

Sunburst Turbo™

Megasonic Cleaning and Rinsing Systems

Features Overview

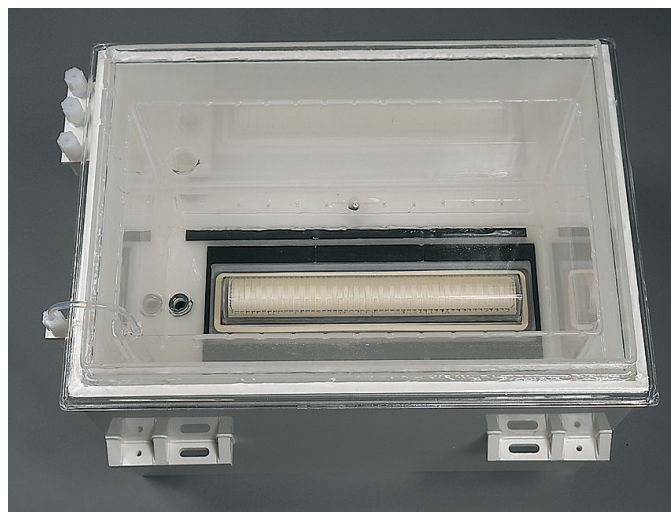
- Verteq's patented and proven high-performance *Sunburst® Turbo™* megasonic transducer
- Cassette configurations include continuous 52-wafer capacity compatible with "reduced" and "low-mass" cassettes, dual end-to-end cassettes, dual side-by-side cassettes, and single cassette
- Quartz, PVDF, Natural Polypropylene tank materials
- 300mm, 200mm, and 150mm models available

Process Performance

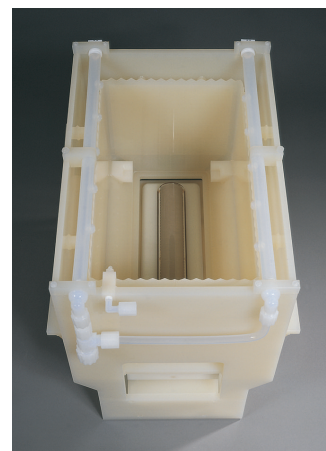
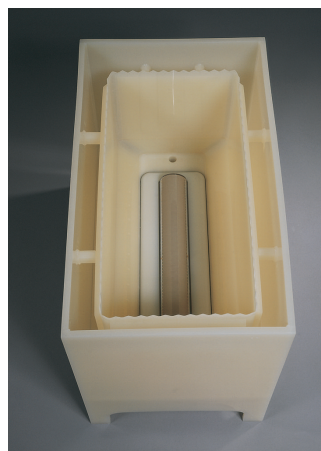
- Consistently near-100% particle removal efficiencies at 0.15µm and smaller particle sizes
- Strategically located curved transducer directs energy between cassette sidewalls to eliminate shadowing
- Energy pattern cleans cassette slots while eliminating the cassette damage caused by flat transducers
- *Sunburst Turbo Quickdump™* megasonic rinsers reduce water consumption and shorten cycle times
- *Sunburst Turbo Quickdump™* megasonic rinsers reduce defect density by reducing particle reattachment
- Quartz tanks feature rounded "seamless" corners for state-of-the-art cleanliness
- Optional Chemraz® elastomers for maximum chemical resistance and service life
- Single-, Dual-, and Four-sided overflow with scalloped or serrated weirs and deep trough for recirculation

Reliability and Integration

- With hundreds of long-term installations in the world's leading production fabs, no other megasonic has proven to have greater longevity, reliability, or performance
- Several controller configurations available to meet OEM and end-user needs
- PLC and SECS-II communication compatibility
- Integral nitrogen "bubbler" level sensor, and transducer cooling flow sensor



Sunburst Turbo megasonic quartz tank models feature rounded corners, four-sided overflow, Chemraz® transducer seals, and advanced design for the quartz to PFA tubing transition. 200mm model shown.



Sunburst Turbo megasonic cleaning tank (left), and Sunburst Turbo Quickdump rinse tank (right) shown in PVDF for 200mm wafers. Also available in natural polypropylene.



The official factory source for all
Verteq products and services.

Sunburst Turbo/Turbo Quickdump

Applications

Sunburst Turbo

Traditional and dilute SC-1, SC-2, and similar chemistries for:

- Pre-Diffusion Clean
- Pre-Epi Clean
- Monitor Wafer Clean
- Post-Laserscribe Clean
- and more

Sunburst Turbo Quickdump

- Post acid rinses for sulphuric, phosphoric, others
- Other critical and final rinse requirements

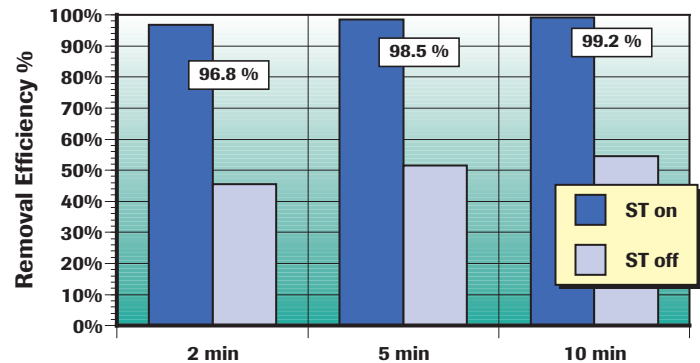
Substrates

- Silicon wafers, thin wafers
- GaAs wafers
- Silicon Carbide
- Hard disks
- Masks, Glass, and more

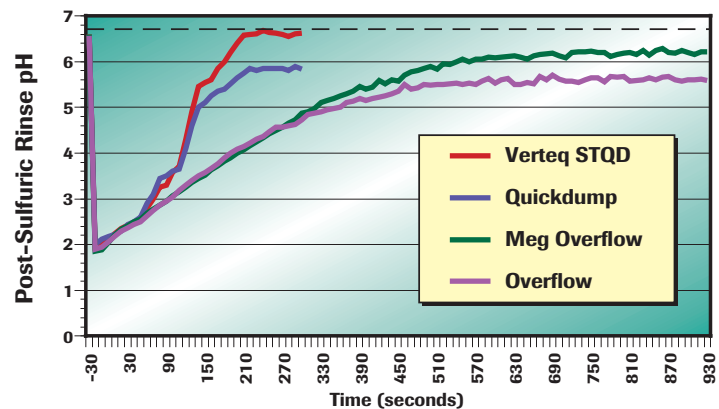


Controllers for the ST and STQD megasonic models come in a variety of packages to optimize integration and routing of cables.

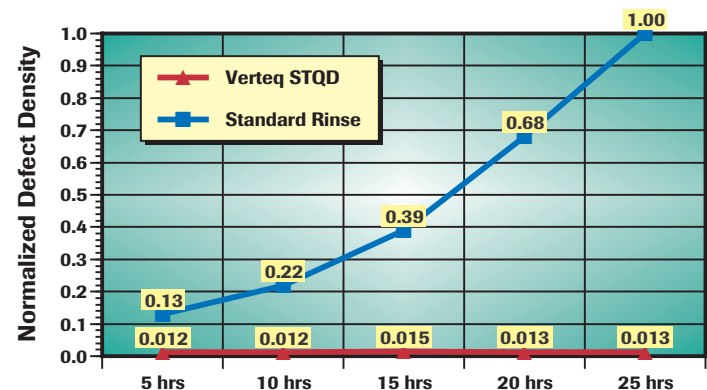
Performance



In this *Sunburst Turbo*™ megasonic test, 200mm wafers dipped in silicon nitride and dried, were cleaned with a dilute SC-1 mixture of 80:4:1 at 60°C. Removal efficiency was calculated for particles $\geq 0.2\mu\text{m}$.



A *Sunburst Turbo Quickdump*™ megasonic rinse process rapidly removes residual chemistry to significantly decrease process time and water consumption in post-sulfuric and other post-acid rinse applications.



Verteq's *Sunburst Turbo Quickdump*™ megasonic rinse process increases the useable life of sulfuric and other acid baths, and decreases the defect density of the entire process significantly.



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Marteq Process Solutions, Inc.

17500 Gillette Avenue • Irvine, California, USA 92614-5610

Phone: (714) 495-4275 • Email: sales@marteqpro.com

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