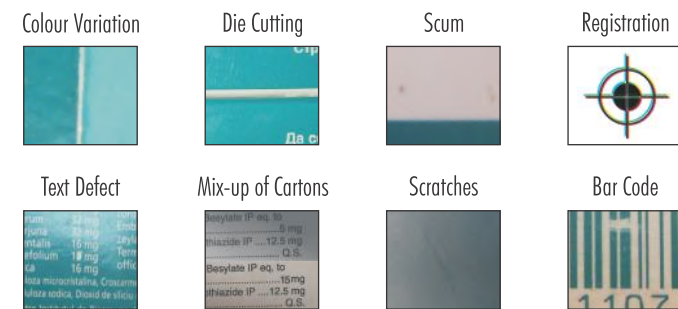


Spotting the minutest flaws
Detecting the smallest error
Nothing can escape
Autoprint **Checkmate 50!**

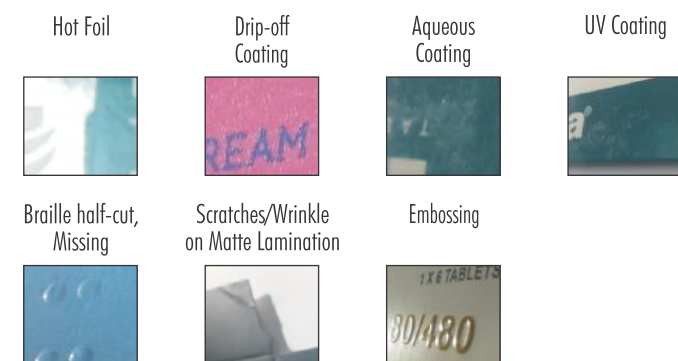


SAMPLES OF ERRORS

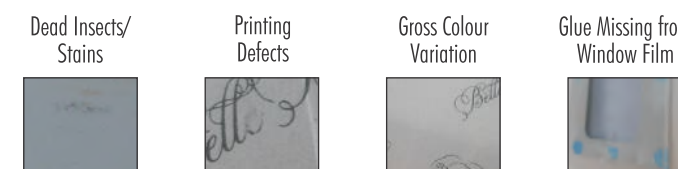
Print Inspection Camera



Foil and Embossing Camera



Bottom Camera



Technical Specifications

Max. Carton Size	: 500 x 400 mm (W x L)
Min. Carton Size	: 100 x 100 mm (W x L)
Paper Thickness	: 180 - 450 gsm
Camera Resolution	: 0.12 mm
Light Source	: Independent LED light for each camera
Suction Blower	: 11.25 Kw
Total Power	: 20 Kw (27 Hp)
Weight	: 2800 Kgs (Approx.)
Dimensions	: 6600 x 3670 x 1980 mm (L x W x H)



A carton-full of top-notch features!

Checkmate 50 - 250 m/min

- Camera 1 - 4K colour is a tri-linear colour camera for inspection of printing defects
- Camera 2 - 4K black & white to check foil defects
- Camera 3 - Bottom, 4K black & white for checking presence of dead insects
- Speed Max: 250 m/min

- Bottom feeding system with vibrator
- Air jets provided to remove dust /fluff from cartons
- Vacuum belt under the camera to hold the carton firmly
- High speed fail proof pneumatic ejection system with air jets to effectively segregate good & defective cartons
- Delivery stacker with servo-control for stream stacking
- Curved conveyor for collecting rejected cartons separately
- Air jets for periodic cleaning of camera lens
- Ergonomically placed operator control with touch panel
- Separate panel with computer that allows viewing of good and rejected cartons on the run
- 4 Cameras to monitor the running of the machine, which also gives views for accept and reject conveyor
- Cooling system for computer and also for camera area
- Brush and vacuum with high speed nozzle for eliminating dust
- Full guards with CE, to provide safety for operator

Checkmate 50 - 300 m/min

- Camera 1 - 4K colour is a tri-linear colour camera for inspection of printing defects
- Camera 2 - 8K black & white to check foil defects
- Camera 3 - Bottom, 4K black & white for checking presence of dead insects
- Speed Max: 300 m/min

- Machine with rugged frame design
- All operator touch areas are designed with corrosion free stainless steel and hard chrome plated parts
- Online UPS system with APC (automatic power control) for computer, light and camera software
- User friendly interface allows easy configuration of software
- Easy model tuning during inspection
- Different tolerance levels can be set in different sections to ensure only critical defects are rejected
- Reject image viewer for defect visualization
- Special scratch and cluster detection
- All defective print images can be archived into the database
- Powerful software algorithms enable sensitive defect detection while maintaining high yield
- Region-wise online defect statistical report generation for corrective actions
- Optional:**
 - Carton counter
 - Provision for running fluted cartons



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Inspection System Powered by



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Email: sales@lucid-imaging.com Website: www.lucid-imaging.com

Due to continuous development and product improvements, the company reserves the right to change/alter the specifications mentioned herein.



When you promise world-class quality
you cannot afford a single defect...

Autoprint
Checkmate 50
A Print
Inspection
System
for defect-free
cartons



Inspect. Detect. Segregate. Presenting Autoprint Checkmate 50

It has been Autoprint's constant endeavour to bring our customers cutting-edging technology, to raise the bar and to add value by innovating consistently. Our efforts have borne rich fruits, the latest of which is the new carton inspection system called Autoprint Checkmate 50. This revolution in imaging technology ensures defect-free print products to the end customer, with 100% accuracy. Besides inspecting print defects and foil errors, Autoprint Checkmate 50 segregates the good and defective cartons neatly into different stacks which can be further analysed to correct the previous process. This not only eliminates expensive manual labour but also enhances inspection speed and process.

Collaborating with an imaging expert to give you the very best!

Autoprint has tied up with Lucid Imaging to offer you the new, innovative Checkmate 50. Associated with some of the leading machine vision component suppliers in the world, Lucid Imaging develops and supplies a spectrum of inspection system for the print industry. These include offline inspection of cartons and sheets, 100% online web inspection, online colour measurement and control, paper inspection and other customised solutions. Since 2006, Lucid Imaging has been providing print inspection solutions to a wide range of customers from printers in India to major global OEMs in the security print industry.

Unmatched features that translate into unmatched benefits

With an unbeatable combination of hardware processing along with high performance multi core processors, Autoprint's Checkmate 50 enables the use of complex software algorithms to detect even the minutest printing defects such as ink smudges, spots, scratches, uneven ink, colour variation, foil stamping variation, hazing, missing print/character, filled-in character, misregistration and other fine flaws and irregularities.

Feeder Unit

Autoprint Checkmate 50 has a Carton Feeding System, which is mounted over SS rollers. The system has an in-built vibrator for smooth feeding of a wide range of carton stock ranging from 180-450 gsm. A bottom feeding mechanism in the feeder unit helps feed the cartons efficiently without them getting folded, jammed or in a cross position. The quick setting mechanism in the back stacker and side stacker allows the setting of any job in the optimum time. A scale provided at the feeder is replicated in the monitor, to set the repeat job accurately within the shortest duration. The Ultrasonic Double Sheet Detector in the feeder unit stops the machine to prevent the passage of double cartons.



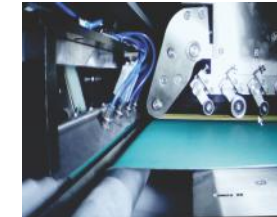
Centralized Touch Screen Control Panel

The ergonomically placed operator controls of Autoprint Checkmate 50 have a touch panel and PLC for quick and easy set-up of various parameters. There are extra control panels provided at delivery accept and reject pile to control the entire machine operation from there.

Camera Inspection System

Autoprint's Checkmate 50 comes with three different cameras which are designed to detect a variety of defects in cartons. The main camera, which is 4K colour, is used to check all print defects and colour variation. The second black and white camera detects foil presence, foil defects, embossing defects, braille defects, braille presence/absence, coating defects, coating presence/absence, etc. While these two cameras are mounted on the top of the conveyor, there is a third camera mounted at the bottom, which spots defects like insects sticking to the back of cartons.

All three cameras are provided with an independent LED light source for capturing crystal clear images of the cartons. All cameras are also provided with a pneumatic cleaning system with air nozzles for lens. The camera unit is totally independent of the machine and hence completely vibration-free which ensures excellent image quality. This conveyor is on a vacuum chamber which allows the cartons to be held firmly during inspection.



Pneumatic Ejection System

The fail-proof high-speed Pneumatic Ejection System of Autoprint's Checkmate 50 enables the effective and efficient segregation of good and defective cartons. All good cartons are collected on the top conveyor, while the defective cartons are assembled separately on a curved conveyor to prevent the mixing of the two. This system has a high-speed pneumatic solenoid with air jet nozzles.

Delivery Stacker

The servo-mechanism in the Delivery Stacker enables neat stacking of good cartons at the top conveyor and defective cartons on a curved conveyor provided under the top conveyor.



Ultrasonic Double Sheet Detector

The Ultrasonic Double Sheet Detector of Autoprint's Checkmate 50 detects double sheets automatically and transfers them to reject bins.



Vacuum Belt

A Vacuum Belt with powerful suction is provided under the camera to hold cartons firmly during inspection.

