

Data



**c.cam**  
A Whole New Angle in Cardiology

**SIEMENS**  
medical

# c.cam

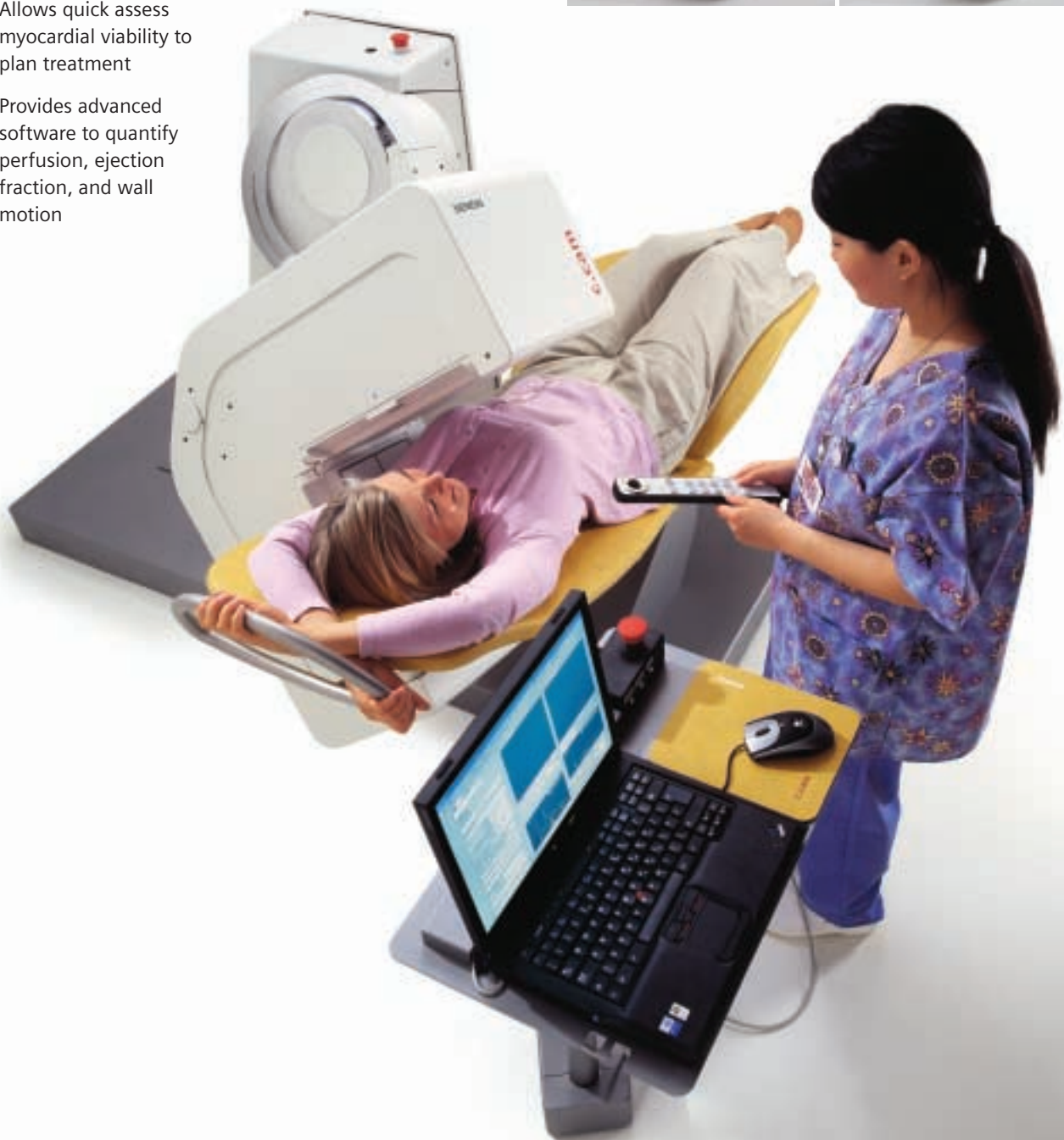
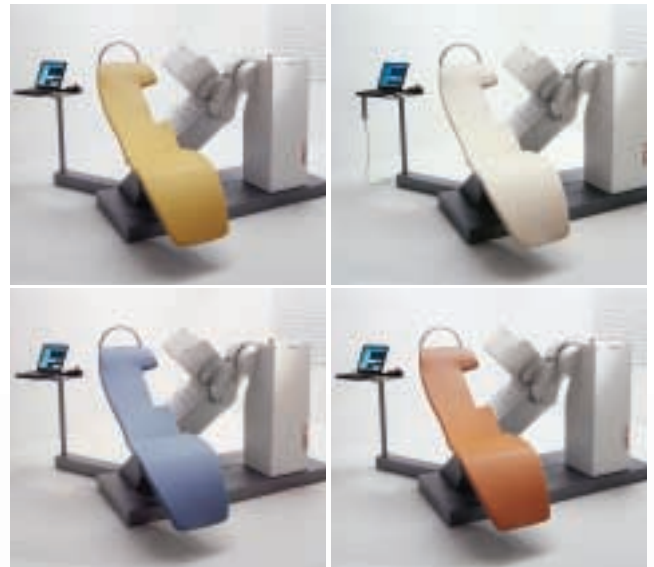
## A Whole New Angle in Cardiology

Have you ever thought how nice it would be to have nuclear cardiology imaging services right in your own office? — how much faster and more convenient it would be for everyone?

Now, adding your own in-house nuclear cardiology services is a lot easier than you might think.

Whether you're considering offering in-house nuclear cardiology services for the first time or expanding existing services, c.cam™ definitely gives you the best new angle in cardiology today.

- Easy to add to your Practice
- Allows quick assess myocardial viability to plan treatment
- Provides advanced software to quantify perfusion, ejection fraction, and wall motion





### Patient Comfort

- Easy access
- Reclining imaging position
- Increased comfort

### Patient-Friendly Environment

- Inviting
- Open System

### Image Quality

- Less patient motion
- Improved anterior wall separation
- Higher diagnostic confidence
- Unobstructed cardiac imaging

### Modern Design

- Choice of color to match interior design
- Compact system

### Easy to Install

- Two-day installation
- 8' x 8' footprint
- Minimum room remodeling requirements

### Easy to Learn

- Three-day onsite application training

### Easy to Use

- Automated camera setup
- Simple, fast collimator change
- Reduced Quality Control (QC) requirements
- Intuitive hand controller
- Preprogrammed motions
- Predefined acquisition protocols
- e.soft workflows

### Easy to Buy

- Low-risk revenue opportunity
- Favorable lease conditions
- Optional 5-year warranty
- Complete configurations

### Ease of Use

An intuitive, icon-driven hand controller operates the new c.cam, which is incredibly easy to learn and use.

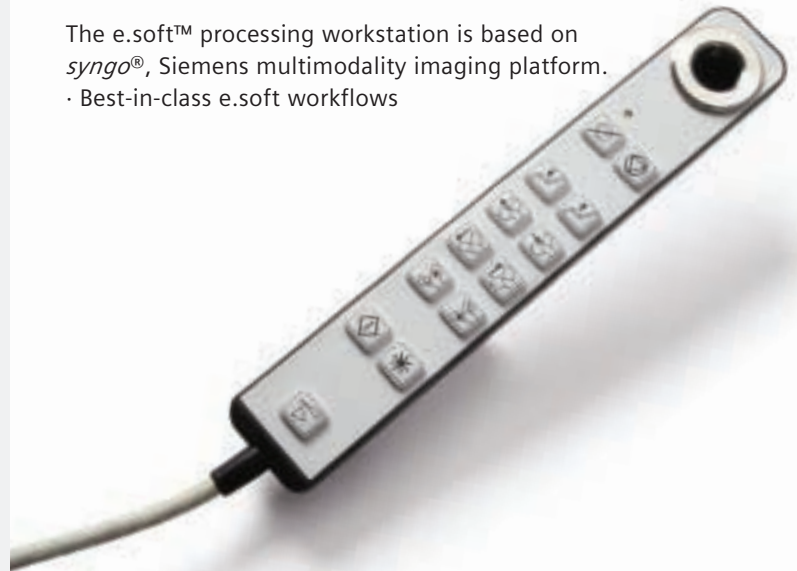
- Easy, automated camera setup

A Windows®-based acquisition station, optimized for cardiology, performs all tasks with ease.

- One-click acquisition

The e.soft™ processing workstation is based on *syngo*®, Siemens multimodality imaging platform.

- Best-in-class e.soft workflows

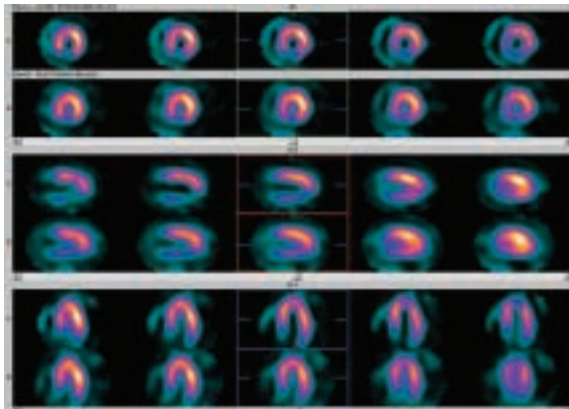


### Patient Comfort

Recognizing the intrinsic value of patient comfort, we designed a revolutionary reclining chair that creates a whole new angle in cardiology.

The exclusive reclining chair allows your patients to sit back comfortably during the scan with obvious benefits. A relaxed patient moves less, so image quality improves and diagnostic confidence increases.

- Inviting, open system
- Easy access for patients of any size or age
- Chair material comes in four versatile colors





# c.cam Cardiac SPECT Gamma Camera

## Features and Benefits

### Acquisition Station

Easy-to-learn, dedicated acquisition user interface includes all cardiology related acquisition activities.



### Hand Controller

Easy-to-use, icon-driven hand controller for gantry operation and entering body contour learning points.



### Unobstructed Cardiac SPECT

No chair material and 0% attenuation in cut-out area.

### Fixed 90° Position

Minimal patient-to-detector distance and small dead space.



### Reclining Imaging Position

Patients sit back comfortably during the scan with obvious benefits. A relaxed patient moves less, so image quality and the overall patient experience are enhanced.



## Lightweight Autoform Collimators

Easily changed by hand.



### Control Tower

Easily accessible electronic cabinet with motion controllers and power supplies.

### Optimized Field-of-View

Prevents activity uptake in other organs from affecting images.



### Inviting Open Gantry

Nonintimidating and patient-friendly design.

### Advanced Motions

Synchronized lateral, arm rotate and detector swivel motors deliver circular and noncircular SPECT motion.



DETECTOR IN



DETECTOR DOWN

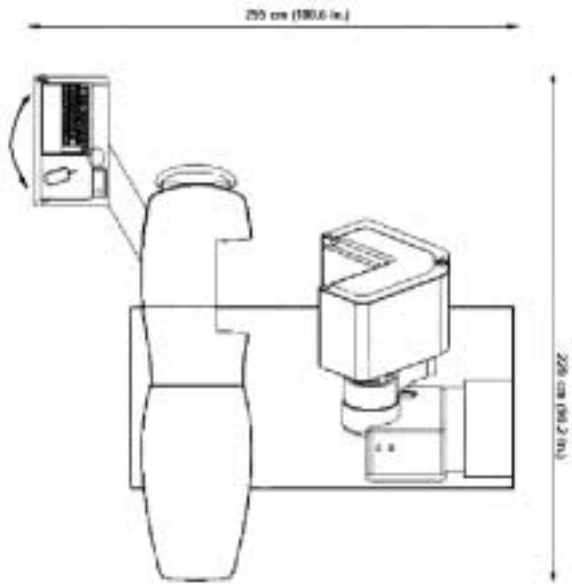


ROTATE DETECTOR CCW

# c.cam Cardiac SPECT Gamma Camera

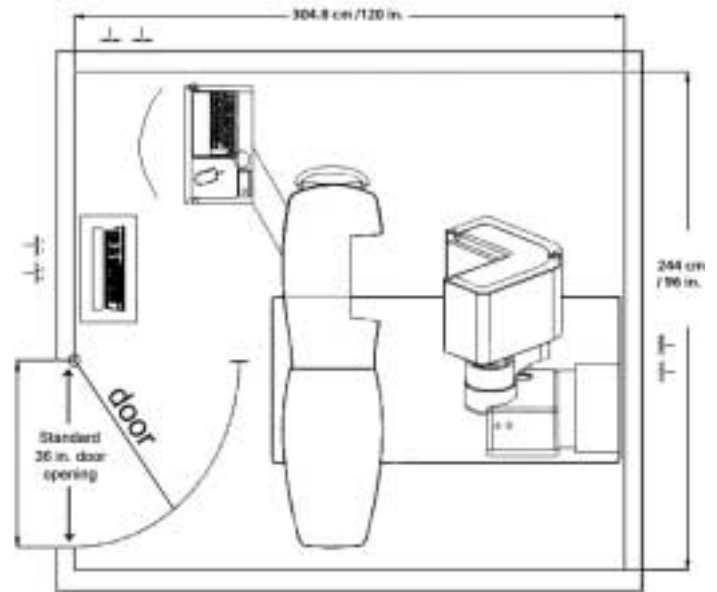
## Room Layout

System Footprint



Footprint approximately 243.84 cm (8' x 8')

Room Layout



Small room layout 304.8 cm (8' x 10')

The compact c.cam system has a small footprint that fits easily in small spaces (8' x 10' minimum). Installation takes only two days.

### Physical, Environmental & Power Data

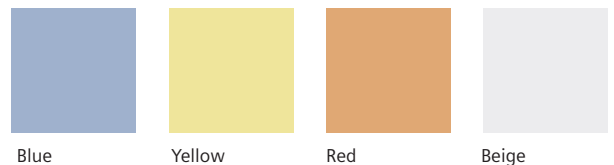
Environmental Requirements	110 Volt AC ( $\pm 10\%$ ), 60 Hz; 12 Amp; single phase service, 1400 kVa
Heat Dissipation	5100K Joules/hr. (< 4800 BTU/hr.)
Temperature Range	15° - 30°C (59° - 86°F) $\pm 3^\circ\text{C/hr.}$ (37.4°F/hr.)
Max. Temperature Variance	3°C/hr. (8°F/hr.)
Humidity	45% - 80% noncondensing
System Weight	2315 lb. (1050 kg)

### Installation Requirements

Receptacle	NEMA 5 -15
Collimator Cabinet (optional)	45 cm x 45 cm (17 in. x 17 in.)
Floor Levelness	floor must be level within 0.5 in. (12.7 mm)



### Optional Chair Colors



Note: Actual chair colors will vary. See your Siemens sales representative for actual color samples

# c.cam Cardiac SPECT Gamma Camera

## System Specifications

### Detector Specifications

Performance Standards (worst case specification)	
<b>Intrinsic Spatial Resolution</b>	
FWHM in UFOV	≤ 3.7 mm
FWTM in UFOV	≤ 7.6 mm
<b>Intrinsic Spatial Linearity</b>	
Differential in UFOV	≤ 0.2 mm
Absolute in UFOV	≤ 0.5 mm
<b>Intrinsic Energy Resolution</b>	
FWHM in UFOV at 140 keV	≤ 9.4%
<b>Intrinsic Flood Field Uniformity</b>	
Differential in UFOV	≤ 1.5%
Integral in UFOV	≤ 2.5%



### Class Standards

<b>Intrinsic Count Rate Performance in Air</b>	
Maximum Count Rate	290 kcps
<b>System Spatial Resolution without Scatter with LEHR Collimator at 10 cm</b>	
FWHM in UFOV	7.6 mm
<b>System Spatial Resolution without Scatter with LEAP Collimator at 10 cm</b>	
FWHM in UFOV	9.6 mm
<b>System Planar Sensitivity with LEHR Collimator at 10 cm at 140 keV</b>	
Absolute	170 cpm/μCi
<b>System Planar Sensitivity with LEAP Collimator at 10 cm at 140 keV</b>	
Absolute	290 cpm/μCi



### Acquisition Station

Laptop console with single monitor and keyboard	
Operating System	Windows XP
System speed	1200 MHz
Persistence Scope	256 x 256
Acquisition Matrices (Static)	64, 128, 256, 512
Display Features	frame/cine display
Display Colors	full color range
Connectivity to e.soft *	DICOM 3.0

\*All processing, including SPECT reconstruction, takes place in e.soft.

### Detector and Gantry Physical Specifications

Field-of-View (FOV)	37 x 21.4 cm (14.6 x 8.4 in.)
Diagonal (FOV)	42.7 cm (16.8 in.)
Useful Field-of-View (UFOV)	36 x 20.4 cm (14.2 x 8.0 in.)
Diagonal (UFOV)	41.4 cm (16.56 in.)
<b>Crystal</b>	
Size	40.2 x 24.6 cm (15.8 x 9.7 in.)
Diagonal	47.1 cm (18.6 in.)
Thickness	8.5 mm (1/3 in.)
<b>Digital Detector</b>	
Photomultiplier Tubes	24 per detector
Diameter	7.6 cm (3 in. sq.)
Array	6 x 4
Energy Range	60 - 170 KeV
Analog to Digital Conversion	overlapping, 2 dimensional arrays using 5 channels
Shielding	
	3 mm lead equivalent
Fixed 90° position dead space	24 mm (0.9 in.)
Dist. from edge of FOV to edge of detector housing	7.0 cm (2.7 in.)
<b>Maximum System Dimensions</b>	
Height	200 cm (78.7 in.)
Width	255 cm (100.4 in.)
Depth	229 cm (90.2 in.)
Weight	1050 kg (2315 lb.)
Circular Radius	20 - 27.5 cm (7.9 - 10.8 in.)
Non-circular Radius	8.8 - 34.6 cm (3.5 - 13.6 in.)
Lateral Position Range	59 cm (23.2 in.)
Lateral Speed	0 - 30 mm per second
Lateral Accuracy	1 mm
Rotation Range	270°
Maximum CW Rotation Det. 1	+90°
Maximum CCW Rotation Det. 1	-180°
Rotational Accuracy	0.25°
Rotational Speed	0 - 0.75 RPM
Patient Contouring	Automatic (two learning points)
<b>Patient Chair</b>	
Tilt Range	20°
Tilt Speed	0.3 RPM
Vertical Motion Range	16.5 cm (6.5 in.)
Vertical Speed	10 mm per second
Material	wood and foam
Thickness	0 mm in cut-out area
Attenuation @ 140 keV	0% in cut-out area
Head, Arm, Shoulder Rest	Integrated
Maximum Patient Weight	180 kg (400 lb.)
Minimum Access Height	58.5 cm (23 in.)
<b>ECG Gating</b>	
SPECT and Planar Mode	Forward
Bad Beat Rejection	Buffered Beat Window
Max. Number of Frames per R-R Interval	Planar 32, SPECT 16
Automatic Centering of Beats Acceptance Window	Yes
Integrated ECG	Plugs into system base, eliminating cable obstruction

### NEMA Performance Measurements of Scintillation Cameras

All values are determined at the manufacturer's facility, using the methods described in "NEMA Standards Publication for Performance Measurements of Scintillation Cameras." Elaborate measurement equipment is required in order to comply with these standards.

Due to this requirement, these standards are not intended for acceptance testing at installation or for use as a user quality-control or quality assurance procedure. All measurements made with a 20% energy window.

ISO 9001 certified, meeting internationally recognized quality standards for good manufacturing practices.

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*Note: Chair material colors may vary. Contact your local Siemens sales representative for actual chair color samples.*

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