



Branson brings people and technology together to spin weld the KarmaCap and preserve the launch of Karma Wellness Water

Background

Karma Culture was introducing a new vitamin water that promised greater nutritional value than competitors' because it protected its vitamin ingredients from the deteriorating effects of water until the time of use. To achieve this, Karma developed the "KarmaCap," a unique reservoir cap that requires an air/watertight seal between the upper "capsule" portion of the cap containing vitamin powder and the lower, screw-on base of the cap. This design allows the user to puncture the seal and release the vitamins into the water directly before drinking.

Challenge

Karma's initial efforts to seal the reservoir portion of the KarmaCap to its screw-on base portion were ineffective. The seal leaked, allowing water to mix with the vitamin powder prematurely.

Branson faced 3 challenges. They needed to develop a spin-welding process that would:

1. Create the necessary air- and watertight seal.
2. Result in minimal flash for aesthetic and product integrity.
3. Deliver a perfect seal at a cycle time of 20 units per minute.

Solution

Branson collaborated closely with Karma to design a custom tool that utilized a knurl to grip the LDPE parts securely during spin welding. The Karma/Branson team then developed a prototype fixture and spin tool to demonstrate that its joint design and welding process would successfully create a clean, optimal seal. However, the standard machine software would not deliver 20 cycles per minute. So Branson control engineers created a customized program and incorporated it, along with other modifications, to the welder/application setup; then the machine could create the seal with only three rotations of the part.

Results

Karma achieved its goal of producing a perfect, hermetic seal for its patented KarmaCap at the necessary 20 cycles per minute and is initiating production with four Branson SW300 servo-motor-driven spin welders, which Branson also helped install and set up for production.

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