

Inspection of Extruded Parts

Gaskets, Flat Parts, Aluminium Cross Sections & more



WHAT IS ScanINSPECT?

ScanINSPECT is a fully integrated, stand-alone process control, measurement and inspection workstation for use in many applications in multiple industries during the extrusion process.

ScanINSPECT uses a PC Windows-based software package integrated with a high-resolution, calibrated, A3 size flatbed scanner. This combination allows for inspection of parts at virtually any stage of production. Parts can be inspected versus Gerber data, CAD data and/or Golden parts.

WHY ScanINSPECT?

Today's extrusion manufacturers face many challenges due to ever-more complex customer specifications, faster turn-around times, smaller production runs, and tighter tolerances; all with the need for zero defects. ScanINSPECT can help to keep the manufacturing process under control to guarantee a quality product.

Reduce scrap, ensure that the end product is within specs, and impact your bottom line!

WHEN TO USE ScanINSPECT?

ScanINSPECT can be used at many stages of production such as:

- New Product Introduction (NPI) as a process setup tool to ensure all variables come together smoothly as a "virtual" product avoiding costly problems before full production starts with "real" products.
- Inspect both a first piece and the die
- An SPC sampling tool for high volume production to ensure the process stays in control.
- Inspect all parts in lower volume production to ensure high quality and minimize costly rework and warranty returns.

MULTIPLE INDUSTRY TOOL

ScanINSPECT can be used in a variety of industries such as:

- Automotive
- Aerospace
- Medical
- Military
- Electrical
- Machinery
- Construction
- Energy



MULTI-PURPOSE INSPECTION SYSTEM

ScanINSPECT is capable of performing many different types of inspection in a manufacturing facility. The system is ideal for inspection of 2D flat parts or the profile of 3D parts.

The combination of fast, easy programming and short inspection times allow for inspection of 100% of features on a part.

Flexible front and/or back lighting along with color or B&W imaging allow for the inspection of many types of parts. Parts with holes or cutouts can be easily inspected with backlighting and B&W imaging. Any feature that has a slight color difference relative to its background can be inspected using color imaging and powerful color separation algorithms.

ScanINSPECT can detect different problems due to variations during the manufacturing process:

- Die swell
- Flow rates
- Temperature
- Shrinkage
- Puller speed
- Vacuum sizing

SIMPLE OPERATION

The ScanINSPECT system can be quickly learned and is simple to operate. Operators can step between defects and zoom in and out to verify errors. Inspection reports can be easily generated. Calibrated high resolution images of parts can be stored for traceability.

AUTOMATIC INSPECTION

The ScanINSPECT system can automatically inspect the scanned part to Gerber or CAD data AND/OR to a Golden part. The inspection threshold is determined by the operator and each area outside of tolerance with this threshold is marked by a 'X' and number from 1 to n that can be further visually inspected, as needed.

SYSTEM FEATURES

WORKSTATION DESK SYSTEM

- Contact System
- Scanner Faces Up
- Part Faces Down
- Wet Parts (adhesive, etc.) with Standoffs
- Large Part Capability with Multiple Scans

SCANNING

- B&W, Gray or Color Imaging
- Top and/or Bottom Lighting
- NIST Certified Glass Plate Calibration
- Automatic Raster to CAD/Gerber Alignment

MEASUREMENT AND INSPECTION FUNCTIONS

- Verify feature sizes to 0.0005"
- User Defined or Automatic Inspection Accuracy Level Setting.
- Check Feature Size, Shape and Position
- Check CAD/Gerber Data against Scanned Image
- Compare CAD/Gerber Data against CAD/Gerber
- Check Scanned Image against Scanned Image
- Radius Calculation of Defined Shapes
- Point to Point Measurement Functions
- Measurement Report with Custom Names for each Measurement
- Perform Area Inspection Function of Scanned Features

OUTPUTS

- Pass/Fail Inspection Report
- Rework File Generation
- BMP, DXF and TIFF Files
- High Resolution, Calibrated Bitmap Images
- SPC Log file

TECHNICAL SPECIFICATIONS

SCANNER

- High-Resolution Color Flatbed Scanner, Size A3: (400/1000/2000/3200*/4000*/4800 dpi)
- Calibrated Accuracy: $\pm 0.0010''$ ($\pm 0.0254\text{mm}$)
- A3-Scanning Bed Area: 11.7" x 16.5" (297mm x 419mm)
- Maximum Work Area: 32.0" x 32.0" (813mm x 813mm)

COMPUTER*

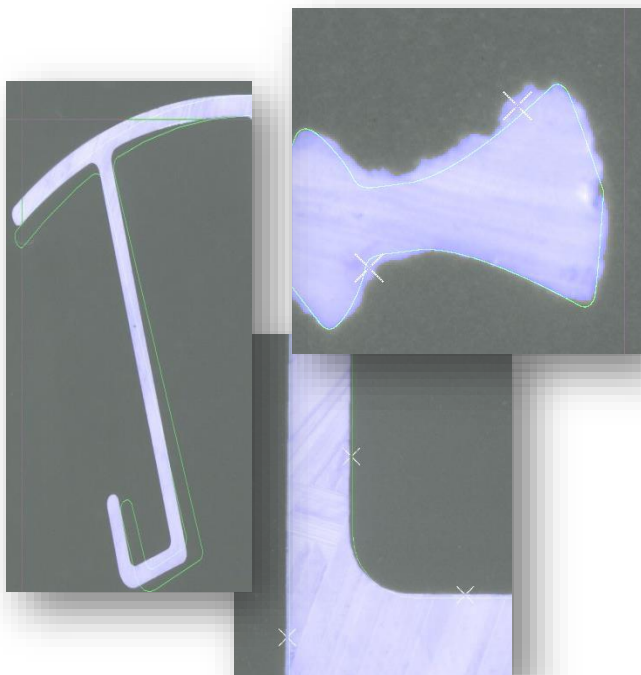
- Multi Core Processor - 3 GHz
- 1 TB 7200 RPM HD, 8 - 16 GB RAM
- Flat Panel Monitor
- Ethernet Connection
- Windows 10 - 64-Bit
- 2 avail. USB2 or USB3 ports

*Recommended customer supplied minimum PC requirements.

ADDITIONAL SYSTEM COMPONENTS

- Precision NIST Certified Glass Calibration Grid
- ConvertPLUS CAM Software
- Software Protection Key
- Custom Transmissive Lighting Package
- Custom Workstation Desk
- Scanning Accessory Package

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