

HD-CR 43 NDT • Brilliant images for heavy workload applications

Technical Data	HD-CR 43 NDT
Resolution	12.5 - 200 µm continuously adjustable
BSR (Basic Spatial Res.)	40 µm certified by BAM (with High Definition IP)
Grey level resolution	16 bit, 65,536 grey levels
Dimensions (H x W x D)	113 x 40 x 44 cm 44.5" x 15.8" x 17.3"
Weight	55 kg 121.25 lbs
Electrical	100 - 240 VAC / 50 - 60 Hz, max 250 W
Temperature range	10 to 35 °C 50 to 95 °F
Noise Level	< 39 dB(A)
Max. Cassettes / h	~ 65
Laser Class	I (EN60825-1)
PC-Connection	Ethernet (TCP-IP protocol)
Software	DÜRR NDT D-Tect
IT-Requirements	For requirements refer to <a href="http://www.duerr-ndt.com">www.duerr-ndt.com</a>
Accessories	Protection envelopes for all-weather application, different IP resolutions available

### Image plate cassettes

Image plate cassettes with RFID for cycle monitoring and assignment. DÜRR NDT warrants each imaging plate for at least 25,000 reading cycles without scanner-induced damage or deterioration.

The image plate cassettes are available

- in different resolutions:
  - High Definition**
  - Regular Definition**
  - Basic Definition**
- in the following formats:
  - 18 x 24 cm
  - 24 x 30 cm
  - 35 x 43 cm.

**GUARANTEE**  
2 Years or  
25,000 cycles  
(Conditions apply)



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# HD-CR 43 NDT

Automatic Image Plate Scanner



For your  
heavy workload  
applications

hand  
made in Germany



**What is CR? How does it work?**

Computed Radiography (CR) is the acquisition of a digital image by using a Phosphor Imaging Plate (IP) in place of conventional film.

**Key advantages of CR include:**

- IP's are reusable
- No dark room or chemicals required
- Exposure and process times reduced
- Easy work flow and image optimisation with D-Tect software
- Simple to share and archive digital information

**The CR technology consists of a 3-step process.**

The Image (storage) Plate (IP) is exposed with X-ray or gamma radiation, which causes the phosphor layer in the plate to store the X-ray image.

During the reading process of the plate in the scanner, a focussed laser beam triggers the release of the stored image data in form of visible light.

The emitted light is detected, captured and converted into electrical signals which are digitized and finally displayed as a digital image on the PC monitor.

The internal in-line eraser removes the residual data from the IP, which is then ready for the next exposure.

**What is important?**

With film radiography the only variable is the film. With CR we have different IP's and the ability to adjust up to 4 parameters within the scanner to optimise the image quality to suit the required inspection task.

**High definition Computed Radiography**

DÜRR NDT is the first company worldwide that has developed a scanner with a 12.5 µm laser spot. When used with correspondingly high resolution phosphor storage plates, this meets all the stringent requirements of EN 14784, EN 17636 and ASTM E2446.

The combination of high resolution image plates and this HD-CR device achieves the unique Basic Spatial Resolution of 40 µm over all system classes for the first time. (Certified by BAM)

**Adjustable resolution**

The HD-CR 43 NDT gives the user the choice to select a 20 µm scan resolution for weld inspection or 100 µm scan resolution for a CUI application where speed and a short exposure really are the prime requirements. The stepless scan resolution ensures that the correct settings can be set to suit the application and inspection needs.

- ▶ **Cost Reduction**
- ▶ **Improved handling**
- ▶ **Increased efficiency**

**Why CR technology from DÜRR NDT**

DÜRR NDT has made a commitment to deliver to the customer products tailored perfectly to the needs of the market.

Through the continuous optimization of existing products and development of new solutions, DÜRR NDT has very quickly become one of the market leaders in digital imaging for non-destructive testing.

- ▶ **ISO 9001 certified**
- ▶ **BAM certified**
- ▶ **EN and ASTM compliant**
- ▶ **DICONDE compliant**



**Acceptance**

Perfect image quality – film-like or better



**Benefit**

Significant reduction of consumables



**Experience**

Technology proven in more than 25,000 units



*hand* **MADE IN GERMANY**

Development and production in Germany

**Fully automated process**

Removal and return of image plate to and from cassettes is fully automatic.

**Scanning device**

Optical unit with laser, pentaprism and photo multiplier.

**Transport guidance**

Guides the image plates exactly along the detection unit.

**Smart erasing**

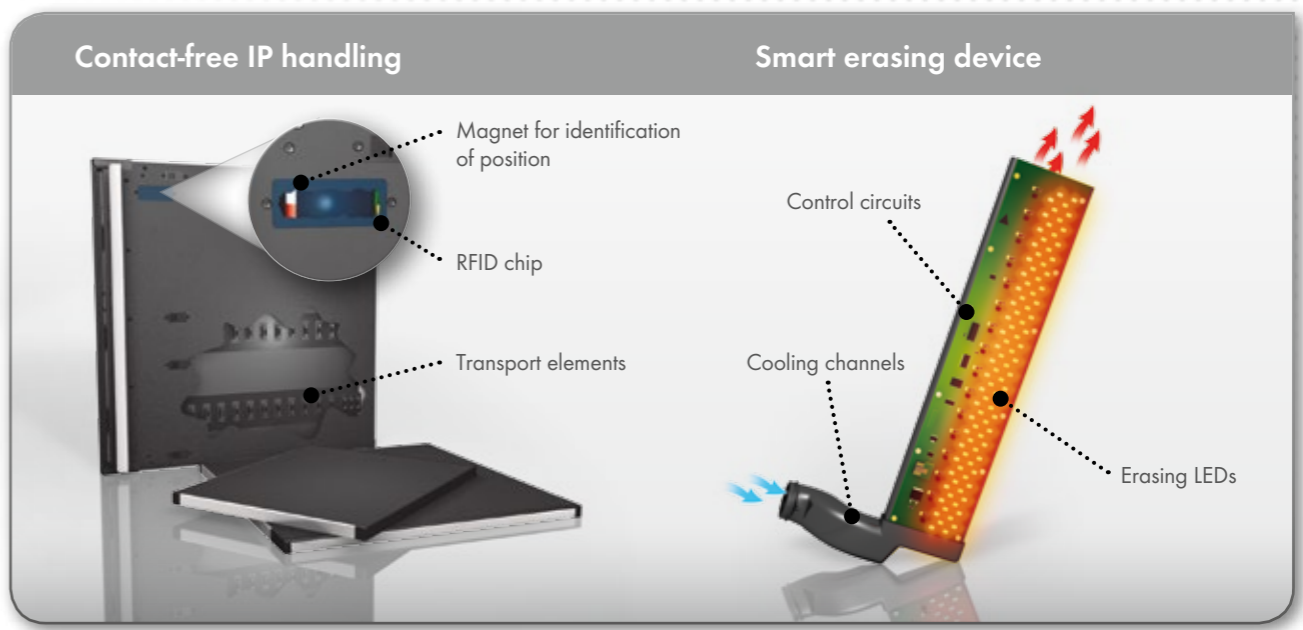
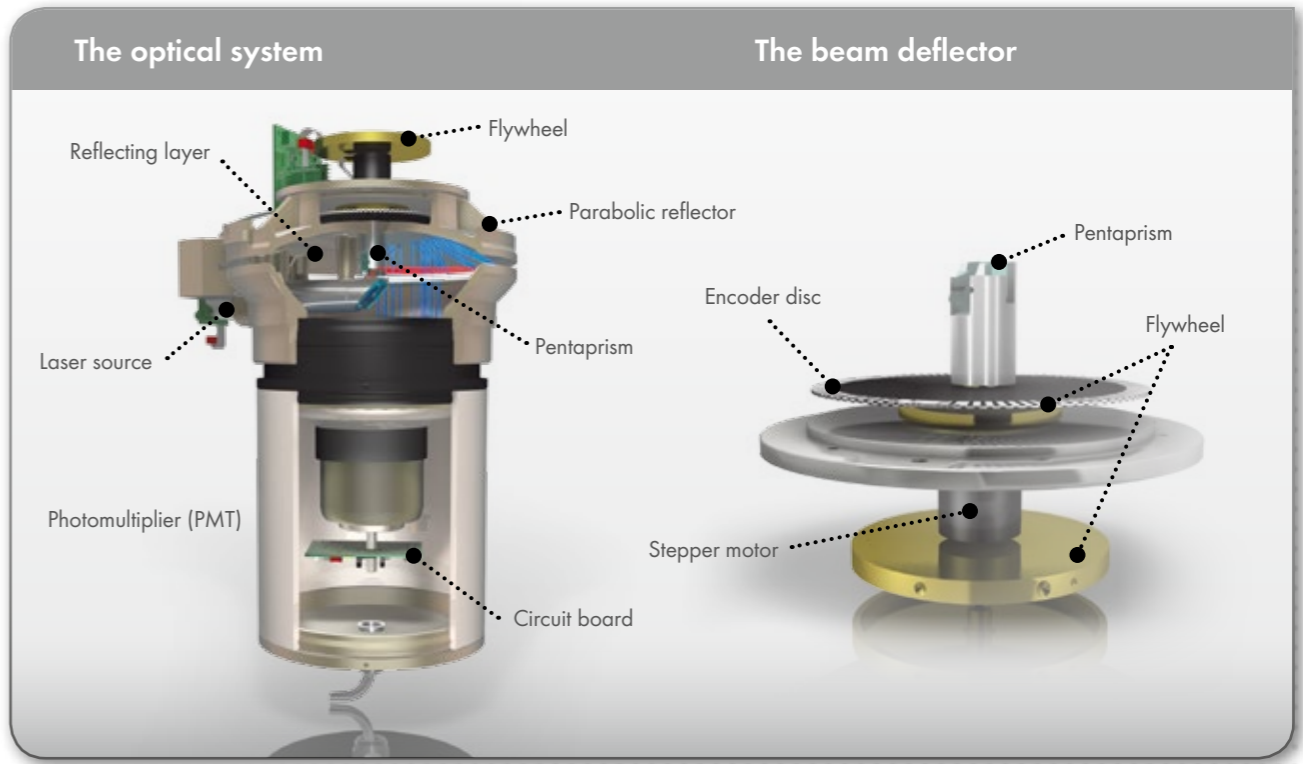
Depending on the application, the erasing unit can be preset accordingly.

**Air duct**

The cooling air remains within the air duct and thus does not carry any dust into the imaging chamber.

**Cassettes**

Robust aluminum cassettes increase life-cycle and provide optimal protection for image plates.



**Resolution**  
Image pixel pitch adjustable from 12.5 to 200 µm



**Logical**  
Easy and fast use through intuitive operating concepts



**Data security**  
Simplified archiving and data sharing



**Guaranteed**  
2 Years or 25,000 cycles (Conditions apply)

HD-CR 43 NDT • Brilliant images through excellent technology

**Wall thickness measurements**

Reduction possible by more than 80%

**Weld Seam Inspection**

Certified according to EN 14784 and ASTM E2446

**Castings**

Precise results even for thick wall sections

**Aerospace**

Film quality - and better



**Clockwork precision**

No artifacts thanks to high precision components



**Intelligent**

Individually adjustable to your preferences



**Robust**

Long-lasting and sturdy cassettes

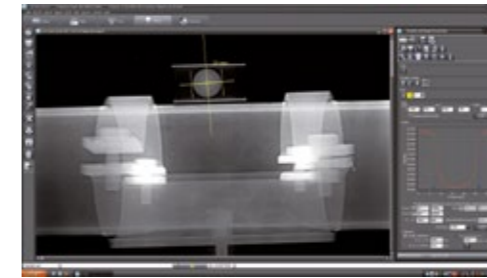


**Network / Stand-alone**

Easily connected to the network or installed as single station

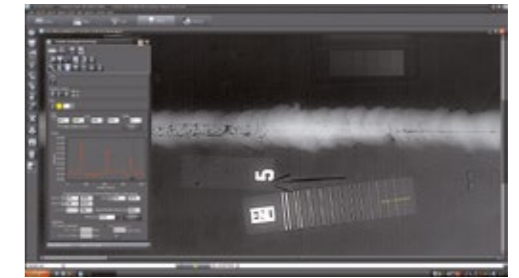
HD-CR 43 NDT • The perfect partner for your applications

**A versatile software platform with solutions for every application**



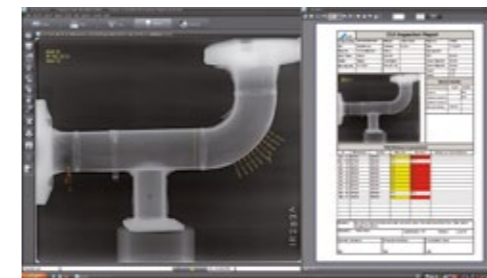
**Calibration**

Automatic calibration using a ball bearing or any other object with a known dimension, like the outer dimension of a pipe.



**BSR**

Automatic tool to determine the BSR of an image in accordance with EN17636-2.



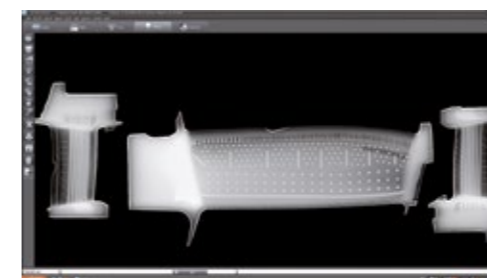
**Report**

Report function. Gives the user the opportunity to produce a report populated with the information and data along with thumbnail images. We provide the template to your requirements.



**Wall thickness**

Automatic measurement tool, single point or multiple measurements along a straight line or around a curve. Set up to give warnings when wall loss reaches a critical level.



**Aerospace**

Ideal for Aerospace applications where consistent quality and highest resolution are required.



**Tailored to fit your needs**

A versatile software platform that provides the information and data which is relevant for your particular application and workflow.