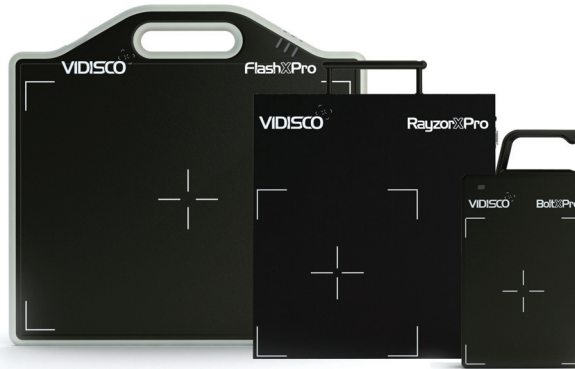




Portable Digital Radiography Systems
for Non Destructive Testing

Digital Radiography with Flat Panels



Vidisco's portable X-ray systems are based on flat panel detectors, also known as Imagers or DDAs (Digital Detector Array). The DDA works with any source of radiation and captures a digital X-ray image that is immediately displayed on a computer screen. With this process there is no need for consumable film and film processing. Images are created virtually at a click of a button.

Vidisco was the first company to make this flat panel technology portable and suitable for NDT applications both in the lab and in the field. Vidisco's digital X-ray images have a wide dynamic range, high contrast, high resolution and an excellent SNR, all of which contribute to detection of hairline cracks on site.

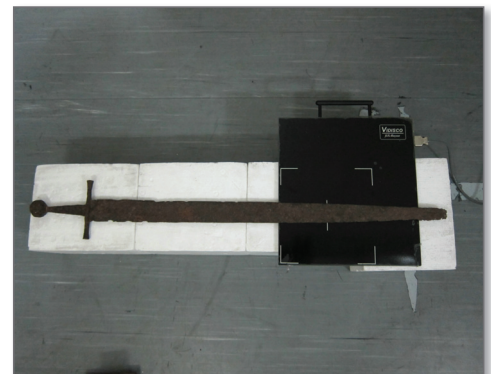
Vidisco systems are suited for various NDT applications, to name a few: pipes inspection (corrosion, erosion, weld quality and wall thickness), ship hulls (mainly welding), composite materials (e.g. delimitations, water penetration) for aircraft manufacturing and maintenance, arts and archeological findings, casting defects, concrete, power lines inspection and more.



System in a Refinery

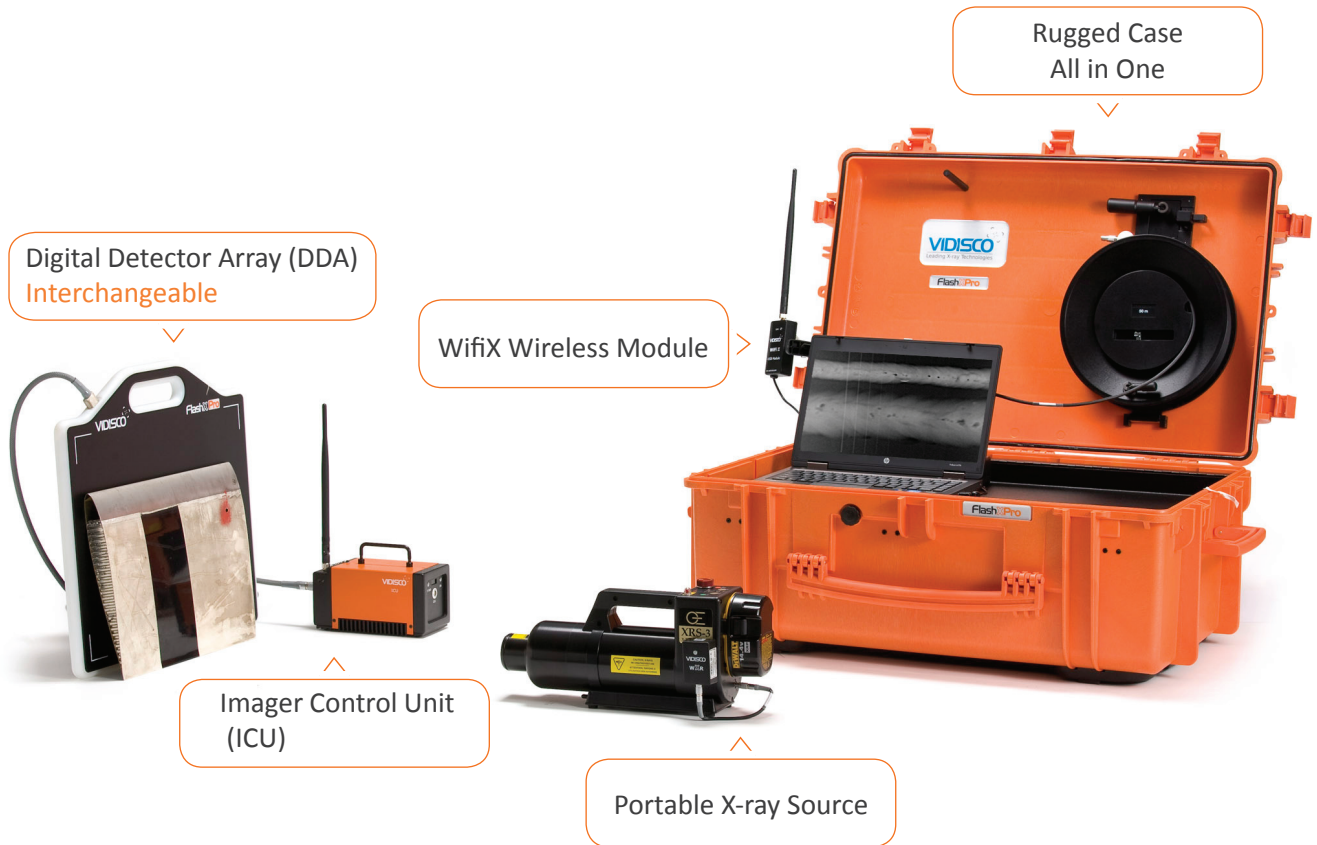


Ship Weld NDT with RayzorX Pro



Ancient Sword Inspection in the Lab

Portable Digital Radiography Systems



- Portable, Battery Operated and Field Ready
- Exceptional Image Quality, Images Upon Request
- Low Dose & Exposure Times for Increased Safety
- Plug & Play: Interchangeable DDAs
- Wireless Mode for Setup Flexibility

DDA Specifications



Specification*	FlashXPro	RayzorXPro	BoltXPro
Imaging Area (mm):	342 X 432 mm (~13.5 X 17")	222 X 222 mm (~8.7 X 8.7")	145 X 114 mm (~5.7 X 4.5")
Imaging Area Position:	30 mm from bottom and sides	5 mm from bottom 7 mm from left side	6 mm from bottom and sides
Imager Size:	466 X 488 X 25.5 mm (h,w,d) (~18.3 X 19.2 X 1")	360 X 330 X 13 mm (h,w,d) (~14.2 X 13 X 0.5")	195 X 125 X 34 mm (h,w,d) (~7.6 X 4.9 X 1.3")
Imager Weight:	4.8 Kg (~10.6lbs)	3.5 Kg (~7.7lbs)	1.5 Kg (~3.3lbs)
Dynamic Range:	16 bit (65,536 Grey Levels)	14 bit (16,384 Grey Levels)	14 bit (16,384 Grey Levels)
Pixel Pitch:	144 µm	143 µm	75 µm

* DDA specifications are subject to market changes and manufacturer specifications

Vidisco System Configurations*

- **Rugged Case:**

For transporting all systems components securely; case doubles as work platform. Both cable and wireless configurations can be placed in the same case.

- **Backpack:**

Ideal for X-ray system operators working outdoors. Includes a ruggedized laptop with a sun-readable touch screen. System in backpack easy to trek to a hard to reach inspection site by one person.

- **Dual Use:**

A combination of a portable system and a laboratory set up. The same imager can be used in the lab and in the field, data easily shared between two **XbitPro** licensed computers – a PC and a laptop, which are both provided.

- **Laboratory Configuration:**

Stationary lab configuration. Powerful desktop computer with **XbitPro** software. Optional high resolution screen, system is easily integrated into the lab. Various industrial X-ray sources can be synchronized and controlled via the Vidisco software.

- **-20 Degrees Celsius Configuration:**

For rough terrain and inclement weather conditions; the system can operate between -20°C to +40°C degrees (-4°F to 104°F). Available in rugged case or backpack.

- **Civilian Case:**

Transporting all system components easily in an inconspicuous civilian suitcase, without drawing attention. Inspection can be conducted in any location with maximum discretion, cable and wireless options both available.

- **Chaser:**

The Chaser configuration offers an additional DDA to an existing system. All Vidisco DDAs are interchangeable, therefore working with one system and various panels for different needs is a convenient option for the Operator.



All configurations (except chaser) include*:

Flat panel (DDA), ICU-X, operating system, 3m ICU to imager cable, AC cables, X-ray cable (default: Golden), PC or laptop, I.Box, CDU to ICU Cable (on reel), **XbitPro** proprietary software, backup and definition CDs, complimentary Vidisco Images Viewer, 1" sphere ball for measurement calibration, tripod mount, imager holder, shoulder strap, user manuals CD & quick-start guide in English, 1 year warranty in English.

* Configurations are subject to market changes and manufacturer specifications

System Accessories*



WifiX



WXR



Protective Cover



Filter Pocket Cover



Tripod Mount



SmartX150



Extension Reel



Car Inverter



Long Range Antenna



Connector Cover



Imager Holders



Scene Camera

*Accessory configurations are subject to market changes and manufacturer specifications

Proprietary Software from Vidisco*

XbitPro

- User Friendly Interface
- Comprehensive Database
- Advanced Enhancement Tools
- Ideal X-ray Image Viewing and Analysis Package

Automatic Calibration

To optimize performance and quality, Vidisco proprietary XbitPro software enables automatic calibration procedures that can be executed at the click of a button. Multi point calibration is generated in a fast and simple process using an automatic calibration wizard.

Image Enhancing Tools

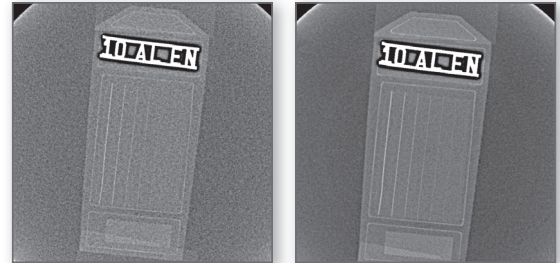
Auto Window (Grey Scale) Leveling, Adaptive Histogram, SNR improvement tool (Averaging), Sharpening, 800% Zooming (with no pixelization), Automatic Stitching, High Pass Filters (HPF), Overlay mode, sequence recorders and more.

Database Management

Images and corresponding information are easily stored, retrieved and shared with others. The raw image is automatically saved ; choose from a variety of formats including TIF, BMP, JPG and DCM. Setup images, reports, diagrams etc. can all be attached to the X-ray image record.

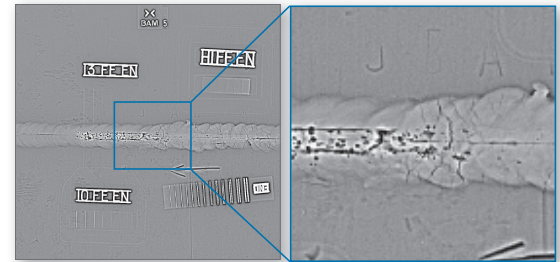
*Software is subject to market changes and manufacturer specifications

Calibration and Averaging

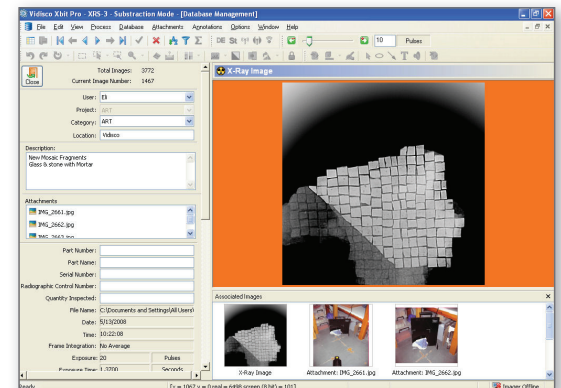


Before

After



BAM5 Steel Weld X-ray Viewed with HPF and Zoom



Database Management Window Contains X-ray "shot" Information and attachments

Specialized Software Tools* (Partial List)

XbitPro

Automatic Stitching

For fast automatic “sewing” together of image parts at the pixel level. Viewing large objects on one screen. Saves hours of work (no human involvement).

Wall Thickness Measurement

Comprehensive tool mainly used for measuring pipe wall thickness using the Tangential Technique. Accurate wall thickness measurements is achieved using special algorithms. To complement this technique, the Double Wall Technique was developed, allowing for the conversion of grey levels into material thickness measurement.

Pitting Detection

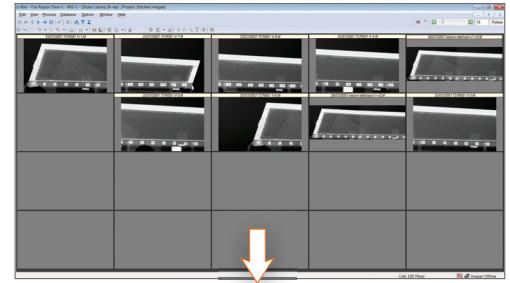
Detecting and measuring pitting has never been easier. Using Vidisco’s semi automatic pitting tool, accurate measurement of a pit (wall loss) is quickly achieved.

Automatic Window Leveling

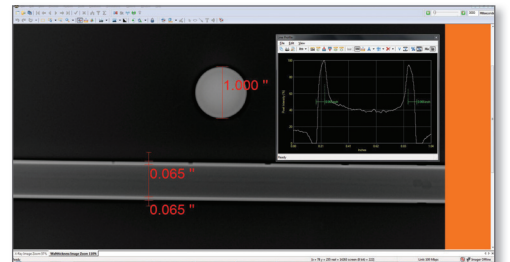
Enables viewing the full scale of 14-16 bit images on an 8bit computer screen. The raw image is not altered. Optimum range, in which most of the information can be found on the image, is automatically generated with a click of a button.

Analysis Tools

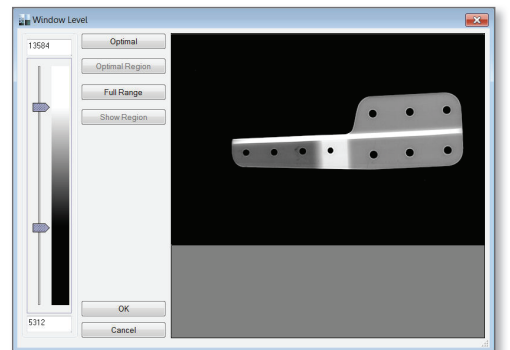
- Line profile
- Image statistics (SNR, CNR, standard deviation, etc.)
- High Pass Filters
- Unique software tools required by current industrial standards (ISO, ASTM, ASME, BSS) are available



Automatic Stitching



Wall Thickness Measurement



Window Leveling

*Software is subject to market changes and manufacturer specifications

RT Applications

Oil & Gas

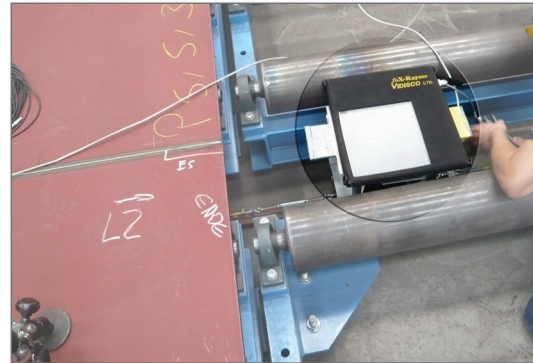
With Vidisco's digital radiography systems RT of pipes is improved in many aspects. Reduced dose levels enable small shutdown areas and smaller safety zones. On the spot interpretation of the radiographs ensures that NDT operators do not leave the worksite without knowing the state of the inspected objects.



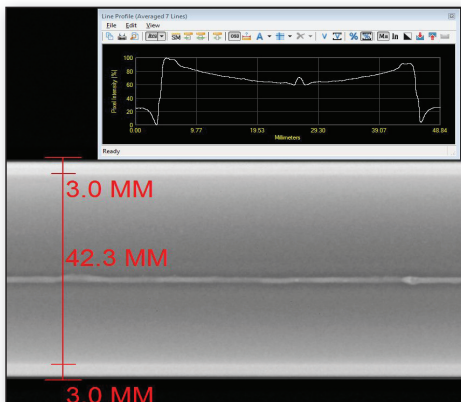
DR Setup on Pipe

Shipyards

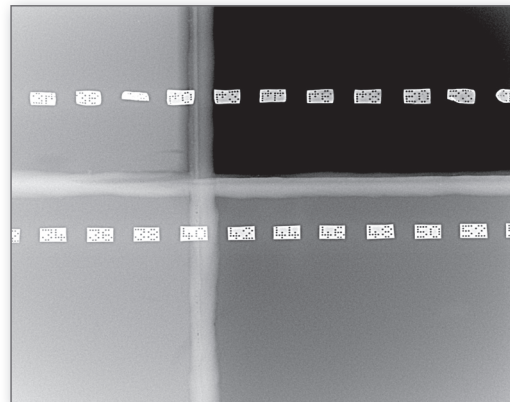
Shipyards NDT with Vidisco's digital radiography systems have proven to be a key ingredient in expediting the production process of ships. RT of welds is conducted parallel to production, even during the day and on site results facilitate immediate quality control and repair when necessary.



RT of Steel Plate



Line Profile Tool for Pipe Measurements



Ship's Hull Weld, Steel Plates of Various Thicknesses

RT Applications

Aerospace

Vidisco's digital radiography systems enable considerable savings of money and time while maintaining the large quantity of radiographs required for producing an aircraft. High resolution images ensure the tiniest defects can be detected. Digital storage reduces the environmental impact of RT and allows easy saving and retrieving of digital images.



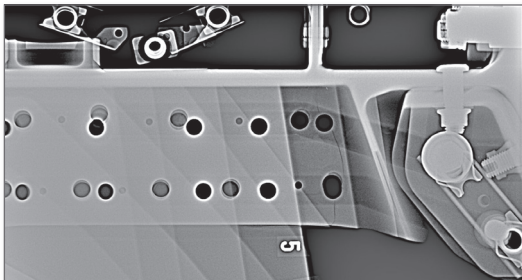
Tail Inspection

Power Lines

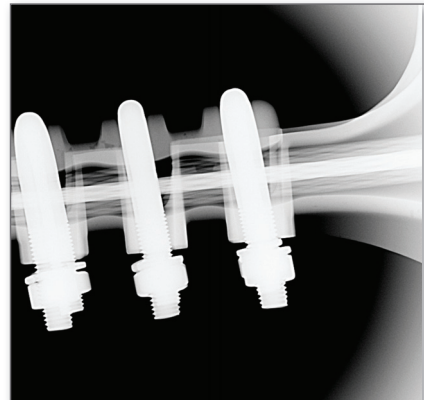
Vidisco's digital radiography systems offer wireless modules that further simplify the setup and inspection process in hard to reach locations. High quality images and advanced software for on site analysis all facilitate unbeatable image quality.



Power Line NDT



Crack in Lower Flanger (F-18)



Compression Sleeve

RT Applications

Art

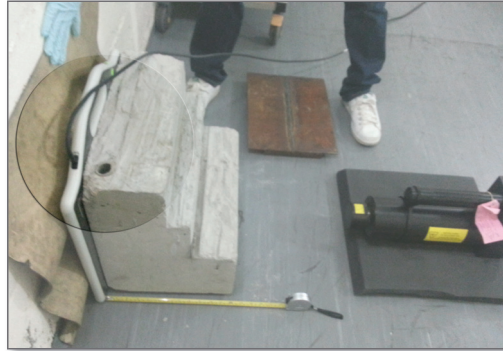
Vidisco's digital radiography systems facilitate advanced yet discreet radiographic testing of priceless artifacts and of art. X-ray is used for research, authenticity and reconstruction purposes.



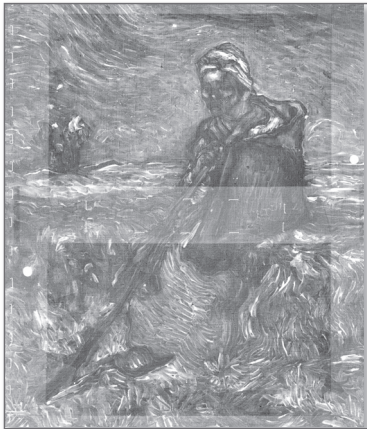
Painting Inspection

Construction

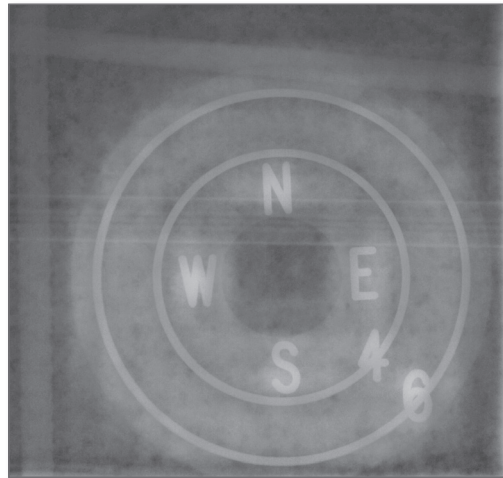
Digital radiography of concrete structures often requires penetrating large amounts of dense material. Vidisco's digital radiography systems enable testing with dramatically reduced exposure times, which can be conducted in difficult to reach locations and provides results on site.



Concrete Step wedge



Van Gogh: The Sheperdess

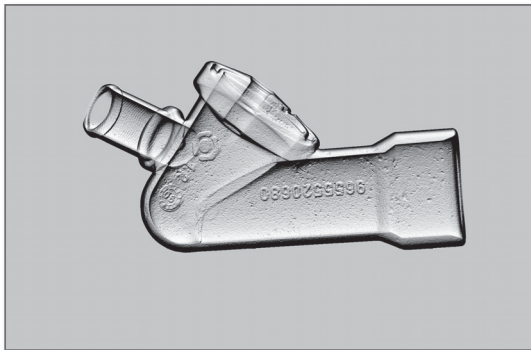


6" Concrete X-ray Generated with Ir-192

RT Applications

Casting

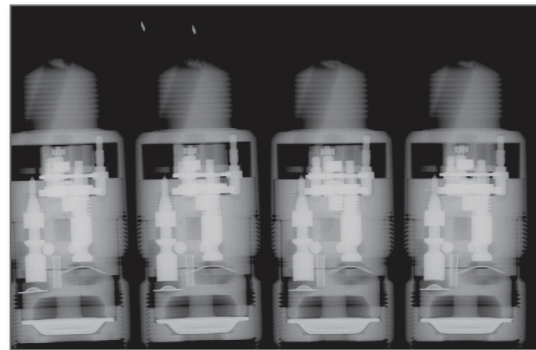
Quality control of castings requires the ability to conduct testing on a massive scale, while at the same time, detect hairline defects. Vidisco's digital radiography systems allow overcoming these challenges and provides tools required by ASTM E2422-05 casting standard.



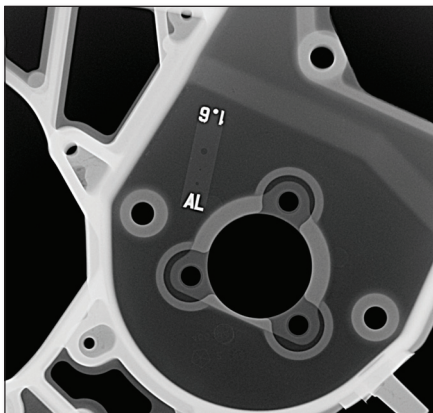
Casting X-ray (Emboss)

Munitions

Intensive X-ray imaging of hard to penetrate materials is required for quality control during the production storage and clearance of munitions. Vidisco's digital radiography systems enable penetration of the thickest munitions and rockets, yet considerably reducing exposure times.



QA of Fuses



Aluminum Casting X-ray



Katyusha Rocket

25 Years of Digital Radiography Expertise



Portability:

- Fully battery operated
- Wireless operation mode
- Packed into a single case or backpack



Highest Image Quality:

- Dynamic range of 14-16 bit
- High resolution
- Excellent SNR (Signal-to-Noise Ratio) and CNR (Contrast-to-Noise Ratio)
- No compromise on image quality



Advanced Technology:

- Leading X-ray innovation for 25 years
- Proprietary professional NDT software
- Truly portable DDA technology
- Meeting current industry standards



Safety:

- Remotely controlled from a safe distance
- Fully synchronized X-ray source control
- Low doses and short exposure time per image



Instant Imaging:

- X-ray images are immediately ready for interpretation
- Quick set up
- Minimized reshoots/ repositioning



User Friendly Operation:

- Intuitive software interface
- Interchangeable DDAs, various accessories
- Case functions as operational platform



Field Design:

- Systems work in all weather and extreme conditions
- Rugged, drop tested DDAs
- Thin DDAs fit into tight spots
- Imaging area starts close to edges





Leading X-ray Technologies Tel. +972 3 533 3001 | Fax. +972 3 533 3002 | ndt@vidisco.com | www.vidisco.com

