

# APPLICATION NOTES

## IMPACT Solutions for Medical Industry High Precision Needle Inspection

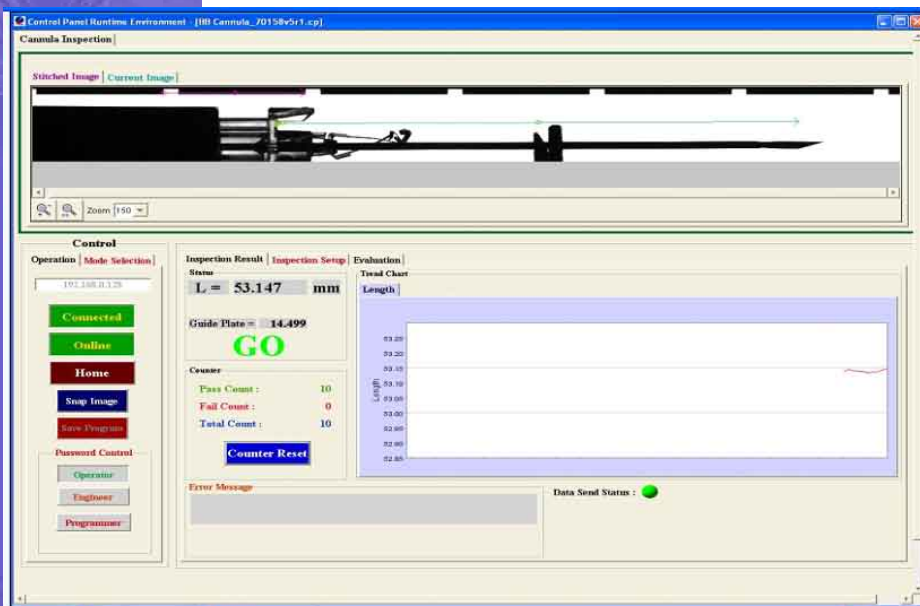
### Application Description

This application example features a needle inspection application installed at BBraun Medical Industries, Penang, Malaysia, where a PPT9200 (1600X1200 pixels) high resolution camera is used to measure the needle length and insertion depth. This application requires a 10-micron repeatability, with 60+ product types ranging from 25mm to 100mm in length. Up to 8 images along the length of the needle were taken and stitched together before the final measurement is taken. A high precision reference plate is positioned next to the needle to provide stitching references. Precision indexing hardware, vibration isolator, and special shields to minimize interference from exterior lights were few of the challenges that had to be conquered. Products produced from various machines have a certain allowable bent, bevel angle and twist angle tolerances, which resulted in various inspection settings for each product type. Fortunately, the flexibility and power available in the IMPACT software provide the necessary logic configuration to implement an effective part recipe management scheme to help with part change over.

### High Precision Needle Inspection



### Control Panels shows stitched image, inspection results and trend chart



### Application Highlights

- Measures Cannula and Capillary Lengths with 10 microns accuracy and repeatability
- Covers 60+ product types from 25mm - 100mm in length
- Designed to stitch up to 8 images using a high-precision reference plate
- Pop-up recipe selection menu makes part change over fast and simple
- Password protected setting panels prohibit vital settings from being altered
- Trend chart shows data from last 25 samples