Everything under control
Quickly in register

Highest register precision.
First-class quality.

regi_star 20

eltromat
BST GROUP

regi_star 20
Innovative register control

Competition in the printing industry is tough and the requirements are constantly increasing. Precise control of the print image is the key to excellent print products.

Precision from experience
As a leading manufacturer of quality assurance systems for the web processing industries, the BST Group has completed more than 200,000 installations in over 100 countries worldwide and can look back on more than 60 years experience in the field of register control.

The eltromat register control system regi_star 20 guarantees maximum of automation. Set-up times and waste are significantly reduced, which increases the productivity of the press.

The open system architecture enables simple and flexible machine integration. Targeted system extensions allow the **regi_star 20** to meet your growing requirements at any time. The

register control system is suitable for inline printing presses of all common printing processes, processing units and insetter applications.
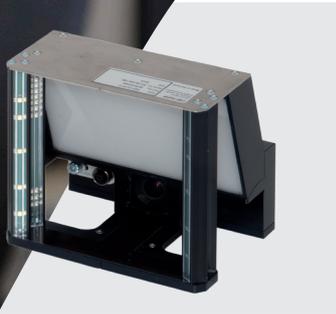
regi_star 20 – Your benefits:
- minimum **waste**
- fast **set-up times**
- easy **handling**
- maximum **quality** at highest machine speed
- increased **productivity**
- high **customer satisfaction**
- reduced **production costs**

Excellent detection of all print marks.
Thanks to the integrated and powerful **eltromat RSH register mark sensor** even low-contrast print marks are detected securely. The modern touchscreen user interface offers efficient handling of the register control. The clearly structured system provides maximum comfort to the operator.

Do you have special requirements? Just get in touch with us. We will be happy to help you.

Matrix camera sensor

regi_commandercontrol panel
With the compact regi_commander control panel, register deviation can be detected and corrected directly at the printing or processing unit.

External operating keypads
With the help of optional membrane keypads setpoint corrections can be made for several printing units at the same time.

regi_star 20
Options

Register mark sensors for dot marks
In addition to the reliable detection of wedge and block marks by the fiber optic **RSH register mark sensors,** the system also supports **RSC matrix camera sensors** for the detection of dot marks.

RegiTouch – semi-automatic register presetting
The **RegiTouch** function allows to bring back selected register marks quickly and easily into the measuring gate.

Insetter control
For register controlled insetting of pre-printed webs and for electronic transmission adjustment of tools, insetter modules are available.

Determining the printing cylinder positions
The printing cylinder positions of all printing units are required for the make-ready process of the press. The register mark sensors determine and provide this information.

Remote service module
With the help of the remote control module the system can be maintained easily and quickly by remote diagnosis via the Internet.

pilot_control register precontrol
Using pilot_control, regi_star 20 automatically adapts to changing process conditions in the press, for example, speed changes and reel changes.

Additional operating unit
An additional remote display and control unit can be connected for comfortable operation of the entire system.

Motorized register mark sensor traverses
When the print web runs sideways, the sensor automatically follows the marks, which increases process stability.

Integration interfaces for process data
For the exchange of relevant process data and status information with the machine control system, PROFIBUS and PROFINET integration interfaces are available.

Chart outputs for recording
Special analog chart recording outputs can be used for external recording and analyzation of register deviations.

Outstanding technology.

First class performance.

The system features of regi_star 20 are matching perfectly to printing applications with the highest demands on quality and performance.

Standard features in the basic system
Even the basic configuration offers you a wide range of intelligent functions for effective register control.

Intelligent RSH register mark sensor
The adaptive **RSH** fiber optic register mark sensor of the **regi_star 20** is able to detect even extremely low-contrast and metallized colors as well as transparent coatings. The register mark sensor automatically analyzes the color spectrum of the reflected light. Because of the large depth of focus of the fiber optics, the user neither have to change the signal amplification nor change the scanning angle. Reliable mark detection is an absolutely non-intrusive process.
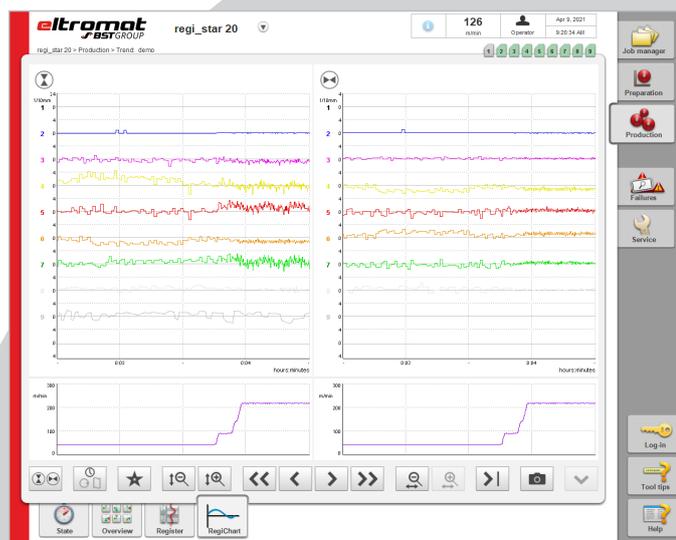
Waste reduction under all production conditions
regi_star 20 supports with its fully automatic, optimal scanning technology the eltromat single-head measuring method. This special technology enables both the sequential control for a fast start of production as well as the spot color control for best possible production quality. Providing the different control methods web-web and web-cylinder in any combination and the high-dynamic control modules optimized for the particular application, a maximum reduction of waste and cost can be achieved.
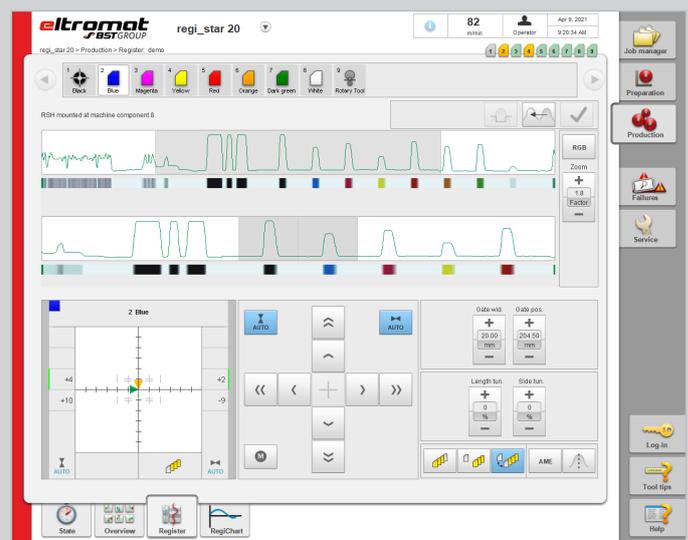
Simple, intuitive operation
The modern user interface, with integrated online help, makes an operating manual not necessary anymore. The operators are quickly familiar with the system. Operating errors are reliably avoided. Time and material are saved. In addition, the set-up time can be reduced, because the subsequent job can be prepared during the current production run.

RegiChart - Register trend display
RegiChart visualizes the register trends of all controls clearly over time or distance. RegiChart supports the operator during the running production to recognize tendency deviations. In this way waste is avoided in advance.

Live image of the register marks
The colored display of the live image of the register marks and the recorded mark signal (oscilloscope view) on the user interface allows the operator to assign even low contrast register marks securely.

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Technical data.

System performance

Number of printing units	up to 20
Maximum web speed	1.200 m/min
Format length	50 – 6.000 mm
Applications	Gravure printing, flexo printing, offset printing, screen printing, processing units
Measurement methods	web-web 1, web-web 2, web-cylinder
Control algorithms	Gravure, Offset, Insetter

Sensors

Variations	RSH fiber optics, RSC matrix camera
Measuring resolution	± 5 µm
Measuring frequency	30 Hz
Register marks	Wedge marks, block marks, dot marks, special printing features
Materials	Paper, foil, metallized substrates (opaque, transparent, reflective)
ATEX approval **(only RSH fiber optic sensor)**	CE 0123 Ex II 2G [Ex op is T4 GB] IIB

System

Operating monitor	19" TFT touchscreen, 1.280 x 1.024 pixel
Interfaces	Ethernet, PROFIBUS, PROFINET
Digital input	24 V according to EN 61131-2, Type 3
Digital output	24 V, 0.5 A, short-circuit resistant
Power supply	100 – 240 V AC / 50–60 Hz, 4 A
Ambient temperature	System: 0- 40 °C (32-104 °F), Sensor: 0- 50 °C (32-122 °F)

BST Group

SMART SERVICE TO HELP
YOU ACHIEVE THE NEXT LEVEL.

No matter where in the world you use our technologies: We support you reliably at all times with our comprehensive BST Group service.

Our specialists are internationally on the road for you and quickly on site when you need them. You can rely on a comprehensive, global production, sales and service network - for first-class performance at any location.

For your optimum benefit, we always adapt our systems exactly to the conditions in your production. Combine solutions from our different product areas:

- Web guiding
- 100% inspection
- Register control
- Video web inspection
- Color measurement
- Surface inspection
- Color management
- Workflow
- Automation

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