Helianthus

The evolution
in diagnostics

METALTRONICA

INNOVATION IS WHAT DRIVE US

THINKING ABOUT THE FUTURE

Preventive diagnostics remains an essential weapon in defeating breast cancer. Metaltronica's forward-thinking design simplifies the technician's operativity, thereby improving workflow, and ensuring that the mammography assessment is a comfortable experience for the patient.

DAY AFTER DAY

Metaltronica has been supporting physicians in breast cancer prevention for over 40 years, providing high-resolution mammography imaging, with a significant reduction in radiation.

In order to deliver optimal mammography systems for customers worldwide, Metaltronica has put at the radiologist's disposal its vast experience in the field of mammography and the significant know-how of its technical staff.

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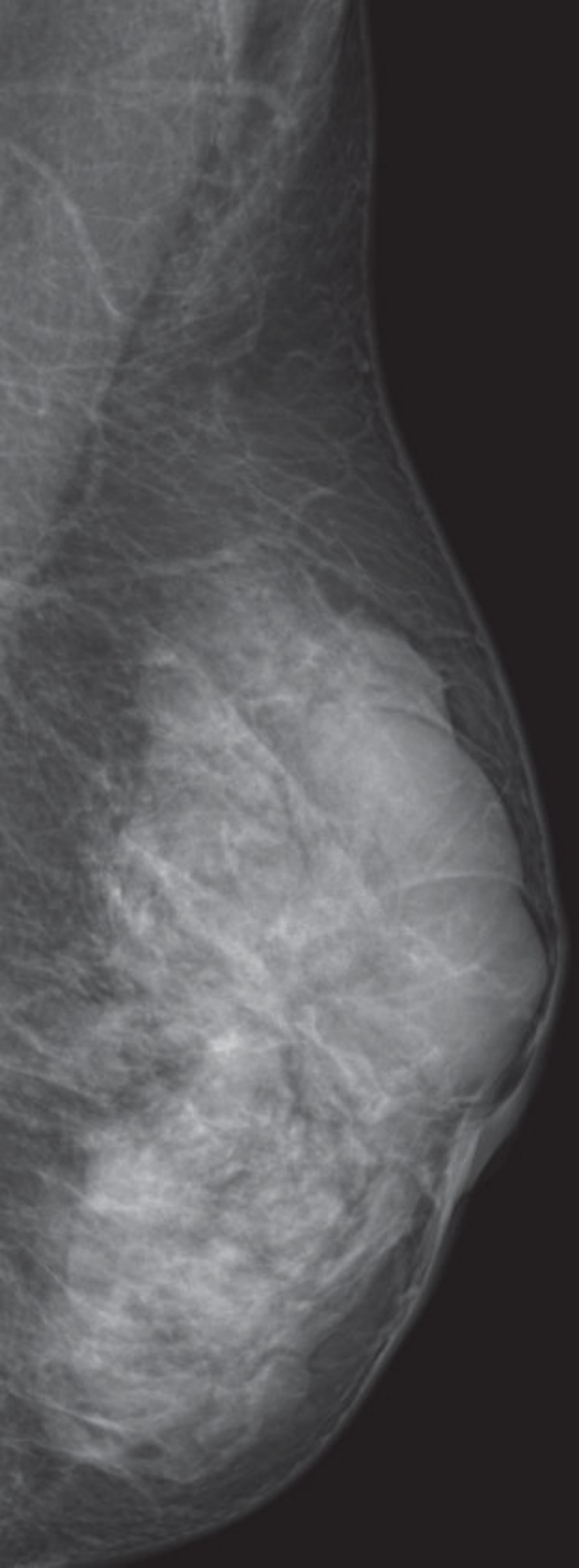
FULL-FIELD DIGITAL MAMMOGRAPHY SYSTEM

HELIANTHUS

Helianthus and Helianthus Bym are **full-field digital mammography systems** for screening and diagnostic examinations supporting the prevention of breast cancer. The mammographic unit is equipped with a high frequency generator, a X-ray tube with a tungsten white anode and a direct or indirect conversion detector. The C-arm has completely motorized movements (vertical translation and rotation). A wide range of accessories allows you to customize the device based on any diagnostic need.



SUPERIOR IMAGE QUALITY

Helianthus is available in two configurations with different flat-panel digital detector technology:

Indirect conversion based on Amorphous silicon–cesium iodide scintillator
The indirect conversion detector has a more competitive price, moreover the Amorphous Silicon is intrinsically more resistant and less sensitive to temperature variations. For this reason, it is particularly suitable for installation in less favorable environmental conditions.

Direct conversion based on Amorphous Silenium
Amorphous selenium is **the most advanced technological solution used to obtain digital images with the highest signal-to-noise ratio.** The detector using this material works properly in a narrower temperature range, but direct conversion avoids light scattering effects. The result is a signal with an extremely precise profile that preserves the sharpness of the image, guaranteeing the highest quality.

POEt Software
Helianthus is equipped with a powerful "POEt" **(Processing for Optimal Enhancement)** software that generates excellent quality diagnostic images, which enhance the structure of the tissues of different types of breasts while reducing noise. Extremely versatile, it provides a set of filters, dedicated even to breasts with implants and/or with metallic markers, anatomical pieces or cores from vacuum-assisted biopsies.

HELIANTHUS FAST AND PRECISE

KEY FEATURES

Smart µPress compression system
Ensures an optimal compression of the breast with minimal discomfort for the patient. The exclusive "FTSE" function automatically adjusts the force to be applied according to breast density.

Full-field digital detector 24 x 30 cm
With a pixel size of only 85 µm, this detector is available with direct conversion (Selenium Amorphous), which provides extremely sharp images with the highest signal-to-noise ratio, or with indirect conversion (Amorphous Silicon), which is particularly suited for mobile applications or in precarious environments.

SENS ROI automatic exposure control
Dual operating mode which sets the exposure parameters based on breast density (PRE) or breast thickness (FAST)

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ACQUISITION WORKSTATION (AWS)

The control and acquisition workstation is equipped with an anti-X protection glass. Fixing the monitor directly on the glass and on the preferred side allows more space on the worktop, fitting the needs of the operator.
The AWS software, together with a remote control panel, includes the following functions:

- Management and display of images (selection, view, manipulation, print and exchange)
- Local database of patients
- Graphic tools for image optimisation
- DICOM 3.0 MG compliance:
  - DICOM STORE SCU
  - DICOM PRINT SCU
  - DICOM WORKLIST MANAGEMENT SCU
- IHE compliance (PIR, SWF, MI)
- CONNECTATHON 2007
- HIS-RIS-PACS interface

OPTIMIZED ERGONOMICS AND FUNCTIONALITY

EASY AND INTUITIVE

Keyboard and integrated display

A keyboard for automatic tagging of images, with manual selection of prefixes / suffixes based on the ACR protocol, is located above the Digital Panel. It is integrated with an auxiliary display to indicate the rotation angle of the C-arm, the ACR projection, the set / applied compression force, the breast thickness and the selected laterality.

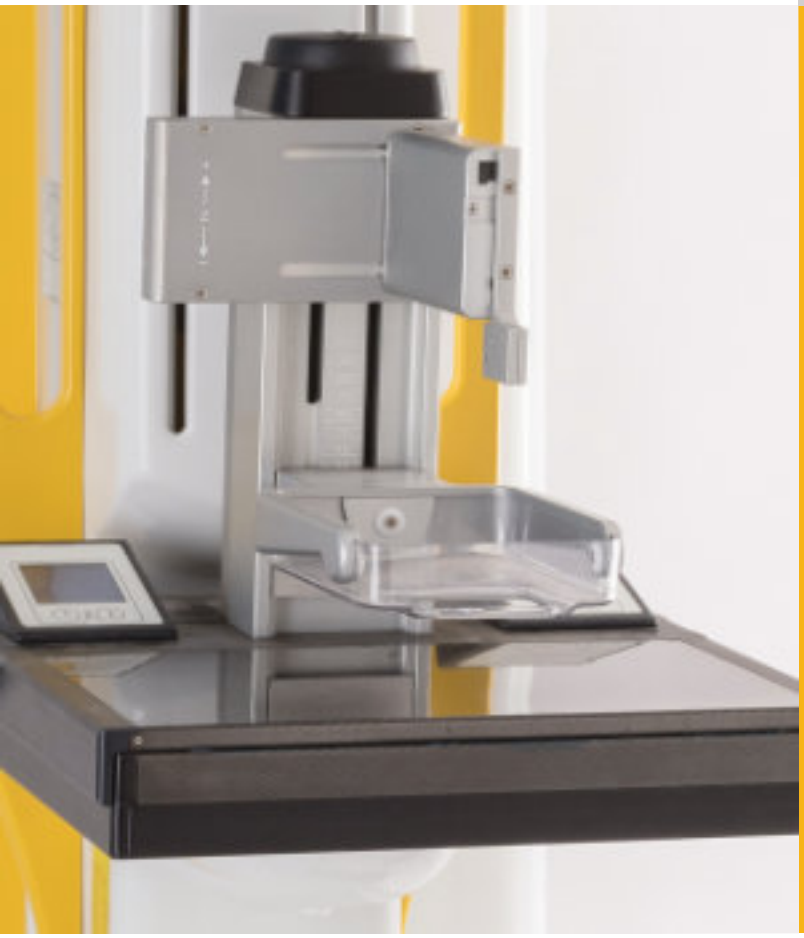
Total control

The easily accessible controls guarantee the operator a total control over the unit, in any examination condition.

HELIANTHUS VARIATIONS AND OPTIONS

HELIANTHUS **BYM**

Helianthus is also available in the Bym version equipped with a motorized isocentric C-arm. The isocentric arm reduces examination time allowing all breast projections to be carried out without adjusting the height of the C-arm or moving the patient. In this configuration, Helianthus can mount the Bym 3D FFDM three-dimensional biopsy device.



BYM 3D FFDM

Bym 3D FFDM is the optimal solution for diagnostic applications.
It is easily interchangeable with the Potter Bucky and magnification kit.
The control software is integrated in the Acquisition Station and includes a database to select needles, biopsy guns and VAB associated to codes that are selected by the user.
The positioning of the C arm in the angulations required for the biopsy (+/-15°) is motorized.

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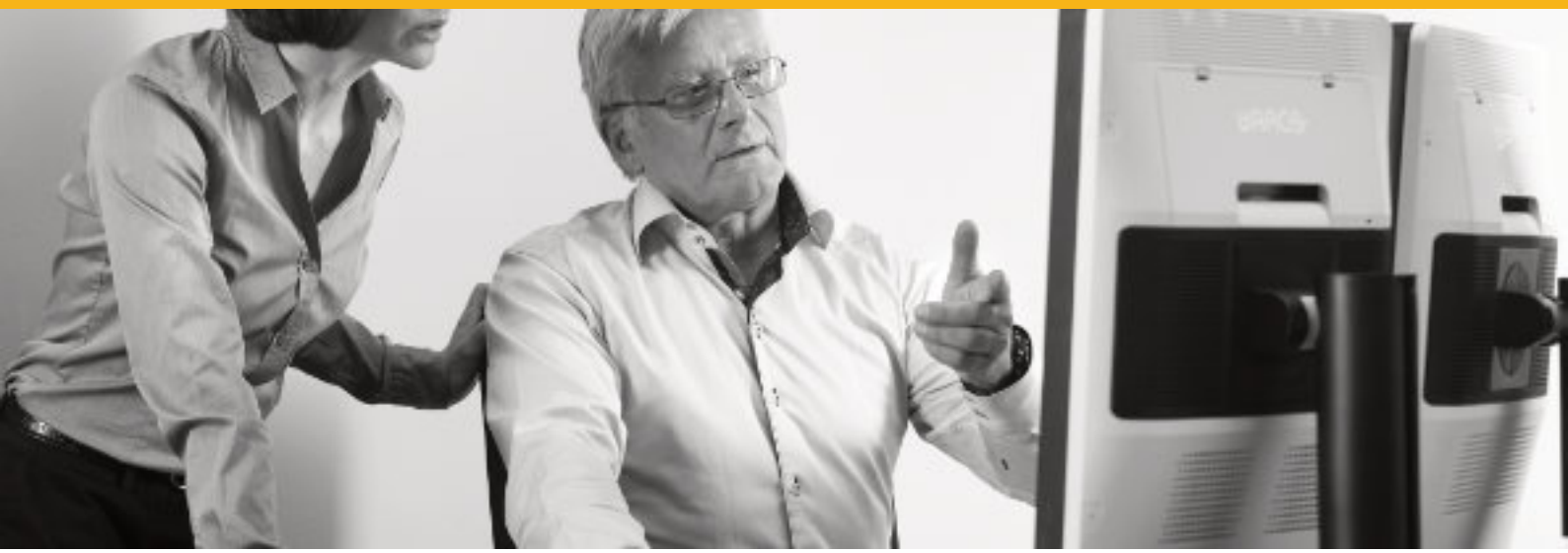
GEOMETRIC MAGNIFICATION AND COMPRESSION PADDLES

A geometric magnification device (1,5x o 2x) can be supplied as an option. Without an anti-diffusion grid, it significantly reduces the dose. Once inserted, a detection system with a carbon-free top, automatically selects the small focus and adjusts the collimation set-up.
As an option, a 9x21 cm sized flat compression paddle (to be used with the geometric magnification device), a ø 7.5 cm round sized compression paddle to examine details and a 18x24 cm sized perforated compression paddle for two-dimensional biopsy examinations can also be supplied.



VISUALISATION AND REPORTING

A dedicated and independent station for the high-resolution visualisation of diagnostic imaging is available as an option. It includes: **Workstation with DVD or Blu-Ray burner, Tools to manage, analyse and process images, Dual 5 Mpixel LCD monochrome monitor, Colour LCD service monitor, DICOM 3.0 MG compliance, Interface for HIS-RIS-PACS systems to transfer images and data from/to the hospital network.**
Optionally, the visualization and reporting software can be integrated with a mammography CAD system for assisted diagnosis which, by using appropriately developed algorithms, is a valid tool for the detection of potential breast lesions.

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