

YXLON.MU56/59 Fully Automatic X-Ray Inspection



YXLON's fully automatic X-ray inspection systems are designed for high speed serial inspection of castings of various dimensions and weights.

Using industrial robots for the part handling results in very low cycle time, highest flexibility and a superior uptime with 100% defect recognition.

As the central operator interface, PXV5000 is responsible for fully automatic system control, part identification, automatic defect recognition and classification (ADR) as well as marking and sorting of rejected parts.

The parts are moved in all necessary positions, and after an O.K. decision, given back into the manufacturing process. After an N.O.K. decision, parts are sorted out. With PXV5000 it is possible to have either visual or fully automatic X-ray inspection or both.

YXLON. The reason why.

- fully automatic image analysis with 100% defect recognition
- consistent, precise inspection results using ADR
- superior image quality using state-of-the-art X-ray technology
- high throughput
- outstanding durability and high machine uptime

Test samples

The MU56/59 systems are designed for X-ray inspection of castings of different dimensions and weights. The systems will be precisely adapted to your special inspection requirements.

Test cycle parameter

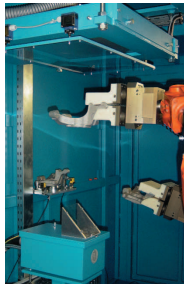
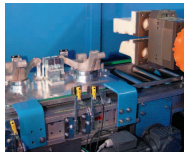
Typical cycle time 15 - 21 sec / Test sample
Typical idle time 2 - 8 sec / Test sample

Part Handling

A pallet conveyor system transports the test parts into or next to the lead shielded cabinet. The parts will be picked up by the industrial robot either directly or through a product door. The robot positions the part precisely and as required in the X-ray beam. Depending on the cycle time requirements one (Y.MU56) or two industrial robots (Y.MU59) will perform the part manipulation.

X-ray tube and X-ray detector are mounted inside the lead cabinet and stay in a fixed position.

According to requirements one or two X-ray beams and detectors can be used simultaneously. After the visual analysis by the operator or the fully automatic analysis of PXV5000, O.K. parts are sent back into the manufacturing process while N.O.K. parts are sorted out through ejection chutes or by a belt conveyor.



X-ray shielded cabinet

The X-ray shielded cabinet is designed to provide X-ray shielding up to 160 kV and complies to the current German X-ray law (RöV) from 2002. The cabinet is always equipped with at least one maintenance door and one lead window to observe the inspection process. The dimensions of the X-ray shielded cabinet depend on the sample dimensions and inspection requirements but generally vary between 2.3 m x 3 m and 3.2 m x 4.3 m.

Control cabinet, X-ray components and lead cabinet are mounted on a common platform. This ensures smaller footprint requirements and minimizes transportation and installation time.



MG165 High stability constant potential X-ray system

The state-of-the-art 40 kHz technique ensures very short switching times between different kV values and best results in image processing. Metal ceramic X-ray tubes with a tube voltage of 6 - 160 kV and up to 1,000 W are chosen depending on the individual inspection requirement. YXLON X-ray tubes are typically equipped with two focal spots of 0.4 / 0.4 acc. IEC 336.

Imaging system

YXLON's standard imaging system for fully automatic systems is a digital flat panel detector with an input screen of approx. 205 x 205 mm², or 410 x 410 mm². It gives extremely high geometrical and densitometrical image resolution. Other imaging systems are available on request.



MU56/59 Control panel

The control console is the central man/machine interface. Besides other equipment it includes the control unit for the X-ray system, conveyor system, and robots. The PC-based user interface and X-ray images are shown on a 19" VGA monitor.



PXV5000 Main graphical user interface

The system operator is supported by a central, graphical user interface with various system modes. Information and error messages are displayed on a color monitor. The PLC-based control enables easy and user friendly teach-and-learn programming of the whole system.

Options

- Statistics software
- Parallel Review, reduction of false reject rate without interruption of the inspection process
- OFFLINE Station
- Mold recognition

Please tell us your requirements and needs. We will find the solution.

Regulations

Products manufactured by YXLON International X-Ray GmbH comply with stringent quality and safety regulations. The quality assurance system of YXLON International X-Ray GmbH is certified to ISO 9001.