

Ultrasonic Wet Spray Coating System for Float Glass

WIDETRACK

Wide Area Coating System

Highly-controllable uniform spray for float glass processes

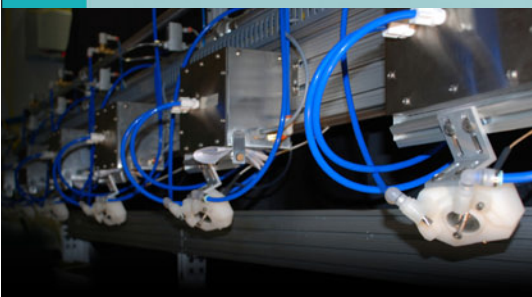
PROVEN RELIABILITY FOR CONTINUOUS OPERATION

Ideal for inline anti-stain protective coatings to protect against corrosion during transport and storage.

- Virtually no overspray and no mess
- Target deposition precisely controlled, adjusting automatically to ribbon speed changes
- Drastic reduction or elimination of exhaust and scrubber requirements
- Low maintenance ultrasonic nozzles will not clog
- Drip-free spray

SONO•TEK Corporation

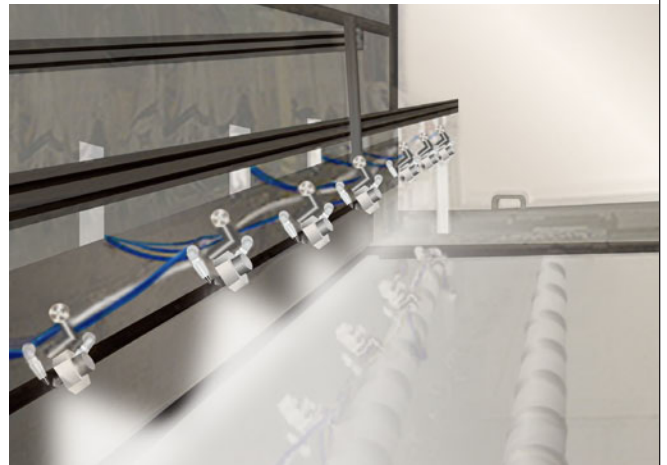
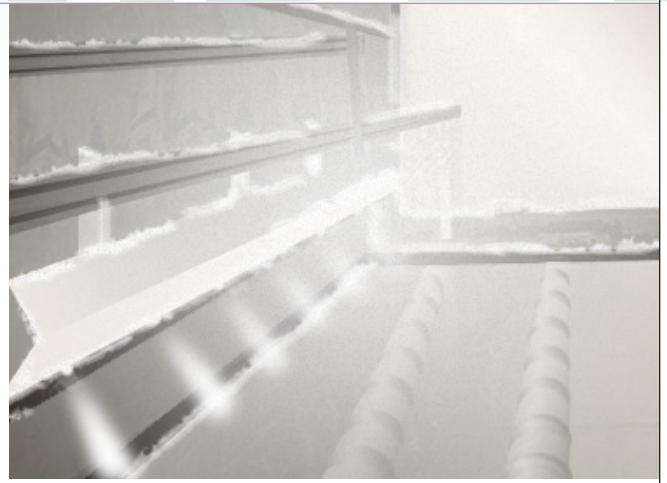
ISO CERTIFIED www.sono-tek.com



Sono-Tek's experience and understanding of the unique demands of continuous float glass production have contributed to making the WideTrack spray system superior for the needs of the industry. Its proven reliability and low maintenance design make it excellent for 24/7 glass manufacturing processes.

Highly controllable spray

The illustrations on the right depict glass manufacturing using conventional pressure spray (top) versus Sono-Tek's WideTrack system (bottom). The difference is dramatic. The amount of waste is greatly reduced, saving liquid usage and minimizing the release of material into the atmosphere, which promotes better environmental conditions as well as lowering risks to employees' health. The resulting benefits of Sono-Tek's low-velocity ultrasonic technology saves cost in materials, maintenance, exhaust requirements, and is beneficial in attaining and retaining ISO 14001 compliance.



Precise deposition of all levels and combinations of acid solutions, including:

- Highly visible Adipic/Maleic/Malic acid mixture
- Slightly visible "Stain Retard 101" mixture
- Barely visible "Irristop" mixture

CONTROLLABLE DEPOSITION WITH EFFICIENT ATOMIZED SPRAY



Total Customer Support

Sono-Tek has developed a wide range of quality spray systems based on our patented ultrasonic liquid spray technology for more than 30 years. Each WideTrack System is configured and factory tested specifically for each application. Installation at your facility is performed by our experienced field service staff who will work with you to set up your process and train your production and service personnel. After installation, we offer full support for service, process setup, or system operation with factory trained service technicians.

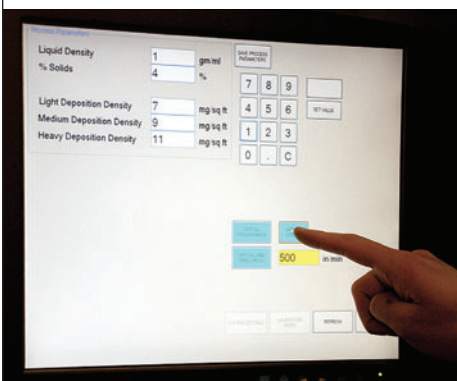


A typical WideTrack Dual Jet installation ▶▶

Non-clogging ultrasonic technology

WideTrack's control center and state-of-the-art pumping system are designed for flexibility, easy access and operation

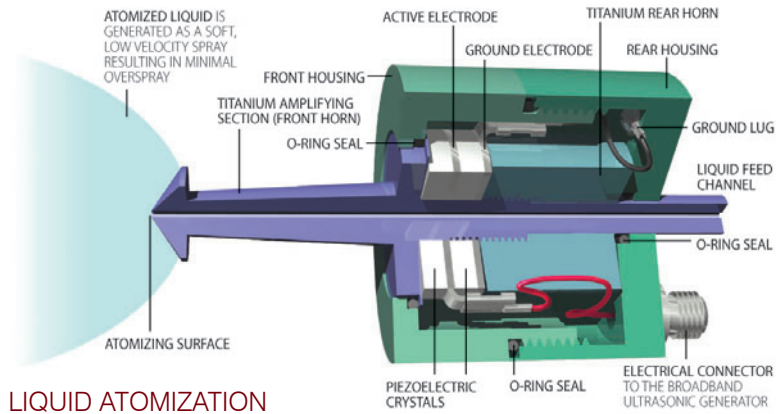
- Robust pump with high precision and repeatability of $<0.5\%$ STDEV from nozzle to nozzle
- Wetted path pump system is compatible with interleaving acids
- Pump features 100 micron dual filter filtration with "swap on the fly" capability
- No heat build-up despite the high temperatures of float glass production
- Integrated air conditioning system keeps electronics cabinet cooled
- Real time monitoring of all system functions with extensive data logging
- Intelligent control tower with full PLC control using 19" touch screen HMI
- Line speed encoder for continuous monitoring of process and dynamic deposition control, adjusting to ribbon speed changes without operator intervention.



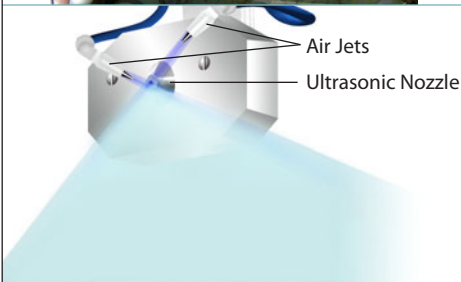
19" touch screen HMI



Operating Principle



LIQUID ATOMIZATION



Each spray assembly contains a pair of air jets which alternately pulse to drive the spray downward. The timing and force of the pulses produces a spray pattern that oscillates back and forth across the substrate.



WIDETRACK DUAL JET COATING SYSTEM SPECIFICATIONS

General Specifications

Coating System	Stationary ultrasonic nozzles with air-operated spray dispersion assemblies
Construction	Stainless steel, Titanium, Teflon®, Polypropylene, Kynar®, Ryton®
Width Range	Up to 156" (4 m) - standard configuration for 8 spray assemblies Custom widths available
Flow Rate Range	3 - 100 ml/min
Deposition Uniformity	± 10%
Deposition Repeatability	± 2%

Ultrasonic sensors detect the presence of float glass. Spray heads turn on and off automatically as required for different width glass. Flow rates and ultrasonic nozzle power are configured to automatically adjust for changing line speed.

Control Center Specifications

Windows® based imbedded industrial controller (modern PLC) with 19" touch screen HMI.	
Output Control for 1 - 8 spray assemblies	
NEMA 12 cabinet	
Cabinet cooled by integrated AC	
Liquid distribution manifold	
Relays	1 input: Remote PLC or PC control through an On/Off input relay suspends spraying when glass is present but coating is not required. 2 outputs: Alarm output relay provides remote notification of alarm conditions.
24V input opto-coupler for reading line speed: 24 VDC square wave pulses	
Encoder package senses line speed changes.	

Service Requirements

Line Power	220 VAC, 20 A ₁ L ₁ L ₂ NG 50/60 Hz Cabinet accepts 5/8" cable (nominal)
Compressed Air	Clean, dry and oil-free
Supply Pressure	90 - 150 psi @ 750 CPM minimum

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