

For over 35 years, Hi-Tech Products has been a top manufacturer of die cut components. Hi-Tech's many capabilities, including RF Welding, are performed in certified cleanrooms in FDA registered facilities. Hi-Tech Products has extensive experience with medical device assembly, packaging, and manufacturing; producing medical devices for wound care, diagnostics, microfluidics, and the latest in wearable sensor technologies.

Why choose Hi-Tech Products for your RF Welding?

Competitive pricing and High Quality - Medical RF Welding processes are conducted in a certified cleanroom in our Tijuana Mexico facility, offering competitive labor rates with US engineering. Our Tijuana facility, with ISO 13485:2016, and ISO 9001:2015 certified quality systems, offers extensive cleanroom assembly and packaging capabilities to compliment the RF Welding process.

RF Welding Expertise - Hi-Tech's medical products manufacturing expertise includes Radio Frequency Welding or RF Welding, technology that uses electromagnetic energy to form a permanent bond that is as strong as the original thermoplastic materials being welded. RF Welding is also known as dielectric welding or high-frequency welding.

You will want to choose a manufacturer that understands the many factors that affect the strength and seal quality created by RF Welding. Weld thickness, material thickness, tooling layout, and machine control are some of the most important factors in creating a good weld or seal. RF Welding can create very robust hermetic seals. Welds are subject to pull tests, leak tests, and optical tests to determine that the correct conditions and highest weld quality has been achieved.

Hi-Tech Products is capable of RF Welded the many materials used in manufacturing medical devices and medical packaging. Whether your product requires PET, PETG, PVCs, Thermoplastic Polyurethanes (TPU), LDPE/EVA, or Open Celled Polyurethanes; we are prepared to accommodate your product manufacturing requirements.



RF Welding is the choice

There are several inferior alternatives to RF welding including gluing, sewing, or hot air.

Sewing - RF welding provides a more consistent, air and liquid tight seal than sewing. When sewn seams are stressed, the thread takes the pressure and could break. RF welds provide a much stronger seam or bond by evenly distributing stresses throughout the material.

Gluing or Adhesives - Gluing can provide an air or liquid tight solution, however glued seams are subject to failure once the adhesive has worn out. RF Welding is a better manufacturing process as gluing takes much longer than RF welding and often uses hazardous solvents that are harmful to the environment.

Hot Air Method - The hot air method applies heat to the outside of the materials being bonded to melt them and create a bond. This method is restricted by material thicknesses. Thicker materials will not melt in the middle and bond, while outside layers will be over heated or burned. RF welding heats the parts being bonded from the inside out and is the best method for forming air tight seams.

RF Welding is used in a number of medical product applications:

- Negative pressure wound therapy devices
- Minimally invasive surgery access ports
- Patient and equipment drapes
- Hospital bed surfaces
- Fluid containment
- Compression therapy garments
- Inflatable dissection balloons

Hi-Tech Products is much more than an RF Welder.

Most products require multiple manufacturing processes to complete their production and reach the marketplace. Hi-Tech Products not only offers RF Welding, but also a full spectrum of die cutting and converting capabilities. Hi-Tech provides expert guidance from prototype through clinical trials to final production parts as well as OQ / PQ validation.

Hi-Tech Products - Your medical products contract manufacturer.

Hi-Tech Products

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