



**HELIANTHUS**

Digital Mammography System



# Helianthus

The Helianthus results from years of expertise in the global mammography market. The Helianthus 2D diagnostic and screening system is now available in the U.S.A. and is a part of the AMRAD Medical brand from Summit Industries, LLC.

The Helianthus is a standalone mammography system consisting of:

- Mammo unit with isocentric C-Arm
- Acquisition workstation embedded on the stand or (optional) separated with integrated X-ray barrier with 2 MP (standard), 3 or 5 MP (optional) color monitor
- Amorphous Selenium (a-Se) digital detector

## Field Upgradeable

In the future, the Helianthus will have the option available to be upgraded, in the field, to 3D Tomosynthesis.

Helianthus can then be configured to include interventional studies such as tomo-guided biopsy sampling.



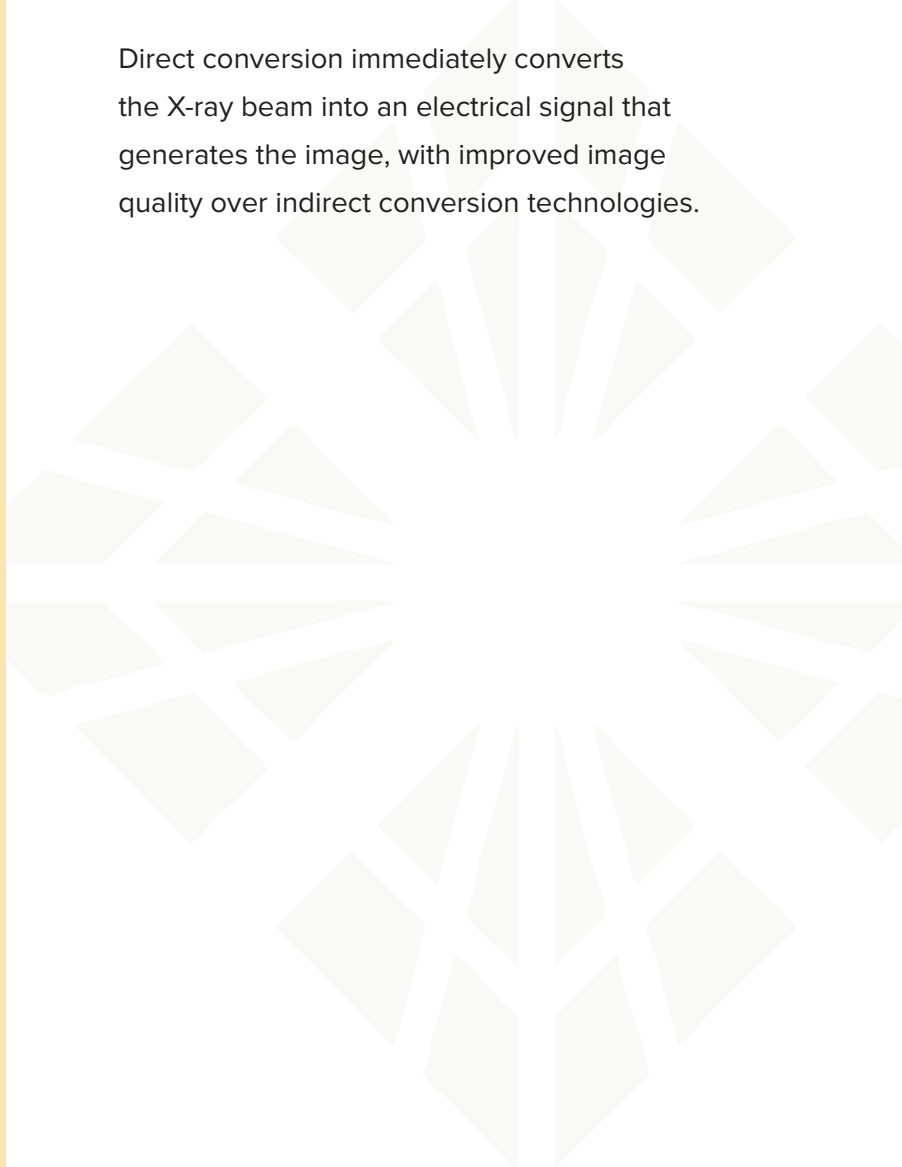


# LATEST TECHNOLOGY FLAT PANEL DETECTOR

## Direct Conversion

The Amorphous Selenium, full-field digital detector has a resolution of 85 micron and direct conversion technology.

Direct conversion immediately converts the X-ray beam into an electrical signal that generates the image, with improved image quality over indirect conversion technologies.





C-arm with isocentric movements (upgradeable to tomosynthesis, when available in the USA)

Protective Screen

2 Mp Medical display (3-5 MP optional)

Integrated Acquisition Workstation

Potter-Bucky with anti-scatter grid

Integrated 7.4 kW X-ray generator (Dual Energy predisposed)

Multifunctional foot-control



# SAFETY

## FOR BOTH PATIENT AND OPERATOR

Extensive rotational and vertical movements (up to 35.8 in. / 91 cm vertical travel) allow a quick and easy positioning of the patient, especially for those with impaired or limited mobility.

Three multi-switches placed on the sides of the C-arm and the front of the X-ray tube, assist the operator in managing the motorized movements of the arm.

Two 7" color touchscreen displays placed on the C-arm's sides assist the technologist in viewing and managing all exam parameters.

Strategically located pressure and collision sensors ensure maximum patient safety.

### Automatic Collimation

Helianthus is designed with a size and position recognition sensor for the compression paddle that automatically adapts to the X-ray beam collimation in all procedure modes: 2D standard, tomosynthesis (when available in the USA), geometric magnification, and biopsy.

As a safety measure, exposures are prevented if they do not comply with the selected accessories. Collimator selection can be manually selected to the specific exam.



# STATE-OF-THE-ART FEATURES

## FOR ACCURATE DIAGNOSIS

### “POEt” Processing for Optimal Enhancement

Helianthus employs a powerful and proprietary software that generates diagnostic images directly from the acquired data called “POEt”. “POEt” software processes the images in a “for processing” format and displays them in a “for Presentation” format that enhances tissue structure and reduces noise.

Extremely versatile, the software includes various filters dedicated to the intricacies of breast tissue whether they are with prostheses, metal findings, anatomical samples or biopsy specimens.

### “Smart $\mu$ Press” Compression System

Mammography image quality directly correlates to the proper compression of the breast. Helianthus lets the mammography technologist perform this operation automatically or in a motorized mode with manual adjustments using rotary controllers or in a fully manual mode.

### Anti-Scatter Grid

The standard linear grid mounted inside the Potter-Bucky drastically reduces scattered radiation, contributing to the acquisition of sharp, high-resolution breast images.

When the Helianthus 2D is upgraded to tomosynthesis, (when available in the USA) an additional grid with a high-density ratio (102 I/cm) is provided, as an alternative. This critical component is manufactured using the same production processes employed for semiconductors, allowing the acquisition of a homogeneous image display.



# RADIATION DOSE

## BY TYPE OF BREAST TISSUE

### “SensROI” AEC (Automatic Exposure Control) - Pre-exposure Mode

In the Helianthus, the digital detector is used to set optimal exposure parameters in an automatic or a semi-automatic mode. Depending on the compression paddle selected, a continuous portion of the targeted region of interest on the detector is selected for each specific procedure. The actual density of the tissue is then determined by using a short pre-exposure pulse.

### Protective Screens

Helianthus is equipped with a polycarbonate screen for patient and image field protection. When upgraded to tomosynthesis, (when available in the USA) an additional larger screen is provided for additional protection during the scanning movement, even with the widest angle of 50°.



### Fast Exposure Mode

In the presence of implants or when it is difficult to effectively compress the breast, it is still possible to optimize the dose delivered with another mode of exposure, called FAST, based on the thickness of the tissue to be examined. The exposure parameters are always set to satisfy the requirements of the European Guidelines and the Average Glandular Dose (AGD) is updated in real-time on all displays.

A user-friendly interface (GUI) guides the operator through every phase of preparation and acquisition.

This interface allows the technologist to select the exposure method (automatic, semi-automatic, or fully manual), the dose profile, and the processing filter to obtain the best possible image based on the type of breast by patient exam.

Helianthus

# OPTIONS

## Bym 3D DMD

The Helianthus can be integrated with the Bym 3D DMD biopsy device for tomosynthesis (when available in the USA) or stereotactic biopsy procedures, which is easily interchangeable with the Potter-Bucky and the magnification kit.

The C-arm positioning for the stereotactic biopsy examination ( $\pm 15^\circ$ ) is motorized and activated with the Bym 3D DMD device. The system has no marking limits and allows the collection of multiple samples. A wide range of supports and adapters allows the use of standard needles, biopsy guns, and VABs.



## Compression Paddles

In addition to the standard equipment, additional compression paddles are available (i.e., for the geometric magnification, the examination of details, and perforated for two-dimensional biopsy procedures).

## Geometric Magnification Kit

As an option, a geometric magnification kit is available. It includes a platform for magnification (with 1.5x or 1.8x or 2x factors) without anti-scatter grid and 7.5 cm compression paddle without an anti-diffusion grid.





## Visualization and Reporting

A dedicated and independent review station for the high-resolution visualization of diagnostic imaging is available as an option. It includes:

- Tools to manage operations, process, and analyze images.
- Workstation with a CD/DVD burner.
- Dual 5 MP or one 12 MP medical grade monitors.
- Color LCD service monitor, keyboard, mouse, and a dedicated keypad.



## Stand Alone Workstation

The Helianthus acquisition and control workstation (AWS) can be offered as a stand-alone unit equipped with a transparent anti X-ray protection barrier allowing the operator to optimize and manage the workflow remotely.

This configuration includes a 15" touchscreen monitor that facilitates the complete control of the mammography system, a 2 MP (3 or 5 MP optional) medical grade monitor and mouse.

# PIONEERS IN RADIOLOGY SINCE 1984

## A NETWORK OF SERVICE + SUPPORT

Enjoy all the advantages of our successful service network. From the first shot to the last managed image, we work to continually improve your imaging performance and patient experience.

Summit Industries' successful service network surrounds you with a dynamic team of exceptional experts. Your organization and your patients will benefit from the experience and best practices that only Summit Industries and its authorized dealer network can offer.



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