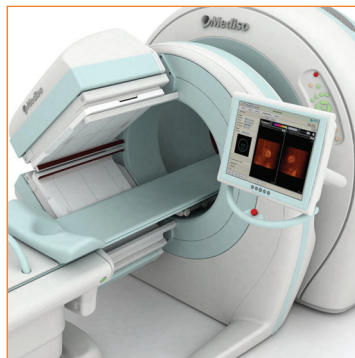
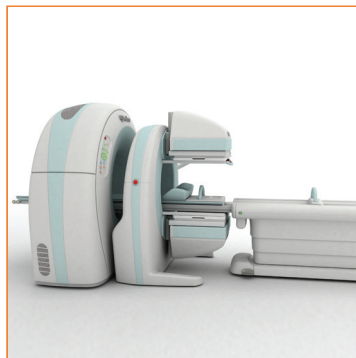


IMAGING FOR LIFE



Nucline™ DHV/CT

hybrid SPECT/CT imager



HYBRID LINE

Nucline™ DHV / CT

Hybrid SPECT/CT Imager

DETECTOR

Two rectangular jumbo FOV high stability detectors assembled with high optical and mechanical quality

- NaI(Tl) scintillation crystal
 - size: 585 x 470 mm
 - thickness: 9.5 mm or 15.9 mm pixelated
- photomultipliers:
 - 55 or 59 pcs of high quantum efficiency PMTs characterized by improved energy resolution, magnetic shielding and long-term stability
- lead shielding thickness: 12–32 mm

DETECTOR ELECTRONICS

A compact, highly integrated, one board easily serviceable construction without tuning potentiometers

- computer controlled PMT autotuning processor for fast PMT gain stabilisation and adjustment
- 1 ADC / PMT detector electronics
- high precision preamplifier electronics
- digital electronics assembled from the latest "high-tech" elements
- active high voltage bleeder with integrated HV module

ACQUISITION CONSOLE

Ergonomic acquisition WS console stand on wheels

- Windows XP based computer with Pentium IV processor
 - Intel Pentium IV; 3.4 GHz IBM compatible computer with 2 Gbyte 64 bit/800 MHz memory handling
 - 512 kbytes cache memory
 - 500 Gbytes hard disk drive
 - CD-DVD RW drive
 - full DICOM 3.0 compatibility (send/receive, query/retrieve, worklist, print)
 - 19" high resolution LCD monitor
- 4 independent energy channels
- multi-channel analyser up to 1024 channels
- 4096 x 4096 pixel image digitising
- digital corrections:
 - direct addressing TS⁹ simulation linearity correction with FOV increasing technology
 - energy correction
 - uniformity correction without count rate loss
 - automatic real time uniformity cross-correction for the different collimators
 - three-phase pile up recovery and resolution enhancing technology for high count rates

COLLIMATORS

- LEGP, LEHR, LEUHR, MEGP, HEGP collimator pairs shipped with dual sided cart.
- Dual infrared line auto body contour facility

CT PARAMETERS

CT Gantry

- Patient Aperture: 70 cm
- Scan Field of View: 50 cm
- Acquisition Times (360°): 0.5, 0.7, 1, 1.5 and 2 sec.

X-ray Generator

- Power: 60 kW

X-ray Tube

- Highest X-Ray Tube Voltage: 140 kVp
- Highest X-Ray Tube Current: 500 mA

X-ray Detector

- Detectors Ceramic
- Number of Detector Elements: 24 x 896
- Number of DAS Rows: 16
- Detector Width (Z Dimension): 20 mm at iso-center

Image Reconstruction

- Reconstruction Matrix: 512 x 512

Scan Parameters

- Acquired Slice Thickness:
 - 16 rows of 0.625 mm or 1.25 mm
- Displayed Slice Thickness:
 - 0.625, 1.25, 2.5, 3.75, 5, 7.5, 10 mm

CLINICAL PROCESSING WORKSTATION

Dedicated Nuclear Medicine and CT workstation with **InterView™XP** software package running on Windows XP

Processing workstation:

- Windows XP based computer with Pentium 4 processor
- Intel Pentium 4; 3.4 GHz IBM compatible computer with 2 Gbyte 64 bit/800 MHz memory handling
- 512 kbytes cache memory
- 500 Gbytes hard disk drive
- 1.44 Mbytes floppy disk drive
- CD-DVD RW drive
- keyboard, mouse
- full DICOM 3.0 compatibility (send/receive, print, query/retrieve, work list)
- 30" high resolution (2560x1600) LCD monitor
- integrated Gigabit Ethernet controller
- CLEARview software (optional)

DUAL IMAGING TABLE

Universal imaging table for SPECT and whole body examinations

- intelligent CAN connected industry standard interface to gantry
- motorized vertical movements
- motorized whole body motion
- low attenuation (< 8%) carbon fiber pallet
- max. 229 kg patient weight
- accessories: arm-holder for WB-, arm-head-holder for heart examinations; integrated source-holder

SPECT GANTRY

- 180 and 101 or 90 degree variable angle head positions with high precision positioning
- small footprint robust mechanical design with improved safety factor
- industry standard CAN connected automation computer
- pre-programmed robotic gantry motions
- full automatic motion calibrations
- maintenance-free mechanical design

DOCUMENTATION

Automated bi-level macro-controlled printing and reporting. High quality inkjet colour and b/w hardcopy

- on normal paper
- on premium photo paper
- on dull X-ray-like film
- 2400 dpi print quality with HP PhotoRET III technology
- special printing software for faithful printing

NEMA SPECIFICATIONS

- FOV: 530 mm x 390 mm
- Energy range: 40–600 keV
- Intrinsic energy resolution for ^{99m}Tc: 9.7%
- Intrinsic Flood Field Uniformity
 - differential CFOV: 1.9% integral CFOV: 2.4%
 - differential UFOV: 2.4% integral UFOV: 2.9%
- Intrinsic Spatial Resolution: CFOV 3.6 mm (FWHM–SPECT mode)
- Intrinsic Spatial Linearity
 - differential CFOV: 0.18 mm absolute CFOV: 0.38 mm
 - differential UFOV: 0.20 mm absolute UFOV: 0.40 mm
- Max. count rate with full correction:
 - >0.5 Mcps (SPECT mode)
- System Spatial Resolution
 - with LEHR collimator: 7.3 mm (FWHM)
- System sensitivity (with LEHR collimator):
 - 160 cpm/ μ Ci

OPTIONAL ACCESSORIES

- Coincidence imaging upgrade package
- ECG triggering device for cardiac gated studies
- Colour video imager or colour laser printer
- CODONICS dry film imager
- Tuning and test phantoms
- Refillable isotope pen for anatomical marking
- Head holder for brain examinations