

7 reasons to move to 100% print inspection

Why advance to 100% print inspection?

Print inspection has advanced greatly in the past few years, bringing huge cost, productivity and quality benefits to packaging converters. Now, the best print inspection is 100% inspection – meaning that 100% of the printed web is inspected 100% of the time.

On top of that, the best 100% inspection is 100% automatic inspection, made possible by the integration of print inspection technology in an end-to-end production workflow.

Your existing AVT print inspection system gives you a head start on the path to 100% automatic print inspection. You can upgrade it to a top-of-the-line, new-generation Argus Turbo HD series system and integrate your print inspection into an end-to-end automated workflow from Esko that also includes X-Rite certified color quality and accuracy.

It's a highly cost-effective way to gain all the advantages of 100% automatic print inspection that spans brand specification and prepress to production, all the way to fulfillment.

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1. Take a major leap forward in technology

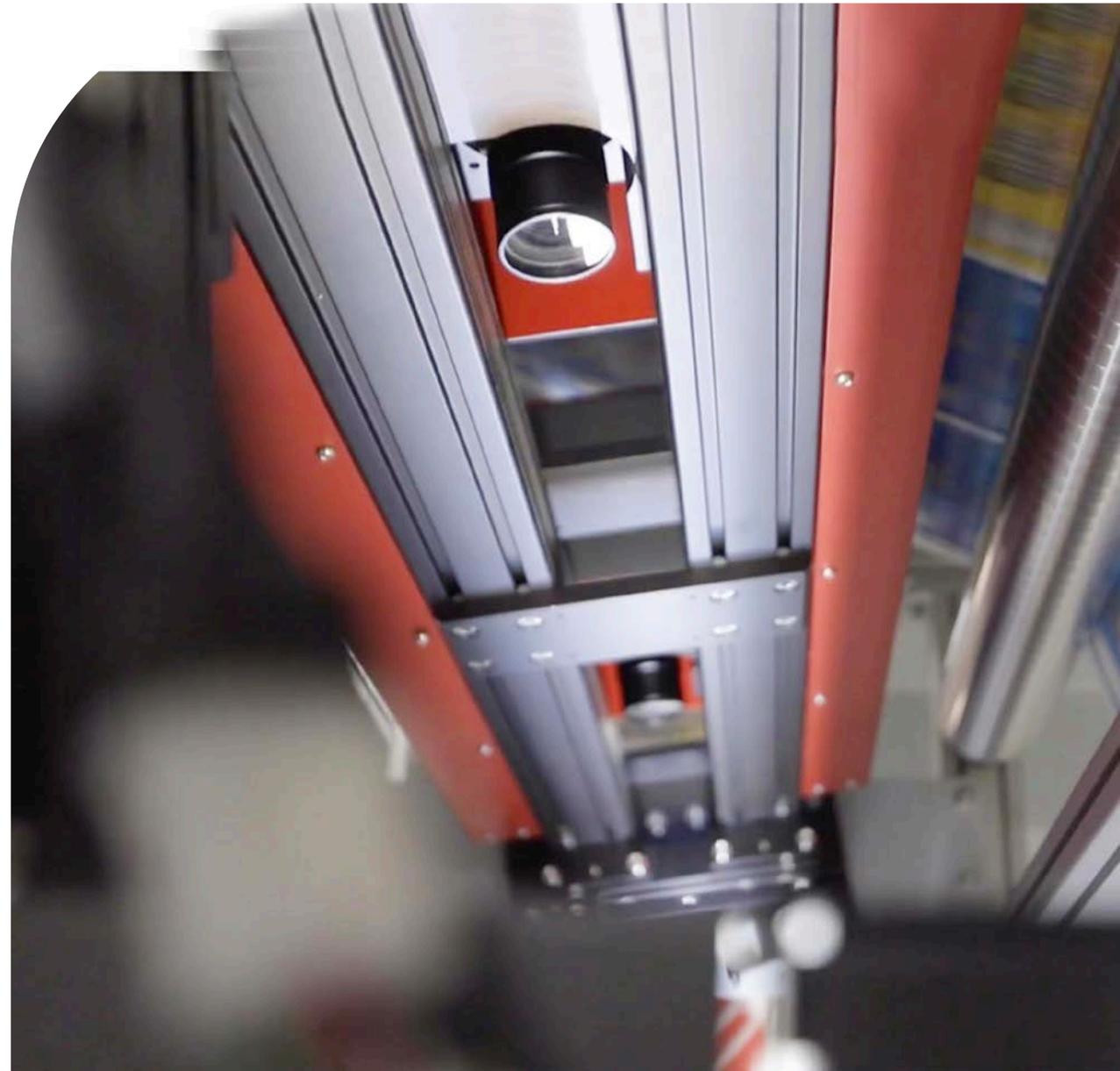
Turbo HD Line scan cameras

AVT Turbo HD 100% automatic print inspection systems have 8K high-speed cameras that provide superior image quality and inspection in full color up to 3 - 4 times faster than earlier-generation inspection systems.

Additional cameras can be added, depending on the web width, up to a 2.6 m web.

Other key technology advances

- LED illumination - Provides stronger, controllable illumination over the inspection area
- Enhanced computing power
- Smaller footprint and easier installation



2. Prevent costly reprints



Job verification

AVT Turbo HD 100% automatic print inspection solutions include inline verification tools that ensure the right job is printed. Job verification eliminates the risk of common mistakes that lead to high volumes of waste, such as using wrong or defective plates, printing incorrect versions or the wrong languages.

- **MasteRef** – Saves the master image of each job, for later use to verify content of repeat jobs
- **JobRef** – Online job verification using the original customer-approved PDF file
 - › A PDF of single package PDF can be compared to all packages in a repeat job
 - › Supports multi-design jobs

Good material monitoring

Automatic counting of good material printed, according to target substrate length or the number of packages, ensures that the correct amount is produced, and no reprints are needed due to higher-than-expected waste levels.

3. New process control tools

Automatic process control and quality assurance

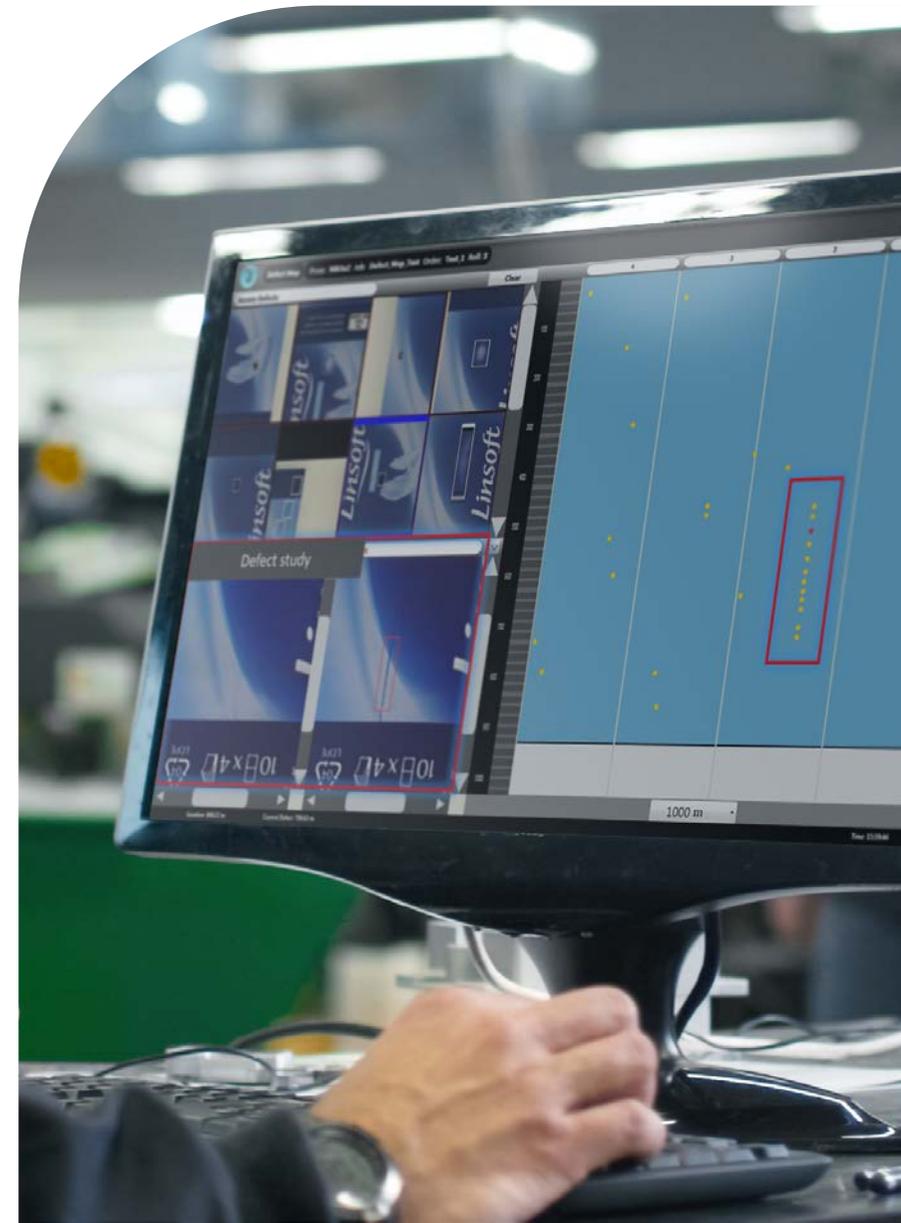
Advanced tools put the operator in complete control, so that that all jobs are produced at the highest quality. Timely detection of all defects significantly reduces waste and production costs, driving a quick return on investment in the inspection system.

Following a very brief setup procedure, the 100% print inspection platform automatically identifies every instance of every type of printing and production defect at the earliest possible point in the production process.

- **Easy visibility into defects** – Defects are marked, classified by type and displayed on the workstation screen
- **Immediate notifications** – Alerts are sent in real time upon detection of each defect

Repeat Length Trend (RLT)

This advanced tool performs continuous inline monitoring for the length of the package and repeat, identifying and alerting on any changes in the package length above a defined threshold due to changes in tension, temperature, and other parameters. The system immediately issues alerts on significant deviations, to avoid production issues or web breaks.





Continuous and random defects monitoring

This new process control tool classifies process and random defects and issues intuitive alerts. It helps operators differentiate between repeating and random defects and enables them to focus on the most relevant defects in real time.

With the ability to quickly identify the source of problems, such as plate defects, Anilox, CI drum and other causes, operators can make more effective decisions about roll quality and waste removal.

100% varnish inspection

This unique tool enables simultaneous inspection of both print and transparent varnish, all through one system. It supports matt, glossy, registered and full-coverage varnish.

- **Quicker varnish registration process** – During make-ready, the system can assist operators in registering the varnish faster, with no need to stop the press again and again
- **Comprehensive detection** – During runtime, all types of varnish issues are detected, including mis-registered varnish, skips and splashes

4. Inline spectral color measurement

Color precision with SpectraLab XF

SpectraLab XF is a unique solution for XRG-certified, automated inline spectral measurement at ultra-high speed during make-ready and production.

Supported by 100% print inspection systems, it provides best-in-class, absolute color measurement, it ensures color and quality consistency across the entire print cycle.

- **Comprehensive measurement** – Measures $L^*a^*b^*$, ΔE , density and dot gain
- **Tailored for packaging** – Complies with ISO and industry standards for flexible packaging and folding cartons
- **Connectivity and reporting** – Color data can be imported to the system from existing repositories and results can be exported automatically, including X-Rite ColorCert and X-Rite InkFormulation Software connectivity
- **SpectraLab BestMatch** – A unique feature that recommends color density adjustments during make-ready and production, enabling color targets to be reached without unnecessary changes to inks



5. Inspection automation and prepress connectivity



The power of digitization

A connected workflow solution, which spans brand specification, prepress, production and fulfillment, ensures alignment on quality standards and enables automated inspection from the first copy.

It saves time and improves accuracy and supports standardized production across jobs and across multiple production sites.

AutoSet

Powered by Esko Automation Engine, AutoSet connects prepress to the 100% inspection system in the press room. It enables a touchless workflow for automated inspection setup, providing the essential first step for true closed-loop color and content inspection.

- **Automates most setup tasks** – Auto-setup of job dimension and image inspection limits, automatic validation of print images against the PDF file, automatic identification of PDF elements
- **Higher productivity** – Saves 3-4 minutes before every print job, raising press uptime by up to 30-60 minutes per shift
- **Improved quality** – Eliminates manual intervention and hence the risk of human error

Offline Setup

With Offline Setup, the job inspection settings for all installed AVT 100% inspection systems are performed in one centralized location, before printing starts. This saves value production time on the press, laminator and rewinder and ensures inspection results are standardized and consistent across all machines.

6. Quality assurance reporting

Comprehensive, detailed reporting

AVT 100% print inspection systems come with a PrintFlow module that handles data archiving and reporting of every roll and job. The built-in SQL database records the roll quality, color measurements, repeat lengths, and barcodes, along with all quality statistics, defect locations, image defects and sensitivity parameters. Every event is recorded, including job setup, inspection parameters and amounts of waste.

- **Remote reporting and analysis** – PrintFlow Manager provides remote access to all PrintFlow databases from anywhere and enables analysis, process improvements and QA editing
- **Exportable reports** – Reports can be printed or saved as a PDF for sharing via email

Centralized quality information

The PrintFlow Central tool automates and centralizes the storage and archiving of inspection data in a single server or computer.

By improving data management and making data continuously available for analysis and repeat jobs, it ensures data availability at all times and increases production efficiency.



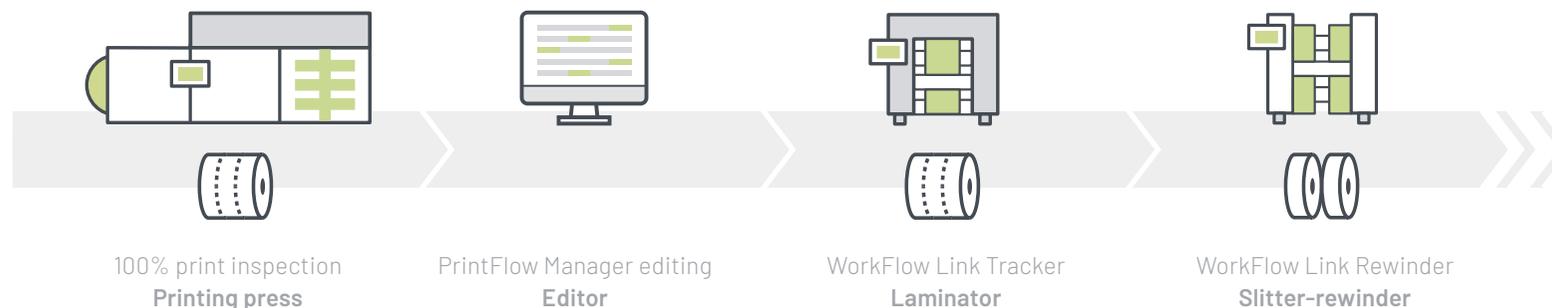
7. Waste removal workflows

WorkFlow Link – Connecting press and finishing

WorkFlow Link is an efficient waste removal workflow solution that enables the best of two worlds – superior process control and waste savings – while ensuring production of defect-free packaging. Available for AVT 100% print inspection systems, it uses on-press defect data to enable efficient removal of defective material. It provides complete traceability from printing to lamination, rewinding, slitting and doctoring, with an automated and cost-effective workflow.

- **Printing** – All printing faults, including random defects, are automatically recorded in the system’s database for removal downstream
- **Quality assurance and decision making** – Quick and easy data editing enables definition of which areas of the printed material should be removed and on which finishing machine, for the most efficient and cost-saving production flow
- **Waste removal in finishing** – WorkFlow Link Rewinder automatically controls and stops the rewinder at the specific position of the defective material, enabling waste removal with the minimum number of stops and eliminating the need for operator inspection.

The solution provides enhanced production efficiency as the rewinder can run at maximum speed and only stop at the relevant defects to be removed.





Argus Turbo HD

Inspect 100% of your job, 100% of the time

Talk to us at info.eur@esko.com to see how moving to 100% is easy.

Find out more on www.avt-inc.com

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