IMS Giotto

GMM GROUP | General Medical Merate SPA

Giotto Class

Digital Mammography system
with Tomosynthesis

Giotto Class
TOMOSYNTHESIS

EXCELLENCE in image quality and ergonomics

- Simple to use cutting-edge technology developed to offer superior ergonomics.

- **AWS:** intuitive, touchscreen controls, and complete of **RAFFAELLO**, a dedicated management software for breast care.

- **GIOTTO CLASS** is a versatile system with which you can perform:
  - **TOMOSYNTHESIS 3D**
  - **SYNTHETIC IMAGE**
  - **FFDM 2D**
  - **BIOPSY** with Tomosynthesis or Stereo with the patient in a **PRONE** or **UPRIGHT position**

- You have the **highest clinical quality** thanks to a number of **cutting-edge technologies:**

  Tomosynthesis: **Step & Shoot**

  Original Pixels: **No Binning (85 µm)**

  Iterative **reconstruction software** dedicated to Tomosynthesis

  Tomosynthesis with a **30° angle**

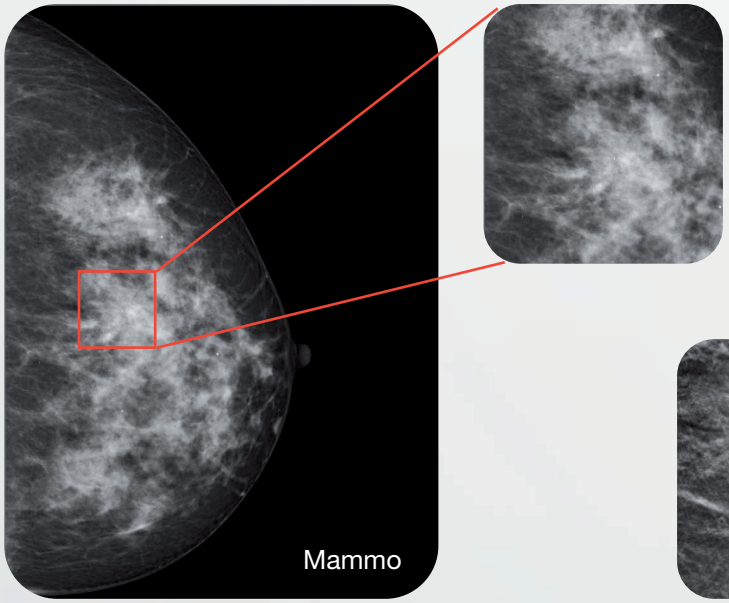
  Only **11 exposures**

- You can have your **GIOTTO CLASS 2D FFDM** without tilting, **upgradable to 3D TOMO** and tilting later.

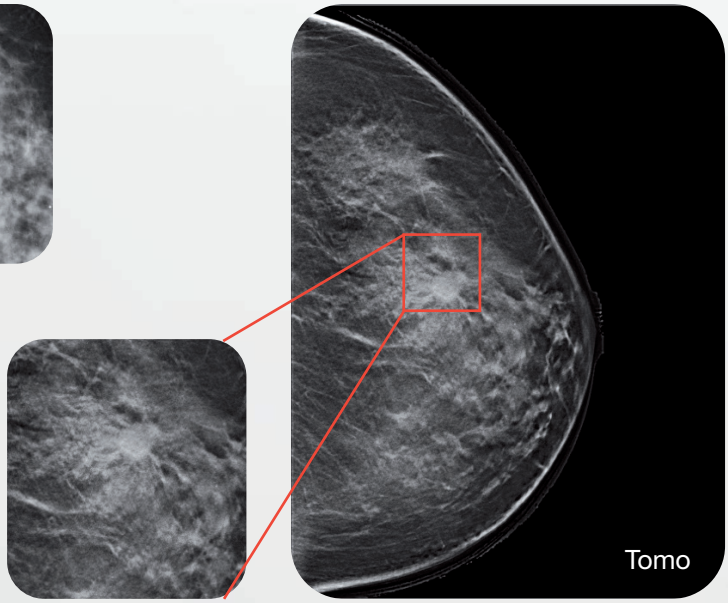
Innovative design is combined with cutting-edge technology to yield a definitive diagnosis and never before seen ergonomics

- **GIOTTO CLASS** is the result of 25 years of experience in the research and development of better instruments for the earliest possible diagnosis of breast cancer.
- It is precisely this experience that has allowed us to build a complete and **multifunctional system** that offers in a single solution well-known functions as well as other features that represent true innovation.
- **GIOTTO CLASS** is a breast tomosynthesis device that implements several **innovative 3D solutions**.
- It is designed with original leading-edge technologies that guarantee superior clinical results while using low dose.
- In addition to **TOMOSYNTHESIS**, GIOTTO CLASS offers a multitude of diagnostic solutions such as **biopsy with tomosynthesis images with the patient in an upright or prone position**.

Giotto Class
TOMOSYNTHESIS



Digital mammography hardly revealed a parenchimal distorsion not clearly identified with the magnification.



The same breast analyzed by Tomosynthesis, gives an improvement in detection and in lesion's characterization.

Step & Shoot

- Tomosynthesis takes place by moving the X-ray tube, but stopping it at each exposure, thereby allowing exposure while the tube is stationary; the result is an image that is completely devoid of blurring and has sharper outlines.

Iterative Reconstruction Software

- This dedicated software for tomosynthesis was designed to produce images with the least number of artifacts, to be extremely fast and accurate in reconstruction, and to achieve a dramatic dose reduction.
  It is versatile and allows the application of geometries and angles to optimize the reconstuction of tomosynthetic images.

No Binning

- For your tomosynthesis you use the amorphous selenium detector at maximum resolution, reading each pixel of 85 µm, without binning, because the binning gives a loss of resolution. We guarantee the best visualization of microcalcifications and structures.

Tomosynthesis with 30°

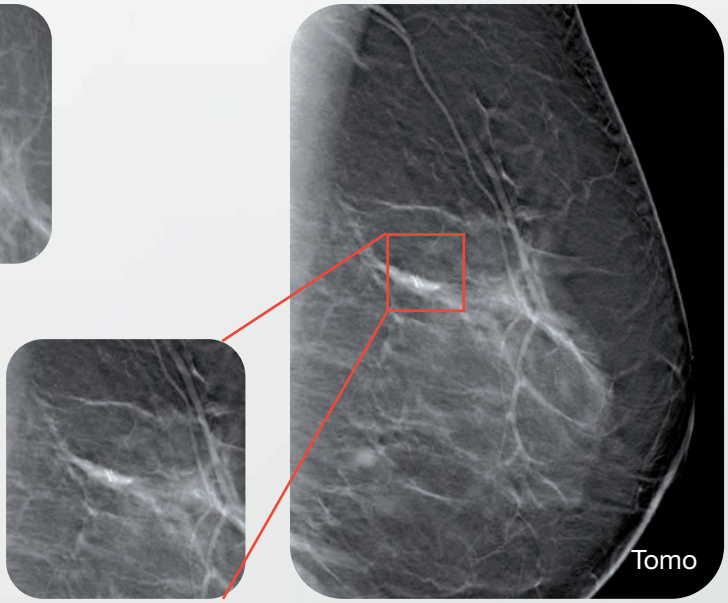
- Optimizes the slice sensitivity profile of 3D information with a rapid scan.

Only 11 exposures

- This makes it possible to achieve, for every single exposure, a high signal-to-noise ratio, with a consequent increase in image quality. 11 exposures is a solution that gives you image quality and a high acquisition rate.

Technological solutions
that give you the highest clinical quality

2D mammogram. A suspicious cluster of microcalcifications is barely visible due to the superimposed structures.



Tomosynthesis considerably improves the visualization of microcalcifications in specific slices and increase the overall visibility.

G-VIEW Synthesized image from 3D to 2D

The new integrated **G-View** software allows the reconstruction of a standard mammography projection from the 3D Tomosynthesis images data set.

The **G-View** 2 image is generated without the need an extra 2D mammography exposure, so using the generated synthesized 2D image instead of the current 2D plus 3D image, it drastically reduces the dose exposure and compression time. You can review the G-View projections after Tomosynthesis exposure in just a few seconds, with a simple click.

Conventional 2D FFDM.

***G-View** 2D-reconstructed images from tomosynthesis.*

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TOMOSYNTHESIS

Never before seen ergonomics

- **Tomosynthesis and 2D at 360° in upright or tilted position.**
- **GIOTTO CLASS** takes advantage of the gravity effect to view retromammary tissue more easily. This exclusive feature is offered only by GIOTTO CLASS.
- All movements are automatic and programmable.

- Rapid and easy to use under all clinical investigation or screening conditions.
- Highest degree of comfort for the patient in every positions. Due to the unit's dedicated design and adjustable inclination, the patient can rest comfortably on it, thereby encouraging muscle relaxation.
- The **GIOTTO CLASS** has a shifting paddle for greater ease, speed and comfort.
- Inclination is possible in every direction, even towards the patient, thereby facilitating the patient's positioning and comfort.
- **GIOTTO CLASS** offers you superior versatility and ergonomics to achieve the best possible results in every case.

Never before seen versatility

GIOTTO CLASS can be **transformed**, by **simply and quickly** moving of inclination, **into a dedicated unit for biopsies** performed with **Tomosynthesis** with the patient in a **prone or upright position**.

You will have a one-of-a-kind instrument for **successfully resolving all of your imaging demands.**

The conversion to prone unit is quick and easy.

Integrated steps for easy access of the patient to the biopsy table.

Thanks to the four wheels, the biopsy table can be quickly positioned and the breast centered ready to start the biopsy procedure.

- **CONTROL PANELS:**
  That are easily reached by the operator, located on both sides of the unit and the X-ray tube.These controls enable all movements or activation of the programmed sequence.

- **TOUCHSCREEN DISPLAYS:**
  Located on both sides of the compressor's base.
  This allows displays to be easily consulted by the operator at all times.

- **DATA SHOWN:**
  Compressor force, compressed breast thickness, and rotation and inclination of the tube / detector, biopsy data.

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TOMOSYNTHESIS

Giotto Class offers you a superior solution for all of imaging challenges

- It is possible to work in **Tomo, Stereo, or Combined mode.**
- The prone position gives you complete confidence in achieving the **best biopsy results with the highest degree of comfort** for the patient.
- The operator has **maximum accessibility** to the breast and **large well-lit work area**.
- **RAFFAELLO** is a fast and intuitive software.
- **GIOTTO CLASS** is compatible with every biopsy system on the market and provides.
- 360° biopsy access with lateral and cranial caudal approaches.
- Mobile wheel-mounted AWS that can be moved to the operating area for maximum visibility and accessibility to the displays for the operators.


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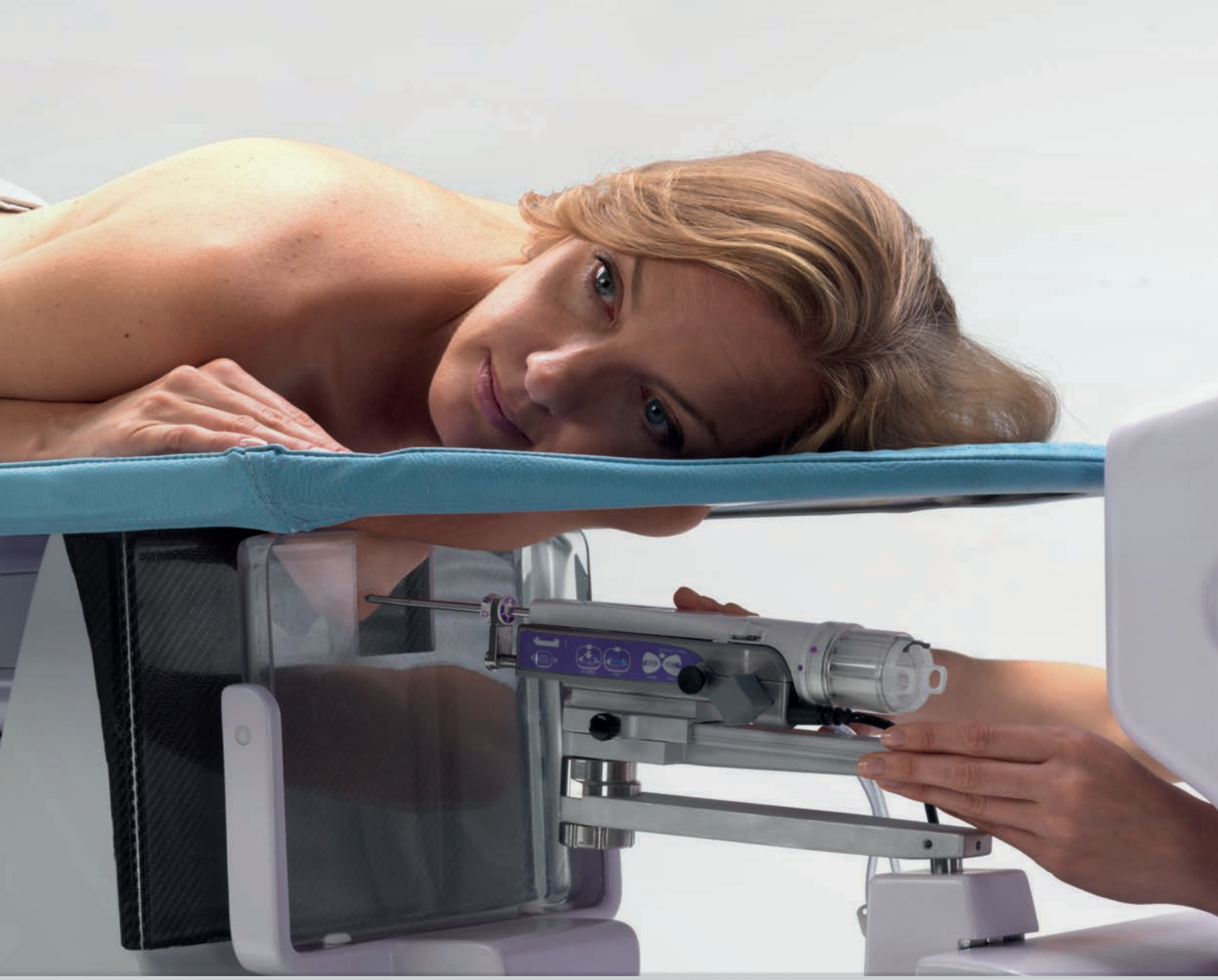

Stereo, Tomo or Combined Biopsy

- Interchangeable guides for compatibility with all types of biopsy drivers
- Motorized and/or manual compression system with handles
- Touchscreen control panel on both sides of the compression paddle and/or on the AWS station

Accessory items:

- Compressor 24 x 30 with 7 x 7 cm window
- Compressor 10 x 10 for side access
- Spacer for lesions near the table or for side access
- Shifting padle for the most difficoult positionings

Dual Energy

- Contrast-Enhanced Digital Mammography (CEDM) is a new breast imaging technique that employs digital mammography with dual-energy technique in combination with an injection of iodized contrast medium.
- GIOTTO CLASS is designed for performing dual-energy examinations (digital mammography with a contrast medium).
- The examination is performed by carrying out a traditional 2D positioning; in a very short time and with a single compression, two images are acquired, one low-energy and the other high-energy, using the iodized contrast medium. The image subtraction software processes the two projections and quickly and accurately generates a clinical image to reveal tumor angiogenesis using an alternative method to magnetic resonance of the breast with contrast medium.

Details that make the difference

Giotto Class

- **AWS**, **acquisition workstation**, that is **extremely intuitive** for the operator.

  The AWS is equipped with a **clinical screen** for displaying the images and a second **versatile touchscreen** on which all the unit's parameters can be easily checked and managed.

  The **MOBILE AWS** is mounted on wheels, which allows it to be placed always in the most convenient position depending on the procedure.

360° breast accessibility

Prone Biopsy Table

- The biopsy table can be either connected to the mains or used with batteries
- Vertical range of 800 mm
- Motorized adjustment of the backrest from 45° to the horizontal position in order to make pre- and post-examination phases easier or backrest reversed for parking position
- Remote control to remotely adjust both the upright movement and the backrest position
- Three spotlights with adjustable intensity
- Largest breast adjustable aperture with a diameter of 250 mm, movable to 100 mm adjustable in all directions
- Side anti-fall protection guard rails
- Side anti-fall protection guards
- Pairs of wheels which can be braked separately for safety purposes during the examination
- Extension supports for non-standard patients
- Comfortable left and right steps for the patient

- Biopsy window up to 7 x 7 cm
- Guaranteed accuracy: +/- 1 mm on the 3 axes, X, Y, and Z
- Biopsy unit weight less than 3.5 kg
- Axis X: motorized, 260 mm
- Axis Y: motorized, 80 mm
- Axis Z: motorized or manual, 255 mm

- Needle positioning accuracy: +/- 1 mm in x, y and z
- Stereotactic inclination: +/- 15°
- Digital detector area: up to 15 cm x 30 cm in biopsy mode
- Useful area for sampling: up to 7 cm in Y, from 8 cm in X
- Sampling angle: 6° fixed in Y, variable in X from 0° to +/-90°

IMSGIOTTO develops, manufactures and markets advanced technology systems for the mammography imaging

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