

# Rugged quality, precision imaging

DXR140P-HC | DXR140P-HE  
DXR100P-HP | DXR75P-HR detectors





# Customer driven leadership in industrial radiography

Some things don't change: like the need in non-destructive testing (NDT) for reliable, high-quality, fast and easy imaging. But that doesn't mean we can't do better. With the next-generation DXR wireless portable detectors Waygate Technologies, has developed a new direct radiography (DR) platform that combines the latest technical advances with extensive customer insight.

The result is a range of DR detectors that meet the strictest ISO standards, designed specifically for the demands of different industrial applications. Rugged inside and out, they offer the high quality and fine details an inspection task requires, from corrosion monitoring to weld inspection and everything in between. Easy to transport and easy to operate, they offer a complete solution for safe, high quality imaging, even in the harshest conditions.

## High-quality, portable imaging for inspection of field installations:

- Rugged additional shielding for extended lifetime
- Easy to transport and handle
- Choice of wireless or wired use
- Wi-Fi range up to 100 meters
- Two hot-swappable batteries, for longer uninterrupted operation
- Dust tight and waterproof
- Compliant with prevailing standards, including ISO/ASTM
- Minimum backscatter and noise, maximum image quality
- Rhythm Insight RT acquisition and review analysis software
- Powered by Flash! automatic image processing technology

## A new detector portfolio for high-quality industrial field operation

The new range of DXR detectors provide the high-quality, efficient imaging solution required for industrial field testing. The detectors have a reduced thickness that makes them ideal in situations with limited detector positioning freedom. Choose wired or wireless use for simplified operation that matches your needs under every circumstance.

## Rugged inside and out

Dedicated to industrial use, the customer-driven design of the next generation DXR detectors offers a rugged reliability that perfectly fits the criteria for mobile inspection of installations.

Each detector comes in a rugged casing that guards against drops, knocks and even radiation. Additional layers of shielding in the detectors better protect them from the harmful effects of radiation, for a longer lifetime and consistent performance. The IP67 rating (immersion up to 1 meter depth) ensures these detectors are suitable for all industrial environments.

A tailored flight case, pipe support, 50 m outdoor network cable and shoulder strap makes the package complete, and ready for safe, easy transportation.

**Designed for high quality, efficient imaging in harsh field radiography conditions**

DXR140P-HC

## Large size, high contrast imager for all-purpose radiography

Ideal for corrosion monitoring in the oil & gas and energy industries, the DXR140P-HC detector offers high contrast. And due to its increased dose sensitivity allows shorter exposure times and faster throughput.



The DXR140P-HC can be used with X-ray as well as isotopes, and is suited for general radiography applications, including (but not limited to):

- **Oil & gas and energy, in-service inspection:**
  - CUI
  - valve positioning
  - WT measurement
  - pipe support
  - boiler tubes
- **Casting inspection**
- **Aviation MRO**
- **Military and security**
- **Structure inspection:**
  - concrete, bridges, supports, ...
- **Science, art and archeology**
- **Power line inspection, GIS**

DXR100P-HP

**NEW**

## Large size, high performing imager, covering most applications

The DXR100P-HP gives you the high, 100-micron pixel resolution, so this versatile detector can cover both worlds: O&G inspections but also weld inspection, supporting ISO 17636-2 class B for weld inspection.



The DXR100P-HP can be used with X-ray as well as isotopes, suited for a wide variety of applications, including (but not limited to):

- **Weld inspection in oil & gas, energy and aviation:**
  - transport pipelines
  - complex structures (spool)
  - boiler & pressure tubes
  - fuel pipes
  - pressure vessels and storage tanks
- **Shipyards weld inspection**
- **Oil & gas and energy, in-service inspection:**
  - CUI & WT measurement
  - valve positioning
  - pipe support
- **Casting inspection**
- **Aviation MRO**
- **Military and security • Structure inspection:**
  - concrete, bridges, supports, ...
- **Science, art and archeology**
- **Power line inspection, GIS**

## DXR75P-HR

# Small size, highest resolution imager for critical applications

The DXR75P-HR gives you the high, 75-micron pixel resolution required to distinguish fine details for critical applications. The detector supports ISO 17636-2 class B for weld inspection, offering precision imaging that meets the most stringent standards.



The detector's narrow width makes it ideal for imaging in situations with limited detector positioning freedom.

The DXR75P-HR is suited for critical applications, including (but not limited to):

- **Weld inspection in oil & gas, energy and aviation:**
  - transport pipelines
  - complex structures (spool)
  - boiler tubes
  - fuel pipes
  - pressure tubes
  - pressure vessels and storage tanks
- **Shipyards weld inspection**

## DXR140P-HE

# Large size, high contrast imager for high-energy radiography

The DXR140P-HE is the ideal portable detector designed for high-energy applications (Isotopes). Due to its optimized internal shielding, we prevent low-energy scattered radiation, having a negative influence on image quality and electronics lifetime.



The DXR140P-HE can be used with isotopes and high-energy X-rays (above 450kV), and is suited for general radiography applications, including (but not limited to):

- **Oil & gas and energy, in-service inspection:**
  - CUI
  - valve positioning
  - WT measurement
  - pipe support
  - boiler tubes
- **Casting inspection**
- **Aviation MRO**
- **Military and security**
- **Structure inspection:**
  - concrete, bridges, supports, ...
- **Science, art and archeology**
- **Power line inspection, GIS**

## Ready to inspect!

Each DXR is a complete solution, with:

- Detector, mounted in a ruggedized case
- Accessories for optional external front shielding
- Transport case
- Wi-Fi and wired accessories
- Four batteries with charger
- Workstation with Rhythm Insight RT acquisition and analysis software, powered by Flash!

## Rhythm Insight RT advanced digital tools

Built on 15 years of experience and proven knowledge, Rhythm Insight RT offers a powerful, scalable, yet easy-to-use NDT acquisition and analysis platform, dedicated to industrial requirements, and powered by Flash!

- Intuitive user interface for out-of-the-box scanning and image processing
- Touch user interface for optimal operation under all conditions
- Application-guided automation
- Powerful image quality validation tools
- DICONDE compliant



## Technical specifications

**NEW**

	DXR140P-HC	DXR100P-HP
Pixel pitch (micron)	140	100
Detector size (incl. armor case & battery pack)	460 x 568 x 27mm (18,1 x 23 x 1,1")	460 x 568 x 27mm (18,1 x 23 x 1,1")
Detector active area	353 x 424 mm (14 x 17")	348 x 425 mm (14 x 17")
Detector weight (incl. armor case & battery pack)	9,2 kgs (20 lbs)	9,2 kgs (20 lbs)
Scintillator	Gadolinium oxysulfide (GOS)	Gadolinium oxysulfide (GOS)
Environmental protection detector	IP67	IP67
Operating temperature	-20 °C to +50 °C	-20 °C to +50 °C
Drop test: 1 m	Passed	Passed
Grayscale	16 bit	
Communication	Wired or wireless (802.11n/ac)	
Power supply	DC +24 V (max 0.8 A) • Wired: power by SCU with tether interface cable • Wireless: powered by battery pack (2 x 3.100 mAh)	
Operating time	Up to 7 hours for imaging, 9 hours on standby	
Radiation hardness	> 1 kGy	
Compliance	ISO, AST, ASME, JIS and KS • DICONDE compliant (ASTM E3147) • Spatial Resolution Measurement conforms to ASTM E2597	

## Useful Assescoires

### Pipe support

Curved support on the armour case that allows smooth positioning of the detector on pipes and ensures that the dda is always in the centre.

### Shoulder strap.

A simple but neat solution that allows easy transport of the detector. Equipped with quick-lock for easy use.

### Transport case (flight case).

Customised transport case offering full protection during transport with protection class IP67.

### Outdoor communication cable

A cable solution consisting of a 50 metre (164 feet) UV protected and shielded flexible network cable that allows direct communication between the detector and the computer. This provides the user with the most stable and fastest data communication.

### Tripod

Allows completely flexible and easy positioning around the object. Two versions available: for large and small detectors.

### Ethercon cabel (7 m - 22,9 feet)

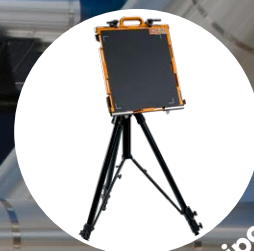
Allows the supplied tether cable to be extended to 14 metres for cable communication between SCU (WiFi access point) and detector.



Pipe support



Transport Case



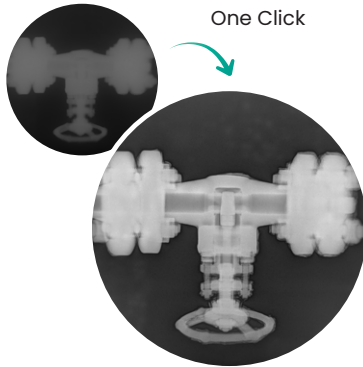
Tripod

	DXR75P-HR	DXR140P-HE
Pixel pitch (micron)	75	140
Detector size (incl. armor case & battery pack)	268 x 358 x 38mm (10,6 x 14,1 x 1,5")	460 x 568 x 27mm (18,1 x 23 x 1,1")
Detector active area	168 x 225 mm (7 x 9")	353 x 424 mm (14 x 17")
Detector weight (incl. armor case & battery pack)	4,5 kgs (9,9 lbs)	8 kgs (17,6 lbs)
Scintillator	Gadolinium oxysulfide (GOS Fine)	Gadolinium oxysulfide (GOS)
Environmental protection detector	IP67	IP67
Operating temperature	-20 °C to +50 °C	-20 °C to +50 °C
Drop test: 1 m	Passed	Passed
Grayscale	16 bit	
Communication	Wired or wireless (802.11n/ac)	
Power supply	DC +24 V (max 0.8 A) <ul style="list-style-type: none"> <li>• Wired: power by SCU with tether interface cable</li> <li>• Wireless: powered by battery pack (2 x 3.100 mAh)</li> </ul>	DC +24 V (max 1.0 A) <ul style="list-style-type: none"> <li>• Wired: power by SCU with tether interface cable</li> <li>• Wireless: powered by battery pack (2 x 3.100 mAh)</li> </ul>
Operating time	Up to 7 hours for imaging, 9 hours on standby	
Radiation hardness	> 1 kGy	
Compliance	ISO, AST, ASME, JIS and KS <ul style="list-style-type: none"> <li>• DICONDE compliant (ASTM E3147)</li> <li>• Spatial Resolution Measurement conforms to ASTM E2597</li> </ul>	



# Powered by Flash! intelligent image processing technology

When it comes to revealing details and reliably make good/fail decisions, Waygate Technologies Flash! digital radiography image processing software sets new standards for defect detection and inspection efficiency.



**Combining 25+ years of experience and patents with next-generation technology, Flash! automatically, quickly and consistently optimizes your digital radiographs.**

You get exquisite image quality and comfortable reading, with a faster, smoother workflow that enhances your productivity, maximizes your resources and gives your customers peace of mind.



SHARP

## Next-level imaging

**Selecting the right imaging hardware has a major impact on image quality – but the software you choose is just as important!**

Flash! uses innovative, proven and leading image processing technology that offers high image quality. Images are made consistent, regardless of the operator, for easier reading and more confident reviewing.



SMART

## A layered perspective

**With Flash! you see more, with a clear vision of both high- and low-density areas, in a single image.** Intelligent image processing automatically minimizes noise while maximizing details.

You can read images quickly, viewing all the layers in a glance without manual adjustments. No unsharp masking or edge enhancement creating artefacts. No over- or under-shooting around higher-density areas. No window leveling required. Flash! provides optimal image quality even with minimal contrast. The invisible becomes visible, and the material no longer hides radiographic secrets from you.



SIMPLE

## Good to go!

Flash! is **easy to learn** and use, and doesn't require specialized training. **Operator independent**, it automatically adjusts to variations in density, materials, geometry, radiation quality, etc. The software **saves time and effort** for operator and inspector, so you get more out of your human and material resources.