

Ultra CASE STUDY

Advanced Manufacturing Practices: In-Die Measurement

For more information on this study, or to view other case studies, please visit www.ultratoolmfg.com.



The advantages of in-die measurement

- ▶ **Maintain Very Tight Target Tolerances**
- ▶ **Measure Variations in the Die**
- ▶ **Allow for Dimensional Flexibility**
- ▶ **Adjust Critical Features in Real Time**
- ▶ **Zero-Defect Production**

Maintain Very Tight Tolerances — Data is produced on each and every part, enabling tight tolerances to be monitored and held.

Measure Variations in the Die — With the use of analog sensors in the die, measurements are electronically gathered in real time to monitor variations in material and key features of the part (e.g. bend angles).

Dimensional Flexibility — Lower modification costs by successfully implementing customer-requested changes (e.g. bend angles) with no additional tooling costs.

Adjust Critical Part Features in Real Time — Electromechanical motor controls process in real time and self-adjust the die in real time.

Zero-Defect Production — A built-in mechanical system ejects parts if tight tolerances are not held, producing zero-defect part delivery.

Please read about our success with in-die measurement to the right.

(A video is available for viewing upon request.)

Specifications:

Date: October 2006
Plant: Ultra Tool & Manufacturing's production plant in Menomonee Falls, Wisconsin (greater Milwaukee area)
Part: Metal Stamping
Material: 1010 CRS
Thickness: .054
Part: Planting Finger
Quantities: 250,000/year
Press: 200 ton punch press
SPM: 60 spm
Shipping: Bulk Pack

Additional Information:
Secondary operations included heat treat and plating.

Summary:

Ultra Tool manufactured this part with a machine part tolerance.

The customer in this case requested changes to the part (e.g. bend angle) six documented times. Each time resulted in a cost savings to the customer because of no required tooling modifications.

No required tooling modifications saves time and money.

CONTACT US TODAY

Ultra Tool & Manufacturing, Inc.
W169 N5954 Ridgewood Dr.
Menomonee Falls, WI 53051
262-703-0455 Fax: 262-703-0468
www.ultratoolmfg.com

Please send RFQs to:
ultra.quotes@ultratoolmfg.com