



## Selenia Dimensions with AWS 8000

Changing the paradigm of breast cancer detection through innovation

Selenia® Dimensions® is the industry's most sophisticated digital mammography system.

The premium breast imaging system is designed for leading breast centers that desire superb image quality, reduced patient dose, high productivity, and a flexible platform designed for advanced applications. Selenia Dimensions can be used to perform screening and diagnostic mammography as well as breast tomosynthesis.<sup>1</sup>

Selenia Dimensions with AWS 8000 is a state-of-the-art system designed to streamline workflow and improve productivity for the technologist. One touch controls, a biometric login and ergonomically designed exposure switches are just a few of the unique system features to help improve exam efficiency.

This versatile platform also opens the doorway to future advances in breast imaging, such as tomosynthesis-guided biopsy, contrast-enhanced tomosynthesis, and tomosynthesis fusion technologies.



Selenia Dimensions with AWS 8000

# Selenia® Dimensions® with AWS 8000 **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

## Acquisition Workstation

CPU	Multi-Core Intel Based CPU
Memory	6 GB RAM
Hard Drive	1.0 TB
Storage Media	DVD +/- R/W
Image Display Technology	3 Megapixel Grayscale Medical Grade LCD Display
User Interface Display	1.2 Megapixel Touchscreen Color LCD Display
Operating System	Microsoft Windows XP, Embedded
DICOM Services	Worklist, Print, Storage, Storage Commitment, Query/Retrieve, Modality Performed Procedure Step
IHE Profiles	Scheduled Workflow, Patient Information Reconciliation, Mammography Image
User Interface	Keyboard, trackball, touchpad, biometrics scanner, bar code scanner
Local Image Store Capacity	Approximately 9,000 screening mammography studies; or 3,000 combined screening mammography and tomosynthesis studies <sup>2</sup>
Ergonomic Enhancements	Touchscreen User Interface (No-Lift Advantage); Biometrics User Login; Automated Barcode Reader; Articulated Image Display

### 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	.80 in x 34 in (203 cm x 86 cm)
Lead Equivalence	.0.5 mm
Material	Lead glass

### Electrical Requirements

Input Line Voltage	100/120/220/230/240 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; Tomosynthesis <sup>2</sup> ; Combined Conventional Mammography and Tomosynthesis <sup>2</sup>
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	7.1 lp/mm, Conventional Mammography; 3.5 lp/mm, Tomosynthesis <sup>2</sup>

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® Grid with Auto-Retract for geometric magnification views and Tomosynthesis

### 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

## Mammography Compliant Printers

Agfa DRYSTAR 4500M, 5500, 5503, AXYS  
Fuji DryPix 4000, 5000, 7000, FM DP-L  
Kodak DryView 5850, 6800, 6850, 8610, 8900M

Konica-Minolta DRYPRO 793, 873  
Sony UP-DF 750

## 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 <sup>3</sup>
mAs Range	3.0 mAs to 500 mAs
mA Range	10 mA to 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) <sup>2</sup>
Port	Beryllium

### Electrical Requirements

Input Line Voltage	200/208/220/230/240 VAC nominal $\pm 10\%$
Input Current	3.5 Amps standby, 65 Amps for 5 seconds, at 208 VAC (40A input breaker rating) maximum
Frequency	50/60 Hz $\pm 5\%$
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 +180° to -140°, Biopsy, Tomosynthesis <sup>2</sup>
SID	70 cm
Patient Face Shield	Removable, Retractable <sup>2</sup>

### 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
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### Collimation System

Collimation Mode	Fully automatic or user-selectable
Predefined Collimation	
Size settings	24 cm x 29 cm 18 cm x 29 cm <sup>2</sup> 18 cm x 24 cm 15 cm x 15 cm 10 cm x 10 cm 7.5 cm x 8.0 cm

## Components

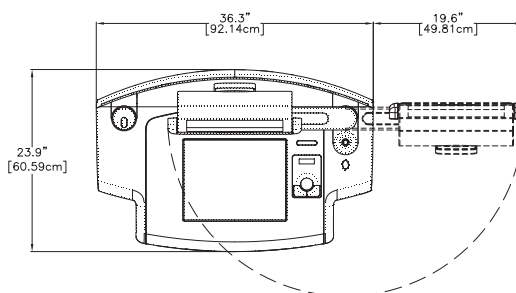
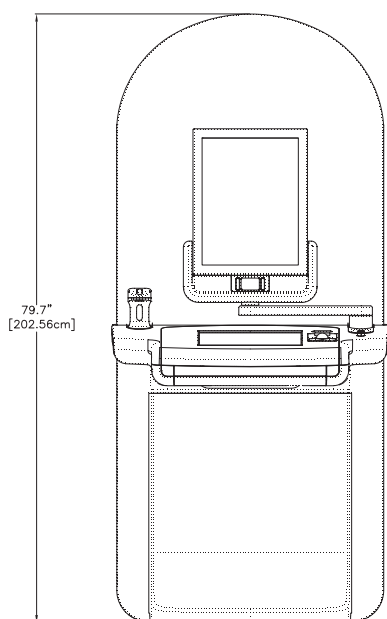
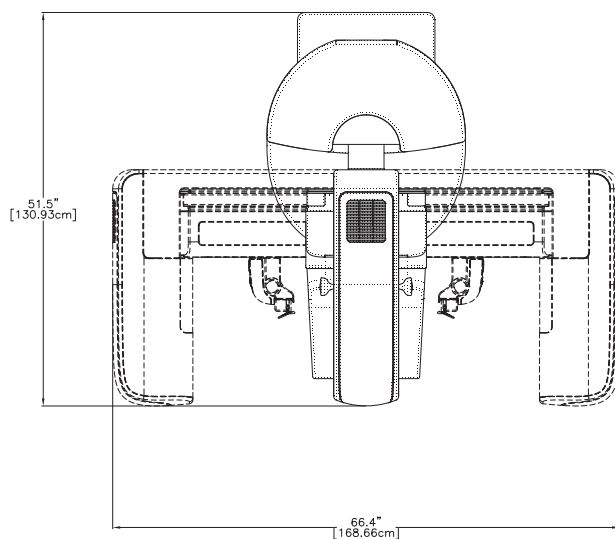
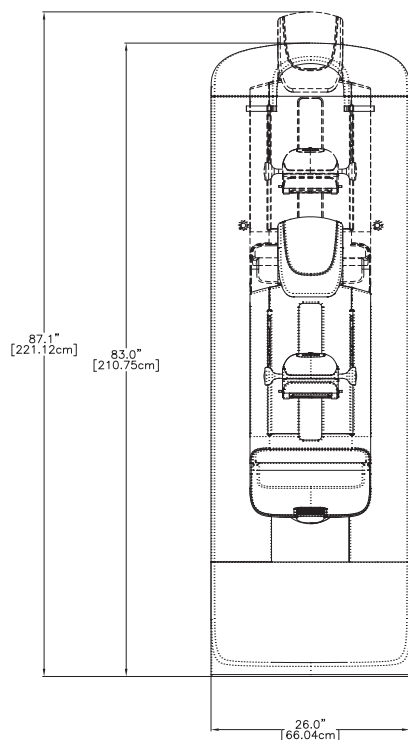
### Standard Components

Screening Compression	
Paddles	24 cm x 29 cm 18 cm x 24 cm Small Breast Paddle
Diagnostic Compression	
Paddles	10 cm Contact Paddle 7.5 cm Spot Contact Paddle Frameless Spot Paddle
Magnification Compression	
Paddles	10 cm Magnification Paddle 7.5 cm Spot Magnification Paddle
Accessories	Removable Face Shield Magnification Platform Dual Function Footswitches (2)
Manuals	User, Service and Quality Control

### System Options

Diagnostic Compression	
Paddles	15 cm Contact Paddle
Magnification Compression	
Paddles	15 cm Magnification Paddle
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 (contact, magnification)
Tomosynthesis	Tomosynthesis Imaging License Tomosynthesis Retractable Face Shield Tomosynthesis Image Review License (single workstation)
Image Analysis Tools	ImageChecker® CAD Quantra™

# Selenia® Dimensions® with AWS 8000



<sup>1</sup> Not available in all markets.

<sup>2</sup> Available when the tomosynthesis option is installed.

<sup>3</sup> The kV range is limited to 39 kV if the tomosynthesis option is not installed.

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