

**Breaking the Limits**  
of Automatic Surface Inspection  
**The New Standard for Paper**



**Driven by Competence.  
Powered by Innovation.**

**ISRA**  
VISION

# Next generation paper surface inspection

## Leading the way to highest production efficiency

### Be ahead of the competition

Faced with intense competition and high prices in energy and raw material, the paper making industry seeks solutions to achieve the highest saleable throughput possible. In addition, the high quality expectations of the customers have to be realized. To do so, the process of producing a mass-product such as paper must be extremely efficient and quality control absolutely reliable.

### Best automated optical surface inspection

With the experience of over 500 successful installations, ISRA developed **PAPER MASTER**, a trendsetting Web Inspection (WIS) and Web Break Monitoring System (WBM). **PAPER MASTER** is the best solution to increase production efficiency, maximize the availability of the paper machine and enable a constant and precise quality control along the paper making process. The result is a 100% saleable production.

### The challenges at a glance:

- High cost of energy & raw material
- Increase in processing reliability
- Declining prices of paper
- Highest quality requirements
- High demand on process efficiency
- Slow machine speeds to avoid web breaks
- Environmental production

### The solution: increase saleable production by...

#### ... increasing Paper Quality

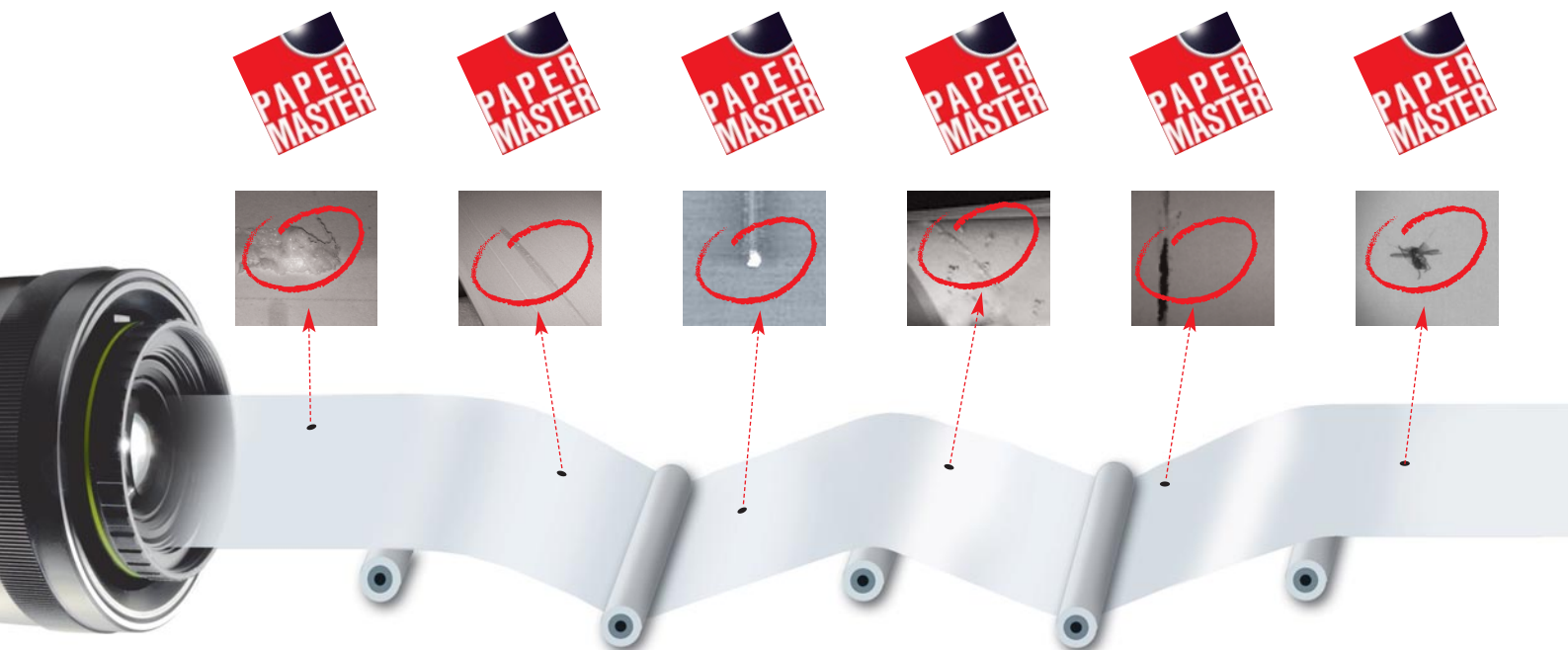
- Lower the number of defects
- Secure constant high quality
- Deliver formation stability
- Get the best price even for non-perfect rolls

#### ... optimizing Process Efficiency

- Reduce losses
- Eliminate web breaks
- Minimize chemical usage
- Use felts & wires for longer times
- Increase machine speed



**Production Efficiency**  
can only be reached with perfect Data Quality



## Reach 100% saleable production throughput w

### The basis to generate optimum quality information

The WIS and WBM Systems of **PAPER MASTER** offer detailed, reliable and most precise data of highest quality. The paper manufacturer is now able to analyze his processes and understand problems during the production process.

### How to achieve highest **Production Efficiency** with perfect **Data Quality**:

#### 1. **Detection:**

- Most reliable discovery of all defects & events
- Excellent streak detection, even down to microns
- Best image quality over entire width of web at highest speeds
- Customized & flexible total vision solutions

#### 2. **Classification:**

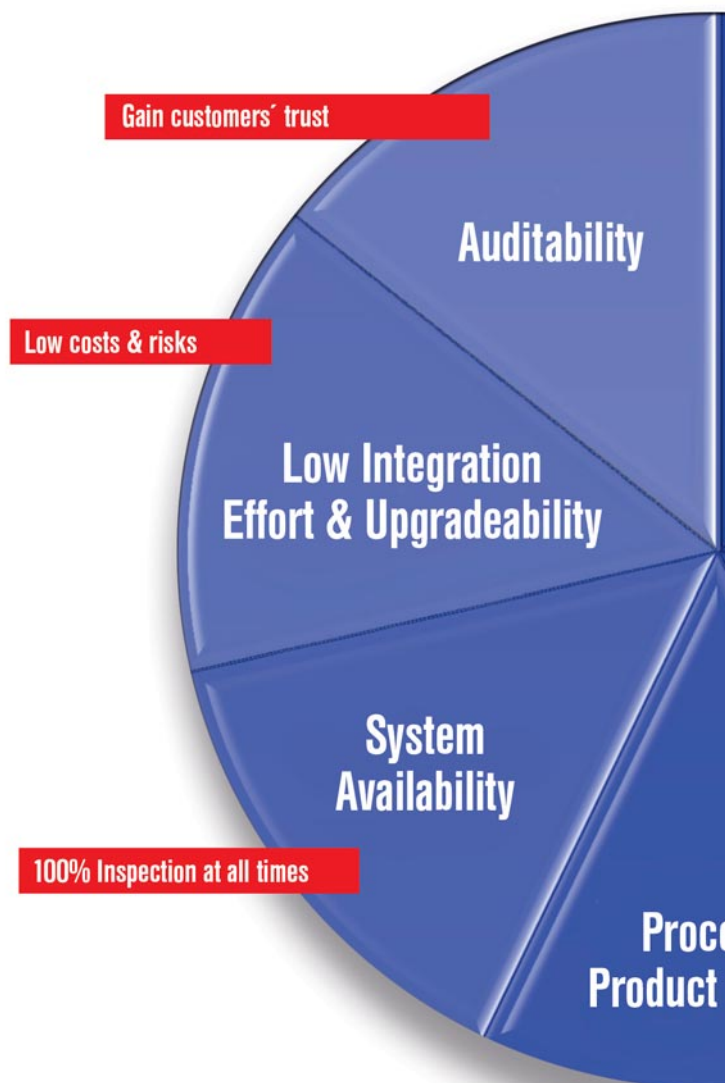
- Correct assignment of each defect & event
- Shortest integration time of the classification tool
- Most reliable classification of size and priority based on defect catalog
- Instant understanding for produced quality level

#### 3. **Monitoring:**

- Synchronization of relevant information
- Precise root cause analysis to understand process issues
- Automatic disturbance detection leads to quick repair of problems
- Best video quality with new technology: **IntelliCam**

### Accurate data you can rely on

**PAPER MASTER** delivers the basis for quick decisions and immediate actions when necessary. It is your key for top performance, maximized throughput and a production at highest speeds.



Liquid Board Packaging



News Print



Tissue



Decor Paper



Coated Fine Print



### Some of our references

• WEPA • Cartaseta • NEW PAGE GROUP • CMPC • Fripa • UPM • Stora Enso • SCA • International Paper • Norske Skog • Arjo Wiggins • SAPPI

# MASTER

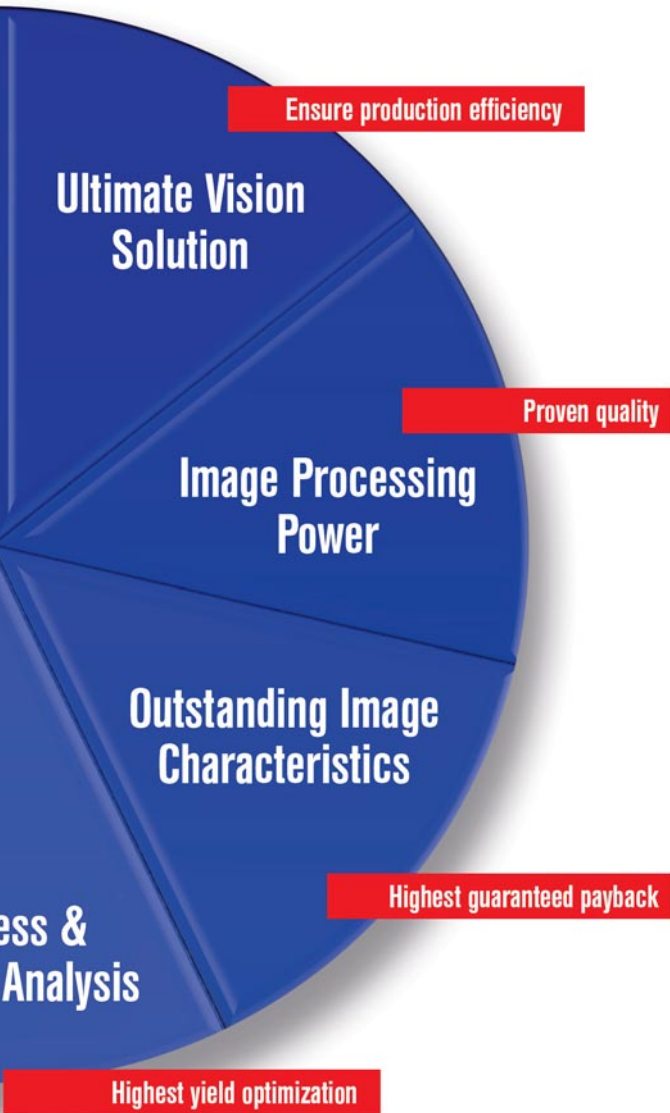
With optical inspection solutions from the expert

**PAPER MASTER** an innovative and most reliable turn-key Web Inspection and Web Break Monitoring Solution. Leading-edge technology with the industry's fastest high-resolution cameras ensure 100% inspection at any speeds, paper machines and applications.

The result: **PAPER MASTER** generates high-quality data, which enables paper manufacturers to keep track of their processes and take action to increase production efficiency, maximize throughput and ensure high quality at lower operating costs.

The return on investment is reached at shortest times. This is due to fast installation, commissioning and shortest ramp-up times.

**PAPER MASTER** is the answer to your needs. Get YOUR key to the future.



### Benefits at a view:

- Easy configuration and integration for any paper machine and all paper applications
- Perfect defect image quality at highest speeds
- Improve quality with accurate and reliable defect recognition
- Guarantee highest quality standards
- Ensure customer satisfaction
- Reduce machine degeneration and maintenance
- Maximize throughput
- Increase machine uptime
- Monitor yield at all production stages
- Lower costs
- Reduce manufacturing costs by increased line yield
- Increase production efficiency

Thermocopy/NCR



Fine Paper



Brown/Grey Liner



Coated White Top Liner



MG Papers



# Reach a **new quality level** in paper manufacturing

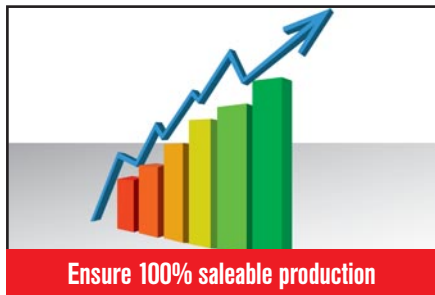
## One solution for the entire production line

### Flexible installation – fast high-end results

The **PAPER MASTER** Web Inspection (WIS) and Web Break Monitoring System (WBM) provide the full range of surface inspection tasks for the paper industry. **PAPER MASTER** can be installed individually or as one system and determines where and how a defect occurred. With only one mouse click the operator is able to visualize defective areas. Of course, existing inspection systems can be revamped fast and easily at any time. In order to ensure a smooth integration, the system architecture of **PAPER MASTER** WIS and WBM is fitted individually to the needs of the inspection landscape at the particular paper machine.

### Ground-breaking system for your success

Inspection features of **PAPER MASTER** WIS concentrate on surface inspection and quality control with a streak detection down to invisibles. **PAPER MASTER** WBM IntelliCam provides a high-performance web break analysis based on a new generation of cameras to achieve an optimum process efficiency.



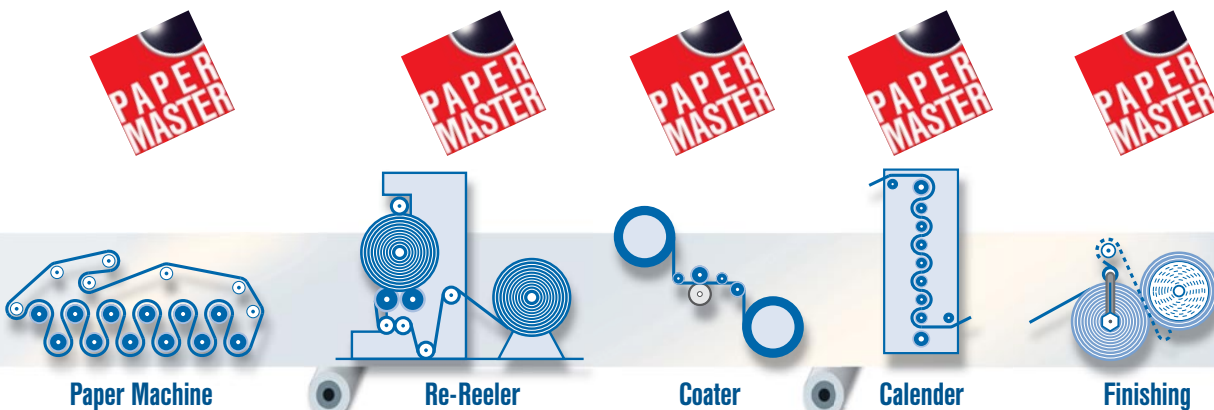
### Technical features:

#### **PAPER MASTER - WIS**

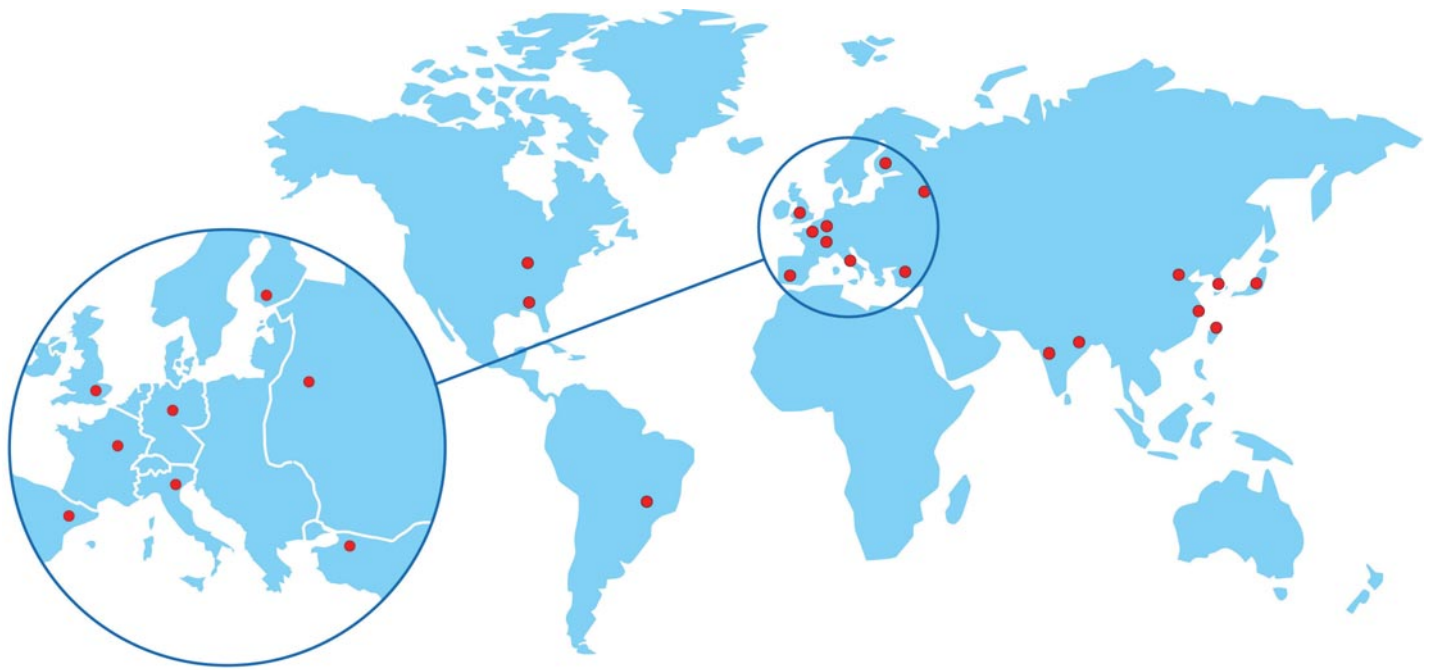
- Latest, fastest high-resolution camera and integrated optical technology
- Highest detection performance down to microns
- Best single- and multilayer detection results
- Ensuring 100% defect detection at highest production speeds of more than 3,000 m/min
- Outstanding defect classification within shortest time

#### **PAPER MASTER - WBM IntelliCam**

- Crystal clear images
- Excellent video root cause analysis for fast corrective action
- All-in-one: Compact, ruggedized stainless steel housing including camera, processing, illumination and cleaning
- Easy to install even in challenging environments with limited spaces, dirt, water, and heat
- Automated razorblade or brush cleaning
- Real-time information to reduce web breaks typically by 50%



# Innovations for Automated Optical Inspection of Paper



## We are the innovators in optical inspection. Best practice. Best system. Best service.

For over two decades, ISRA VISION has become a leading manufacturer of highly accurate automated optical quality inspection systems.

More than 10,000 successful applications attest to our experience in the field of machine vision products – and our ability to innovate.

Today our products are installed and operating worldwide in industries such as paper, solar glass, glass, plastics, foils, packaging, print and automation. It is our goal to set system standards for total process control in these industries.

Customers choose ISRA for the ability to develop products consistent with their requirements. More than 600 employees at locations worldwide are working to contribute to your success.

## Your global partner for surface inspection.

We offer our experience and a highly qualified team of experts to design and implement solutions for advanced applications.

We assure that our mission continues beyond our shipping dock. Just challenge our Customer Support Center.

We guarantee excellence to our customers – from consulting to service, from tailored solutions, to worldwide support. We can make your business more competitive.

## Challenge us. Inspect to control – with ISRA VISION

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The More You See...

