

## Fairy DR +

### Full Field Digital Mammography System

Upgradable To 3D Tomosynthesis  
at Site and **Biopsy** Compatible



Quality, System and Safety Certifications



# ABOUT US

Allengers since 1987, is revolutionizing the medical world with its offering of a wide range of high quality, cost effective state of the art medical equipment from its headquarters at Chandigarh.

Thanks to the trust and confidence of our valued customers, Allengers has emerged as a fine, world class company and a major force to reckon with in the medical equipment field.

## MANUFACTURING UNITS

One of the India's largest manufacturing facilities of medical devices - Spread over an area of 1,00,000 Sq. Mtrs.

## GLOBAL PRESENCE

Presently, being exported to more than 100 countries in the continents of Africa, Asia, South America, Europe, Middle East and CIS

Installation Base  
**80000+**  
Worldwide

## DOMESTIC PRESENCE

✓ **26** branches with direct sales and services operations

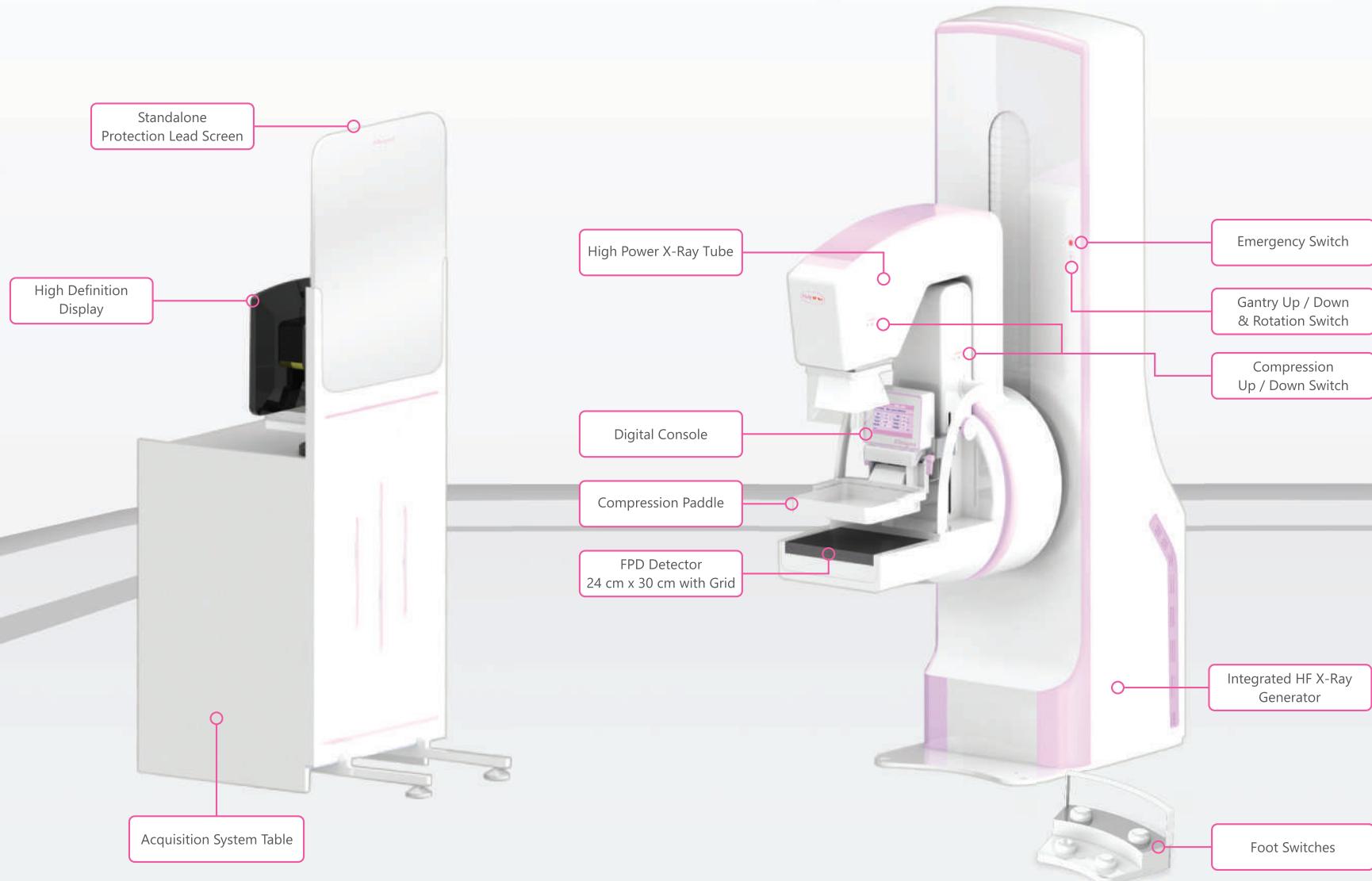
✓ **44** Exclusive and non-exclusive Channel Partners



- Corp. Off.
- Works
- Zonal Offices
- Sales / Service Branches
- Channel Partners Sales
- Channel Partners Service
- Resident Engineer Service
- Resident Engineer Sales

# Fairy DR +

Huge advancements have taken place in last two decades in digital mammography. Allengers with years of expertise in imaging solutions, coupled with innovative research has resulted in providing a high end digital mammography machine for ensuring better health care for women.



# FULLY INTEGRATED FULL - FIELD DIGITAL MAMMOGRAPHY

Fully motorized movements with ergonomically placed motion controls

8 KW High Frequency X-Ray generator with KV range from 20 - 49 and mAs range from 1 to 700

Dedicated mammography Synergy Acquisition software

Dedicated mammo 2D diagnostic workstation

## Fairy DR +

### ADVANCED FEATURES

- Patient Entry : Manual / MWL / Emergency.
- Examination : Manual / APR / SMART AEC.
- Detector : 24 cm x 30 cm / High DQE / High spatial resolution.
- Generator Controls : KV / mAs / Filament / Filters.
- Movements :  $\pm 180^\circ$  / Motorized / Preset.
- Automatic filter selection.
- Auto release of compression after exposure.
- Image Processing : View specific - dynamic range scaling.
- Advanced DICOM printing and hanging protocols.
- Export: CD / DVD / DICOM printer / DICOM PACS / DICOM workstation.
- Compression : 24 cm x 30 cm / 18 cm x 24 cm / Square spot compression / straight round spot compression paddles.
- Magnification Stands : 1.8 x.
- Monitors : 1MP for acquisition and 1MP + 3MP monitors for reporting workstation.

### OPTIONAL FEATURES

- 3D Tomosynthesis.
- CAD.
- AI CAD.
- Mammo dedicated keyboard.
- Digital stereotactic biopsy compatible.
- Breast density calculation software.
- Contrast-Enhanced Digital Mammography (CEDM)
- Multiple collimation selection :
  - 24 cm x 30 cm, 18 cm x 24 cm, 12 cm x 18 cm.
- 1MP + 5MP monitors for reporting workstation.
- 1MP + Dual 5MP monitors for reporting workstation.
- 1MP + 12MP monitors for reporting workstation.
- Magnification stands : 1.5x.
- Round spot compression paddle.
- Sliding compression paddle 18 cm x 24 cm.
- Automatic collimation selection as per inserted compression paddle.



## FEATURES

- **High Quality FPD** : 24 cm x 30 cm Flat Panel Detector with high DQE, spatial resolution and dynamic range.
- **Instant Image Display** : Instant image display on high resolution monitor. Time to acquire and display image is less than 10 seconds.
- **Patient Comfort** : The exposure time to achieve good image quality in FFDM is very less and hence the compression time is also less. The compression is auto released after exposure.

- **Smart AEC** : Advanced breast density detection algorithm to achieve accurate exposure parameters.
- **Advanced Processing** : Improved processing which achieves contrast between dense and non-dense breast tissue in case of heterogeneously dense and extremely dense breast resulting in easy detection of mass, asymmetrical distortion or abnormal nodules.
- **Upgradable to 3D Tomosynthesis at site**

# COMPRESSION

Compression paddle is designed to minimize patient pain and discomfort perception. Allengers Fairy DR + provides a wide range of compression paddles.



Compression Paddle  
24 cm x 30 cm



Compression Paddle  
18 cm x 24 cm

## SQUARE SPOT COMPRESSION PADDLES

The square spot compression paddle to be used with magnification stand is provided with the machine.



## STRAIGHT ROUND SPOT COMPRESSION PADDLES

The straight round spot compression paddle is used without the magnification stand.



## MAGNIFICATION STAND



1.5 x (optional)



1.8 x (standard)

# SYNERGY ACQUISITION SOFTWARE

## ADVANTAGES

In house designed and developed mammography Synergy Acquisition software provides quick and hassle free 2D and 3D (optional) image acquisition with minimal workflow.

- Convenient patient entry (MWL / Manual / Emergency).
- Easy procedure selection with positioning guide.
- Software controlled generator parameter (KV / mAs, Filter, Focal Spot).
- Single click mode switching (Manual / AEC / APR).
- Advanced post processing and annotation features for 2D and 3D (optional) imaging.
- Image export - CD / DVD, DICOM send and DICOM print.
- Auto detector calibration to maintain the homogeneity of image.



## ADVANCED PRINTING MODULE

(Supports variety of printers)

- Multiple printer configuration.
- Supports variety of printers (Paper or DICOM).
- Auto mammo view adjustment.
- Ease of operation.
- Multiple mammo layouts.
- Customized layouts.
- Easy configuration support.

## DEDICATED MAMMOGRAPHY 2D/3D WORKSTATION (Optional)

1 Monitor : 1MP



1 Monitors : 3MP

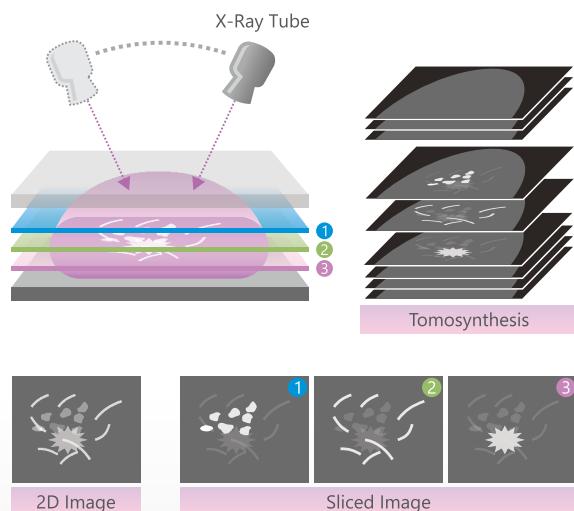


# BREAST TOMOSYNTHESIS (Optional)

Breast Tomosynthesis is an advanced form of mammography to detect breast cancer in its early stage. Tomosynthesis is preferable over 2D mammogram to better diagnose the cancer which is hidden due to overlapped breast structure.

In breast tomosynthesis the X-Ray tube creates an arc and captures low dose images in series. These images are taken from different angles and thereafter all the images are reconstructed and slices of specific thickness are created from those images which shows the internal structures very clearly.

It is better to diagnose the breast cancer and easy to identify the lesion which is hidden due to overlapped breast structures. We provide 3 different modes of Tomosynthesis i.e. Standard Mode, High Definition Mode and Ultra High Definition Mode.



	ST Mode	HT Mode	UHT Mode	WAT Mode (optional)
Rotation Angle	$-7.5^{\circ}$ to $+7.5^{\circ}$	$-15^{\circ}$ to $+15^{\circ}$	$-15^{\circ}$ to $+15^{\circ}$	$-27^{\circ}$ to $+27^{\circ}$
Projection Angle	$1^{\circ}$	$2^{\circ}$	$1^{\circ}$	$3^{\circ}$
Scan Time	5 Seconds	10 Seconds	10 Seconds	18 Seconds



## Standard Mode (ST)

- Acquisition angle  $\pm 7.5^{\circ}$
- Exposure at every degree
- The small angular range for fast image acquisition
- Relatively low dose to the patient



## High Definition Mode (HT)

- Acquisition angle  $\pm 15^{\circ}$
- Exposure at every  $2^{\circ}$
- Large area coverage
- The large angular range and fast image acquisition



## Ultra High Definition Mode (UHT)

- Acquisition angle  $\pm 15^{\circ}$
- Exposure at every degree
- Large area coverage
- The large angular range and better diagnostic value



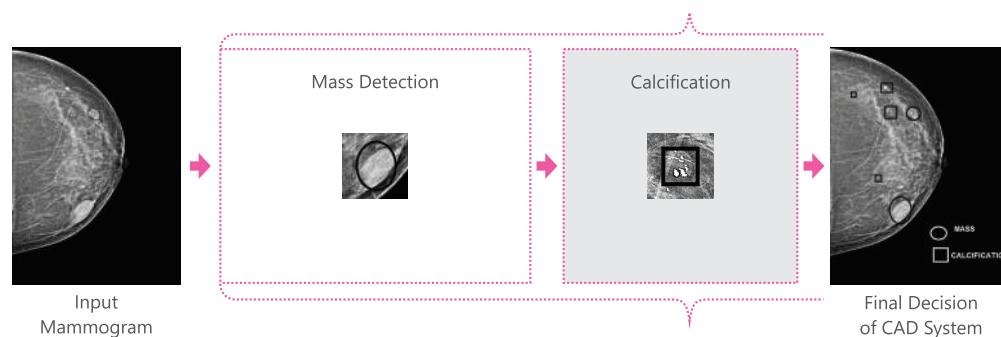
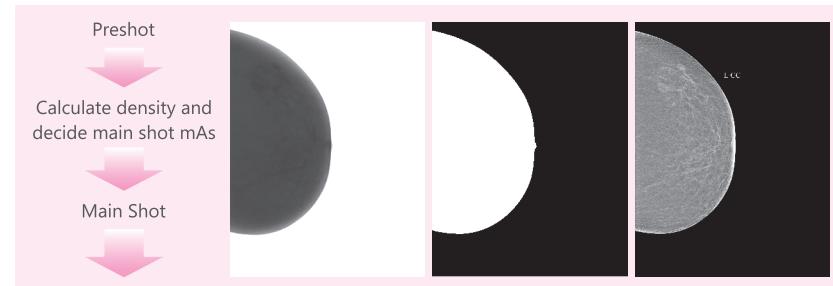
## Wide Angle Tomo Mode (WAT)

- Acquisition angle  $\pm 27^{\circ}$
- Exposure at every  $3^{\circ}$
- Extra large area coverage

## SMART AEC

Smart AEC provides better imaging by giving appropriate dose to the patient. Smart AEC is implemented in dual shot where pre-shot captures the image on low dose and algorithm calculates and decides the dose for the main shot. In this way it smartly gives the low and required dose to the patient and gives good quality image.

- It smartly sense the mammary glands in breast and calculates parameters accordingly whereas in conventional sensor based AEC, manual adjustment is needed.
- It provides hassle free and ease of operation.
- Provides better image by giving appropriate dose to the patient.
- It enables more accurate results.

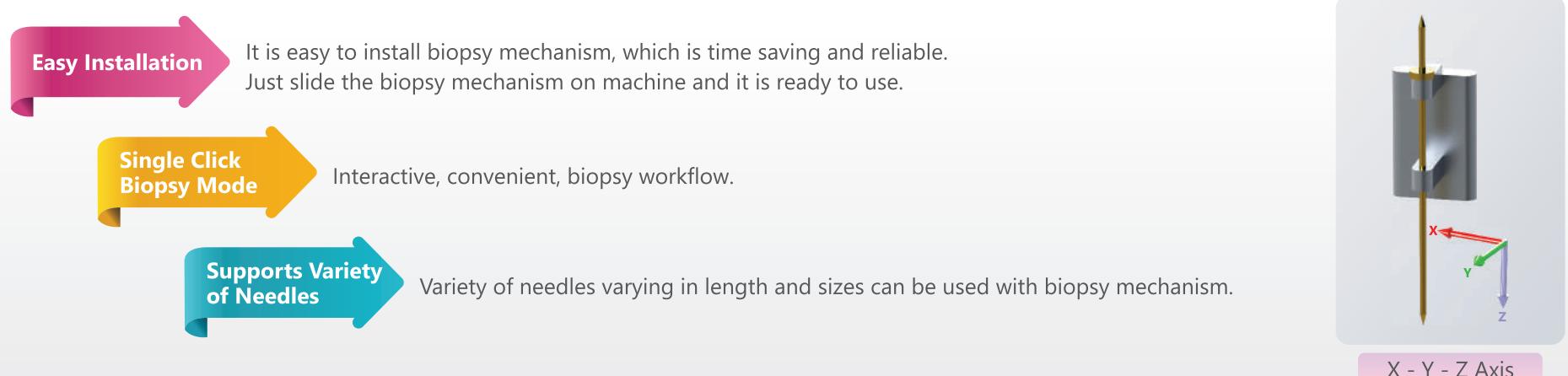


## COMPUTER AIDED DETECTION (CAD) - Optional

Computer Aided Detection (CAD) is designed for computerized second read of mammography images to suggest radiologists that a suspicious area require further investigation. It is intended to identify suspicious areas for their better localization. The diagnosis is always performed only by the radiologist after his/her in depth analysis of the mammogram. The system can assist the radiologist by identifying regions that may warrant a more meticulous review.

## ADVANCED BIOPSY SYSTEM - Optional

Breast biopsy is done after a suspicious lesion is discovered after a screening (Normal mammogram or Tomosynthesis). In order to get tissue for pathological examination. Allengers provides hassle free mechanism for biopsy which is easy, convenient and accurate.



## GANTRY - MOTORIZED MOVEMENTS

Display	Digital display of angulations degree on display monitor
Motorized Rotation-Angulation Movement	±180°
Source to Image Distance	65 cm
Motorized Vertical Travel	80 cm

## MAJOR TECHNICAL SPECIFICATIONS\*

MODEL	MAM VENUS+
SERIES	Fairy DR +
X-Ray Generator	High Frequency (50 KHz) X-Ray generator
Max. Power	8 KW
Max. mA	Upto 220 mA
mAs Range	1 - 700 mAs
KV Range	20 KV to 49 KV
X-Ray Tube	Dual focus rotating anode X-Ray tube [ Small (0.1mm) and Large(0.3mm) ]
Power Requirement	Single Phase, 230 V AC ±10%, 50 / 60 Hz, 6.25 KVA, Independent earthing

\* These are broader specifications with highest certifications. The final product will be dispatched as per agreed terms in quotation.



**ASSURE Protocols**: All X-Ray based equipments involve some potential risk of radiation exposure. We, at Allengers understand your concerns. Allengers is fully committed towards radiation safety and care of its customers.

Allengers has introduced ASSURE Protocols, which is a step in the direction of delivering best possible image quality at lowest possible dose. Allengers products with ASSURE Protocols are carefully crafted to protect users and patients from unwanted leakages in the X-Ray equipment.

**ASSURE version range mentioned is based upon lowest and highest configurations of safety standard protocols and is configuration dependant, which may vary for desired combinations.**

FOR ANY ENQUIRIES CONTACT US

020 8146 6839 | +44 75 2990 2750

[info@euronoxxmedical.com](mailto:info@euronoxxmedical.com)

[www.euronoxxmedical.com](http://www.euronoxxmedical.com)

35 Berkeley Square, Mayfair, London, W1J 5BF

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