HIGH-RES & WIRELESS
D-DR SERIES
PORTABLE DIGITAL X-RAY DETECTORS



Digital Intelligence – Ready to Change.

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DÜRR NDT

RIGID X-RAY DETECTORS

RUGGED AND RELIABLE FOR INDUSTRIAL APPLICATIONS



D-DR 7 NDT

CMOS detector for ultra-high resolution X-ray imaging. Ideal for small tubes. Can also be positioned in hard-to-reach places or even inside objects.

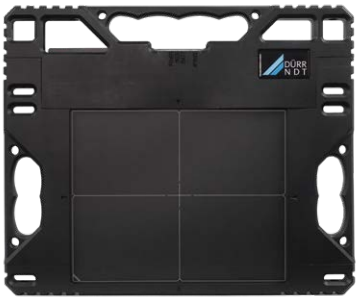
- 19 µm pixel pitch (26.3 lp/mm)
- 26 x 36 mm active area
- Meets aerospace standards
- Compact design
- Simple fixing system
- Robust aluminum housing
- Optional active cable extension
- Optional positioning tool with various shielding plates



D-DR 1024 NDT

Compact and high-resolution detector designed for portability and the harsh conditions of industrial radiography. Perfectly suited for weld inspection.

- 76 µm pixel pitch (6.5 lp/mm)
- 97 x 233 mm active area
- Suitable for X-ray and gamma sources
- Equipped with internal shielding for use up to 350 kV
- Extremely robust design with detachable carry handle
- Built-in wireless access point
- Connector for Gigabit Ethernet and power
- 1 meter drop test pass
- Dust-tight and waterproof
- Optional positioning tool



D-DR 2329 NDT

Medium size high-resolution detector designed for portability and the harsh conditions of industrial radiography. The best choice for universal use with X-ray sources.

- 75 µm pixel pitch (6.7 lp/mm)
- 230 x 288 mm active area
- Equipped with internal shielding for use up to 450 kV
- Hot-swap function enables battery change during operation
- Built-in wireless access point
- Connector for Gigabit Ethernet and power
- Dust-tight and waterproof



The positioning tool allows easy placement of the D-DR 7 NDT CMOS detector as well as the attachment of shielding plates.



The carry handle and the housing can be removed to allow the detector to be inserted into hard-to-reach areas such as inside pipes.



All wireless detectors are equipped with LED status indicators for power, operation mode, battery and Wi-Fi.



D-DR 2430 NDT

Medium size high-resolution detector designed for portability and the harsh conditions of industrial radiography. The best choice for universal use with gamma sources.

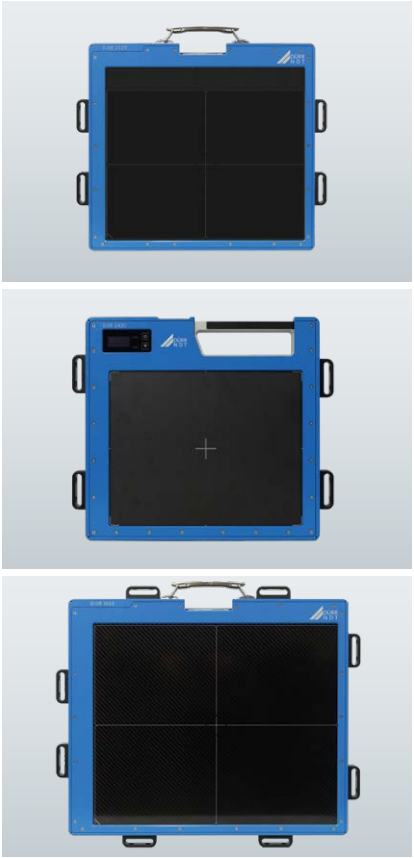
- 76 µm pixel pitch (6.5 lp/mm)
- 233 x 291 mm active area
- Suitable for X-ray and gamma sources
- Equipped with internal shielding for use up to 350 kV
- Extremely robust design
- Built-in wireless access point
- Connector for Gigabit Ethernet and power
- 1 meter drop test pass
- Dust-tight and waterproof



D-DR 3643 NDT

Large size detector designed for portability and the harsh conditions of industrial radiography. Perfectly suited for profile images and large objects.

- 99 µm pixel pitch (5.0 lp/mm)
- 351 x 427 mm active area
- Suitable for X-ray and gamma sources
- Equipped with internal shielding for use up to 450 kV
- Light-weight full size detector
- Extremely robust non-glass TFT sensor
- Hot-swap function enables battery change during operation
- Built-in wireless access point
- Connector for Gigabit Ethernet and power
- 1 meter drop test pass
- Dust-tight and waterproof



Optional variants with aluminum (AL) housing available for the D-DR models 2329, 2430, and 3643. The AL housing is more compact than the PA version, has adjustable brackets for mounting, and holes for a VESA mount (100x100).



All wireless detectors can also be operated in wired mode with Gigabit Ethernet and power supply.



The hot-swap function enables quick and easy battery change during operation.



Optional waterproof hard cases for safe transportation, with space for the detector, accessories and notebook.

BENDABLE X-RAY DETECTORS

RUGGED AND RELIABLE FOR INDUSTRIAL APPLICATIONS



D-DR 1025B NDT

Bendable and high-resolution detector, perfectly suited for inspecting circumferential weld seams on pipes with diameters of 150 mm and above.

- 99 µm pixel pitch (5.0 lp/mm)
- 97 x 249 mm active area
- Suitable for X-ray and gamma sources
- Equipped with internal shielding for use up to 450 kV
- Innovative bending mechanism to replace traditional film
- Connection Unit with built-in wireless access point and battery
- Simple mounting system
- Exposure possible on both sides of detector
- Dust-tight and waterproof



D-DR 1043B NDT

Bendable and high-resolution detector, perfectly suited for inspecting long circumferential weld seams on pipes with diameters of 300 mm and above.

- 99 µm pixel pitch (5.0 lp/mm)
- 97 x 427 mm active area
- Suitable for X-ray and gamma sources
- Equipped with internal shielding for use up to 450 kV
- Innovative bending mechanism to replace traditional film
- Connection Unit with built-in wireless access point and battery
- Simple mounting system
- Exposure possible on both sides of detector
- Dust-tight and waterproof





Optional variants with Cordura® (NY) cover available for the D-DR models 1025B and 1043B.



The Cordura® (NY) cover can be attached to the test object in various ways using magnets and straps.



The detectors can be easily attached to a pipe with 2 straps and then rotated along the weld seam.



The optional fixation holds the detectors in flat position and thus making them rigid.



The Connection Unit provides wireless connectivity and supplies the detector with power via battery.

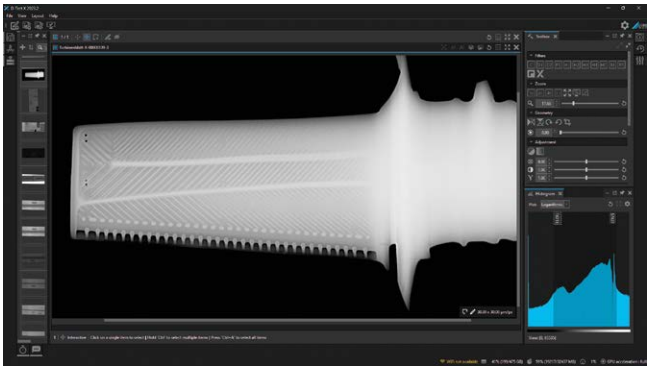
THE PERFECT SOFTWARE SOLUTION

DETECT RISKS QUICKLY AND RELIABLY WITH D-TECT X

D-Tect X provides an optimal and time-saving NDT inspection workflow: from calibration and image acquisition to image evaluation and data import and export, everything you need is included and easy to use.

With a comprehensive set of features, D-Tect X is fast, intuitive and easy-to-learn. DICONDE file format support ensures that images can be viewed and processed by any other DICONDE compatible system. Interfaces to instaNDT PACS and DRIVE NDT management software ensure seamless integration into an efficient digital workflow.

- Native DICONDE file format support
- Simultaneous reference image adjustment
- X-Filter: one-click image enhancement
- Image history: track all performed image operations and define presets
- Tools to assist with working with standards (ASME, ASTM, ISO)
- Unlimited image file size support
- Report generation via direct Excel export or DRIVE NDT
- Advanced histogram tools
- SNR/SNR_N calculation
- Automatic duplex IQI detection and SR_b determination
- Advanced wall thickness analysis
- Image filters to assist with evaluation
- Length, area and angle measurement tools
- Image annotations with customizable detail information
- Line profile tool
- Panel calibration (offset, gain, bad pixel)
- Multi image editing/processing
- Unrestricted image zoom



Easy and reliable evaluation

Consistent quality and detection of the finest details are essential for NDT – specially designed filters and tools makes accurate and effective evaluation possible. To save time, it is also possible to save optimal evaluation settings for use with subsequent images.

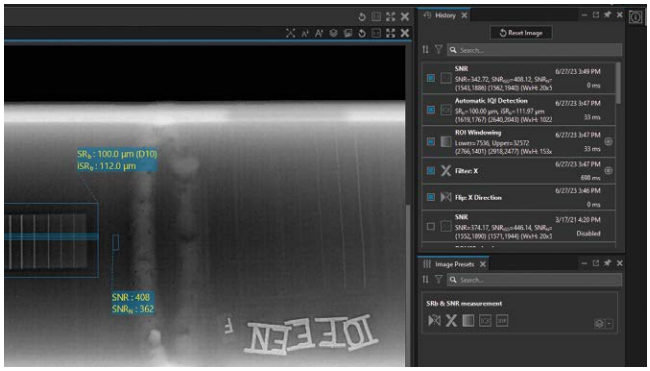
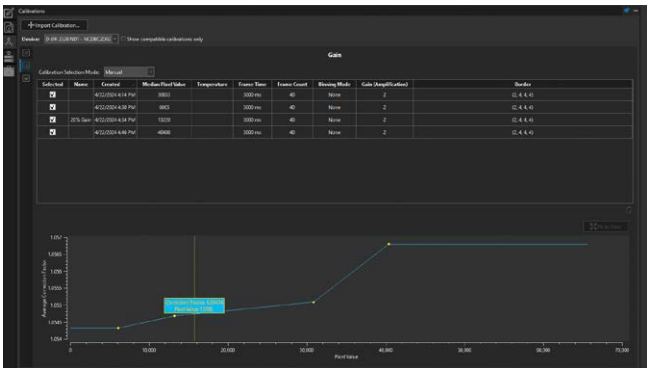


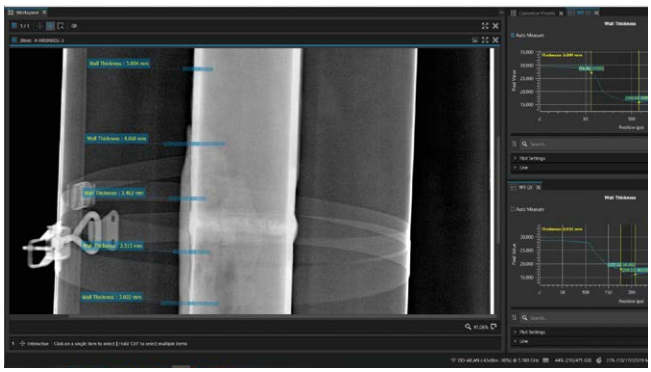
Image operation history and presets

Every action applied to an image since it was imported or acquired is recorded and each can be individually activated or deactivated. Any combination of actions can also be saved as a preset and applied to other images with a single click.



Multi-gain calibration

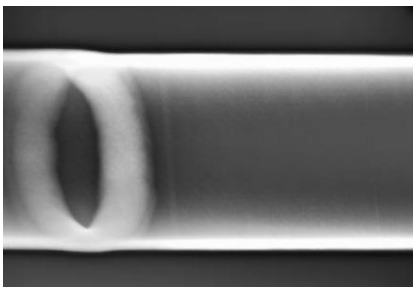
Multiple gain calibrations at various radiation doses can be applied during acquisition in order to achieve the best image quality possible.



One-click Wall Thickness Tool

This optional tool determines the thickness at one or more points along the wall of a pipe. The measurement is performed with a single click on the point to be measured and can be moved if necessary.

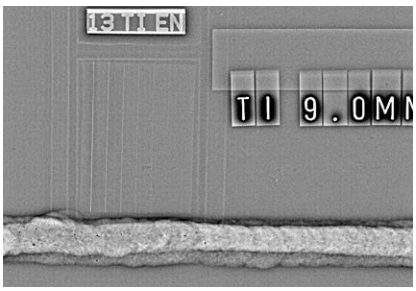
Technical data	D-DR 7 NDT	D-DR 1024 NDT	D-DR 2329 NDT
Active area	26 mm x 36 mm (1.0 x 1.4")	97 mm x 233 mm (3.82" x 9.2")	230 mm x 288 mm (9.05" x 11.33")
Bendable	N/A	N/A	N/A
Dimensions detector / incl. polyamide (PA) housing / incl. aluminum (AL) housing (H x W x D)	31.5 mm x 50 mm x 8.3 mm – –	132 mm x 335 mm x 30 mm 184 mm x 421 mm x 44 mm (without handle)	322 mm × 355 mm × 17 mm 391 mm x 473 mm x 27 mm 353 mm x 432 mm x 25 mm
Weight detector / incl. polyamide (PA) housing / incl. aluminum (AL) housing	0.15 kg (0.33 lbs) – –	2.2 kg (4.9 lbs) 2.9 kg (6.4 lbs) –	3.4 kg (7.5 lbs) 4.7 kg (10.3 lbs) 5.4 kg (11.9 lbs)
Number of pixels	1368 x 1896	1280 x 3072	3072 x 3840
Frame time	8 s to 29 s	0.5 s to 180 s	3 s to 180 s
Image transfer time (wired/wireless)	2 s / –	1.9 s / 2.6 s	2 s / 3 s
Maximum energy	70 kV (for long life in typical applications)	350 kV (for long life in typical applications), Isotopes (with typical in-field usage)	450 kV (for long life in typical applications)
Pixel pitch	19 µm	76 µm	75 µm
Maximum SR_b (basic spatial resolution)	25 µm	80 µm (Ultra-Fine), 130 µm (Plus)	80 µm
Scintillator options	CsI	GOS Ultra-Fine, GOS Plus	GOS Ultra-Fine
ADC	12-bit	16-bit	16-bit
Interface	USB 2.0, USB 3.0 compatible (cable length 4.5 m)	Gigabit Ethernet, WLAN: 2.4 GHz (802.11abgn) / 5 GHz (802.11ac)	Gigabit Ethernet, WLAN: 2.4 GHz (802.11n) / 5 GHz (802.11ac)
Battery	–	Lithium-ion (11.25 V, 33.2 Wh)	2 x Lithium-ion (7.6 V, 23.6 Wh)
Operating conditions	10 to 35°C (50 to 95°F), < 80 % humidity	0 to 45°C (32 to 113°F), 30 to 85 % humidity	-20 to 50°C (-4 to 122°F), 10 to 90 % humidity
Protection level	–	IP67 (dust-tight and waterproof)	IP67 (dust-tight and waterproof)
Software	DÜRR NDT D-Tect X	DÜRR NDT D-Tect X	DÜRR NDT D-Tect X
Accessories	Positioning tool with shieldings	Positioning tool, transport case	Transport case, bundle



Weld seam, 5 mm diameter pipe with 1.2 mm wall thickness, X-ray (13 FE ISO: W19).

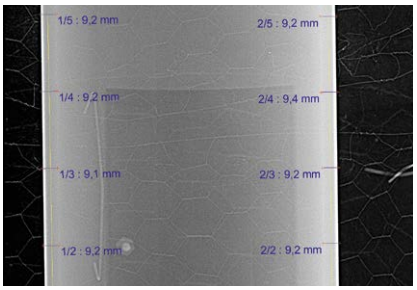


Thin-walled stainless steel cylinder with longitudinal weld seam.

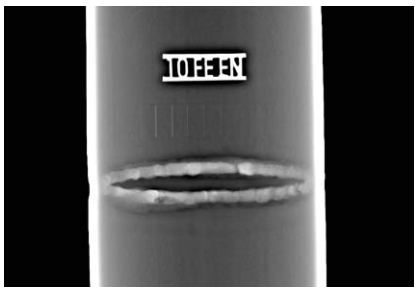


Weld seam, 9 mm titanium plate, X-ray (ISO 17636-2 Class B compliant).

Technical data	D-DR 2430 NDT	D-DR 3643 NDT
Active area	233 mm x 291 mm (9.2" x 11.5")	351 mm x 427 mm (13.8" x 16.8")
Bendable	N/A	N/A
Dimensions detector / **incl. polyamide (PA) housing /** **incl. aluminum (AL) housing** (H x W x D)	368 mm x 327 mm x 21.5 mm 435 mm x 343 mm x 30 mm 342 mm x 400 mm x 27 mm	384 mm × 460 mm × 15 mm 470 mm x 602 mm x 25 mm 460 mm x 537 mm x 25 mm
Weight detector / **incl. polyamide (PA) housing /** **incl. aluminum (AL) housing**	3.2 kg (7 lbs) 4.5 kg (9.9 lbs) 5.2 kg (11.5 lbs)	4.1 kg (9 lbs) 6.1 kg (13.4 lbs) 7.5 kg (16.5 lbs)
Number of pixels	3072 x 3840	3548 x 4316
Frame time	0.5 s to 180 s	0.5 s to 180 s
Image transfer time (wired/wireless)	2 s / 4 s	3.5 s / 5 s
Maximum energy	350 kV (for long life in typical applications), Isotopes (with typical in-field usage)	450 kV (for long life in typical applications), Isotopes (with typical in-field usage)
Pixel pitch	76 µm	99 µm
Maximum SR_b (basic spatial resolution)	130 µm	100 µm (Fine), 130 µm (Standard), 160 µm (Plus)
Scintillator options	GOS Plus	GOS Fine, GOS Standard, GOS Plus
ADC	16-bit	16-bit
Interface	Gigabit Ethernet, WLAN: 2.4 GHz (802.11abgn) / 5 GHz (802.11ac)	Gigabit Ethernet, WLAN: 2.4 GHz (802.11n) / 5 GHz (802.11ac)
Battery	Lithium-ion (7.4 V, 29.6 Wh)	2 x Lithium-ion (11.55 V, 39.3 Wh)
Operating conditions	0 to 45°C (32 to 113°F), 30 to 85 % humidity	-20 to 50°C (-4 to 122°F), 10 to 90 % humidity
Protection level	IP67 (dust-tight and waterproof)	IP67 (dust-tight and waterproof)
Software	DÜRR NDT D-Tect X	DÜRR NDT D-Tect X
Accessories	Transport case, bundle	Transport case, bundle



Profile image, DN 150 x 9 mm, Iridium-192.

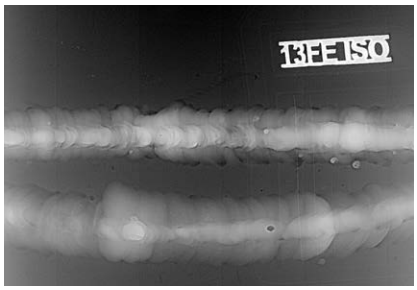


Double wall examination, DN 86 mm, t = 3.6 mm, X-ray, Elliptic technique (ISO 17636-2 Figure 11)

Technical data	D-DR 1025B NDT	D-DR 1043B NDT
Active area	97 mm x 249 mm (3.82" x 9.8")	97 mm x 427 mm (3.82" x 16.8")
Bendable	Minimum pipe diameter 150 mm (6")	Minimum pipe diameter 300 mm (12")
Dimensions detector / **incl. polyamide (PA) housing /** **incl. Cordura® (NY) cover** (H x W x D)	182 mm x 453 mm x 20 mm 225 mm x 555 mm x 34 mm 210 mm x 460 mm x 40 mm	182 mm x 633 mm x 20 mm 225 mm x 733 mm x 34 mm 210 mm x 640 mm x 40 mm
Weight detector / **incl. polyamide (PA) housing /** **incl. Cordura® (NY) cover**	1.5 kg (3.3 lbs) 2.0 kg (4.4 lbs) 2.0 kg (4.4 lbs)	1.7 kg (3.7 lbs) 2.2 kg (4.8 lbs) 2.4 kg (5.3 lbs)
Number of pixels	981 x 2517	981 x 4309
Frame time	0.5 s to 180 s	0.5 s to 180 s
Image transfer time (wired/wireless)	1.5 s / 3 s	1.5 s / 3 s
Maximum energy	450 kV (for long life in typical applications), Isotopes (with typical in-field usage)	450 kV (for long life in typical applications), Isotopes (with typical in-field usage)
Pixel pitch	99 µm	99 µm
Maximum SR_b (basic spatial resolution)	100 µm (Fine), 130 µm (Standard)	100 µm (Fine), 130 µm (Standard)
Scintillator options	GOS Fine, GOS Standard	GOS Fine, GOS Standard
ADC	16-bit	16-bit
Interface	Gigabit Ethernet, WLAN: 2.4 GHz (802.11n) / 5 GHz (802.11ac)	Gigabit Ethernet, WLAN: 2.4 GHz (802.11n) / 5 GHz (802.11ac)
Battery	Lithium-ion (11.55 V, 39.3 Wh)	Lithium-ion (11.55 V, 39.3 Wh)
Operating conditions	-20 to 50°C (-4 to 122°F), 10 to 90 % humidity	-20 to 50°C (-4 to 122°F), 10 to 90 % humidity
Protection level	IP67 (dust-tight and waterproof)	IP67 (dust-tight and waterproof)
Software	DÜRR NDT D-Tect X	DÜRR NDT D-Tect X
Accessories	Transport case, rigid fixation (PA), bundle	Transport case, rigid fixation (PA), bundle



The D-DR 1025B NDT can be bent continuously from flat to a 150 mm diameter in one direction, the D-DR 1043B NDT to a 300 mm diameter.



Double wall examination, Ø 170 mm, t = 5 mm, X-ray, elliptic technique (ISO 17636-2 Figure 13a).

DÜRR NDT GmbH & Co. KG
Höpfigheimer Straße 22
74321 Bietigheim-Bissingen
Germany

info@duerr-ndt.com
www.duerr-ndt.com

DÜRR NDT

WPRO100074 RA0008 EN Technical data subject to change.