// Quickly in Register

ARC_18
Register Control

Be inspired. Move forward.

BST eltromat INDIA

INNOVATIVE REGISTER CONTROL

The ARC_18 by BST eltromat India 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 ARC_18, so that additional functions can be integrated at any time.

The ARC_18 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 India – synonym for excellent detection of all print marks

The 1-pixel color camera metalized marks, 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 occurs mainly when process conditions change in the printing press. This includes changes in the machine speed and reel changes. ARC_18 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.

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.

OPTIONS

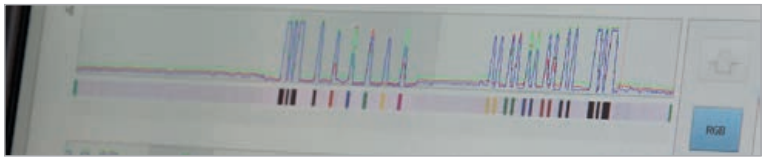
Additional keypad
Set point corrections can be executed simultaneously for several printing units with the aid of the optional keypad.

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

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.

User interface with live image of the register marks



Intelligent register mark sensor– 1-pixel color camera
The adaptive register mark sensor of the ARC_18 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.

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.

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.

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.

Waste reduction during start-up
With its fully automatic, optimum scanning technology, the register mark sensor designed for the ARC_18 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.

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 12

Sensor

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

Operating monitor (Optional)

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

Supply Voltage

Voltage	115 V / 230 V AC / 50-60 Hz
Power consumption	4 A

Signals

Digital input signals	24 V according to EN 61131-2, Type 3
Digital output signals	24 V, 0,5 A short-circuit-proof

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