

**SHIMADZU**

# PRODUCT DATA

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Digital  
R/F  
System**SONIALVISION G4**  edition

## GENERAL

SONIALVISION G4 is a digital R/F system that is designed with the concept of multi-purpose, patient care, low dose, exceptional image quality and workflow optimization. The following various applications are easily performed;

- Digital fluoroscopy
- Digital spot/serial imaging
- Digital Subtraction Angiography (option)
- Endoscopy procedures
- Orthopedics
- Myelography
- General radiography
- Bariatric studies
- Urogenital examinations
- Slot Radiography (option)
- Tomography (standard) / Tomosynthesis (option)

**CONFIGURATION**

**STANDARD CONFIGURATION**

- (1) Table body assembly  
1 set (ZS-200)  
This unit consists mainly of a body frame, an X-ray tube supporting tower, a FPD support -ing base, and a tabletop. Fluoroscopy/radiography can be performed at an optimum position, with adjusting elevation, tilting, and lateral movement of the tabletop, longitudinal movement of the imaging unit, and oblique projection of X-ray beam.
- (2) System control console  
This console operates the table system.  
Selectable:
  - Operation desk
  - Control box type on the tabletop
  - Console cart
- (3) Control cabinet  
This box controls the table system by communication. The cabinet includes cables to connect each component such as the table main body, the control console, and X-ray high voltage generator.
- (4) X-ray beam collimator  
(R-300)  
The X-ray beam collimator controls the exposure field automatically to suit fluoroscopy/radiography.
  - Iris collimator
  - Asymmetric collimator
  - Virtual collimator
  - Beam hardening filter (Automatically selected to Cu 0.1 mm, 0.2 mm or 0.3 mm)

- (5) Accessories
  - Scatter removal grid
  - Footrest
  - Shoulder rest
  - Hand grips (right/left)
  - Overhead hand grip
  - Soft tabletop mattress
- (6) Monitor
  - Acquisition / Reference
  - 19" LCD
  - 24 bit Color Monitor (16,777K Color Square Dot Matrix)
- (7) Digital radiography system  
1 set (DR-300)
  - Control Cabinet
  - FPD Unit
  - Standard Accessory (Keyboard, Mouse)
  - Media Storage Device (Incorporated in Control Cabinet)
  - DICOM Print Software
  - Pulse Fluoroscopy Software
  - SUREngine-Advance image enhancement
  - SCORE PRO Advance
  - Digital Tomography
- (8) X-ray tube unit  
(0.7/1.2JG326D-265)
  - 750 kHU X-ray tube
  - Starter SA-61S
- (9) X-ray high voltage generator  
1set D150BC-40S (80 kW)
  - Control cabinet
  - High voltage generator (Incorporated in the control cabinet)
  - Connection cable
  - Phototimer

**OPTIONAL ITEM**

- Local console selectable:
  - Standard control console
  - Control console with touch panel
  - Standard control console with monitor
- Monitor cart
- Monitor expanded box
- Compression cone / Barium cup holder (Factory Option)
- Compression band
- Lateral cassette holder
- Urology leg support
- Endoscope support
- Drain pan/ bag
- Elbow support
- Cystography chair
- Safety sensors
- Foot controller
- Rotary footrest
- Footrest for myelography
- Foot switch for examination room
- Drip hanger
- Hand grip
- Grid rack
- Auxiliary tabletop (600 mm)
- 500 lb (227 kg) weight option
- 2<sup>nd</sup> tube console
- UPS (DR-300)
- DSA software
- DICOM storage software, Including DICOM storage commitment software
- DICOM MWM software
- DICOM MPPS software
- DICOM RDSR software
- Barcode reader
- Laser line marker for collimator
- Area dosimeter
- Slot Radiography
- Footrest for Slot Radiography
- Standing position belt for Slot Radiography
- Hand grip for Slot Radiography
- Footrest board for Slot Radiography
- Tomosynthesis
- Side Station i3 for Oblique Tomosynthesis /T-smart PRO Tomosynthesis
- 1.8 m SID (Factory Option)

**FEATURES**

- (1) Large field FPD ;  
A large-field 17x17 inch FPD and digital image processing enable you to acquire high quality diagnostic images.
- (2) High quality imaging ;  
The image is processed and stored at the original quality of the matrix at the time of the capture.
- (3) SCORE PRO Advance (fluoroscopy);  
The real-time image-processing engine improves the visibility of small targets with motion detective process, while maintaining the high-speed real-time characteristic of fluoroscopy.
- (4) SUREngine-Advance (radiography) ;  
The digital filters provide uniform overall contrast of the captures and suppress the halation and loss of shadow details.
- (5) Pulse fluoroscopy ;  
As a standard feature, four modes of pulsed fluoroscopy (up to 30 fps) can be selected to suit the examination, for the reduction of patient dose while maintaining high image quality.
- (6) BH Filters Switch to Suit the Examination;  
Three beam hardening (BH) filters are provided as standard to efficiently remove unnecessary soft X-rays that do not contribute to image quality. The optimal BH filter is selected to suit the examination by simple operation, so exposure dose reduces.
- (7) Lower Dose with a Removable Grid;  
The SONIALVISION grid can be mounted or removed to suit the radiography application. The grid can easily be removed for pediatric, obstetrics and gynecological examinations when radiation dose to the patient must be kept to a minimum.



- (8) Collimation
  - Virtual collimation
  - Left and right asymmetrical collimator
  - Iris collimator
- (9) Seamless tabletop;  
The tabletop can be raised or lowered in the height range from 47 cm to 110 cm to help the patient get on or off and allow the operator to take an unforced pose according to required examinations.  
And table offers the highest weight capacity in its class up to 318 kg (700 lb) at horizontal position, easily

accommodating bariatric patients as well.

- (10) Wide coverage, 202.5 cm (17x17 inch);  
The wide longitudinal sliding range of the imaging system with large tabletop provides head to toe coverage without moving the patient. The edge of the imaging range can be positioned as close as 9.5 cm from the head-end of the table.



- (11) Wheelchair examination ;  
Wheelchair patients can be examined simply by extending the imaging chain to 1.5 m SID or 1.8 m SID (Factory Option).

- (12) Stretcher applications;  
The tube head can rotate 90 degrees at vertical position for the stretcher.



- (13) Getting on/off position mode;  
To reposition the table when getting on or off, simply press a button. With 47 cm the lowest minimum table height and X-ray tube unit extension at horizontal table position, even elderly patients can get on and off easily.



- (14) The control panel is equipped with a 10.4 inch LCD touch panel, where the operator can view the patient information or change the fluoroscopy or radiography condition. The screen layout or display options can be switched as appropriate according to the purpose of examination. Customizable hard switches help you access to the frequently used functions with a single touch of a button.



**SPECIFICATIONS (R/F table)**

Item		Content	
Table top	Size	76.5 × 235 cm (flat type)	
	Lateral movement	Range	25 cm
		Speed	5.0 cm/sec max.
	Table tilting	Range	+90° to -90°
		Speed	Max. 6°/sec , soft start and soft stop Max. 5.3°/sec , soft start and soft stop *1
	Elevation (at horizontal position)	Table height	47 – 110 cm from floor
		Allowance load weight	204 kg (450 lb)
			227 kg (500 lb) (in all operations, with 500 lb weight option.) 318 kg (700 lb) (patient is stationary and lying horizontal.)
Distance between Table top surface and FPD		75 mm	
Tabletop material / Attenuation		CFRP / 0.8 mm Al equivalent	
Imaging unit	Longitudinal movement	Range	160.5 cm (Imaging range: Max. 202.5cm)
		Speed	15 cm/sec max. (continuously variable)
	Distance between X-ray focus and FPD (SID)		110, 120, 150 cm (standard) 110, 150, 180 cm (With 1.8m SID option, SID 180 cm is available only for vertical or Trendelenburg position.)
	Distance between X-ray beam axis and floor surface at vertical position		59.5 - 220 cm (+90° table tilting) 46.5 - 207 cm (-90° table tilting)
	Oblique angle of X-ray beam projection		Max. 40 degrees (caudal-cranial) Max. 40 degrees (cranial-caudal)
	X-ray tube rotation angle		Vertical: Counter-clockwise 90° Trendelenburg: Clockwise 90°
Collimation	Field collimation		H-leaves and V-leaves
	Collimation functions		• Virtual collimation • Octagonal Iris collimation • Asymmetric collimation
	Beam hardening filter		0.1 mm Cu, 0.2 mm Cu, 0.3 mm Cu
Grid	Type		Ratio: 10:1, Density: N 50 cm <sup>-1</sup> , Focal distance: 120 cm, Ratio: 10:1, Density: N 50 cm <sup>-1</sup> , Focal distance: 180 cm, (with 1.8 m SID option) Intermediate material: Al
	Scatter removal grid		Detachable
Requirements for Installation	Space needed for installation		D 3000 × W 3700 mm or more *2 With 1.8 m SID option, D 3000 × W 4200 mm or more *3
	Ceiling height needed for installation		Recommended: 290 cm or more Minimum: 260 cm *4
	Operation/maintenance weight		Approximately 1560 kg

Notes \*1; In case of the system combined 500 lbs. weight option, the speed of tilting is 5.3 degrees/sec  
 Notes \*2; Although a floor width of at least W 3700 mm is recommended, W 3500mm is also acceptable.  
 However, the tilting of table at SID:150 cm will be limited. The cabinets are installed outside of examination room.  
 Notes \*3; Although a floor width of at least W 4200 mm is recommended, W 3900 mm is also acceptable.  
 However, the SID at -90° tilting of table will be limited. The cabinets are installed outside of examination room.  
 Notes \*4; The longitudinal movement of imaging unit is confined.

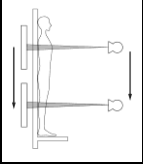
**SPECIFICATIONS (Digital system)**

Item		Content	
Applications Covered	Digital Radiography	Orthopedics, General radiography, Gastrointestinal, Myelography, Urology and Others	
	Digital Angiography (option)	Real-time DSA	
Programmable Procedures Memory		More than 2,000 patterns (with automatic system positioning and X-ray conditions)	
Hard ware	OS	Microsoft Windows 7 or later	
	Operation	Mouse and keyboard	
Image Input	X-ray Detector	Flat Panel Detector	
	X-ray Conversion Material	CsI (Cesium Iodide Scintillation)	
	FPD Field Size	17" x 17" , 15" x 15" , 12" x 12" , 9" x 9" , 6" x 6" (42 x 42 cm, 38 x 38 cm, 30 x 30 cm, 23 x 23 cm, 15 x 15 cm)	
	Pixel Pitch	139 µm	
	Resolution	3.6 lp/mm	
	Dynamic Range	16 bits (65,536 graduations)	
	DQE (0 lp/mm)	65% or more	
Image Acquisition / Real-Time Processing	Fluoroscopy	Matrix	1024 x 1024 matrix
		Pulsed Fluoroscopy	Pulse Rate: 30 / 15/ 7.5/ 3.75 fps
		Fluoroscopy Image Storage	Direct store / LIH store / Loop store Up to 1000 frames per run (Ex. 7.5 fps images are memories for 133 sec.)
		MAP Fluoroscopy (DSA option)	Subtraction MAP mode This mode enables a subtraction between a fluoroscopic image and a black peak image, the subtraction image is superimposed on the fluoroscopy image.
		Virtual collimation	Enables to configure irradiation field by displaying the collimator position onto fluoroscopic LIH image.
		SCORE PRO Advance (Fluoroscopy)	High-speed real-time image processing engine - Real-time multi frequency processing - Real-time flexible noise reduction
	Radiography	SPOT Acquisition	Single Acquisition 3032 x 3032 (1512 x 1512) matrix (FPD field: 42 x 42 cm) 2704 x 2704 (1352 x 1352) matrix (FPD field: 38 x 38 cm) 2056 x 2056 (1024 x 1024) matrix (FPD field: 30 x 30 cm) 1624 x 1624 (808 x 808) matrix (FPD field: 23 x 23 cm) 1024 x 1024 (512 x 512) matrix (FPD field: 15 x 15 cm)
		Multi-frame imaging	2 or 4 images split horizontally / vertically
		Serial Acquisition	Frames rate: Max 15 frames/sec 3032 x 3032 (1512 x 1512) matrix (FPD field: 42 x 42 cm) 2704 x 2704 (1352 x 1352) matrix (FPD field: 38 x 38 cm) 2056 x 2056 (1024 x 1024) matrix (FPD field: 30 x 30 cm) 1624 x 1624 (808 x 808) matrix (FPD field: 23 x 23 cm) 1024 x 1024 (512 x 512) matrix (FPD field: 15 x 15 cm)
		SUREngine-Advance (Radiography)	The digital filters suppress the halation and loss of shadow details for SPOT images.
		DSA Acquisition (option)	Real time subtraction at 7.5 frames/sec (max.) Real-time DSA / RSM-DSA function

**SPECIFICATIONS (Digital system) (cont.)**

Item		Content	
Image Acquisition	Tomography	Movement	Linear
		Exposure position	SID:110 cm Possible at any table tilting angle from +90° to -90°
		Exposure angle	8° , 20° , 30° , 40°
		Speed	Max.2.5 sec. / 40°
		Layer height	0 mm – 250 mm from the tabletop surface
Image Recording Unit (*)	Hard Disk	Up to 500 GB: 10000 images (1024 x 1024 matrix)	
	DVD-R, CD-R	DVD : 4.7 GB ; 2000 images (1024 x 1024 matrix) CD : 700 MB ; 300 images (1024 x 1024 matrix) (DICOM Media format)	
	(*) Software of media storage for digital images, with DICOM image viewer is included.		
Image Processing	Graduation Processing	Density/contrast adjustment, black/white reversal, auto optimization processing (AWC)	
	Gamma processing	Selection from up to 10 types of graduation conversion curve	
	Edge Enhancement	Template filter processing	
	Noise Reduction Filter Processing	Recursive processing	
	H/V Inversion	Horizontal or vertical direction inversion	
	Zoom	X4	
	Multiple Image Display	Multiple-image display (2 x 2 or 4 x 4)	
	Annotation	Overlays display text and figure on the image	
	Re-masking (option)	By selecting arbitrarily a mask image again, a new subtraction image can be created. Requires DSA option.	
	Re-registration (option)	By moving arbitrarily a mask image, perform subtraction. Requires DSA option.	
	Stacking (option)	Hold Peak value for pixel of multi-frames. Requires DSA option.	
	Landmarking (option)	Creates and displays a live image of DSA radiography. Requires DSA option.	
Measurement Processing	Distance Measurement	Measures the distance on the image	
	Angle Measurement	Measures the angle on the image	
DICOM Communication	Output to Laser Imager	Compatible with DICOM print (Allows output to DICOM Laser Imager)	
	Media Output	DVD-R, CD-R (DICOM Media format)	
	Network interface	100/1000 Base-T	
	Output to Image Server (option)	Compatible with DICOM storage (Allows output to DICOM image server) Format is "RF", "XA", "CR" or "DX" DICOM storage option includes DICOM Storage Commitment.	
	DICOM Modality Worklist (MWM) (option)	Receives study information from the server. Studies for the same person can be combined on modality.	
	DICOM Modality performed procedure step (MPPS) (option)	Sends study results to server	
	DICOM Radiation Dose Structured Report (RDSR) (option)	Sends X-ray dose information to the network	
	Barcode reader (option)	Inputs patient information from barcode reader and performs search with MWM (option)	

**SPECIFICATIONS (Digital system) (cont.)**

Item		Content		
Document -ation	Reject analysis	Provide statistics of rejected images.		
	Exposure Index	Provide Exposure Index value		
SLOT Radiography (option)	Parallel movement of the imaging chain and FPD unit with the slit collimation X-ray exposure can produce a longitudinal radiographic image.  High speed mode Slot width : 4 cm, Composite width : 2 cm on both sides High quality mode Slot width : 2 cm, Composite width : 1 cm on both sides			
	Max. imaging range	145 cm x 42 cm		
	Positioning	Possible at any tilting angle SID: 110,120,150 cm (standard) or 110, 150 cm (with 1.8 m SID option)		
	Longitudinal movement Speed of imaging unit	High quality mode	6 cm/sec	
		High speed mode	12 cm/sec	
	Acquisition rate	3 f/sec		
	Reconstruction parameter	Auto-configured by acquisition parameter Digital filter function :SUREngine-Advance		
	Measurement	Distance, Angle, Cobb angle		
Tomosynthesis (option)	Movement	Linear		
	Exposer position	SID: 110 cm Possible at any table tilting angle from +90° to -90°		
	Tomographic angle	8° , 20° , 30° , 40°		
	Frame rate	15 fps		
	Scan time	5 sec.(76 frames), 2.5 sec. (38 frames)		
	Layer Height	0 mm – 250 mm from the tabletop surface		
T-smart PRO (option)	Reconstruction method	Create a Tomosynthesis reconstruction image in the iteration method using images acquired in the Tomosynthesis acquisition.		
	Oblique Tomosynthesis	A horizontal and vertical oblique image of a maximum of 20 degrees is created from Tomosynthesis reconstruction images.		

**SPECIFICATIONS (High voltage generator D150BC-40S (80kW))**

Nominal maximum power		80 kW
Setting range of Radiography *1	Tube voltage	40 to 150 kV
	Tube current	10 to 1000 mA
		Any 12 of the following positions permitted by the X-ray tube can be used for each focus. 1000, 900, 800, 710, 630, 560, 500, 450, 400, 360, 320, 280, 250, 220, 200, 180, 160, 140, 125, 110, 100, 90, 80, 71, 63, 56, 50, 45, 40, 36, 32, 28, 25, 22, 20, 18, 16, 14, 12, 11, 10 mA
	mAs	0.5 to 800 mAs
		Set from the following 65 positions. 500 mAs is the upper limit for AEC radiography. 0.50, 0.56, 0.63, 0.71, 0.80, 0.90, 1.0, 1.1, 1.25, 1.4, 1.6, 1.8, 2.0, 2.2, 2.5, 2.8, 3.2, 3.6, 4.0, 4.5, 5.0, 5.6, 6.3, 7.1, 8.0, 9.0, 10, 11, 12.5, 14, 16, 18, 20, 22, 25, 28, 32, 36, 40, 45, 50, 56, 63, 71, 80, 90, 100, 110, 125, 140, 160, 180, 200, 220, 250, 280, 320, 360, 400, 450, 500, 560, 630, 710, 800 mAs
	Time	0.001 to 10 sec
Set from the following 81 positions. (Cannot be set with an mAs value below 0.5 or above 800 mAs. 500 mAs upper limit for AEC radiography.) 1.0, 1.1, 1.2, 1.4, 1.6, 1.8, 2.0, 2.2, 2.5, 2.8, 3.2, 3.6, 4.0, 4.5, 5.0, 5.6, 6.3, 7.1, 8.0, 9.0, 10, 11, 12, 14, 16, 18, 20, 22, 25, 28, 32, 36, 40, 45, 50, 56, 63, 71, 80, 90, 100, 110, 125, 140, 160, 180, 200, 220, 250, 280, 320, 360, 400, 450, 500, 560, 630, 710, 800, 900 ms, 1.0, 1.1, 1.2, 1.4, 1.6, 1.8, 2.0, 2.2, 2.5, 2.8, 3.2, 3.6, 4.0, 4.5, 5.0, 5.6, 6.3, 7.1, 8.0, 9.0, 10 sec		
Setting range of Fluoroscopy *1	Tube voltage	50 to 125 kV
	Tube current	0.3 to 20 mA
	Time	Total time display: 99 min 59 sec., continuous fluoroscopy time: 10 min
Short-time rating *2		150 kV 500 mA, 125 kV 630 mA, 100 kV 800 mA 80 kV 1000 mA
Long-time rating *2		75 kV 20 mA, 125 kV 12 mA
Min. tube current time product		0.5 mAs
Nominal min. exposure time (AEC radiography)		3 ms
Nominal X-ray tube voltage and max. tube current that can flow at nominal X-ray tube voltage *2		Short-time rating: 150 kV 500 mA Long-time rating: 125 kV 12 mA
Max. tube current and max. tube voltage to achieve max. tube current *2		Short-time rating: 80 kV 1000 mA 100 kV 800 mA Long-time rating: 75 kV 20 mA
Tube voltage and tube current combination for max. electrical output *2		Short-time rating: 80 kV 1000 mA, 100 kV 800 mA Long-time rating: 75 kV 20 mA, 125 kV 12 mA
Nominal supply voltage (50/60 Hz)	400 V line	3-phase AC: 380/400/415/440/480 V
	200V line	3-phase AC: 200/220/240 V

\*1: The setting range differs according to the type of X-ray tube unit.

\*2: Restrictions apply depending on the type of X-ray tube unit.



**SPECIFICATIONS (High voltage generator D150VC-40S (65kW))**

Nominal maximum power		65 kW
Setting range of Radiography *1	Tube voltage	40 to 150 kV
	Tube current	10 to 800 mA
		Any 12 of the following positions permitted by the X-ray tube can be used for each focus: 800,710,630, 560, 500, 450, 400, 360, 320, 280, 250, 220, 200, 180, 160,140, 125, 110, 100, 90, 80, 71, 63, 56, 50, 45, 40, 36, 32, 28, 25, 22, 20,18, 16, 14, 12, 11, 10 mA
	mAs	0.5 to 800 mAs
		Set from the following 65 positions. (500 mAs upper limit for AEC radiography.) 0.50, 0.56, 0.63, 0.71, 0.80, 0.90, 1.0, 1.1, 1.25, 1.4, 1.6, 1.8, 2.0, 2.2, 2.5,2.8, 3.2, 3.6, 4.0, 4.5, 5.0, 5.6, 6.3, 7.1, 8.0, 9.0, 10, 11, 12.5, 14, 16, 18,20, 22, 25, 28, 32, 36, 40, 45, 50, 56, 63, 71, 80, 90, 100, 110, 125, 140,160, 180, 200, 220, 250, 280, 320, 360, 400, 450, 500, 560, 630, 710,800 mAs
	Time	0.001 to 10 sec
Set from the following 81 positions. (Cannot be set with an mAs value below 0.5 or above 800 mAs. 500 mAs upper limit for AEC radiography.) 1.0, 1.1, 1.2, 1.4, 1.6, 1.8, 2.0, 2.2, 2.5, 2.8, 3.2, 3.6, 4.0, 4.5, 5.0, 5.6, 6.3,7.1, 8.0, 9.0, 10, 11, 12, 14, 16, 18, 20, 22, 25, 28, 32, 36, 40, 45, 50, 56,63, 71, 80, 90, 100, 110, 120, 140, 160, 180, 200, 220, 250, 280, 320, 360,400, 450, 500, 560, 630, 710, 800, 900 ms, 1.0, 1.1, 1.2, 1.4, 1.6, 1.8, 2.0, 2.2, 2.5, 2.8, 3.2, 3.6, 4.0, 4.5, 5.0, 5.6, 6.3,7.1, 8.0, 9.0, 10 sec		
Setting range of Fluoroscopy *1	Tube voltage	50 to 125 kV
	Tube current	0.3 to 9.0 mA
	Time	Total Time Display 99 min 59 sec, continuous fluoroscopy time 10 min.
Short-time rating *2		150 kV 400 mA, 130 kV 500 mA, 103 kV 630 mA, 81 kV 800 mA
Long-time rating *2		75 kV 20 mA, 125 kV 12 mA,
Min. tube current time product		0.5 mAs
Nominal min. exposure time (AEC radiography)		3 ms
Nominal X-ray tube voltage and max. tube current that can flow at nominal X-ray tube voltage *2		Short-time rating: 150 kV 400 mA Long-time rating: 125 kV 12 mA
Max. tube current and max. tube voltage to achieve max. tube current *2		Short-time rating: 81 kV 800 mA Long-time rating: 75 kV 20 mA
Tube voltage and tube current combination for max. electrical output *2		Short-time rating: 130 kV 500 mA Long-time rating: 75 kV 20 mA, 125 kV 12 mA,
Nominal supply voltage (50/60 Hz)	400 V line	3-phase AC: 380/400/415/440/480 V
	200V line	3-phase AC: 200/220/240 V

\*1: The setting range differs according to the type of X-ray tube unit.

\*2: Restrictions apply depending on the type of X-ray tube unit.

**Load condition when combined with the X-ray tube unit**

Item	X-ray tube unit
	0.7/1.2JG326D-265
Normal X-ray tube voltage and max. tube current that can flow at nominal x-ray tube voltage	125 kV, 7.6 mA
	150 kV, 500 mA
Max. tube current and max. tube voltage to achieve max. tube current	80 kV, 11.8 mA
	100 kV, 800 mA
Tube voltage and tube current combination for max. electrical output	125 kV, 7.6 mA
	100 kV, 800 mA
Nominal electric power	80 kW (100 kV, 800 mA, 0.1 sec)

**AMBIENT CONDITIONS**

**Examination room**

Ambient temperature	10 to 30 °C
Relative humidity	15 to 75 % (No condensation) It is recommended to use a dehumidifier for humid control.
Atmospheric pressure	800 to 1060 hPa

**Operation room**

Ambient temperature	10 to 30 °C
Relative humidity	20 to 70 % (No condensation) It is recommended to use a dehumidifier for humid control.
Atmospheric pressure	800 to 1060 hPa

The installation of a dedicated air-conditioner is recommended if the building air-conditioner cannot maintain the necessary environmental conditions 24 hours a day.

**Power supply (for digital radiography unit)**

- Nominal voltage: 200/220/230/240 VAC, single phase
- Frequency: 50/60 Hz
- Allowable voltage range (at no load): Nominal voltage  $\pm 10\%$
- Electric capacity: 7.0 kVA
- Grounding condition: Class D grounding (grounding resistance: 100  $\Omega$  max.)

**Power supply (for high voltage generator, X-ray diagnostic table)**

- Nominal voltage: 200/220/240/380/400/415/440/480 VAC, 3-phase
- Frequency: 50/60 Hz
- Allowable voltage range (at no load): Nominal voltage  $\pm 10\%$
- Maximum Momentary road and recommended transformer capacity

Maximum Momentary road	133 kVA
Recommended transformer capacity	75 kVA

- Safety devices

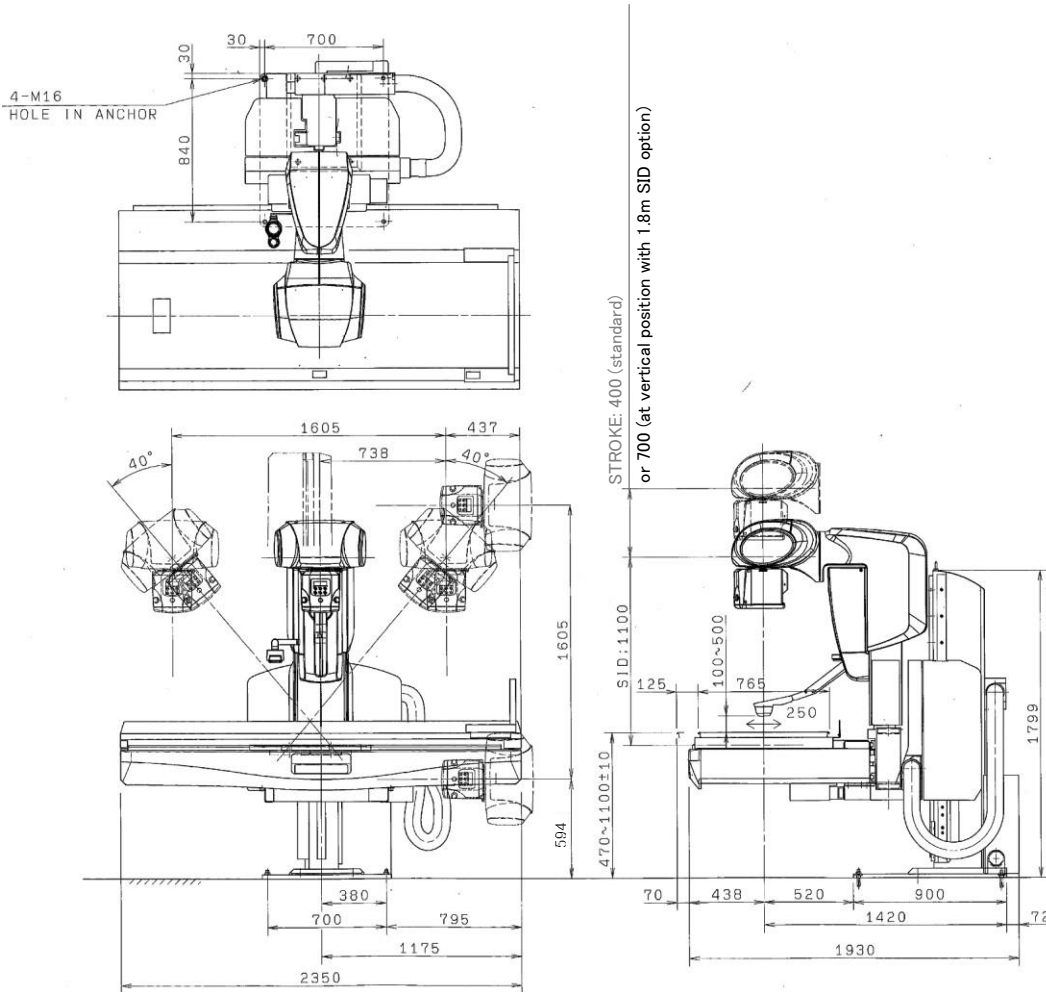
200V line	Breaker	100 A
	Knife switch, fuse	
400V line	Breaker	75 A

- Grounding conditions

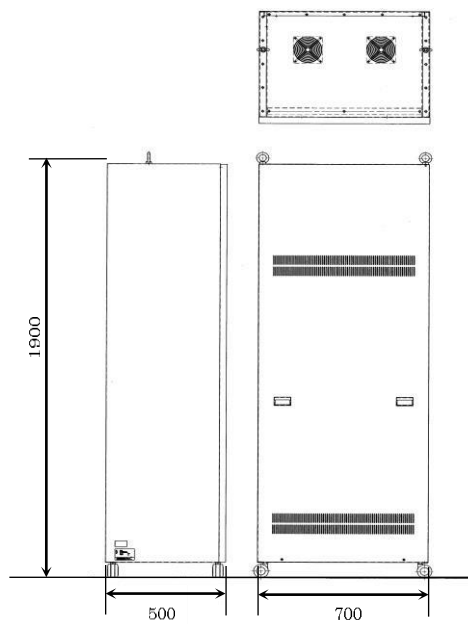
200V line	100 $\Omega$ max.
400V line	10 $\Omega$ max.

**DIMENSIONS**

R/F table



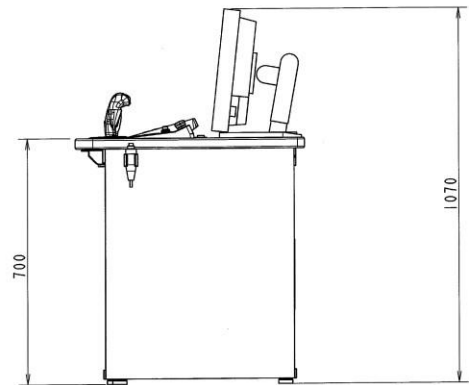
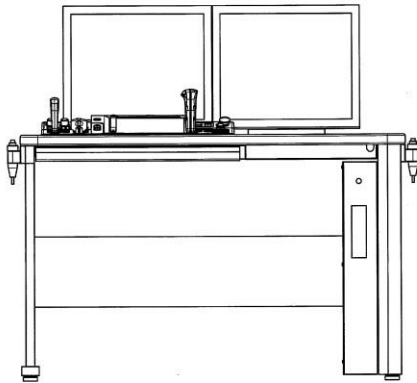
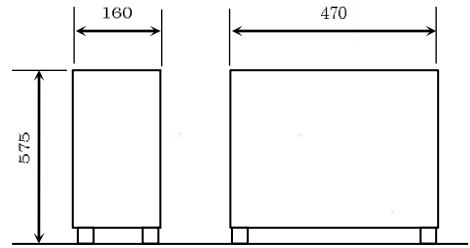
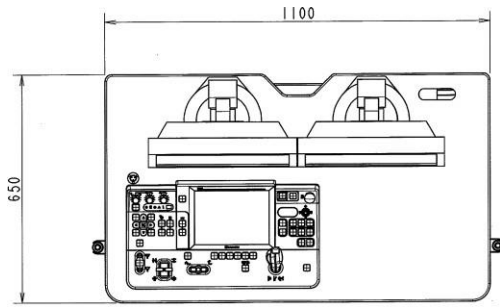
R/F table Control cabinet  
 Digital Control cabinet  
 High voltage generator



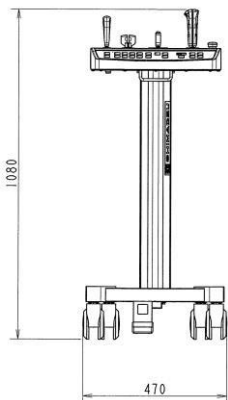
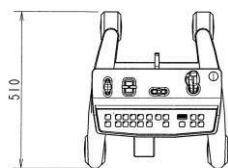
(3 cabinets are same dimensions)

Unit : mm

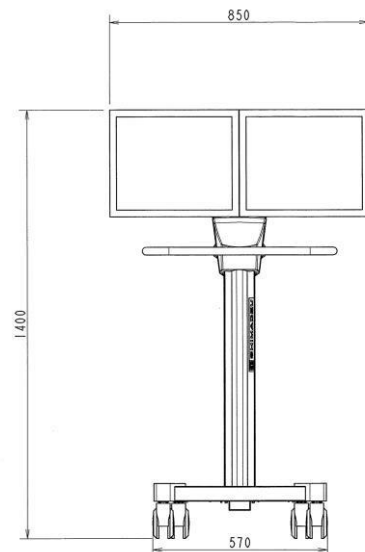
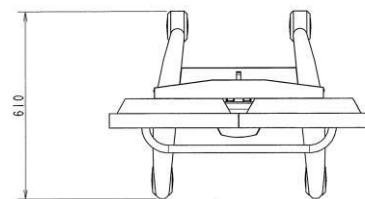
### Remote system control console



### Local system control console

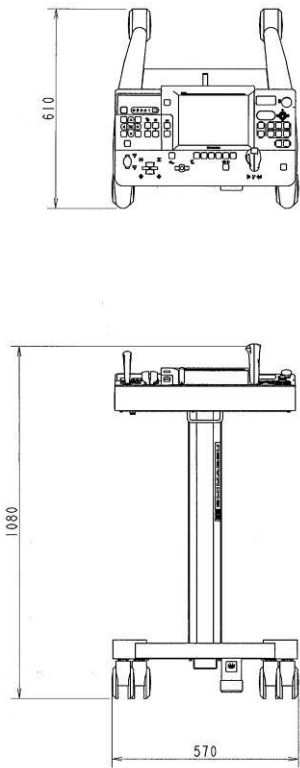


### Monitor cart

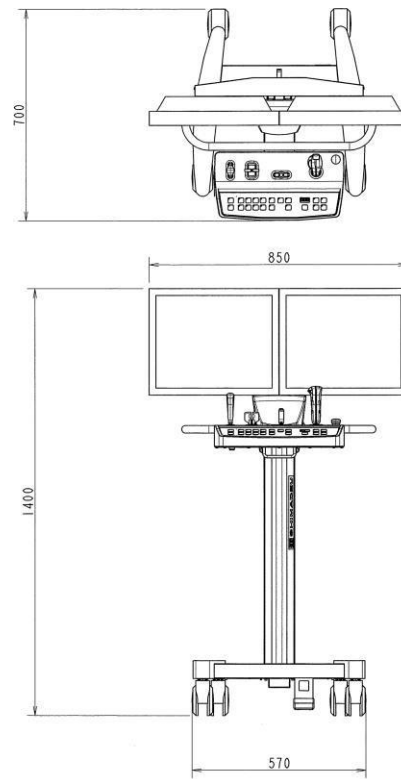


Unit : mm

Local system control console with touch panel



Monitor cart with control panel



**Label Description: X-RAY TV SYSTEM SONIALVISION G4**

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- The appearances and specifications are subject to change for reasons of improvement without notice.
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- Before operating this system, you should first thoroughly review the Instruction Manual.