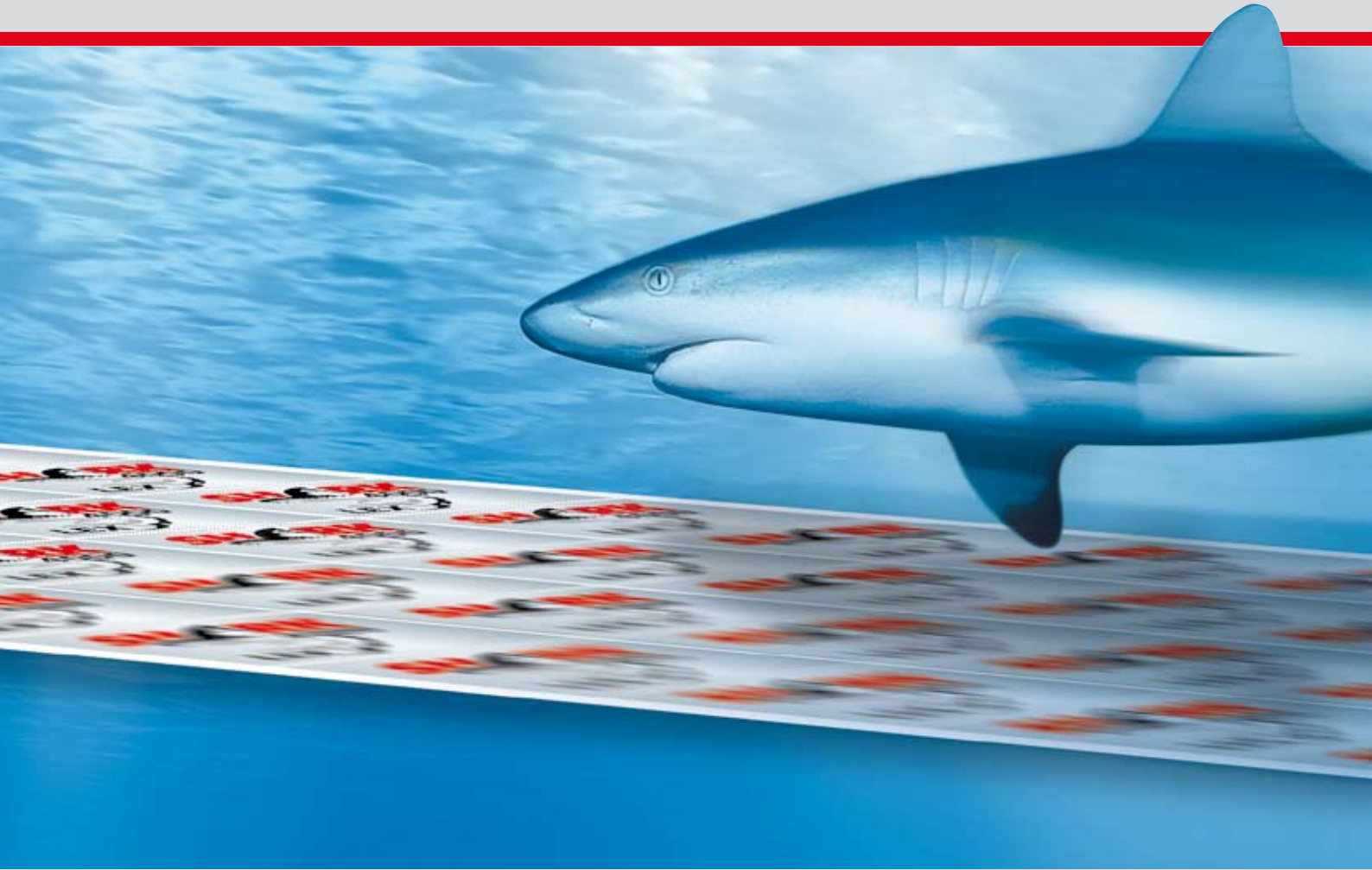


Nothing Guards your Print like  
**SHARK 4000 LEX**



# 100 % Inspection 100 % of the Time

## So simple, yet powerful beyond imagination

100 % real time inspection systems so powerful, so relentless in its pursuit of defects and so superior in its simplicity that they could only be called **SHARK**! The systems of the BST SHARK family cover all web widths and are specially designed for the various requirements of the web processing industry.

**SHARK 4000 LEX**, the 100 % print defect detection system for use on rewinders and narrow-web printing machines, stands out due to its well-engineered technology, extensive range of functions, comprehensive defect management software and features that allow you to produce highest quality for your customers:

- **Defect detection starts from the first label, no minimum machine speed necessary.**
- **Setting up of new jobs in the shortest possible time.**
- **Space-saving single-monitor solution: Print monitoring and system operation via one touch screen**
- **Intuitive system control, user guidance and multilingual menus.**
- **System is equipped with greyscale or color camera.**
- **Use of PC technology and Windows XPe for quick data processing and expanded storage options.**
- **Referencing of the golden master using a PDF file.**
- **Reliable detection both of random and repeating defects up to a minimum size of 0.05 mm<sup>2</sup> (0.000076 in<sup>2</sup>) (depending on application).**
- **Clearly laid-out categorization of defects according to the established defect types.**
- **Precise image monitoring using the electronic Quick Zoom function.**
- **Job report function for meaningful job documentation, including a defect image for each defect that occurred.**
- **Suitable for all types of substrates, including highly-reflective materials.**
- **Optional combination of 100 % print defect detection and video web inspection using the integrated POWERLink.**



# Superior Concept

## SHARK 4000 LEX standard features

### Operation

- A new job is set up in the shortest possible time. You are led through the clearly laid out operation menus step by step. The menus are available in numerous languages (incl. Chinese).
- Choose from four quality thresholds to quantify the degree of defects tolerated for each job. After quality thresholds selection, the system automatically calculates the maximum web speed.
- You can specify lanes for each job. This simplifies the location of defects on the web, as the system assigns detected defects to a lane and displays them highlighted on the monitor.
- SHARK 4000 LEX uses the so-called ROI/RONI concept (Regions of Interest/Regions of Non-Interest). These are freely definable control areas, with which you can both exclude areas of the repeat from print defect detection as well as defining sections with different defect sensitivities. This allows you to carry out specified print inspection for each job.
- The optional Job Report function of the SHARK 4000 LEX creates meaningful documentation for each roll and each job, including an automatic inspection report at the end of each roll of a job. In addition, the report contains defect images for each defect that occurred.
- All parameters and settings are saved with the reference image in the job file and thus can always be called up again.
- Using the optional POWERLink, the system can be combined with a BST video web inspection system. So you can use all the advantages of 100 % defect detection and video web inspection (e.g. advanced zoom functions).
- Via the system user interface, you can simply stop and start your rewinder without having to change between 100 % print inspection and machine control.
- The system is very easy to maintain. Maintenance requires only a few easy steps.



### Print inspection functions

- On the monitor of the SHARK 4000 LEX, the entire repeat is displayed as a live image including the marking of the defective area, the localized and marked defect and the corresponding section of the reference image shown simultaneously. So you can monitor the situation on the print web at a glance.
- The system shows the total number of labels checked in real-time, as well as the number of defect-free and defective labels.
- Using the defect history function, the most recently detected defects can be called up at any time.
- The defect list is a useful tool for defect analysis: in a clearly laid out list, all detected defects are displayed together with the defect type and meter count on the web. With just one push of a button you can decide whether a defect is to be removed from the doctor table or can let be unconsidered and deleted from the list.

### Technology

- SHARK 4000 LEX is equipped with a high-performance grayscale camera that can be upgraded to a color camera at any time.
- The data is saved in a platform-independent XML database, which can be called up using standard browser programs.
- The system is suitable for all types of substrates, even highly-reflective material. Special algorithms compensate for stretch and snap-back of extensible substrates.
- The well-engineered lighting system guarantees the required constant illumination needed by line cameras.
- If necessary, an integrated interface is used to send a signal to a rewinder or flagger.
- The integrated system modem allows easy online service support.

# Put a **SHARK 4000 LEX** on your Re-winder or Press

## Typical defect types:



## Technical data

Camera: LCCD greyscale camera,  
optional color camera

Minimum defect size:  
0.05mm<sup>2</sup> (0.000076 in<sup>2</sup>)

Power supply:  
90 V – 132 V, 50/60 Hz, 400 VA  
198 V – 264 V, 50/60 Hz, 400 VA

Web widths:  
up to 520 mm (20.5")

Substrates:  
suitable for use on transparent,  
opaque and reflective materials

Ambient temperature:  
min. 0°C (32°F)  
max. 40°C (104°F)  
Humidity 20% – 80%,  
not condensing  
Monitor: see separate  
technical details

Light sources:  
diffuse and direct,  
optional reverse side lighting

Communications:  
via inbuilt analogue modem/  
DSL connection via Ethernet  
interface

Cross web resolution:  
up to 0.07 mm (0.0028"),  
dependent on application

Options: Flagger connection, web  
backer/reverse side lighting  
(for transparent materials),  
color camera, PDF master check,  
POWERLink, Job Report

Storage temperature:  
-10°C to +55°C  
(14°F to 131°F)  
Monitor: see separate  
technical details

Resolution in web running direction:  
0.07 mm (0.0028") up to a web  
speed of 100 m/min (328 ft/min)

0.3 mm (0.01") up to a web  
speed of 300 m/min (984 ft/min)

### **BST International GmbH**

Heidsieker Heide 53  
33739 Bielefeld, Germany  
Telephone: +49 5206 999-0  
Telefax: +49 5206 999-999  
Internet: [www.bst-international.com](http://www.bst-international.com)  
E-mail: [info@bst-international.com](mailto:info@bst-international.com)

### **BST Pro Mark**

650 West Grand Avenue # 301  
Elmhurst, Illinois 60126, USA  
Telephone: +1 630 833-9900  
Telefax: +1 630 833-9909  
Internet: [www.bstpromark.com](http://www.bstpromark.com)  
E-mail: [sales@bstpromark.com](mailto:sales@bstpromark.com)

Local representative

A member of the **LEXIS** group

© 2008 BST International GmbH, Bielefeld, Germany • BST 177/0508 en • Subject to change