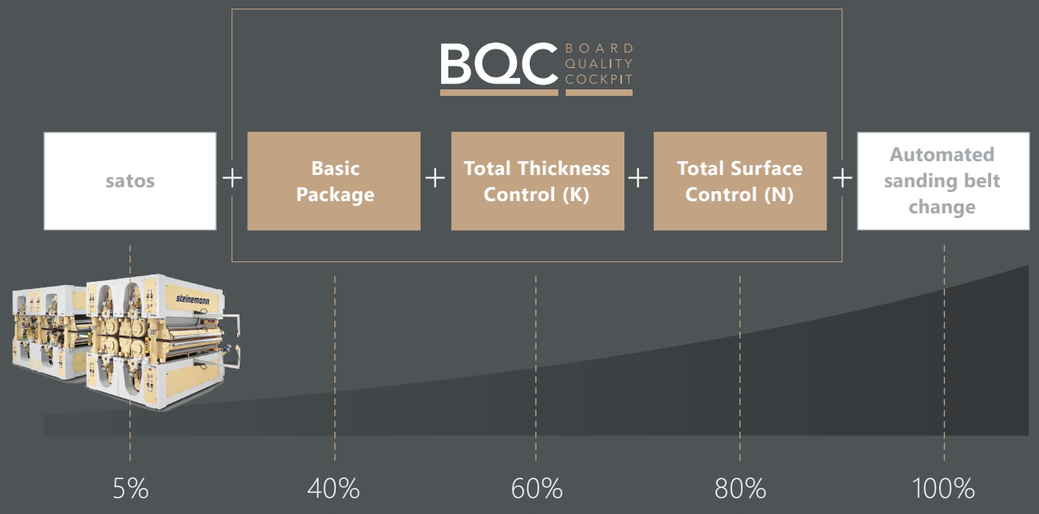
RETROFIT AUTOMATION PROGRAM FOR SATOS

steinemann

BQC – the process control system for a fully integrated, automated sanding process

We offer a number of automation packages that enable the complete integration and automation of the sanding process. Depending on the choice and combination of the various BQC packages and modules, the sanding process can be almost entirely automated.

Level of Automation



BASIC PACKAGE

Automated machine pre-setting
- Higher machine availability
- Faster job changes
- Greater reductions to operating costs
- Less B quality in the pre-sanding process

TOTAL THICKNESS CONTROL (K)

Automated calibration process
- Uniform and reproducible panel thickness
- Reduction in material and personnel costs
- Reduction in B quality due to compliance with thickness tolerances

TOTAL SURFACE CONTROL (N)

Automated fine sanding process
- Uniform and reproducible surface quality
- High level of process transparency
- Rapid response time
- Reduction in B quality due to compliance with required surface quality

ROI in less than 3 years if all packages are deployed

We will be happy to perform an individual ROI calculation for you. Please contact your Steinemann representative for details.

Use a modular retrofit to achieve fully integrated sanding

The BQC process control system offers a modular approach to performance. Three coordinated retrofit packages let you achieve customized automation for your individual sanding processes, plus the full integration of satos into your overall production line.

BQC BASIC PACKAGE

Standard features for process and quality monitoring.
Including recommendations for action, fault cause reporting and trending. With interfaces to the ERP and the handling system for job and production management, as well as product data exchange (including panel dimensions, panel count and reporting about panel quality grading).

BQC modules:
BQC **BASIC**
BQC **ERP**
BQC **HANDLING**

Machine upgrades:
CUS Control Upgrade Siemens
BTS Belt tension sensors

BQC TOTAL THICKNESS CONTROL (K)

Automation of the calibration process.
Integration with external thickness measuring and installation of the Total Thickness Control (K) software module. Systems controls and monitors the target panel thickness automatically. Ensuring a uniform and reproducible panel thickness.

BQC modules:
BQC **EXT-THICK**
BQC **Total Thickness Control (K)**

Machine upgrades:
CDA Motorized fine adjustment of contact drums
EXT External thickness measuring

BQC TOTAL SURFACE CONTROL (N)

Automation of the fine sanding process.
Integration with chatter mark and roughness scanner, and installation of the Total Surface Control (N) software module. Systems controls and monitors the target panel quality automatically. Ensuring a uniform and reproducible surface quality.

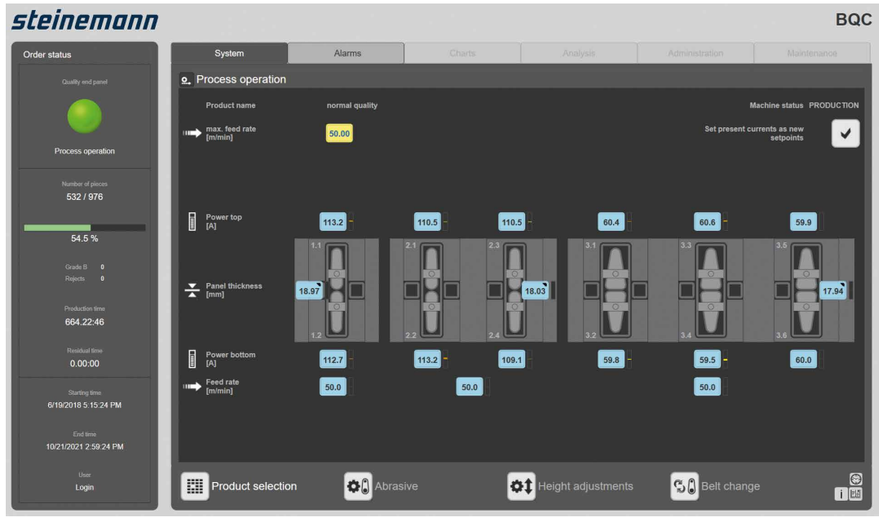
BQC modules:
BQC **CHATTER & ROUGH**
BQC **Total Surface Control (N)**

Machine upgrades:
SPA Motorized fine adjustment of sanding platens
CRS Chatter mark and roughness scanner

BQC benefits and functions

The combination of the satos family and BQC represents a giant step towards our ultimate goal: the fully automated sanding process. In this scenario, BQC operates separately from the machine software as an autonomous software suite that networks with all of the sanding line peripherals.

- Job, product and recipe management with the sanding center database
- Optimum machine pre-setting for format and job changes
- Dynamic process display for quality and process monitoring
- Real-time inspection and reporting of deviations from target values
- Fault analysis and recommended actions for resolution
- Production data trending and reporting
- Maintenance planning and management



During process mode, real values are monitored continuously and a report with recommendations for action is generated as soon as measured values deviate from the set point.

Machine upgrades at a glance

BTS Belt tension sensors

Monitoring of belt tensioning on all sanding heads and sanding belt control in process mode.

→ BQC Basic Package required for installation

CDA Motorized fine adjustment of contact drums

Fine adjustment of all contact drums via position sensors and displays mounted on both sides.

→ BQC Total Thickness Control required for automated calibration process

SPA Motorized fine adjustment of sanding platens

Fine adjustment of all fine sanding platens via position sensors and displays mounted on both sides.

→ BQC Total Surface Control required for automated fine sanding process

CRS Chattermark roughness scanner

Scanning system performs continuous monitoring of chatter marks and roughness. Ensuring a uniform and traceable surface quality.

→ BQC Total Surface Control required for installation

CUS Control unit upgrade (Siemens TIA Portal)

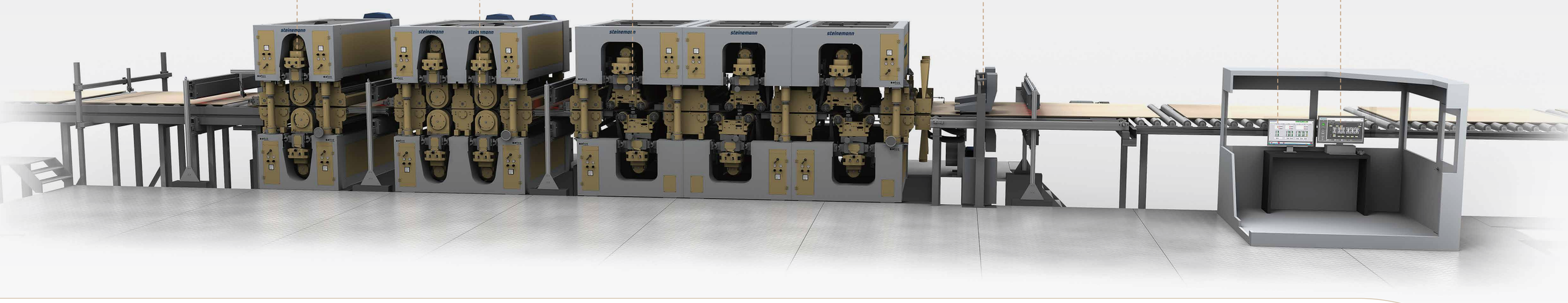
Control upgrade for modernization of installed base system.
High machine availability and boost to productivity.

→ Required to install all BQC packages for satos

BQC Board Quality Cockpit Process control system

The process control system for a fully integrated, automated sanding process.

→ Basic control software for networking the sanding line



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