ANKE

ANATOM Precision

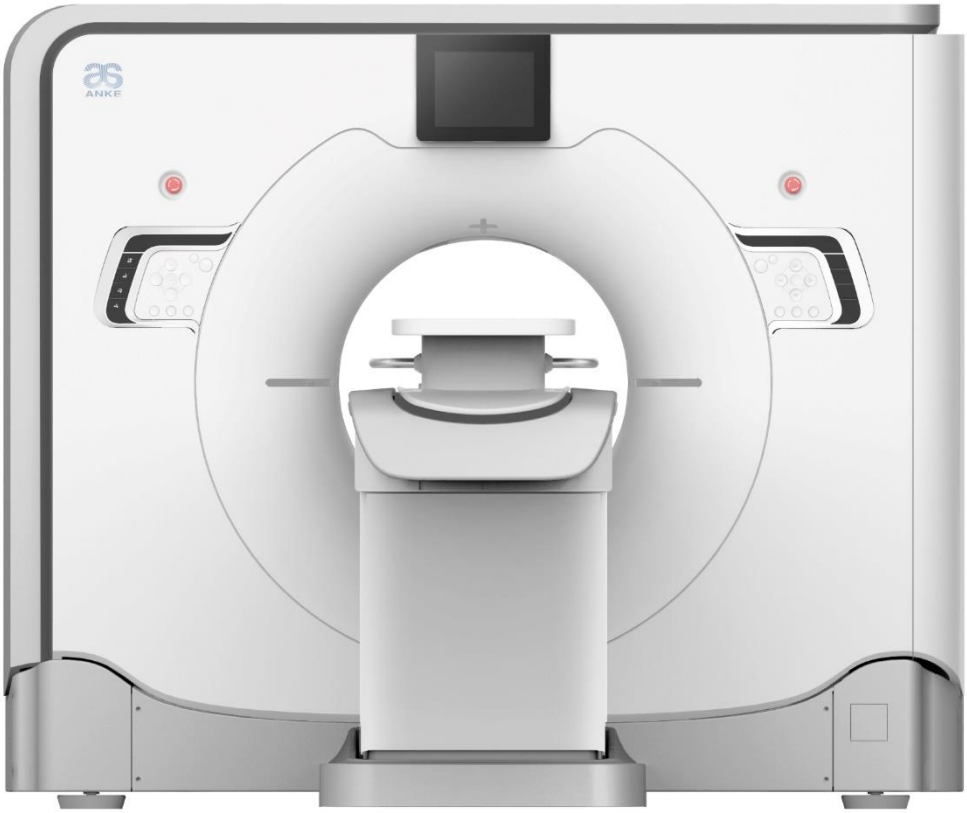
Product Datasheet for

128-slice Computed Tomography System

Key to Success of Precision

ANATOM Precision. Platform

As a growing number of patients pay great attention on a more precision and efficient diagnosis output, ANKE ANATOM Precision provides exquisite image quality while continuing to optimizes the patient experience with streamlined workflow and comprehensive clinical applications from routine to cardiac examination. Focus on patient-centered purpose, ANATOM Precision is key success of Precision.



System Hardware

Gantry

Aperture	Φ 70 cm
Scan FOV	52 cm
Rotation time (360°)	0.37, 0.4, 0.5, 0.6, 0.8, 1.0, 1.5, 2.0s
Tilt	±30° (mechanical) & ±50° (digital)
Slip ring	Low voltage slip ring
Laser light	3D laser orientation

Tube Assembly

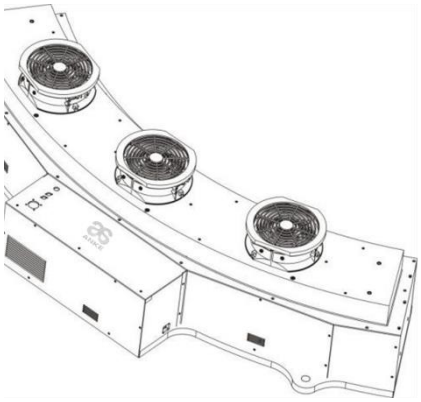
Tube	CTR-2280
Tube anode storage capacity	8.0 MHU
Maximum colling rate	931 kHU/min
Focal spot size (IEC 60336)	1.1 mm x 1.2 mm (Large) 0.6 mm x 1.2 mm (Small)
Type of cooling	Oil / Air cooling

Generator

Max. power	80 kW
Type	High frequency
kV settings	80, 100, 120, 140kV
Tube current range	10 – 667mA

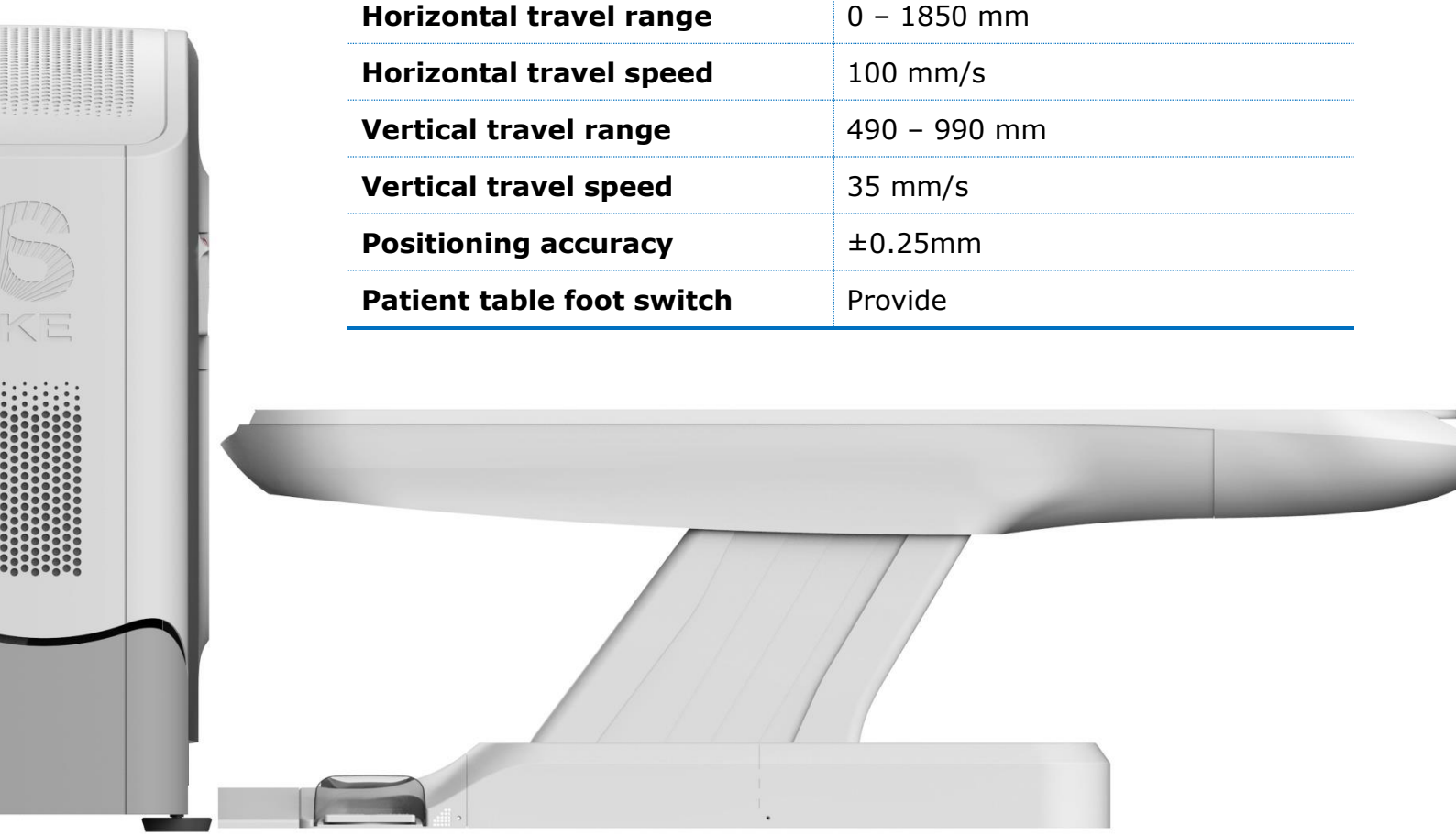
Data Acquisition System

Detector material	New generation Optiwave™ (Solid-state GOS)
Max. number of slices per rotation	128
Number of detector rows	64
Z-plane coverage	40 mm
Minimum slice thickness	0.625 mm
Number of detector elements	58,368



Patient Table

Max. table load	230 kg / 507 lbs
Max. scannable range	1800 mm
Horizontal travel range	0 – 1850 mm
Horizontal travel speed	100 mm/s
Vertical travel range	490 – 990 mm
Vertical travel speed	35 mm/s
Positioning accuracy	±0.25mm
Patient table foot switch	Provide



System Performance

Data Acquisition

Scout Scan

Scout scan helps technicians to accurately locate the desired examination region of patients while minimize the dose usage with the help of ADose dose modulation function customize and automatically.

Axial Scan

Rotation time (360°)	0.37, 0.4, 0.5, 0.6, 0.8, 1.0, 1.5, 2.0s
Acquisition mode	64x0.625, 32x0.625, 16x0.625, 8x0.625
Reconstruction slice thickness	0.3125mm, 0.625mm, 1.25mm, 2.5mm, 5.0mm, 10.0mm

Helical Scan

Rotation time (360°)	0.37, 0.4, 0.5, 0.6, 0.8, 1.0, 1.5, 2.0s
Acquisition mode	64x0.625, 32x0.625, 16x0.625, 8x0.625
Reconstruction slice thickness	0.3125mm, 0.625mm, 1.25mm, 2.5mm, 5.0mm, 7.5mm, 10.0mm
Max. continuous scan time	120 s
Scan pitch	0.1 – 2.0

Image Reconstruction

Reconstruction FOV	10 – 500 mm
Image reconstruction speed	65 images/s
Reconstruction matrix	512x512, 768x768, 1024x1024
Display matrix	1024x1024
CT Value	-32,767 ~ 32,768

ANKE

Image Quality

High contrast resolution	21 lp/cm @ 0%MTF 17 lp/cm @ 10%MTF 12 lp/cm @ 50%MTF
Low contrast resolution	2.0 mm @ 0.3%, no more than 18mGy
Image noise	≤ 0.25% central dose 25mGy
Homogeneity	±3 HU (Water)

Workplace Systems

Console Workstation

CPU	Intel Xeon W2223 (4-core) 3.6GHz
RAM	64 GB
Hard disk storage	4 TB + 512 GB SSD
Graphics	RTX 3080 Ti
Monitor	24 inches
Monitor resolution	1920 x 1200
System	Windows 10 Professional

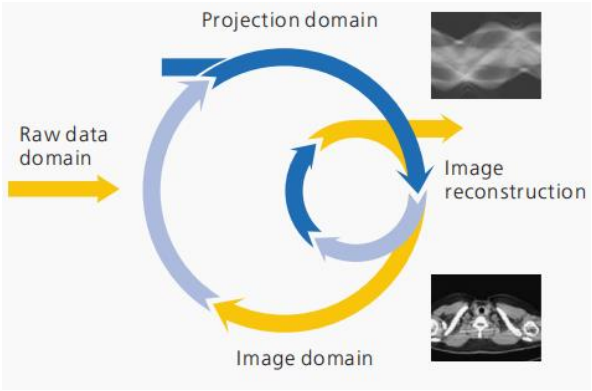
Post-processing Workstation

CPU	Intel Core i7-10700 (8-core) 2.9GHz
RAM	16 GB
Hard disk storage	1TB
Graphics	6G
Monitor	24 inches
Monitor resolution	1920 x 1200
System	Windows 10 Professional

Standard Functions for Application

Admir™ 3D Iterative Reconstruction

Through innovative technology, Admir™ can not only fully extract effective data information but also maintain consistent image quality with reduced dose compared to conventional algorithm.

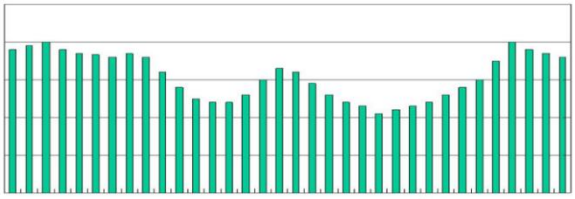


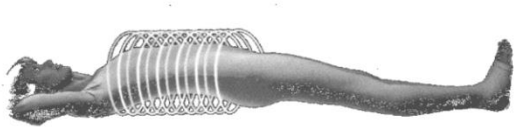
AutoVoice

A standard set of commands for patient guidance have already been put into system, and supports personalized languages recorded.

Adose – Auto mA

Auto mA is an automatic current modulation technology which optimize the tube exposure output. System utilizes different real-time tube current based on the patient organization, ensuring the high definition of images while don't compare to the extra radiation dose.



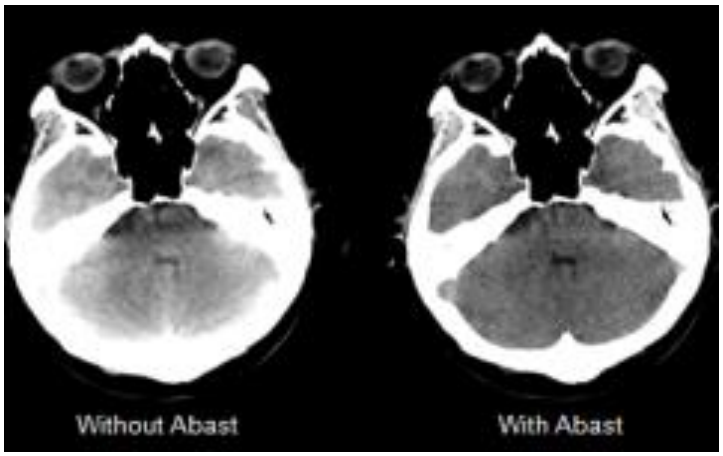


Adose – kV

The kV value could be selected automatically according to the patient size, age and scanning protocols; thus, the dose is optimized under the premise of image quality guarantee and noise uniformity.

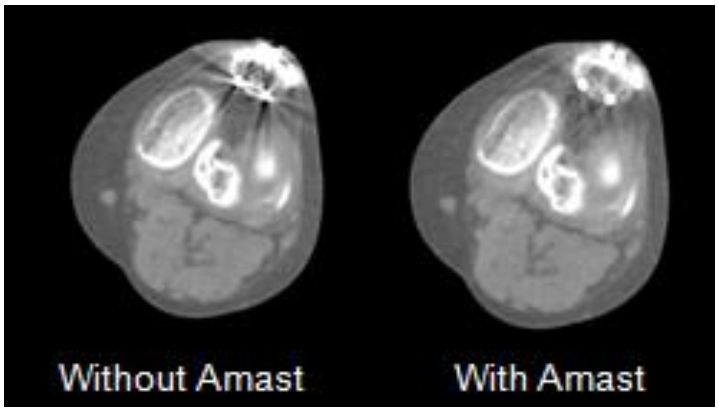
Abast™

Abast™ bone artifact suppression technology can eliminate X-ray hardening effect to the human parts like cerebellum, brain stem and so on, clearly showing the structure and improving the diagnostic reliability.



Amast™

Amast™ metal artifact suppression technology is an elimination method based on iterative correction, which is performed on the basis of pre-processed images, it can remove metal artifacts effectively and suppress the generation of secondary artifacts.



AccuOrgan

AccuOrgan is ANKE featured technology targeted at enhancing image resolution, application default protocols with customized setting and algorithm for head, chest, abdomen, inner ear, pelvis and bone.

Low-dose pediatric scanning

A full-range of pediatric scanning protocols have been customized and recorded in system for children based on the weight, age and scanning area. Reducing exposure in reasonable range while achieving satisfiable clinical output.

AccuCadio

When scanning the coronary arteries of patients with arrhythmias, system monitors the arrhythmic condition intelligently and automatically skip the irregular cycle which able to acquire the normal heart rate cycle and data

AccuPitch

Adaptive pitch and corresponding scanning parameters provided by system automatically according to the heart rate

AccuTracking

Ensuring a successful coronary scan, system will track the motion of coronary arteries and correct artifacts algorithmically

AccuGating

During a cardiac coronary scan, the system can automatically initiate data acquisition based on the ECG during a cardiac coronary scan

AccuPhase

Based on patients' ECG wave, system will select the appropriate phase for scanning automatically

ANKE

Standard Functions on console

Real-time MPR

Real-time MPR function make it possible to reconstruction of different MPR orientations during scanning process, the operator may check immediately without waiting

Image Module

- Image loading and quit
- 2D image viewer
- Sequence / image selection
- Multi image layout
- Image browse
- Image measurement: angle, distance, CT value, ROI drawing, labeling, recover and delete
- Image adjustment: Movement, zoom in and out, turn direction, WW/WL selection, image reset, grid coordinate display, position line / scout view display
- Sequence comparison
- Image export and transmit

Film Module

Film module is used for image receipt, image viewer and management, layout setting, printing preview and output

3D

- 3D volume rendering (VR) with robust set of templates for different clinical applications
- Multi-planar reconstruction (MPR)
- Maximum / minimum intensity projection (MIP / MinIP)
- Surface shaded display (SSD)
- Curved-planar reconstruction (CPR)
- Tissue segmentation
- Bone and table removal
- Extract blood vessels
- Virtual Endoscope

Report Module

- Load designated report
- Report creation, storage and print
- Template setting support

DICOM Viewer

ANKE ANATOM CT series fully complies with DICOM 3.0 communications protocols, which allows connectivity to DICOM 3.0 with PACS, workstations and printers. Supporting image view, write, transmit, and print of DCIOM format data

DVD/CD Archiving

Supports storage of images, information and data viewing on DVD/CD format

Bolus Tracking

Triggering the start of spiral acquisition at a pre-set threshold following the contrast injection

Networking

Supports 10/100/1000 Mbps network

CINE Display

All images in same sequence could be browsed in cine mode rapidly

Advanced Clinical Applications on post-processing workstation

CT Vessel Analysis

Rapid extraction of blood vessels throughout the body, combined with MIP, CPR, straightening image and other multi-mode displays. And complete the functions of vascular stenosis analysis, plaque analysis, pre-operative simulation and so on, achieving rapid diagnosis and analysis of vascular lesions

CT Coronary Analysis

Automatic coronary artery extraction, naming, labelling and image display such as coronary VR, straightening and CPR images. Combined with stenosis analysis, plaque analysis, pre-operative simulation and other functions, assist in the diagnosis of coronary artery lesions

CT Cardiac Calcium Scoring Analysis

Automatically calculate the calcification integral value of each coronary artery. Generate a measurement report and evaluate the overall calcification of coronary artery without invasiveness

CT Cardiac Function Analysis

Automatically calculate cardiac functional parameters such as ejection fraction, end-systolic and end-diastolic ventricular volume. Combined with the movement state of the ventricular wall and the change of the thickness of the chamber wall, the functional status of the left ventricle of the patient was assessed

CT Perfusion Analysis

Provide perfusion models such as head, body and liver tumors, automatically generates temporal density curves and provides key parameters like CBF, CBV, MTT, etc., to assist in disease diagnosis and efficacy evaluation

CT Colon Analysis

Automatic identification and extraction of colon, providing multi-mode display such as colon VR, virtual contrast development and tiling. Dynamic display of colon lesions and quantitative analysis of colon polyps.

CT Pulmonary Nodule Analysis

Automatic detection and identification of lung nodule lesions, qualitative and quantitative analysis. Provide lung nodule follow-up function, automatically generate growth curves and other analysis results to assist in clinical early screening and regular evaluation of lung nodule lesions

CT Dental Analysis

Automatically reconstruct the panorama and section of the teeth tile, visually display the overall situation of the oral cavity, the display of root canal form and position, etc., to assist in the diagnosis of dental disease

Optional Applications

Liver Analysis*

Automatic extraction and segmentation of liver, quantify the volume and proportion of each liver segment and other parameters, accurately assess the liver reserve function. Meanwhile, liver tumors can be quickly extracted and quantified, which intelligently indicates the risk areas of tumors and peripheral blood vessels, providing pre-operative simulation resection protocols

Pericoronary Fat Attenuation Index (FAI)*

Automated quantitative measurement and analysis of multiple parameters of pericoronary fat to assist in clinical prediction and assessment of the risk of coronary artery disease

Myocardial Perfusion Analysis*

Automatic image calibration and myocardial segmentation, intelligent calculation of dynamic perfusion curves, bulls eye maps, etc., quantitative analysis of MBF, MBV and other parameters, visual assessment of perfusion status, evaluation of coronary heart disease myocardial ischemia or infarction

Lung Analysis*

Whole lung is automatically extracted and divided, volume and density of each tissue in the lung parenchyma are generated with one-click. Emphysema and bronchial lesions are evaluated with one-click

Pulmonary Effusion Analysis*

Quantitative analysis of relevant parameters such as accumulation volume and weight in the lungs to assess the lesions of patients

Pulmonary Texture Analysis*

The voxel analysis curve and parameter values of lung texture index can be automatically generated for the lung tissue of interest. Clinical analysis of chest lesions that may be caused by changes in lung texture can be carried out as well

Intelligent Pulmonary Lesions Analysis*

Based on 3D deep neural network detection model, automatically detects, localizes and amounts of various types of diseases such as pneumonia and lumps in the lungs. Providing multi-phase follow-up comparison function and structured reporting to improve the efficiency of clinical diagnosis and avoid missed diagnosis results

CTU Analysis*

Urinary system automatic extraction and reconstruction display, providing straightening image, CPR reconstruction, simulated endoscopy to assist in the diagnosis of urinary stones and tumors

Cerebral Ischemia Penumbra Analysis*

Fast lock the location and scope of tissues such as infarction area and ischemia penumbra zone. Conduct quantitative assessment to assist clinical timely formulation of the most suitable treatment plan

Spine Analysis*

Automatically extract, segment and name of the spine, providing a variety of display modes and professional measurement & analysis tools to assist in the clinical diagnosis and evaluation of scoliosis, fractures and other disease

Rib Analysis*

Automatically extract ribs and perform 3D reconstruction, realize multi-mode display such as 3D, CPR and rib cross-section. Quickly realize the refined analysis of target ribs, assist in the diagnosis of rib fractures and other lesions

Intelligent Rib Panorama Assessment*

Automatic extraction and naming of ribs and spine, intelligent tiling of ribs, straightening of thoracic spine, combined with MRP, VRT and other multi-mode display methods, to assist in the all-round diagnosis of ribs and spine as well as other lesions

Bone Mineral Density Analysis*

Calculate bone mineral density values for regions of interest, automatically analyze and calculate TScore and ZScore values. Generate analytical reports to assist in the evaluation of clinical lesions

Surgical Planning and Simulation Platform*

Three-dimensional multi-stage reconstruction to achieve multi-organ tissue fusion display, clearly display the anatomical relationship between different organs and tissues. Assist doctors in observing all aspects of intra-parenchymal lesions and pre-operative planning

Data (Lesions) Tracking and Evaluation System*

For follow-up patients, a professional lesion data management database can be quickly established to realize the automatic comparative analysis of lesion data, providing WHO, RECIST and other entity lesions treatment efficacy evaluation standards, automatically generate analysis results, assist in clinical diagnosis and efficacy assessment of lesions

Image Fusion*

Support CT, MRI, PET images fusion

Dual Energy Analysis*

Provide energy spectrum analysis techniques such as single-level analysis, energy spectrum curve, scatter plot, effective atomic number map, etc., as well as qualitative and quantitative analysis such as metal removal artifacts, gout crystal detection and stone detection

TAVI**

Full-process imaging review for transcatheter aortic valve replacement, including rapid annular plane localization, measurement of relevant parameters, structural analysis, aortic angiography, approach analysis and report output, printing. This function can assist in the comprehensive planning of pre-operative surgical protocols, post-operative follow-up evaluation and TAVI-related scientific research

Intelligent Analysis of Left Atrial Appendix**

Using for whole process of imaging evaluation of left atrial appendage occlusion, including plane confirmation of the opening, measurement of relevant parameters, analysis of correlation structure, simulation of left atrial appendage and left atrium, approach analysis, reporting and automatic calculation of the thrombus volume. Post-operative assessment of the morphology and degree of endothelialization of the left atrial appendage

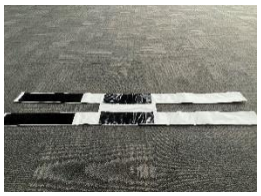
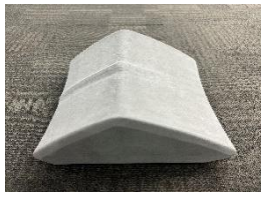
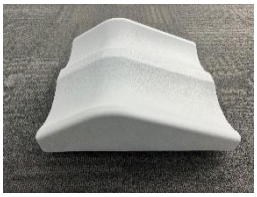
*Optional on post-processing workstation
**Optional on independent workplace

Accessories

Standard Accessories

		
Flat Head Holder	**Flat Head Holder Cushion**	**Patient Table Cushion**

Optional Accessories

			
Head Straps	**Body Straps**	**Coronal Head Holder**	**Coronal Head Holder Cushion**
			
Arm-head Cushion	**Arm Joint Support**	**Knee Joint Cushion**	**Leg Cushion**
			
Head Cushion (Groove)	**Patient Table Extension Cushion**	**Heighten cushion – 10/20/30/50cm**	**15° / 25° heighten cushion**

Site Planning

We redesigned ANKE CT with compact design language fits your demanding clinical requirements and outstanding system performance

Components

Dimensions	L (mm)	W (mm)	H (mm)	Weight (kg)
Gantry	2320	1140	1945	1950
Patient table 230kg	3065	789	1200	350

Power Supply

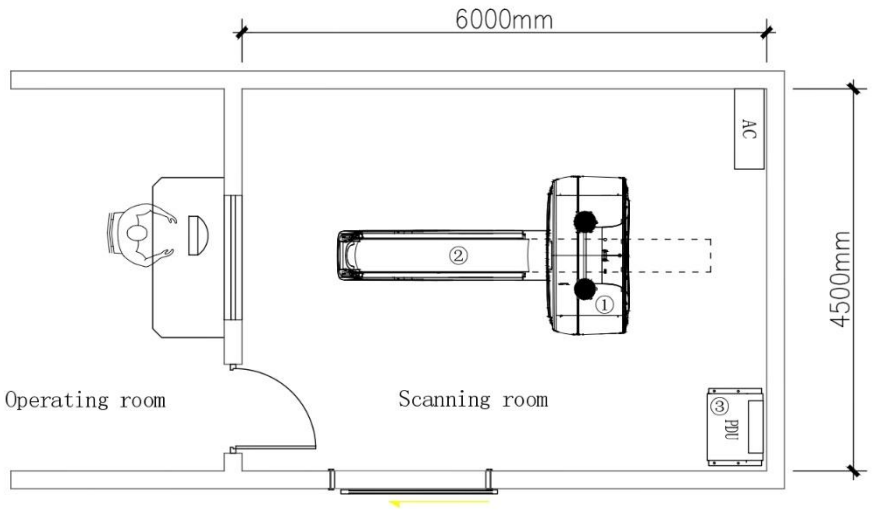
Power input	115 kVA
Input frequency	50 Hz
Power type	Three-phase
Input voltage	380 VAC
UPS for whole system	30 mins for power failure*

*Optional

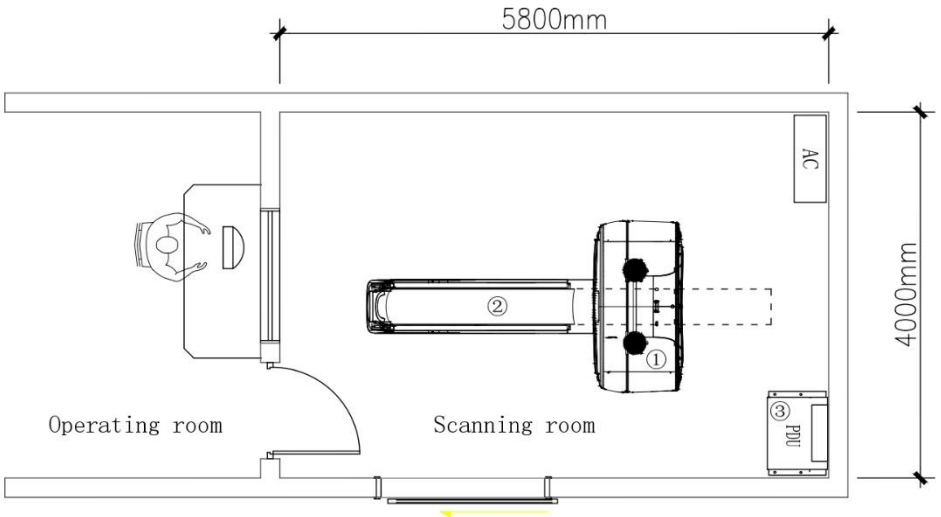
Environmental Requirements

Temperature of scan room	20℃ - 26℃
Temperature of control room	18℃ - 28℃
Humidity of scan room	30% - 70% (non-condensing)
Humidity of control room	20% - 80%
Atmosphere pressure	700hPa – 1060hPa

Recommended Area of Room (27 square meters)



Min. Area of Room (23.2 square meters)



Shenzhen Anke High-tech Co., Ltd.

Address: Block B, LingYa Industrial Zone, Tangtou No.1 Road, Bao'an District, Shenzhen, 518108, P.R. China
Tel: +86-755-21622518 26688889
Fax: +86-755-26695307 26685908
Email: anke@anke.com

Twitter: ANKE (@ankeint)
Facebook: ANKE (@ankemri)
Instagram: ANKE (@ankemarcom)
Linkedin: Shenzhen Anke High-tech Co., Ltd.

Specifications and appearance of the equipment may change without prior notice. ANKE reserves the right of final interpretation