



Helianthus

FULL FIELD DIGITAL MAMMOGRAPHY UNIT



www.metaltronica.com

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TECHNICAL FEATURES

- High frequency X-Ray generator:
 - 5 kW power, 100 kHz ripple
 - 20 ÷ 35 kV (0.5 kV step)
 - 1 ÷ 640 mAs
- "C" arm with fixed focus-detector distance of 62.5 cm:
 - motorized up/down movement
 - manual rotation with electromagnetic brake (+/- 180°)
- X-Ray tube with molybdenum or tungsten anode, dual focal spot 0,1 and 0,3 mm
- Automatic filter interchangeable Rh/Mo
- Direct Conversion Full Field Flat Panel Detector (18x24 cm or 24x30 cm)
- Removable grid
- Motor-driven (with clutch) and manual compression device with safety release
- Adjustable compression force
- Interactive digital control panel with graphic display showing exposure parameters, for messages to the operator in different languages to be selected during installation
- Additional display over the detector with "C" arm inclination, ACR projections, compression force selected/applied, breast thickness and laterality selection
- AGD (Average Glandular Dose) calculation

- 18x24 cm (or 24x30 cm) shifted compression paddle
- ø 7.5 cm straight compression paddle for magnification
- ø 7.5 cm shifted compression paddle for magnification
- 10x24 cm shifted format compression paddle
- 9x21 cm straight format compression paddle
- 18x24 cm shifted compression paddle for 2D biopsy
- ø 14 cm interchangeable collimator plate
- Gridless device for geometric variable magnification 1,5x and 2x
- Lexan screen for protection of the X-Ray field from parts not under examination
- Two pairs of compression foot-pedals
- X-Ray control push-button with extensible cable
- Phantom for periodical system calibration

OPTIONS

- X-Ray tube with tungsten anode
- Anti-X rubber aprons for pelvis protection of the patient
- Chair for exams with sitting patient



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STANDARD ACCESSORIES

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ACQUISITION STATION

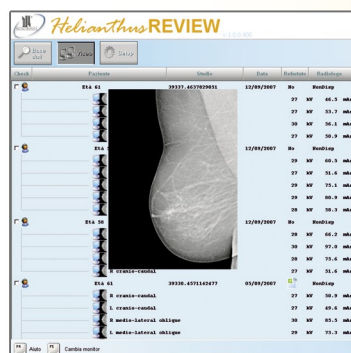


The Acquisition Station is inclusive of:

- Workstation integrated with transparent anti-X screen for operator protection
- Acquisition software complete of:
 - Remotized mammo control panel
 - Off-line images display and viewing
 - Local fully functional operational mode
 - Patient information local DataBase
 - Graphic manipulation tools:
 - Display protocol with ACR predefined views
 - Current session loaded images
 - GOP® images enhanced
 - Fit to window, Zoom, Pan, Magnification lens
 - 1:1, Effective size
 - AOI operations
 - DICOM W/L, High/Very High/Skin contrast
 - Linear measure
 - Histograms
 - Override ACR settings
 - Mirroring operations on ACR standard views (CC, MLO)
 - DICOM 3.0 MG Conformity (IHE validated)
- 2 MPixel Colour LCD Display System (21.3" viewable size)

Local viewer allows:

- Database studies search
- Studies selection criteria
- Studies summary display
- Mammography preview
- Multiple simultaneous studies loading and display
- Display protocol setting
- Menu and report user configurable
- Graphic tools:
 - User palette defined
 - Invert palette on the fly
 - Free images link
 - Anchor point user defined
 - Tags user configurable
 - Predefined zoom factor (1x, 1:1)
 - Annotations (text, geometric shapes, lines)



LOCAL VIEWER

DIAGNOSTIC STATION

(Optional in Full DICOM configuration)



A Diagnostic Station is available.

It's inclusive of Workstation with:

- High resolution 5 MPixel Dual Headed Digital Flat Panel Display System (21.3" viewable size)
- Software for images management and processing
- Store server (in Stand-alone configuration only)

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A FLOWER TO DEFEAT BREAST CANCER!

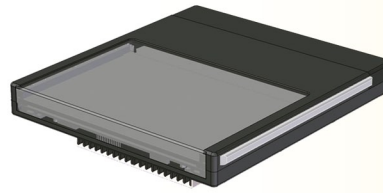


The HELIANTHUS is a complete mammography solution optimized for digital imaging.

It is composed of:

- Mammography Unit with X-Ray tube and Direct Conversion Amorphous Selenium detector 18x24 cm or 24x30 cm format;
- Integrated x-ray control and image acquisition console.

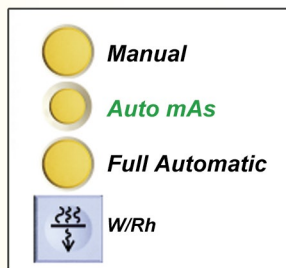
The Amorphous Selenium is the most advanced technology to produce the highest signal/noise ratio and greater efficiency than other known technologies. With the Amorphous Selenium the X-Radiation is transformed directly into electric charges without relying on an intermediate step to convert X-Ray energy to light. So the direct detection avoids a light diffusion effect that degrades image quality, produces a precise signal profile and preserves the image sharpness.



- Technology: Amorphous Selenium (a-Se)
- Digitalization type: logarithmic
- Depth: 14 bit
- Pixel Pitch: 85x85 mm
- Resolution: 2016x2816 pixels (18x24 cm format)
2816x3584 pixels (24x30 cm format)
- Active Area: 17.2x23.9 cm (18x24 cm format)
23.9x30.5 cm (24x30 cm format)

DETECTOR

AEC



HELIANTHUS AEC guarantees delivered dose within limits defined in the European Guidelines over the entire range of breast thickness in full automatic or manual kV-automatic mAs.

In the HELIANTHUS the workflow is optimized by means of full image projections tagging with a special keyboard on top of detector cover and full DICOM functionality of acquisition station.

An auxiliary display shows the following informations:

- C-Arm rotation angle
- Compression thickness
- Compression force
- ACR projection



ACR CODE
KEYBOARD