

PRODUCT LINE



ULTRASONICS

Ultrasonic welding uses a high frequency, vertical motion to produce heat and the flow of thermoplastic material at the interface of mated parts. Pressure is maintained after the delivery of energy is stopped to allow re-solidification of interwoven plastic at the joint, securing the parts with a homogeneous or mechanical bond. This process offers an environmentally friendly means of assembly as opposed to conventional adhesives or mechanical fasteners.



IMPULSE STAKING

Impulse Staking is a process that creates heat on-demand for staking plastic bosses of various sizes. The process is perfect for sensitive electronics and parts where excessive heat and pressure may cause damage to visible areas. At the end of each cycle, tips are cooled to room temperature within seconds preventing accidental operator injury and eliminating the need for constant heating.



VIDEO DEMO



VIBRATION WELDING

Vibration welding produces a side-to-side scrubbing motion of low frequency energy, but it's the high amplitude that creates frictional heat at the interface of the parts. Vibration welders are capable of very high pressures and have the ability to join very large components without the use of conventional adhesives or mechanical fasteners.



VIDEO DEMO



INDUCTIVE INSERTION

Inductive insertion is a process by which threaded metal inserts are rapidly heated through the use of induction and then inserted into plastic parts for a strong and lasting bond. The process can be tailored to a range of parts and can be used with three, four, and six-axis robots for parts with multiple insert locations. Parts with three or fewer inserts on the same plane may benefit from servo or pneumatic actuation.

SPIN WELDING

Spin Welding is ideal for cylindrical or spherical assemblies, and can produce a bond stronger than the parent material with hermetic seals possible for most thermoplastics, including engineered resins. Filter and resin cartridges, twin-wall drinking cups and spools are just a few of the applications well suited to Spin Welding, but the process has wide ranging capabilities.



TOOLT^{EX} INC.

PLASTIC ASSEMBLY MACHINERY & TOOLING



HOT STAMPING

Using the precise delivery of heat and pressure, Hot Stamping transfers the text and/or image from a die by depositing dry ink from a Mylar carrier. Hot Stamping is ideal for: Logos, product names, instructions, indicators and a countless variety of graphic information can be applied to flat plastic surfaces by hot stamping. "Tipping" is another common process where the part has raised letters with a flat surface and a flat die deposits the dry ink only to those surfaces.



HEAT STAKING

Heat Staking uses a continuously heated forming tool that lightly contacts and conductively heats the boss to a controlled collapse against the mated part. Cooling is applied near the end of the cycle to re-solidify the shaped boss and aid in release of the heated tool.



HOT PLATE WELDING

In the hot plate welding process, parts are brought into contact, or nearly in contact, with a heated platen or focused infrared heat source to encourage flow at the joint. The platen is quickly retracted and the heated parts are brought into contact with each other at the interface under pressure until the material is sufficiently cooled and the bond is secure.



Need help with product applications?
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