# Jupiter

Superior Process Control and Automatic Defect Detection Solution Introducing UV & Varnish Viewing



Uniquely designed for packaging web printing applications, AVT's Jupiter gives you all the tools you need to guarantee comprehensive process control. Jupiter's advanced automatic detection software module visually inspects printed materials on the press, automatically detecting imperfections in real-time. When it comes to delivering quality print results, Jupiter gets the job done – every time!



# **Best-in-Class Process Control**

Today, Over 50% of all high-end inspection and quality assurance systems installed are AVT platforms. AVT's Jupiter is a truly advanced, affordable automatic defect detection solution designed exclusively for packaging web printing applications. Jupiter draws on AVT's years of field-proven experience gathered through thousands of installations worldwide, continuous dialogue with printers and the leading R&D team in the industry.

Jupiter 's process control demonstrates exceptionally high sensitivity to ensure early warning of developing defects.

The system immediately detects defects before they are seen by the human eye, dramatically reducing costly waste. Jupiter's unique automatic inspection software module and innovative display visually inspects all types of printed materials on the press, automatically detecting defects in real-time. What's more, Jupiter enables significantly higher press speeds, supports all press types, models and materials, including transparent and flexible substrates commonly used in the packaging industry, and is available with a range of optional add-on modules.



## **Immediate Waste Reduction**

- Early detection of evolving defects
- Eliminates customer rejections
- Reducing make ready waste in CI Flexo through press automation
- Ensure consistent print quality in every job

## **Boosts Productivity**

- Fully automatic defect detection in real-time
- Enables higher press speeds
- Upgradable to meet your current and future business needs
- Enables continuous production analysis & improvement

## **The Most Efficient**

- Easy installation and short learning curve
- Simple, step-by-step guided setup
- Categorizes defects according to type with easy on-screen view
- Indicates the precise location of defects

## Innovation That Meets the Eye

Jupiter's unique strength lies in its ability to identify print defects before they are seen by the human eye, immediately alerting the press operator. The system visually indicates the position and the type of defect detected, displaying the defect on a novel split-screen monitor, alerting the operator as to the nature and location of every defect. Jupiter's "dual mode" capability enables operators to view the live image on one screen and the defect image on a second screen. By deploying this intuitive, easy-to-use human interface, the operator can immediately address the problem and correct the relevant defect source. All defects are marked and categorized by advanced detection algorithms, according to defect type and sensitivity level. Defects are then saved to libraries for future use and to ensure printing consistency same job in different runs.





**Miss-Registration** 

Color Variation





Streak



Spot

## **Built-in System Features**

Smears

• HD Camera:

Equipped with an advanced HD camera guaranteeing best screen image quality, coupled with the highest quality inspection of evolving print defects.

## • Sensitivity Profiles:

Saves the sensitivities of each job for the next similar job run; dramatically reducing sensitivity setup time and ensures uniformity between operators. Hazing Detection/Haze View
Enables detection of very low
contrast defects such as hazing
or scumming as soon as they
evolve. The haze view function
allows users to clearly see
hazing on clear film which
otherwise cannot be seen or
detected prior to lamination.



Without UV Illumination



With UV Illumination



Without Haze View

The Printer's Choice



With Haze View



## **Optional Modules**

## Hazing Detection/Haze View

Enables detection of very low contrast defects such as hazing or scumming as soon as they evolve. The haze view function allows users to clearly see hazing on clear film which otherwise cannot be seen or detected prior to lamination

## Dual-Mode

Defect study processing unit, dual monitor configuration

## ABCV

In-line, automatic barcode verification (ANSI & CEN certified)

## I∆eal

In-line Delta E color measurements anywhere on the image, performed during and in parallel to print inspection, displays graphical view of color differences and report statistics

## pRegister

Automatic register pre-set/control for CI Flexo press

## Presco

Automatic plate and anilox pressure; preset/control for CI Flexo press

## **Technical Specifications**

## **Automatic Inspection**

- Maximum inspected (printed) width: Standard: 1200mm / 47.24"
   Optional unlimited masters: 2600 mm / 102.36" (wider webs supported upon request)
- Max. web speed support: 650 m/min, 2132 f/min
- Minimal detected defect area: 0.023 mm<sup>2</sup> at 2% contrast (smaller defects detected at higher zoom/contrast)
- Inspection modes: Full repeat cover or user-defined inspection steps
- Substrate: Supports all material types, including flexible and transparent films, paper and cartons

## PrintFlow

Enables automatic job data archiving and SQL-based roll/job reporting, including defect location, images and print-quality statistics

#### PrintFlow Manager

Collects PrintFlow data from all PrintVision platforms with easy, remote access for managers/key personnel from their desktop PCs

#### RiteSeal

ColdSeal/Varnish viewing and F/B register view

## UV Viewing

Innovative switchable UV illumination module enables viewing of UV- sensitive inks and varnishes

## Label Inserter Interface

Manual/automatic defects marking on the roll

## Jupiter Upgrade

Add-on with combined process control and 100% quality assurance capabilities; equipped with an advanced HD camera to guarantee best-in-class on-screen image quality, coupled with the highest quality inspection of evolving print defects

## Camera & Optical Head

- Camera: High-resolution, 3-chip digital color camera
- Resolution: 1392 x 1040 x 3
- Field of View (@ zoom x1): 240mm X 180mm, 9.44" x 7.08"
- Zoom: Up to x16 optical zoom
- Calibration Mechanism: Integral dedicated self-calibration H/W unit

## Additional Specifications

- Configuration: Innovative ergonomically-designed console or integration into the press control console
- Defect detection software: Jupiter Advanced Automatic
   Inspection software module
- Monitors: 24", TFT, high-resolution monitors
- User interface: Dedicated keyboard and mouse
- Languages supported: Multilingual MMI capability

## The Printer's Choice

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