

Planmed Clarity™ 3D

Key Facts

- Digital mammography system for 2D imaging, diagnostic imaging and Digital Breast Tomosynthesis (DBT)
- Large 24 x 30 cm amorphous silicon detector
- Compact and ultra-slim Bucky design
- Intuitive Planmed Clarity™ Flow touch screens
- Side Access™ patient positioning
- Full-Field Flex-AEC™ with paddle recognition and auto-collimation
- Optional patented MaxView Breast Positioning System
- Optional Planmed Clarity Guide stereotactic biopsy system
- Optional Planmed S2D™ synthetic 2D images created from tomosynthesis

Planmed Clarity™ Full Field Digital Detector

- TFT/PIN Photodiode amorphous silicon detector with direct deposit CsI scintillator
- 83 µm pixel size
- Spatial resolution for 2D: 6,024 lp/mm
- Spatial resolution for DBT: 5,26 lp/mm (95 µm voxel size)
- 2,816 x 3,584 pixel matrix
- Active detector area 232 mm x 297 mm
- MTF: > 90% @ 1 lp/mm (1x1), > 40% @ 5 lp/mm (1x1)
- DQE: 68% @ 1 lp/mm, 42% @ 5 lp/mm
- 16 bit depth

Digital Breast Tomosynthesis (DBT)

- Patented Continuous Sync-and-Shoot™ tomosynthesis imaging sequence
- Utilizes our TomoMarker™ technology for high precision tomosynthesis images
- Iterative reconstruction algorithm
- 30° tomosynthesis angle
- 15 projection images
- 95 or 140 µm voxel size
- 1 mm slice thickness

DBT Acquisition Workstation (DBT AWS)

- High performance Planmed Clarity™ 3D acquisition workstation with Planmed Clarity™ Manager software
- Planmed Clarity 3D iterative reconstruction and image post processing
- Dedicated Planmed Clarity™ 2D image processing with adjustable post processing parameters
- Integrated to optional motorized Planmed Wave™ acquisition station
- 2.1 megapixel color monitor. Multiple optional monitors available, please see acquisition workstation specifications.

Image post processing

- 2D imaging uses the Planmed CORE post processing algorithm
- Possibility to adjust in 2D imaging:
 - Contrast
 - Sharpness
 - Brightness
 - Skin line visibility
 - Granularity (parenchyma appearance)
- Dedicated implant post processing mode
- Possibility to adjust the contrast in DBT imaging

X-ray Tube

- High Speed Bi-angular, rotating anode
- Tungsten (W) target
- Anode rotation speed 9700 rpm
- 0.1/0.3 mm focal spot,
- Beryllium window of 0.63 mm
- Dual motorized filters: 60 µm Rh, 75 µm Ag with automatic change
- Automatic and manual collimation of FOV
- Automatic paddle recognition to adjust FOV in the middle and in corners
- Air and oil cooled
- Anode heat capacity 300 000 HU. Maximum anode heat dissipation rate 60 kHU/min
- Tubehead heat capacity 700 kHU
- Tube protected by microprocessor controlled continuous monitoring of the tube load

X-ray Generator

- High frequency 100 kHz constant potential microprocessor controlled 4,5 kW generator

Anode current:

large focus maximum 120 mA

small focus maximum 42 mA

- mAs range: 5-600 mAs
- Anode voltage: 23-35 kV with 1 kV step
- 187 - 264 VAC, 50/60 Hz, 15 Amps, single phase
- Automatic line voltage compensation

Exposure Control Modes and Exposition times

- Anatomically adaptable Full-Field Flex-AEC™
- Full-Field Flex-AEC exploits the entire detector area
- Operation modes: AEC, kV-fixed AEC and manual mode
- Separate implant mode available
- Time from button down to preview: 6 seconds
- Time from button down to final processed image: 10 seconds
- Time from button down to ready-state: 13 seconds
- Tomosynthesis scan time: 13 seconds

Planmed Clarity™ Flow user interface

- Dual touch screen control panels, one on each side of the unit
- User interface adapts to the imaging mode and user preferences
- Controls the imaging mode, imaging values, unit movements

- Display of used exposure parameters kV, mAs as well as compression force and breast thickness
- Guides the user through system setup
- OneTouch™ workflow for fast screening
- PriorView™ to show prior images on the mammo unit
- On-screen guide to help user

C-Arm

- SID 65 cm
- Motorized, isocentric C-arm rotation with selectable reference projections for quick and easy operation
- C-arm angulation from -135° to +180°
- C-arm vertical travel from 81 – 138 cm
- Motorized telescopic column with two adjustable speeds
- Unique Side Access™ patient positioning provides extra space for patient access and improved patient positioning ergonomics
- Motorized beam collimation: continuously and automatically adjustable radiation field with LED imaging field illumination
- Ergonomic handle provide excellent support for the patient in all projections
- Curved chin guard for maximal patient comfort and ergonomics

Compression

- Motorized compression with selectable speed levels
- Patient-friendly degressive compression paddle movement
- Soft paddle for better patient comfort
- Fine-tuned compression adjustment either manually or with foot-controls
- Automatic or manual release of the compression after the exposure
- Paddle recognition and locking mechanism
- Quick and safety release

Bucky

- Easily attachable light-weight compact Bucky for 2D imaging
- Rounded corners for improved patient comfort and hygiene
- Minimal dead spaces between the detector active area and Bucky's edges
- Tailor-made special grid to further enhance contrast and resolution
- Microprocessor controlled precise grid movement
- 31 l/cm; 5:1 grid ratio (anti-scattered)
- Active detector area 232 mm x 297 mm

Equipment base

- Either free-standing, bolted or optional turnable base
- Elevated rear wheels increase stability
- Integrated color display for projection angle, compression force, breast thickness, traction distance, system status, notifications and alerts
- Dual trailing foot controls to operate compression, traction and vertical drive of the C-arm

General

- Compact size and lightweight
- Five selectable and changeable colors for top cover, handle and chin guard
- Standard color off-white RAL 9016 (upper part) and RAL 820-1 (lower part)

Optional Features

AWS monitors

- Monitor options: 3 megapixel: Barco Nio Color or Eizo RX360, 5 megapixel Totoku

MaxView™ Breast Positioning System

- Enables to achieve optimal breast tissue visibility in all routine mammography views.
- Integrated feature and design
- Integrated MaxView™ lower module and upper module with in/out control buttons for both sheets
- Graphical and digital display of traction distance on dual touch panels and base display
- Pulling velocity 3-5 mm/s
- Max pulling distance 50 mm
- Dedicated, radiolucent, clear plastic upper and lower sheets
- MaxView foot controls for driving both sheets simultaneously
- Safety release

Geometric Magnification

- Light-weight magnification platform with integrated abdomen shield for 2D imaging
- 1.6x or 1.8x magnification factors

Planned Wave™ acquisition station

- Technologist center for Planned Digital Mammography and DBT
- Housing for the acquisition workstation and isolation transformer
- Motorized vertical movement for excellent ergonomics
- Optional integrated radiation shielding glass 0.5 mm Pb eqv.

Shielding

- Planned radiation protection screen with 0.3 mm or 0.5mm Pb eqv.

Planned Envision™ and Planned Envision™ Pro Review Workstation

- Review workstation for Planned Digital Mammography and DBT
- High-resolution display
- Review workstation computer with GPU
- Customizable workflow for softcopy reading
- Optional Planned DigiPad™ short-cut panel

Planned ClarityGuide™ stereotactic biopsy system

- Light-weight biopsy unit
- Precision targeting with screen guidance

Configuration

Planned Clarity 3D Digital Breast Tomosynthesis x-ray unit	FED00867
Surface colour Peach	FED00870
Sunflower	FED00871
Orchidea	FED00874
Ocean	FED00873
Lime	FED00872
Digital receptor	FED00894
Clarity Bucky 24 x 30 cm	FED00876
Clarity Tomosynthesis platform	FED00880
Large 24 x 30 cm paddle	FED00899
Tomosynthesis 24 x 33 cm paddle	FED00883
Small 19 x 23 cm shifting paddle	FED00882
Free standing base for Clarity	FED00885
Transportation barrow handle without wheels	FED00585
Acquisition workstation PC with Clarity Manager software for 3D	FED00908
Acquisition workstation color display (2 MP)	FED01009
Tomosynthesis License	FED00938
Packing for Clarity	FED00929
Packing for acquisition workstation (AWS)	FED00320
User's manual	
Installation manual	
Technical manual	

Dimensions

