



XRH*RobotStar* High volume in-line inspection



VisiConsult
X-ray Systems & Solutions

Highly Scalable through system clusters

Automated Defect Recognition (ADR)

Capable of mixed production inspection

Developed for the automotive industry

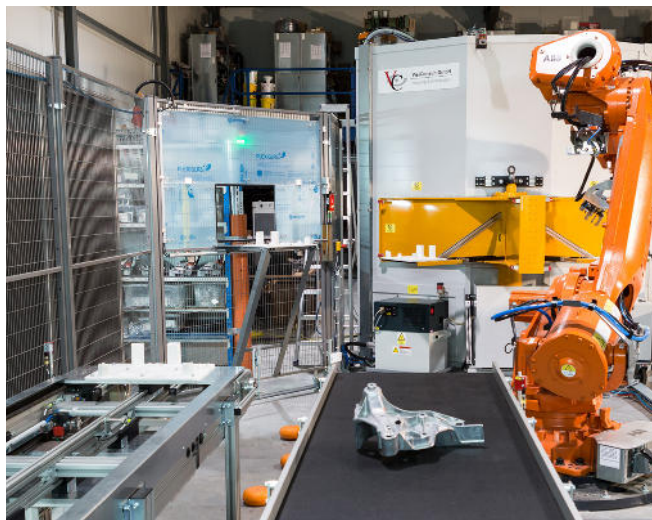
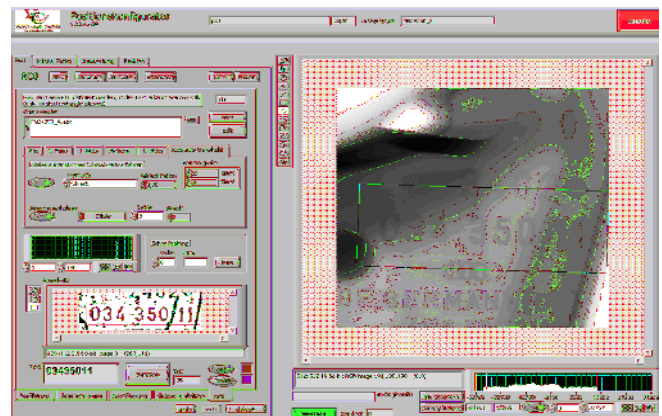
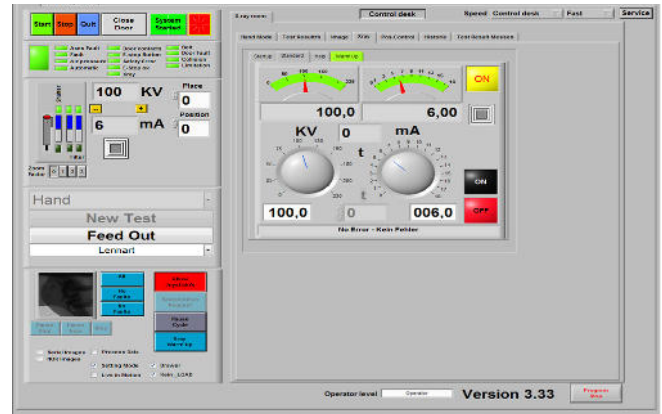
Successful reference installations worldwide



XRHRobotStar – For high throughput

In high volume industries like automotive the requirement for a hundred percent X-ray inspection creates a bottleneck in the production. The XRHRobotStar is a fully automated in-line inspection robot-system that allows unmatched processing speed while fulfilling all common industry and company standards. The system has multiple successful installations worldwide especially for the inspection of medium sized aluminum castings. By building a parallelized cluster solution consisting of several cabinets the throughput can be adjusted to the production output

The underlying principle is the parallelization of processes to reduce the inspection overhead. The X-ray components are mounted on a C-Arm, which is attached to the inner robot. On the outside a second robot loads parts on the part-table and distributes the tested parts to a pass or scrap conveyor. The test positions and inspection sequences are highly optimized through extensive case studies by experienced VisiConsult application engineers. As every millisecond counts in high volume production all processes are highly optimized.



Automated Defect Recognition (ADR)

The XRHRobotStar needs no human interaction for system operation or defect classification. This entitles the system for 24/7 unmanned operation resulting in reduced labor costs and an absolute process safety. The VisiConsult ADR is capable of detecting all common defects like porosity, inclusions etc. and can carry out complex tasks like measurement jobs, completeness checks, fitting control and many more. Part identification is done through interacted DMC, RFID or Barcode readers. Proven through many successful reference installations worldwide the VisiConsult ADR is the most flexible automation suite as all processes can be easily customized towards special requirements.

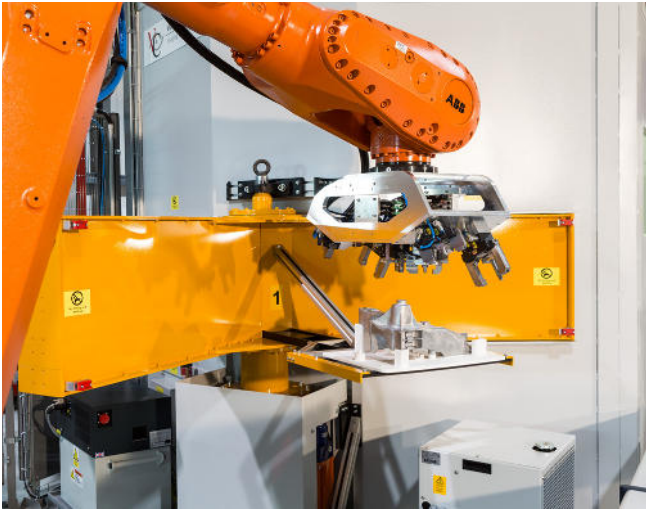


In case of extreme production volumes, the inspection throughput can be easily scaled by grouping systems to inspection clusters. The connected systems can be interfaced to the same conveyors and communicate to maximize the efficiency.

In times of high production diversity and short life-cycles it is important to have a flexible inspection system. The XRHRobotStar recognizes the part type and applies the correct inspection sequences. This allows the system to be used for mixed production.

Patented positioning system

The combination of high-end industrial robots with an in-house developed and patented positioning solution leads to an ultra-low misdetection rate. Optical pre-positioning and complex image rectification make sure the system delivers repeatable results complying to the most demanding industry and company standards.



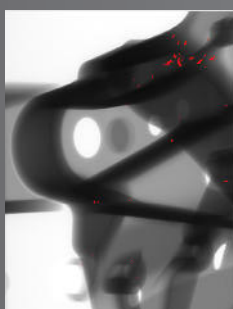
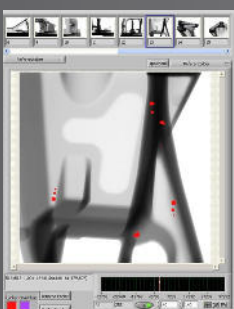
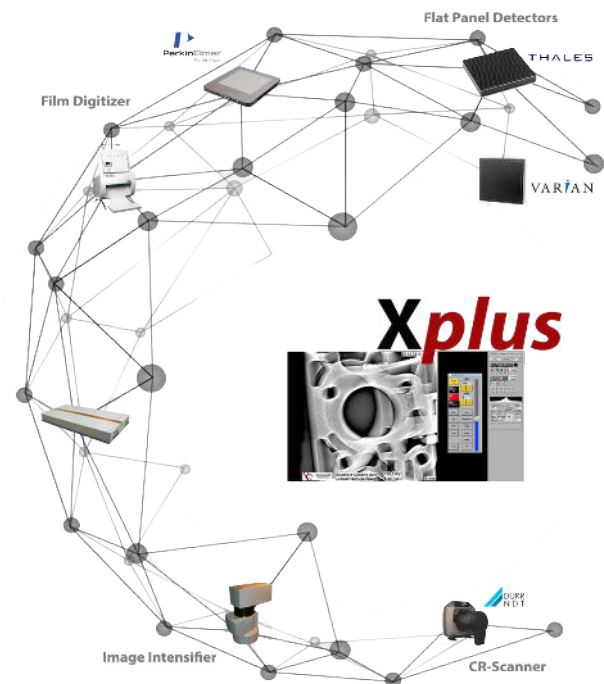
Modular design and high quality

To provide the best inspection results VisiConsult supplies a broad variety of X-ray components. Tube and detector can be freely combined depending on customer preferences or application requirements, which are determined through complex case studies. For a maximum safety the cabinet is certified by the German TÜV and CE to ensure no X-ray leakage and fulfillment of all related standards. The robust industrial design, developed and produced in Germany, guarantees a long lifetime and low downtimes even in demanding conditions. The inspection results can be reviewed at the system, in an operator cabinet or through offline-stations.

Xplus – Discover the Invisible

The core of the system is our in-house developed image enhancement system *Xplus* that sets new industry standards. Constant development and 25 years of experience combined with a maximum flexibility towards special process requirements help our customers to be a step ahead! Advanced features like overlay tools, macro generators, filter builders, live image enhancement, report toolkits, DICONDE integration, measurement tools and many more make the *Xplus* the most sophisticated software on the market.

It fulfills all major international industry standards like ASTM, EN17636-2, Boeing 7042/44, NADCAP and many more. VisiConsult is a highly agile and flexible solution provider. Therefore, special software or even hardware requirements can be easily implemented on customer demand!



To find even the tiniest failures in test-parts our renowned image enhancement system *Xplus* has a broad portfolio of enhancement features to deliver sharp and noise-reduced images that are optimized for automated inspection.

To achieve the best inspection results an experienced team of accomplished application engineers creates an optimized sequence for every single part. Parameters, test positions, angles and X-ray components are determined in comprehensive case studies in cooperation with technicians of our customers.

The XRHRobotStar is a dedicated in-line X-ray inspection system for high volume serial production.



XRHRobotStar - technical specification

Max. part size (mm L x W x H)	ca. 700 x 500 x 420
Max. part weight (kg)	20
System size (mm L x W x H)	5200 x 2600 x 3000
System weight (kg)	8000
Estimated space (mm)	10000 x 5000
Energy (kV)	160, 225
Inspection cycle time	1.3 s / position
Connection values	3N PE, 400/230 V, 50/60 Hz
Power	14kW
Grounding	8mm ² separate
Ambient conditions	+10° to +35°C

Dimensions and electrical values can vary depending on X-ray equipment. Cabinet in compliance to German and international radiation law. Dimensions can be customized in case of special requirements, especially in terms of part size.



Your VisiConsult Sales Team!

- 100% automated in-line inspection through ADR
- Patented system with unmatched throughput
- Capable of mixed production inspection
- Dimensions can be customized on demand
- Designed to eliminate the inspection bottleneck
- Extensive archiving options including DICONDE
- Brilliant images with high dynamic range
- Compliance to international X-ray standards



VisiConsult is a family owned company located in Northern Germany and is a specialist for customized and standard X-ray systems. All our products are developed and produced locally and delivered as turn-key solutions. This leads to cutting edge performance and a high flexibility. Our goal is to solve our customers' problems with tailored systems and guarantee a premium post-sales service.

More than 25 years of expertise in Security and classic Non Destructive Testing (NDT) markets like aerospace, automotive and many more lead to an unmatched experience in X-ray technology and result in a superior global service network.