STERNMED®

IBS GROUPE

Cytom 16

Multi-slice ultra-fast CT scanner

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WORLD LEADING GANTRY TECHNOLOGY

- Higher Rotation Speed
- Faster Dynamic Response
- Smaller in Dimension & Weight

HIGHLY INTEGRATED DATA ACQUISITION SYSTEM

- Number of Detectors per Row 896
- Number of Detector Units 21504
- Minimum Slice Thickness 0.625mm

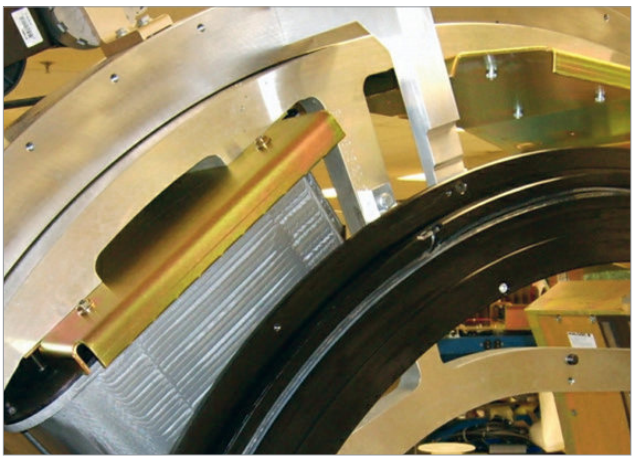
PERFECT X-RAY GENERATOR SYSTEM

- Power of Generator 60kW
- Tube kVp Range 80-140Kv
- Tube mA Range 10-500mA

Cytom 16

Multi-slice ultra-fast CT scanner

The Cytom 16 is a multi-slice ultra-fast CT scanner with PowerLink Non-Contact Power Technology. PowerLink eliminates limitations of today's rotating gantry systems providing highest reliability CT power system, no need slip ring at lower cost.



NON-CONTACT SLIP-RING DESIGN

Innovative PowerLink™ Gantry Technology

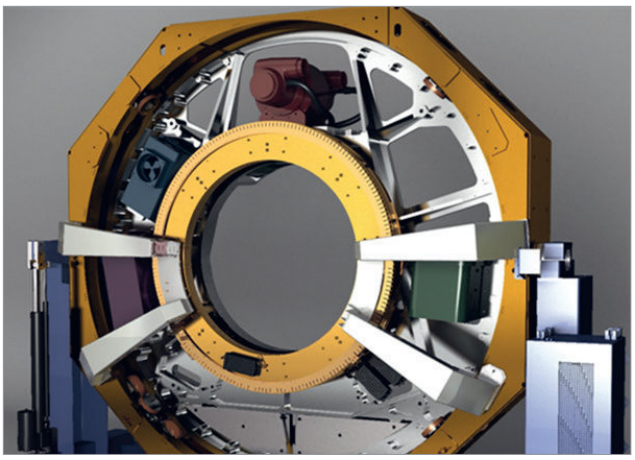
- Never attrited and non-contact slip ring design
- Full integration in data communication and transmission
- Integrated control in gantry rotation

ADVANTAGE OF AUTO-DOSE

Tube current is automatically controlled according to the features of organs to reduce the radiation dose effectively on the basis of ensuring images quality.

TECHNOLOGY OF LOW-DOSE

It is the latest and advanced technology for reducing dose, which can ensure high clinical image quality with large does reduction to the patient, even under the condition of 60%~70% normal dose.



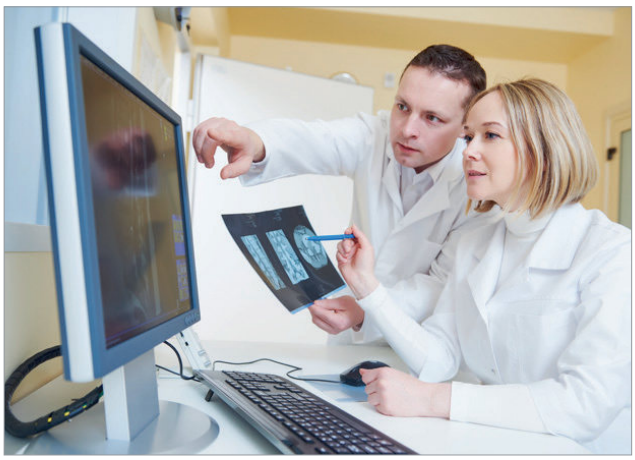
MINIMUM MAINTENANCE COSTS

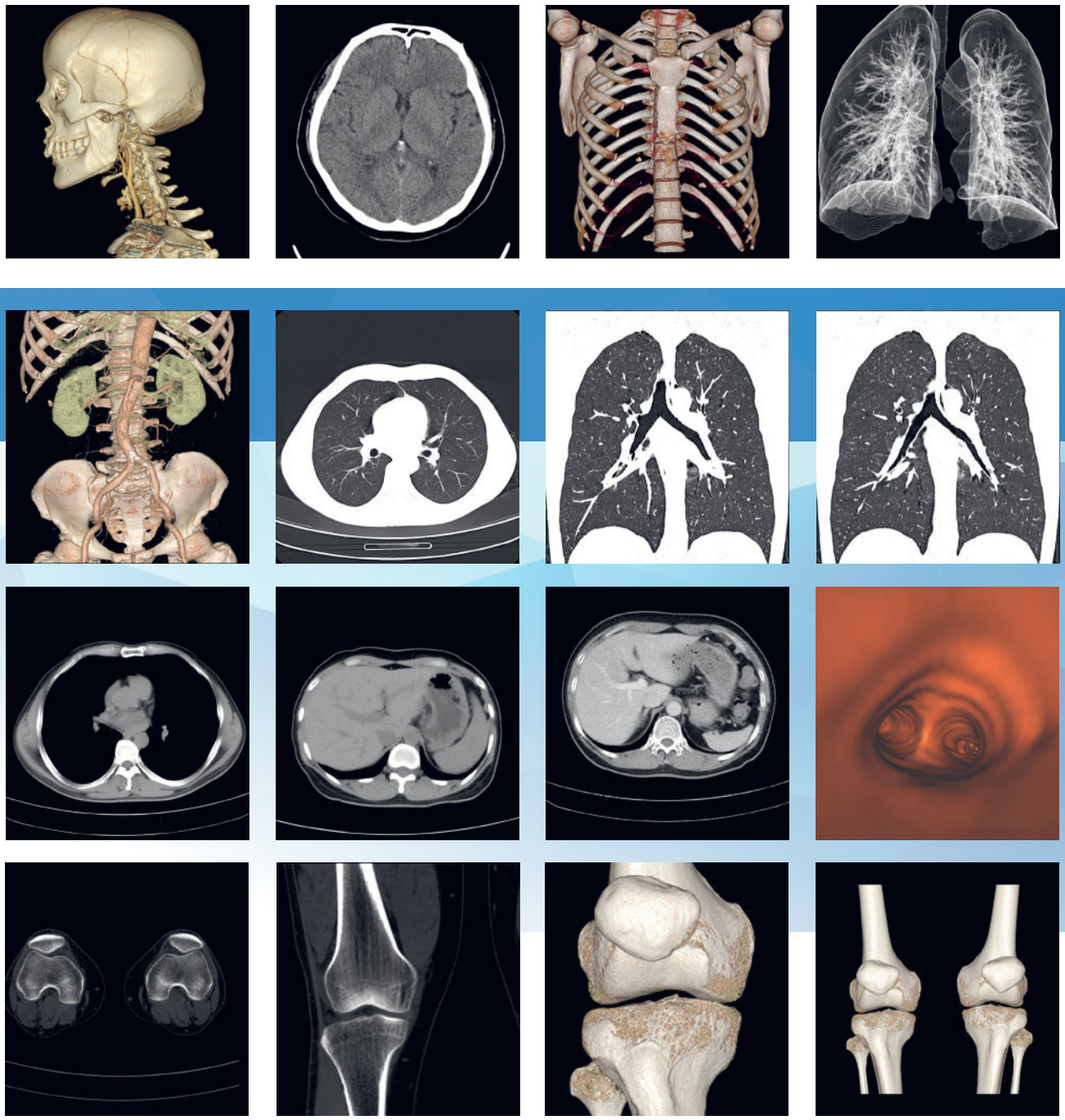
- Lower dose, lower consumption
- Non-contact power transfer, without carbon brush consumption
- Reduced downtime

OUTSTANDING CLINICAL IMAGES

Head: Conventional, Paranasal Sinus, MPR, SSD, VR, CTA, HD
Inner Ear Cervical Vertebra: Conventional, MPR, VR, CTA
Chest: Conventional(Lung Window, Mediastinal Window), MPR, VR, MinIP

Abdomen: Conventional, Enhancements Phases), MPR, VR,
CTA Extremities and Joints: Conventional, MPR, VR





APPLICATION PACKAGES

3D image reconstruction:
Include VRT, MPR, CPR, SSD, Simulated scalpel, Virtual endoscope, CTA Remove bone, CTA subtraction,etc.

Tissue fluoro
Combine 2D and 3D Image; Multi-Date field fusion for observation; Read a slice on any angles; Automatic push functions can reduce operation and improve speed

Tissue element analysis
Make extraction and analysis of the tissue within the organ, giving quantitative analysis for the estimate of diagnose\treatment\treatment effect

CT vessel analysis
After CTA subtraction or bone removal, make vessel straighten analysis, virtual endoscope, plaque analysis,virtual stent and so one, including head and neck, thoraco-abdominal, limbs and other parts.

CT perfusion analysis
According to the analysis of the dynamics of blood, detect the patholo-gical field before the morphological changes occur. Multiple Perfusion Models including CT Head Model, CT Body Model, CT Liver Model; providing various para-meters for analysis, including BF, BV, MTT, TTP, tMIP, PS, etc.

CT coronary artery analysis
Mainly focus on cardiac CTA analysis, including One-key heart 3D reconstruction, panoramic view of heart,stenosis analysis, plaques analysis, vessel straighten analysis, broken branch and CTO reconstruction, Heart display as a globe, virtual stents placement and measurement Automatic analysis and manual correction are both available.

CT calcium score analysis
According to calcium score, evaluate the quality of the coronary and give quantitative analysis of the calcium volume, CT value to assist diagnosis.

CT heart function evaluation
Dynamic play and AVI storage of the cardiac motion; automatically calculate the parameters of the cardiac function, such as Ejection Fraction, End.Sys.Vol, End.Dia.Vol, ventricular wall movement, ventricular wall thickness, etc.

CT Bone mineral density analysis
Calculate and display the bone mineral density of the ROI. TScore and ZScore can be automatically calculated or self defined analysis. Mineral density analysis report is created by one key. Images of mineral density measurement and analysis are saved as DICOM.

CT spine extraction and analysis
Whole spine is segmented automatically. Offer Segmental analysis, auto-name, virtual multi-dimensional X-ray images, one-key multiple slices printing, etc. Spine diagnosis becomes quite efficient.

CT rib analysis
Auto-analysis of the rib. One-key segmentation of the target rib, display 3D view and CPR. Full analysis of the rib makes the diagnosis quite efficient.

CT colon analysis
Forward path and backward path of virtual colonoscope, self-navigation, colon unfolding display to help doctor to observe the inner side. Auto segmentation of analysis of the interested colon segment and mark the lesion.Various measurement parameters for the lesion are provided.

CT lung nubble analysis
Analysis of the suspected lesion within the lung. Automatic lung extraction and manual extraction are both available. Nubble volume measurement, evaluate the nubble size changes through time, assist to qualitatively determine the nubble. In addition, various parameters are provided, including volume, CT value, component analysis, curves, etc.

CT pulmonary edema analysis
Calculate the volume of ROI, water volume, water weight, density in the lung CT image, display the ROI analysis result in the list. Assist the pulmonary edema diagnosis.

CT lung analysis
One-key to segment the airway and left/right lung with pseudo color processing;Quantitative and qualitative analysis of the lung.

CT lung markings analysis
Auto-segmentation of the whole lung;For the lung nubble, generate the voxel analysis curve and data form.

Advanced dental radiological analysis function
Dental full view and sectional view, provide various measurements, assist dental diagnosis and to make operation plans.

CTU
Urological imaging analysis

CT liver analysis
Auxiliary to develop operation plan based on CT images; image processing includes liver segment, extracting blood vessels, liver surgery simulation

CT abdominal panoramic reconstruction
Based on contrast-enhanced CT abdomen images, offers 3D reconstruction, tissue extraction with the fusion display, reconstruction of the abdomen panorama, better diagnosis and operation programming.

TECHNICAL SPECIFICATIONS
Cytom 16 | SternMed multi-slice ultra-fast CT Scanner

DATA ACQUISITION SYSTEM	
Detector Spec	21504 UNIT/24 ROWS
Scan vision	500 mm
Scanning Type	Axial, Dynamic, Spiral, Positioning
Reconstruction Matrix	512 x 512
X-RAY HIGH VOLTAGE GEN.	
Max. output power	60 Kw
Max. Output mA	500 mA
High Voltage Output Range	80, 100, 120, 140 Kv
X-RAY TUBE COMPONENT	
Anode thermal capacity	5.0 MHU
Effective thermal capacity	5.0 MHU
Focus size	S: 0.5 x 1.0 mm L: 1.0 x 1.0 mm
Tube Focus Technology Tube Voltage Tube Current	Dynamic
COLOR IMAGE DISPLAY	
Monitor	24"
Monitor Resolution	1920 x 1200
Image Matrix	776 x 776
SPIRAL SCANNING PARAMETERS	
Helical Pitches	0.5, 1.0, 1.5
Continus Spiral Scan time	120 s
Scanning range	>160 Cm
IMAGE STORAGE AND ARCHIVING	
DICOM	DICOM 3.0
WORKING & ENVIRONMENT CONDITIONS	
Exam room temperature	20 ~ 26 °C
Control room temperature	18 ~ 28 °C
Exam room humidity	30 ~ 70 %
Control room humidity	20 - 80%
Atmospheric pressure	700 ~ 1060 hPa
POWER CONDITIONS	
nominal Voltage	3N ~ 380 V
Nominal frequency	50 Hz
Power Capacity	115 kVA
SYSTEM PERFORMANCE	
Image Noise	>0.29% (28 mGy)
Water Uniformity of CT	± 3 HU
Accuracy of CT	Air : -1000 HU ± 10 HU Water : ± 3HU
High Contrast Resolution	17.51 p/cm@0%MTF 131 p/cm@10%MTF 101 p/cm@50%MTF
Lower Contrast Resolution	3.0mm@0.3% (30mGy)
Artifacts	No in phantom CT Image

SCAN TIME	
Scanning time range	Axial: 0.5s, 0.8s, 1s, 2s Spiral: 0.5s, 0.8s, 1s
Max. Continous Scanning time	> 120s
Image reconstruction time	40 images/s
Slice Thickness	0.625, 1.25, 2.5, 5.0, 10 mm
Axial & Spiral Scan	>2mm Thickness : ± 1.0 mm
Deviation of measured and Nominal	<2mm Thickness : ± 50%
GANTRY	
Gantry tilt	Front & Back tilt function Tilt Angle indicator
Tilt angle capability	± 30° - Deviation < ± 2° H & V position laser light ind.
Laser Positioning Accuracy	± 1 mm
Tube Position for Scanning	0° , 90° , 180° and 270°
Gantry Aperture (Openning Diameter)	>700 mm
EXAMINATION TABLE	
Highest Adjusment range	>350 mm
Horizantal movement range	>1600 mm
Scanning range	>1600 mm
Step Accuracy	< ± 0.25 mm
Table Load	< 240 Kg
Operating Noise	< 70 dB
X-RAY GENERATOR DEVICE	
Voltage Regulation range and accuracy	80, 100, 120 & 140 kv four gears
Voltage Deviation	± 5%
Current adjusment range and accuracy	10mA ~ 500mA
Increment steps	10mA
Current Deviation	± 20%
Max. Scan layer / single scan	16
SOFTWARE FUNCTIONS	
	Check Patients Patient Information Management Image viewing and analysis Image type setting and printing DICOM communucation interface Scanning Protocol management Task queue management Enhanced Scanning Noise Reduction Package Automatic speech function Log Management

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