

**SHIMADZU**

# PRODUCT DATA

General

Radiographic  
System**RADspeed Pro** style edition VIVIX-S**GENERAL**

RADspeed Pro with DR system package is a digital radiographic system that provides a comfortable examination environment for operator and patient alike.

This package includes the Flat Panel Detector (FPD). FPD provides high definition images.

The Auto-stitching long view radiography can be performed. (Optional feature)

The TM and ® symbols are omitted in this document.

## **FEATURES**

### **(1) System layout**

This system combines the digital radiograph with an X-ray high voltage generator, X-ray tube assembly, collimator, X-ray tube support, and if necessary, X-ray radiography table and/or X-ray radiography stand.

The abundant combination of system components allows a variety of system configurations according to the intended applications.

### **(2) Enhancement of tracking units**

The enhanced tracking units such as for tracking with radiography conditions and positioning as well as the auto-positioning function help the operator save time and labor required for preparation for radiography while making the patient feel more relaxed during care. (Availability of these functions may vary depending on the options provided.)

### **(3) Network connectivity for an optimal workflow**

The system supports DICOM3.0 image format for diagnostic workstations and image transfer function.

### **(4) Long View Radiography Function (option)**

This option allows for generating a long view radiographic image by taking X-rays of continuous body parts, with the FPD position and the exposure field being interlocked.

### **(5) Energy saving collimator with a bright irradiation field**

LED is adopted as the light source to indicate the irradiation field. This reduces power consumption and improves brightness levels and durability.

### **(6) Dose Management**

Prior to exposure, dose area product (DAP) is estimated based on the exposure parameter setting and exposure area, and estimated value is displayed on the console. After exposure, DAP value is recalculated based on actual exposure parameter and displayed.

**SYSTEM CONFIGURATION**

The RADspeed Pro Auto package consists of DR system, X-ray high-voltage generator, X-ray tube assembly, collimator, and X-ray tube support and if necessary, X-ray radiography table and/or X-ray radiography stand.

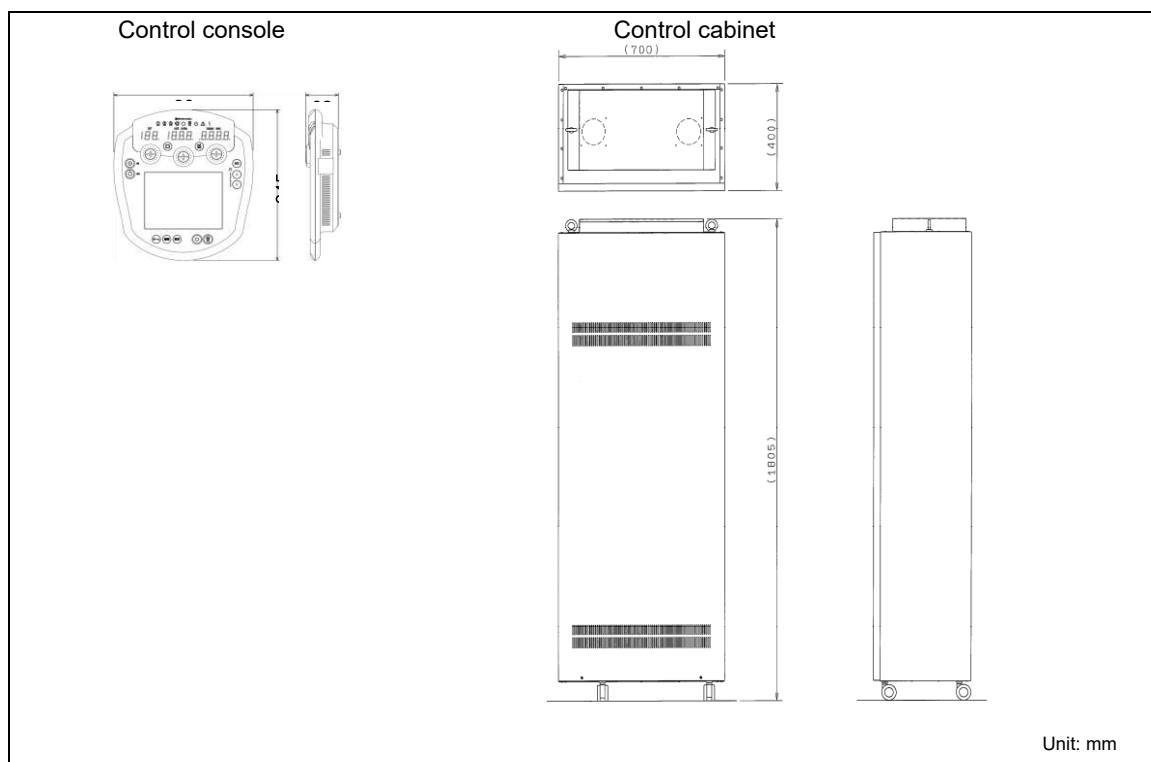
**System configuration and accompanying documents**

Component	Model Name
Whole system	RADspeed Pro (DR package)
X-ray high voltage generator.	UD150B-40/L-40/V-40
	UD150L-40E/L-40F
X-ray tube assembly	0.6/1.2P326D-150
	0.6/1.2P366D-150
	0.6/1.2P324DK-125
	0.6/1.2P364DK-125
	0.6/1.2P324DK-85
	0.6/1.2P364DK-85
	0.6/1.2P164DK-85
	0.6/1.2P323DK-85
	0.6/1.2P38DE-85
	0.6/1.2P33DK-85
	0.6/1.2P18DE-85
	0.6/1.2P13DK-85
	1/2P18DK-85
	1/2P13DK-85
Ceiling suspended X-ray tube support	CH-200
	CH-200M
Floor mount X-ray tube support	FH-20HR, FH-21HR
X-ray Bucky stand	BR-120T
	BR-120
	BR-120M
X-ray Bucky table	BK-200
	BK-120MK
	BK-12HK
X-ray Collimator	R-300
	R-20J
DR system	VXvue
	VIVIX-S

## SPECIFICATIONS

### X-Ray High Voltage Generator UD150B-40/V-40/L-40

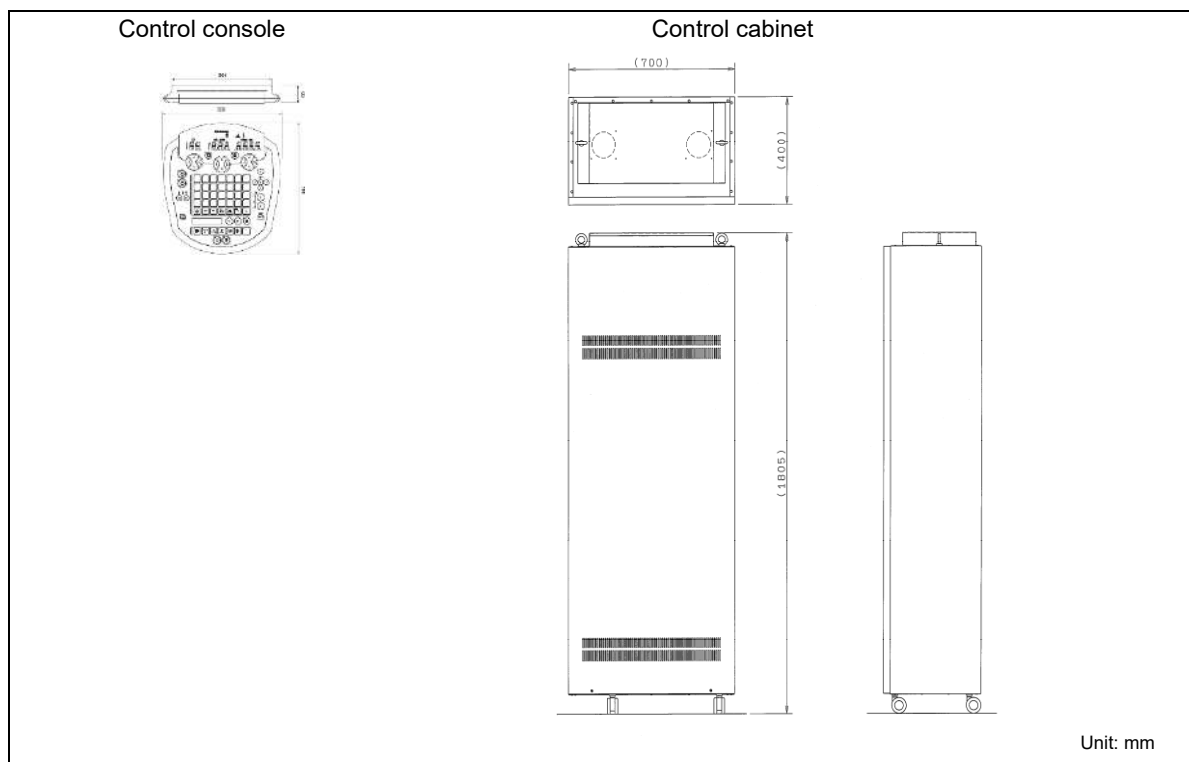
Item			Specifications
Radiography technique			General radiography, Bucky radiography, Digital radiography
Number of connectable X-ray tubes			2 tubes
Setting range *1 *2 *3	Radiography	Tube voltage	40 to 150kV
		Tube current	B-40 : 10 to 1,000m A V-40 : 10 to 800 mA L-40 : 10 to 630 mA
		mAs	0.5 to 800 mAs
		Time	0.001 to 10 sec
Nominal supply voltage (50/60Hz)			B-40/V-40 : 200/220/240/380/400/415/440/480 VAC, 3-phase  L-40 : 200/220/240/380/400/415/440/480 VAC, 3-phase or 200/220/240 VAC, single-phase  Factor depending on the waveform: 1.00
Power input			B-40/V-40 : 3-phase AC: 120 kVA L-40 : 3-phase AC: 80 kVA or single-phase AC: 95 kVA
Rated output			B-40 : 80 kW (100 kV, 800mA) V-40 : 65 kW (100 kV, 650 mA) L-40 : 50 kW (100 kV, 500 mA)  Product of tube voltage and max. current that can flow in 0.1s at 100kV tube voltage
Short-time rating *2			B-40 : 150kV 500mA, 125kV 630mA, 100kV 800mA, 80kV 1,000mA V-40 : 150kV 400mA, 125kV 500mA, 100kV 650mA, 80kV 800mA L-40 : 150kV 320mA, 125kV 400mA, 100kV 500mA, 80kV 630mA
Nominal max. tube voltage and max. tube current that can flow at nominal max. tube voltage *2			B-40 : Short-time rating: 150 kV 500 mA Long-time rating: 125 kV 12 mA V-40 : Short-time rating: 150 kV 400 mA Long-time rating: 125 kV 9 mA L-40 : Short-time rating: 150 kV 320 mA Long-time rating: 125 kV 9 mA
Max. tube current and max. tube voltage to achieve max. tube current *2			B-40 : Short-time rating: 80 kV 1,000 mA Long-time rating: 75 kV 20 mA V-40 : Short-time rating: 80 kV 800 mA Long-time rating: 125 kV 9 mA L-40 : Short-time rating: 80 kV 630 mA Long-time rating: 125 kV 9 mA
Tube voltage and tube current combination for max. electrical output *2			B-40 : Short-time rating: 80 kV 1,000 mA, 100 kV 800 mA Long-time rating: 75 kV 20 mA, 125 kV 12 mA V-40 : Short-time rating: 100 kV 650 mA Long-time rating: 125 kV 9 mA L-40 : Short-time rating: 80 kV 630 mA, 100 kV 500 mA Long-time rating: 125 kV 9 mA
Dimensions	Operation panel	308(W) x 345(H) x 82(D) mm	
	Control cabinet	700(W) x 1805(H) x 400(D) mm	
Mass	Operation panel	2.5 kg	
	Control cabinet	B-40/V-40 : 250 kg L-40 : 240 kg	

**DIMENSIONS**

**UD150L-40E/L-40F**

Item			Specifications
Radiography technique			General radiography, Bucky radiography, Digital radiography
Number of connectable X-ray tubes			L-40F: 2 tubes L-40E: 1 tube
Setting range *1 *2 *3	Radiography	Tube voltage	40 to 150 kV
		Tube current	10 to 630 mA
		mAs	0.5 to 800 mAs
		Time	0.001 to 10 sec
Nominal supply voltage (50/60Hz)			200/220/240/380/400/415/440/480 VAC, 3-phase or 200/220/240 VAC, single-phase Factor depending on the waveform: 1.00
Power input			3-phase AC: 80 kVA or Single-phase AC: 60 kVA
Rated output			3-phase AC: 50 kW (100 kV, 500 mA) or Single-phase AC: 32 kW (100 kV, 320 mA)  Product of tube voltage and max. current that can flow in 0.1 s at 100kV tube voltage
Short-time rating *2			3-phase AC: 150 kV 320 mA, 125 kV 400 mA, 100 kV 500 mA, 80 kV 630 mA  or Single-phase AC: 150 kV 200 mA, 125 kV 250 mA, 100 kV 320 mA, 80 kV 400 mA, 60 kV 500 mA
Nominal max. tube voltage and max. tube current that can flow at nominal max. tube voltage *2			Short-time rating: 3-phase AC: 150 kV 320 mA Single-phase AC: 150 kV 200 mA Long-time rating: 125 kV 4 mA
Max. tube current and max. tube voltage to achieve max. tube current *2			Short-time rating: 3-phase AC: 80 kV 630 mA Single-phase AC: 60 kV 500 mA Long-time rating: 125 kV 4 mA
Tube voltage and tube current			Short-time rating: 3-phase AC: 80 kV 630 mA, 100 kV 500 mA

Item		Specifications
combination for max. electrical output *2		Single-phase AC: 80 kV 400 mA, 100 kV 320 mA Long-time rating: 125 kV 4 mA
Dimensions	Operation panel	308(W) x 345(H) x 65(D) mm
	Control cabinet	700(W) x 1805(H) x 400(D) mm
Mass	Operation panel	2 kg
	Control cabinet	240 kg

## DIMENSIONS



\*1: Setting range differs according to the X-ray tube type.

\*2: Limited according to the X-ray tube type.

\*3: The various conditions are as follows (conform to IEC-standards):

Tube voltage (within +/-10%), Tube current (within +/-20%)

mAs within +/- (10% + 0.2 mAs), Time within +/- (10% + 1 ms)

## Options

Item	Specifications	
Direct phototimer (AEC) radiography option	Combination with a Shimadzu receiver permits phototimer(AEC) radiography. The following types can be used: Xe detector-type phototimer receiver (SPT-XD series) Number of pick up fields: 1/3/4(3 types) Permitted combination: up to three receivers	
B-40/V-40/L-40 Communication Unit	Permits communication of radiographic conditions with DR unit	
High Speed Rotation Starter SA-60	Power supply	Single phase 200 V,208 V,220 V,230 V,24 0V (for power and control circuits)
	Power consumption	7.5 kVA
	Frequency	50/60 Hz
	Supply capacity	5 kVA
	Voltage validation	±10%
	Ground resistance	Less than 100 ohm
	Dimensions	520(W) x 400(H) x 470(D) mm
	Mass	50 kg

## X-Ray Tube Assembly

### 0.6/1.2P326D-150

Item		Specifications	
Nominal X-ray tube voltage	Long-time	125 kV	
	Short-time	150 kV	
X-ray tube assembly	Max. heat content	1100 kJ (1600 kHU)	
	Nominal continuous input power	470 W (660 HU/s) (with fan)	
X-ray tube	Max. anode heat content	424 kJ (600 kHU)	
	Max. anode heat dissipation rate	2000 W (2820 HU/s)	
	Max. continuous heat dissipation rate	300 W (420 HU/s)	
Nominal focal spot		0.6 mm	1.2 mm
Nominal anode input power (0.1sec, 180Hz)		38 kW	96 kW
Anode Target	Material	Rhenium-tungsten faced molybdenum	
	Angle/diameter	12° / 100 mm	
Minimum total Filtration		1.7 mm Al / 75 kV (including added filter)	
Permanent Filtration		1.0 mm Al / 75 kV	
X-ray radiation field		430 x 430 mm at SID 1m	
Mass		22 kg	

### 0.6/1.2P366D-150

Item		Specifications	
Nominal X-ray tube voltage	Long-time	125 kV	
	Short-time	150 kV	
X-ray tube assembly	Max. heat content	1100 kJ (1600 kHU)	
	Nominal continuous input power	470 W (660 HU/s) (with fan)	
X-ray tube	Max. anode heat content	424 kJ (600 kHU)	
	Max. anode heat dissipation rate	2000 W (2820 HU/s)	
	Max. continuous heat dissipation rate	300 W (420 HU/s)	
Nominal focal spot		0.6 mm	1.2 mm
Nominal anode input power (0.1sec, 180Hz)		24 kW	65 kW
Anode Target	Material	Rhenium-tungsten faced molybdenum	
	Angle/diameter	16° / 100 mm	
Minimum total Filtration		1.7 mm Al / 75 kV (including added filter)	
Permanent Filtration		1.0 mm Al / 75 kV	
X-ray radiation field		350 x 350 mm at SID 0.65 m	
Mass		22 kg	

### 0.6/1.2P324DK-85 & 0.6/1.2P324DK-125

Item		Specifications	
Nominal X-ray tube voltage	Long-time	125 kV	
	Short-time	150 kV	
X-ray tube assembly	Max. heat content	1100 kJ (1600 kHU)	
	Nominal continuous input power	470 W (660 HU/s) (with fan)	
X-ray tube	Max. anode heat content	280 kJ (400 kHU)	
	Max. anode heat dissipation rate	1600 W (2200 HU/s)	
	Max. continuous heat dissipation rate	300 W (420 HU/s)	
Nominal focal spot		0.6mm	1.2 mm
Nominal anode input power (0.1sec, 180Hz)		38 kW	92 kW
Anode Target	Material	Rhenium-tungsten faced molybdenum	
	Angle/diameter	12° / 100 mm	
Minimum total Filtration		1.7 mm Al / 75 kV (including added filter)	
Permanent Filtration		1.0 mm Al / 75 kV	
X-ray radiation field		350 x 350 mm at SID 1 m	
Mass		22.5 kg	

### 0.6/1.2P164DK-85 & 0.6/1.2P364DK-85 & 0.6/1.2P364DK-125

Item		Specifications	
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Nominal X-ray tube voltage	Long-time	125 kV	
	Short-time	150 kV	
X-ray tube assembly	Max. heat content	1100 kJ (1600 kHU)	
	Nominal continuous input power	470 W (660 HU/s) (with fan)	
X-ray tube	Max. anode heat content	280 kJ (400 kHU)	
	Max. anode heat dissipation rate	1600 W (2200 HU/s)	
	Max. continuous heat dissipation rate	300 W (420 HU/s)	
Nominal focal spot		0.6 mm	1.2 mm
Nominal anode input power (0.1sec)	50Hz (164DK)	12.7 kW	34.3 kW
	60Hz (164DK)	13.8 kW	37.3 kW
	180Hz (364DK)	24 kW	65 kW
Anode Target	Material	Rhenium-tungsten faced molybdenum	
	Angle/diameter	16° / 100 mm	
Minimum total Filtration		1.7 mm Al / 75 kV (including added filter)	
Permanent Filtration		1.0 mm Al / 75 kV	
X-ray radiation field		350 x 350 mm at SID 0.65 m	
Mass		22.5 kg	

#### 0.6/1.2P323DK-85

Item		Specifications	
Nominal X-ray tube voltage	Long-time	125 kV	
	Short-time	150 kV	
X-ray tube assembly	Max. heat content	1100 kJ (1600 kHU)	
	Nominal continuous input power	470 W (660 HU/s) (with fan),	
X-ray tube	Max. anode heat content	210 kJ (300 kHU)	
	Max. anode heat dissipation rate	1200 W (1690 HU/s)	
	Max. continuous heat dissipation rate	250 W (350 HU/s)	
Nominal focal spot		0.6 mm	1.2 mm
Nominal anode input power (0.1sec, 180Hz)		38 kW	92 kW
Anode Target	Material	Rhenium-tungsten faced molybdenum	
	Angle/diameter	12° / 100 mm	
Minimum total Filtration		1.7 mm Al / 75 kV (including added filter)	
Permanent Filtration		1.0 mm Al / 75 kV	
X-ray radiation field		350 x 350 mm at SID 1 m	
Mass		21 kg	

#### 0.6/1.2P18DE-85 & 0.6/1.2P38DE-85

Item		Specifications	
Nominal X-ray tube voltage	Long-time	125 kV	
	Short-time	150 kV	
X-ray tube assembly	Max. heat content	1100 kJ (1600 kHU)	
	Nominal continuous input power	235 W (330 HU/s) (without fan)	
X-ray tube	Max. anode heat content	140 kJ (200 kHU)	
	Max. anode heat dissipation rate	640 W (900 HU/s)	
	Max. continuous heat dissipation rate	210 W (300 HU/s)	
Nominal focal spot		0.6 mm	1.2 mm
Nominal anode input power (0.1sec)	50Hz (18DE)	18 kW	48 kW
	60Hz (18DE)	21 kW	53 kW
	180Hz (38DE)	37 kW	85 kW
Anode Target	Material	Rhenium-tungsten faced molybdenum	
	Angle/diameter	12° / 100 mm	
Minimum total Filtration		1.7 mm Al / 75 kV (including added filter)	
Permanent Filtration		1.0 mm Al / 75 kV	
X-ray radiation field		350 x 350 mm at SID 1m	
Mass		22.5 kg	

#### 0.6/1.2P13DK-85 & 0.6/1.2P33DK-85

Item		Specifications	
Nominal X-ray tube voltage	Long-time	125 kV	
	Short-time	150 kV	
X-ray tube assembly	Max. heat content	1100 kJ (1600 kHU)	
	Nominal continuous input power	235 W (330 HU/s) (without fan)	



Item		Specifications	
X-ray tube	Max. anode heat content	140 kJ (200 kHU)	
	Max. anode heat dissipation rate	640 W (900 HU/s)	
	Max. continuous heat dissipation rate	210 W (300 HU/s)	
Nominal focal spot		0.6 mm	1.2 mm
Nominal anode input power (0.1sec)	50 Hz (13DK)	12.5 kW	34.5 kW
	60 Hz (13DK)	14 kW	37.5 W
	180 Hz (33DK)	24 kW	65 kW
Anode Target	Material	Rhenium-tungsten faced molybdenum	
	Angle/diameter	16° / 100 mm	
Minimum total Filtration		1.7 mm Al / 75 kV (including added filter)	
Permanent Filtration		1.0 mm Al / 75 kV	
X-ray radiation field		350 x 350 mm at SID 0.65 m	
Mass		21 kg	

#### 1/2P18DK-85

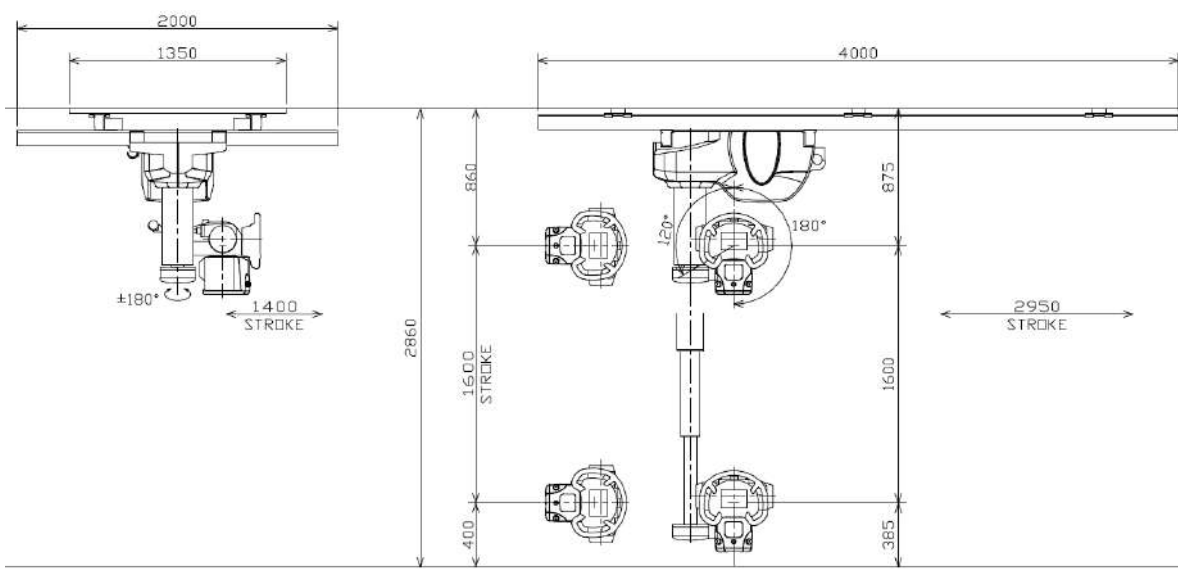
Item		Specifications	
Nominal X-ray tube voltage	Long-time	125 kV	
	Short-time	150 kV	
X-ray tube assembly	Max. heat content	1100 kJ (1600 kHU)	
	Nominal continuous input power	235 W (330HU/s) (without fan)	
X-ray tube	Max. anode heat content	140 kJ (200kHU)	
	Max. anode heat dissipation rate	640 W (900HU/s)	
	Max. continuous heat dissipation rate	210 W (300HU/s)	
Nominal focal spot		1 mm	2 mm
Nominal anode input power (0.1sec)	50 Hz (18DK)	35 kW	68.5 kW
	60 Hz (18DK)	39 kW	75 kW
	18 0Hz (38D)	66.5 kW	117.7 kW
Anode Target	Material	Rhenium-tungsten faced molybdenum	
	Angle/diameter	12° / 100 mm	
Minimum total Filtration		1.7 mm Al / 75 kV (including added filter)	
Permanent Filtration		1.0 mm Al / 75 kV	
X-ray radiation field		350 x 350 mm at SID 1m	
Mass		22 kg: 18DK	
		21 kg: 38D	

#### 1/2P13DK-85

Item		Specifications	
Nominal X-ray tube voltage	Long-time	125 kV	
	Short-time	150 kV	
X-ray tube assembly	Max. heat content	1100 kJ (1600 kHU)	
	Nominal continuous input power	235 W (330 HU/s) (without fan)	
X-ray tube	Max. anode heat content	140 kJ (200 kHU)	
	Max. anode heat dissipation rate	640 W (900 HU/s)	
	Max. continuous heat dissipation rate	210 W (300 HU/s)	
Nominal focal spot		1 mm	2 mm
Nominal anode input power (0.1sec)	50 Hz (13DK)	27.5 kW	64 kW
	60 Hz (13DK)	30 kW	70 W
	180 Hz (33D)	53 kW	110 kW
Anode Target	Material	Rhenium-tungsten faced molybdenum	
	Angle/diameter	16° / 100 mm	
Minimum total Filtration		1.7 mm Al / 75 kV (including added filter)	
Permanent Filtration		1.0 mm Al / 75 kV	
X-ray radiation field		350 x 350 mm at SID 0.65 m	
Mass		22.5 kg	

**X-Ray Tube Support  
CH-200**

CH-200

Item	Standard type	Rear-mounting type (*1)	Front mount L type (option)	Low-ceiling type (option)
In case of Standard type				
<div>unit : mm</div> 				
Maximum supportable weight	47 kg			
Balancing system	Spring-balanced type			
Ceiling fixtures rail	Fixed rail: 4 m / 5.5 m Travelling rail: 2 m / 2.6 m / 3.3 m			
Movement of X-ray tube assembly				
Range of movement Vertical travel (*1)	With ceiling height of 2,860 mm: 400 to 2,000 mm	With ceiling height of 2,860 mm: 400 to 2,000 mm	With ceiling height of 2,860 mm: 320 to 1,920 mm	With ceiling height of 2,710 mm: 400 to 2,000 mm
	Continuous			
Longitudinal travel	2,950 mm (with a 4 m fixed rail) (*2) 4,450 mm (with a 5.5 m fixed rail) (*2)			
Transverse travel	1,400 mm (with a 2 m travelling rail) 2,000 mm (with a 2.6 m travelling rail) 2,700 mm (with a 3.3 m travelling rail)			
Rotation about the vertical axis				
Angle of rotation	±180°, continuous (click stops at 90° intervals)			+30° to -90°, continuous (click stops at 90° intervals)
Rotation about the horizontal axis				
Angle of rotation	+120° to -180°, continuous Click stops at 0° and ±90°			
Operation	Manual, electromagnetic lock(off lock)			

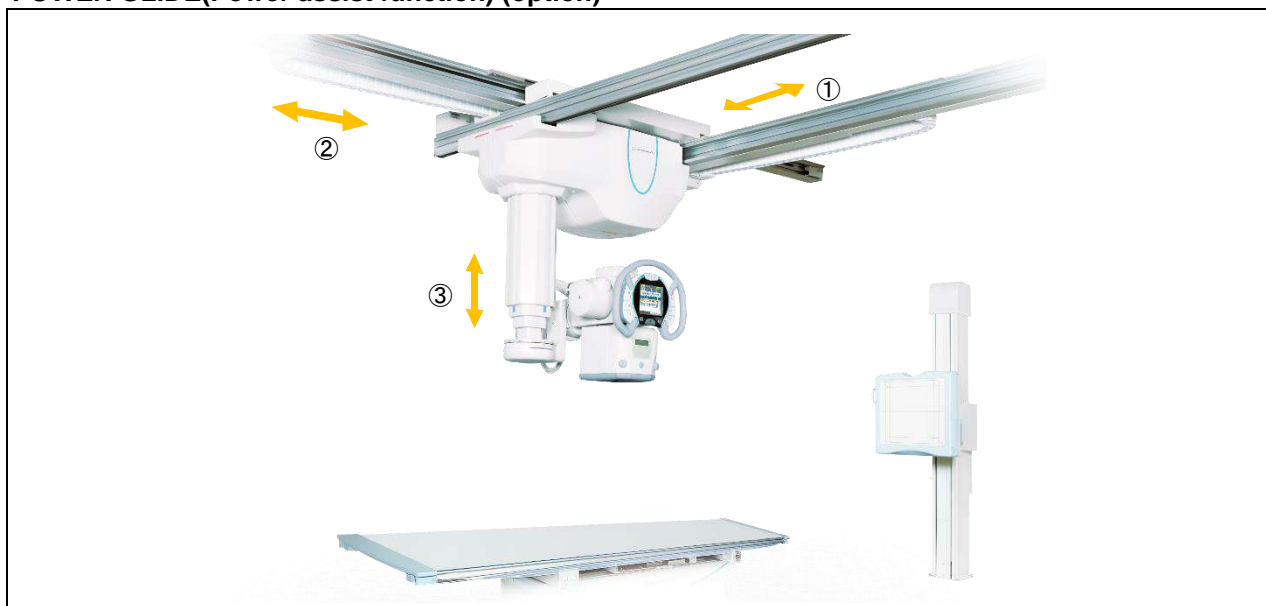
Item	Standard type	Rear-mounting type (*1)	Front mount L type (option)	Low-ceiling type (option)
Display	Angle of rotation displayed digitally.			
Standard ceiling height	2,860 mm (*3)			2,710 mm
Mass	250 kg (including support, 4 m fixed rail, and 2 m traveling rail)			
Power source	Single phase, AC100 V, 0.2 kVA, 50/60 Hz Single phase, AC 200, 220, 230, 240 V, 1.0 kVA, 50/60 Hz			

\*1 Low-ceiling type and electric tomography, bucky synchronization unit are not available with the rear-mounting type.

\*2 The traveling stroke decreases by 100mm in combination with the electronic tomography (optional) and the auto positioning function (optional).

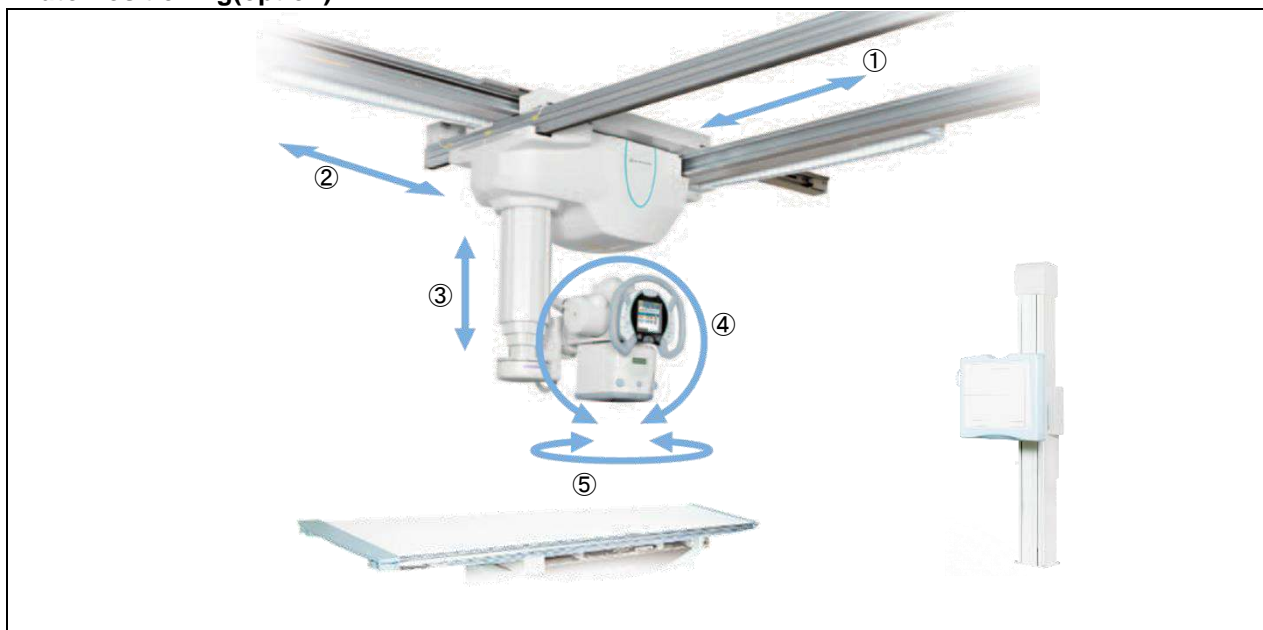
\*3 It is possible to keep the vertical travel 400 to 2,000mm by installing the focal height 350mm lower, even when the ceiling height is 3,210 mm.

#### POWER GLIDE(Power assist function) (option)



Type	Standard type	Rear-mounting type	Front mount L type	Low-ceiling type
Enable / Disable	Enable	Disable	Enable	Enable
<b>Movement</b>	① Transverse travel ② Longitudinal travel ③ Vertical travel			
Axis	Speed			
Transverse travel	50 cm/sec max.			
Longitudinal travel	50 cm/sec max.			
Vertical travel	60 cm/sec max.			
Assist strength	High / Mid / Low			

### Auto Positioning(option)



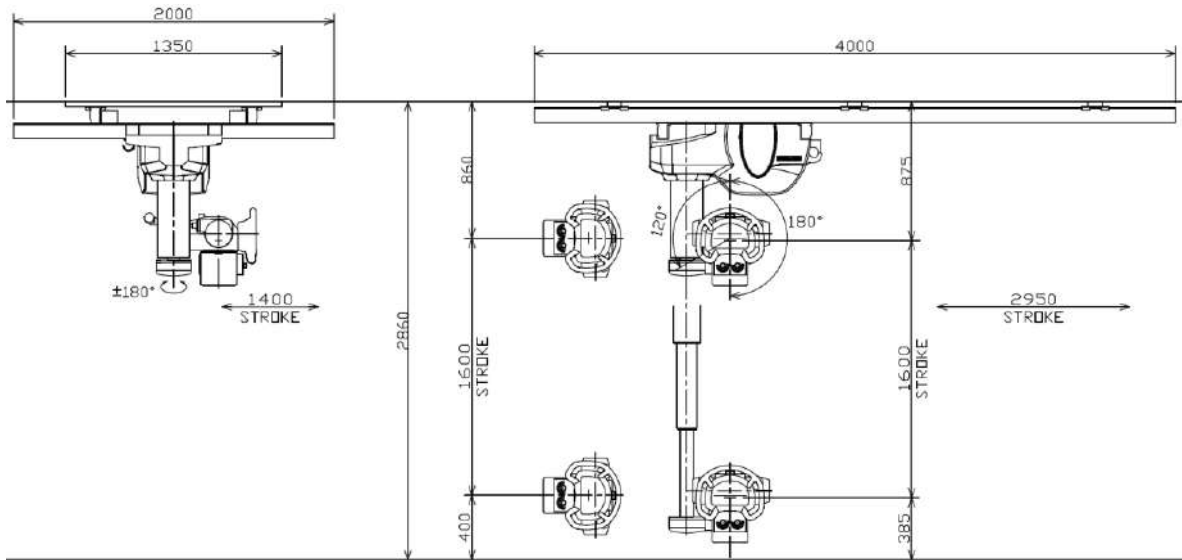
Type	Standard type	Rear-mounting type	Front mount L type	Low-ceiling type
Enable / Disable	Enable	Disable	Enable	Enable
<b>Movement</b>	④ Transverse travel ⑤ Longitudinal travel ⑥ Vertical Travel ⑦ Tube Rotation ⑧ Swivel(option) ⑨ Irradiation Field Collimation  ⑩ Buckly Tracking(When combined with BR-120, BR-120T or BK-200)			
<b>Axis</b>	<b>Speed</b>			
Transverse travel	10 cm/sec max.			
Longitudinal travel	15 cm/sec max.			
Vertical travel	10 cm/sec max.			
Tube rotation	20 degree/sec max.			
Swivel(option)	20 degree/sec max.			
Number of Memories	30 memories for Bucky Stand 30 memories for Bucky Table 30 memories for General radiodiography technique			

### Options

Item	Description
Tractable cable management system	It is placed along the ceiling rails to supports smooth positioning.
Longitudinal or Lateral SID display	The display shows SID for bucky stand BR-120/120T.
Vertical tracking	X-ray tube will follow the vertical motion of BR-120/120T and or table height of the BK-200.
Bucky tracking	The bucky device of BK-200 will follow the axis of X-ray beam automatically.
Auto collimation	The irradiation field of the collimator can be adjusted automatically in accordance with the SID and cassette size detected by bucky devise of the table and/or stand.

**CH-200m**

CH-200m

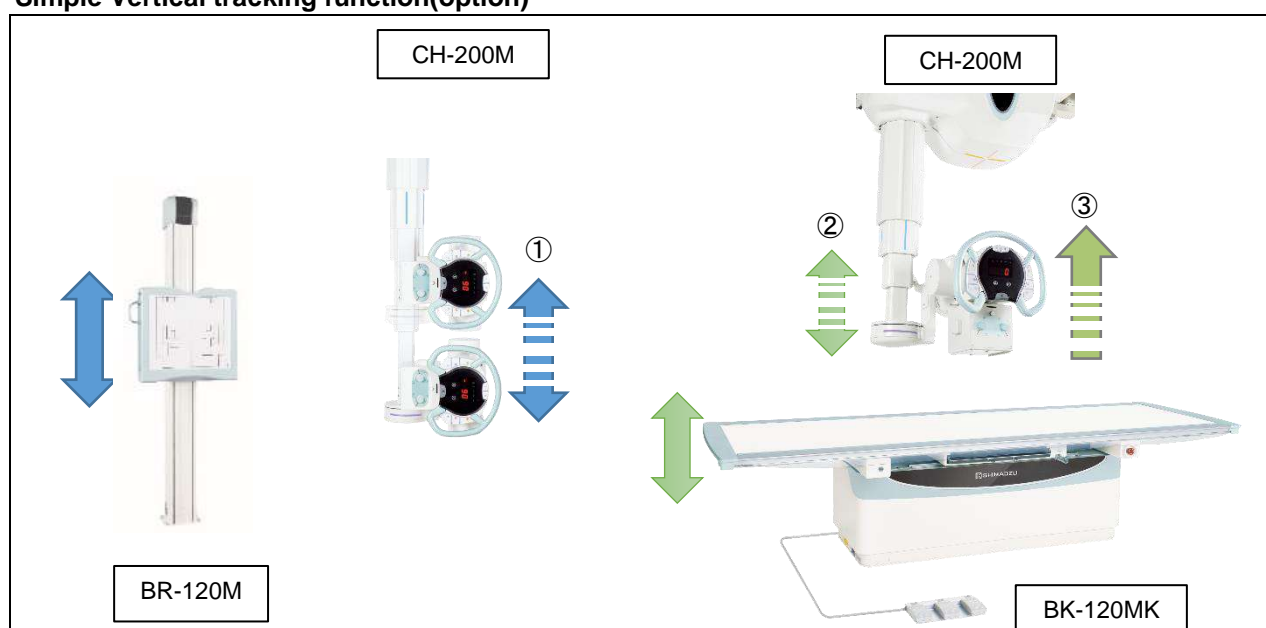
Item	Standard type	Rear-mounting type (*1)	Front mount L type (option)	Low-ceiling type (option)
In case of Standard type				
<div>unit : mm</div> 				
Maximum supportable weight	39 kg			
Balancing system	Spring-balanced type			
Ceiling fixtures rail	Fixed rail: 4 m / 5.5 m Travelling rail: 2 m / 2.6 m / 3.3 m			
Movement of X-ray tube assembly				
Range of movement Vertical travel (*1)	With ceiling height of 2,860 mm: 400 to 2,000 mm	With ceiling height of 2,860 mm: 400 to 2,000 mm	With ceiling height of 2,860 mm: 320 to 1,920 mm	With ceiling height of 2,710 mm: 400 to 2,000 mm
	Continuous			
Longitudinal travel	2,950 mm (with a 4 m fixed rail) (*4) 4,450 mm (with a 5.5 m fixed rail) (*4)			
Transverse travel	1,400 mm (with a 2 m travelling rail) 2,000 mm (with a 2.6 m travelling rail) 2,700 mm (with a 3.3 m travelling rail)			
Rotation about the vertical axis				
Angle of rotation	±180°, continuous (click stops at 90° intervals)			+30° to -90°, continuous (click stops at 90° intervals)
Rotation about the horizontal axis				
Angle of rotation	+120° to -180°, continuous Click stops at 0° and ±90°			

Item	Standard type	Rear-mounting type (*1)	Front mount L type (option)	Low-ceiling type (option)
Operation	Manual, electromagnetic lock(off lock)			
Display	Angle of rotation displayed digitally.			
Standard ceiling height	2,860 mm (*3)			2,710 mm
Mass	250 kg (including support, 4 m fixed rail, and 2 m traveling rail)			
Power source	Single phase, AC100 V, 0.7 kVA, 50/60 Hz			

\*1 Low-ceiling type are not available with the rear-mounting design.

\*2 It is possible to keep the vertical travel 400 to 2,000 mm by installing the focal height 350 mm lower, even when the ceiling height is 3,210 mm.

### Simple Vertical tracking function(option)

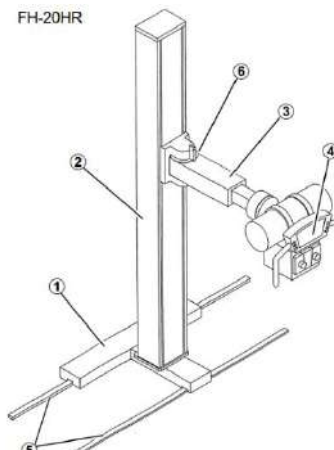
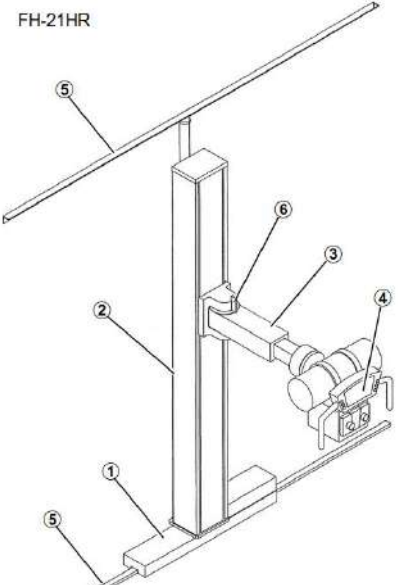

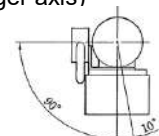
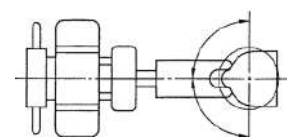


Type	Standard type	Rear-mounting type	Front mount L type	Low-ceiling type
<b>Enable / Disable</b>	Enable	Enable	Enable	Enable
<b>Movement</b>	① Vertical Tracking with BR-120M *) When tube rotation is +90° or -90°. **) To keep upper edge of irradiation field and film/CR (BR-120M(CE)) ***) To keep center of X-ray beam and film/CR (BR-120M(UL)) ② Vertical Tracking with BK-120MK *) When tube rotation is 0 degree. **) To keep preset SID (The downward direction is deadman method using a switch on the CH panel). ③ Auto retract function			
<b>Axis</b>	<b>Speed</b>			
<b>Vertical travel</b>	10 cm/sec max.			

### Options

Item	Description
Vertical SID display	The display shows SID with vertical travel toward BK-120MK.
Longitudinal or Lateral SID display	The display shows SID for bucky stand BR-120M.
Tractable cable management system	It is placed along the ceiling rails to supports smooth positioning.

**FH-20HR/21HR**

Item	Specifications
<div style="text-align: center;">FH-20HR</div>  <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="text-align: center;">① Base ④ Control Panel</div> <div style="text-align: center;">② Column ⑤ Guide rail</div> </div>	<div style="text-align: center;">FH-21HR</div>  <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="text-align: center;">③ Arm ⑥ Rotation lock/release lever</div> </div>
Maximum supportable weight	35 kg
Balancing system	Counter weight-balanced type
Vertical travel	400 – 1950 mm (floor to focus)
Longitudinal travel	2,500 mm
Transverse travel	250 mm
Rotation around horizontal axis 	±180°, continuous (click stops at 90° intervals)
Rotation of X-ray tube unit (longer axis) 	90° upward 10° downward continuously variable
Rotation around vertical axis 	stop at three points -90°, 0°, +90°
Operation	Manual, electromagnetic lock(off lock)
Ceiling height	FH-20HR : 2,300 mm or higher FH-21HR : 2350 – 2900 mm

Item	Specifications
Required space for installation	Refer to BK series
Mass	140 kg (excluding X-ray tube assembly and collimator)
Power source	Single phase, AC100V, 0.3 kVA, 50/60 Hz

## Collimator R-300

R-300

Item		Specifications
Max. voltage used for applicable X-ray tube		150 kV
Radiation field	Shape	Rectangular
	Maximum field	52.3 x 52.3cm @SID 100 cm
	Minimum field	0 x 0 cm
Radiation field indication	Average brightness	160lx @SID 100 cm
	Accuracy	Less than 2% of SID
	Center of the field	Dark hair cross
	Light source	LED
	Period of indication	30 sec (timer-controlled)
Opening indication	SID	1, 1.5, 1.8, 2 m
	Field size indication	Digital indication
Lead equivalent of leaves	Shielding leaves (H and V-leaves)	3 mm Pb eq.
	Middle leaves	2 mm Pb eq.
Filtration	Inherent filtration	1.1 mm Al eq.
	Auto-filter	None / 0.1 mm Cu / 0.2 mm Cu / 0.3 mmCu  It automatically selects the X-ray filter in accordance with the radiography conditions set with the X-ray high-voltage generator.
Turning mechanism		+/- 45°
External dimensions		231(W) x 317(D) x 259(H) mm
Mass		10 kg
Power supply		24 VDC, 150 VA

## Options

Item	Description
Line marker	Used to align the center positions of the Bucky device and the equipment, and to set the radiography position for long view radiography
Detent	Fitted at the home position of the turning mechanism and serves to confirm the home position when the collimator is turned.
DAP adapter for VACUTEC	This is a mounting adapter for ionization chamber manufactured by VACUTEC. DAP can be displayed on the console of the high-voltage generator. It also can be embedded in DICOM tag.
DAP adapter for PTW	This is a mounting adapter for ionization chamber manufactured by PTW.

## R-20J

Item		Specifications
Max. voltage used for applicable X-ray tube		150 kV
Radiation field	Shape	Rectangular
	Maximum field	43 x 43 cm @SID 100 cm
	Minimum field	0 x 0 cm
Radiation field indication	Average brightness	160 lx @SID 100 cm
	Accuracy	Less than 2% of SID
	Center of the field	Dark hair cross
	Light source	LED
	Period of indication	30 sec (timer-controlled)
Opening indication	SID	1, 1.5, 2 m
	Field size indication	20,23,25,28,30,36,43 cm 8.9 10 11 12 14 17 inch

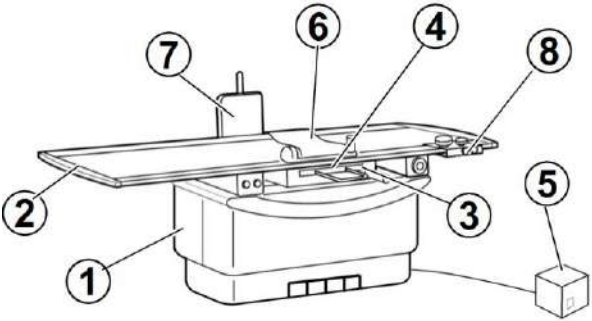
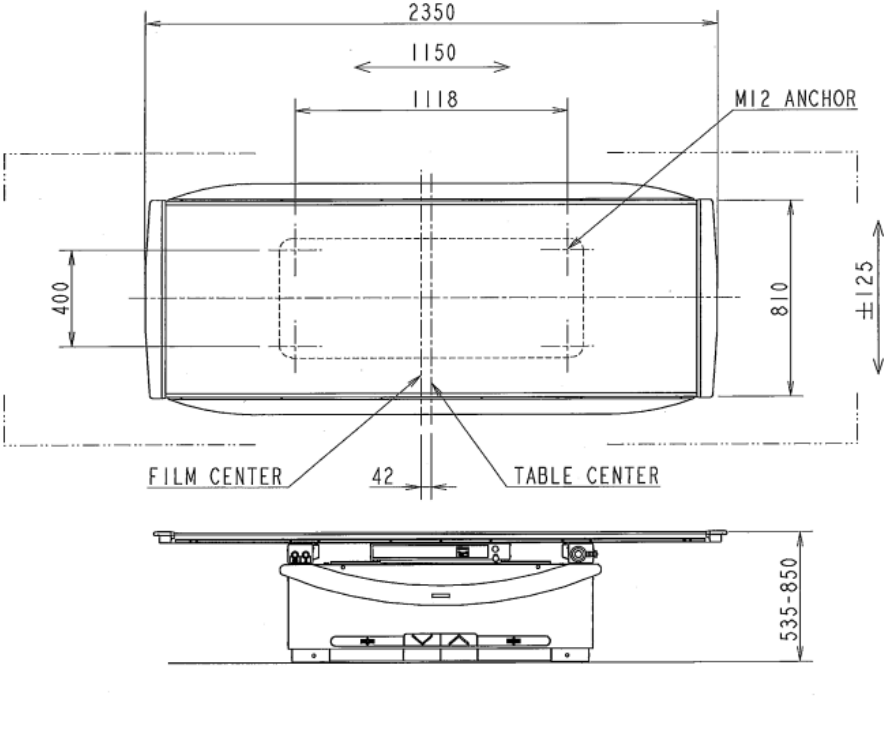


Item		Specifications
Drive of leaves		Manual
Lead equivalent of leaves	Shielding leaves(H and V-leaves)	3 mm Pb eq.
	Middle leaves	2 mm Pb eq.
Filtration	Inherent filtration	1.0 mm Al eq.
	Additional filter	0.5 mm Al. plate
Turning mechanism		+/- 45°
External dimensions		205(W) x 273(D) x 222(H) mm
Mass		6 kg
Power supply		AC 12 V : 50/60 Hz : 100 VA or DC24 V 100 VA

**Options**

Item	Description
Line marker	Used to align the center positions of the Bucky device and the equipment, and to set the radiography position for long view radiography
Detent	Fitted at the home position of the turning mechanism and serves to confirm the home position when the collimator is turned.
DAP adapter for VACUTEC	This is an adapter kit for DAP meter manufactured by VACUTEC. DAP can be displayed on the console of DAP meter.

**X-ray Radiography Table  
BK-200**

Item		Specifications	
① Main Body ② Floating Table Top Assembly ③ Bucky device ④ Grid type indicator ⑤ Control cabinet ⑥ Compression belt (optional) ⑦ Lateral cassette holder (optional) ⑧ Grip switch (optional)		 	
Main Body	Size of Tabletop	810(Width) x 2,350(Length) mm Flat tabletop	
	Material of tabletop	Wood CFRP(option)	
	Attenuation equivalent for table	1.7 mmAl eq. (Wood) 0.7 mmAl eq. (CFRP)	
	Longitudinal movement	1,150 mm Manual operation	
	Lateral movement	+/- 125 mm Manual operation	
	Tabletop Lock	Electromagnetic lock (off-lock)	
	Vertical moving range	315 mm Motor drive	
	Distance between tabletop and floor	535 to 850 mm (The tabletop stops once at Approx. 700 mm.) *1	
	Distance between tabletop and X-ray conversion Layer	80 mm	
	Maximum allowable load	295 kgf	
Bucky Device	Portable FPD fixing position	Center position	
	Bucky device moving stroke	400 mm (+/- 200)	
	X-ray grid (Fixed grid)	Dimensions	438 mm x 479 mm
		Intermediate material	Al
		Density, ratio	40 lines/cm, 10:1
	Mounting/removing grid	Possible	

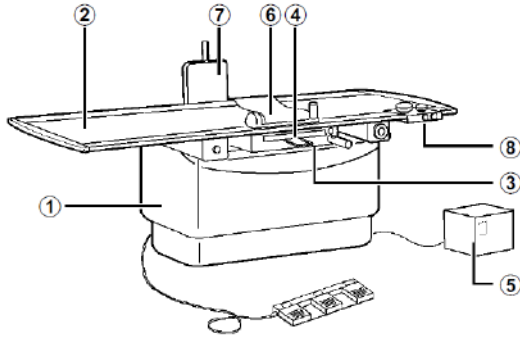
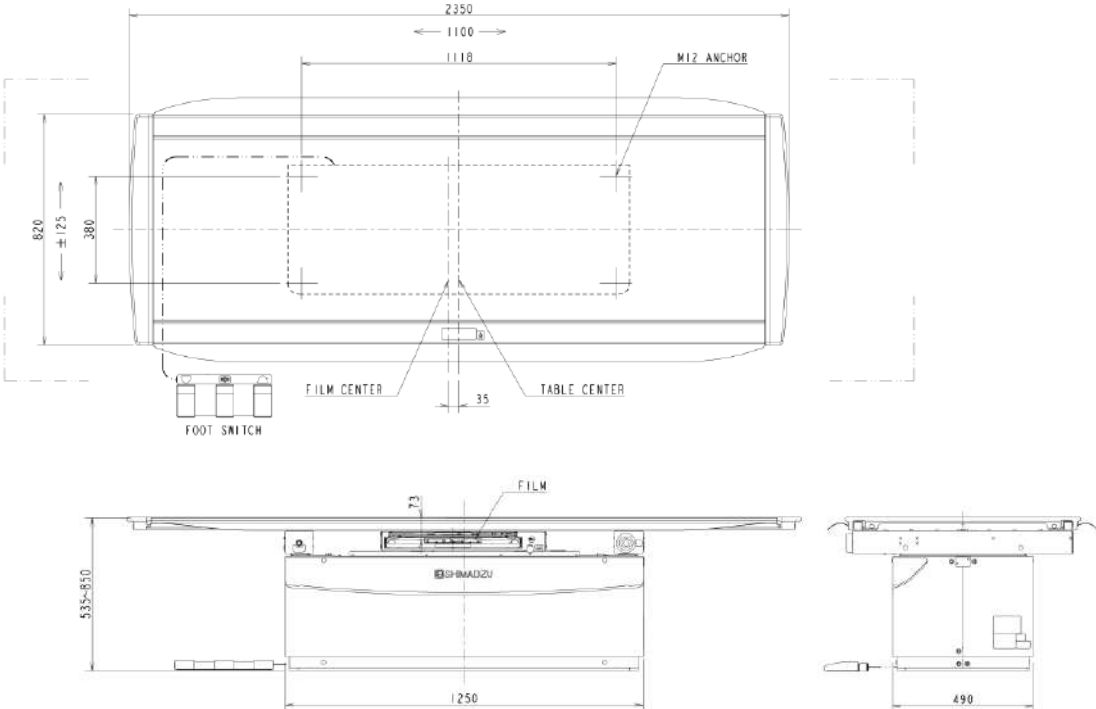
Item		Specifications
Installation Conditions	Required space for installation	5,000(W) x 3,500(L) mm (to combine with the X-ray support device)
	Mass	320 kg
	Power Supply	Single-phase AC200, 220, 230, 240 V 1.4 kVA, 50/60 Hz

\*1 When installing, the stop position can be adjusted within a height range of 600 to 700 mm.

### Options

Item	Description
Compression belt	This belt to be attached to the sides of the tabletop secures the patient's radiography region to the tabletop.
Lateral cassette holder	This holder to be attached to the side of the tabletop holds a cassette in lateral radiography.
Grip switch	This switch to be attached to the side of the tabletop operates the floating tabletop.
CFRP tabletop	This tabletop is made of CFRP (Carbon Fiber Reinforced Plastic).
Table elevation Tracking device	Adds the following functions when combined with the X-ray tube support CH-200. <ul style="list-style-type: none"> <li>• The height of the X-ray tube support CH-200 is adjusted in conjunction with the height of the tabletop to maintain a constant exposure distance.</li> <li>• The size of irradiation field is automatically adjusted.</li> </ul>
Bucky tracking device	Incorporated into the tabletop elevator, this unit drives the Bucky device electrically. When this option is selected, Bucky tracking radiography is available if the X-ray tube support CH-200 is combined.
Hand grip	Equipped with tabletop side and grasped by patient so that the patient position keeps steady.
Drip stand	Attached to the tabletop side and suspends the drip bins.
Rear side foot switch	Additional rear side foot switch which has the same function and shape than a front one.
FPD rotation tray	The FPD tray can be rotated 90 degree to change the orientation of FPD. (Portrait↔Landscape) This option is only for 14 x 17 inch (35 x 43 cm) FPD.

**BK-120MK**

Item		Specifications	
① Main Body ② Floating Table Top Assembly ③ Bucky device ④ Grid indicator ⑤ Transformer unit  Optional Items ⑥ Compression belt ⑦ Lateral cassette holder ⑧ Grip switch ⑨ Drip holder (not shown) ⑩ CFRP table top (not shown)		 <p>unit:mm</p>	
			
Main Body	Size of Tabletop	810(Width) x 2,350(Length) mm	
	Material of tabletop	Wood CFRP(option)	
	Attenuation equivalent for table	1.7 mmAl eq. (Wood) 0.7 mmAl eq. (CFRP)	
	Longitudinal movement	1,100 mm Manual operation	
	Lateral movement	+/- 125 mm Manual operation	
	Tabletop Lock	Electromagnetic lock (off-lock)	
	Vertical moving range	315 mm Motor drive	
	Distance between tabletop and floor	535 to 850 mm (The tabletop stops once at Approx. 700 mm.) *1	
	Distance between tabletop and X-ray conversion Layer	73 mm	
	Maximum allowable load	200 kgf	
Bucky Device	Portable FPD fixing position	Center position	
	Bucky device moving stroke	380mm (+/- 190)	
	X-ray grid (Fixed Grid)	Dimensions	438 mm x 479 mm
		Intermediate material	Al
		Density, ratio	40 lines/cm, 10:1
		Mounting/removing grid	Possible

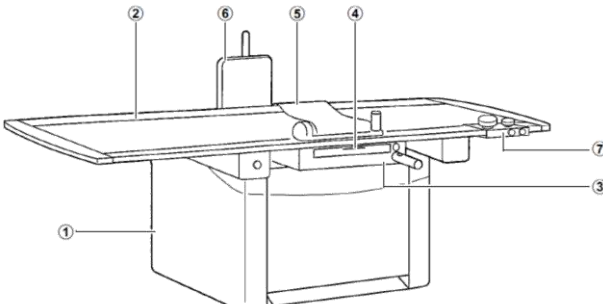
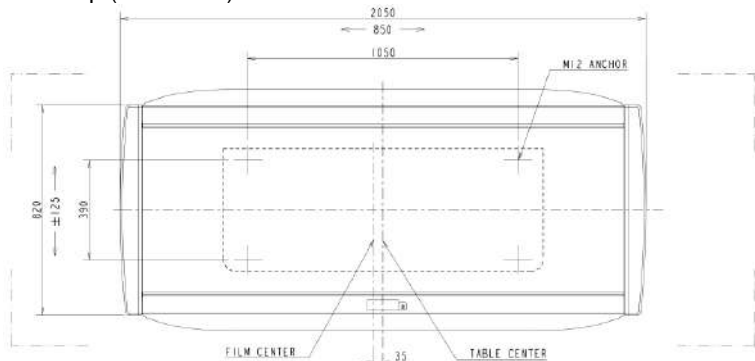
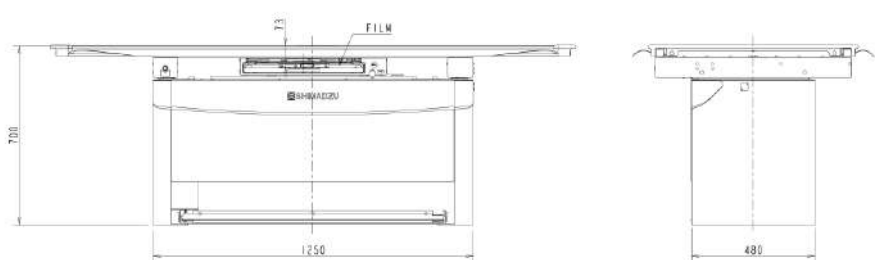
Item		Specifications
Installation Conditions	Required space for installation	5,000(W) x 3,500(L) mm (to combine with the X-ray support device)
	Mass	320 kg
	Power Supply	Single-phase AC200, 220, 230, 240 V 1.0 kVA, 50/60 Hz

\*1 When installing, the stop position can be adjusted within a height range of 600 to 700 mm.

### Options

Item	Description
Compression belt	This belt to be attached to the sides of the tabletop secures the patient's radiography region to the tabletop
Lateral cassette holder	This holder to be attached to the side of the tabletop holds a cassette in lateral radiography.
Grip switch	This switch to be attached to the side of the tabletop operates the floating tabletop.
CFRP tabletop	This tabletop is made of CFRP (Carbon Fiber Reinforced Plastic).
Hand grip	Equipped with tabletop side and grasped by patient so that the patient position keeps steady.
Drip stand	Attached to the tabletop side and suspends the drip bins.
FPD rotation tray	The FPD tray can be rotated 90 degree to change the orientation of FPD. (Portrait↔Landscape) This option is only for 14 x 17 inch (35 x 43 cm) FPD.

### BK-12HK

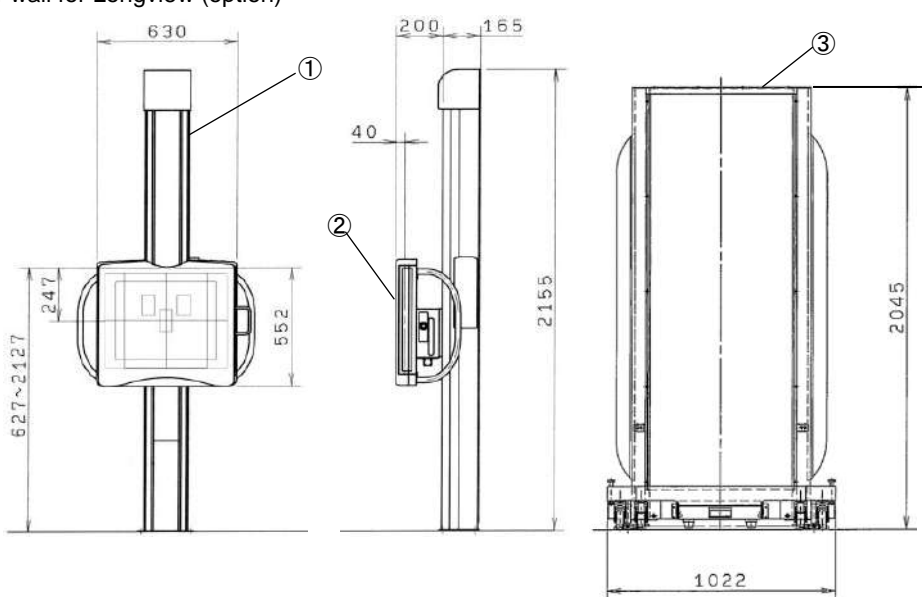
Item	Specifications
① Main Body ② Floating Table Top Assembly ③ Bucky device ④ Grid indicator  Optional Items ⑤ Compression belt ⑥ Lateral cassette holder ⑦ Grip switch ⑧ Drip holder (not shown) ⑨ CFRP table top (not shown)	   unit:mm

Item		Specifications	
Main Body	Size of Tabletop	810(Width) x 2,350(Length) mm	
	Material of tabletop	Wood CFRP(option)	
	Attenuation equivalent for table	1.7 mmAl eq. (Wood) 0.7 mmAl eq. (CFRP)	
	Longitudinal movement	1,100 mm Manual operation	
	Lateral movement	+/- 125 mm Manual operation	
	Tabletop Lock	Electromagnetic lock (off-lock)	
	Vertical moving range	315 mm Motor drive	
	Distance between tabletop and floor	700 mm	
	Distance between tabletop and X-ray conversion Layer	73 mm	
	Maximum allowable load	200 kgf	
Bucky Device	Portable FPD fixing position	Center position	
	Bucky device moving stroke	380 mm (+/- 190)	
	X-ray grid (Fixed Grid)	Dimensions	438 mm x 479 mm
		Intermediate material	Al
		Density, ratio	40 lines/cm, 10:1
		Mounting/removing grid	Possible
Installation Conditions	Required space for installation	5,000(W) x 3,500(L) mm (to combine with the X-ray support device)	
	Mass	120 kg	
	Power Supply	Single-phase AC100 V, 0.1 kVA, 50/60 Hz	

### Options

Item	Description
Compression belt	This belt to be attached to the sides of the tabletop secures the patient's radiography region to the tabletop
Lateral cassette holder	This holder to be attached to the side of the tabletop holds a cassette in lateral radiography.
Grip switch	This switch to be attached to the side of the tabletop operates the floating tabletop.
CFRP tabletop	This tabletop is made of CFRP (Carbon Fiber Reinforced Plastic).
Hand grip	Equipped with tabletop side and grasped by patient so that the patient position keeps steady.
Drip hanger	Attached to the tabletop side and suspends the drops.
FPD rotation tray	The FPD tray can be rotated 90 degree to change the orientation of FPD. (Portrait↔Landscape) This option is only for 14 x 17 inch (35 x 43 cm) FPD.

**X-Ray Radiography Stand  
BR-120**

Item		Specifications	
① Stand ② Bucky Device ③ Fender wall for Longview (option)			
Bucky device	Distance between Bucky device gnathal hub and floor	$h = 627(643) - 2,127(2,143)$ mm (Manual operation) $h = 655(671) - 2,097(2,113)$ mm (Motor-driven operation) (Figures in parentheses are dimensions when mounted on a base plate)	
	Operation	Manual or motor drive(option) Electromagnetic lock (off lock)	
	Distance between Bucky device gnathal hub and center of detector	247 mm	
	Distance between Bucky device front face and X-ray conversion Layer	40 mm	
	Portable FPD fixing position	Center reference, Top reference or bottom reference	
	X-ray grid(Fixed)	Dimensions	438 mm x 479 mm
		Intermediate material	Al
		Density, ratio Note) Select one of the listed Grids	40 lines/cm : 10:1 or 12:1
		Mounting/removing	Possible
	Attenuation equivalent for front panel	0.63 mm Al eq.	
Installation conditions	Required space	650 mm(L) x 400 mm(D)	
	Required ceiling height	2,350 mm	
	Mass	Standard: 120 kg When motor drive/Longview option installed : 145 kg Fender wall for Longview (option) : 70 kg	
	Power Supply	Single-phase AC100 V, 0.2 kVA, 50/60 Hz	

**Options**

Item	Description
Overhead hand grip	For lateral chest exam to grip overhead, adjust the height by the position of gripping.
Cassette holder	Cassette unit is attached on bucky device and holds a film cassette.
Base plate	Base plate is installed when the equipment cannot be mounted in the standard holes.
Wall mounting option	Fix the top of column to wall. Use when the fixation to floor is difficult.
Side hand grips	For P-A chest exam. to grip both hands, a pair of left and right.

Item	Description
Bucky tracking device	By servo tracking device, the following functions are attached with CH-200 combined: X-ray tube unit focus of X-ray tube support tracks automatically the center on height of Bucky device. Collimator for radiography radiation field operates automatically.
Compression belt	This belt fixes the radiography area of a patient on the Bucky device.
Handy switch unit	To control collimator near a patient with handy switch unit.
Motor drive unit (w/ Foot switch)	To move the Bucky device vertically with foot switch.
FPD rotation tray	The FPD tray can be rotated 90 degree to change the orientation of FPD. (Portrait↔Landscape) This option is only for 14 x 17 inch (35 x 43 cm) FPD.
Fender wall	To be used for long view radiography. A compression band (option) for the patient stand can be used to hold the patient in position.
Hand grip for Fender wall	Supports the posture of the patient when he/she is resting on the patient stand.

**BR-120T**

Item		Specifications	
<div>① Stand</div> <div>② Bucky Device</div> <div>③ Fender wall for Longview (option)</div>			
<p>Technical drawing showing the dimensions and components of the X-ray unit. The drawing includes three views: front, side, and rear. The front view shows the Bucky device (2) mounted on the stand (1) with a height h1. The side view shows the Bucky device tilted at 20° with a height h2. The rear view shows the fender wall (3) with a height of 2045 mm and a width of 1022 mm. Other dimensions include 630, 423, 223, 40, 241, 552, 2155, 540-2040, and 80°.</p>			
Bucky device	Distance between Bucky device gnathal hub and floor surface	$h1 = 627(643) - 2,127(2,143)$ mm (Manual operation) $h1 = 655(671) - 2,097(2,113)$ mm (Motor-driven operation) $h2 = 540(556) - 2,040(2,056)$ mm (Manual operation) $h2 = 568(584) - 2,010(2,026)$ mm (Motor-driven operation) (Figures in parentheses are dimensions when mounted on a base plate)	
	Operation	Manual or motor drive (option) Electromagnetic lock (off lock)	
	Distance between Bucky device gnathal hub and center of detector	247 mm	
	Distance between Bucky device front face and X-ray conversion Layer	40 mm	
	Bucky device tilting angle (manual operation)	-20°, 0° (vertical), 15°, 30°, 45°, 60°, 75°, 90° (horizontal)	
	Portable FPD fixing position	Center reference, Top reference or bottom reference	
	X-ray grid (Fixed grid)	Dimensions	438 mm x 479 mm
		Intermediate material	Al
		Density, ratio Note) Select one of the listed Grids	40 lines/cm : 10:1 or 12:1
Mounting/removing		Possible	
Attenuation equivalent for	0.63 mm Al eq.		



Item		Specifications
Installation conditions	front panel	
	Required space	650 mm(L) x 700 mm(D)
	Required ceiling height	2,350 mm
	Mass	Standard: 160 kg When motor drive/Longview detection option installed: 185kg Fender wall for Longview (option) : Approx.70 kg
	Power Supply	Single phase AC100 V, 0.2 kVA, 50/60 Hz

### Options

Item	Description
Overhead hand grip	For lateral chest exam to grip overhead, adjust the height by the position of gripping.
Cassette holder	Cassette unit is attached on bucky device and holds a film cassette.
Base plate	Base plate is installed when the equipment cannot be mounted in the standard holes.
Side hand grips	For P-A chest exam. to grip both hands, a pair of left and right.
Bucky tracking device	By servo tracking device, the following functions are attached with CH-200 combined: X-ray tube unit focus of X-ray tube support tracks automatically the center on height of Bucky device. Collimator for radiography radiation field operates automatically.
Compression belt	This belt fixes the radiography area of a patient on the Bucky device.
Handy switch unit	To control collimator near a patient with handy switch unit.
Motor drive unit (w/ Foot switch)	To move the Bucky device vertically with foot switch.
FPD rotation tray	The FPD tray can be rotated 90 degree to change the orientation of FPD. (Portrait↔Landscape) This option is only for 14 x 17 inch (35 x 43 cm) FPD.
Fender wall	To be used for long view radiography. A compression band (option) for the patient stand can be used to hold the patient in position. Maximum allowable load: 295 kg
Hand grip for Fender wall	Supports the posture of the patient when he/she is resting on the patient stand.

### BR-120M

Item		Specifications
① Stand ② Bucky Device		
Bucky device	Distance between Bucky device gnathal hub and floor	$h = 627(643) - 2,127(2,143)$ mm (Manual operation) (Figures in parentheses are dimensions when mounted on a base plate)
	Operation	Manual Electromagnetic lock (off lock)
	Distance between Bucky device gnathal hub and center of detector	247 mm
	Distance between Bucky device front face and X-ray conversion Layer	33.5 mm
	Portable FPD fixing position	Center reference, Top reference or bottom reference

Item		Specifications	
	X-ray grid(Fixed)	Dimensions	438 mm x 479 mm
		Intermediate material	Al
		Density, ratio (Note) Select one of the listed Grids	40 lines/cm : 10:1 or 12:1
		Mounting/removing	Possible
	Attenuation equivalent for front panel	0.63 mm Al eq.	
Installation conditions	Required space	650 mm(L) x 400 mm(D)	
	Required ceiling height	2,350 mm	
	Mass	120 kg	
	Power Supply	Single-phase AC100 V, 0.2 kVA, 50/60 Hz	

### Options

Item	Description
Overhead hand grip	For lateral chest exam to grip overhead, adjust the height by the position of gripping.
Cassette holder	Cassette unit is attached on bucky device and holds a film cassette.
Base plate	Base plate is installed when the equipment cannot be mounted in the standard holes.
Wall mounting option	Fix the top of column to wall. Use when the fixation to floor is difficult.
Side hand grips	For P-A chest exam. to grip both hands, a pair of left and right.
Compression belt	This belt fixes the radiography area of a patient on the Bucky device.
FPD rotation tray	The FPD tray can be rotated 90 degree to change the orientation of FPD. (Portrait↔Landscape) This option is only for 14 x 17 inch (35 x 43 cm) FPD.

**Digital Radiography System**

Item		Specification
	Application	General X-ray radiography
	Size of imaging unit	VIVIX-S 4343FW, VIVIX-S 4343VW, VIVIX-S 4343VW PLUS: W460 x D460 x H15.0 mm VIVIX-S 3643FW, VIVIX-S 3643VW, VIVIX-S 3643VW PLUS: W384 x D460 x 15.0 mm VIVIX-S 2530FW: W282.5 x D333.3 x H15.0 mm VIVIX-S 2530VW, VIVIX-S 2530VW PLUS: W284 x D350 x H15.0 mm VIVIX-S 1751S: W532 x D1357 x H30.0 mm
	Scintillator	CsI (except VIVIX-S 1751S), GOS (VIVIX-S 1751S)
	Pixel Size	VIVIX-S 4343FW, VIVIX-S 3643FW, VIVIX-S 2530FW: 99 $\mu$ m VIVIX-S 4343VW, VIVIX-S 4343VW PLUS, VIVIX-S 3643VW, VIVIX-S 3643VW PLUS, VIVIX-S 1751S: 140 $\mu$ m VIVIX-S 2530VW, VIVIX-S 2530VW PLUS: 124 $\mu$ m
	Effective number of pixels	VIVIX-S 4343FW: 4,276 x 4,276 VIVIX-S 3643FW: 3,508 x 4,276 VIVIX-S 2530FW: 2,484 x 2,996 VIVIX-S 4343VW, VIVIX-S 4343VW PLUS: 3,048 x 3,048 VIVIX-S 3643VW, VIVIX-S 3643VW PLUS: 2,536 x 3,048 VIVIX-S 2530VW, VIVIX-S 2530VW PLUS: 2,048 x 2,536 VIVIX-S 1751S: 3060 x 9200
	Effective field of view	VIVIX-S 4343FW: 423.324 x 423.324 mm VIVIX-S 3643FW: 347.292 x 423.324 mm VIVIX-S 2530FW: 245.916 x 296.604 mm VIVIX-S 4343VW, VIVIX-S 4343VW PLUS: 426.72 x 426.72 mm VIVIX-S 3643VW, VIVIX-S 3643VW PLUS: 355.04 x 426.72 mm VIVIX-S 2530VW, VIVIX-S 2530VW PLUS: 250.976 x 314.464 mm VIVIX-S 1751S: 428.4 x 1288.0 mm
	Dynamic Range	VIVIX-S 4343FW, FXR-3643FW, FXR-2530FW: 303 min. VIVIX-S 4343VW, VIVIX-S 3643VW, VIVIX-S 2530VW: 900 min. VIVIX-S 4343VW PLUS, VIVIX-S 3643VW PLUS, VIVIX-S 2530VW PLUS: 1028 min. VIVIX-S 1751S: 400 min
	Gradation	16 bit (65,536 gradations)
	Weight (Including battery)	VIVIX-S 4343FW One battery pack: 2.95 kg (6.5 lbs) Two battery pack: 3.15 kg (6.9 lbs) VIVIX-S 4343VW One battery pack: 3.45 kg (7.6 lbs) Two battery pack: 3.65 kg (8.0 lbs) VIVIX-S 4343VW PLUS One battery pack: 3.7 kg (8.2 lbs) Two battery pack: 3.9 kg (8.6 lbs) VIVIX-S 3643FW One battery pack: 2.4 kg (5.3 lbs) Two battery pack: 2.6 kg (5.7 lbs) VIVIX-S 3643VW One battery pack: 2.95 kg (6.5 lbs) Two battery pack: 3.15 kg (6.9 lbs) VIVIX-S 3643VW PLUS One battery pack: 3.1 kg (6.8 lbs) Two battery pack: 3.3 kg (7.3 lbs) VIVIX-S 2530FW: 1.7 kg (3.7 lbs) VIVIX-S 2530VW: 1.95 kg (4.3 lbs) VIVIX-S 2530VW PLUS: 2.15 kg (4.7 lbs)
	Weight	VIVIX-S 1751S: 19.7 kg
	Mechanical Strength	Partial load: 200 kg (440 lbs), given 40 mm (1.6 in) diameter Uniform load: 400 kg (881 lbs) over all surface VIVIX-S 1751S: N/A

Item			Specification
	Water Proof / Dust Proof		VIVIX-S 4343FW, VIVIX-S 3643FW, VIVIX-S 2530FW, VIVIX-S 4343VW, VIVIX-S 4343VW PLUS, VIVIX-S 3643VW , VIVIX-S 3643VW PLUS, VIVIX-S 2530VW , VIVIX-S 2530VW PLUS: IP67 VIVIX-S 1751S: IPX0
	Battery Life		VIVIX-S 4343FW, VIVIX-S 3643FW, VIVIX-S 4343VW, VIVIX-S 4343VW PLUS, VIVIX-S 3643VW, VIVIX-S 3643VW PLUS: One battery pack: 270 frame (100 sec interval) Two battery pack: 540 frame (100 sec interval) VIVIX-S 2530FW: 270 frame (100 sec interval) VIVIX-S 2530VW, VIVIX-S 2530VW PLUS: 252 frame (100 sec interval) VIVIX-S 1751S: N/A
	Battery Charge Time		VIVIX-S 4343FW, VIVIX-S 3643FW, VIVIX-S 2530FW, VIVIX-S 4343VW, VIVIX-S 4343VW PLUS, VIVIX-S 3643VW, VIVIX-S 3643VW PLUS: Approx. 2 H by Cradle Approx. 2 H by first charging with wiring Unit VIVIX-S 2530VW, VIVIX-S 2530VW PLUS: Approx. 2 H by Cradle Approx. 2 H by first charging with wiring Unit VIVIX-S 1751S: N/A
	Wireless Communications		Standard (except VIVIX-S 1751S)
		Regulation	IEEE 802.11n/ac
		Frequency band	2.4 GHz / 5 GHz
		Security	WPA2-PSK(AES)
Image Transfer		Gigabit Ethernet (1000BASE-T) (VIVIX-S 1751S only )	
Digital Radiography System	(Specs of recommended PC)	OS	Windows 10 Pro 64 bit / Windows 11 Pro 64 bit
		LAN Card	1000BASE-T Gigabit Ethernet card for detector interface (intel 1210 series) Gigabit supported LAN card for network interface(optional)
		CPU	Intel Core i9-11900 or higher (or compatible CPU)
		Memory	16 GB or more
		HDD or SSD	SSD, or NVME 100GB (or more) HDD 2TB or more
		Monitor	General monitor : 1920 x 1080, 2560 x 1440 Surface pro 4: 2160 x 1440
		CD-ROM	CD or DVD Reader / Writer
	Image Preview		Less than 5 seconds
	Image Processing		Contrast Processing Noise Reduction Grid Pattern Remove Process Auto Exposure Field Recognition Free Rotation Scatter Correction(option)
	DICOM		Print, Storage, MWM, MPPS, STORAGE COMMITMENT, RDSR

### Exposure condition linkage

Item	Details
APR linkage	The exposure conditions on the X-ray high voltage generator are automatically set in conjunction with the DR protocol selected on the DR console. For the setting, there are the following two methods: • X-ray conditions • Auto positioning

	<ul style="list-style-type: none"> <li>• Clinical application (for example, Long View)</li> </ul>
Exposure field size interlock (option)	<p>The exposure field size on the collimator is automatically adjusted in conjunction with the radiography menu selected on the DR console.</p> <p>Note that selecting the exposure field size on the X-ray tube support also switches the exposure field size on the DR console.</p>
Patient information display (option)	<p>The patient information on the DR console is also displayed in the X-ray tube support screen.</p> <p>The displayed items are as follows:</p> <ul style="list-style-type: none"> <li>• Name</li> <li>• Gender</li> <li>• Age</li> <li>• ID number</li> </ul>

\*: Operation icon which indicates X-ray tube used, radiography technique, and FPD used

### Long View Radiography Function (option)

This option allows for generating a long view radiographic image by taking X-rays of continuous body parts, with the FPD position and the exposure field being interlocked.

Item	Details
Supported FPD	VIVIX-S 3643VW VIVIX-S 3643VW PLUS VIVIX-S 3643FW VIVIX-S 4343VW VIVIX-S 4343VW PLUS VIVIX-S 4343FW
Long view radiography range	Stand: 160cm max. (4 exposure) Table: 120cm max. (3 exposure) (The value on the FPD detection surface. The region varies depending on the size and direction of the FPD, and the amount of image overlap.)
No. of exposures for a long view image	4 exposures max. (The set long view radiography region is evenly split by the No. of the exposures.)
Long view radiography time	About 30 sec from the start of the first exposure until all exposures are completed, and about 45 sec until the composite long view image is completely displayed (in Auto Save mode). (When combined with VIVIX-S 3643FW, three exposures at standing position under wireless connection with radiography region of 120 cm. The time varies depending on stand/table, X-ray tube, FPD, No. of long view images, radiography region, and timing of radiography.)

## Operation Environment

### Digital Radiography System

Item	Specifications
Ambient temperature	10 to 30 degree C
Relative humidity	35 to 80% (non condensing)
Atmospheric pressure	700 to 1060 hPa

### Except Digital Radiography System

Item	Specifications
Ambient temperature	10 to 40 degree C
Relative humidity	30 to 85% (non condensing)
Atmospheric pressure	800 to 1060 hPa

## Power Supply

### Except Digital Radiography System

Item	Specifications
Phase	3-phase, single-phase
Frequency	50/60 Hz

Standard voltages	3-phase 200/220/240/380/400/415/440/480V Single-phase 200/220/230/240V
Permitted voltage range	+/- 10% of standard voltage
Supply capacity	3-phase 120 kVA Single-phase 14.9 kVA

## Label Description: RADspeed Pro

Founded in 1875, Shimadzu corporation, a leader in the development of advanced technologies, has a distinguished history of innovation built on the foundation of contributing to society through science and technology. We maintain a global network of sales, service, technical support and applications centers on six continents, and have established long-term relationships with a host of highly trained distributors located in over 100 countries. For information about Shimadzu, and to contact your local office, please visit our Web site at [www.shimadzu.com](http://www.shimadzu.com)



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Shimadzu Corporation Medical Systems Division has been certified by TÜV Rheinland as a manufacturer of medical systems in compliance with ISO9001:2015 Quality Management Systems and ISO13485:2016 Medical Devices Quality Management Systems.

### Remarks:

- Every value in this document is a standard value, and it may vary a little from the actual at each site.
- The appearances and specifications are subject to change for reasons of improvement without notice.
- Items and components in the photos may include optional items. Please confirm with your sales representative for details.
- Certain configurations may not be available pending regulatory clearance.
- Contact your sales representative for information on specific configurations.
- Before operating this system, you should first thoroughly review the Instruction Manual.