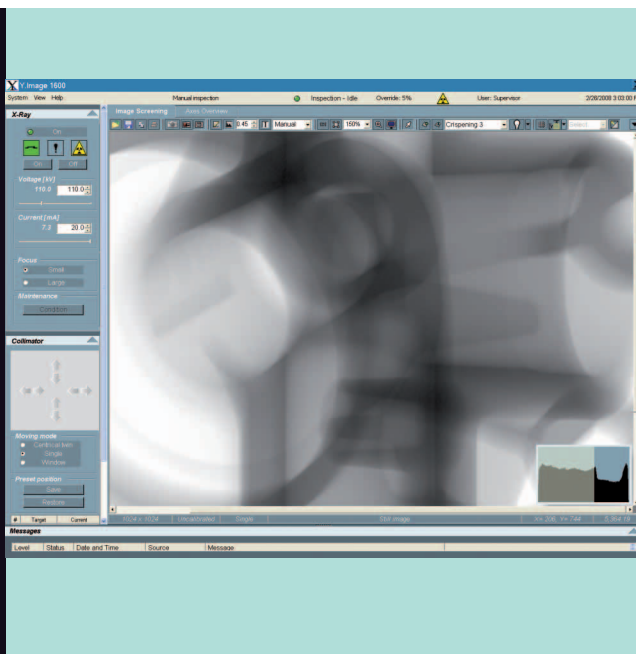


# Y.Image 1600 – convenient software for visual X-ray inspection



YXLON is offering an easy-to-use software solution for visual X-ray inspection: Y.Image 1600.

The area of deployment ranges from the manual manipulation of inspection items via joystick to traveling through predefined inspection sequences. In the case of medium-sized unit volumes, throughput can be increased considerably using such sequences. In terms of image enhancement using Y.Image 1600, the emphasis has been placed on simple operation limited to the most important functions.

As an option, fixed inspection positions can be set up quickly and easily which are then worked through consecutively on an automatic basis. The process can be interrupted at any time for manual manipulation to examine conspicuous features more closely. A reference image for each position is automatically consigned during the set-up phase.

*YXLON. The reason why.*

- efficient inspecting through operation of all components using one single user interface
- inspection with certainty through optimum image quality
- time savings through fast installation of inspection programs
- system stability through immediate detection of deviations in position and changed image quality

## Full-scale solution

Y.Image 1600 is a software solution that enables the operation of YXLON inspection cabinet components, for example X-ray tubes, image intensifiers and flat-panel detectors, as well as collimators. Additional functions serve toward image enhancement, data storage and documentation.

When the option "Testing using inspection programs" is chosen, inspection programs that use fixed inspection positions for efficient in-line series inspection can be defined quickly and conveniently.

## Image data preprocessing

Y.Image 1600 is suitable for image sources with a gray-value scope of up to 32 bits. The input data can be optimized via an offset correction and a multigain correction in order to obtain images with a high signal-to-noise ratio.

The access for setting the image source parameters can be limited via multistage user management.

## Gray-value scaling

Y.Image 1600 supports a variety of modes that adapt the gray values from the image source to output on the monitor.

Using the standard gray-value scaling, the entire dynamic range of the image source is depicted. That scaling makes sense for setting optimum parameters for X-raying. Using the automatic gray-value scaling, the current image information is splayed across all the gray values available on the monitor. This scaling is used to travel through various areas of the inspection item without constantly having to adjust the parameters for X-raying.

In the case of Y.Image 1600, switching back and forth between these modes is done at the press of a button. Scaling can be additionally performed with the help of a histogram or by "dragging and drawing" a rectangle.

## Additional functions

For depicting optimum images for X-ray inspection, Y.Image 1600 also offers

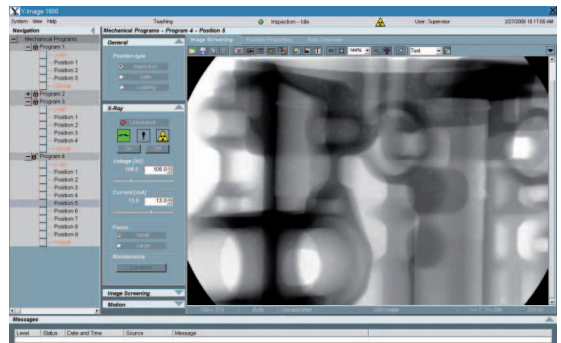
- Noise reduction through adjustable integration
- Image enhancement with the help of key filters
- Image inversion and zoom function
- Full-screen and 1:1 depiction
- Tools for convenient documentation



Analogous to standard program options in Windows®, the graphic buttons can be configured to suit operators' different methods of working.

## Testing using inspection programs (optional)

This option enables the quick and simple creation of inspection programs with inspection positions that can be traveled to consecutively. The familiar tree structure from Windows Explorer® makes it possible to obtain a good overview of the programs and individual positions that have been created.



Bei Along with the mechanical position, in each program the

- X-raying parameters
- gray-value scaling
- collimator setting
- detector calibration and/or image intensifier setting
- reference image (current or loaded image)

are saved, too. Inspection positions can be conveniently tested, changed and shifted. The corresponding X-raying and image parameters are visible for each inspection position, even without activating the inspection program itself.

## Inspection workflow

In a normal case of preprogrammed testing, an inspection decision is made after each position. Testing is continued or terminated depending on that decision. However, the "Testing using inspection programs" option also enables the operator to quickly change to the manual mode. The inspection workflow is then aborted or continued step-by-step at the press of a button.

Switching between the current image and the reference image can be performed at any position. Changes in image quality or in the position of the inspection item become immediately identifiable as a result. If a reference image is consigned during loading, e.g. with the help of an optional interior camera, the operator receives support in positioning items with complex shapes.

Colored symbols and comments can be displayed on the image as overlays in order to point out certain things to the operator. A statistic supplies information about inspection results during a shift.