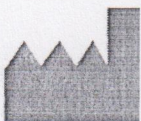


# **GXR-SD/CSD/USD**

**Digital diagnostic X-ray System**

**Operation Manual**



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**CE** 2460

3.2.1 GXR-SD/CSD/USD SYSTEM CONFIGURATION PART

Part		Configuration				
		GXR-32SD	GXR-40SD	GXR-52SD#	GXR-68SD#	GXR-82SD#
X-ray Generator	Model	GXR-32	GXR-40	GXR-52	GXR-68	GXR-82
	Type	High Frequency				
	Nominal Output	32kW	40kW	52kW	68kW	82kW
	kV Range	40~125kV 40~150kV for 3 phase line power		40~150kV		
	mA Range	10 to 400mA	10 to 500mA	10 to 640mA	10 to 800mA	10 to 1,000mA
	Timer Range	0.001~10 sec				
	mAs Range	0.1 to 500mAs (Optional up to 1,000mAs)				
	Software/Firmware	GXR SDK, HT Control Board, DSS board				
X-ray Tube Assembly	Tube	E7239X, E7242X, E7843X, E7876X, E7884X, E7252X, E7255FX, E7869X, E7254FX, DXT-8M, DXT-10M, DXT-11M, DXT-12M, DXT-14U, DXT-15U, RAD-14, RAD-21, RAD-60, RAD-92	E7239X, E7242X, E7843X, E7876X, E7884X, E7252X, E7255FX, E7869X, E7254FX, DXT-8M, DXT-10M, DXT-11M, DXT-10M, DXT-11M, DXT-12M, DXT-14U, DXT-15U, RAD-14, DXT-15U, RAD-14, RAD-21, RAD-60, RAD-92	E7876X, E7884X#, E7252X#, E7255FX#, E7254FX#, E7869X#, DXT-12M#, DXT-14U#, DXT-15U#, RAD-14#, RAD-21#, RAD-21#, RAD-60#, RAD-92#,	E7252X#, E7255FX#, E7254FX#, E7869X#, DXT-14U#, DXT-15U#, RAD-14#, RAD-21#, RAD-60#, RAD-92#, RTM90HS#, RTM101HS#, RTC600HS#,	E7255FX#, E7254FX#, E7869X#, RAD-60#, RAD-92#, RTM90HS#, RTM101HS#, DXT-17U#, DXT-19U#

				RTM90HS#, RTM101HS#, RTC600HS#, UH-6FC-31E#, DXT-17U#, DXT-19U#	UH-6FC-31E#, DXT-17U#, DXT-19U#	
	Type of Collimator	R108, DXC-RML, R302MLP/A#				
Patient Table	Mobile Patient Table	PBT-6 (Basic)#, PBT-4, PBT-1, PDT-1				
		-	PBT-6 (Deluxe)#,			
	Software/Firmware	PBT-6 Auto Control Board, PBT-4 Auto Control Board, Auto Tracking Board				
			PBT-6 Deluxe Auto Control Board, FS-WP3			
Wall Bucky Stand	Wall Bucky Stand	WBS(Manual), WBS-TM(Manual), WBS(Manual Plus), WBS(Motorized), WBS-TM(Motorized), WBS-TA(Motor type), WBS-TA(Actuator type)#				
		-	WBS-TA (Deluxe)#			
	Software/Firmware	<b>Manual:</b> PBT-4 Control Board				
		<b>Motorized:</b> WBS Motorized Control Board, WBS Panel Board, Communication Board				
			WBS Motor Driving Board, WBS Display Board, THU Control Board			
Tube Stand	Tube Stand	TS-FM6(Manual), TS-FC6(Manual), TS-FC4(Manual), TS-FC2(Manual), TS-FM6(Motorized), TS-FC6 (Motorized), TS-FC4 (Motorized), TS-FC2 (Motorized) TS-CSA, TS-CSE				
		-	TS-CSP			
	Software/Firmware	<b>Manual:</b> Tube Stand Control Board <b>Motorized:</b> Tube Stand Control Board, LS210 Board(7inch), OP Switch Control Board, Angle Board <b>TS-CSA:</b> Ceiling main control, TS-CSA OP control, TS-CSA Switch control, TS-CSA Head Unit (7inch)				

		<p><b>TS-CSE:</b> TS-CSE Main Board, TS-CSE Display Board</p> <p><b>Motorized:</b> Head Unit(15.6inch),</p> <p><b>TS-CSA:</b> TS-CSA Head Unit (15.6inch)</p> <p><b>TS-CSP:</b> Ceiling main control, TS-CSP OP control, TS-CSP Switch control, TS-CSP Sensor Board, TS-CSP Head Unit (7inch / 15.6inch)</p>
Generator controller	Generator controller	PC interface module, Touch Console
	Software/Firmware	GXR_PCI, GXR_TCC
SW	Workstation	Workstation
	Operating software	RADMAX
Detector	Detector	<p>PaxScan4343R V3, PaxScan4343RC, PaxScan4336W V4, 4343W(Basic), XRpad2 3025 HWC-M, XRpad2 4336 HWC-M, XRpad2 4343 HWC-M, 2530W-G5, 4336W-G5, 4343W(Lumen) , 4343W-HD</p> <p>Mano4343T, Mano4336W, Mano4343W, Mano1748W, Mars1417X, Mars1717X, Luna1012X, Luna1012X-G, Mano2530A, Mano2530F, Mars1417X-PI, Mars1717X-PI, Mano4336A, Mano4343A, Mano4336F, Mano4343F, PIXIUM 4343EZ-C HD, PIXIUM 3543EZ-C HD, F1417MCW, A1417MCW, A1717MCW</p>
Options & Accessories	DAP (Dose Area Product) meter	120-131HS (RS485), DAP PLUS
	Grid	Grid 1000
	Live streaming camera	HU205
	Stitching Stand	Stitching Stand (Option : Reinforced stitch stand)
	AEC Ion Chamber	9890 000 70006 (Amplimat 5-Field)
	Grid Holder	Grid Holder
	Smart Device Software	RADMAX M

Model		4343W-HD
Active pixel area / matrix		17 x 17 inch (4,256 x 4,256)
Pixel pitch		100um
Limiting resolution		5 lp/mm
Scintillator		CsI
Energy range		40 – 150 kV
A/D conversion		16-bits
MTF	@ 1 lp/mm	72%
	@ 2 lp/mm	45%
	@ 3 lp/mm	28%
DQE	@ 0 lp/mm	67%
	@ 1 lp/mm	55%
	@ 2 lp/mm	45%
Interface		Gigabit Ethernet / WiFi(802.11n/ac/ax)
Weight (with battery)		3.1 kg (6.83lbs.)

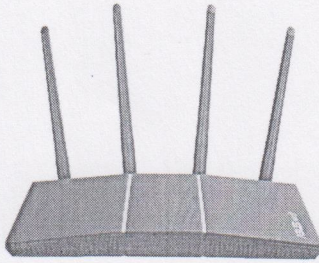
• Digital flat panel detector (iRay)

Model		Mano4343T	Mano4343W	Mano4336W
Active Pixel Area / Matrix		17 x 17 inch (3,072 x 3,072)		17 x 14 inch (2,800 x 2,304)
Pixel Pitch		139um		150um
Limiting Resolution		3.6 lp/mm		3.3 lp/mm
Scintillator			CsI	
Energy Range		40 – 150kVp		
A/D Conversion		16-bits		
MTF	@ 1 lp/mm	70%	70%	75%
	@ 2 lp/mm	43%	43%	49%
	@ 3 lp/mm	24%	24%	29%
DQE	@ 0 lp/mm	66%	66%	61%
	@ 1 lp/mm	48%	48%	46%
	@ 2 lp/mm	35%	35%	36%
Interface		Gigabit Ethernet	Gigabit Ethernet / WiFi(802.11ac)	
Weight (Without battery)		Approx. 4kg (8.8 lbs.) (Without Cable)	4.3kg (9.47lbs.)	3.3kg (7.3lbs.)

## 3.2.3 WORKSTATION

CPU	Intel Core i5 10th or higher
Memory	16GB (1x16GB) DDR4 2400MHz or higher
Display	Intel® HD Graphics 630 or Higher
Storage	256GB SSD, 1TB 7200RPM SATA HDD or higher
OS	Windows 10 or 11 Enterprise LTSC
Monitor	23 inch Color LED or Higher, Display resolution: 1920 x 1080 pixels (16:9)

- AP (Access Point) for Wireless Detector.

Model	RT-AX57 (AX 3000)
Product Picture	
Manufacturer	ASUS
Standards	IEEE 802.11n, IEEE 802.11ac, IEEE 802.11ax
Frequency	5GHz / 2.4GHz
Wireless LAN (max.)	2402Mbps(5GHz) / 1201Mbps(2.4GHz)
Weight Antennas Type	4 external antennas
DC Power Adapter	12V / 1.5A
Regulatory Compliance	CE, FCC, RoHS, KCC

### 3.2.4 IMAGING SOFTWARE

#### 1) General Features

- Windows OS based graphic user interface
- Multi-image display ( 1x1 ~ 4x4 )
- X-ray generator control panel
- ROI feature ( support the creation of ROI for each APR by user )
- Maker feature ( support the creation of maker for each APR by user )
- Multi-language support
- EXCEL sheet for language support ( only possible on Microsoft Office automation environment )
- DAP meter ( Optional )
- Unlimited PACS code ( CPT code )
- Unlimited Anatomically programmed radiography (APR) support
- Dose monitoring function
- Built-in memory function
- Grid line suppression function
- Reject analysis function
- 9-Preset function
- Cobb's angle function
- Tube & Line Enhancement function
- APR Positioning Guide function
- Auto ROI function
- Screen Locker function
- ROI Masking function
- Authority setting function
- MANO Detector power off function
- Live Streaming function
- Blue and Black Skin GUI
- Support SCP(SERVICE CLASS PROVIDER)
- Support Audit Trail
- Support Period Setting
- Support DICOM Send Monitoring
- Support AEC Field area display function using camera
- Support DICOM Tag Matching
- Support Scatter Reduction image processing parameter
- Support C-Store SCP function
- Support Widget function
- Support Small Movement function

- Support Bone Suppression function
- Support Easy Auto Stitch function
- Support Manual Workflow Mode
- Enhanced security function
- Sound Settings (Worklist Alarm ,Auto Voice , Driving Sound)
- Study Backup/Restore function
- Extended Display function

2) *Post processing parameters*

- MODULE 1
  - ◆ Edge Enhancement: 0 ~ 50
  - ◆ Contrast Factor : 1 ~ 200
  - ◆ Image Frequency : 0 ~ 20
  - ◆ Image Latitude : -10 ~ 10
  - ◆ Sharpness : 0 ~ 100
  
- MODULE 2
  - ◆ Histogram Optimization : -100 ~ 100
  - ◆ Skin line Weight : -100 ~ 100
  - ◆ Latitude Compression : -100 ~ 100
  - ◆ Contrast Enhancement : -100 ~ 100
  - ◆ Edge Enhancement : -100 ~ 100
  - ◆ Noise Suppression : -100 ~ 100
  - ◆ Gamma : -20 ~ 20
  
- MODULE 3
  - ◆ Global Brightness : -100 ~ 100
  - ◆ Global Contrast : -100 ~ 100
  - ◆ Latitude Compression : -100 ~ 100
  - ◆ S-Structure Enhancement : -100 ~ 100
  - ◆ Noise Suppression : -100 ~ 100
  - ◆ Gamma : -20 ~ 20
  
- MODULE 4
  - ◆ Global Contrast : -30 ~ 30
  - ◆ Global Brightness : -20 ~ 20
  - ◆ Local Contrast : 0 ~ 20
  - ◆ Small Enhancement : 0 ~ 20
  - ◆ Latitude Reduction : -20 ~ 20
  - ◆ Noise Suppression : 0 ~ 20

◆ Gamma : -20 ~ 20

3) Image Maintenance ( All functions are supported by the pop-up menu )

- ROI : Support the creation of up to 30 of ROI by user
- ROI Shape : Support the shape of rectangle, circle and polygon
- MARK : Support the creation of up to 30 of MARKER by user ( User preset support )
- Arrow Marker
- Overlay Display On/Off
- Horizontal Flip
- Vertical Flip
- Rotate CW
- Rotate CCW
- Fine Rotation : Rotate the image with fine angle (1,2,3,45 degree)
- Line Rotation: Rotate the image by the line angle.
- Inverse (Black or White)
- Text Annotation
- Ruler : Distance tool
- Angle : Angle measurement tool
- Zoom : Image zoom in/out
- Magnify : Image magnify glass window
- Pan : Image panning
- Fit Image : Auto fitting to window size
- 1:1 View : Display 1:1 mapped image between monitor pixels and detector pixels or the real size on screen
- Image Crop : Image crop function / Supported by left double-click mouse
- Image Recovery : Recover the original image
- Image Bright/Contrast control : Supported by right-click mouse
- Module3 Processing Type function (Soft, Standard, Strong)
- Hip Measurement
- Cardiothoracic Ratio(CTR) function
- Q-Angle function
- Area Measurement function
- Cervical / Lumbar curve function
- Vertical / Horizontal Center line function
- Spine label function

4) CD Burning

- DICOMDIR based CDR data generation
- Support CD/DVD Recording

- Include internal DICOM Viewer
  - Support multi-study data
- 5) DICOM Features : DICOM PRINT
- DICOM 3.0 compatible
  - Support Print Preview
  - Support Film Orientation : Portrait / Landscape
  - Support Film Size : 8X10 / 10X12 / 10X14 / 11X14 / 14X14 / 14X17 / 24X24 / 24X30 / 25X30
  - Support Film Layout : 1:1 / 1:2 / 2:1 / 2:2 / 3:1 / 1:3 / 3:3 / 4:4
  - Support Real size printing
  - Support image swap in layout
- 6) DICOM Feature : STORAGE
- DICOM 3.0 compatible
  - Support DX/CR modality ( can be extended for DR and other )
  - Support RDSR(Radiation Dose Structured Report)
  - Support the modification of Transfer Syntax
- 7) DICOM Feature : MPPS
- Support Modality Performed Procedure Step feature
  - Provides only three state : FAILED / IN PROGRESS / COMPLETED
- 8) DICOM Feature : WORKLIST
- Support DICOM Modality Worklist Standard
  - Support DICOM Query/Retrieve
  - Support Search Filter ( ID / Name / Access Number )
  - Support Import Filter
- 9) DICOM Feature : STORAGE COMMITMENT
- 10) DICOM Feature : QUERY/RETRIEVE
- 11) DICOM Feature : VERIFICATION
- 12) DICOM Feature : TLS

## 13) Overlay Display on image

- Projection description
- Patient Name / Sex / Age
- kV / mA / Time / mAs
- Feed-back mAs / Feed-back Time for AEC
- EI(Exposure Index) / DI(Deviation Index)
- Window Width / Level
- Overlay can be set by user

## 14) Image Stitching

- Stitches whole spine/long bone images to single image
- Support 2 ~ 5 images stitching
- Support zoom in/out of all images simultaneously
- Moves single image or all images simultaneously
- Support automatic stitching using 2 point
- Support image clipping
- Automatically remove non-exposure area
- Adjust window level of single image or all images simultaneously
- Provide full-spine imaging apparatus

## 15) Integration with smart devices

- The "RADMAX M" software for Smart Devices connects wirelessly to the RADMAX program on the workstation, providing various functions such as system status monitoring, worklists, and procedures.

## 3.2.5 X-RAY GENERATORS

System Model	GXR-32SD	GXR-40SD	GXR-52SD#	GXR-68SD#	GXR-82SD#
Generator Model	GXR-32	GXR-40	GXR-52	GXR-68	GXR-82
Output Rating	32kW	40kW	52kW	68kW	82kW
Line Nominal, Phase	220~230V~, 380/400/480V3~		380/400/480V3~		
Line Voltage Range	±10% (Frequency: 50/60Hz)				
kV Range	40~125kV, 1kV step 40~150kV for 3 phase line power		40~150kV, 1kV step		
mA Range	10 to 400mA	10 to 500mA	10 to 640mA	10 to 800mA	10 to 1,000mA
Timer Range	0.001 to 10 sec, 38 steps				
mAs Range	0.1 to 500mAs (Optional up to 1,000mAs)				
AEC Shortest Irradiation Time	1ms				
Max. Power Output	400mA@80kV 320mA@100kV 250mA@125kV 200mA@150kV(3 Φ)	500mA@80kV 400mA@100kV 320mA@125kV 250mA@150kV(3 Φ)	640mA@81kV 500mA@104kV 400mA@130kV 320mA@150kV	800mA@85kV 640mA@106kV 500mA@136kV 400mA@150kV	1,000mA@82kV 800mA@102kV 640mA@128kV 500mA@150kV
Rotor Supply	Low Speed (Option: LSS Brake, Dual Speed for 3Φ)		Low Speed (Option: LSS Brake, Dual Speed)	Dual Speed	
Technique Selection	4 point display(kV, mA, Time, mAs): kV/mAs, kV/mA/Time, kV/AEC option				
Image Receptors	2 Bucky + 1 Non-Bucky				
Auxiliary Power Supply	External System Power		230VAC, 1A, 230W (PBT-4)		
			230VAC, 2A, 460W (PBT-6 (Basic, Deluxe))		
	Magnetic Lock(Brake) Power		110VAC, 1A, 110W		
Collimator Lamp Power		28VAC, 6.3A, 176W			
Reproducibility		Coefficient of Variation: kV < 0.005, Time < 0.005, mAs < 0.01			
Accuracy	kV < ±(1%+1kV), mA < ±(3%+1mA), Time < ±(1%+0.5ms), mAs < ±(3%+0.1mAs)				
Linearity	Coefficient of Linearity < 0.01 : CL = (X1-X2)/(X1+X2), where X is mR/mAs				
Dimension / Weight	Main Cabinet		626(W) x 652(H) x 408(D) mm / 92kg(203lbs)		
	Main Cabinet with level foot option		626(W) x 667(H) x 408(D) mm / 92kg(203lbs)		
	PC Interface Module		208(W) x 76(H) x 181(D) mm / 0.8kg(1.76lbs)		
	Touch Console		308(W) x 51(H) x 200(D) mm / 1.5kg(3.31lbs)		

\* #: It can be combined with TS-CSP.

Model		PBT-6 (Deluxe)#		
Movement	Tabletop	Longitudinal	Stroke	Tabletop Size(W)
			1,100(±550)mm	Tabletop 2,660mm
			840(±420)mm	Tabletop 2,400mm
			640(±320)mm	Tabletop 2,200mm
	Vertical	Travel	300(±150)mm	
			350(510~860)mm	
			Speed	13~ 19mm/sec ± 10% (Full load to no load)
			Operating	Motorized movement by Foot/Hand grip Switch Linear Actuator
Bucky	Mechanical	-740mm ± 10mm with standard tray -500mm ± 10mm with rotating tray		
	Table Tracking	-710mm ± 10mm with standard tray (automatically move only)		
Tabletop		Inherent Filtration	Laminate : 1.2mmAl at 100kV Carbon : 0.5mmAL at 100kV	
		Max. Patient Weight	400kg(881lbs)	
		Size	2,660(W) x 878(D) x 45(H) mm 2,400(W) x 878(D) x 45(H) mm 2,200(W) x 878(D) x 45(H) mm	
Bucky Type	Oscillating (Optional built in charger)	Fixed (Optional built in charger)		
Grid	FD 100cm, 103 lpi, 150 lpi, ratio 8~12:1	FD 100cm, 103lpi, 200lpi, 215lpi, 230 lpi, 250 lpi, ratio 8~13:1 (Optional removable grid)		
Lock(Brake)	EM Lock, Foot Switch on/off, Hand Grip Switch on/off, Hand Switch on/off (Bucky)			
Center indication	Transverse center, height center			
Electrical Rating	230VAC, 550VA, 50/60Hz			
Option	Patient Compression Belt, Patient hand grips, Cassette holders, Mechanical Table Bucky Tracking (with TS-FM6), Hand grip switch, FS-WP3(Wireless Foot Switch), FS-PP3(Wire Foot Switch), 45° rotating Bucky			
Dimension / Weight	Laminate	2660(W) x 878(D) x 860(H) mm / 240kg(529.1lbs) 2400(W) x 878(D) x 860(H) mm / 236kg(520.3lbs) 2200(W) x 878(D) x 860(H) mm / 227kg(500.4lbs)		
	Carbon	2660(W) x 878(D) x 860(H) mm / 232kg(511.5lbs) 2400(W) x 878(D) x 860(H) mm / 229kg(504.9lbs) 2200(W) x 878(D) x 860(H) mm / 221kg(487.2lbs)		

\* APPLIED PART

\* Optional Rotating Bucky (45 Degree only for FVF Bucky)

\* #: It can be combined with TS-CSP.

Model	WBS(Motorized)	
Cassette stroke	Vertical	970mm (300~1,270mm from floor to Bucky center) ± 10mm 1,120mm (300~1,420mm from floor to Bucky center) ± 10mm 1,290mm (300~1,590mm from floor to Bucky center) ± 10mm 1,540mm (300~1,840mm from floor to Bucky center) ± 10mm
Vertical movement	Manual and Motorized movement	
Bucky type	Oscillating (Optional built in charger)	Fixed (Optional built in charger)
Grid	FD 130,150,180cm, 103 lpi, 150 lpi, ratio 8~12:1	FD 130,150,180cm, 103lpi, 200lpi, 215lpi, 230 lpi, 250 lpi, ratio 8~13:1 (Optional removable grid)
Inherent Filtration	0.5mmAl at 100kV	
Lock(Brake)	EM Lock, Switch on/off	
Balance	Counter Weight	
Electrical Rating	100-240VAC, 160VA, 50/60Hz	
Vertical Speed	6.2 cm/s ± 15% (Normal up), 5.6cm/s ± 15% (Normal down)	
Option	Patient Overhead hand grips, Patient Lateral hand grips, Cassette holders, Right side drawer tray, Emergency Stop Switch for operation room, Vertical Up/Down foot switch or hand switch for operation room	
Dimension / Weight	1,614(H) x 659(W) x 549(D) mm / 126kg(277lbs) 1,764(H) x 659(W) x 549(D) mm / 130kg(286lbs) 1,934(H) x 659(W) x 549(D) mm / 132kg(291lbs) 2,184(H) x 659(W) x 549(D) mm / 135kg(297lbs)	

\* APPLIED PART

\* Optional Rotating tray

Model	TS-CSA	
Tube Rotation Angle	Horizontal axis	±180° (LCD display)
	Vertical axis	±180° (mechanical detents at every 90°)
Tube stroke (with 3x4m rails - Transverse x Longitudinal)	Longitudinal	3,280mm(with 4m rail) 4,280mm(with 5m rail)
	Lateral	2,200mm(with 3m rail) 3,200mm(with 4m rail)
	Vertical	1,500mm or 1,600mm ± 10mm (1,500mm is possible up to the weight of E7252X plus R108)
Lock(Brake)	EM Lock, Switch on/off	
Balance	Spring	
Vertical Movement	Manual or Motorized(Option) Motorized option supports vertical sync with table and wall stand	
Tube Rotation	Manual or Motorized(Option) Motorized option supports the source tilting type image stitching operation	
SID Indication	7 inch Touch Screen LCD with control buttons Optional 15.6 inch Touch Screen with control buttons	
Electrical Rating	220-230VAC, 200VA, 50/60Hz	
Option	Cable chain (3x4m, 3x5m, 4x4m, 4x5m), Extend HV cable (20m, 25m) Mechanical detent, Built-in laser of Tube Stand Handlebar, Fail-safe	
Dimension	4,010(W) mm x 2,766(H) x 3,022(D) mm 4,010(W) mm x 2,766(H) x 4,022(D) mm 4,010(W) mm x 2,866(H) x 3,022(D) mm 4,010(W) mm x 2,866(H) x 4,022(D) mm 5,010(W) mm x 2,766(H) x 3,022(D) mm 5,010(W) mm x 2,766(H) x 4,022(D) mm 5,010(W) mm x 2,866(H) x 3,022(D) mm 5,010(W) mm x 2,866(H) x 4,022(D) mm Option(Tube Head Motorized Rotation): 4,010(W) mm x 2,722(H) x 3,022(D) mm 4,010(W) mm x 2,722(H) x 4,022(D) mm 4,010(W) mm x 2,822(H) x 3,022(D) mm 4,010(W) mm x 2,822(H) x 4,022(D) mm 5,010(W) mm x 2,722(H) x 3,022(D) mm 5,010(W) mm x 2,722(H) x 4,022(D) mm	

Tube Model	RTM90HS#	RTM101HS#	RTC600HS#	UH-6FC-31E#
Manufacturer	IAE	IAE	IAE	FUJIFILM
Focal Spot Size	0.6/1.2mm	0.6/1.2mm	0.6/1.2mm	0.6/1.2mm
Rating(0.1s)	35/85kW	41/97kW	43/100kW	40/100kW
Max. Anode HU	300kHU(225kJ)	400kHU(300kJ)	600kHU(450kJ)	300kHU(210kJ)
Target Angle	12.5°	12.5°	13°	12°
Max. kV	150kV	150kV	150kV	150kV
Weight	22.7kg(50lbs)	22.8kg(50.3lbs)	23kg(50.7lbs)	24kg(52.9lbs)
Inherent Filtration	1.2+0.3mmAl/75kV	1.2+0.3mmAl/75kV	1.2+0.3mmAl/75kV	1.0mmAl/75kV
Half Value Layer	More than 2.9mmAl eq. at 80kVp			
Leakage Radiation	Less than 100mR/hr			

Tube Model	DXT-17U#	DXT-19U#
Manufacturer	DRGEM	DRGEM
Focal Spot Size	0.6/1.2mm	0.6/1.2mm
Rating(0.1s)	40/100kW	40/100kW
Max. Anode HU	400kHU(285kJ)	600kHU(444kJ)
Target Angle	12°	12°
Max. kV	150kV	150kV
Weight	20kg(44.1lbs)	20kg(44.1lbs)
Inherent Filtration	1.0mmAl/75kV	1.0mmAl/75kV
Half Value Layer	More than 2.9mmAl eq. at 80kVp	
Leakage Radiation	Less than 100mR/hr	

\* #: It can be combined with TS-CSP.

Model	R302MLP/A #
Manufacturer	RALCO
Field shape	Square X-ray field
Max. field size	48 cm x 48 cm (at SID 100 cm)
Leakage Radiation	< 40mRh (at SID 100 cm, 150kVp / 4mA)
Max. kVp shield	150 kV
Inherent Filtration	Min. 2.0mm Al eq. (at 75kV)
Luminosity	> 160 Lux (at SID 100 cm, 35 x 35 cm)
Light source	LED (heatsink mounting)
Standard	Metal fixed mounting flange
Option	Additional variable filtration - automatic selection
Input rating	24 V AC/DC - 2 A, 50/60 Hz
Dimension / Weight	195.5(W) x 250(D) x 206.5(H) mm / 9.5 kg (21lb)

\* #: It can be combined with TS-CSP.

<b>NOTE</b>
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The weight may vary according to the optional items mounted to the collimator.
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### 3.2.9 FOOT SWITCH

Model	FS-WP3#
Electrical Rating	3VDC (1.5V Battery x 4ea), 3mA

\* #: It is the basic component of PBT-6 (Deluxe).

\* #: It can only be used in combination with PBT-6 (Deluxe).

Model	FS-PP3#
Electrical Rating	-

\* #: It is the option component of PBT-6 (Deluxe).

\* #: FS-PP3 can only be used in combination with PBT-6 (Deluxe).

**NOTE**

Live streaming camera images are used only for reference.

- Foot Switch

Model	DFS-2
Harness Length	5m
Expose method	2 step( Ready, Expose )

- **Accessory**

- DAP (Dose Area Product) meter

: A device that is installed on X-ray equipment to measure the radiation dose received by patients during exposure.

Model	120-131HS (RS485)
Manufacturer	IBA
DAP Resolution	0.01 $\mu\text{Gym}^2$
Interface	RS485
Active area	115 x 115mm / 140 x 140mm
Dimension	158 x 134.5 x 17mm / 179 x 156 x 17mm
Inherent Filtration	0.31 mm Al / 70kV / 2.5 mm Al
Power input	12 – 29 VDC, 100mA
Measurement Uncertainty	$\pm 25\%$
Option	Display

\* In addition to the DAP (Dose Area Product) meter, a DAP PLUS meter option is also available

- Grid

: A device that reduces scatter radiation dose to achieve clear image acquisition.

Model	Grid 1000
Manufacturer	JPI
Focal distance	100, 130, 150, 180cm
Line number	103 lpi, 200 lpi, 215 lpi, 230 lpi, 250 lpi
Reason	8:1 ~ 13:1

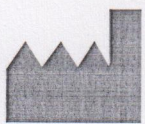
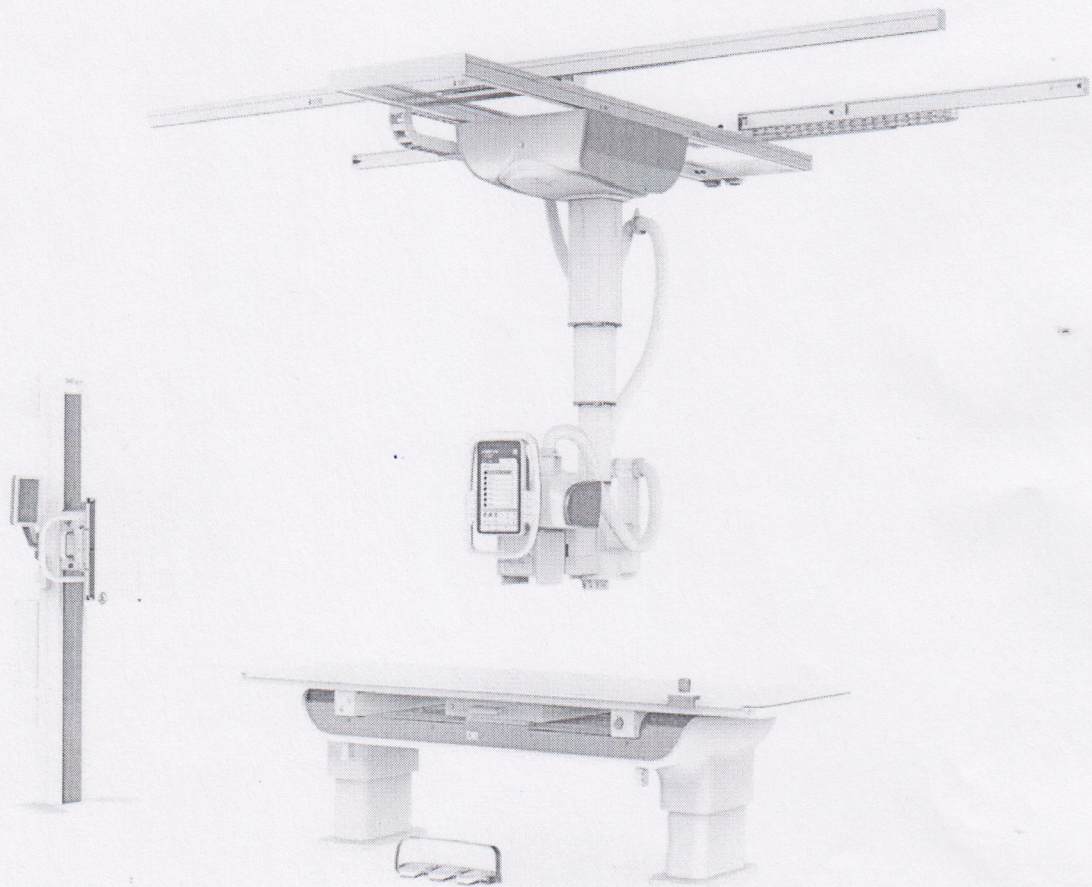
- Grid Holder

: A device for securing a grid to the detector.

# GXR-SD/CSD/USD

## DIGITAL RADIOGRAPHY SYSTEM

### Technical Specifications

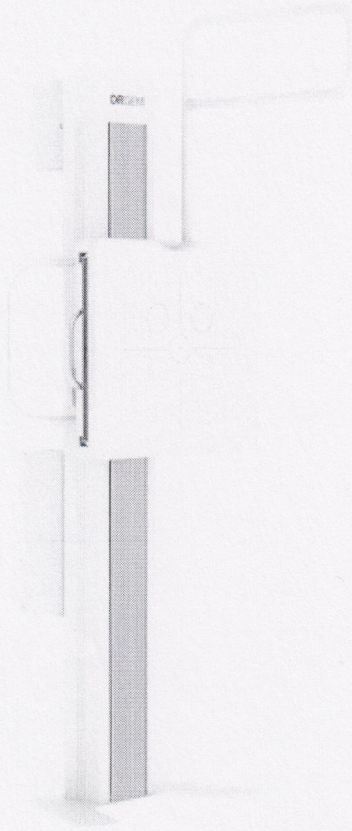


**DRGEM Corporation**

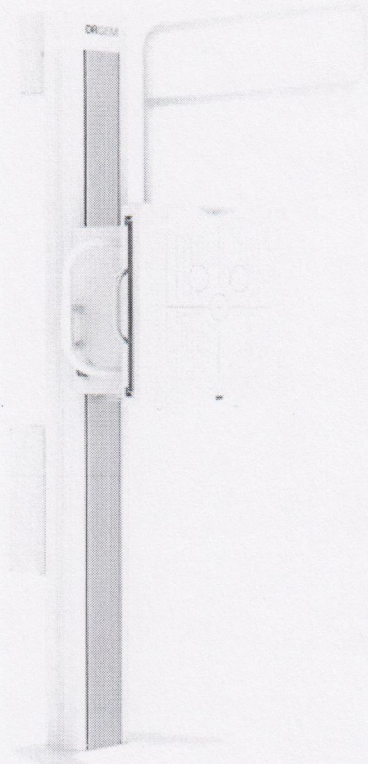
7FI, E-B/D Gwangmyeong Techno-Park, 60 Haan-ro,  
Gwangmyeong-si, Gyeonggi-do, 14322, Republic of Korea  
TEL: +82-2-869-8566, FAX: +82-2-869-8567

D/N: RSP1807-006, Rev. 40



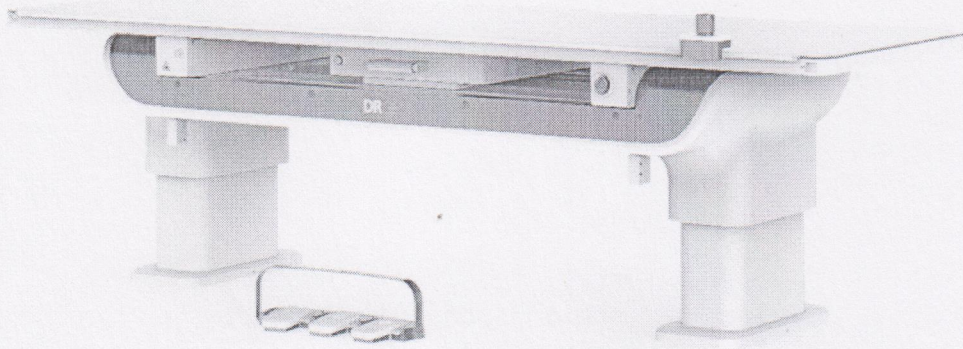


WBS(Motorized)



WBS-TM(Motorized)





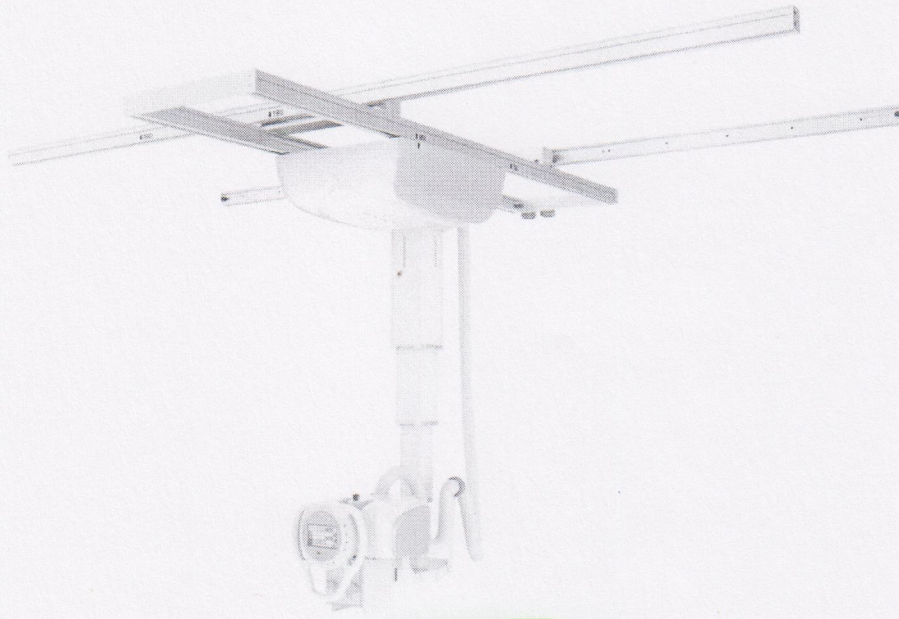
PBT-6(Deluxe)



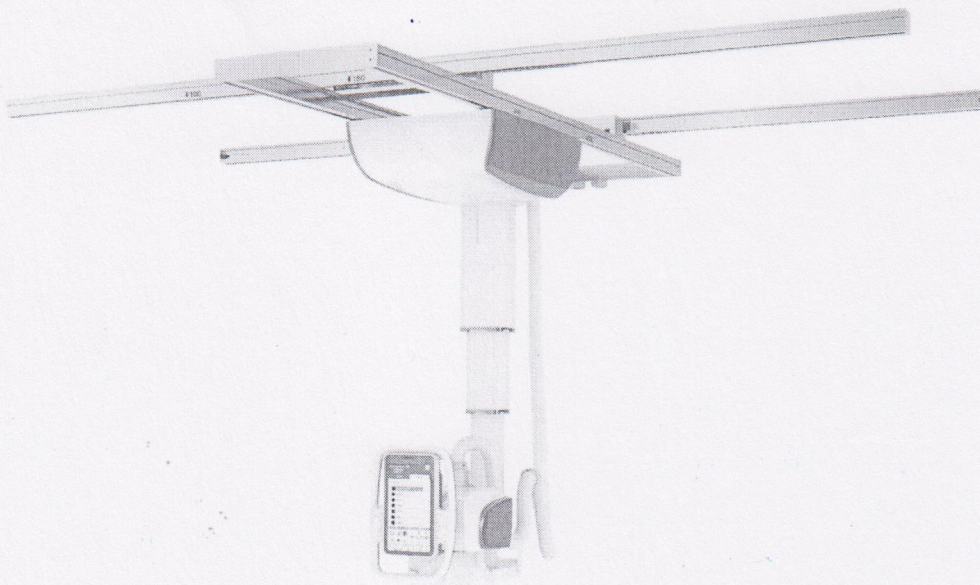
PBT-6(Basic)



PBT-4



TS-CSA



15.6 inch Touch Screen TS-CSA