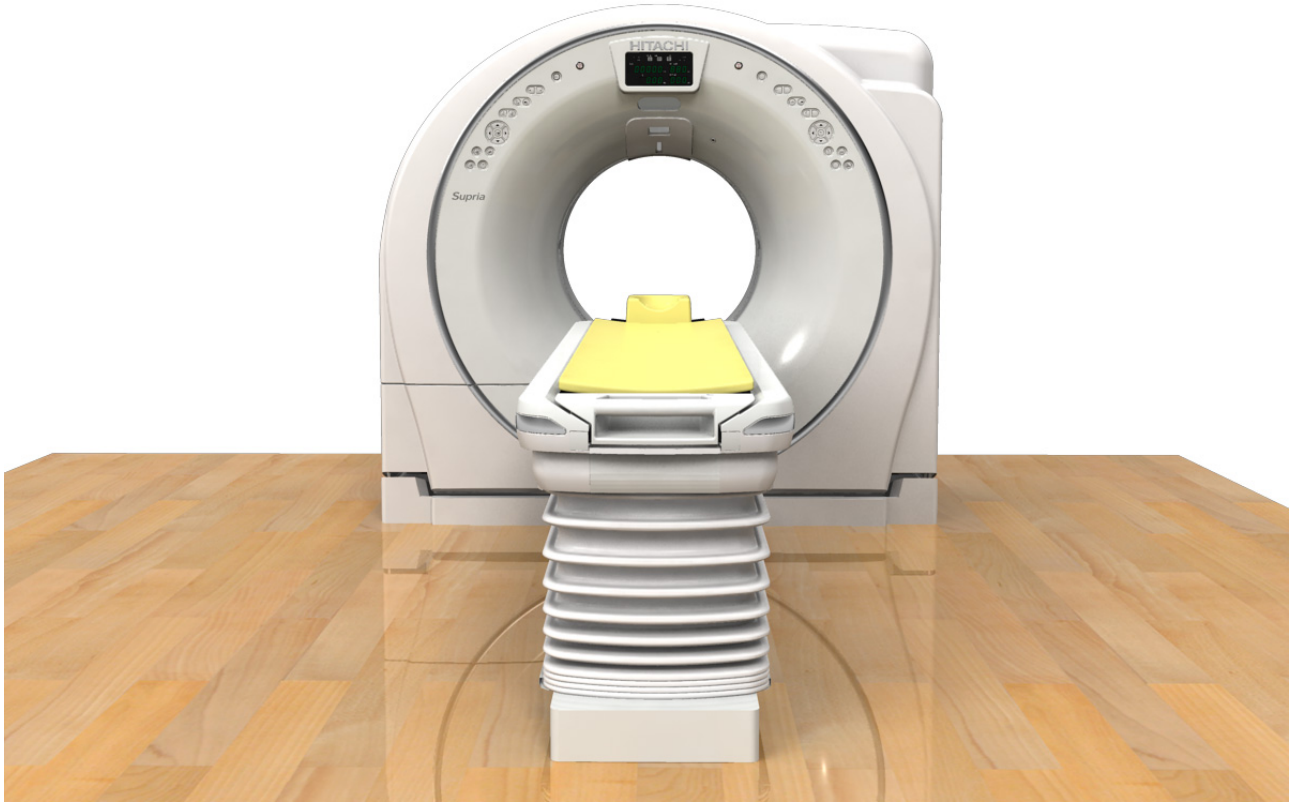
HITACHI
Inspire the Next

Whole-body X-ray CT System
- OPEN & COMPACT 16ch CT -

Supria

Product Specification
(5MHU)



Hitachi Medical Corporation

SN-C629E

1. Product Overview

Open Access and Compact Design, with the latest technologies. New “Supria” CT meets your future needs.

The needs for faster and more accurate diagnosis are increasing every day in the front-line of medical practice. Supria is designed to answer in one CT all the demands for various routine applications, compact size, useful results and ease of use without any compromise.

Supria CT is your answer to take off to the next clinical and technology standard.

Supria Open & Compact
75cm wide gantry bore with compact foot-print

Supria Performance
Newest technologies for high image quality

Supria Low Dose
State of the art technologies for low dose are integrated as standard

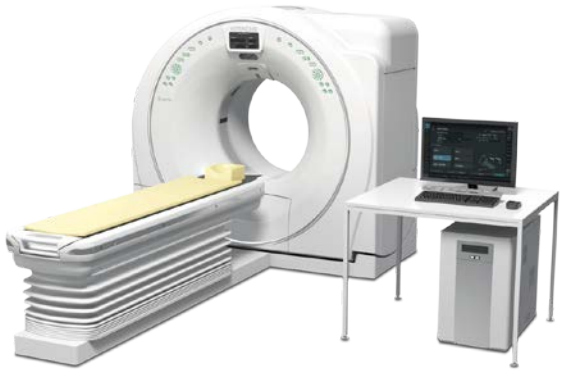
Supria Easy Operation
Intuitive GUI design with 24-inch LCD monitor

2. System configuration

Standard configuration

1.	Scanner gantry	1	
2.	Patient table(CT-WT-20)	1	
3.	Operator's console	1	Console unit 24-inch LCD monitor Keyboard Mouse Intercom
4.	Standard functions	1set	DICOM 3.0 DICOM Print DICOM Dose SR Simple Dose Report Predict Scan Intelli IP (Advanced) IntelliEC (SD-mode) CEV-CPR Viewer for media(CD/DVD) Auto MPR
5.	Standard accessories	1set	Head rest 1(without arm rest) Head/Chin band Patient belt Patient mat Patient fixing parts Speaker (for CT room)
6.	Instruction manual	1set	
7.	System Transformer(*1)	1	

(*1) Provided if the power supply voltage at the site is 380/400/415/440 VAC.



Above image configured with patient table (CT-WT-20).

Options for scanning

1. Patient table(CT-WT-21) : Long Table
2. Breath-Navi display(*1) : 3 displays on the gantry bore
3. Light localizer(*1) : for preparatory position
4. Foot switch : 2 switches on each side of the patient table (for PRESET/HOME)
5. Table accessories : Armrest HF
   Headrest 2 (for Armrest HF)
   Chinrest (for Armrest HF)
   Foot mat
   Extended tabletop (*1)
   Touch switch (for Extended tabletop) (*1)
   Foot mat (for Extended tabletop)
   Armrest FF
   Headrest 3 (for Armrest FF)
   Spacer 1
   Spacer 2
   Triangle mattress
   Infant fixing tool
   IV pole
6. UPS : for console
7. Remote Service : Additional contract required. Please contact local sales representatives.
8. Quality Exam : for evaluation of the changes in performance of the equipment.
9. guideShot
10. Injector Synchronization (*1)(*2)
11. Back side operation panel (*1)
12. Dose Check : Dose Check is a function for judging the scanning dose based on predetermined dose threshold values and for displaying notifications or alerts.

(*1) Factory installed option
(*2) The models of injector compatible with Injector Synchronization are as follows.
DUAL SHOT α7(Nemoto Kyorindo co., Ltd.)
Salient (Single) (Synchronization Unit : ISI700) (Imaxeon Pty Ltd.)
Salient (Dual) (Synchronization Unit : ISI700) (Imaxeon Pty Ltd.)

Options for image processing & DICOM

1. Hyper Q-Net R(*1) : Image analysis software (network-compatible)
2. fatPointer : Body fat analysis software
3. riskPointer : LAA analysis software
4. CT Colonoscopy : Colon analysis software
5. Dental Analysis(*2) : Tooth-jaw analysis software
6. Lung Analysis : Lung field analysis software
7. Perfusion Analysis : Cerebral blood flow analysis software
8. DICOM MWM(*3) : Modality Worklist Management
9. DICOM MPPS : Modality Performed Procedure Step
10. DICOM Q/R : DICOM Query/Retrieve

(*1) This includes software only, and PC(Windows 7 – 64bit type) shall be procured by customer.

(*2) Hyper Q-Net R required.

(*3) Including IHE/SWF

3. Specification

Scanner gantry

1.	Object for scanning	: Whole body including head
2.	Scanning time	: 0.75 / 1.0 / 1.5 / 2.0 sec
3.	Maximum number of slice	: 16 slices/scan
4.	Gantry Opening	: 750mm
5.	Effective field of view (FOV)	: 500mm
6.	Gantry tilt angle	: Forward tilt 30°~backward tilt 30°
7.	Setting scan position	: Light Localizer

Patient table

		CT-WT-21	CT-WT-20
1.	Material of tabletop	:	Carbon fiber
2.	Table height	:	450～1,000mm
3.	Tabletop width	: 475mm	: 400mm
4.	Maximum scannable range@ Normal scan (with extended tabletop)	: 1,550mm (1,800mm)	: 1,200mm (1,500mm)
5.	Maximum load (supportable load)	: 227kg(500lb)	: 180kg

X-ray high voltage generator/ detector

1.	X-ray tube	: 5 MHU
2.	X-ray high voltage generator maximum output	: 51kW
3.	Maximum X-ray output	: 48kW
4.	Tube voltage	: 80 / 100 / 120 / 140kV
5.	Tube current	: 10～400mA
6.	Detector type	: Solid state detector
7.	Number of output channels along Z-axis	: 16ch
8.	Number of channels per row	: 880ch
9.	Number of elements	: 28,160 elements (880ch x 32rows)
10.	Detector width	: 20mm (0.625mm x 32rows)

Scanning Function

1. Scanogram
   - Maximum scanable range: 1,500mm(CT-WT-20 with extended tabletop) / 1,750mm(CT-WT-21 with extended tabletop)
   - Measurement slice thickness: 0.625mm x 8
2. Normal scan
   - Scan time: 0.75 / 1.0 / 1.5 / 2.0 sec
   - Image slice thickness: 0.625 / 1.25 / 2.5 / 3.75 / 5 / 7.5 / 10mm
3. Dynamic scan
   - Scan time: 0.75 / 1.0 / 1.5 / 2.0 sec
   - Image slice thickness: 0.625 / 1.25 / 2.5 / 3.75 / 5 / 7.5 / 10mm
4. Volume scan
   - Scan time: 0.75 / 1.0 / 1.5 sec
   - Image slice thickness: 0.625 / 1.25 / 2.5 / 3.75 / 5 / 7.5 / 10mm
   - View rate: 1,200view/sec
   - Volume pitch: 0.563～1.563
   - Reconstruction method: CORE(3D image reconstruction algorithm)

Image display/ process

- Display monitor: 24-inch LCD monitor
- Reconstruction matrix: 512 x 512
- Reconstruction time: Max. 10 images /sec
- Display matrix: 1,920 x 1,200
- Magnetic disk unit
  - Storage Image: 200,000 images or more
  - Storage Raw Data: 6,000 scans or more
- Archival storage: ：DVD drive (CD-R、DVD-R)
- Display gray scale: 256 levels
- Window level: Standard: -2,000～+4,000 / Extended: -32,768～+32,767
- Window width: Standard: 1～6,000 / Extended: 1～32,767
- Data display: Patient name, Birthday, Sex, Patient ID No., Slice thickness, Tube voltage, Tube current, Slice position, State of contrast, and others

Image display/ process

Window process	(a) Window level/width adjustment (b) Black-white contrast reversal (c) Linear/nonlinear window (d) Double window (e) Level detection
Image display process	(a) Multi-frame display (b) Magnification (real-time, etc.) (c) Image rotation (d) Left-right inversion (e) Correction (f) Comment display (g) Cine display (h) Subtraction/Addition (i) Edge enhancement/Smoothing (j) Multi-slice image addition
Image analysis process	(a) Distance and angle measurement (b) Profile of CT value (c) Setting ROI - Shape: Oval, Free - Process: Area, Mean value of CT # - Display: Up to 4 ROIs can be displayed - Control: Size, Position, Rotation (d) Histogram (e) Display of CT value (f) Scale display (g) Volume calculation
3D image display	(a) MPR (SAG, COR, OBL, CURVE) (b) MIP, MinIP, RaySum display (c) Surface rendering (d) Volume rendering (VT method) (e) Multi angle reconstruction plan (MARP) (f) Movie display (g) Perspective method

4. Environmental requirements

Environmental requirements

No.	System	Mean heat dissipation※1		Temperature (℃)	Degree of humidity (%)
		(W)	(kcal/h)		
1	Scanner gantry	2,650	2,273	20～28※3 (-5～33)※2	35～80
2	Patient table				
3	System Transformer※4	400	343		
4	Operator's console	350	300	10～28 (-5～33)※2	

(*1) Measurement condition of mean heat dissipation
- # of scan : 150 scan/hour
- Scan condition : 120kV、200mA、1 sec x 30 continuous scans

(*2) Temperature in ( ) shows the condition while the equipment is not in use. System shall be prevented from the dew condensation.

(*3) The fluctuation of room temperature during operation time shall be within the range of "±2℃

(*4) If the power supply voltage at site is 380/400/415/440 VAC, use the provided system transformer.

Power supply facility

Mains voltage	3 phase 200VAC	3 phase 380/400/415/440VAC※1
Mains frequency	50 / 60Hz	
Power supply capacity	75kVA	
Grounding resistance	100Ω or less	10Ω or less

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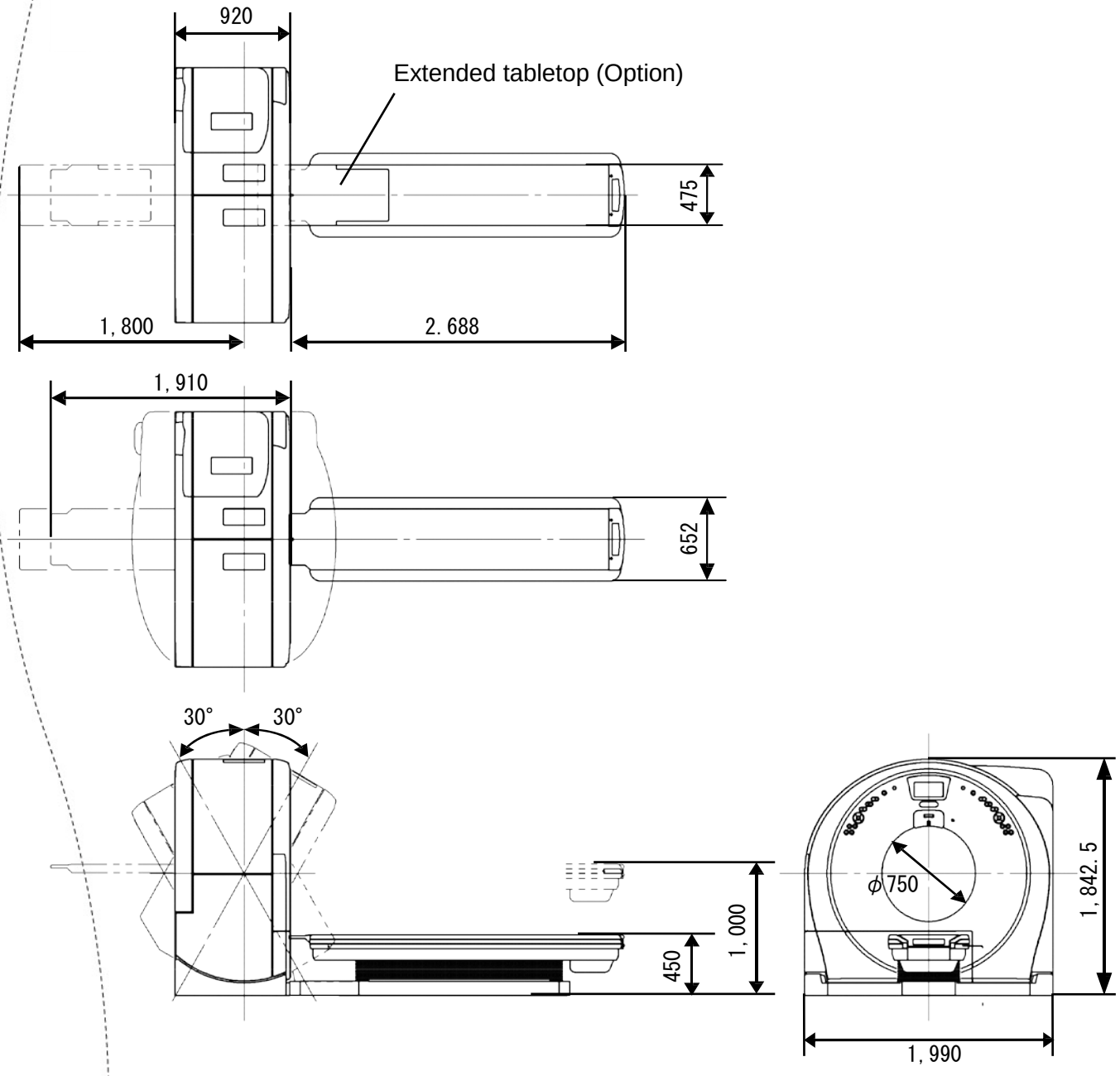
5. Outside dimension and mass

Outside dimension and mass

Unit	Width(mm)	Depth(mm)	Height(mm)	Mass(kg)
Scanner gantry	1,990	920	1,842.5	1,600
Patient table CT-WT-20 CT-WT-21	 577 652	 2,262 2,688	 450～ 1,000	 324 423
Operator's console				
Main unit	400	745	660	76
Intercom	470	85	52	1.2
Monitor	568.5	217	426～550	9
Keyboard	440	130	40	0.1
System Transformer※1	550	520	660	113

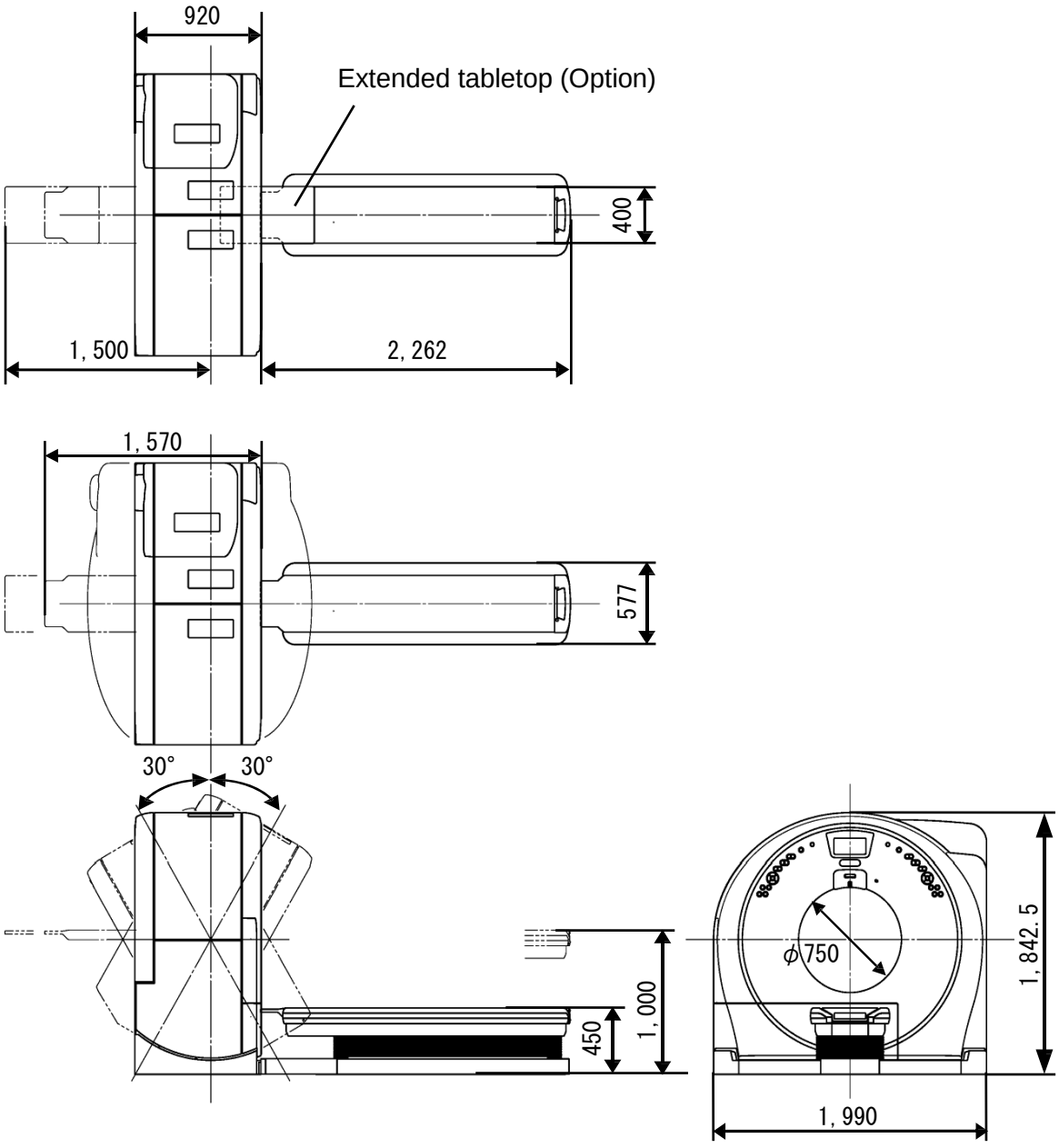
(*1) If the power supply voltage at site is 380/400/415/440 VAC, use the provided system transformer.

6. Dimensions of system units



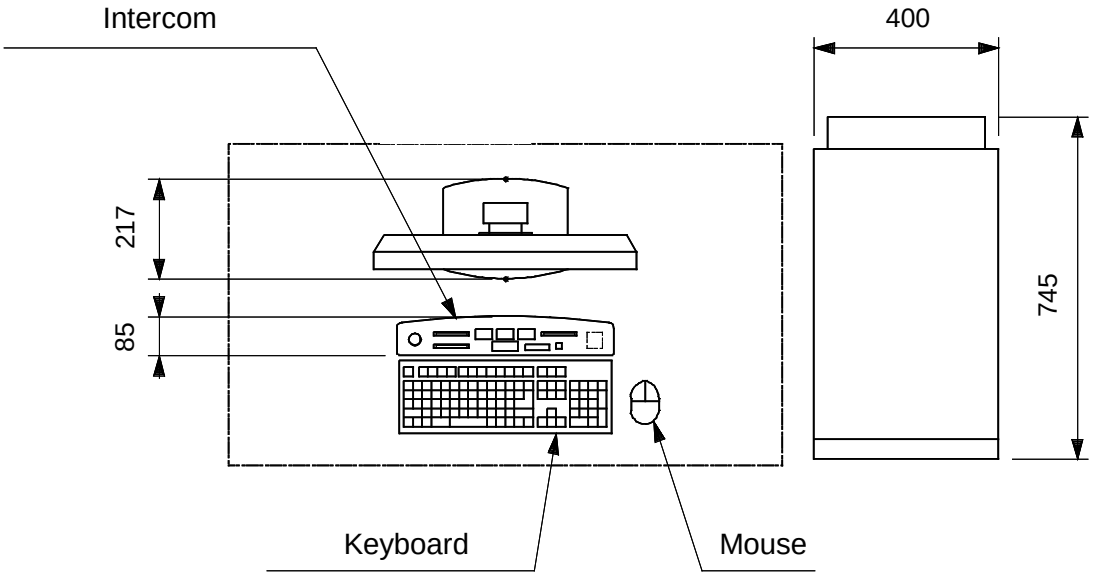
Unit : mm

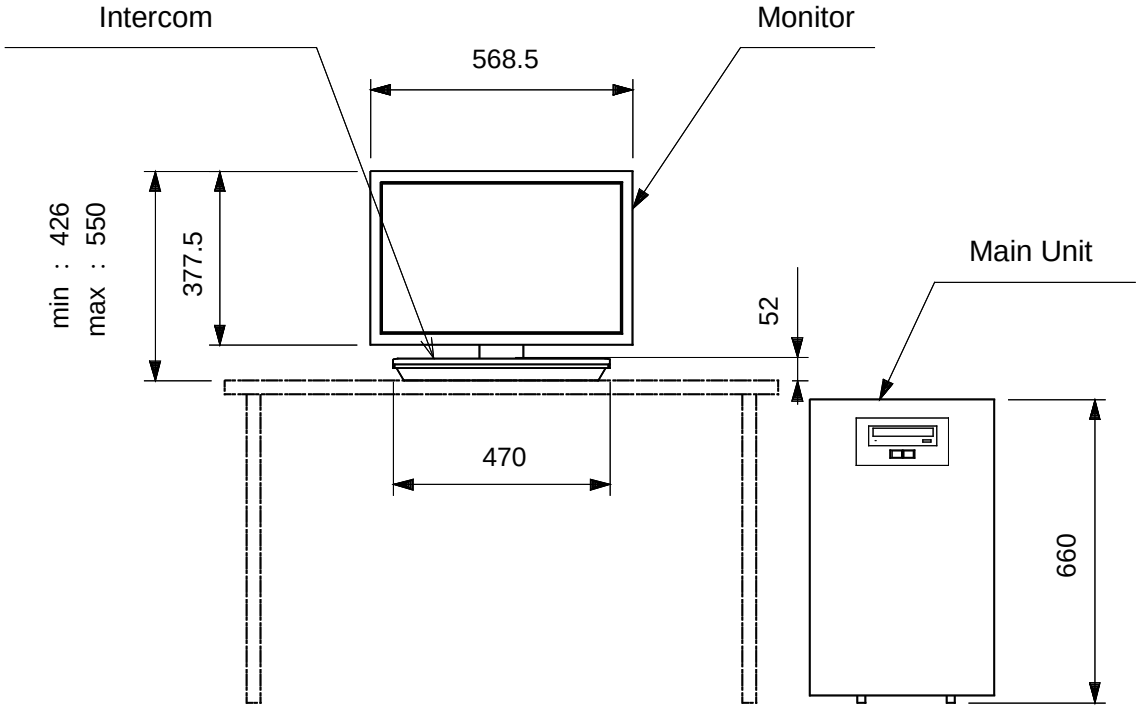
Scanner gantry / patient table (CT-WT-21)



Unit : mm

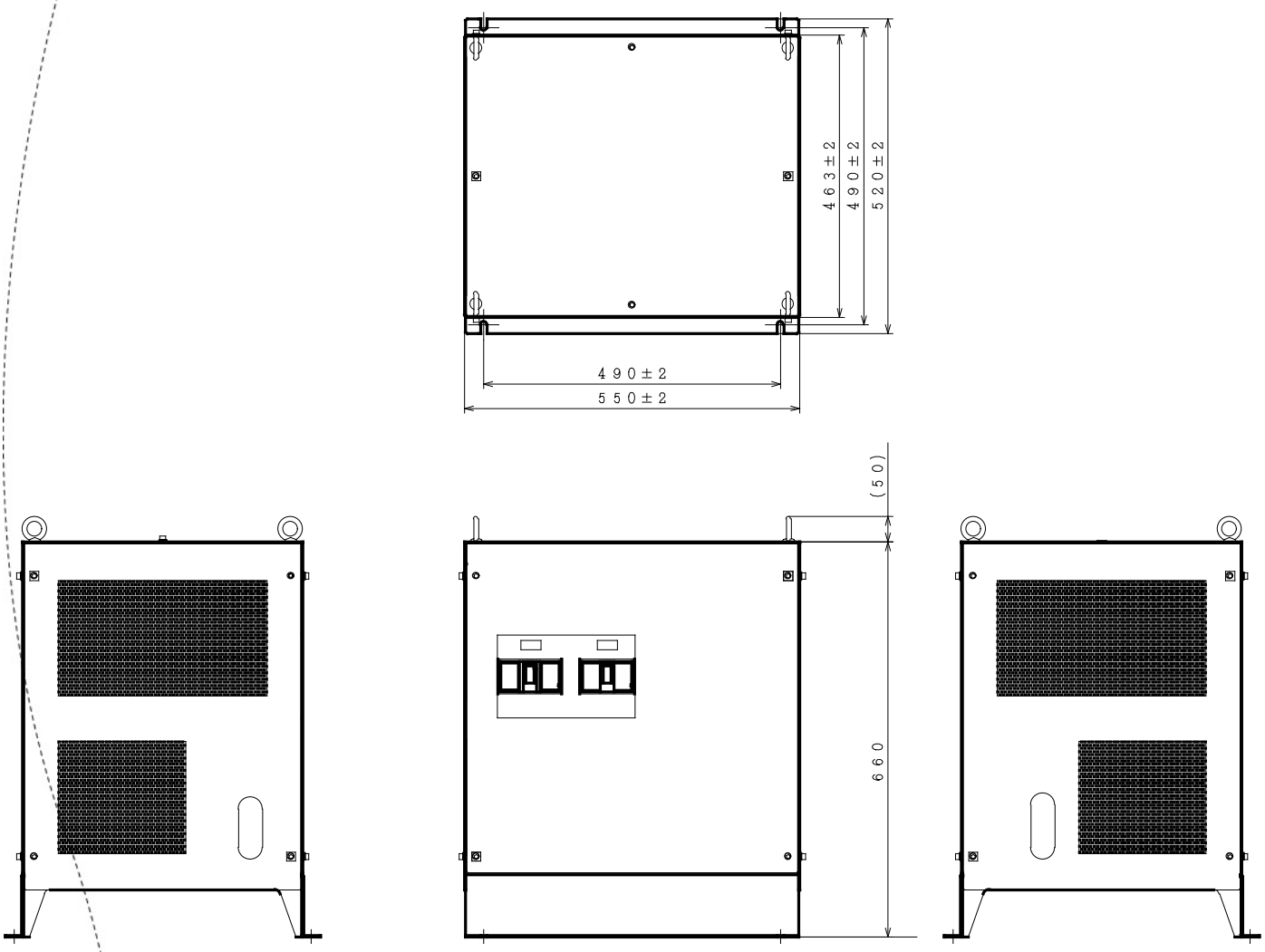
Scanner gantry / patient table (CT-WT-20)





Unit : mm

Operator’s console



Unit : mm

System Transformer※1

(*1) Provided if the power supply voltage at the site is 380/400/415/440 VAC.

Supria

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