

// iPQ-View

Digital web viewing
for your quality assurance.



Be inspired. Move forward.

// EXCELLENT PRESENTATION. RELIABLE QUALITY.

Competition in the printing industry is hard, and the requirements are rising constantly. Highly precise web viewing is the prerequisite both for accurate printing products and satisfied customers.

Precision based on experience

Being a leading manufacturer of quality assurance systems for the web-processing industries, BST eltromat International provided more than 100,000 installations in more than 100 countries all over the world.

The powerful all-rounder

The increasing Productivity & Quality-Center – abbreviated as iPQ-Center – by BST eltromat offers a modular product line for centralized control of various quality assurance functions. BST eltromat integrates web viewing, 100% inspection and spectral measurement as well as further functions in one system. Choose your level of quality assurance with our modular approach.

Digital web viewing

iPQ-View by BST eltromat is a powerful tool for digital web viewing during the printing process.

Based on high-quality video display, the iPQ-View operator makes informed decisions on optical quality assurance. The intuitive operating concept minimizes the reaction times and offers the operator new capacities for other tasks. A wide multitude of standard functions and optional features makes iPQ-View an attractive multifunctional tool for quality assurance.

Quality assurance - centrally controlled:
iPQ-Center combines hard and software components on one intuitive multitouch operator interface.



// CONVINCING FEATURES. FIRST-CLASS RESULTS.

The system features of iPQ-View were adapted perfectly to the needs of the web-processing industries:

Optional camera equipment

- industry-applicable high-resolution 1-chip or 3-chip digital cameras
- always reliable and brilliant image quality
- various optical zoom variants for adjustment of field of vision without impairment of quality
- electronically driven traverse for highly precise camera positioning

High-performance flash

- for uniform and optimal lighting of the printing zone
- suitable for all customary materials

Fast remote maintenance

- for easy and immediate diagnostics

Intuitive operator interface

- 16:9 multi-touch monitor
- simple and fast handling thanks to intuitive gestures
- modern design



iPQ-Center – focused on the user: The gesture navigation, known by smartphones, offers central access to all features from zooming to the selection of image sections.

- 1 Camera and picture menu: direct access to main operating elements like camera option and settings
- 2 Live image
- 3 Pull down-menu to access the position memory
- 4 Print format preview makes the control of the field of view easier

At a glance:

iPQ-View – your benefits:

- high decision certainty thanks to excellent image quality
- shorter reaction times reduce waste
- intuitive operation thanks to gesture control
- low investment costs thanks to modularity
- subsequent expandability makes your investments future-proof
- increased customer satisfaction

// IMPRESSIVELY VERSATILE: STANDARD FUNCTIONS OF IPQ-VIEW.

The basic version of the iPQ-View system offers an impressive variety of functions that proves its value in practice every day:

Pin-sharp image reproduction

- low-reflection 23" TFT operating monitor (16:9)
- true-color live presentation

Clearly arranged printing format preview

- camera scan of the whole printing format (overview function)
- programmable camera positions for detailed viewing

Efficient automatic step and repeat

- transfer of any stored position to any impression of the print formats
- automatic, system-controlled selection of increments in x and y direction for monitoring every impression

Comfortable automatic functions

- definition of order-specific automatic runs as arbitrary sequence of stored positions and dwell times



Split-screen for fast quality assessment.

Selectable split-screen function

- simultaneous displaying and direct comparison of live images and reference print (good sample) or live images of a second camera:
 - screen presentation with horizontal or vertical displaying or as a picture-in-picture display with freely selectable sizes



iPQ-View
Basic system

Individual scan mode

- monitoring of the whole printing format
- individually definable increments
- minimal set-up time



The position memory shows all stored camera positions in a clearly arranged manner.

Position memory

- user-defined storage of positions, including zoom, iris and flash settings
- presentation of positions as thumbnails
- simple selection of positions by means of a finger tip
- assignment of inspection tasks such as optional barcode verification or color measurement

// TAILORED SOFTWARE OPTIONS. INTELLIGENT DESIGN.



Snapshot gallery – look at the current production from anywhere in the world

Snapshot gallery (snapshot gallery)

- remote monitoring of production
- up to 50 live images per job can be taken and saved
- access via own company network is possible – from any place in the world

Barcode verification (barcode)

- verification of all common 1D and 2D codes
- reliable detection of the slightest deviations
- ensuring of continuous code legibility in accordance with ISO 15416 and ISO 15420
- intelligent software enables inspection of all common types of 1D and 2D data codes (e.g. QR-codes)
- real-time classification and the control of a status lamp ensure an optimum overview

Sample inspection

- entrance to automatic print inspection
- comparison of the current print to an automatically saved reference image for increased objectivity and reliability
- any occurring errors are reliably detected, indicated, and logged

Enhanced image stabilization (image lock)

- improvement of image stability already at set-up



without Haze Guard



with Haze Guard

Display of low contrasts (Haze Guard)

- Making the „invisible“ visible
- Visualization of missing lacquer and any kind of low contrast defects like hazing or scumming
- by pushing the button improved display of image contrast

Semi-automatic CI register control (smart register)

- fast and precise support when setting up the register when the machine is down
- reference color and all other colors are assigned to the respective printing units by using the monitor
- no additional register marks
- fully automatic adjustment of register at machine start

Relative color measurement (color monitoring)

- detects color deviations compared to previously defined color values
- arbitrary measuring points

... and also:

- defect data logging (event logger)
- alarm status

// FLEXIBLE UPGRADING: TAILOR-MADE HARDWARE OPTIONS.

In addition to the comprehensive standard functions, iPQ-View also offers a multitude of useful optional features. These optional features allow for flexible extension of the capabilities of your system.

Additional monitor options

- 23" TFT monitor (as additional monitor)
- 23" TFT monitor (color-calibrated)
- 40" TFT monitor

Housing and remote options

- ergonomic operator console for integration of the processing unit and all further electric components
- joystick as operating alternative (also for remote controlling of camera)
- monitor cable extensions >5 m

Second matrix camera

- shortening of reaction times – monitoring of back side
- simultaneous use of visual inspection and automatic error detection
- barcode verification or in-line color measurement

Options for 2nd traversing camera

- 1-chip 10x zoom
- 1-chip 16x zoom
- 3-chip 16x zoom

Illumination options

- shadowless backing plate
- homogeneous back side light
- special light sources for:
 - cold seal
 - lacquers
 - UV
 - fluorescent lacquers
 - holograms
 - embossing
 - register comparison top to bottom (power light)
 - shadow-free illumination of the print on transparent material



without UV light



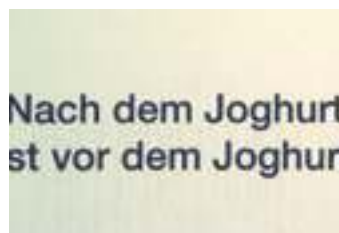
with UV light



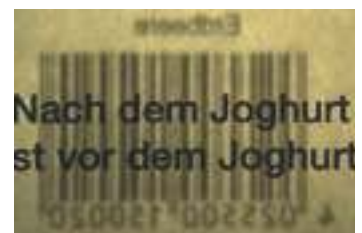
without lacquer



with lacquer



without power light



with power light

// IPQ-VIEW: TECHNICAL DATA.

Area of application

Print methods	Gravure, flexo printing, reel fed offset printing, digital printing, screen printing, converting
Material	Paper, plastic sheet, aluminium (transparent, translucent, opaque, reflective)

System performance

Max. web speed	1,200 m/min (3,930 ft/min)
Max. web width	2,800 mm (110 inches), wider web upon request
Ambient temperature	0-40 °C (32-104°F) (higher temperatures possible with climate control unit)
Relative air moisture	10-90% (not condensed)

Camera

Type	1-chip or 3-chip
Lens	10x zoom, max. FOV 175 x 140 / 16x zoom, max. FOV 220 x 176
Number of cameras	1-2 (depends on application)
Camera resolution	1280 x 1024 pixels or 3x 1280 x 1024 pixels
Max. image resolution	0,012 mm/pixel (0.00047 inch/pixel)
Traverse bar	motorized, speed up to 250 mm/s (490 ft/min)

Illumination options

Type	Main illumination, back side illumination*, lacquer flash*, UV flash*, embossing flash*, hologram flash*, power flash for front to back register viewing*
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User interface

Type	23" TFT multi-touch screen
Resolution	1920 x 1080 pixels
Signal input	DVI

Supply voltage

Power supply	115 / 230 V AC / 50-60 Hz
Rated current	Depends on application
Fuse protection	6 A

Inputs / outputs

Input / output	Alarm signal (error, warning, good) / reel change
Power supply	24 V DC
Input current / max. output current	7 mA / 100 mA per output, short-circuit proof

*optional

// MODULAR QUALITY ASSURANCE: THE IPQ-CENTER.

Integrated functions. Intuitive operation.

The features of the iPQ-Center are always based on your needs. Cameras, image analysis functions, error detection, additional illumination, spectral measurement and other components can be integrated when they are needed.

Thanks to the iPQ-Center it is not necessary to switch between different operating elements: all modules and functions are integrated into a uniform, intuitive multi-touch operator interface.

At a glance:

iPQ-Center – your benefits:

- **numerous quality assurance functions** on a single software platform
- hardware and software modules efficiently integrated into a **single system**
- intuitive and **uniform operation**
- **central access** to various quality management functions
- **freely configurable** as wanted or needed
- functions and modules can also be integrated at **any point in time**

Your local contact

The logo for SARELTECH features the word "SARELTECH" in a bold, blue, blocky font with a white outline. The letters are set against a dark, textured rectangular background.

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