



NEWS RELEASE

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Sonobond's Ultrasonic Metal Spot Welders are Carefully Custom-Tooled to Meet the Specific Needs of Each Individual Customer

Manufacturers know they can rely on Sonobond for tooling modifications that produce superior welds for their wire-to-terminal and sheet metal applications.

Vice President Melissa Alleman announced today that Sonobond remains committed to providing the very best in custom tooling for its ultrasonic metal spot welders. She said, "We realize that each application is unique and that every



company has different production requirements. So we work closely with our customers to meet their specific needs. This is a critical part of the service we provide. We are ready and equipped to make the tooling modifications that ensure our machines will produce the top-quality, consistent welds the customer demands."

A Step-by-Step Approach to Every Application

In further describing Sonobond's custom-tooling process, Alleman said, "The tooling required will vary according to the application. We have found that customization is most often necessary when a machine is to be used for wire-to-terminal or sheet metal ultrasonic spot welding. But before we even consider the tooling, we must make certain our ultrasonic metal welding technology is right for the

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job. This is our #1 priority. For example, we may need to confirm that we can successfully weld wires to terminals involving tinned materials. (Sonobond equipment *can* weld most tinned and oxidized metals.) Or we may need to be sure our ultrasonic welder can handle an unusual part configuration.

“After we have established that our ultrasonic metal spot welder can accomplish the basic tasks demanded of it, we set to work to determine what tooling adjustments are needed for that *specific* application. To do this, we carefully consider the geometry and specifications of the finished part. Then we design tooling that will hold the various pieces together in the proper orientation while the ultrasonic weld is being completed—but without unnecessarily complicating the load and unload operations. We check the finished welds to make sure the customer’s dimensional tolerances, as well as their electrical and mechanical requirements, are all met. The customer is invited to review the operation or is sent parts to check against his specifications before we ship. In some cases, we have our technician present at the customer’s site for checkout and approval.”

“In other words, we work closely with plant engineers and other manufacturing personnel to provide the tooling modifications that ensure fast, reliable, cost-effective ultrasonic welding. With the exception of wire-to-wire applications—which can use our standard jaw set and readily-available tips—some amount of tooling customization is usually needed before our metal spot welder takes its place in their production process.”

Custom-Tooling for Blue Jeans Cable

Blue Jeans Cable in Seattle, Washington is a manufacturer of professional-grade cabling for home audio and video components. They sell their products direct to the consumer.

Before discovering the advantages of Sonobond’s ultrasonic metal welding technology, the company was using a mechanical screw joint to produce its speaker cables. However, after learning about the SonoWeld® 1600 Ultrasonic Spot Welder at

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a trade show, Blue Jeans Cable asked Sonobond to design tooling which could be used to assemble the banana plugs that insert the wires coming from amplifiers or receivers into speakers.

The company was impressed by the SonoWeld 1600 because of its built-in microprocessor that permits storage and recall of over 250 weld protocols, as well as automatic frequency control, overload protection, and automatic quality monitoring. The machine also has heat-treated, tool steel Taper Lock Tips that can perform up to 100,000 welds before being replaced, which is a quick and easy procedure.

Blue Jeans Cable wanted the SonoWeld to assemble an affordably-priced plug with superior electrical and mechanical integrity. The plug needed to be stronger and more reliable than those that could be assembled with more labor-intensive—but less



effective—soldering or mechanical methods. To accomplish this, the ultrasonic metal spot welder had to be able to hold the company's custom-designed banana plugs firmly in place so that the #10 and #12 stranded copper wires could be inserted into the back of the plug and then fused directly to the brass surface.

Sonobond worked with the company to achieve the desired results. In the words of Blue Jeans Cable's management, the banana plugs assembled on their 1500-watt SonoWeld 1600 create "a bond of remarkable strength and low electrical resistance" and ensure the "best physical durability and electrical integrity of any speaker cable."

Sonobond's Patented Wedge-Reed Bonding System

All of Sonobond's ultrasonic metal spot welders are made in the U.S.A. and feature the unique, patented 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 true metallurgical bonds that are precise and dependable. There is no bending stress or stalling.

Sonobond's is the only ultrasonic system that is capable of reliable one-pulse welding of most oxidized and tinned metals without pre-cleaning.

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Free Ultrasonic Welding Viability Test

Determining whether a specific machine is right for a particular application is easy, thanks to Sonobond's *free* Ultrasonic Welding Viability Test. Companies are encouraged to submit their non-ferrous materials to Sonobond to have sample welds made. There is no cost or obligation for this service.

Once a firm decides to make a purchase, Sonobond will work with them to ensure that the installation is as seamless as possible. This includes working with company personnel to make any necessary custom tooling and/or modifications to the ultrasonic welding equipment. Customers can count on Sonobond for superior service and solid technical support every step of the process—before, during, and after installation.

Over a Half-Century of Leadership and Innovation

Sonobond is a global leader in the application of ultrasonic welding and bonding technology. In 1960, the company—then known as AeroProjects—received the first patent ever awarded for ultrasonic metal welding. For more than 60 years, Sonobond has established and maintained a well-earned reputation for its pioneering work and quality-engineered products. Its many customers include leading firms in the electrical, automotive, appliance, solar, aerospace, filtration, medical, and ballistics industries. Sonobond equipment is environmentally-friendly and easy to operate with only minimal training.

Additional Information

To learn more about Sonobond products or for information about the free, no-obligation Ultrasonic Welding Viability Test, visit the company's website at www.SonobondUltrasonics.com or call 800-323-1269. For immediate service, contact Vice President Melissa Alleman at MAlleman@SonobondUltrasonics.com.

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[Photos with captions]

[SonoWeld 1600]

All of Sonobond's ultrasonic metal spot welders, like this SonoWeld® 1600, are made in the U.S.A. and utilize the patented Wedge-Reed bonding system. Sonobond works closely with customers to design and build custom tooling for their specific needs. As a result, manufacturers can depend on these environmentally-friendly, easy-to-operate machines to deliver the best in fast, reliable, cost-effective performance.

[Banana Plug Custom Tooling for Blue Jeans Cable]

Blue Jeans Cable is a leading manufacturer of professional-grade cabling for home audio and video components. In order to ultrasonically assemble banana plugs like the one shown here, they asked Sonobond to design custom tooling for the SonoWeld® 1600 Ultrasonic Spot Welder. According to Blue Jeans Cable, the bonds created on this unit have "remarkable strength" and "the best physical durability and electrical integrity of any speaker cable."

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