



NeuViz 16

ADVANCED IMAGING • MADE AFFORDABLE

Neusoft[®]
Beyond Technology[™]





Neusoft

NeuViz 16

Quality You Can Afford

The pursuit of ever more accurate imaging procedures is complicated by the relentless pressure on healthcare institutions and physicians to produce more affordable diagnoses. In order to meet these conflicting demands, Neusoft has developed the NeuViz 16, 16-slice computed tomography scanner, to achieve cost-effective, cutting-edge patient care.

NeuViz 16 offers multi-detector capability to generate clearer 3-D images of complex anatomical structures in an exceptionally compact design.

Key Features

- Friendly tool bar and graphical user interface
- Effortless patient data input
- Intuitive registration and clinical procedure selection
- Easy-to-use workflow for efficient operation



Efficiency

- 16-slice technology reduces exam time for more rapid diagnosis and maximum patient throughput
- Reliable system performance
- Low environmental costs due to minimal space requirements and optimal energy efficiency
- Compact design simplifies site planning

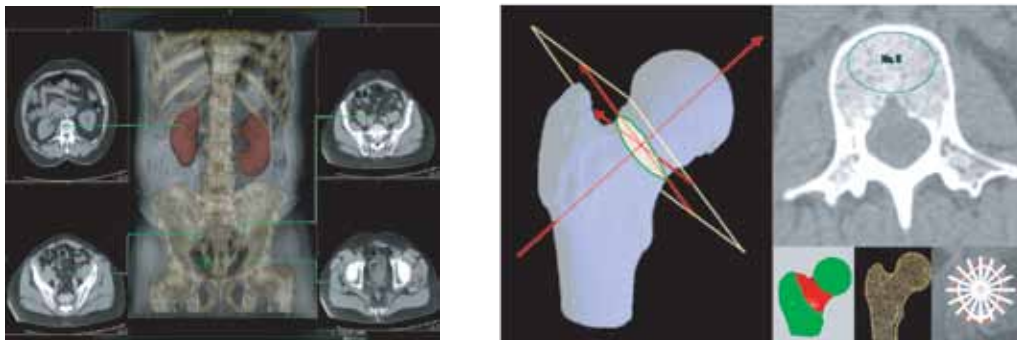
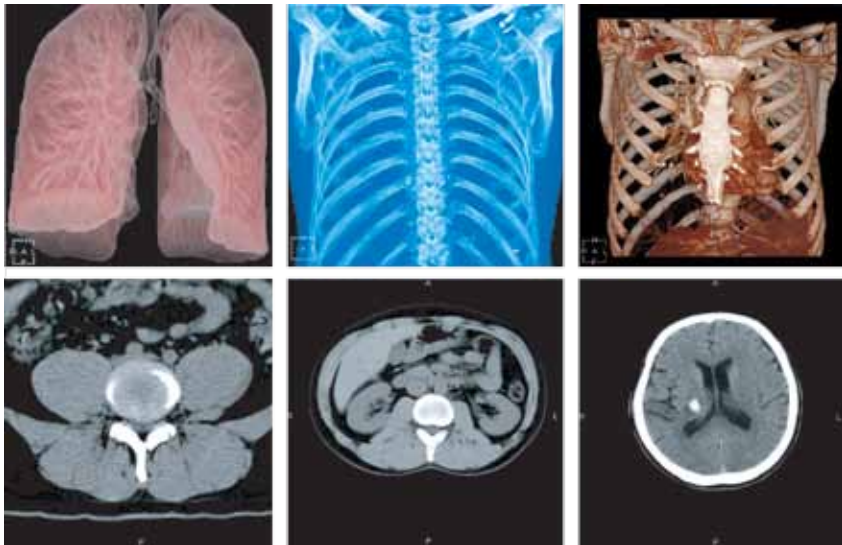
Clinical Benefits

Diagnostic insight is found at the intersection of modern imaging and advanced information technology.

The NeuViz 16 operator's console establishes an efficient environment for acquisition, reconstruction and post-processing using Neusoft's embedded computer-aided diagnostic (CAD) software.

Neusoft IT solutions provides visually enhanced 2D and 3D images and stabilize system performance to improve the diagnostic capabilities of CT.

UroCARE | OsteoCARE* | NeuColonCARE*



*Not available in all countries



Integrated Detector combines the widest detector coverage in its class with our with DAS system to dramatically improve signal-to-noise ratio for high resolution scanning, shorter breath-hold times, lower patient dose and improved patient comfort.

Patented Dynamic Focal Spot technology enables exceptional spatial resolution during axial and spiral scanning by alternately sampling two fan beams and doubling the reconstruction data samples to produce a more detailed image.

Dose Reduction functions reduce radiation exposure. Features including Automatic Current Selection, DoseRight® Dose Modulation, and dedicated pediatric protocols deliver optimal dose efficiency without compromising image quality. Modulation optimization tools enhance user experience, improves image quality and reduces patient dose by up to 50 percent.

Advanced Technology



Exceptionally Compact Design

With a footprint less than 190 sq. ft. (17.7 m²), the NeuViz 16 enables hospitals and private practices with limited space to install a 16-slice CT scanner where previously only a single-slice system could be accommodated.





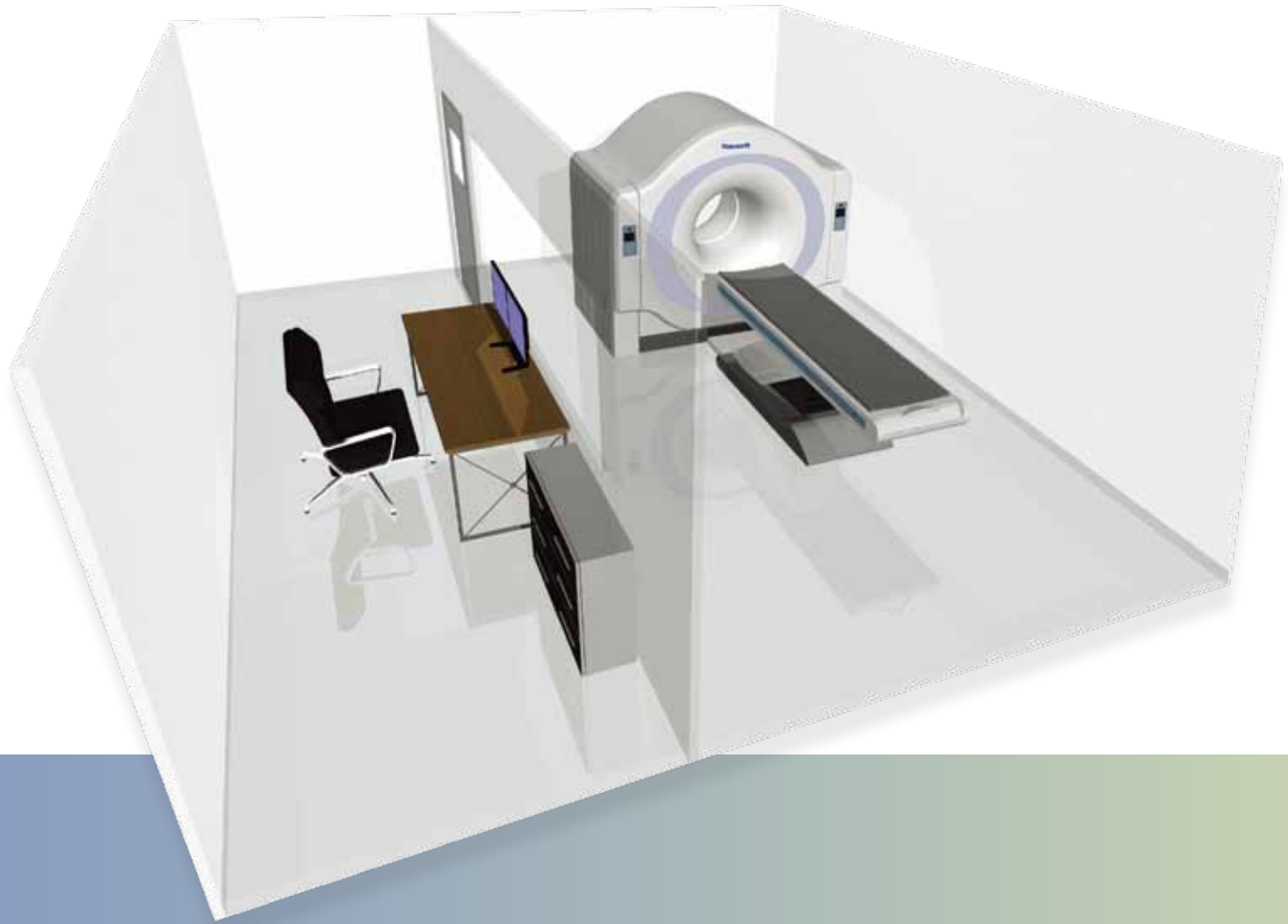
Rest Assured with Remote Service Capabilities*

The Neusoft Remote Service package continuously links the NeuViz 16 scanner directly to our online service center to proactively detect performance deviations and prevent further damage.

The Remote Service package provides ease of mind by ensuring that your NeuViz 16 is running at maximum performance and continually being serviced by technical experts.

*Optional. Broadband Internet is required.

NEUVIZ 16 • TECHNICAL SPECIFICATIONS



Generator

Maximum output:..... 50kw
MA range: 30mA~420mA
KV switch: 90KV, 120KV, 140KV

Detector

Material: Solid-State GOS
Number of elements: 16,128
Active elements per slice: 672
Detector arrangement:..... 24 rows
Slip ring: Capacitive -1.1 Gbps transfer rate
Scan collimation: 16x1.5mm, 12x1.5mm, 10x1.5mm,
16x0.75mm, 12x0.75mm, 10 x0.75mm,
8x0.75mm, 2x0.75mm, 4x0.75mm
Data acquisition rate: 1160, 2320, 4640 views/rotation

Image quality

Spatial resolution: 15.0 lp/cm @ cut-off [512X512 matrix,
120KV, 250mAs, FOV 50mm, 12mm, ED,
System Phantom, 22.38 mGy]
Low contrast resolution: 4.0 mm @ 0.3% [120kVp, 250 mAs, 9mm
250mm FOV, USA filter, 39.8mGy surface,
20 cm CATPHAN phantom]
Noise: 0.35%
[120kVp, 250mAs, 9mm, 250mm FOV, SA
filter, 20 cm water equivalent phantom]
Absorption range:..... -1024 to +3072 Hounsfield units
Absorption rate:..... 98%
CTDI: [120KV, 180mA, 1.0s, 16*1.5mm]
Head: 15.8 mGy/100mAs surface
14.3 mGy/100mAs Center
Body: 9.6 mGy/100mAs surface
4.6 mGy/100mAs Center

Phantom:

1. Tower phantom (7inch, 10inch) for system calibration
2. Step phantom for system calibration
3. Philips System Phantom for QA purpose

X-Ray Tube

Anode storage capacity:..... 5.0 MHU
Focal spots: 0.5x1.3mm (small)
1.0x1.3mm (large)
Anode rotate speed: 6300 RPMISO
Center to focal spot distance: 570mm
Focus to detector distance: 1040mm
Anode continuous cooling rate: . 6KWMax.
Anode heat dissipation rate: 9.6KW (815 kHU/min)
Cooling Mode: oil cooling

Dynamic Focal Spot (DFS) doubles the data sampling density effectively doubling the number of detectors and providing high spatial resolution in axial and spiral scanning.

Beam fan angle: 52 degree
Collimator type: lead, 4mm.
Filter: (Ti (Thickness: 1.2mm) + Teflon (Thickness:
2mm)) equiv 6.68mm Al

Gantry System

Gantry aperture: 700mm (700mm±10mm)
Gantry tilt: +/-30° (0.5°increments) accuracy +/- 2°
Scan speed(s/360°): 0.5s, 0.6s, 0.75s, 1.0s, 1.5s, 2s (Partial scan
speed: 0.33s for 240)
Scan localizer: (Laser positioning lamp) sagittal and
transverse localizer

Patient Table System

Longitudinal Motion

Manual stroke: 1580 mm
Scannable range: 1500 mm
Max scan range: 1500mm
Speed: 0.1 to 100 mm/sec.
Position accuracy: ± 0.25 mm

Vertical Motion

Range: 430 to 970 mm above floor; 1.0 inc
Table load capacity: 200 kg (440 lbs.) with 0.25mm z-axis accuracy
Speed: 9mm~15mm/sec.
Floating tabletop: Carbon-fiber tabletop with foot pedal and push button table brake release

Scan and Image Acquisition

Scout Scanning

Scan orientation: PA, AP, LAT
Scan range: 50m~1500mm
Scan speed: 100mm/sec.
FOV variable: 50-500mm

Spiral Scanning

Multiple, bi-directional, contiguous slices acquired simultaneously with continuous table movement during scans.
Spiral exposure: Up to 100 sec. of uninterrupted spiral scanning (Power<36kW, acquisition time max = 102s, 36kW<Power<42kW, acquisition time max = 80s, Power>42kW, acquisition time max = 60s)

Spiral pitch: 0.5 to 1.5 (user selectable 0.1 inc or auto pitch factor 0.5, 0.6, 0.67, 0.86, 1.0, 1.2, 1.5)
Slice thickness: 0.75mm, 1mm, 1.5mm, 2mm, 2.5mm, 3mm, 4mm, 5mm, 6mm, 7mm, 8mm, 9mm, 10mm

Axial Scanning

- Multiple-slice scan with up to 16 contiguous slices acquired simultaneously with incremental table movement between scans.
- Fused modes for reconstructing partial volume artifacts free thick slices from thin slice acquisition.
- Slice thickness: 0.75mm, 1.5mm, 3mm, 4.5mm, 6mm, 9mm and 12mm.

Dynamic Multi-scanning

Multiple (continuous) axial scanning without table movement for fast dynamic contrast study.
Dynamic scan: 1s, 2s, 3s
Cycle time: 0.6s
Scan times 0.5, 0.6, 0.75, 1, 1.5, 2 seconds for full 360° scans

Manual Scanning places slice-by-slice scans under operator, triggered by enable button or foot pedal.

Console Computer

Dell Precision™ T5400 Workstation

Operating system: Windows XP
CPU frequency: ≥ 2 GHz (Xeon processor)
Graphic processor: 1 GPU
Memory: 8GB
Hard disk capability: 750GB

Max. storage of images: Storage capacity \geq 400,000
 DVD — RW driver: 7500 images of 512 matrix/per 4.7GB Disk
 with embedded DICOM viewer
 User interface: CH & EN
 Monitor: 19' LCD
 Monitor resolution matrix: 1280x1024
 DICOM 3.0 configuration: DICOM Print/Store; DICOM Send
 Option configurations: DICOM MPPS/DICOM Modality Worklist
 (HIS/RIS)
 Connectivity: 10/100/1000Mbps (10/100/1000BaseT)
 UPS: APC UPS for console 1000VA, 670W, 4.5A

CT Site Planning

Dimensions & Weight

Gantry:..... 2244mm(L) x 890mm(W) x 1920mm(H)
 Gantry weight: \leq 1900kg
 Gantry package:..... 2370mm(L) x 1030mm(W) x 2250mm(H)
 Couch: 2420mm(L) x 575mm(W) x 1055mm(H)
 Couch weight: \leq 430kg
 Couch package: 2570mm(L) x 970mm(W) x 1230mm(H)
 Console table: 1400mm(L) x 800mm(W) x 760mm(H)

Power Supply Requirement

Power capacity: 80KVA
 Input voltage: 3-phase 4-line (with isolation transformer),
 power supply from these options:
 200/208/220/230/240/380/400/415/440/4
 60/480VAC

Voltage variation: tolerance \leq +10%
 Drop with loading: \leq 5% of the rating
 3-phase unbalance: \leq 5%
 Frequency: 50Hz/60Hz \pm 1Hz
 Grounding resistance:..... Independent grounding
 Resistance $<4\Omega$: Common grounding resistance $<1\Omega$

Environment Requirements

Minimum area of scan room: 18 m2Min.
 Area of operating room: 4.8 m2
 Recommended room size: 20 m2
 Minimum height of ceiling: 2300 mm
 Temperature of scan room: 18°C~24°C
 Temperature of control room: 15°C~30°C
 Humidity of scan room: 30%~60%
 Humidity of control room: 20%~ 80%
 Atmospheric pressure: 70kPa~106kPa
 Temperature of transportation
 and storage: -20°C+55°C Shock is less than 10G with package
 Humidity of transportation
 and storage: 10%90% (no-condensing)
 Atmospheric pressure: 50kPa106kPa
 Running noise: <70 dB(A) (1 meter distance)
 Heat dissipation:
 Gantry: 26,638 BTU/hr
 Computer: 2,561 BTU/hr



About Neusoft

Neusoft, the largest IT solutions and services provider in China, offers a rich portfolio of products and solutions across industries including: telecommunications, electric power, FSI manufacturing and trade logistics, healthcare, education and transportation.

Neusoft Medical Systems offers a comprehensive portfolio of digital medical imaging systems including CT and MRI scanners, digital X-ray equipment and diagnostic ultrasound systems. In recognition of our development efforts, Neusoft received the 2010 Frost and Sullivan New Product Innovation Award for remarkable contribution to sustaining innovative new product development in the medical imaging industry.

Neusoft Medical provides powerful yet affordable medical technology to over 60 countries and regions, with more than 5,000 customers worldwide.

For more information please visit
<http://medical.neusoft.com/en>

Neusoft[®]
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Neusoft Medical Systems USA, Inc.
14425 Torrey Chase, Suite 100
Houston, TX 77014
<http://medical.neusoft.com/en>
Tel: (281) 453-1206
nmsusa@us.neusoft.com

Neusoft Medical Systems
Neusoft Park
Huannan Industrial Area
New & High-Tech Development Zone
110179, P.R. China
Tel: (86 24) 8366 5681
neumedical@neusoft.com

Neusoft Medical (Middle East) FZ - LLC
Dubai Healthcare City, Building 26 'Al Bakar'
Office # 705/706
P.O. Box 115321 - Dubai, UAE
<http://medical.neusoft.com>
Tel: +971 4 44 04 885
mohamed.elgabry@neusoft.com