

Offering reliability, consistency and versatility in ultrasonic packaging assembly



*Pour Spouts,
Fitments &
Gable Tops*



*Handles
& Film*



*Tubes
& Pouches*



*Clamshells
& 2-piece
Blister Packs*



*Corrugated
Plastic
Containers*

Ultrasonics is fast replacing the more traditional ways of sealing packages, especially when film, laminate, or coated material are used in packaging food, medicine and other non-durables. And Dukane Ultrasonics is fast becoming the most trusted name in ultrasonic application for packaging. Why ultrasonics?

Because it's the faster, cleaner, safer and more economical way to assemble packaging. Ultrasonics uses vibratory energy and frictional heat to seal plastic at the joint area. And since only the joint area heats up, there is no threat of contamination or damage to the product. Why Dukane Ultrasonics? Because only Dukane offers the equipment, customized solutions and unparalleled customer support to meet your assembly needs for better, economical packaging.

With over 25 years of experience in ultrasonic joining technology, Dukane has the capabilities to handle the diversity of today's packaging applications. From basic low-cost welders to advance process control equipment, Dukane systems offer fast, energy-efficient processing. From the initial consultation to installation and follow-up, Dukane's worldwide network of ultrasonic experts are always available for total customer support, service, and training.

Dukane's ultrasonic assembly equipment is packed with features that add up to superior performance and extended service life. For instance, **Dynamic Process Control** enables the assembly process to be controlled by the major process variables (time, distance, absolute distance, energy, peak power, force, velocity and amplitude) ensuring a level of versatile process control and finished part quality unmatched by the competition. **Auto Trac Tuning** automatically maintains a consistent operating frequency under varying temperature and loading conditions. Continuous-duty applications? No problem! **Line and Load Regulation** compensate for power fluctuations and assure constant amplitude so that delicate materials such as thin films are assembled successfully.

Dukane welders are designed to work hard so that you don't have to. Functional reliability. Versatile process control. User-friendly operation. Easy maintenance. Dukane is the ideal choice for ultrasonic package assembly.



Dukane ultrasonic packaging assembly just makes more sense

Ultrasonic assembly is a fast, clean, efficient and repeatable process that produces strong bonds while consuming very little energy. No solvents, adhesives, mechanical fasteners or external heat are required. Finished assemblies are strong and clean, environmentally friendly and free of any substance that may become a part of the package itself. Part assemblies are cycled quickly because the energy transferred to the joint and released as heat occurs very rapidly and is confined to the immediate joint area.

Dukane ultrasonic assembly system tooling can be quickly changed to accommodate different applications - a flexible and versatile advantage not found in many other assembly processes. The relatively low-cost investment in ultrasonic equipment versus its high reliability, long life, ease of use and consistent, repeatable performance makes ultrasonic packaging assembly the sensible method of assembly.

Patented Electronic Control Circuit for Power Regulation

It responds 100 times faster than previously used methods. It is particularly valuable in continuous ultrasonic processes such as many fabric and film applications where an uncontrolled increase or decrease in power, will result in under or overweld product.



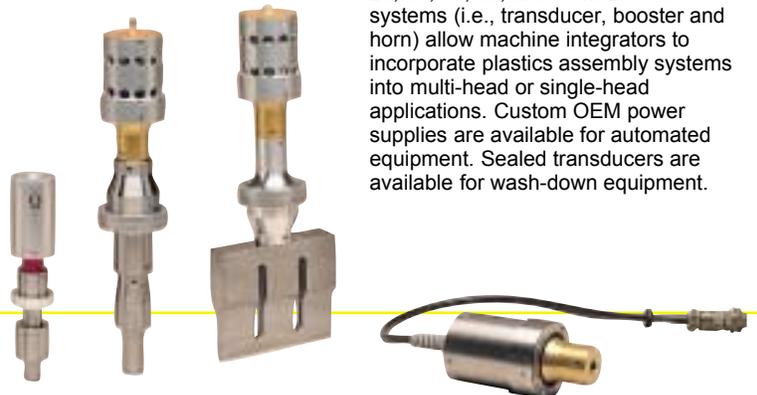
Continuous Film Sealing



Modular Design

Ideal for System Integration

20, 30, 40, 50, and 70 kHz Probe systems (i.e., transducer, booster and horn) allow machine integrators to incorporate plastics assembly systems into multi-head or single-head applications. Custom OEM power supplies are available for automated equipment. Sealed transducers are available for wash-down equipment.



Combining technology and speed for cost-effective ultrasonic assembly

The tooling is a critical part of any packaging application. And since each application is unique, Dukane custom designs each horn and fixture to exacting standards. **Finite element analysis** is an advanced design technique used by our engineers to evaluate horn design and optimize performance before any material is machined. **Advanced CNC machining** equipment is used to ensure that acoustic horns are machined to precise tolerances. **Custom engineering** for special applications goes far beyond modifying our standard product line to meet your needs. It means things like custom software development and system design and construction. **Quality and continuous product improvement** are ongoing processes at Dukane. And the results can be seen in the performance of our ultrasonic welding equipment.

From benchtop presses to portable units, Dukane Ultrasonic equipment works fast - up to four times faster than RF sealing. They not only improve the quality of your packaging, they also save money by increasing

production and lowering assembly and energy costs.



Dukane's Technical Centers offer custom solutions for better packaging

Our six technical centers located across the United States play a vital role in ultrasonic consultation and problem solving. Field sales and applications support engineers work closely to respond quickly with unique solutions for customer's needs in their region. Each technical center offers a wide range of services including applications engineering, tooling design, systems integration, service and support and training.

Automated System Increases Productivity
Dukane rotary tables are space-saving, self-contained turnkey systems designed to improve productivity and reduce operator fatigue.



Here are just a few of the thermoplastic packaging materials that can be ultrasonically welded:

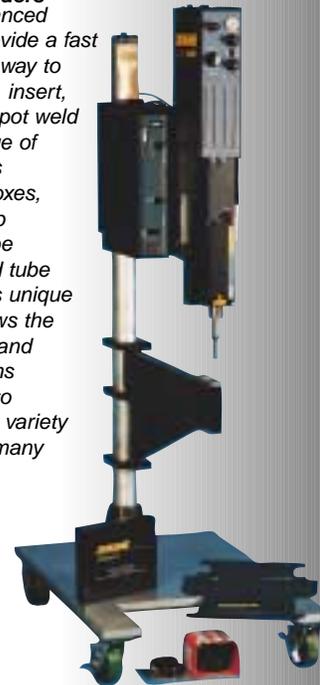
Material Type	Polyethylene	Polypropylene	Nylon	PET/ PETE	PETG/ RPET	PVC	Styrene	Urethane
Blisters				X	X	X	X	
Clamshells				X	X	X		
Tri-Folds				X	X	X		
Films	X	X	X			X	X	X
Laminates	X	X	X			X	X	
Coated Material	X	X	X			X	X	X

Since there are many possible combinations of materials, please send your material in for a free feasibility test.

As the technological leader in ultrasonic assembly for over a quarter of a century, Dukane is committed to total customer satisfaction. We offer the same commitment to you.

To find out how Dukane Ultrasonics can offer you reliability, versatility and increased productivity for your packaging needs, contact your local Dukane Representative.

Dukane's Integrated Corrugated Plastic Welders
These advanced welders provide a fast and simple way to weld, stake, insert, swage, or spot weld a wide range of applications including boxes, crates, lamp shades, rope splices, and tube closures. Its unique design allows the horn travel and throat depths necessary to assemble a variety of parts in many sizes.



Dukane Ultrasonics
2900 Dukane Drive
St. Charles, IL 60174 USA
+1 TEL (630) 797-4900
+1 FAX (630) 797-4949
WEB www.dukane.com/us
E-MAIL ussales@dukane.com