



ENGINEERING QUALITY ASSEMBLY AND TEST SYSTEMS SINCE 1993.

Expert Solutions

Integrated LASER Welding

TECHNICAL BULLITEN

Customer Objective

Design and supply a series of stations that can be used to assemble and safely LASER weld, check and LASER cut miniature parts in a medical devices.

Project Description

INVOTEC Engineering has developed a standard station platform to supply complete, "turn-key" stations that include integrated part fixturing, fume extraction and safety circuits to manually assemble and automatically weld, verify the integrity of the welded joint and cut to trim the part to the specified length. Using the standard station, coupled with the LASER welding and cutting technology developed for this type of product, provides a method of assembly for the miniature components that are otherwise, difficult to handle.

Manufacturing Benefits

Miniature part handling and assembly is simplified with an error-proofed process that integrates part fixturing for manual assembly with part present sensors, holding tooling for the welding and cutting operations, and weld joint verification through an automatic pull test operation. Additional operations can be added to each station with a custom designed solution that utilizes the indexing transfer dial with multiple fixture locations.

Integrated Technologies

Unitex Miyachi LASER welding system integrated with a LASER safe operation enclosure, fume extractor, pull test analog load cell, custom part fixturing, integrated error-proofing sensors, safety circuits, Allen-Bradley PLC and operator interface terminal.

