

RAZAR – Reduced Area Zone Automated Radiographic

The Rayscan RAZAR is a digital real-time radiographic inspection system (RTR) for small-diameter pipes.

To complete a full inspection, the system only needs to scan around the pipe once and has a very reduced exclusion zone (5ft). This allows other trades to continue working safely without shutting down the entire inspection area.



THE Applus+ SOLUTION

The Rayscan RAZAR system can be customized to meet client requirements, providing the most effective integrity solution for their assets, resulting in operational efficiency, reduced risk, and enhanced safety.

We have been the industry's specialist in non-destructive testing, inspection, and certification since 1937, providing both standard and tailor-made solutions through our global Research and development team. We are committed to ensuring the quality and efficiency of your asset and providing the most efficient and accurate results.

This real-time radiography system provides tailor-made solutions with different key advantages and is the ultimate solution for the radiographic inspection of new construction girth welds.

- Compact X-ray tubes for better access in tight areas and portability
- Direct-acting detectors for better sensitivity and faster production speed.
- Advanced double wall scanner yields optimal tube positioning, resulting in more consistent image quality without having any equipment inside the pipeline.

Proven capabilities and demonstrated results.



- Better image quality than conventional RT.
- Over half a million welds have been inspected since 2010 using the Rayscan technology.
- Compliant with ASME BPVC Section V, Art.2, and ASME BPVC Section III

Data interpretation and data management

- Scans are accessible via a secure cloud or customer-specified database.
- Enables remote interpretation and auditing.
- Improves file management and archiving.

The RAZAR technology uses similar technology to what is found on Applus+'s Rayscan system, however, it miniaturizes the technology in a tiny and lightweight package suitable for tight and congested areas.

It also has similar traits found in Applus+'s Small Containment Area Radiography techniques where a very small radiation safety exclusion area (less than 5 feet radius) is required, which safely allows other work groups to work in parallel with radiographic examination activities.

Our experience with our clients brings significant schedule and cost savings to their projects. RAZAR is proven to be safer, non-intrusive to projects, and more productive while providing high-quality code-compliant digital images.

Target customers

Rayscan RAZAR technology can be used to inspect weld quality on piping and tubing systems where quick and high-quality results are required, and a low radiation exclusion safety zone is favorable to allow other work groups to continue with work.

Key customer benefits

Cost Efficiency

- No films or consumables
- Reduced inspection time
- Smaller crew size
- Increased production

Operational Feedback

- Real-time feedback
- Multiple pipe diameter capability
- Digital imaging and reporting
- Remote auditing capability



Safety and Environment

- Shorter exposure times
- Reduced exclusion zones
- Use of an X-ray generator instead of a radioisotope
- No environmental impact – no chemicals or waste