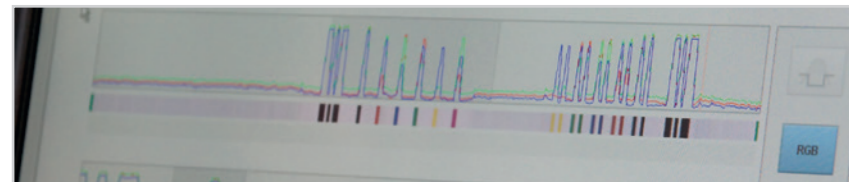




User interface with live image of the register marks



#### Standard functions of the system

Even the standard model offers a wide range of intelligent functions for effective register control.

#### Live image of the register marks

For the first time, it is possible to provide the operator with a live color image of the register marks due to the newly developed 1-pixel color camera. This allows a distinct allocation of printed marks even when they are difficult to detect. Thus, the times in which it was difficult for the operator to determine whether or not the correct print marks were selected are finally over.

#### Intelligent register mark sensor – 1-pixel color camera

The adaptive register mark sensor of the **regi\_star 20** is even able to detect extremely low-contrast colors and metallised inks, as well as transparent lacquer. The register mark sensor developed as a 1-pixel camera analyses the color spectrum of the light reflected from the web, and automatically detects all types of register marks. Thanks to the great depth of focus provided by the fibre optics, the user must change neither the signal amplification nor the scanning angle – the reliable mark detection is performed without any operator intervention. As a light source a long-life maintenance-free LED is used.

#### Waste reduction during start-up

With its fully automatic, optimum scanning technology, the register mark sensor designed for the **regi\_star 20** supports the BST eltromat single head measuring procedure. This unique technology not only allows sequential control for a fast production

start but also key color control for the best possible production quality. A maximum in waste and cost reduction is achieved by using the different measuring and control procedures in any desired combination.

#### Simple, intuitive operation

The modern user interface with integrated online help makes an operating manual obsolete. The operators are quickly familiar with the system. Time and material are saved, because operating errors are avoided. In addition, the set-up time can be reduced because the subsequent job is being prepared while the current production is still running.

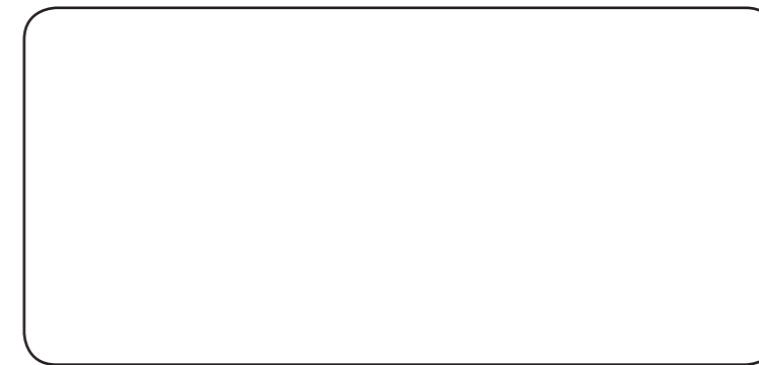
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// Quickly in Register

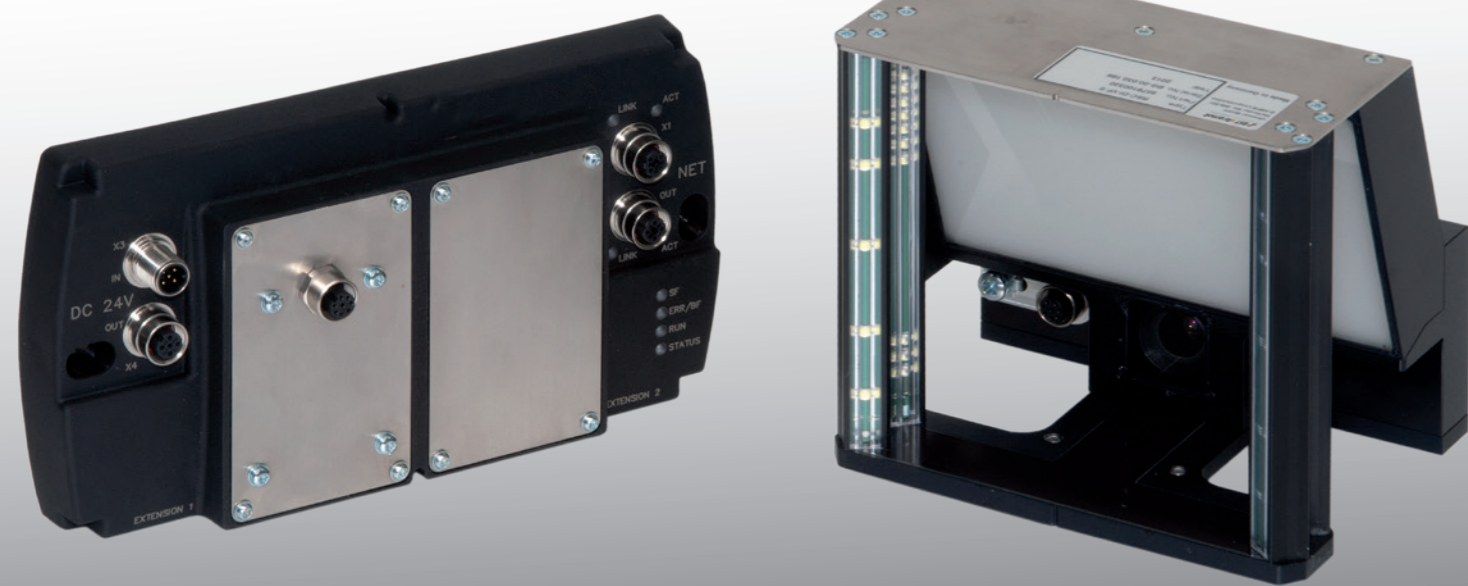
regi\_star 20  
Register Control

*Be inspired. Move forward.*

*Be inspired. Move forward.*

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## // Quickly in Register



## TECHNICAL DATA

### System performance

Maximum web speed	1.200 m/min (3,937 ft/min)
Format length	125 - 5.000 mm (4.9 - 196.9 inch)
Ambient temperature	0 - 40 °C (32 - 104 °F)
Number of printing units	up to 20

### Sensor

Measuring resolution	± 5 µm
Measuring frequency	30 Hz
Material	Paper, foil/film, metallized substrates (opaque, transparent, reflecting)

ATEX approvals (only wedge mark sensor)	C 0123 ` II 2 G [Ex op is T4] IIB PTB 11 ATEX 2013 X according to EN 60079-0, EN 60079-28
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### Operating monitor

Type	19" TFT Touch
Resolution	1280 x 1024 Pixel
Signal input	DVI

### Supply voltage

Voltage	100 – 240 V AC / 50 – 60 Hz
Power consumption	4 A

### Input signals

Digital input signals	24 V according to EN 61131-2, Type 3
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### Output signals

Digital output signals	24 V, 0,5 A short-circuit-proof
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## INNOVATIVE REGISTER CONTROL

The **regi\_star 20** by BST eltromat guarantees a high degree of automation. Set-up times and waste are reduced considerably, resulting in an increase in the productivity of the printing press.

The hardware architecture with maximum flexibility was developed especially for the **regi\_star 20**, so that additional functions can be integrated at any time.

The **regi\_star 20** is suitable for all common printing processes and can be installed at any inline printing press. The system can be easily adapted to the individual needs and process requirements.

Challenge us – we can help you to meet your customers' expectations.

- Quick to print
- Minimising waste
- Ensuring print projects of high quality
- Increasing customer satisfaction
- High degree of automation
- Optimising processes
- Increasing productivity
- Reducing costs

### BST eltromat – synonym for excellent detection of all print marks

The 1-pixel color camera metalized marks and allows the detection of marks with a very low contrast. This means that cold seal and lacquer can be controlled in the web-web comparison. The detected marks are displayed on the user interface as a live color image.

The modern user interface with touch monitor offers individual and efficient handling of the register control system. The clearly designed UI provides a high degree of operating comfort for the printer. This allows the next job to be prepared while the current job is still running.

## OPTIONS

### Automatic process adaptation \_pilot\_control

Waste accrues mainly when process conditions change in the printing press. This includes changes in the machine speed and reel changes. The BST eltromat register control system optimizes these processes by always adapting itself automatically to the respective process conditions with the aid of **\_pilot\_control**. The amount of waste created during set-up, start-up, reel changes and speed changes is considerably reduced.

### Additional keypad

Set point corrections can be executed simultaneously for several printing units with the aid of the optional keypad.

### Remote display and operating unit for the entire control system

An additional remote display and operating unit can be connected to facilitate the setting of tools, e. g.

### Motorised traverse bars for the register mark sensors

When the printed web runs off laterally, the sensor automatically follows the marks and thus increases the process stability.

### Outputs used to connect external logging systems

Appropriate outputs and connections for field buses are available for external capture of process data, such as register deviation.

### Register mark sensors for dot marks

In addition to detecting wedge marks using the 1-pixel color camera, matrix cameras can also be connected to detect dot marks.

### Insetter control system

Insetter modules are available to control a preprinted web and for the electronic gear adjustment of tools.

### Register presetting for the printing press

The set-up process is streamlined through the presetting of the register rollers, lateral cylinder position as well as mark positions. The functions revert to data from the job memory.

### Acquisition of the print cylinder positions

The register mark sensor captures the print cylinder positions of all print units. These positions are provided to be used for the presetting of the print cylinders.

### Remote maintenance module

With the aid of the remote maintenance module, the system can be inspected simply and quickly via remote diagnosis.