

DELWORKS LLI

Long Length Direct Radiography System

DEL MEDICAL

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PASSIONATE ABOUT IMAGING

System Overview
DELWORKS LLI

Enhance operational efficiency and reduce patient radiation exposure through the utilization of DELWORKS LLI, a cutting-edge imaging solution. Distinguished by its expansive image area measuring 17 x 42 inches (43 x 107 cm), DELWORKS LLI facilitates comprehensive spine and long leg imaging with unparalleled efficiency, requiring only a single exposure. This advanced system eradicates the potential for stitching misalignments, thereby elevating confidence in diagnostic accuracy.

The inherent portability of DELWORKS LLI enables seamless image acquisition in both upright and supine positions, adding a versatile dimension to its clinical utility. Furthermore, the system is equipped with highly sensitive Automatic Exposure Detection (AED) technology, ensuring precision and consistency in image capture. This technological prowess enables seamless integration and synchronization with any x-ray generator, exemplifying DELWORKS LLI as a sophisticated and adaptable solution at the forefront of medical imaging advancements.



Key Highlights

Large Active Imaging Area
17 x 42 in (43 x 107 cm)

Optimized Workflow
9-second Image display

Lower Dose

Long Length and Routine Studies

Effortless Portability
22 lbs (10 kg)

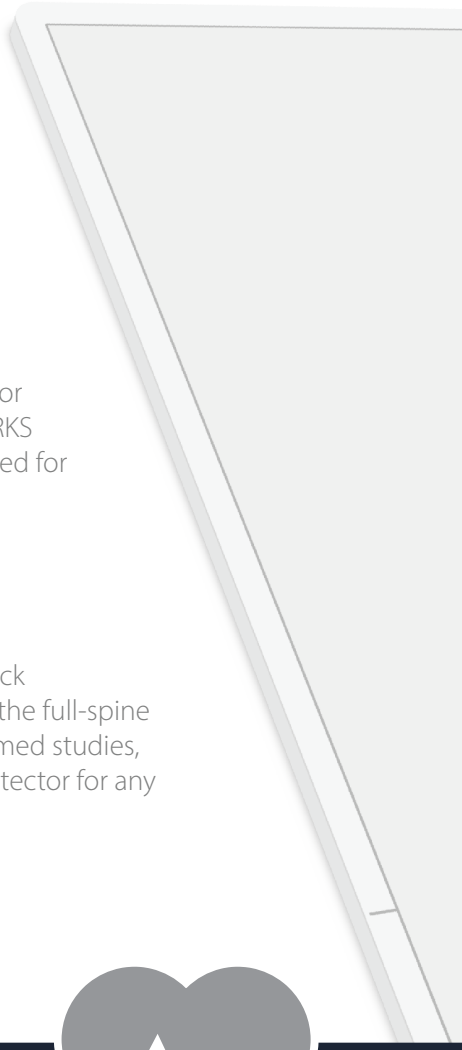
Wireless or Wired Imaging

High Resolution Imaging
3072 x 7680 image matrix / 140 micron pixel resolution

System Overview
UNMATCHED VERSATILITY

Work Efficiency - A single instant exposure

Experience a new level of efficiency, diagnostic confidence, and precision with the DELWORKS LLI. A single exposure simplifies workflow while simultaneously reducing patient motion artifacts lessening the time needed for them to hold still.



Medical

The DELWORKS LLI is perfectly suited for orthopedics, trauma, and radiology applications. Given the full spine image acquisition in a single shot, the DELWORKS LLI is the best detector for the most sensitive population: children - specifically pediatric orthopedics. The DELWORKS LLI is an easy and practical addition to any radiology department or practice as it can be used for both routine and long-bone studies.

Chiropractic

Acquiring baseline full spine studies has never been easier with the DELWORKS LLI. The quick acquisition and highest geometric accuracy of the DELWORKS LLI makes it easy to acquire the full-spine studies that chiropractors need. Additionally, the ability to acquire all other typically performed studies, its easy portability, and cost-conscious price point makes the DELWORKS LLI the perfect detector for any practice looking to upgrade to DR or install their own imaging suite.

Better for the Technologist

- No repositioning equipment between exposures
- No worry about sufficient overlap
- No complicated setup
- No possible image misalignment
- Fewer repeats due to patient motion
- No stitching

Better for the Physician

- No possibility of vertical or lateral misalignment
- Uniform image density
- Eliminates rib misalignment from inconsistent inspiration / expiration between exposures
- Highly detailed direct digital images at low patient dose
- Highest image quality for more confident diagnosis

Better for the Patient

- Shorter overall exam time
- Image acquisition in seconds vs several minutes with stitching methods
- Highest image quality for more confident diagnosis
- Lower radiation dose
- Fewer repeats

System Overview
FEATURES

Large Active Imaging Area - 17 x 42 in (43 x 107 cm)

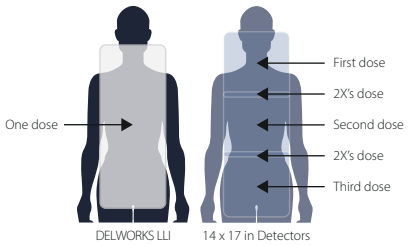
The DELWORKS LLI contains a Gadox scintillator coupled with an amorphous silicon detector. It has an active imaging area of 17 × 42 in (43 x 107 cm) that can accommodate a wide variety of patient sizes in both supine or standing positions. High resolution images taken with or without a grid, need no stitching or subtraction and require minimal manipulation.

Portability - Weighing only 22 lbs (10 kg)

No other long-length detector is as portable as the DELWORKS LLI. Weighing only 22 lbs (10 kg) and equipped with wireless capability, the DELWORKS LLI is lightweight and mobile. It can be easily moved from a wall mount to a cart, or attached to a gurney.

Low Dose - Lowest dose for the most sensitive patients

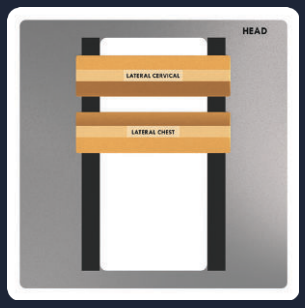
Use of the DELWORKS LLI delivers substantially less dose as compared with standard multi-exposure long bone or full spine imaging methods, while providing the highest geometric accuracy available. The monolithic panel reduces unevenness and provides a perfect density gradient with no overlap. Its Cesium Iodide scintillator enables the highest quality images with low exposure.



Attenuation Filters (Optional)

Filters are used when imaging body parts with varying thickness

- Reduce dose to thinner parts of the anatomy, preventing oversaturation and improving image quality
- Set includes lateral cervical, AP/PA scoliosis and leg length filter
- Filters attach magnetically to frame inserted into collimator rails



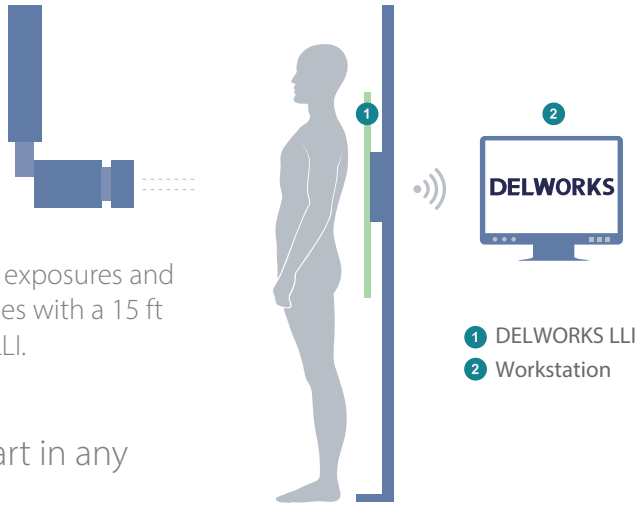






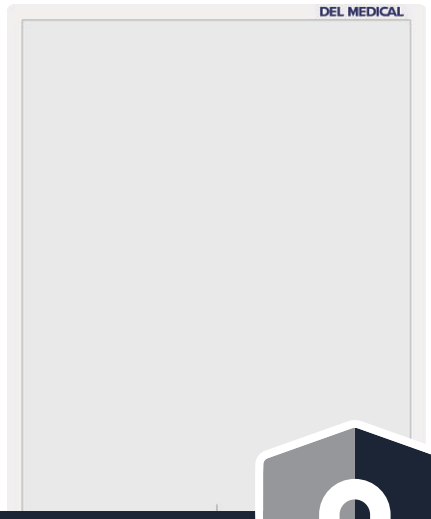
Wireless or Wired Transfer

DELWORKS LLI can be easily repositioned for upright or supine imaging thanks to the freedom of wireless technology. Equipped with the latest and fastest 802.11ac wifi connectivity, DELWORKS LLI communicates directly with DELWORKS 3.0 processing software. The DELWORKS LLI is fitted with two rechargeable lithium ion batteries that take 2-3 hours to fully charge. One full charge yields 650 exposures and lasts 11 hours in standby mode. For wired use, the DELWORKS LLI comes with a 15 ft (5 m) magnetically connected cable, which also serves to charge the LLI.



Routine Studies - Generate images of any body part in any region of the detector

The DELWORKS LLI detector can also be used for any study by simply collimating to the area of clinical interest. DELWORKS will auto-shutter to generate images of any part of the body, making the DELWORKS LLI detector the only panel necessary for all of your imaging needs.







CyberSecurity

To provide exceptional patient care without interruption, it is critical for health care providers to have a secure environment, protected against cyberthreats such as viruses or ransomware. UMG/DEL MEDICAL takes our partnership in this seriously and is committed to providing safe, reliable, and secure systems. We deliver product security that helps you achieve compliance with Health Insurance Portability and Accountability Act (HIPAA). Together, we can increase security and privacy.

Software Overview
DELWORKS

DELWORKS is a powerful image acquisition and processing software featuring a user-friendly interface that provides sophisticated and speedy medical imaging. Designed with complex system automation, DELWORKS aims to simplify the examination process by making the difficult decisions for you.

Advanced anatomical programming and image processing algorithms help optimize technologist productivity. DELWORKS strives to minimize human error and unwanted repeat exams to give technologists the highest quality image and lowest dose, with every exposure.



Large Active Imaging Area

Utilizing the single detector, DELWORKS LLI, eliminates the need for stitching multiple images such as full-spine and long-bone studies.

Software Features

- Pre-exposure display of patient and procedure information, x-ray generator exposure factors, status and control functions integrated in a single display screen
- Positioning guide: queues proper positioning for each view
- Deviation Index (DI): standard reporting to assist in dose minimization
- Exam-specific image processing algorithms automatically optimize images based on selected patient anatomy
- Automatically Programmed Radiography (APR) specific default values with manual adjustment
- Image rotation in 90° steps, horizontal mirroring, automatic and manual image cropping to collimated area
- Manual adjustment of the LUT, window and level
- Easy verification and correction of image laterality and patient orientation
- Intuitively add orientation markers and text comments directly to acquired images (pre-defined or text free)
- PICC tool applies enhanced processing to images for better visualization of leads, lines or tubes
- Effective management, analysis, and reporting of rejected images
- Detailed histograms of pixel density
- User selection of modified LUT (Look-Up Table) based on various exam types
- Measurement tools: full array of standard and specialty tools
- PC Options: Desktop with a 24 in monitor, laptop, or tablet workstation

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VS50
Premium Long Length
Wall Stand

Mobile Vertical Holder

DELWORKS LLI
17 x 42 in (43 x 107 cm)
long-length detector



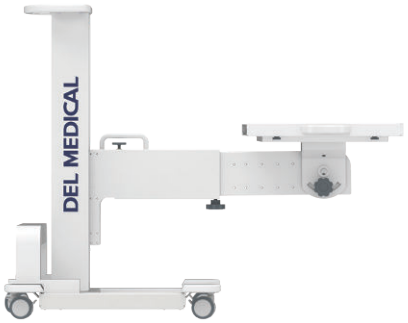
Mobile Positioning Holder
for upright, supine under-table or
cross-table procedures

DELWORKS LLI

ACCESSORIES

Mobile Positioning Holder

- Multi-positional holder for upright, supine under-table or cross-table procedures
- Excellent option for imaging in the operating room
- Telescoping arm
- Adjustable head (full rotation and angulation)
- Piston driven vertical travel of 64 in (162.6 cm)
- Locking casters
- Counterbalanced for easy positioning





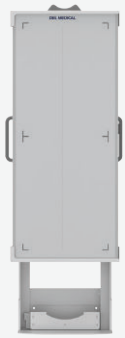


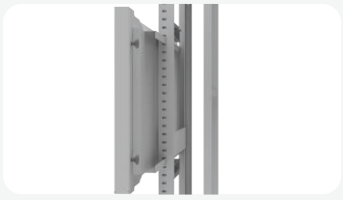


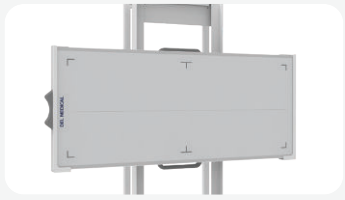


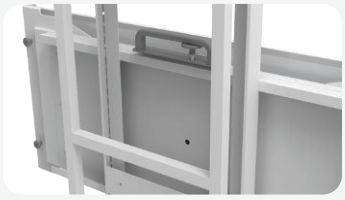
Mobile Vertical Holder

- Compact design
- Holds DELWORKS LLI and removable grid
- Manual height adjustment of 27 in (68.6 cm)
- Holder can be lowered to capture images just 1.75 in (4.45 cm) from the floor
- Easily moved when not in use
- Rotates LLI detector from portrait to landscape











Grid

- May be used with either holder (Positioning holder / Vertical holder)
- 17 x 42 in (43 x 107 cm)
- 8:1 ratio
- 103 LPI
- 44 in (111.8 cm) to infinity focal range



VS50 Long Length Wall Stand

- Safely houses the DELWORKS LLI detector for long length and routine upright exams
- Full range of motion of active area of DELWORKS LLI
- Fully concealed counterbalance system for easy vertical travel
- Wall hugging design (Less than 7 in (17.8 cm) from wall to receptor plane)
- Convenient 4-point mounting to wall (No floor drilling)
- Left or right load
- Lead backer for back scatter protection
- No power required











Supine Detector Cover

- Placed over the detector for supine studies
- 500 lb (227 kg) weight capacity



Tabletop Pads

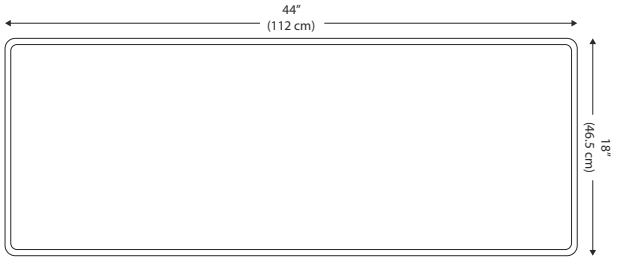
- Used with weight distribution cap to provide a comfortable and level surface





DELWORKS LLI
TECHNICAL SPECIFICATIONS

Scintillator:	Cesium
Detector Technology:	a-Si
Active Image Area:	17 x 42 in (43 x 107 cm)
Pixel Matrix:	7680 x 3072 (24 mp)
Pixel Pitch:	139 um
A/D Conversion:	16-Bit
Minimum Detectable Dose:	20nGy
Maximum Linear Dose:	115uGy
MTF @ 1.0 LP/mm:	0.64/0.70/-
MTF @ 2.0 LP/mm:	0.41/0.44/-
MTF @ 3.0 LP/mm:	0.23/0.25/-
DQE @ 0.0 LP/mm (2.5uGy):	0.67/0.71/-
DQE @ 1.0 LP/mm (2.5uGy):	0.52/0.56/-
DQE @ 2.0 LP/mm (2.5uGy):	0.43/0.46/-
DQE @ 3.0 LP/mm (2.5uGy):	0.18/0.22/-
Ghose (%, 300uGy, 60s):	<25
Spatial Resolution:	3.6 LP/mm
Image Acquisition Time:	3S
X-Ray Voltage Range:	40 - 150 KV
Data Interface:	GigE Wifi
Power Dissipation:	20 W
Adapter Input:	AC 100 - 240 V, 50 - 60 Hz
Adapter Output:	DC 24 V, 60 W
Dimensions:	111.5 x 47.1 x 1.5 cm
Weight (kg):	22 lbs (10 kg)
Detector Housing Material:	Carbon, Al Alloy
Water Tightness:	IPX3





Mobile Positioning Holder

Total Vertical Travel:	44 in (111.75 cm)
Pneumatic Piston Vertical Travel:	19 in (48.25 cm)
Horizontal Arm Vertical Travel:	25 in (63.5 cm)
Horizontal Stroke (Telescoping Arm):	8.125 in (20.6 cm)
Max. Height Active Imaging Area - Portrait:	78 in (198 cm)
Min. Height Active Imaging Area - Portrait:	1.5 in (3.8 cm)
Max. Height Active Imaging Area - Landscape:	65.5 in (166.4 cm)
Min. Height Active Imaging Area - Landscape:	6.75 in (17.1 cm)
Max. Height Active Imaging Area - Undertable:	63 in (160 cm)
Min. Height Active Imaging Area - Undertable:	21 in (53.3 cm)
Dimensions:	30 x 23.25 x 40 in (76.2 x 59 x 101.6 cm)
Weight (Unloaded):	152 lbs (77 kg)
Weight (with Detector and Grid):	188 lbs (76.2 kg)

Mobile Vertical Holder

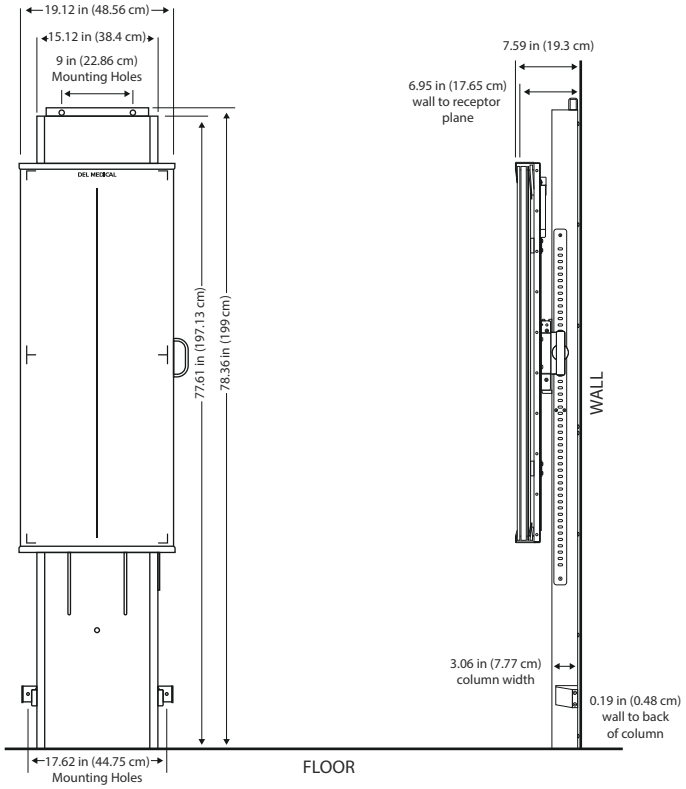
Total Vertical Travel:	27 in (68.6 cm)
Max. Height Active Imaging Area - Portrait:	71 in (180 cm)
Min. Height Active Imaging Area - Portrait:	1.75 in (4.44 cm)
Max. Height Active Imaging Area - Landscape:	58.5 in (148.6 cm)
Min. Height Active Imaging Area - Landscape:	13.5 in (34.3 cm)
Dimensions:	50 x 24 x 22 in (127 x 61 x 56 cm)
Weight (Unloaded):	88 lbs (40 kg)
Weight (with Detector and Grid):	126 lbs (57.3 kg)

Supine Detector Cover

Dimensions:	54.4 x 24 x 3.4 in (138.2 x 61 x 8.6 cm)
Weight Limit:	500 lbs (227 kg)

VS50 Wall Stand

Height:	78.36 in (199 cm)
Depth:	7.59 in (19.3 cm)
Receptor Width:	19.12 in (48.56 cm)
Vertical Travel:	37.5 in (95 cm)
Weight (Without Grid, Detector, and Lead Backer):	200 lbs (90.7 kg)
Options:	Grid



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Itemized quote, certificates, W-9, SAM registration and capability statement, ready for your purchasing file.

Supported after installation.
Installation, training and service are coordinated through manufacturer-authorized partners.

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From the first call through installation, however long approvals and funding take.

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Contact Us About The DELWORKS LLI Today

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