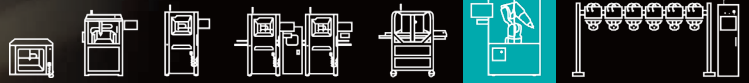


# ULTRASONIC COATING SYSTEM

# OMNI bot



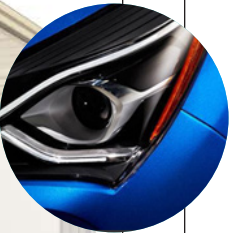
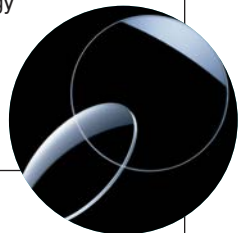
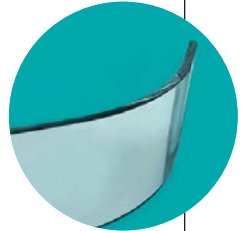
Sono-Tek's OMNIbot coating system is a full coating solution for applying atmospheric coatings of very uniform thin films onto 3D surfaces, large areas, and complex coating applications.

### Applications Include:

- Lenses/optics
- Automotive components
- Medical devices
- Aerospace components
- Electronic components
- Plastic laser welding
- Surgical implants
- Food and food packaging

### Sono-Tek ultrasonic coating system benefits:

- Up to 80% reduction in material consumption
- Reduced wasteful overspray and atmospheric contamination
- Minimal servicing and downtime
- Self-cleaning ultrasonic nozzle prevents clogging
- Highly controllable spray produces reliable, consistent results
- Low-velocity delivery will not harm or disturb components
- Repeatability as low as +/-2%
- Controllable drop size enables customization of coating morphology
- Compatible with slurries and other undissolved particles
- Available in various sizes from 0.9 meter reach to 2.5 meter reach

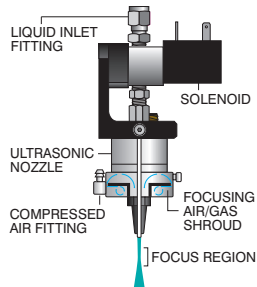


Ultrasonic spray systems are well known for their precise thin film coatings and minimal overspray of expensive solutions. Sono-Tek systems are full coating solutions, replacing traditional coating techniques, such as pressure spray and spin coating to reduce waste and minimize overspray. OMNIBOT has the flexibility to develop a process as an R&D system and then be utilized at full potential for production volume coatings. OMNIBOT is a quicker, inexpensive alternative or replacement to plasma coating machines, with proven expertise coating various substrates.

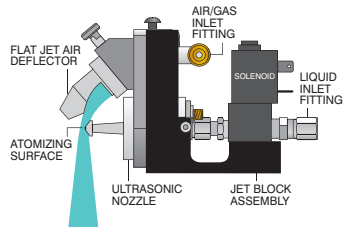
### OPTIONS FOR PLATFORM INTEGRATION

#### ULTRASONIC NOZZLE OPTIONS

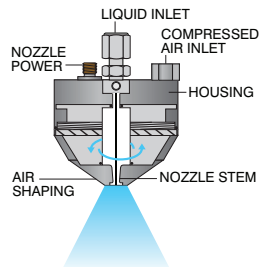
**AccuMist** - Produces a thin, bow-shaped spray pattern.



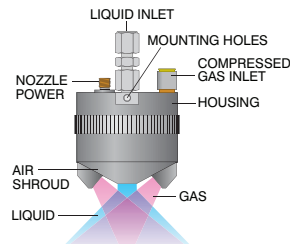
**Impact** - Creates a fan shaped spray pattern.



**Vortex** - Rotational air/gas produces a conical shaped spray pattern.



**Propel** - Creates a wide, fan shaped spray pattern.



#### LIQUID DELIVERY OPTIONS

##### Syringe Pump TI

Touch Interface programmable syringe pump. Flow rate range: 0.01-50 ml/min

##### HyperFlow

High volume precision gear pump. Flow rate range: 0.5 - 20 ml/min

##### Gear Pump

Pulseless gear pump for continuous or intermittent flow. Flow rate range: 2-20, 10-70 or 40-200 ml/min

##### MicroFlow

High accuracy positive displacement pump. Flow rate range: 1µl/min-25ml/min

##### SonoFlow Fusion

Continuous syringe pump compatible with SonicSyringe or Stirring Syringe. Flow rate range: 0.5-15 ml/min

##### DuraFlow Pump

High volume volumetric rotor/stator pump. Flow rate range: 0.2-3 or 2-110 ml/min

#### AIR/GAS CONTROL OPTIONS

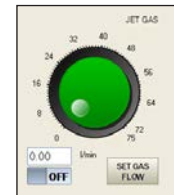
##### Pressure regulator

Manual adjustment flow regulator



##### Precision programmable air flow controller

Digital touch screen adjustment



## OMNIBOT SPRAY SYSTEM SPECIFICATIONS

### Ultrasonic Nozzle Specifications

#### Materials of Construction

Nozzle Body*	Titanium alloy 6Al-4V
Nozzle Housing	316 stainless steel
O-rings*	Kalrez®
Liquid Inlet*	316 stainless steel (6 mm)
Air/Gas Inlet	Nickel-plated brass(4 mm barb)

#### Air Shaping

##### AccuMist

Air Shroud Materials	Delrin®/316 stainless steel
Spray Pattern Diameter	2 mm - 6.4 mm (0.080" - 1.5")
Air Pressure	0-14 kPa (0-2 psi) typical

##### Impact

Air/Gas Jet Materials	Ertalyte®, Delrin®, stainless steel, Acetal
Spray Pattern Diameter	50 mm - 150 mm (2" - 6")
Air Pressure	0-200 kPa (0-30 psi) typical

##### Vortex

Air/Gas Jet Materials	Delrin®, stainless steel
Spray Pattern Diameter	50 mm - 200 mm (2" - 8")
Air Pressure	0-70 kPa (0-10 psi) typical

##### Propel

Air/Gas Jet Materials	Stainless steel
Spray Pattern Diameter	50 mm - 200 mm (2" - 8")
Air Pressure	14-170 kPa (2-25psi) typical

#### Liquid Solenoid Valve (2 Different Types)

Wetted Materials	Type 1: 316 stainless steel, Chemraz®, 400 series stainless steel or Type 2: Teflon and Kalrez
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### Service Requirements

Input Power	240 or 380 VAC
Compressed Air	Clean, dry and oil-free
Air/Gas Consumption	2-170 lpm, application dependent
Exhaust	Application dependent

### Omnibot Control Specifications

Dimensions	Varies depending upon application requirements
Display Interface	Windows®-based touch screen
Robot upgrade	IP67, Cleanroom, food grade options (not available with all configurations)
Operating Temperature	5 - 45° C (0 - 104° F)
Humidity	<95%

\*Wetted materials. Teflon®, Kalrez® and Delrin® are registered trademarks of E.I.DuPont de Nemours & Company. Specifications may change without notice.