Selenia® Dimensions®
With Acquisition Workstation 5000

A flexible platform for the next dimension in breast imaging

At Hologic, our mission is to continually push the boundaries of imaging technology, giving you greater power to detect subtle breast tissue changes and ultimately enhance your ability to detect cancer.

The Selenia® Dimensions® system offers the exceptional digital images you have come to expect from Hologic, as well as a flexible platform designed to support the latest innovation in breast imaging: breast tomosynthesis. Our Selenia Dimensions breast tomosynthesis system is changing the paradigm in breast cancer screening by detecting cancer earlier than conventional mammography alone. In fact, screening with Hologic tomosynthesis increases cancer detection by 27% and increases invasive cancer detection by 40%.

In addition, studies show Hologic tomosynthesis reduces unnecessary callbacks by 20-40%.

The Selenia Dimensions with Acquisition Workstation (AWS) 5000 package offers a comprehensive package tailored to fit your unique workflow and budgetary needs.
Selenia® Dimensions® with AWS 5000 System Specifications

General Operating Conditions

Temperature Range ............................................ 20° C to 30° C
Maximum Rate of Temperature Change ........... <10° C/hr
Relative Humidity Range......................... 20% to 80% non-condensing

Standard Acquisition Workstation

CPU ..................................... Multi-Core Intel Based CPU
Memory.......................... 16 GB RAM (min)
Hard Drive ..................... 1.0 TB (min)
Storage Media .............. DVD +/- R/W
Image Display Technology .... 2.0 megapixel color LCD display
User Interface Display ......... 1.2 megapixel color LCD display
Operating System ............ Microsoft Windows 7/64, embedded
DICOM Services .... Worklist, Print, Storage, Storage Commitment, Query/Retrieve, Modality Performed Procedure Step6
IHE Profiles ................... Scheduled Workflow, Patient Information Reconciliation, Mammography Image
User Interface ...................... Keyboard, mouse, optional bar code scanner
Local Image Store Capacity ... Approximately 9,000 screening mammography studies; or 3,000 combined screening mammography and tomosynthesis studies6
Ergonomic Enhancements ...... Height-adjustable workstation 33.1 in to 44.6 in (84 cm to 114 cm)

Exposure Modes
Manual.............................. Operator selects all parameters
Auto-Time ....................... System selects mAs, operator selects filter and kV
Auto-kV ......................... System selects kV and mAs, operator selects filter
Auto-Filter ...................... System selects filter, kV and mAs

Integrated Radiation Shield
H x W .................................. 75.3 in x 32 in (191.3 cm x 81.3 cm)
Lead Equivalence............... 0.5 mm
Material.......................... Lead glass

Electrical Requirements
Input Line Voltage ............ 100/120/200/220/230/240 VAC
Input Current ................... 3.5 Amps maximum @ 100/120 VAC
.................................. 2.0 Amps maximum @ 200/220/230/240 VAC
Frequency ......................... 50/60 Hz

Digital Image Receptor

Type................................. TFT-based Direct Capture Technology
X-Ray Absorption Material .... Amorphous Selenium
Image Receptor Size .......... Single Plate 24 cm x 29 cm
Imaging Modes................. Conventional Mammography; Tomosynthesis6;
.................................. Combined Conventional Mammography and Tomosynthesis6
Screening Views ............... 18 cm x 24 cm nominal (2560 x 3328) at center, left and right detector locations; 24 cm x 29 cm (3328 x 4096) at center location
Diagnostic Views............. 18 cm x 24 cm nominal at center, left and right detector locations
Magnification Views .......... 18 cm x 24 cm nominal at center detector location
Pixel Size ......................... 0.070 mm
Limiting Spatial Resolution.... conventional mammography; 3.5 lp/mm, tomosynthesis6

Dynamic Range ................... Linear response over 400:1 in X-ray exposure
Output Image..................... 14 bit image data
Saturation ...................... X-ray exposure level at which image pixels are saturated is not less than 500 mR
Anti-scatter Grid .............. HTC™ High Transmission Cellular Grid with Auto-Retract for geometric magnification views and tomosynthesis6

Storage Environment
Storage Temperature Range ... 10° C to 30° C
Maximum Rate of Temperature Change ........ <10° C/hour
Relative Humidity Range .... 10% to 80% non-condensing
### X-ray Gantry

**Generator**
- **Type**: Constant potential high frequency inverter type
- **Rating**: 7.0 kW, maximum (isowatt), 200 mA at 35kV
- **Electrical Power Capacity**: 9.0 kW maximum
- **kV Range**: 20 kV to 49 kV in 1 kV increments
- **mA Range**: 200 mA, large focal spot; 10 mA to 50 mA, small focal spot

**X-ray Tube**
- **Anode Type**: Tungsten, rotating
- **Anode Design**: Bi-angular
- **Anode Speed**: High speed (9500 RPM)
- **Target-Tube Angle**: 16° (Large focal spot), 10° (Small focal spot)
- **Heat Capacity**: 300,000 HU (222 kJoules)
- **Focal Spot Size**: 0.1 mm (small), 0.3 mm (large)
- **Filtration**: 0.050 mm Rhodium (Rh); 0.050 mm Silver (Ag); 0.70 mm Aluminum (Al)
- **Port**: Beryllium

**Electrical Requirements**
- **Input Line Voltage**: 200/208/220/230/240 VAC nominal ±10%
- **Input Current**: 3.5 Amps standby, 65 Amps for 5 seconds, at 208 VAC (40A input breaker rating) maximum
- **Frequency**: 50/60 Hz ± 5%
- **Number of Phases**: Single, permanently wired

### C-Arm Assembly (Biopsy-Ready)
- **Vertical Travel**: 27.8 in to 56.0 in (71 cm to 142 cm) motorized
- **Rotation**: +195° to – 155°, Conventional mammography
- **SID**: 70 cm
- **Patient Face Shield**: Removable, retractable

**Compression Modes (Operator Selectable)**
- **Pre-compression**: 15.7 lbs to 30 lbs (70 to 134 Newtons [N]), motorized
- **Full Compression**: 20 lbs to 40 lbs (89 to 178 N), motorized
- **Dual Compression**: First activation provides pre-compression force; incremental increase of compression with each subsequent activation up to full compression
- **Manual Compression**: 67.4 lbs (300 N) maximum
- **Compression Tilt**: Standard, FAST; user-selectable

**Magnification**
- **Magnification Factor**: 1.5x; 1.8x

**Collimation System**
- **Collimation Mode**: Fully automatic or user-selectable
- **Predefined Collimation Size Settings**:
  - 24 cm x 29 cm
  - 18 cm x 29 cm
  - 18 cm x 24 cm
  - 15 cm x 15 cm
  - 10 cm x 10 cm
  - 7.5 cm x 8.0 cm

### Components

#### Standard Components
- **Screening Compression**
  - Paddles: 24 cm x 29 cm, 18 cm x 24 cm
- **Diagnostic Compression**
  - Paddles: 10 cm contact paddle
- **Magnification Compression**
  - Paddles: 10 cm magnification paddle
- **Accessories**
  - Magnification platform
  - Dual-function footswitches (2)
- **Manuals**
  - User, Service and Quality Control

#### System Options
- **Screening Compression**
  - Paddles: Small breast paddle
- **Diagnostic Compression**
  - Paddles: 7.5 cm spot contact paddle, 15 cm contact paddle
- **Magnification Compression**
  - Paddles: 7.5 cm spot magnification paddle, 15 cm magnification paddle

#### System Options Continued
- **Needle Localization**
  - Paddles: 10 cm open localization paddle, 15 cm open localization paddle, 10 cm perforated localization paddle, 15 cm perforated localization paddle, 10 cm open localization paddle for magnification
- **Accessories**
  - Localization crosshair assemblies (contact, magnification)
- **Needle Localization Kit**
  - 10 cm open localization paddle, 10 cm open localization paddle for magnification, Localization crosshair assemblies
- **Expanded Compression**
  - Paddle Kit: Small breast paddle, 7.5 cm spot contact paddle, 7.5 cm spot magnification paddle
- **Tomosynthesis**
  - Tomosynthesis Modality Imaging License
  - Tomosynthesis retractable face shield
  - Tomosynthesis Image Review License (single workstation)
- **Workflow Enhancements**
  - Bi-Directional Communications License
  - Modality Performed Procedure Step (MPPS) License
  - Bar code scanner
- **Image Display Options**
  - 2 megapixel grayscale medical grade LCD display
  - 3 megapixel grayscale medical grade LCD display
- **Upright Biopsy**
  - Affirm™ Breast Biopsy Guidance System
- **Image Analysis Tools**
  - ImageChecker® CAD
  - Quantra™ Breast Density Assessment
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4 This display may not be adequate for breast biopsy. A grayscale, medical grade display should be used with the Affirm™ breast biopsy guidance system.
5 Optional software license may be required.
6 Available when the tomosynthesis option is installed.
7 The kV range is limited to 39 kV if the tomosynthesis option is not installed.