



Branson helps Kwik Products answer the challenge of a mandated materials change.

Background

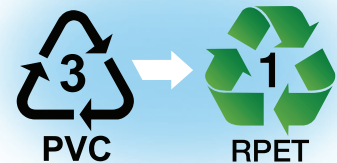
Kwik Products manufactures and markets Kwik Loader, “the world’s easiest trimmer head” for string trimmers. Kwik Loader, Line and Blade products rely on a strong and transparent PVC clamshell package to hang on retailer shelves. With increased pressure to limit or eliminate use of PVC in rigid packaging in California as well as a number of other states, Kwik Products wanted to change to a more environmentally-friendly polymer.

Kwik Products uses three BRANSON 2000 Integrated Welders (IW), two of them since 1999, to ultrasonically weld over 2-million PVC clamshell packages annually.

Challenge

To ensure future compliance nationwide, Kwik Products converted from PVC to recycled PET (RPET) for their entire line of products that use the clamshell package. Unfortunately, with this change in material, Kwik Products was experiencing a lot of issues. “We had a high rate of poor welds with the RPET which is far more brittle than the PVC. We tried several setting variations and were not successful” said Kwik Products Production Manager, Ed McConnell. The solution seemed to require more weld amplitude. But when Kwik Products tried increasing amplitude by using a different booster, the increased heat caused the weld to either fully penetrate the RPET or crack the material.

Kwik Products decided to call in Branson to determine what changes were needed while still maintaining use of their existing Branson 2000 integrated welders.



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Solution

Working in close collaboration with Kwik Products, Branson tested alternative stitch anvil designs, as well as welder settings and horn designs in its state-of-the-art Application Development Lab in Danbury CT.

“Branson’s material and welding expertise was very helpful. They did trials in their lab plus tested on site here in our plant in Arizona” added Ed McConnell. The final prototypes tested employed not only a redesigned horn, but a new inle stitch weld pattern and use of gold boosters to increase weld amplitude. “The final solution produced a weld so strong that the RPET would break before the weld came apart.”

Results

Within just a few weeks, Branson was able to help Kwik Products answer the challenge of the new RPET plastic materials and get back into production.

Kwik Products achieved the weld they needed and was able to return to full-scale production with a clamshell package that satisfied the new environmental regulations, shipping millions of clamshells annually.

