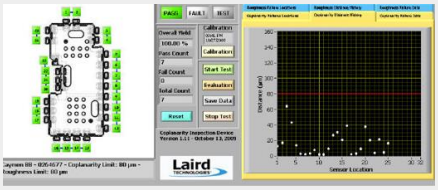
Laird Medical Device Capabilities

MEDICAL DEVICE CAPABILITIES

Laird Performance Materials is a global leader in producing transformative design concepts by leveraging our extensive experience with innovative materials and supporting our customers' most challenging problems. In the complex and competitive world of medical devices, we offer these same capabilities but with increased awareness of the unique design challenges, regulatory framework, and critical nature of each component. We invite you to look at the variety of capabilities Laird Performance Materials has to offer.

- High Precision metal components, for structural, mechanical and EMI shielding purposes.
- Experts in materials, design, and evaluation of challenging small structures with critical path reliability.
- Collaborate with partners to achieve high manufacturing efficiency while fulfilling design intent:
    i. Strive to understand design intent so we can constructively engage on tolerancing and manufacturing controls.
    ii. Clearly capture design requirements critical to producing high precision components that can be well characterized, controlled, and manufactured efficiently in high volumes.
- Utilize advanced automation to improve throughput and combine assembly processes:
    i. Ensuring that parts are prototyped and manufactured in a statistically capable process thereby ensuring a smooth transition through IQ/OQ/PQ and successful functional validation.
    ii. Sourcing suppliers who understand as an organization the process and the critical nature of each part and best practices for controlling key features and attributes.
    iii. Achieving high volume production, while also maintaining challenging tolerances, and being able to deliver a cost competitive product.

EXAMPLE OF THE HIGH VOLUME AUTOMATED INSPECTION SOLUTIONS LAIRD PERFORMANCE MATERIALS HAS IMPLEMENTED



Coplanarity distance history

System permits 32 inspection points, including internal walls.

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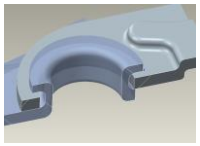
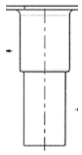
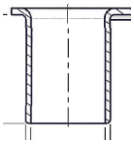
INSULIN PUMP / CONTINUOUS GLUCOSE MONITORING DEVICE CAPABILITIES



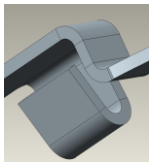
- Pivoting feature created from single strip of material
- Material is stamped in distinct steps into two components which are then joined in-die



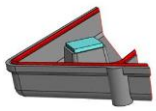
- Deep drawn features with very high precision
- Feature is 9mm in height which is held +/- 0.09mm
- Diameter is 3.0mm



- Diameter of 3mm which is held +/- 0.025m
- Linear areas generated by direct stamping operations (~10mm) held to +/- 0.04mm



- Linear areas generated by direct stamping operations (~10mm) held to +/- 0.04mm
- Manage complex bend angles with high repeatability and critical surface finishes in areas with multiple hit



- Employing combinations of precision metals, plastics, thermal polymers, conductive elastomers, absorbers and/or conductive fabrics, multi-functional embodiments manage electromagnetic interference and heat as they minimize footprint

- Molded, Extruded, and Co-Extruded Electrically conductive/non-conductive elastomers for a variety of electrical shielding, grounding, and contact applications.
- Design/build capability to apply a variety of elastomers and conductive fillers.

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