



NEWS RELEASE

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Sonobond Sets a High Bar for Manufacturers of Ultrasonic Welding and Bonding Equipment

Two examples of Sonobond's innovative technology—the Dual Head SpliceRite™ Ultrasonic Wire Splicer and the SeamMaster™ High Profile Ultrasonic Textile Bonder—will be exhibited at the 2012 Assembly & Automation Technology Expo, June 19-21.

WEST CHESTER, Pennsylvania, March 28, 2012—Those attending the 2012 Assembly & Automation Technology Expo can look forward to seeing two impressive examples of Sonobond's welding and bonding equipment. In speaking of her company's participation in this important event, Sonobond Vice President Melissa Alleman said, "We recognize that the Expo gives us an excellent venue in which to familiarize a diverse and technically sophisticated audience with the advantages of our assembly equipment. So we are very pleased to be coming to Chicago and to be exhibiting two of our premier machines, the Dual Head SpliceRite™ Ultrasonic Wire Splicer and our SeamMaster™ High Profile Ultrasonic Textile Bonder.

"This equipment demonstrates how high Sonobond has raised the bar in terms of innovation and performance. However, Expo attendees don't have to take our word for it. They will be able to see this for themselves by coming to our exhibit at **Booth #849**

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in McCormick Place, June 19-21. In that way, they can learn more about these two groundbreaking machines, as well as our other ultrasonic welders and bonders. They'll discover how Sonobond is helping firms across a wide spectrum of industries find practical, cost-effective solutions to their specific production and assembly requirements."

Many Applications for Ultrasonic Welders and Bonders

Sonobond's ultrasonic metal welding technology—which includes the Dual Head SpliceRite to be exhibited in Chicago—has many uses. It is ideal for welding stranded wire-to-wire and wire-to-terminal applications in the assembly of electrical wire harnesses and bus bars. It is used to weld terminals to lithium-ion batteries, foil-wound capacitors, thin aluminum or copper foil, and electrical contacts. This technology also plays an important part in the manufacture of fuses/circuit breakers, ignition modules, starter motors, and photovoltaic panels. And Sonobond ultrasonic metal welders are used to close HVAC tubing, replacing crimp and solder methods.



The SeamMaster High Profile Textile Bonder—the other Sonobond unit to be exhibited at the 2012 Assembly & Automation Technology Expo—is an example of how Sonobond technology offers unique advantages to the nonwovens and textiles industries. Applications for ultrasonic bonding include general purpose sewing, filtration assembly, manufacture of medical disposables that help satisfy tough OSHA requirements, production of ribbons and trims, and the assembly of ballistic vests and body armor.

Sonobond's Unique Dual-Head Systems

Sonobond's commitment to attaining ever higher levels of performance is shown in its development of dual-head ultrasonic technology.

In the period of 2004 to 2008, Sonobond was involved in a joint venture with Ford Motor Company and others to help the automotive industry find ways to successfully

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weld various aluminum alloys at sheet thicknesses up to 3 mm. each. The result was Sonobond's revolutionary Dual Head Spot Welder. This system introduced energy from *both* sides of the weldment. This effectively accommodated the desired thickness of metal, shortened the required weld time, and substantially reduced sticking between the welding tip and the aluminum.

Following this achievement, Sonobond began exploring ways to apply its dual-head ultrasonic technology to wire splicing. The result was the Dual Head SpliceRite.

Unequalled Wire Splicing Capacity

The assembly of wire harnesses is an important application for ultrasonic metal welding. This process creates solid-state metallurgical bonds with high conductivity *without* the need for filler materials. No clipping, soldering, crimping, or dipping is required. It does *not* produce arcs, sparks, or fumes and does *not* melt the assemblage.



The *unique* capabilities of the Sonobond Dual Head SpliceRite make it ideal for assembling the heavy-duty cables used for cars, trucks, trains, and industrial machinery. Typical ultrasonic welders can accommodate wire bundles up to 40 sq. mm. But thanks to its dual-head construction, the Sonobond machine can handle much larger wire bundles—*up to a maximum of 100 sq. mm.—with just one pulse*. It can even accommodate *tinned wires* up to 60 sq. mm. *No other ultrasonic unit available today can equal this capacity with a single hit.*

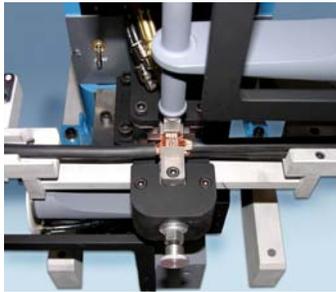
The Dual Head SpliceRite Ultrasonic Wire Splicer consists of two ultrasonic transducers and couplers—one above and one below the weld area—plus a set of pneumatically driven jaws. These jaws gather the wires tightly to a preset width. The upper tip then descends to complete the compressing of the bundle and ultrasonic power is applied. When the cycle ends, the jaws open so the wires can be removed.

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The process is environmentally-friendly and cost-effective. It produces no waste and consumes only minimal energy.

Unique Wedge-Reed System

All Sonobond metal spot welders, including the Dual Head SpliceRite, are *manufactured in the U.S.A.* and feature the unique Wedge-Reed bonding system of high vibratory force and low amplitude coupling. Shear mode vibration, parallel to the



welding surface, is utilized while the line of force is directly over the parts to be welded. This creates precise, dependable welds without bending stress or stalling. The patented Wedge-Reed system also lets Sonobond equipment accommodate most tinned and oxidized metals without pre-cleaning. *Only* Sonobond machines have this capability.

The Dual Head SpliceRite has other significant advantages that assure optimal performance and reliability. For example, it has heat-treated, tool steel taper lock tips that can last for 100,000 welds or more. These are designed for quick tooling changes and fool-proof placement. The machine also has a 3500-watt power supply with a microprocessor that stores and recalls up to 250 jobs. Welds can be controlled by height, by energy, or by time. The entire process is fast and does not melt the material.

Sonobond SeamMaster™ Bonders Deliver Unequaled Performance

Although similar in appearance and operation to traditional sewing machines, the SeamMaster series of ultrasonic bonders uses *no thread, glue, or other consumables*. Instead, these bonders seal, “sew,” and trim nonwoven and synthetic fabrics with ultrasonic vibrations. This eliminates concern about stitch holes or glue gaps. Problems with fraying and/or unraveling of bonded edges are also virtually eliminated.

SeamMaster ultrasonic bonders perform several labor-intensive operations in just *one* step to save manufacturers valuable time and money. These machines operate *four times faster than conventional sewing machines* and up to ten times faster than

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adhesive methods. They are frequently used in assembling filters and protective products, such as medical disposables that must comply with tough OSHA regulations for barrier seams. Sonobond offers a variety of interchangeable pattern rollers for slitting, embossing, and “stitching.” This technology is also used to produce such products as window shades, draperies, garments, blankets, awnings, automotive seats and carpets, athletic accessories, banners, safety garments, ballistic vests, aviation insulation panels, netting, and ribbons.

The *Only* Continuous-Bonding Rotary System

SeamMaster ultrasonic machines are the *only ones on the market today that feature a continuous-bonding rotary system*. As a result, they bond more efficiently, reliably, and quickly than other “plunge” type bonders. This equipment is especially useful in specialized applications in the textile, apparel, and engineered fabrics industries. It is available with a special fixture for sewing pleated filters and can be easily integrated into production lines as a modular unit.

A Popular Choice with Body Armor Manufacturers

Sonobond’s SeamMaster High Profile Bonder is ideal for hand-guided applications with tight tolerances, for heavy and bulky materials, and for working around curves. That’s because it has a higher clearance between the wheel and horn than other SeamMaster units.



This machine also plays a major role in helping to protect law enforcement and military personnel. It is highly effective in sealing the outer shell of body armor with the ballistic-resistant materials inside. This helps manufacturers comply with the latest National Institute of Justice (NIJ) submersion standards (NIJ 0101.06). These standards—recently revised to be even more stringent than before—now require a leak-proof seam, even after immersion in water for 30 minutes.

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Prior to this, National Institute of Justice standards only required protection from a spray shower.

An Invitation for Expo Attendees and Others

In discussing the upcoming 2012 Assembly & Automation Technology Expo, Sonobond Vice President Alleman said, "I strongly encourage anyone coming to Chicago, June 19-21, to visit us at **Booth # 849** in the McCormick Place Convention Center. Not only will we have our Dual Head SpliceRite and our SeamMaster High Profile Bonder on hand, but we will be happy to discuss how our many other Sonobond Ultrasonics machines are helping manufacturers and assemblers find effective solutions to their particular welding or bonding requirements. I might add that our customers are pleased to find that—in addition to their superb engineering—Sonobond equipment has the advantage of being *easy to operate with only minimal training*."

"Regardless of whether or not someone is coming to the Expo, we encourage them to take advantage of Sonobond's *free Ultrasonic Welding/Bonding Viability Test*. Companies can submit their materials and we will provide a sample weld or bond. There is no cost or obligation for this service. However, it is an excellent way to see what our technology can do and to determine which of our machines is best for a given application. Once a company decides to incorporate our ultrasonic equipment into their production process, we work hard to accomplish this as seamlessly as possible. You can count on Sonobond for superb customer service and for the very best technical support before, during, and after installation."

Industry Leaders Since 1960

It was 52 years ago that Sonobond—then known as Aeroprojects—received the first patent ever awarded for ultrasonic metal welding. Over the intervening years, the company has earned an outstanding reputation for its pioneering work and quality-engineered products. Sonobond currently manufactures a complete line of ultrasonic

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bonding and welding equipment for firms in the automotive, appliance, solar, electrical, filtration, aerospace, medical, body armor, and apparel industries.

Convenient Ways to Learn More

For additional information about the Dual Head SpliceRite Ultrasonic Wire Splicer, the SeamMaster High Profile Ultrasonic Bonder, and other Sonobond equipment—or to find out about Sonobond's free, no-obligation Ultrasonic Welding Viability Test—visit www.SonobondUltrasonics.com or call 1-800-323-1269. You can also contact Vice President Melissa Alleman at MAlleman@SonobondUltrasonics.com for immediate service.

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[Suggested photos with captions]

[Close up of the Dual Head SpliceRite]

The Dual Head SpliceRite™ Ultrasonic Wire Splicer is one of two Sonobond machines that will be exhibited at Booth #849 at the 2012 Assembly & Automation Technology Expo in Chicago, June 19-21. This is the only ultrasonic metal spot welder that can accommodate wire bundles with cross-sectional areas *up to 100 sq. mm. with a single pulse.*

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[Example of a metal weld]

Sonobond has raised the bar to new levels with its dual-head technology. For example, the Dual Head SpliceRite™ Ultrasonic Wire Splicer creates solid-state metallurgical bonds without clipping, crimping, or dipping. It can even accommodate tinned wires up to 60 sq. mm. with one hit and without pre-cleaning. *No other ultrasonic metal welding system can weld oxidized or tinned surfaces.*

[SeamMaster High Profile Ultrasonic Bonder]

The Sonobond SeamMaster™ High Profile Ultrasonic Bonder seals, sews, and trims nonwoven and synthetic fabrics in one quick, reliable step that requires no thread, glue, or other consumables. This machine operates four times faster than traditional sewing machines and will be exhibited at the 2012 Assembly & Automation Technology Expo in Chicago.

[SeamMaster HP - Head]

Bulky fabrics and hand-guided operations are no problem for the Sonobond SeamMaster™ High Profile Ultrasonic Bonder. All SeamMaster ultrasonic machines operate rapidly and feature the *only continuous-bonding rotary system in the industry.* They work very much like a typical sewing machine and are more efficient and reliable than other “plunge” type bonding equipment.