

A photograph of three people smiling. On the left is an elderly woman with short, wavy blonde hair, wearing a light-colored top. In the center is an elderly man with short, wavy grey hair, wearing a light-colored button-down shirt over a brown turtleneck. On the right is a young woman with short, styled blonde hair, wearing a bright orange top. They are all looking towards the camera with warm, genuine smiles. The background is a plain, light color.

ergo

A NEW ERA IN
CLINICAL FLEXIBILITY

DIGIRAD®

UNIQUE BENEFITS

- ▶ **SOLID-STATE** UNMATCHED SPECS AND IMAGE QUALITY
- ▶ **LFOV (12.25" X 15.5")** FLEXIBILITY FOR MORE STUDIES
- ▶ **PORTABLE** IMAGE OR SITE ANYWHERE
- ▶ **COST EFFECTIVE** ONE CAMERA. MULTIPLE USES
- ▶ **FRIENDLY** SIMPLE AND EASY TO USE





A NEW ERA IN
CLINICAL FLEXIBILITY

EXPAND YOUR HORIZONS

UNPRECEDENTED IMAGE QUALITY, UNPARALLELED CLINICAL FLEXIBILITY AND A WHOLE NEW LEVEL OF FREEDOM.



A NEW ERA IN NUCLEAR MEDICINE

We're entering an era in nuclear medicine where we expect to be challenged like never before to seek new ways to attain further improvements in quality, increase productivity and reduce costs. While many companies are addressing these challenges with a philosophy that 'Bigger is Better', the Digirad Vision is geared toward making products that transcend the ordinary. In line with this thinking, Digirad has developed powerful new solid-state technology that is radically transforming nuclear camera design, substantially raising overall performance capabilities and significantly lowering total lifecycle costs. The proof is in products like the ERGO™ large field-of-view (LFOV) imager that marks the beginning of a new genre of solid-state general-purpose nuclear medicine cameras that expand utility and performance to a level that was not possible, until now. The ERGO is all about expanded possibilities. It's about taking breakthrough technology and entirely rethinking how to use it to make real gains in improving quality, increasing productivity and reducing costs.

ERGO delivers improved clinical outcomes, imaging without boundaries and a higher return on investment.



A NEW STANDARD IN

CLINICAL QUALITY

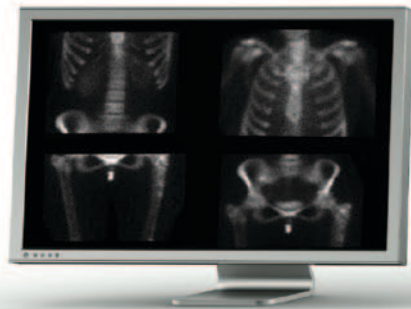
UNPRECEDENTED CLINICAL FLEXIBILITY - EXCITING IMAGING POSSIBILITIES.

The heart of the ERGO is its large 12.25" by 15.5" field-of-view, Digirad's most advanced solid-state detector technology ever. Getting images of unprecedented quality was a top design goal for the ERGO. That's why the system delivers unsurpassed performance specifications for general imaging with intrinsic spatial resolution of 3.25 mm, energy resolution of 7.9% and count rate capabilities greater than 5 Mcps. The end result is superior image contrast and clarity for every patient study with a level of performance that is second to none.

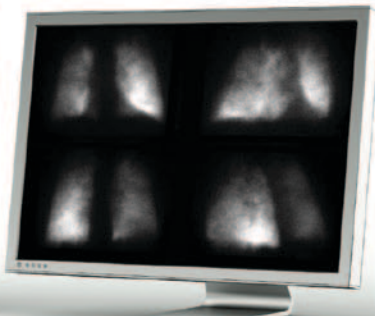
The ERGO's innovative ergonomic system design introduces a level of positional flexibility that is unparalleled by any other system available in nuclear medicine today. Distinguished by a sleek patient-friendly open gantry, a portable base and multiple compound detector motions, the ERGO provides virtually an unlimited range of exciting new imaging possibilities for a wide variety of procedures.

The ERGO is an ideal solution for departments seeking to add or replace aged fixed or mobile cameras with a more versatile, higher-performance, state-of-the-art solid-state camera for fixed or mobile imaging use. What's most incredible is the ERGO offers a level of positional flexibility, clinical utility and patient friendliness that is unmatched by any other general imaging system.

ERGO applications include: Bone Spots, Lung, Liver, HIDA, Gastric Emptying, GI Bleed, Renal, Thyroid, Parathyroid, Brain Flow, MUGA, Breast (MBI), Gallium, Indium, 3 Phase Bone, Sentinel Node, Lymphoscintigraphy and Animal Studies



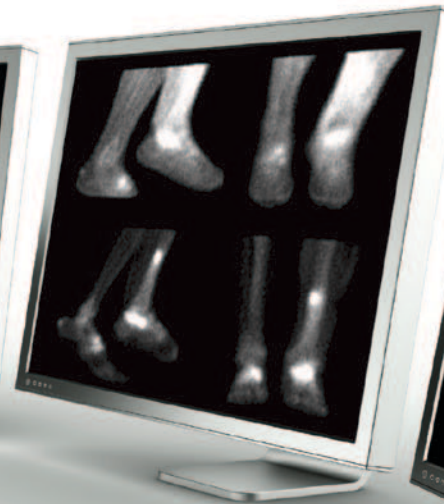
Bone Study



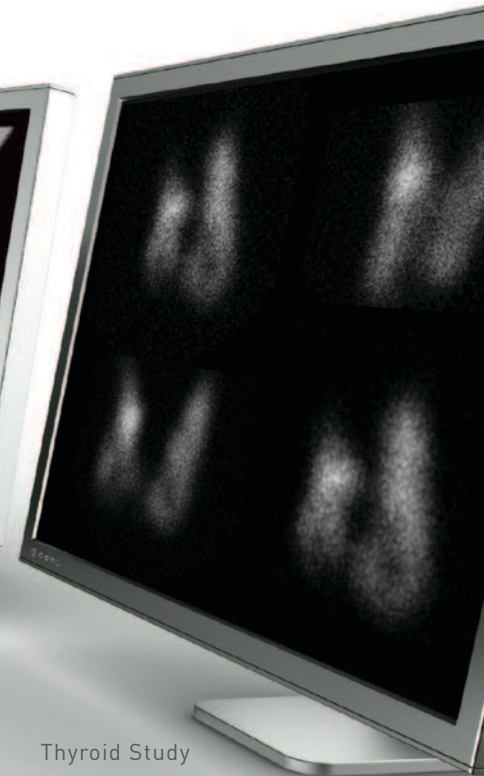
Lung Study



HIDA Gallbladder Study



3 Phase Bone Study

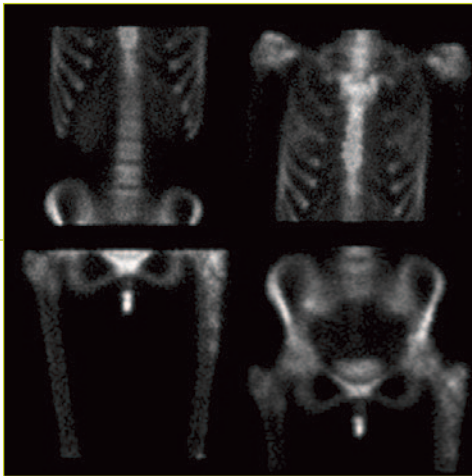


Thyroid Study

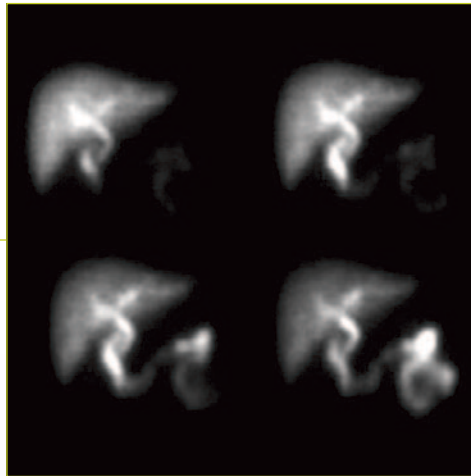
A NEW LEVEL OF CLINICAL CONFIDENCE

SEEING IS BELIEVING

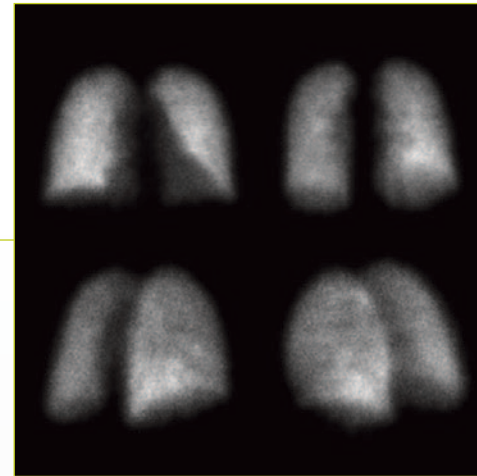
Bone Spot Study



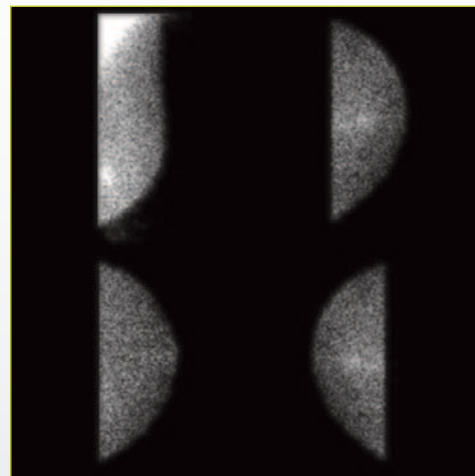
HIDA Gallbladder Study



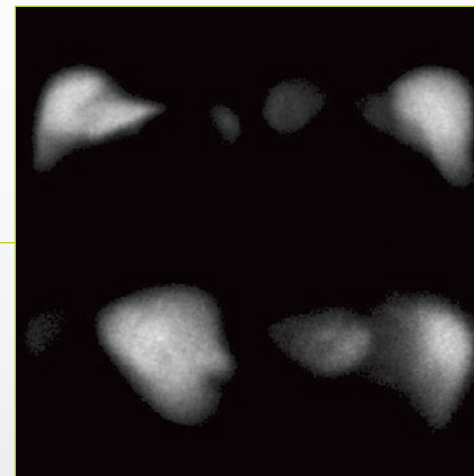
Lung Perfusion Study



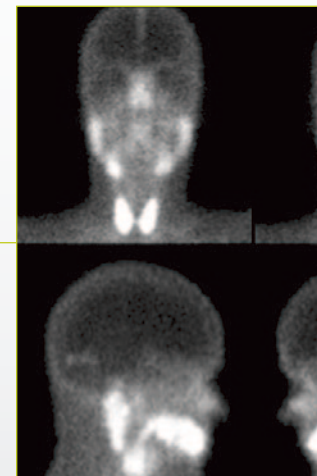
3 Phase Bone S



MBI Breast Study

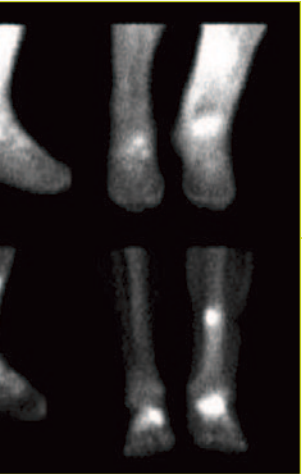


Liver Study

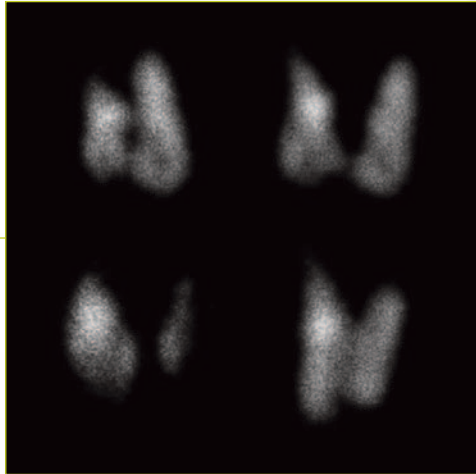


Salivary Study

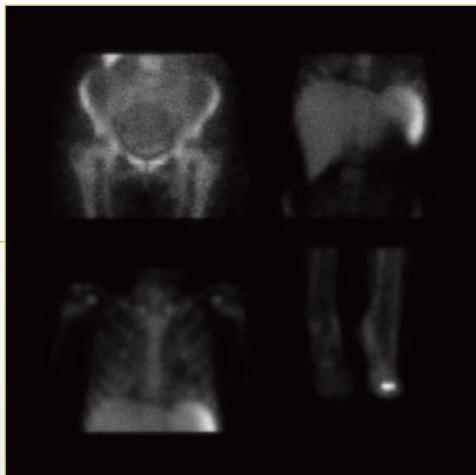
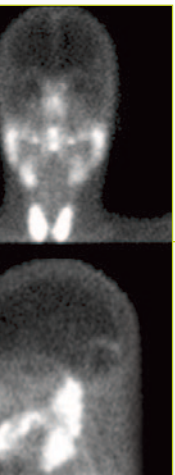
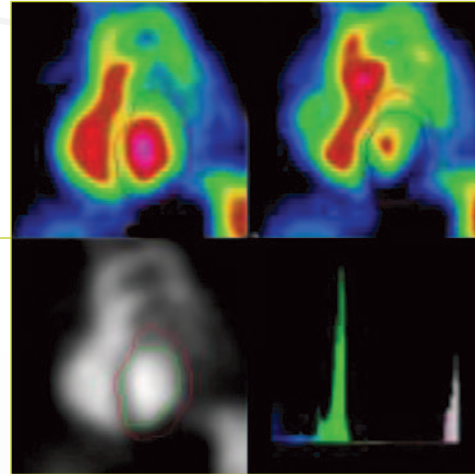
Study (2 of 3 Phases)



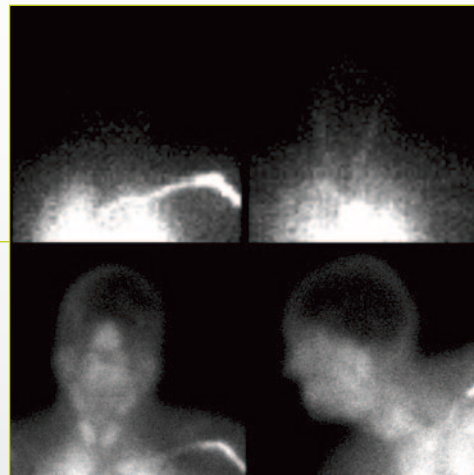
Thyroid Study



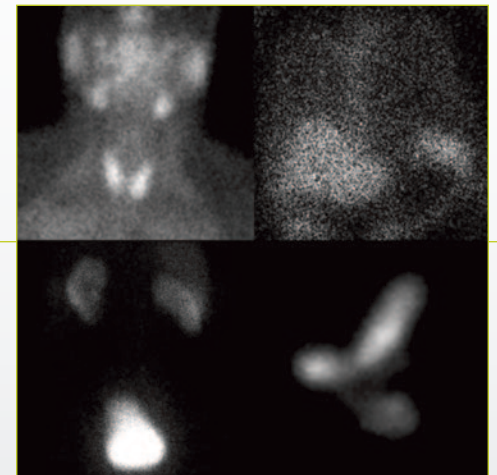
Planar Gated MUGA Study



White Blood Cell Study



Brain Flow Study (Flow and Static Images)



Miscellaneous Studies: Parathyroid, Indium, Renal and Gastric Emptying

THE NEW STANDARD IN PERFORMANCE



UPRIGHT IMAGING



BEDSIDE IMAGING



STRETCHER IMAGING



PEDIATRIC IMAGING

LARGE-FIELD SOLID-STATE DETECTOR

The large 12.25" X 15.5" FOV provides ideal utility for a wide range of procedures commonly performed in nuclear medicine or outside the department. With 3.25 mm intrinsic spatial resolution, 7.9% energy resolution and 5 Mcps count rate capability, the ERGO delivers unmatched performance.

COMPACT OPEN GANTRY DESIGN

The ERGO's sleek open gantry/detector design makes it convenient and easy to image patients sitting up and lying on stretchers or beds. The openness of the system is very patient friendly and its compact lightweight portable design makes it possible to use the system in nearly any room or department. The system requires no special room renovations and only 110V/15A of power.

VIRTUAL POSITIONAL FLEXIBILITY

Clinical flexibility and efficiency is enhanced with multiple compound motions, a long 48" reach (detector parallel to floor) and the portable base that affords an unlimited range of exciting new imaging possibilities in the department or on the floor. The detector has a thin 1/2" edge on two sides that optimizes performance for a number of special applications.

LIGHTWEIGHT PORTABLE DESIGN

The lightweight portable design and low profile wheelbase make it easy to maneuver the ERGO in the department, on patient floors and under nearly any patient bed or stretcher, maximizing the systems imaging utility and convenience. With a narrow 27" width, it is possible to easily enter 30" doorways, turn in small hallways and maneuver around a patient's bed.

FULL ARRAY OF QUICK DISCONNECT LATCH COLLIMATORS

Five high performance collimator options (LEAP, LEHR, PINHOLE - 4, 6 and 8 mm inserts, Low Energy DIVERGING and MEAP) provide the capability to provide outstanding imaging quality for a wide range of procedures for energy ranges from 50 to 350 keV. Simple quick release latch mechanisms and flip-up handles make changing collimators, simple and fast. An optional collimator storage cart provides easy and convenient accessibility and storage for up to 5 collimators.





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ON BOARD UPS + EKG GATE

An on board UPS system provides power to the system during transit or power outages, making it possible to image immediately upon arrival to the floor or permitting the completion of a patient study in the event that the AC power were to be interrupted. An EKG gating device is conveniently integrated into the chassis for gated cardiac applications (MUGA's).

SWIVEL ACQUISITION + VIEWING WORKSTATION

A state-of-the-art laptop based acquisition workstation is mounted to a special swivel base making it possible to operate the system from either side of the camera. The operator control console provides comprehensive acquisition and viewing functionality, as well as supports DICOM 3.0 and Modality Worklist functionality. A detachable hand control provides variable speed up/down detector motion and convenient start/stop acquisition functionality.

BREAST STABILIZATION ACCESSORY OPTION

The optional breast stabilization accessory combined with a thin 1/2" detector edge makes it possible to perform high quality molecular breast imaging (MBI) studies. The large FOV and high performance characteristics of the detectors enhance the outcomes of these procedures.

CONVENIENT INTEGRATED STORAGE AREA

An open storage area at the back of the camera provides a convenient space to store patient syringes and miscellaneous supplies. An optional removable storage carrier provides an additional (0.7 Cu. Ft / 19.6 liters) of storage capacity for carrying ancillary equipment or supplies during portable use.

VARIETY OF IMAGING TABLES + STOOL OPTIONS

A variety of optional radiolucent imaging tables and stools are available for imaging patients in various positions.

SIMPLE AND FAST COLLIMATOR CHANGING



THYROID IMAGING



MOLECULAR BREAST IMAGING (MBI)



GENERAL IMAGING ON IMAGING TABLE



THE ERGO DIFFERENCE



THE NEW LEVEL OF
FREEDOM

IMAGING WITHOUT BOUNDARIES.

A MODERN WORKHORSE SYSTEM

Lightweight solid-state detectors coupled with a revolutionary portable design opens the door to a range of new opportunities to expand services and improve patient care, both within the nuclear department and outside (ICU, CCU, ER, OR, pediatrics, trauma units, patient floors, ambulatory services, women's health or in the research lab). The ERGO's open design makes it easy to image patients sitting up or on imaging tables, stretchers or patient beds in the department, or on the floor. The ERGO system introduces a level of freedom and convenience for nuclear imaging that is virtually without boundaries.

ONE CAMERA. MULTIPLE USES.

Whether you intend to use the ERGO to image within the nuclear department or outside, you can always be confident the ERGO will deliver the highest clinical results. Being solid-state – it is both rugged and reliable. The ERGO offers the possibility to dramatically reduce your costs for many procedures, increase your return on investment, improve patient satisfaction, reduce operational costs, raise productivity, and increase your study volume – all key advantages over traditional fixed assets.





THE NEW STANDARD OF CARE

EXPANDED OPPORTUNITIES FOR NUCLEAR IMAGING.

GENERAL NUCLEAR MEDICINE

The solid-state large-field-of-view single-head design affords more clinical flexibility and higher quality clinical results. Patients can be imaged directly on stretchers, sitting up, or even in wheelchairs.

PEDIATRICS

The sleek portable design offers a new level of freedom and comfort for imaging patients in the department or at the bedside (in pediatrics, ICU, CCU, ER, trauma units, or regular patient floors).

SURGERY

Open new doors with the ability to support a wide variety of surgical protocols that offer the possibility to improve clinical outcomes for a number of oncological, general or pediatric surgical procedures.

WOMEN'S HEALTH

The thin large-field-of-view and narrow-edge of the solid-state detector and breast stabilization fixture makes it possible to generate new revenues by performing state-of-the-art MBI-sestamibi imaging protocols.

SUPERIOR

DIGIRAD SUPPORT

A NEW LEVEL OF SATISFACTION.

The ERGO imager sets the standard for planar, gated and dynamic imaging today with enabling solid-state technology that provides unprecedented clinical performance. Its unique portable design affords nuclear services to be provided in the convenience of patient rooms or in specialty care areas away from the central nuclear medicine department. Simply stated, patients far prefer the openness and friendliness of the ERGO's open system design. Technologists like its ease of operation and use. Physicians appreciate the high quality of the studies and the ability to maximize their diagnostic confidence. Administrators like the favorable economic returns derived from an investment that affords the possibility to generate revenue from new procedures and reduce operational costs.

With products like ERGO, Digirad is driving the technology progression in nuclear medicine to new clinical frontiers, attaining new economical benchmarks and getting you geared-up for tomorrow. Make a safe investment today and get ready for the future with the technology leader.

100% DEDICATED TO NUCLEAR MEDICINE

Your advantage goes beyond better image quality, economics and future readiness. It requires a system that you know will deliver high quality results, reliable and consistently, day after day. It requires a company with an attitude and response that places their customers first in delivering superior service and support. Only Digirad delivers world class service and support with a focus that is 100% dedicated in what you do – nuclear medicine.



SOLUTIONS FOR
A BRIGHTER FUTURE

- ▶ SOLID-STATE LFOV
- ▶ UNMATCHED SPECS
- ▶ ERGOMETRIC DESIGN
- ▶ NEW REVENUE POTENTIAL

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A NEW SOLUTION WITH A
GREENER FOOTPRINT

The ERGO marks a transition to an era where nuclear imagers offer higher performance – yet are more friendly to the environment and patients. Solid-state nuclear medicine imagers are far lighter and smaller in size (portable), more reliable, and consume less energy than conventional PMT-base designs.

CONFORMANCE TO
STANDARDS

ERGO conforms to the Medical Device Directive Quality System. The product is designed to meet IEC 60601-1:1998 and IEC 60601-1-2:2001 for safety and electromagnetic compatibility. Trademarks and service marks used in this material are property of Digirad Corporation. All other company, brand, product and service names may be trademarks or registered trademarks of their respective holders. Digirad reserves the right to modify the design and specifications contained herein without prior notice. Some configurations are optional. Product performance depends on the selected configuration. Please contact Digirad for the most up-to-date information. This information may be changed without notice.

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DIGIRAD®

ERGO IMAGING SYSTEM

SPECIFICATIONS

DETECTOR SPECIFICATIONS

detector technology	solid state, segmented CsI (TI)/silicon photodiode
crystal thickness, mm (in)	6 (0.24)
exterior dimensions, cm (in)	42.1 x 28.4 x 10.2 (16.6 x 15.1 x 4.0)
useful FOV cm (in)	39.6 x 31.1 (15.6 x 12.2)
number of solid state detector elements	11,520
detector element Size (mm)	3 x 3
energy range, keV	50-350
standard collimator	LEAP
optional collimators	pinhole, LE diverging, MEAP, LEHR

SYSTEM PERFORMANCE

energy windows	2
spectrum analyzers	10 bit
acquisition matrix	variable (64 x 64, 128 x 128, 256 x 256, 512 x 512)
maximum emission count rate, cps ¹	>5M
persistence scope	128 x 128
display color depth	true color
intrinsic spatial resolution, mm	3.3
intrinsic energy resolution, FWHM, 140 keV (%)	7.9
intrinsic spatial linearity, mm	0.3 (absolute)
high count flood field uniformity ²	<2.5% differential <3.5% integral

¹ The maximum count rate was reached with 34mCi 99mTc source in the open window was 5M cps. The fold-over point was not yet reached.

² Refer to the camera operator's manual for the required number of counts for the high count uniformity.

DETECTOR/YOKE MOTION

rotation, degrees	
detector	180
yoke	360
arm rotation	390
vertical position	
maximum, cm (in)	152.4 (60)
minimum, cm (in)	45.7 (18)
maximum reach	
parallel to the floor (looking up/down), cm (in)	92.2 (36.3)
perpendicular to the floor (looking back), cm (in)	66 (26)
vertical speed up	nominal 1" per second
vertical speed down	nominal 1" per second

ERGO DRIVE SPECIFICATIONS

power source	manual
forward	manual
reverse	manual
brakes	mechanical
steering	all wheel
maximum incline	10%
emergency drive disengagement	n/a

COLLIMATOR SPECIFICATIONS	LEAP	LEHR	DIVERGING	MEAP
isotope	^{99m} Tc	^{99m} Tc	^{99m} Tc	¹¹¹ In, ⁶⁷ Ga
useful energy range (keV)	50-170	50-170	50-170	50-350
hole shape	hex	hex	hex	hex
septal thickness (mm)	0.2	0.2	0.3	1.0
hole diameter (mm)	1.5	1.5	1.9	2.3
hole length (mm)	23	30	30	30
sensitivity @ 10cm (cpm/uCi) ³	250*	132*	106*	153^
system spatial resolution @ 10cm w/o scatter (mm) ³	10.3	7.4	10.8	11.2
system spatial resolution @ 10cm with scatter (mm) ³	10.8	7.8	12.3	10.1
focal length @ exit surface (mm)	n/a	n/a	350	n/a
weight (lbs)	26	34	40	68
type	parallel	parallel	diverging	parallel
method of construction	foil	foil	cast	cast

³All spatial resolution and sensitivity numbers are typical values. Sensitivity numbers within +/-7% of spec are acceptable.

*Sensitivity measured using 16% ^{99m}Tc window.

^MEAP sensitivity calculated using ⁶⁷Ga with 86-100 keV and 170-200 keV windows.

PINHOLE COLLIMATOR SPECIFICATIONS

isotope	^{99m} Tc
hole shape	round
septal thickness (mm)	n/a
hole diameter (mm)	4, 6, 8
hole length (mm)	218
diameter at base of cone (mm)	285
sensitivity @ 10cm with 4mm (cpm/uCi) ³	100*
sensitivity @ 10cm with 6mm (cpm/uCi) ³	210*
sensitivity @ 10cm with 8mm (cpm/uCi) ³	367*
geometric resolution @ 10cm with 4mm (mm) ³	6.2
geometric resolution @ 10cm with 6mm (mm) ³	9.1
geometric resolution @ 10cm with 8mm (mm) ³	11.9
system spatial resolution @ 10cm with 4mm (mm) ³	6.6
system spatial resolution @ 10cm with 6mm (mm) ³	10.0
system spatial resolution @ 10cm with 8mm (mm) ³	12.5
weight (lbs)	38
type	pinhole
method of construction	cast

³All spatial resolution and sensitivity numbers are typical values. Sensitivity numbers within +/-7% of spec are acceptable.

*Sensitivity measured using 16% ^{99m}Tc window.

OPERATOR CONSOLE

persistence scope, cm (in)	9 x 9 (3.5 x 3.5)
zoom control	yes
ratemeter	yes
scaler	yes
time readout	yes
automatic energy selection	yes
autopeaking	yes
image rotation control	yes
automatic window selection	yes
auto uniformity correction	yes

INTEGRAL COMPUTER MINIMUM SPECIFICATIONS

main CPU	Intel core 2 duo P8600 with VT, 2.40 GHz, 1066MHz, 3M L2 cache, dual core
display processor	256 MB NVIDIA quadro NVS 160M
array processor	Intel core 2 duo, dual core
display matrix	1680 x 1050 or 1440 x 900
storage	
hard disk	160 GB hard drive
USB ports	3
other	8X DVD+/-RW
software	Windows XP operating system, Microsoft office basic 2007, SeeQuanta, Prominence DICOM 3.0

ENVIRONMENTAL/OPERATION REQUIREMENTS

system total weight, kg (lbs)	305 (671)
system dimensions, cm (in)	
height	179.1 (70.5)
width	74 (29)
length	170 (67)
minimum room size, ft	8 x 8
floor clearance, cm (in)	8.9 (3.5)

OPERATING SPECIFICATIONS

power requirements	15A @ 120VAC, 60Hz 7.5A @ 240VAC, 50/60Hz
temperature, C (F)	18-29 (65-84)
relative humidity, %	30-75
architectural modifications	none required
battery run time max pwr (low pwr mode)	18 min (>30 min)
charging time, hr	up to 4

STORAGE

environmental storage, C (F)	5-50 (41-122)
humidity (non-condensing), %	10-90

COLLIMATOR CART (OPTION)

length, cm (in)	83.8 (33)
width, cm (in)	58.4 (23)
height, cm (in)	119.4 (47) without accessories
weight, kg (lbs)	117.9 (260)
storage capacity	five collimators plus one breast stabilization fixture

CLINICAL APPLICATIONS

bone spots, lung, liver, HIDA, gastric emptying, GI bleed, renal, thyroid, parathyroid, brain flow, MUGA, breast (MBI), gallium, indium, 3 phase bone, sentinel node, lymphoscintigraphy, animal studies

OPTIONAL FEATURES

breast stabilization fixture, collimator cart, general nuclear medicine processing software, printers, additional collimators, DICOM MWL, stool, imaging table

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