BW Converting | barrywehmiller bw betterworld

Change for the better



Defender® 100%

Deliver perfect print quality—every roll, every time—
to brand owners and customers

BALDWIN®

Defender® 100% Inspection

True 100% web inspection – simplified

The Baldwin **Defender® 100% Inspection system** from BW Converting continuously monitors 100% of the web, 100% of the time detecting and managing defects before materials reach your customer—saving you time and money.

The industry's most comprehensive defect tracking solution features the latest UX (user experience) standards and technology and can support inspection of any substrate at high resolution.

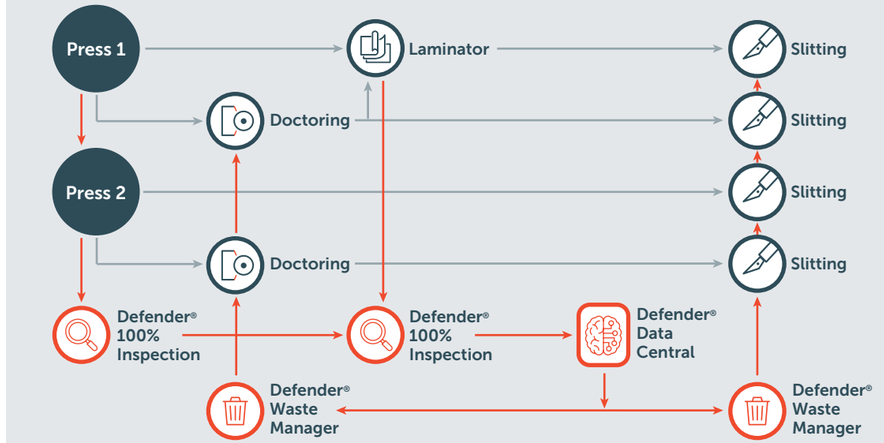
Quickly identifies, classifies and records defects in real time for faster, more informed quality decisions with less waste and rework

Self-learning algorithms automatically adapt inspection tolerances to each job, reducing false defect warnings and increasing your uptime

Helps improve profitability, lowers risk of returns and claims, aids in winning and retaining business through repeated high-quality, protects your business and your customers' brands

The powerful yet intuitive multi-touch interface and wizard-based setup allow new operators to learn the app-style system in just minutes

A complete solution for detecting, tracking, and removing defects.



1. Detect every critical defect

Defender 100% Inspection advanced detection technology identifies and classifies a wide range of defects across wide-web packaging substrates, including:

- Spots, streaks, color shifts and haze
- Wrinkles and pinholes
- Contamination and other random defects
- Barcode errors
- Repeat length variations
- Automated Delta E color monitoring
- Option to inspect both sides of the web simultaneously and monitor front-to-back registration
- Option to inspect clear treatments such as varnish, cold-seal and other coatings

A live roll map allows operators to quickly identify the different types of defects.

2. Track and analyze

With the optional **Defender® DataCentral®** module you'll ensure every detected defect across the entire production run is recorded and saved with the following details:

- Position data
- Classification details
- Defect images

Out-of-tolerance areas are identified for removal, and job-based quality reports can be generated. This comprehensive data enables faster analysis, streamlined quality control, and improved decision-making throughout production and finishing.

3. Remove defective material

Add the optional **Defender® Waste Manager**, an automated defect-removal and waste-management module that uses defect location data to help downstream equipment (rewinding, slitting, and sheeting) automatically find and remove defective sections of the web.

By automating waste removal workflows, you'll reduce labor, minimize waste, and help ensure that only the highest-quality product reaches your customers.

Designed to be flexible! Features can be added as your business grows providing a future-proof investment.



Built for flexible packaging

Defender 100% Inspection is specifically designed for wide-web substrates and demanding packaging applications:

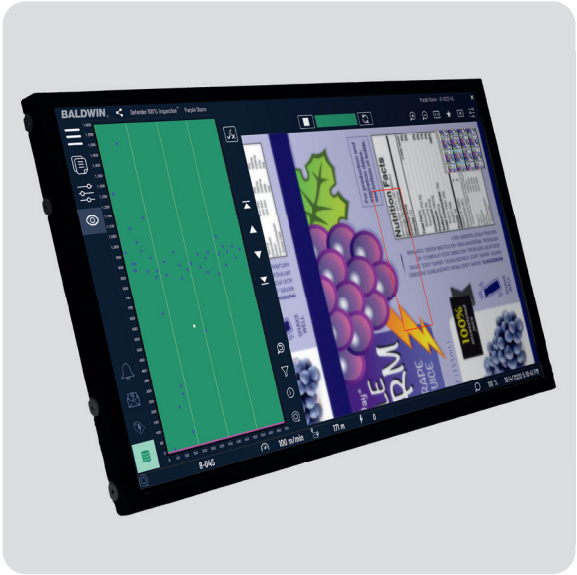
- Film, including transparent, opaque and metallized materials
- Paper and paperboard
- Foil substrates
- Inspects high-tensile/stretchy materials without generating false detection—an area where other inspection systems may struggle
- Inspects graphic and non-graphic product without adjustments to the system



Operator-friendly

- Powerful, multi-touch interface for efficient navigation
- Auto margin placement feature makes set-up faster
- Automated inline barcode verification
- Automated repeat length monitoring
- Automatically adapts inspection tolerances for each job
- Real-time error alerts for quick corrective action

Specifications



Defender® 100% Inspection System:

Inspection frequency: up to 28 repeats/second

Max printing speed: 1,000m/min

Max substrate width: 2800 mm

Min detectable defect size: typical - 0.05mm^2

Operating system: Windows® 10, 64-bit architecture

Display: multi-touch, 23" HD (1920x1080p), scalable to 4K

User interface: wizard-based set up

Camera type: high-speed color line scan

Max number of cameras: 8

Lighting type: high-intensity, fan-cooled LED

Lighting options: top, foil, back, UV

Lights, camera, action!

- Standard modern, high-efficiency, fan-cooled LED lighting delivers high-intensity with low power consumption
- Optional lighting choices (top, foil, back) provide maximum brightness that stays uniform over time eliminating image noise even at the highest press speeds and delivering greater sensitivity to color changes
- Optional UV lighting to inspect fluorescing applications
- Camera field of view is configurable, ensuring maximum effective resolution and optimal image quality

Ask about pairing with our **Defender® Web Viewer** for the newest, most comprehensive inspection duo in the industry: the Baldwin Vision Platform.

Optional equipment

- TruePrint D auto press registration and pressure
- PDF Check Module
- Defender® Data Central
- Defender® Data Central Remote View
- Defect Tracking - physical or electronic tagging
- Defender® Live View
- Defender® Waste Manager
- Repeating Defect Coordinates
- Extended UI Ready (no monitor)
- Live-View Digital Viewing Module (no monitor)
- Low-Contrast Viewing
- Reflective ("foil") Light Module HW and SW
- Top, back and/or UV lighting
- Golden Template Verification (GTV)
- Simultaneous two-sided web inspection
- Defender AMP Connector (IoT)
- Inspection stand turnkey solution—drop in a complete inspection unit including lights, cameras, and web path idlers