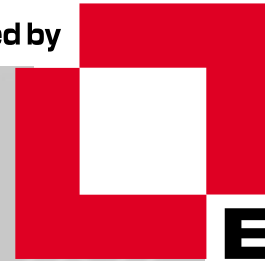
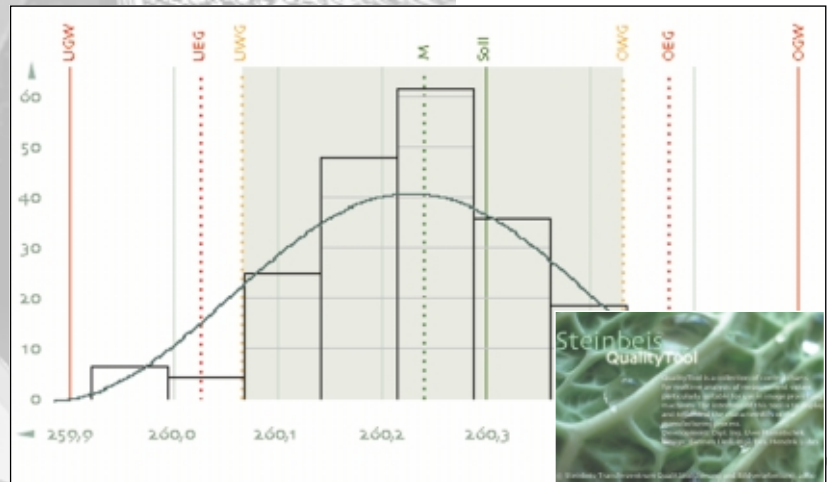


# ► Quality

powered by



COMMON VISION  
**BLOX**



Statistical process  
control tool



STEINBEIS-TRANSFERZENTRUM  
QUALITÄTSSICHERUNG UND BILDVERARBEITUNG

**STEMMER**<sup>®</sup>  
IMAGING

# ► Quality

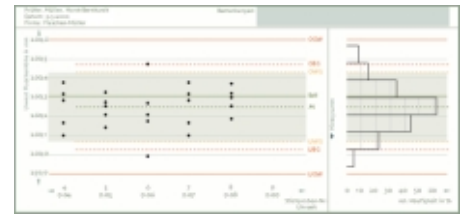
Random sample testing as a mathematical and statistical procedure for the recording and evaluation of quality characteristics along with their representation in the form of quality control charts forms the basis for the monitoring and control of processes in many areas of production and economic quality management.

Quality contains a range of functions that can be used for realtime evaluation of measured information in image processing devices. They make use of the SPC (statistical process control) methods. These quality control chart procedures serve to record/visualize, control and regulate the quality characteristics in the production process. They supply information about the processes and are tools which systematically collect information and data about the process from which conclusions can then be drawn about how best to control the process. A quality control chart is represented in the form of a Cartesian coordinate system where the x-axis represents a time unit (inspection period, sampling number, etc.) and the y-axis represents the value unit (measured value, variation, standard deviation, number of errors, etc.).

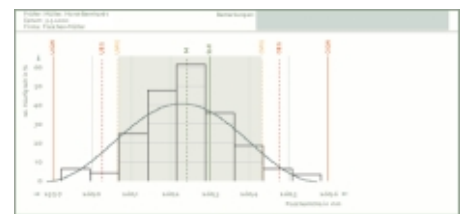
The process control aspect is realized using statistically calculated warning and action thresholds. When the warning threshold is exceeded, the process should be monitored very carefully. If the action threshold is exceeded, the process has to be adjusted to ensure that the quality characteristics return to their planned limits. The diagrams shown here feature selected examples which show the graphical representation of quality control charts as provided by the Quality tool.

## ► Functions of Quality

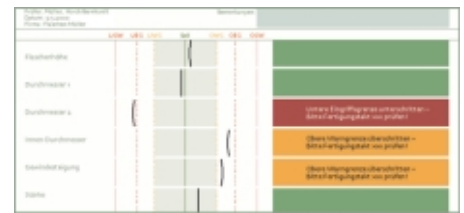
- Realtime representation of the tested quality characteristics of the production process
- Option which allows you to select various quality control chart types (original values, average chart, standard deviation chart, error distribution chart, histogram chart)
- Overview of the synchronous monitoring and regulation of a number of quality characteristics of the production process
- Possible combination of different control charts in one application
- Automatic scaling and labeling of diagram axes
- Automatic calculation of action and warning thresholds
- Flicker-free representation
- Freely scalable representation
- Automatic updating of the view window
- Interactive navigation in the range of key
- Changing type of quality control chart during runtime
- Easy to apply since there are only a few lines of code in the program
  - Simple to add or remove data
  - All parameters can be adjusted using properties
  - Information for the user is output in the form of events should thresholds be exceeded or not achieved



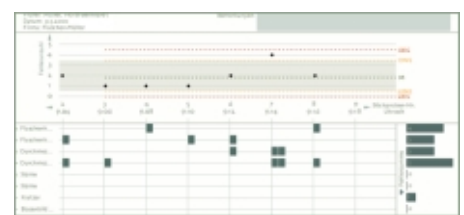
Original value quality control chart showing a histogram as well as the warning and action thresholds



Histogram of a characteristic feature



Quality diagrams for the simultaneous representation of several quality characteristics



Inspection chart showing distribution of errors



Reduced representation of several quality characteristics