ENDO

ENDO CS128.2

CT Scan

https://endo.id

ENDO CT Scan CS128

128-slice CT scanner

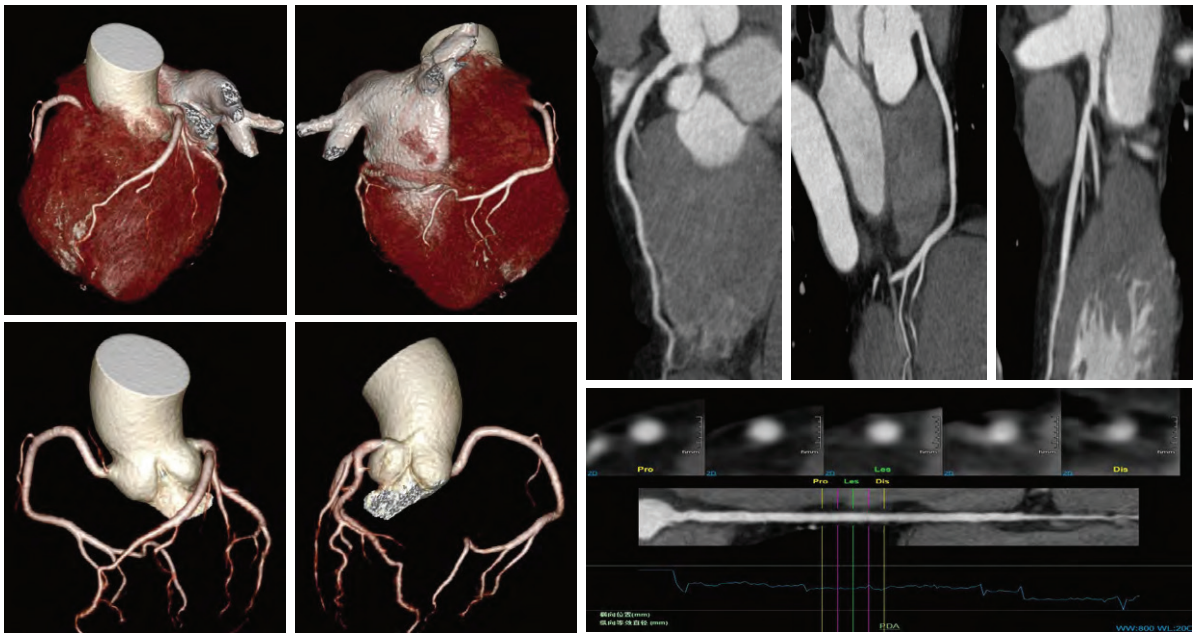
High-level, multifunctionality for all CT radiology needs

Product highlights

- RTF technology and 25ms temporal resolution effectively reduces cardiac motion artifacts which enabling clearer rendering of heart at higher rates with better image quality.
- Patented Micro Wafer detector together with V-beam X-ray optimalization collimation greatly improves X-ray efficiency resulting in ultra-high definition.
- Whole body full range scanning, diagnosis, and biopsy, supports the full process from quantification to qualification.
- AI based post-processing workstation assists faster workflow and greater diagnostic confidence.

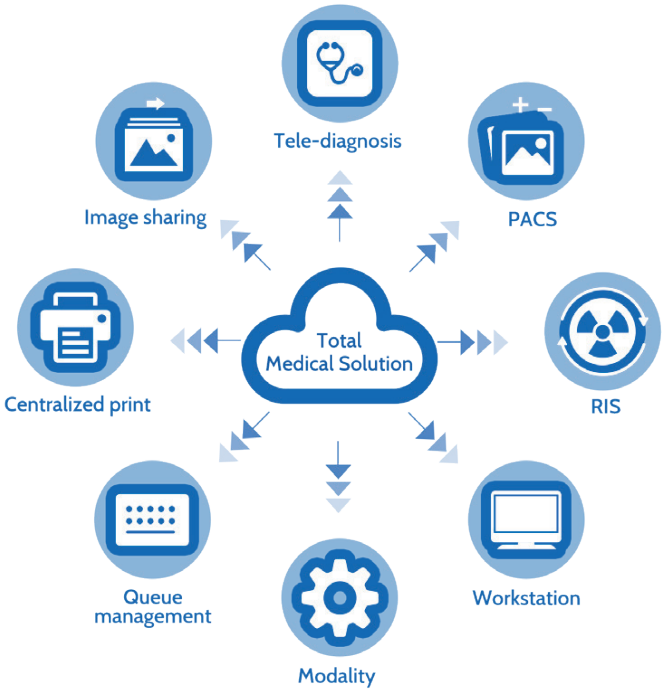
Coronary CTA clinical case

Heart rate: 70bpm, 120kV, 780mAs, 0.37s rotation speed, scan range 115mm, scan time 9s, slice thickness 0.625mm

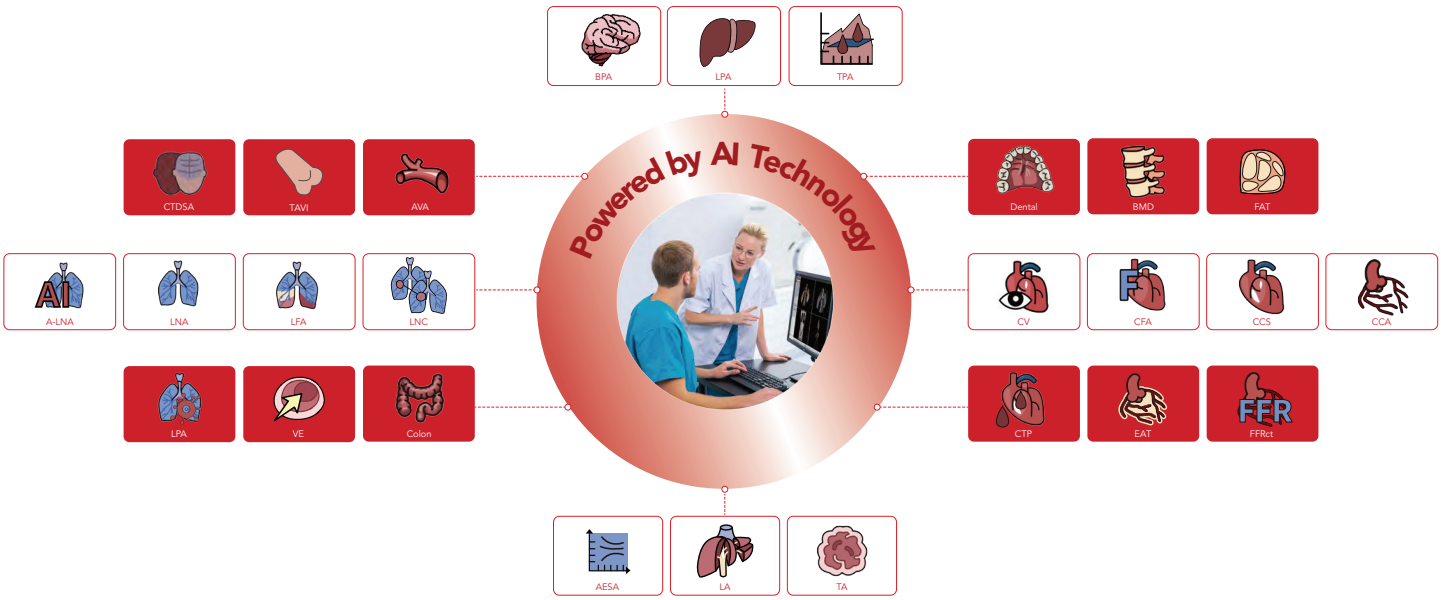


Advanced Visualization Solution

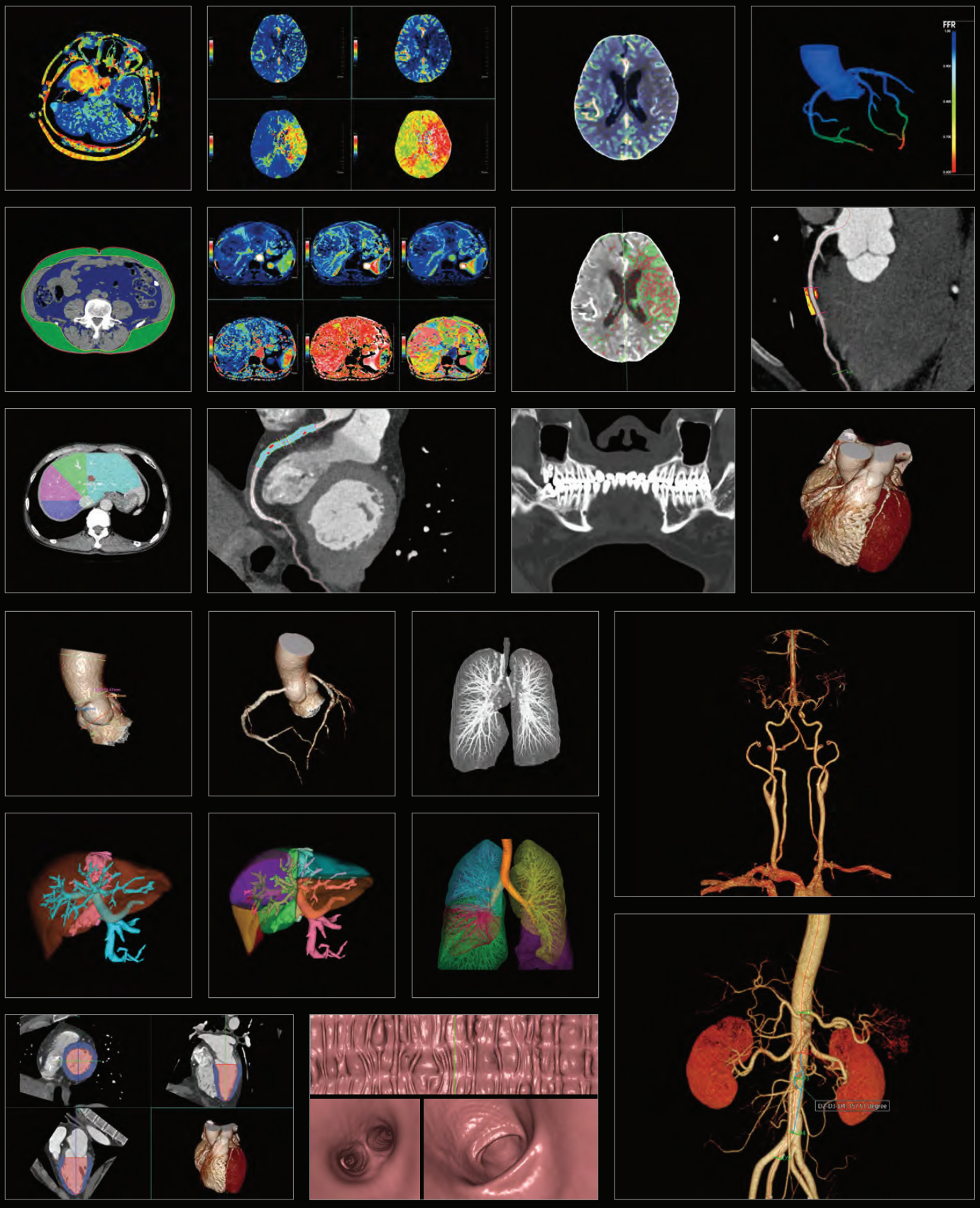
- Facilitates patient image sharing, clinical workflow collaboration, and diagnosis report consultation.
- Post-processing collaboration, powered by Insight Vision clinical packages and tools.
- Combines PACS system and workstation utilizing innovative cloud solution.



- Independent mode and Server-Client mode,
- customized based on your needs



Full range of clinical applications



Specification

Gantry

Aperture	76cm
One-button positioning	Preset 3 protocols
Scan speed/360°	0.37, 0.4, 0.5, 0.6, 0.7, 0.8, 0.9, 1.0, 2.0s
Scan FOV	50cm
Tilt range	Mechanical tilt: ±30°（step 0.5°）
display panel	Size: 13.3 inch LCD、showing current scan parameters
Auto voice	Support
ECG cable connection interface	Integrated in the front of gantry control panel

Patient Table

Max. horizontal travel range	1950mm
Horizontal scannable range	50mm~1860mm
Horizontal travel speed	1~200mm/s
Vertical table travel range	425mm~990mm
Max. table load	250kg
One-key patient table release	Support
Patient table cradle switches	Support

X-Ray Tube

Anode heat capacity	8MHU
Cooling rate	931kHU/min
Focal spot size	Large: 1.1mmx1.2mm Small: 0.6mmx1.2mm

Generator

Power rating	80kW
kV settings	70, 80, 100, 120, 140kV
mA range (Step Size)	10~667mA (1mA step)

Detector

Material	Solid-state GOS
No. of Detector rows	64 rows
Max. number of slices/rotation	128
No. of detector channels per row	864
Total No. of detector elements	55296
Min. slice thickness	0.625mm
Detector width	40mm
Max. data sampling rate	4800 views/360°

Scanning Performance

Scout scan	Supports 3 modes：A.P. lateral and dual; Scannable range 50~1860mm;
Acquisition modes	128 x 0.625mm 64 x 0.625mm 32 x 0.625mm
Min slice thickness	0.625mm
Collimation width selection	40mm, 20mm, 15mm, 10mm
Pitch factor	0.2~1.75 (multiple selections)
Max. continuous scan time	100s

Image Reconstruction

Recon FOV	50~500mm; 50~650mm（Extended）•
Recon matrices	512×512、768 x 768、1024×1024
Recon speed	≥40 ips, thw actual speed can reach 42~128 ips
Display matrix	1024×1024

Note: • The image quality for the area outside the standard 500mm scan field does not meet the image quality specifications shown in the technical data sheet and image artifacts may appear, depending on the anatomy

Image Optimization Algorithm

Metal artifact reduction	Standard
Beam hardening artifact reduction	Standard
Partial volume artifact reduction	Standard
Steaking artifact reduction	Standard
Helical scan artifact reduction	Standard
Motion artifact reduction	Standard

Image Quality

Spatial resolution:	⩾21 lp/cm @ 0% MTF; X-Y plane ⩾15 lp/cm@0% MTF; Z plane
Low-contrast resolution	2mm@0.3%@23.5mGy;
Image Noise	⩽0.35% (Central dose⩽26 mGy)
CT HU scale	Standard: -1024HU ~ +3072HU Extended: -32768HU ~ +32767HU

Computer System

CPU	Intel Xeon 6 core, 12 threads, frequency 3.8GHz, cache 8.25MB
RAM	DRR4 ECC 32 GB
Hard disk	7TB (system disk 0.3 TB+ image disk 1.7TB + raw data disk 5 TB)
Monitor	Size: 24 inch, LCD Resolution: 1920×1200 Brightness: 600cd/m^2 Contrast: 1000:1
Images storage	⩾3,200,000 images (512×512)
External storage	DVD/CD RW, USB
Printing interface	DICOM 3.0 standard

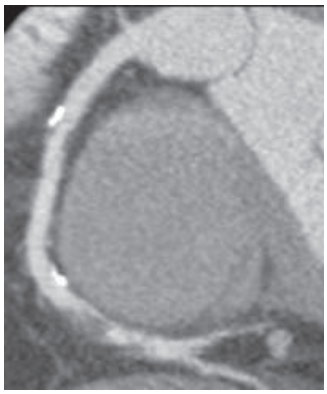
Doze Optimization

Dedicated pediatric protocols	Standard
Auto-mA	Standard
V-Dose check	Standard
Low dose lung screening	Standard
240° exposure	Standard
V-Beam	Standard
V-Dose report	Standard
iDream Iterative reconstruction	Standard
V-Bolus tracking	Standard
V-Bolus timing	Standard
ECG mA modulation	Standard

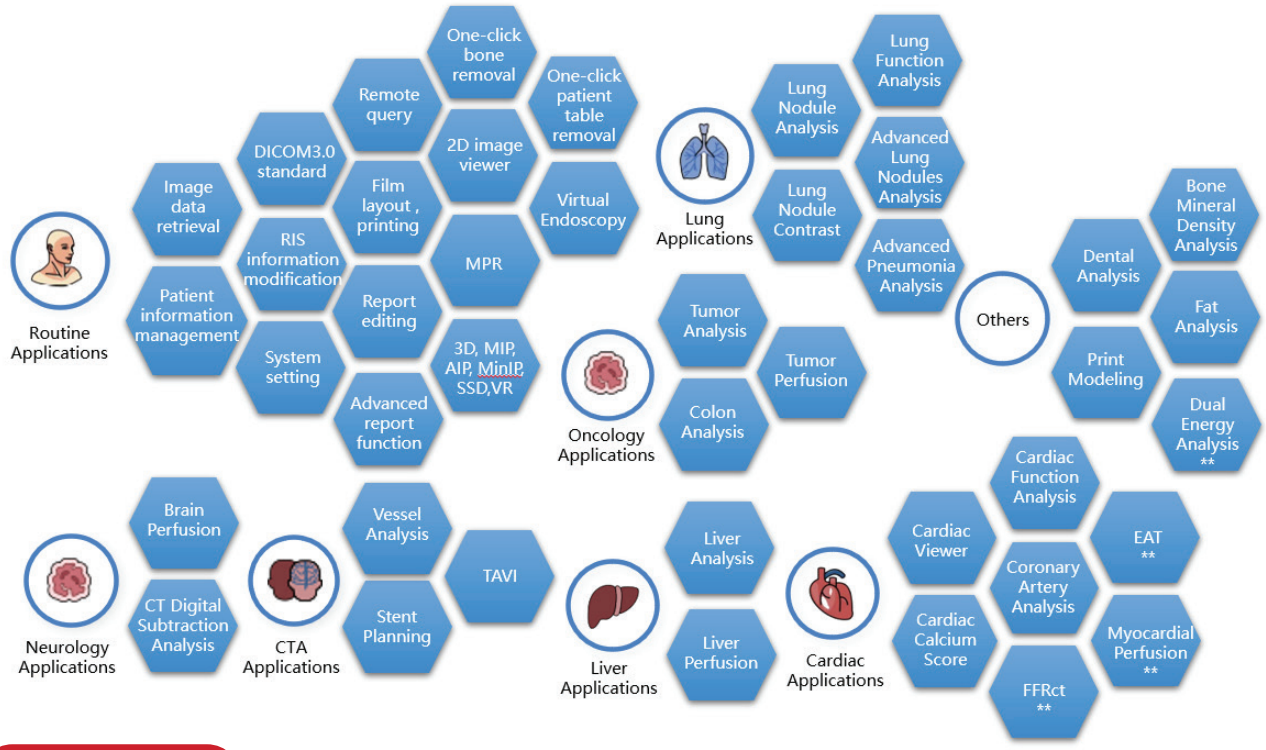
Cardiac Scan

Prospective ECG scan	Support
Retrospective ECG scan	Support
Multi-sector coronary artery scan	Self-adaptive sector with maximum support for 4 sectors
Temporal resolution	46ms; 25ms @ RTF
ECG wave editing	Provides editing, adding, and deleting functions for abnormal ECGs (such as premature beat) used for coronary artery recon
Cardiac reconstruction	Automatically selects the optimal recon phase, multiphase recon for whole sequence or a single image

Instantaneous coronary artery freezing technology RTF (Real Time Focus) The third-generation motion artifact correction algorithm based on deep learning can model and compensate the heart motion artifact and partially eliminate artifacts caused by insufficient motion, breathing and tempoal resolution. Displacement of the motion is correctwd repeatedly through an iterative method to avoid excessive correction.

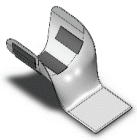
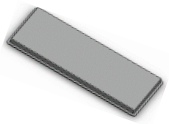
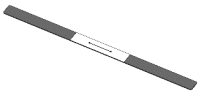
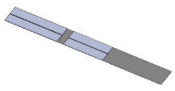
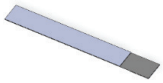
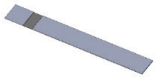


Clinical Applications



Accessories

Standard Accessories

					
Table pad	Headrest	Headrest pad	Inferior frontal belt (standard)	Inferior frontal belt (wide)	Inferior frontal belt (narrow)
					
Chest and abdomen belt (standard)	Chest and abdomen belt（narrow1）	Chest and abdomen belt（narrow2）	Water phantom	System phantom	Phantom support

Optional Accessories

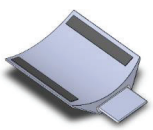
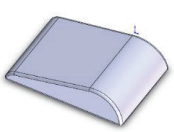
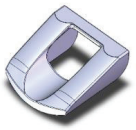
		

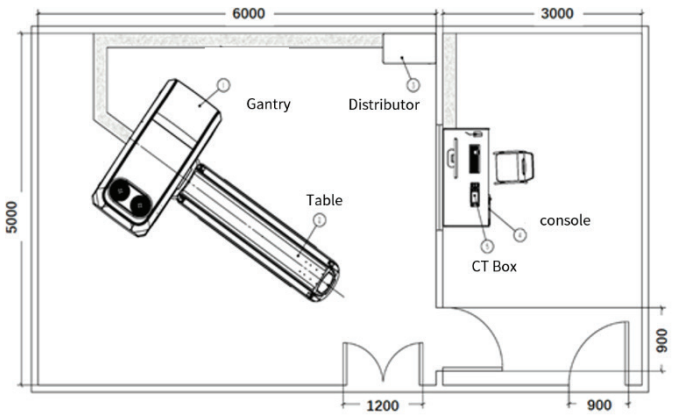
Table extension	Knee cushion	Head and arm rest	IV poles	Flat table	Laser location lamp

Running Environment & Siting Requirements

Dimensions & Weight

System	Length	Width	Height	Weight
Gantry	2200 mm	1021 mm	1969 mm	1800 kg
Table	680 mm	2678 mm	1073 mm	450 kg
Console	450 mm	716 mm	652 mm	60 kg
Distributor	800 mm	430 mm	663 mm	170 Kg

Siting Requirements (Recommended)



Running Environment

Scanning room dimension	Min. area：22.4 ㎡（5600mm x 4000mm） Recommended room size：30 ㎡（6000mm x 5000mm）
Operating room dimension	Recommended room size：3000mm x 5000mm x 2800mm
Temperature & Humidity	Temperature：scanning room：20～26 °C; operating room：18～28 °C Humidity：scanning room：30%～70%，no condensation; operating room：20%～80%，no condensation
Power supply requirements	Power capacity：100 kVA Power supply option：3 phase 380 VAC，voltage variation: tolerance ≤±10% Frequency：50 Hz or 60 Hz, tolerance ≤±1 Hz
Intelligent energy saving	Insitum series CT scanners are designed to be energy saving, and have further optimized standby mode, which reduces the live operation of high-voltage control and data acquisition devices. They only keep necessary components in working state. This does not affect normal start-up efficiency, yet annual power consumption is reduced by 2815kW · h when the device is turned on for 10 hours a day, 6 days a week, which is 62.5% lower than the earlier design.

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