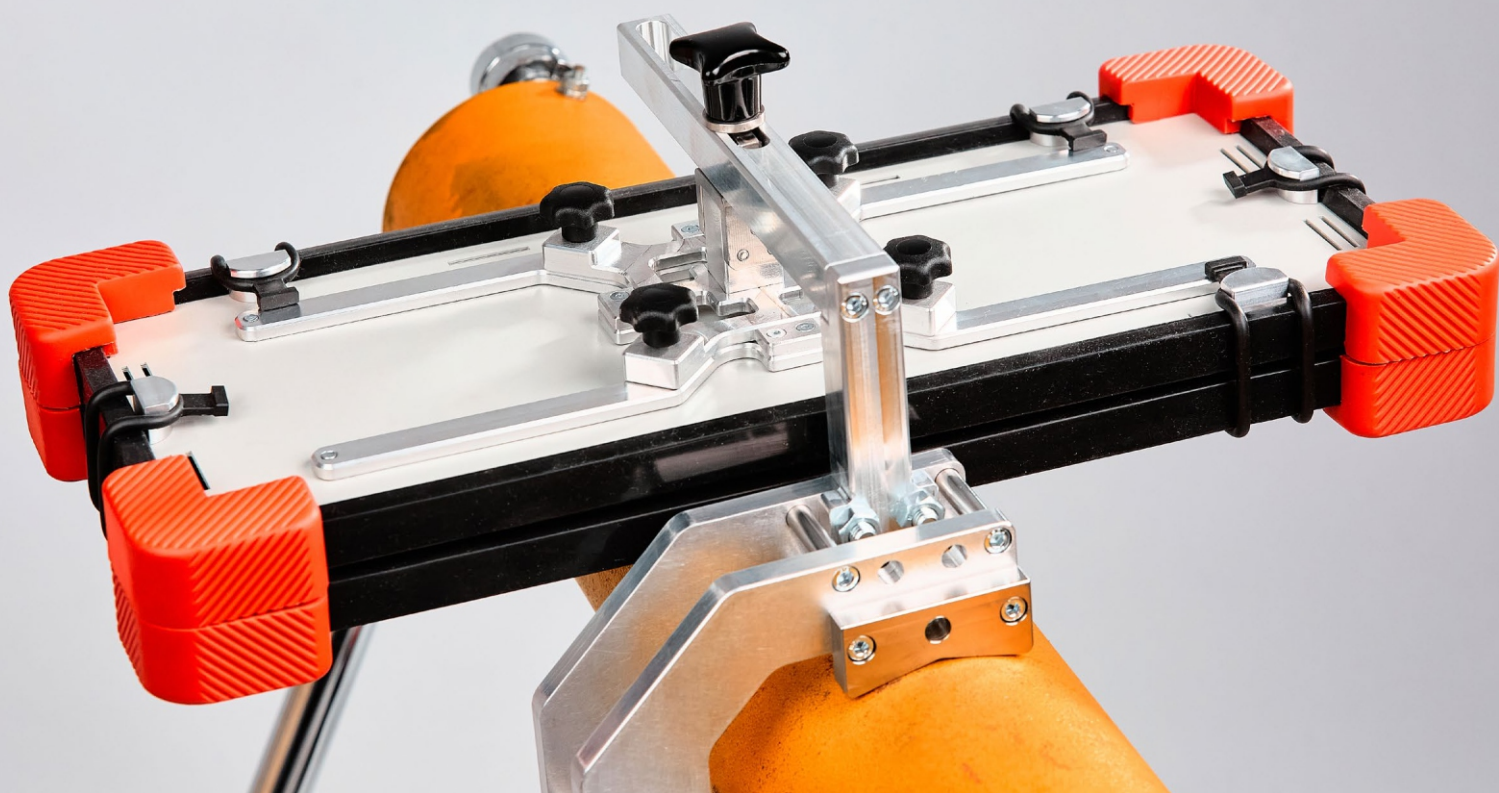


SYSTEMS

SCANRAY 1230 HS

High-speed flat-panel digital radiography system



The unique **SCANRAY 1230 HS** (High-Speed) digital radiography system offers several important advantages compared to classic DR solutions. In many applications, these features significantly boost the inspection workflow and improve image quality. At the same time, high-speed detectors require specific handling and attention during operation.

The **SCANRAY 1230 HS** can be used as a universal solution with Gamma sources for the inspection of objects of any geometry, provided the procedure described below is followed. The system can also be used with X-ray generators, but only when there is no direct radiation exposure of the detector surface (i.e., the inspected object must fully cover the flat-panel detector).

Key advantages of the system

■ Reduced exposure time

Exposure time is typically 2-3 times shorter compared to standard DR systems, especially when inspecting materials with large wall thickness.

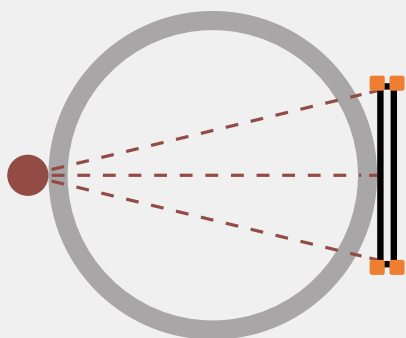
■ Enhanced image contrast and reduced light scattering

Improved contrast makes it easier to achieve the required inspection sensitivity, SNR_N and SR_b levels.

Operational consideration: ghosting effect

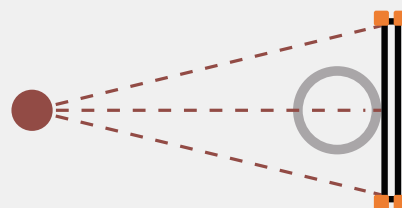
The main operational limitation of the **SCANRAY 1230 HS** system is its sensitivity to the ghosting effect (image lag). However, when proper preparation and operating procedures are followed, ghosting can be effectively minimized and reliably controlled.

When inspecting **large-diameter pipes** (or other objects that fully cover the detector), ghosting is generally not observed, regardless of the radiation source type.



No ghosting with any source

When inspecting **small-diameter pipes** or objects that do not fully cover the detector surface, additional preparation is required to prevent ghosting artifacts.



Only Gamma sources
with the **ghostbusting** procedure applied

Ghosting mitigation procedure () with Gamma sources

When working with small-bore pipes or other objects that do not fully cover the detector, a ghostbusting procedure must be performed before starting the inspection and repeated during operation if necessary.

- Position the Gamma source at a distance of **70-100 cm** from the detector, perpendicular to the center of the detector's active area. Expose the detector **without any object** in front of it for **1-3 minutes** (the detector may be powered off during exposure).
- This procedure typically suppresses the ghosting effect for **2-3 hours** of operation. During this period, inspections can be carried out using Gamma sources on pipes of any diameter without noticeable ghosting artifacts.
- After 2-3 hours of operation, or if ghosting becomes visible, repeat the ghostbusting procedure. The strongest ghosting artifacts are usually most visible when using the **B** filter in **DR-SOFT**. For this reason, it is recommended to use this filter periodically to monitor image quality over time.

By following these guidelines, operators can fully benefit from the high contrast and reduced exposure time of the **SCANRAY 1230 HS** system while keeping ghosting effects under control.

Operation with X-ray generators

X-ray generators may also be used with the **SCANRAY 1230 HS** system when inspecting large objects that completely cover the detector area. However, X-ray sources are not recommended for small-sized objects, as X-ray exposure causes a more pronounced ghosting effect, and the ghostbusting procedure is less effective compared to Gamma sources.

If it is necessary to overcome ghosting when using an X-ray generator, perform the ghostbusting procedure. For that, set the anode voltage to **100 kV** and position the X-ray source at a distance of **70-100 cm** from the detector, perpendicular to the center of the detector's active area. Expose the detector for **3-5 minutes**.

Authorised Distributor



INNOVATIVE TECHNOLOGIES
IN INDUSTRIAL RADIOGRAPHY
info@dr-systems.com
WWW.DR-SYSTEMS.COM



AK NDT & Industrial Supplies
PRECISION BEYOND MEASURE

Email: sales@ak-ndt.com

Web: www.ak-ndt.com