

// The powerful All-Rounder
for your Quality Assurance:
iPQ-Center.



Be inspired. Move forward.

CONSTANT QUALITY ASSURANCE AS A CHALLENGE.

In the printing industry demands on the product quality are high, and due to the competitive market they are continuously increasing. Ensuring flawless printing quality is essential for manufacturers to remain competitive. In the past, manufacturers had to rely on various autonomous quality assurance systems to meet the requirements.

Different tasks, different systems

Until now, print manufacturers could equip their machines with the following quality assurance systems:

- **Line scan camera systems** for monitoring the print web in its complete width using fixed optics that only provided a limited resolution, especially at high web speeds
- **Web monitoring system** with area scan camera and zoom lenses that make visible even the tiniest details in an excellent image quality, but can capture a part of the web only.

- With **hand-held meters, such as spectral photometers** for carrying out offline color measurements that can only be done on a random basis on samples, and at the start and the end of a roll.

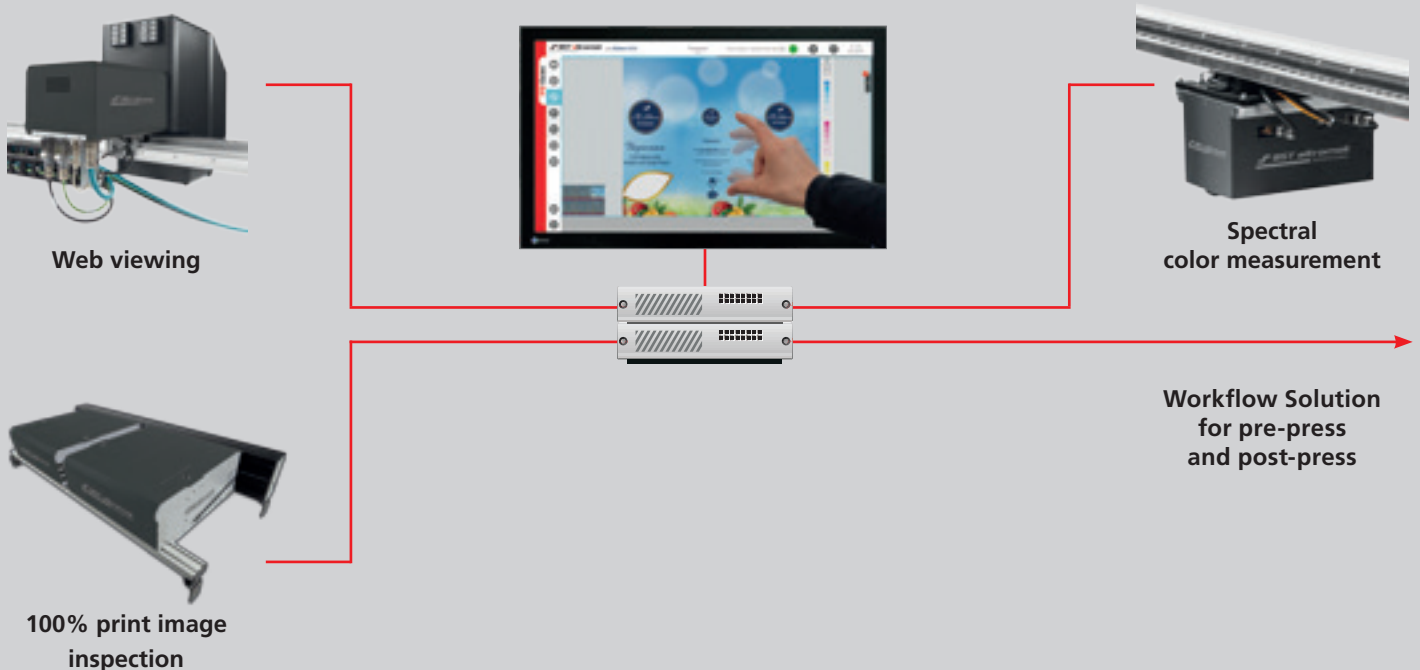
The disadvantages of autonomous systems are clear: a higher hardware expense due to equipping each system with its own PC and monitor; a higher complexity of operating for the printers due to different software as well as a higher expense due to a separate set-up of print jobs for all systems.

Challenge: Color setting

The compliance with default color standards during the ongoing printing process cannot be ensured with the naked eye. Therefore, objective parameters must be captured to ensure that the requirements of the customer are strictly complied with.

In response to the described problems BST eltromat International developed an intelligent and integrated quality assurance solution. On the following pages we would like to introduce you to the BST eltromat iPQ-Center.

MODULAR SYSTEM DESIGN



INTELLIGENTLY MADE: QUALITY MONITORING BASED ON A MODULAR CONCEPT.

BST eltromat International exactly knows the practical requirements and thinks out of the box – for precise print results and an efficient printing process.

Precision based on experience

As the leading manufacturer of quality assurance systems for the web-processing industry, BST eltromat has performed more than 100,000 installations in more than 100 countries all over the world.

iPQ-Center: the powerful all-rounder

The increasing Productivity & Quality-Center (abbreviated: iPQ-Center) of BST eltromat is a modular product line for the central control of numerous quality assurance functions. BST eltromat integrates web viewing, 100% inspection and spectral measurement as well as further functions into a single system. Configure your quality monitoring modules individually based on a modular concept.

One single monitor for all systems

The iPQ-Center does not need to switch between various controls: All modules and functions are integrated into a uniform interface. It does not matter which kind of quality assurance task the operator wants to execute: The iPQ-Center automatically controls the required component.

Comfortable handling

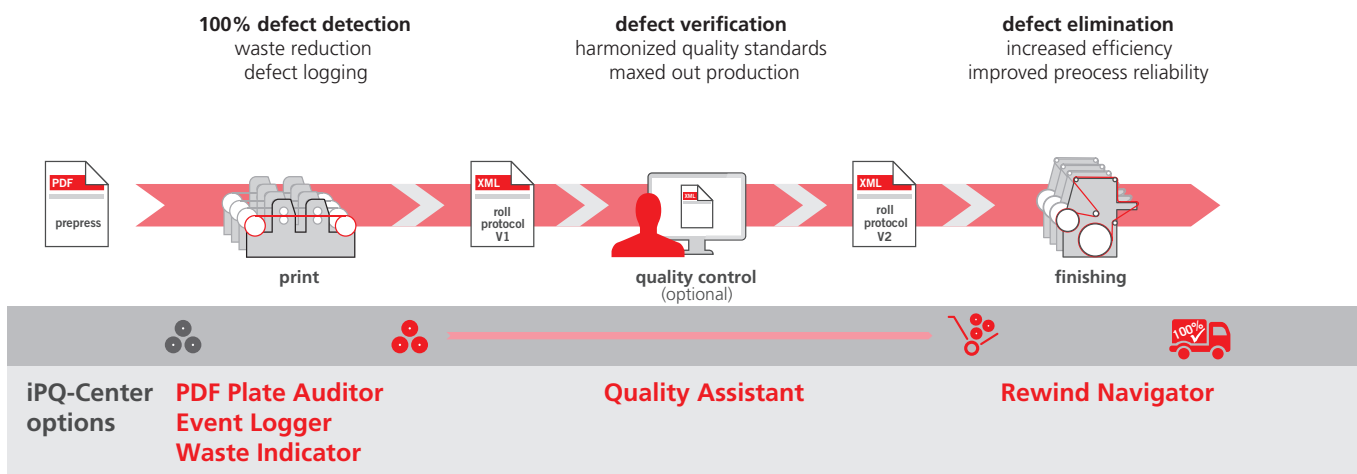
The iPQ-Center supports the machine operator through fast setup times – even with the shortest print jobs. The continuous control approach lets the extremely powerful individual systems work exceptionally efficiently as an integrated system. Other advantages: reliable image representation from the first printing cylinder revolution and direct access to all features.

Process sequences: perfect in the flow

With the iPQ-Workflow software BST eltromat perfectly combines the different iPQ-Center modules. iPQ-Workflow – as the iPQ-Center in general – is very well balanced to meet the requirements of the printing, labeling and processing industries.

QUALITY MANAGEMENT

From pre-printing to further processing: perfect print results are based on continuous data management.



INTEGRATED FUNCTIONS. INTUITIVE OPERATION.

Quality assurance – controlled centrally

The iPQ-Center combines hardware and software components on an intuitively operated multi-touch screen interface. The gesture control known from smartphones provides a central access to all features, from zoom to the selection of image areas and the view of the complete web width to the determination of measuring locations for color measurement.

Modular design according to your needs

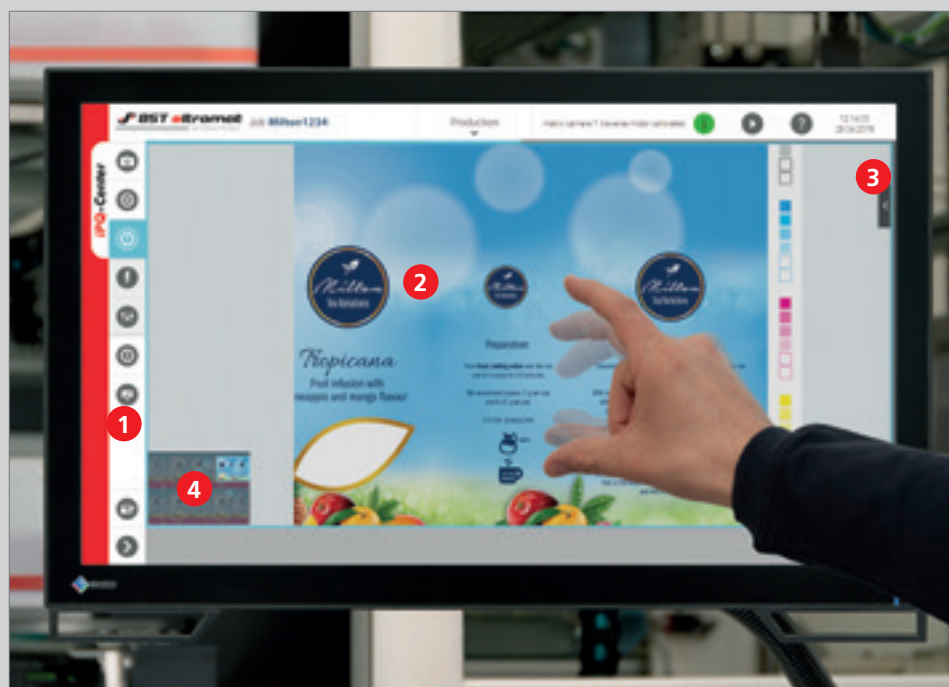
The features of the iPQ-Centers are always based on your needs. Cameras, image analysis functions, error detection, additional illumination, spectral measurement and further components can be integrated as required.

Increasing integration of prepress and press

One key attribute of the iPQ-Workflow is its openness to production-assisting solutions from other manufacturers. The inspection systems of the iPQ-Center have for some time featured interfaces to ESKO, Color Cert, AxonGraphix, PantoneLIVE or Colorware MeasureColor, among others. For example, targets for the individual modules of the iPQ-Center can be set conveniently with the Automation Engine.

Particularly in flexo and gravure printing, close coordination between the prepress and press stages is generally the key to shorter setup times and greater convenience for the machine operators, and therefore to cost savings. After all, this coordination ensures that the job relevant data, which is used in the iPQ-Center, complies with the specifications of your customers. The machine operators can focus completely on their core tasks.

IPQ-CENTER – THE OPERATOR IN THE FOCUS:



The gesture control known from smartphones provides a central access to all features, from zoom to the selection of image areas.

- 1** Menu for camera and image control: direct access to the main control elements, such as camera selection and settings
- 2** live image
- 3** extractable menu for the position memory
- 4** the printing format preview facilitates the control of image areas

INDIVIDUAL SOLUTIONS FOR FLAWLESS PRINT RESULTS.

Efficiency cannot be easier: The **iPQ-Center** combines **numerous quality assurance features** on a clearly designed software platform. Its uniform and intuitive control design enables an central access to various quality management features ...

... from the **view of the complete web width**
... to **zoom and selection of image areas** ...
... to the **determination of measuring locations**
for color measurement.

The **iPQ-Center** can be freely configured and upgraded in accordance with your wishes and requirements.



Selective quality monitoring

- **iPQ-Check:** 100% print image inspection
 - 100 % inspection over the whole web width
 - relative color measurement by means of RGB assessment (color monitoring)
- **iPQ-View:** digital web viewing
 - sample inspection
 - barcode check
 - relative color measurement by means of RGB assessment (color monitoring)
- **iPQ-Spectral:** spectral color measurement
 - XRGB compliant measuring results that are aligned to hand-held measuring devices of the same standard
- **iPQ-Workflow:** workflow software
 - software for pre and post press connection to the iPQ-Center

At a glance:

iPQ-Center ...

- is a modular and forward-thinking system design
- combines a variety of quality assurance task in one user interface, which also means that there are no double job entries
- enables shorter and intuitive operation workflows through gesture control on a multi-touch screen interface
- provides clarity, the same handling for all tasks and reduced training requirements through the seamless control approach

YOUR OPTIONS ...

iPQ-View

Digital web viewing

With iPQ-View BST eltromat created a powerful tool for digital web monitoring in the printing process. Based on print image representations in excellent image quality, the operator makes decisions on the optical quality assurance fast and informed. A vast variety of standard features and equipment options makes the iPQ-Viewer an attractive multi-function tool for quality assurance.

At a glance:

iPQ-Center – your benefits:

- high decision confidence through high-resolution images in the highest quality
- intuitive operation with gesture control
- choice of camera equipment
- high performance flash for equally optimal printing area illumination
- flexible extensibility
- remote maintenance
- shortened response times reduce waste
- increased customer satisfaction
- and much more



iPQ-View

iPQ-Check

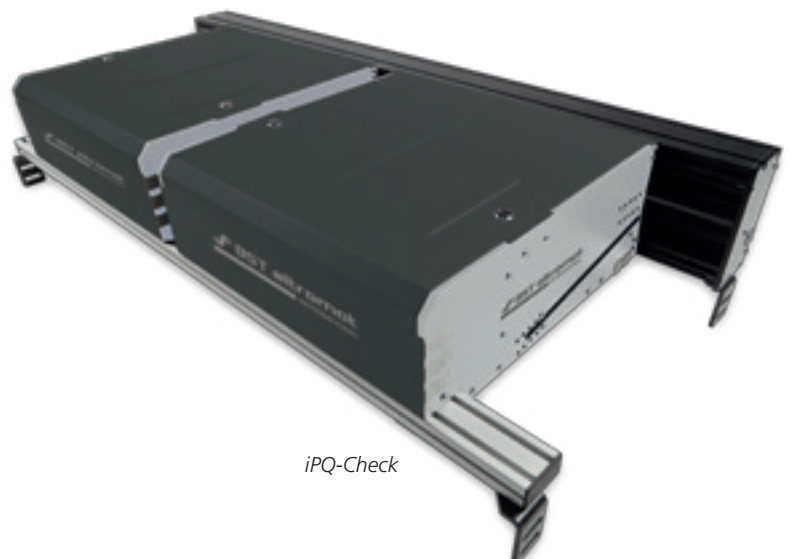
100% print image inspection

iPQ-Check is an intelligent tool for 100% print image inspection throughout the whole printing format. The features of the system are perfectly adapted to web-processing industries requirements. Well-engineered technologies and algorithms deliver a gapless and reliable monitoring, and enable the direct rectification of error sources. The result: flawless printing quality that will delight your customers.

At a glance:

iPQ-Check – your benefits:

- uninterrupted quality control
- reliable and fast error determination and, thus, error correction
- increased productivity through automated print monitoring
- targeted error prevention based on production logs
- detailed color image data through powerful line cameras
- live view of the whole printing format
- display of the printing report from the first print roll revolution
- reliable inspection on all materials
- flexible setting options for sensitivity
- subsequent extensibility
- remote maintenance
- increased customer satisfaction
- and much more



iPQ-Check

... FOR EXTRAORDINARY PRINTING QUALITY.

iPQ-Spectral

Spectral color measurement

iPQ-Spectral supports you efficiently on complying with default color standards by carrying out an in-line measurement within your printing machine. Thus, color measurements and comparison with print samples after a roll change is unnecessary. The evaluation of the constantly captured color data enables the optimization of workflows to achieve a maximum economical printing process and perfect results – even at the highest color intensity.

At a glance:

iPQ-Spectral – your benefits:

- early detection and correction of color deviations
- valuable support during machine setup
- constant color data capture
- objective data assessment and alarm feature when exceeding tolerances
- color quality documentation for the customer
- process optimization based on printing logs
- avoidance of waste as from the setup process
- direct availability of color measurement values from the in-line process for color management and quality assurance
- high-resolution spectral photometer
- stable measuring conditions for reliable analyses
- highest possible data compatibility with off-line measuring devices through XRGB compatibility
- and much more

iPQ-Workflow

workflow software

The BST eltromat iPQ-Workflow software forms a reliable basis for the interaction of machines, processes and departments to achieve fast and smooth workflows with a higher efficiency and flawless print results. iPQ-Workflow enables reliable assessment and correction of any occurring errors and offers solutions for data import and export from pre-printing to further processing. At the same time, the coherent overall concept of the software allows for the flexible adaption to most different production processes.

At a glance:

iPQ-Workflow – your benefits:

- uninterrupted quality control
- reliable error detection starting at set-up
- fast error correction
- automatic tagging and removal of waste
- targeted error prevention based on the analysis of production logs
- optimized process reliability
- also suitable for more complex process sequences with multiple refining steps
- for a continuous and economic workflow
- reduced waste and complaints
- increased customer satisfaction
- and much more



iPQ-Spectral



iPQ-Workflow

INTELLIGENT SERVICE THAT MOVES YOU FORWARD.

No matter where in the world you use our technologies: We support you reliably with our comprehensive BST eltromat service.

Our specialists are located all over the world and can be on site quickly in case of emergencies. You can access an extensive global production, sales and service network – for first-class performance at any location.

For your benefit, we always adapt our systems exactly to the requirements of your production. Combine solutions from our various product areas:

- Web Guiding
- 100% Inspection
- Register Control
- Web Video Inspection
- Color Measurement
- Surface Inspection
- Color Management
- Workflow
- Process Automation
- Layer Thickness & Basis Weight Measurement

Further information and current news are available at www.bst-international.com



Your local contact

Be inspired. Move forward.

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