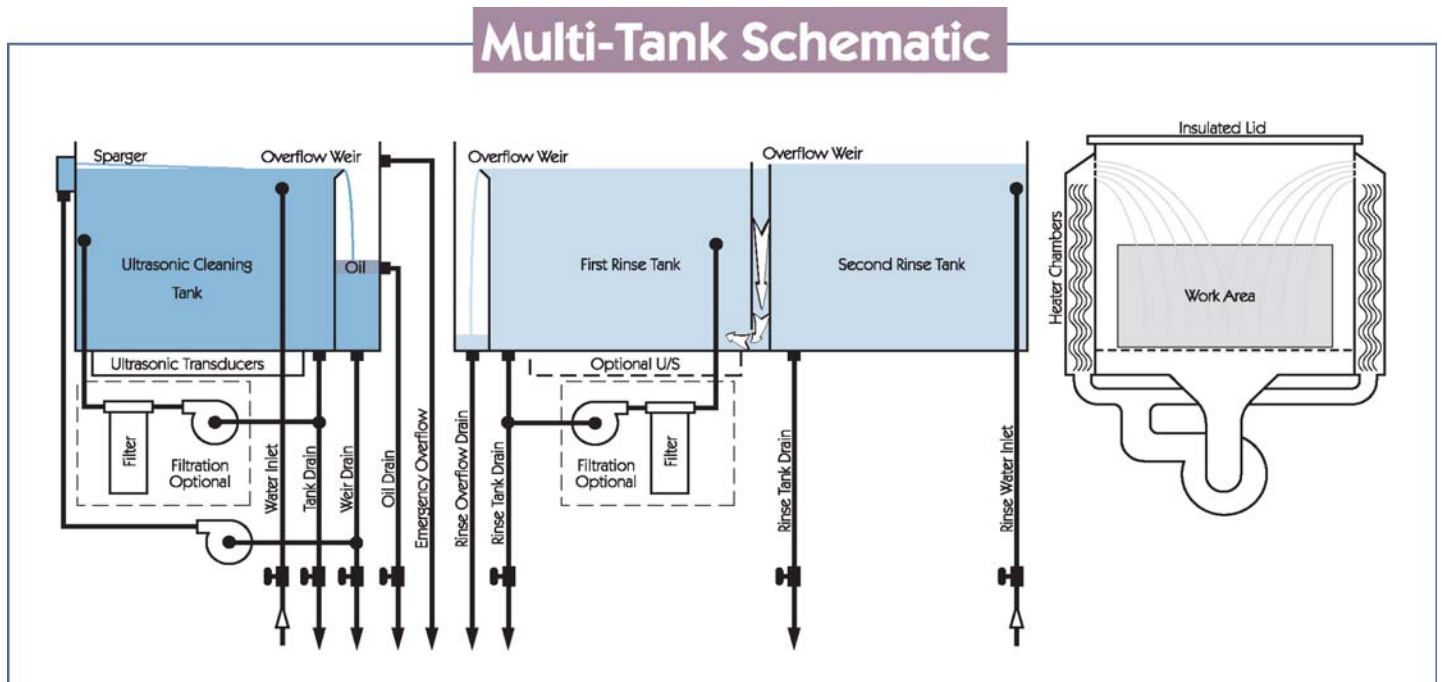
A Cleaning Technologies Group Company

Multi-Tank Ultrasonic Cleaning Systems

Aquarius™ and Atlantis™

The Blackstone~NEY Ultrasonics, Inc. line of Multi-Tank Cleaning Systems offer multi-stage ultrasonic cleaning capability in a unitized system. Process steps typically include ultrasonic cleaning, single or multiple stage rinsing and, finally, drying using recirculated hot air. Blackstone~NEY Ultrasonics offers a standard line of pre-engineered products as well as custom-engineered systems to satisfy a wide range of cleaning needs. Standard Aquarius™ console systems are available in 3, 4, and 5 station configurations with a tank capacity of up to 60 gallons. Automated transfer of workloads up to 200 pounds is provided by robotic arm type material handling systems.

Larger capacity and custom systems with and without automation are readily configured using Atlantis™ modular components. Atlantis™ modules are also available as individual, freestanding units. Parts to be cleaned are first immersed in a cleaning tank with an appropriate chemistry and ultrasonic transducers. An overflow weir and sparger skims the surface of the tank to prevent redeposition of contaminants as the cleaned parts are withdrawn. Following cleaning, parts are immersed in one or more tanks containing clean water for rinsing. One or more of these tanks may also be fitted with ultrasonic transducers to aid the rinsing process. After they are rinsed, parts are dried using recirculating, filtered hot air in an enclosed dryer. Additional process steps and other options may be specified to meet the needs of some cleaning applications.



Standard Features

- Blackstone~NEY Ultrasonics high efficiency 40kHz metallurgically bonded piezoelectric transducers
- Neptune™ series ultrasonic generators with full time pulse and sweep for maximum cleaning performance
- Heavy Duty industrial construction throughout
- Stainless steel tanks, plumbing and enclosures
- Thermostatically controlled tank temperature
- Tanks insulated to minimize heat loss and sound emission
- Overflow weir and sparger in wash tank removes floating contamination
- Low liquid level protection for ultrasonics, pumps and heaters
- Recirculating hot air dryer with insulated lid
- Ergonomically designed controls
- Strategic component placement and ample access to facilitate routine maintenance



Optional Features

Material Handling and Automation

- Automated robotic transfer 50, 100, 200, and 400 capacity
- Custom parts basket and fixtures
- Workload rotation in and/or above tanks
- Integral load and unload stations
- Total system automation packages with PLC controls
- Agitation platforms

Dryer Options

- HEPA and ULPA Filtration, Multiple dryer stations for increased throughput, Air blow-off

Wash and Rinse Tank Options

- Filtration, Oil Separation, Agitation platform, Lip exhaust, Cascade Rinse Tank, De-Ionized water rinse, Rinse water pre heater, Resistivity meter control of rinse makeup, Additional process tanks, Ultrasonically enhanced rinse

System Options

- Total system enclosure, Remote electrical enclosure, Sound suppression, Total system customization, 7 day startup timer, Alternate power supplies, Pump to drain

Ultrasonic Options

- Multiple frequencies in one tank, Ultrasonic power control, Timed ultrasonics, Digital waveform synthesis



All **Blackstone~NEY Ultrasonics** cleaning systems feature high efficiency piezoelectric composite transducers manufactured by us, the leader in ultrasonic technology since 1952. All transducers are attached to the ultrasonic radiating surface using an unique metallurgically bonding process. This permanent attachment is **guaranteed for the lifetime of the radiating surface itself**. The ultrasonic transducers are powered by Neptune™ series ultrasonic generators featuring advanced, proprietary digital solid-state technology also developed by Blackstone~NEY Ultrasonics. Neptune™ series ultrasonic generators feature pulse modulation, frequency sweep, automation frequency optimization and square wave output for maximum cleaning results

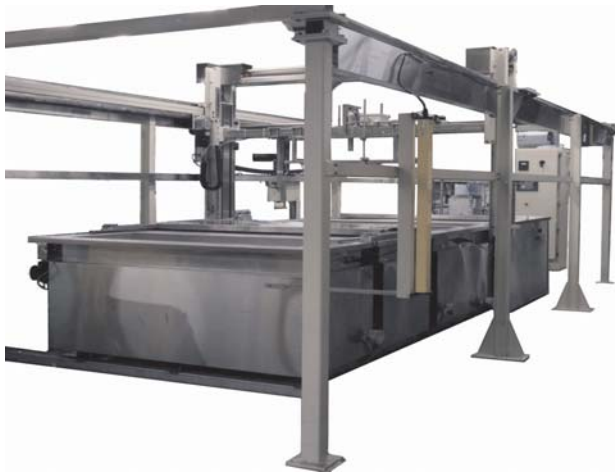
Multi-Tank Ultrasonic Machine Specifications

AQUARIUS™

Model	AQ-3 (4) - 1218	AQ-3 (4) - 1620	AQ-3 (4) - 1824	AQ-3 (4) - 2027
Tank Capacity	13 Gallons	22 Gallons	30 Gallons	47 Gallons
Tank Dimensions	12" x 18" x 20"	16" x 20" x 18"	18" x 24" x 18"	20" x 27" x 22"
Unit Dimensions	68" (81") x 31" x 36"	80" (97") x 33" x 136"	86" (105") x 37" x 36"	103" (123") x 36" x 66"
Ultrasonic Power	900 Watts	1,000 Watts	2,000 Watts	3,000 Watts
Heat (Wet tanks)	2,000 Watts	4,000 Watts	4,000 Watts	6,000 Watts
Dryer Heat/CFM	8kW/1,000	10kW/1000	12kW/1,000	12kW/1,000

ATLANTIS™

Model	AT-3 (4) - 3636	AT-3 (4) - 6036	AT-3 (4) - 4848	AT-3 (4) - 7248
Tank Capacity	200 Gallons	335 Gallons	480 Gallons	720 Gallons
Tank Dimensions	36" x 36" x 36"	36" x 60" x 36"	48" x 48" x 48"	48" x 72" x 48"
Unit Dimensions	Configuration Dependent	Configuration Dependent	Configuration Dependent	Configuration Dependent
Ultrasonic Power	4 to 15 KiloWatts	5 to 21 KiloWatts	6 to 30 KiloWatts	8 to 60 KiloWatts
Heat	15 KiloWatts	24 KiloWatts	30 KiloWatts	45 KiloWatts
Dryer Heat/CFM	Varies by Application	Varies by Application	Varies by Application	Varies by Application



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