PrintChek for Die-Cutters and Flexo-Folder-Gluers

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PrintChek – Full Sheet Inspection

- Familiar ClearVision interface
- Large full-sheet images
- Two-touch arming
- Easy to configure tolerances and tests
- Full local defect data collection
- Archive image management
Defect Types

- Sheet size
- Sheet rotation/skew
- Registration (Print-to-Print and Print-to-Sheet)
- Barcode quality
- Box damage including de-lam, splices and paper defects
- Print Defects:
  - Spots/hickeys
  - Stripes
  - Scratches/Scuffs
  - Missing print
  - Smearing
  - Double print/ghosting
  - Fading/drying
  - Incorrect color

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Installation Locations

- Prior to Die-Cutter
- Empty print section
- Dryer area
- Above or below sheet depending on machine-type
Installation Locations

Bottom-up United Die-Cutter 115”
Installation Components

BoxChek 7X Enclosure – includes cabinet air-conditioner

PrintChek 22” Monitor – optional second monitor
Components

- Line-scan cameras
- Air blow-off
- Lighting Modules
- Lighting Power Supplies
- Encoder
- Photoeye
Specifications

CAPABILITIES:
• Resolution – 0.5mm [0.020”]
• Minimum defect size – 2.0mm [0.080”]
• Color delta e differences of >3
• Max speed flexo – 420 m/min
• Max speed die-cutter – 300 m/min
Dust Management

- Blower – high volume, low pressure
- Plenum to generate directed flow
- Requires filter change
1. Load Order # and Product number
2. Load gold standard pdf file or…
3. Run sample sheet for live standard if new product
4. Live standard substitutes for gold standard in absence of pdf gold standard
5. Inspect each sheet to standard
6. Store defect data in SQL format
7. Store defect images
PrintChek Tests

- Blemish
- Print-to-Print
- Print-to-Die
- Board Size
- Board Rotation
- Code Reading
- Color
Product Recall and Auto-Arming

- Recall previously stored products upon arming
- Fully automate arming process using product database
- Automatically select different tolerance levels based on product/customer
Alarm Configurations

- Tailor alarm, sheet marking, rejection and notifications
- Can configure trend notifications
- Customize notifications for different defect type
- Different alarms for different product families
Defect Viewing

- Sort and filter defects by order number, date, error type
- Use filmstrip at bottom to look for specific defects
- View defect, standard, metadata and other views
- Different alarms for different product families
PrintChek Defects (Rotation)

Defect

Misfed Sheet – rotated ccw

Standard
**PrintChek Defects (Sheet problems)**

<table>
<thead>
<tr>
<th>Defect</th>
<th>Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delamination</td>
<td></td>
</tr>
</tbody>
</table>
PrintChek Defects (Print-to-Print)

Defect

Dark Blue register in through direction

Standard
PrintChek Master (Print-to-Sheet)

Defect

Misfed Sheet – print to top of sheet

Standard
PrintChek Defect (Print Blemish)

Defect

Faded Print

Standard
Optional MisCut Detection

- Photoeyes measure sheet
- Start
- Length – through direction
- Skew
MisCut SPC

- Track process data points
- Control and specification limit display
- Trend-based alarming
- Cp and Cpk monitoring
• Usage and quality statistics per camera/sensor
• Hosted by ClearVision® unit – no cloud data
• Excel export of job data and per-box data
# Quality Report

## Order Details

### Order

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Start Time</td>
<td>11/6/15 1:45 PM</td>
</tr>
<tr>
<td>Order</td>
<td>156012</td>
</tr>
<tr>
<td>Pass</td>
<td>65763</td>
</tr>
<tr>
<td>Fail</td>
<td>22</td>
</tr>
<tr>
<td>Fail Rate</td>
<td>0.03 %</td>
</tr>
</tbody>
</table>

### Sensors

<table>
<thead>
<tr>
<th>Fault Type</th>
<th>Count</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Code Faults 2</td>
<td>9</td>
<td>Number of Code Bars</td>
</tr>
<tr>
<td>Glue Faults 1</td>
<td>2</td>
<td>Volume Fault</td>
</tr>
<tr>
<td>Total Faults 1</td>
<td>2</td>
<td>Faulty Products</td>
</tr>
<tr>
<td>Total Faults 2</td>
<td>9</td>
<td>Faulty Products</td>
</tr>
</tbody>
</table>

Order Details

- Quality report format
- Fault classification

Back To List
MySystemChek

- Monitor multiple machines live from your desktop
- Observe usage and current run statistics
- Unlimited number of machines (shown as sites on example)
- Add new machines with a simple text string