



PMA100 – FD+

PAYAMED Digital Mammography System

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ELECTRONIC INDUSTRIES

CE
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Women's health

Family peace

Society vitality



Payamed Company is the first designer and manufacturer of mammography systems in Iran and the Middle East with more than 20 years of experience, which has become a well-known and leading company in the field of production and supply of medical imaging equipment by developing and employing the most advanced relevant technology.

Breast cancer is the most commonly diagnosed cancer in women worldwide and the leading cause of cancer death in them. Regular mammographic screening significantly reduces mortality from breast cancer. The effectiveness and success of screening and diagnostic mammography, however, depends on **consistent production of high-quality images**. It is widely known that improving image quality in mammography can improve breast cancer detection. As mammography screening entails the examination of thousands of healthy women, **keeping dose as low as possible** is extremely important. At the same time, the **patient comfort** plays an important role in the quality of mammography and final images.

As women's health and comfort are the main concerns to us, we have considered these three key parameters as the foundation for designing and manufacturing the mammography system, PMA100-FD+, and we never stop looking for new ways to improve and optimize our breast imaging technology.



Image High Quality

Every component – from tube to detector to processing algorithms – contributes to excellent image quality. Applying the most advanced image receiving and processing algorithms, automatic optimization of images by software and applying advanced x-ray tubes with Tungsten anode and Silver/Rhodium filter, lead to high-quality images with the most details and the least amount of noise.

Patient Low Dose

PMA100-FD+ is the result of the 20-year experience and technical knowledge of Payamed's engineers and designers. PMA100-FD+ employs a FDA-certified flat panel detector with optimum pixel size and high DQE, which generates high-resolution images while applying low dose levels. This system controls the proper exposure conditions automatically depending on the breast tissue and optimizes the patient dose by using the advanced filtration and intelligent AEC capability.

Patient and User Comfort

The comfort of user and patient has been considered in the design of PMA100-FD+. A face shield is designed to simplify positioning. In addition, patients can rest their faces comfortably on the shield, which minimizes movement and motion artifacts. The compression paddles are designed with soft edges and optimized for breast shape.

The device is also equipped with an automatic post-exposure compression release system to minimize the time when the breast is under pressure. Using simple symbols and processes and the access to control panels from both sides of the device facilitate working for users. Using anatomic memories in manual exposure condition setting, remove the need for setting conditions by the user.



PMA100-FD+ at a glance

Advanced X-ray Tube

- Small focal spots, 0.1 and 0.3 mm
- Tungsten anode
- Silver/Rhodium filter

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Control Panel

- Easy to use
- Streamlining the workflow
- Dual control panels

3

Compression System

- Soft-edged paddles and optimized for breast shape
- Automatic post-exposure compression release system to minimize the time when the breast is under pressure

Flat Panel Detector

- High DQE
- Optimum pixel size
- Generating high-resolution images in detail

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Grid

- Anti-scatter for mammography
- Made of high-transparent materials

6

Generator

- High frequency, accurate and stable output
- Powerful microprocessor to control all exposure parameters

7

Compression Control Pedals

- Located on both sides of the device for easier user access

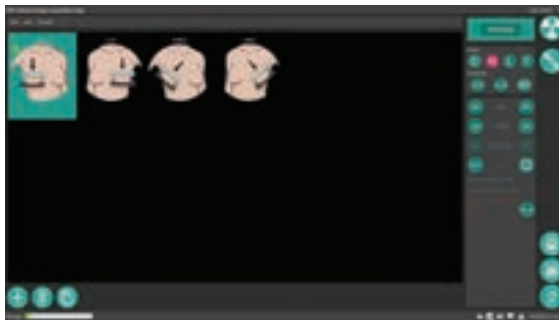


Acquisition Workstation and Software

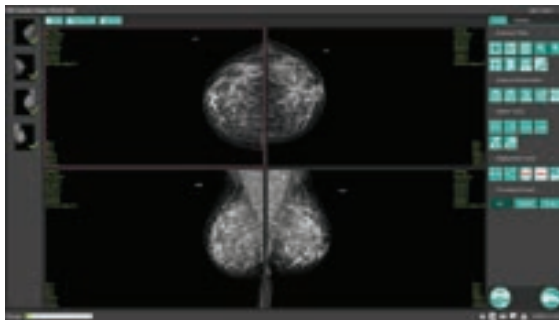
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3



Easy and fast just in **3** steps

- Fast patient registration and search according to Date, ID and Name
- Defining new examination for previous patients
- Quick selection of views and exposure conditions
- Capable of splitting the screen to visualize 1, 2 or 4 images
- Containing necessary markers, note-taking and annotation tools
- Advanced image process using intelligent algorithms
- Recording the profile of user or radiologist on the image



Other Special Functions

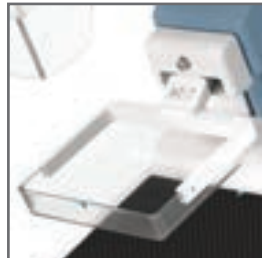
- Automatic positioning of the device's arm in OBL, CC and LAT degrees
- Automatic compression stop
- Automatic intelligent control of exposure conditions according to breast type and tissue
- Control of exposure numbers of x-ray tube
- X-ray tube overload protection



Compression Paddles

18 × 24cm

Used for compression of small and medium-sized breasts



24 × 30cm

Used for compression of large breasts

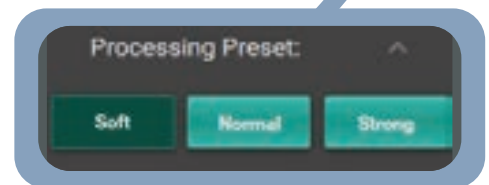
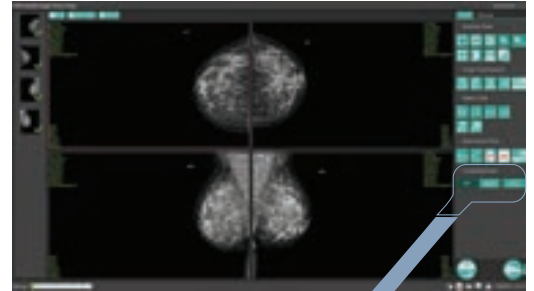


Local

Used for local compression of breast for more accurate investigation of suspicious tissue.



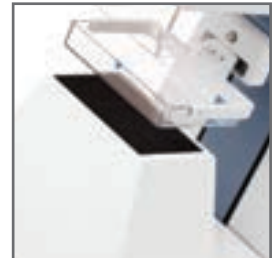
Unique Contrast Optimization



3 different modes for image contrast optimization (Soft/Normal/strong) according to the radiologist preference

Magnification Platform

It allows the acquisition of magnified images of the region of interest to evaluate and count micro-calcifications and its extension as well as the assessment of borders and tissue structures of a suspicious area or a mass.



Mammography QC kit (Option)

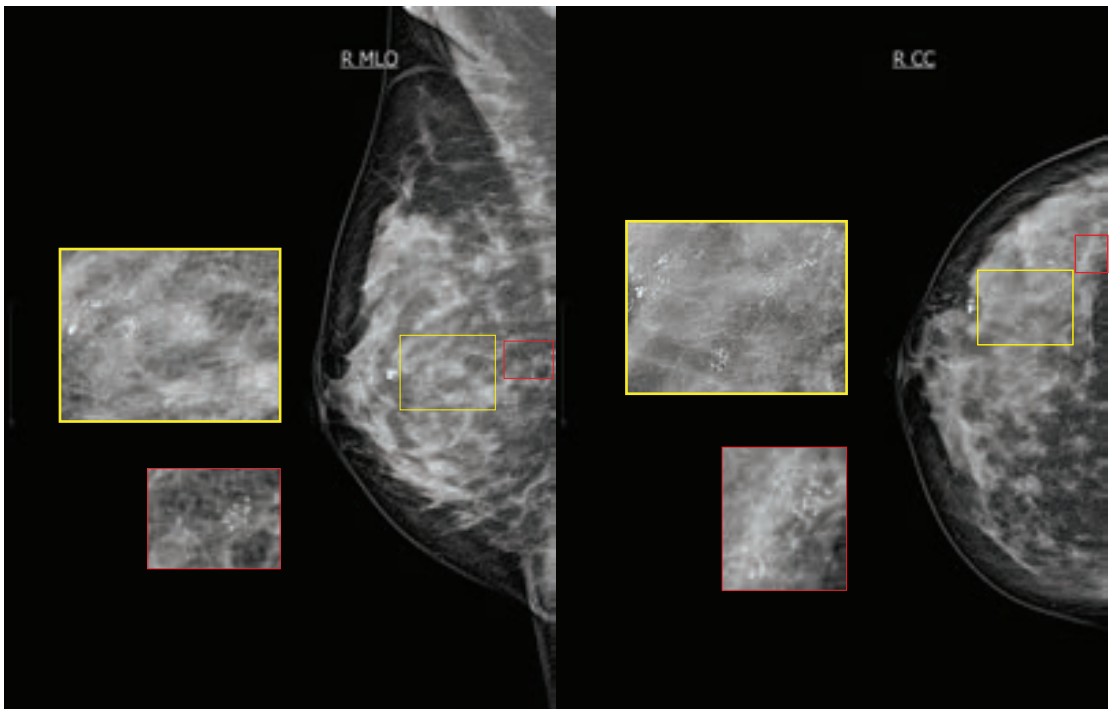
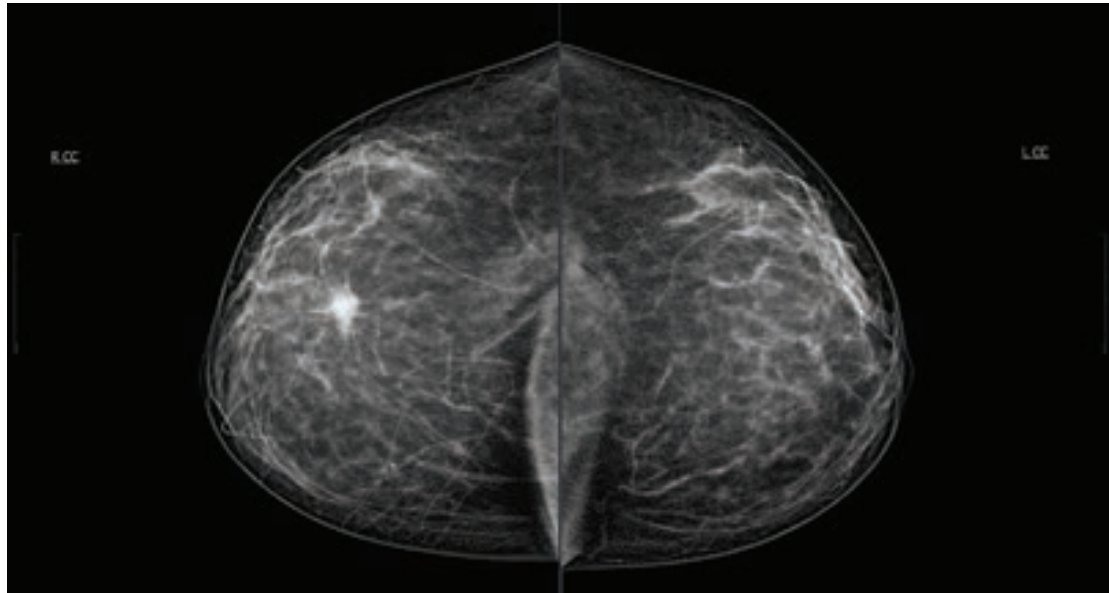
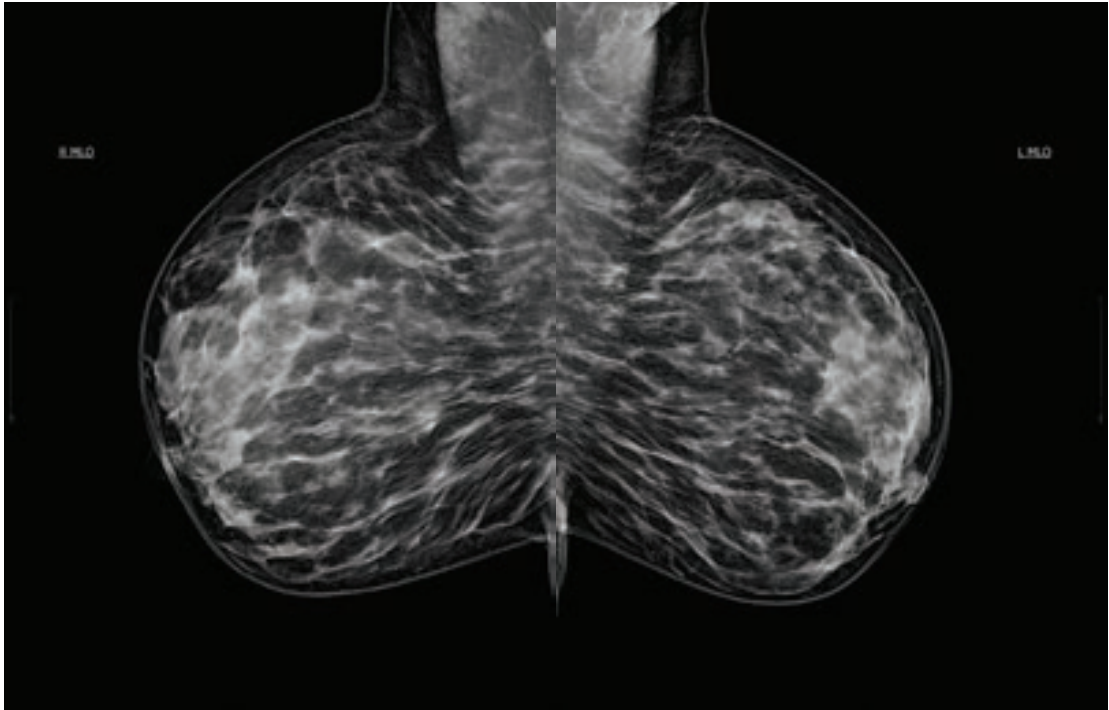
Used for conducting the mammography QC program. This program ensures the production of satisfactory high-quality images.





Radiologist Workstation and Software (Option)

- Two medical high-resolution monitors to display four different modes L/R and CC/MLO (capable of displaying 8 images simultaneously)
- Displaying different views simultaneously and comparing images on two separate monitors
- Defining several different customized flow-works regarding the radiologist's preference
- Printing DICOM images
- More detailed localized examination of the breast by blurring other parts of the tissue
- Previous images retrieval and comparing new and old ones
- Image brightness and contrast adjustment
- Providing the necessary and practical tools for cropping, rotating, zooming, mirroring images and measuring distances and angles
- Magnifying glass
- Capability of adding standard and necessary tags on images



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