



Go filmless the easy way

Philips Essenta DR Digital radiography system

PHILIPS



Small effort, ...

Are you still harboring doubts about going digital? Here's the good news. All it takes to work with Essenta DR is one small step. Now you can get an all-you-need system that is especially developed for moderate budgets. What's more, thanks to its compact size it only needs a moderate amount of space.

... big performance

Act big in your department. With Essenta DR you'll benefit from big advantages in digital radiography. Carry out all standard applications and experience filmless workflow. Place your trust in a quality product made in Germany and backed by Philips' worldwide service network.



One system,

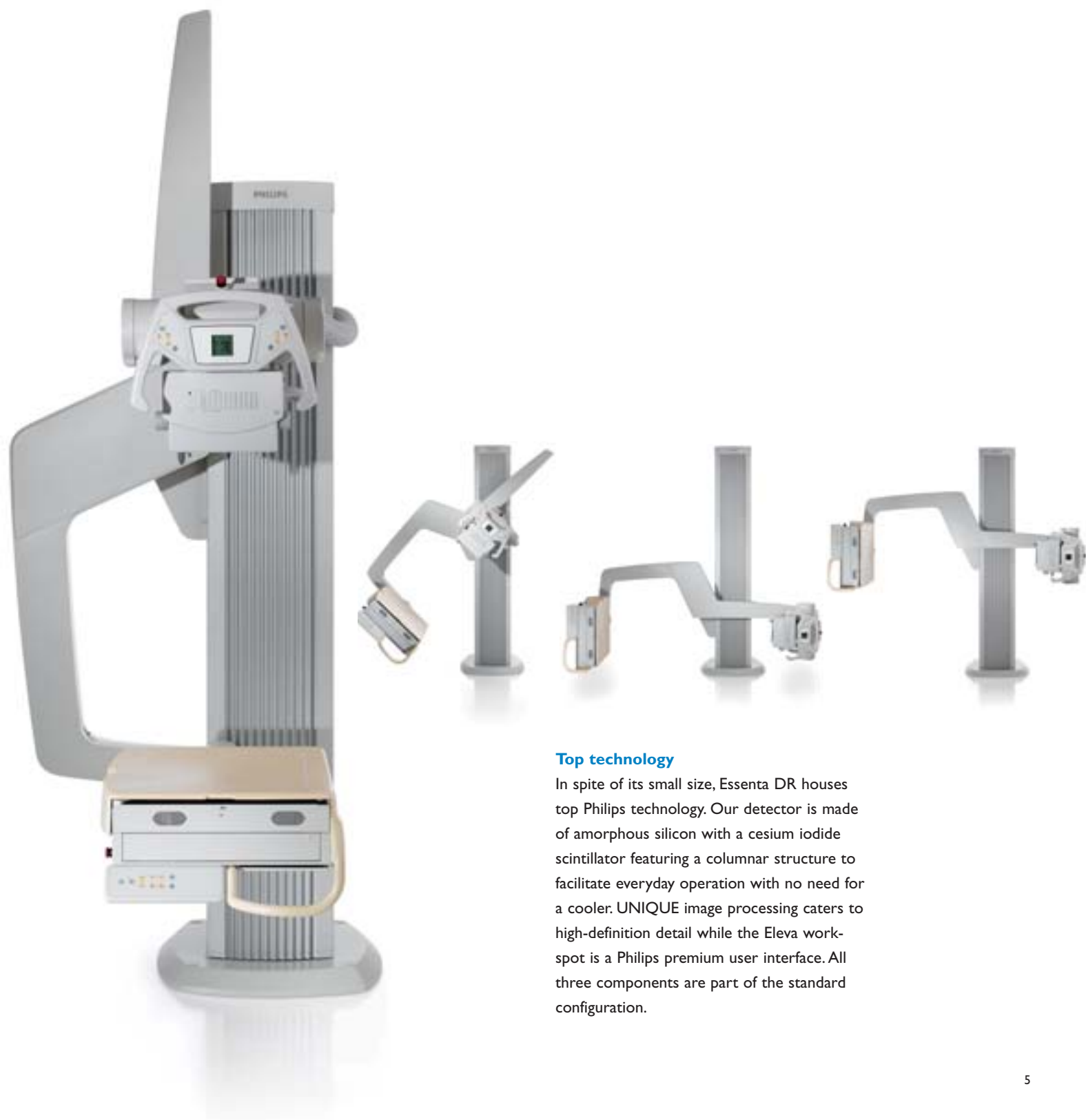
Experience the flexible geometry of Essenta DR. Its floor mounted stand, which includes a U-arm with tube, collimator and digital detector; allows for easy positioning. Plus, your trust is well-placed in Philips' state-of-the-art technology.



Very versatile

Essenta DR is a very versatile digital system for environments with a medium patient load. Just right for facilities going digital and as a back-up system for larger clinics. Most common applications in both vertical and horizontal positions including chest examinations are possible.

scores of possibilities



Top technology

In spite of its small size, Essenta DR houses top Philips technology. Our detector is made of amorphous silicon with a cesium iodide scintillator featuring a columnar structure to facilitate everyday operation with no need for a cooler. UNIQUE image processing caters to high-definition detail while the Eleva work-spot is a Philips premium user interface. All three components are part of the standard configuration.

Stop slow motion,

Your filmless workflow will be more convenient and faster than the conventional radiography process. Patients also benefit from these smooth-running procedures since you can spend more time with them. In addition, the administration of your medical facility will appreciate Essenta DR's streamlined, cost-effective processes and high quality results.



RIS-Terminal



Patient list

Pleasantly simple

Some facilities may wish to complement their Essenta DR with an easily available PACS. Philips recommends its mini-PACS Media & Distribution Center*. Your new, smooth workflow will run as follows: Essenta DR can be connected to your RIS to update your patient list after the patient checks in. In the Eleva concept, the information coming from the RIS automatically programs the right Eleva presets, including processing, printing and exporting. This ensures maximum efficiency as there is no need to manually reenter any information.

* The Philips Media & Distribution Center is not available in North America.

choose flow motion



Examination



Verification



Diagnostic viewing PACS

Seamless procedures

You can observe automatic, instant image processing and the intuitive Eleva workspot ensures easy navigation with features such as image thumbnails. The images can be manipulated and automatically exported to PACS or the printer once the examination is complete. Images from previous exams can be accessed with iSite PACS. At the click of a button, you can enter the PACS and check positioning as well as other parameters from prior exams of individual patients.

Your work becomes easier

Benefit from a clear user interface – available as a touch screen to make things even more convenient. All functions such as rotation and shuttering are intuitive. The Eleva workspot is designed around your needs and adapts to the way you work.

German engine intuitive opera

What defines a digital radiography workhorse? A design you can rely on, day in and day out. That's why Essenta DR is equipped with the latest technology and backed by a proven track record in all other Philips DR systems. Plus, Essenta DR utilizes geometry that caters to the specific needs of both the technologist and the patient.



Engineering inside, Innovation outside

Advanced engineering

Every component is a model of advanced engineering. The excellent lifetime performance of the tubes is a repository of the collective experience of Philips, the very first developer of X-ray tubes. The detectors feature a 3k x 3k pixel matrix and 12 bit image depth to enable a low X-ray dose as well as excellent image quality every time. Furthermore, UNIQUE, Unified Image Quality Enhancement software from Philips, achieves accurate details in all areas of the image and eliminates processing artifacts.

Intuitive operation

Technologists require ergonomic, safe handling when carrying out examinations. Essenta DR responds to this need with a floor mounted column containing a motorized U-arm and the lowest detector height on the market. The move-to-position function is possible via motorized U-arm movements. Essenta DR contains Philips' patented safety concept for patient protection against collision. One aspect of this expertise is Philips' 100 plus years of experience in developing X-ray devices.



Standard configuration:

- Generator
- Floor-mounted multi-purpose stand FF-M including adjustable U-arm with X-ray tube assembly, collimator and integrated digital detector
- Motorized movements with move-to-position function
- UNIQUE image processing

Options:

- DICOM package
- Height adjustable trolley
- Clinical QC
- DICOM Media
- iSite PACS

Extensions:

- CAD Chest solution xLNA
- mini-PACS Media & Distribution Center

Granted, Essenta DR is small in size. But when it comes to application diversity, it has no need to hide behind much bigger systems. Essenta DR excels as a chest workhorse when used without a table and covers all major parts of the body including head, arms, and legs. Plus, combining it with our height adjustable trolleys allows you to perform accurate lateral examinations.

A lot of projections your daily projects



Standing knees AP: The very low position of the detector and the tube enables convenient examinations of standing knees or ankles.



Foot right DP: Examinations of lower extremities are possible by rotating the system to the right projection angle.



Decubitus chest: Cross lateral examinations in combination with a height adjustable trolley.

for



Lateral chest: The system moves automatically from any position to the chest position with a SID of 180 cm (72") at the push of a button.



AP supine townes: Advanced undertable examinations can be performed independently from the tube by adjusting detector rotation.



Standing feet on cassette: The tube can be rotated manually to enable exposures with free standing cassettes.

Clarify weak details, achieve strong image quality

Image processing plays a major role in consistent, excellent image quality for all anatomical areas. To support the quality of care, Philips has always placed special emphasis on enabling excellent image processing in all its radiography systems.

Creating brilliant diagnostic views

Essenta DR supports diagnostic viewing by:

- Image processing specially suited to flat detectors
- Detecting the appropriate region of interest
- Anatomy specific image processing



Conventional Chest Processing (left), UNIQE processed (right)

UNIQUE at a glance

- Harmonizes contrast
 - Enhances weak details and attains detail accuracy in all areas
 - Permits a visually uniform impression for DR and CR images
 - Achieves consistently high image quality
- UNIQUE is ideal for both viewing on the monitor and for printing. Image quality is enhanced while simultaneously preserving the images' natural appearance. Plus, the parameters can be adapted to users preferences.

Image verification

The image is available within a matter of seconds after exposure, which reduces waiting time for each individual patient. In addition, the user can use a range of parameters to further enhance the image:

- Contrast/brightness
- Rotation/mirror
- Annotations
- Shutters

UNIQUE image processing

With UNIQUE you can expect consistently high image quality whether working with Computed Radiography, Direct Radiography or CR/DR combinations. UNIQUE enhances detail contrast and harmonizes image quality for all Philips digital radiography modalities. UNIQUE image processing is especially suited to those applications where high detail definition is absolutely essential.

A new level of confidence

The Philips' CAD Chest solution aids physicians in visualizing, identifying, evaluating and reporting pulmonary lesions/nodules in digital radiographic chest images. It provides interactive toolkits to assist in the identification of lung nodules. xLNA enhances diagnostic confidence and helps to provide better quality of care.

Integration into your PACS workflow

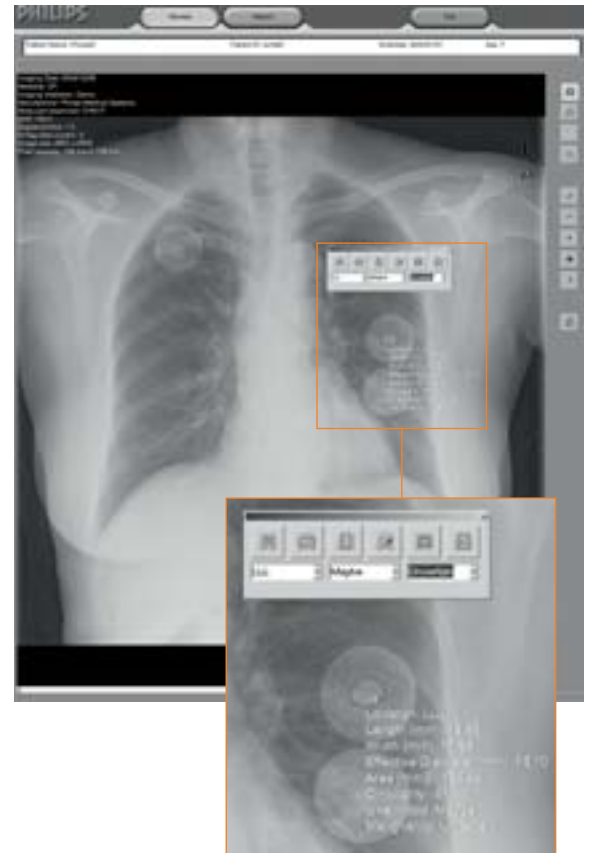
xLNA integrates into your PACS based solely on DICOM connectivity. Neither code-level integration nor the installation of any software on your PACS is necessary.

Image reading and ROI (Region of Interest) analysis

- Image visualization toolkits with multiple viewing modes
- Nodule-specific contrast-enhanced and nodule-enhanced views
- Tools for physicians to perform lesion marking and selection
- Lesion/nodule segmentation in automated or manual mode
- Instantaneous automatic computation of quantitative measurements from segmentation results
- Tools for physicians to add additional diagnostic assessment comments

Clinical report

- Automatically generates clinical report on physician-confirmed diagnostic information
- Allows physicians to input notes and digital signatures
- Secures report with time stamp
- Stores report in DICOM format ready for PACS archiving



Instantaneous automatic computation of quantitative measurements from segmentation results.

Enhanced views enhance diagnostic confidence

xLNA is a new generation of CAD software that offers interactive real-time assistance tools for X-ray lung nodule assessment and reporting (xLNA).

High efficiency on th

Essenta DR is DICOM compatible. This means that you can benefit from all relevant DICOM services offered via this common medical data transfer standard. Storing, retrieving, printing and other features will significantly improve your workflow. The same is true for iSite PACS.

DICOM Options

Optional DICOM WLM (Work List Management)

DICOM WLM connects Essenta DR to the RIS. Essenta DR automatically retrieves the work list from the RIS to make patient data available in the digital X-ray room.

DICOM MPPS (Modality Performed Procedure Step)

DICOM MPPS returns examination data from Essenta DR to the RIS. As a result, the RIS server is given examination data updates. The information received relates to the corresponding entries in the work list:

- Patient and procedure data
- Number of exported DICOM images
- User comments on the Performed Procedure Step

The DICOM MPPS option is only available together with the DICOM WLM option.

DICOM Print

DICOM Print allows for manual and automatic printing directly from the Essenta DR acquisition console. It enables the user to transfer images to a networked DICOM imager with a choice of two different printing modes: automatic printing and manual layout composing.

DICOM Media

This option allows users to write CDs directly on the Essenta DR acquisition console using the internal CD recordable drive. The images are exported either as DICOM CR or SC images. Each recorded CD complies with the DICOM Media Interchange format and includes a stand-alone DICOM viewer to review the CD content on any standard PC.

DICOM Image Export

DICOM Image Export consists of two services:

- DICOM Store sends DICOM images to PACS or any other DICOM destination.
- DICOM Storage Commit enables the storage destination to inform the Essenta DR system when images have been stored securely. This trigger is used by Essenta DR to allow images to be deleted during an automatic clean-up procedure.

Essenta DR supports DICOM GSDF (Grayscale Standard Display Function). This provides optimum consistency between quality control and reading situations by ensuring permanent high-quality image display on both printouts and PACS viewing monitors when exporting to DICOM imagers and PACS systems with the same function. Refer to DICOM Conformance Statement for more information.

e data highway

Clinical QC Option

This convenient image statistic tool enables users to analyze all images with regard to, for example, number of images per exam type or number and reasons for rejections. It also serves to monitor and analyze general parameters. The data files can be downloaded for further use or archiving on a standard PC. It is the perfect tool to advance quality standards in the department and for training situations.

iSite Option

This option allows access to Philips iSite PACS directly on Essenta DR's Eleva work-spot. It improves workflow significantly since it allows Essenta DR users to review prior patient examinations and even display images of other modalities without leaving the examination room.

Extended security with mShield Option

Philips' mShield is part of an overall strategy to safeguard the integrity of data on medical information systems. It protects Philips' modalities from malicious attacks.





The U-arm movement stops when a body part has contact with the light barrier.



Solid as a rock – the geometry of Essenta DR.

Safety first, in just a second

Essenta DR offers automated features which are designed to improve your workflow. This way you can devote more time to your patient.

Automated convenience

The move-to-position function enables the system to move automatically to pre-defined positions for your most frequent applications, such as chest to table exams and vice versa. For additional application and flexibility, you can use manual tube and detector rotation.

Technology steps in

A technologist works under conditions requiring a consistently high level of concentration. Nevertheless it is reassuring to know that Philips has implemented certain patient safety devices into Essenta DR. For example, all buttons are dead-man controlled at the tube and at the detector. Movement ceases as soon as you lift your finger from the key. Plus, a fail-safe light barrier in the U-arm and sensors initiate an auto-stop.

High service level, low-key consideration

Let Philips be your partner before, during and after the purchase of a system. It pays off. While your system is in your medical facility, our more than 6,000 service professionals offer you predictable life cycle costs and peak performance now and in the future.

Prized quality

Place your trust in our integrated concepts. From financing to systems maintenance, we're at your disposal. Our philosophy is to offer you fast support and excellent quality. Benefit from our global service network, our highly qualified service engineers, our service technicians' individual attention and the international availability of spare parts. Maintaining this high level of competence is one of our greatest priorities.

CustomerCare portfolio

Our CustomerCare service programs ensure excellent support, flexible solutions and effective relationships – providing the service you need to guarantee that your Essenta DR system always operates at its peak. Our range can be tailored to any individual customer situation. We offer customized Service Agreement solutions to help enhance the quality of patient care, increase your productivity and improve your profitability. Our Service Agreements come in silver, gold or platinum levels. Regardless of the level, a Philips expert is always just around the corner, whether via proactive remote support or in person.

Generators

The range of Philips generators features modern architecture based on a modular design using high performance components to enable customer specific solutions.



Optimus 50, 65 or 80 kW

Basic features

Anatomically Programmed Radiography (APR)

- 1024 anatomical programs
- Quick-to-find application-oriented menus
- Customized short-cut keys to preprogrammed application profiles
- Tube overload protection
- Monitors temperature conditions in order to protect tube and housing parts from being damaged or destroyed by overstress
- Tube power availability indicated on generator control desk

Automatic Exposure Control (AEC)

- Sets the exposure time according to exposure voltage and object characteristics in order to automatically obtain the correct exposure

X-ray tubes

The Philips dual-focus rotating anode tubes are manufactured in one of the most advanced production centers in the world.



RO 1750 ROT 360

- Low-speed rotating anode tube assembly (3,600 rpm max.)
- Excellent lifetime performance
- Housing with 90° horn angle position with free air convection cooling
- All radiography systems, esp. chest units



SRO 2550 ROT 306/351, SRO 33100 ROT 306/351

- Fast rotating anode tube assembly (10,800 rpm max.)
- High load capacity, fast speed-up (1.0 sec)
- To increase continuous power and minimize downtime (for more demanding applications) the tube assembly can be ordered with additional fan or cooling unit
- Ideal for all radiography and fluoroscopy systems
- SRO 0951: recommended tube for Variofocus due to focal spot combination 0.3/1.0

Tube and detector carrier

The Essenta DR comes with a fixed floor-mounted stand which holds the adjustable motorized U-arm containing the X-ray tube assembly and the detector carrier.



Floor-mounted fixed stand

Basic features

- Motorized column with height adjustable vertical movement
- Adjustable motorized U-arm
- Detector carrier
- Motorized SID adjustment
- X-ray tube assembly with collimator

Functions

- All movements completely motorized for easy, ergonomic positioning
- Motorized move-to-position operation from vertical (chest) to horizontal position (for table projections)
- Variable SID from 1000 to 1800 mm (40" to 72")
- Motorized U-arm rotation from -30° to +120°
- Philips patented safety concept, in all axes dead-man position and fail-safe light barrier in the U-arm for high patient safety and comfort
- Manual tube rotation from -30° to 180° enabling free cassette exposures
- Manual detector tilting range from -45° to +45°

Patient Support

Philips offers two types of mobile patient tables.



Height adjustable trolley TA-M

- Single side suspended trolley with floating table top (two widths) and central pedal control
- Widths standard version: 620 mm / 22.4"
bariatric version: 670 mm / 26.4"
- Hydraulic height adjustment from 600 to 870 mm / 23 to 34.3"
- Full application flexibility
- Excellent access to the patient from all sides
- Floating table top, X-ray transparent
- Precise and easy and to maneuver due to central pedal control
- Maximum patient load: 225 kg / 496 lbs



TraumobX

(Not available for sale in North America)

- Mobile base with 4 castors and central locking
- Removable table top with accessory rails for OR equipment
- Height adjustable from 720 mm to 1060 mm / 28.4" – 41.8"
- Table top can be tilted to max. 10°
- Maximum patient load: 135 kg / 297 lbs

Workspot

Clinical images are available immediately after acquisition on the Eleva workspot.



Eleva workspot

Basic features

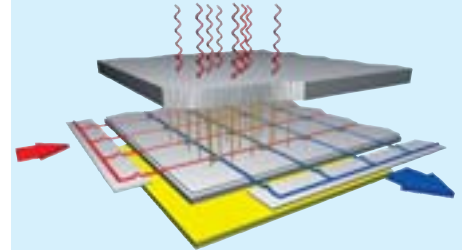
- Consists of a powerful computer, 19" TFT color monitor (touch or non-touch), keyboard and mouse
- A central operating workspot for the whole X-ray examination, with emphasis on:
 - Automating Essenta DR workflow in the examination room
 - Automatic RIS patient data query or manual patient data entry
 - Selecting patient and exam
 - Data transfer from the digital detector
 - Instant image processing with UNIQUE, Philips' advanced image processing software
 - Instant quality check of fully processed image
 - Includes integrated virus scanner

Additional options

- Clinical QC for image analysis and statistics
- Complete DICOM connectivity in hospital network
- iSite PACS easy viewing of prior patient exams
- Optional image archiving on CD (DICOM Media)
- Extended security with mShield

Detector

The DigitalDiagnost flat detector is made of amorphous silicon and a cesium iodide scintillator for excellent image quality even with a low X-ray dose.



Digital Detector

Basic features

- Completely integrated into the Essenta DR
- Large size (43cm x 43cm / 17" x 17") for high projection flexibility
- Resolution up to 3.5 lp/mm, 143 µm pixel size
- Pixel matrix of approx. 9 Mpixels (3000 x 3000 pixels)

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