

GE Healthcare

# Proteus XR/f ST

PRODUCT DATA SHEET



## TECHNICAL DATA:

FLOOR MOUNTED TUBE STAND	
<b>Design</b>	Manual movement, with fully counter balanced horizontal tube arm
<b>Longitudinal tube travel</b>	148 cm (248 cm optional)
<b>Vertical tube travel</b>	150 cm
<b>Focal spot-to-floor distance</b>	Variable from 40 to 190 cm
<b>X-ray tube rotation</b>	± 180° (detents at +90°, 0°, -90°)
<b>Tube stand column rotation</b>	± 90° (detents at +90°, 0°, -90°) (optional)
<b>Locks</b>	Electromagnetic brakes
<b>Transverse table top travel</b>	30 cm (±15 cm) (optional)
<b>Table locks</b>	Electromagnetic brakes
<b>Tube arm console controls</b>	Longitudinal, transverse, vertical, and rotational lock control buttons
<b>Options</b>	Floor-Mounted Tube stand PROTEUS XRF longitudinal tube travel 148 cm. With telescopic Arm and rotation
	Floor-Mounted Tubestand Tracking bucky fix SID, longitudinal travel 148cm

## FIXED TABLE

<b>Table top dimensions</b>	220 cm x 82,5 cm
<b>Height from floor</b>	77 cm
<b>Table top composition</b>	Laminated structure (according to EN 438 standard)
<b>Table top-to-film distance</b>	10.2 cm
<b>Table top Al. equivalence</b>	< 1 mm Al. at 100 kVp
<b>Table top weight limit</b>	300 kg
<b>Table top movement</b>	Manual, 4-way floating top
<b>Longitudinal travel</b>	90 cm (±45cm)
<b>Transverse table top travel</b>	23 cm (±11.5 cm)
<b>Table locks</b>	Electromagnetic brakes
<b>Table lock controls</b>	Full-length foot switch along table base
<b>Bucky travel</b>	51.8 cm Total center-to-center
<b>Radiographic coverage</b>	180 cm
<b>Grid*</b>	40 lines/cm - 12:1 linear ratio Focused at 100 cm
<b>Detector Bucky Sizes</b>	Sizes from 35x43 cm either orientation and 43x43 cm
<b>Auto-charging system with LED indicator</b>	
<b>Easy rotational detector</b>	
<b>Options</b>	Mechanical attachment allows for detector Auto-tracking with x-ray beam

\*See optional grids available

## COLLIMATOR

<b>Collimator type</b>	Manual (Multilayer, square field X-ray collimator, 6 pairs of lead-lined shutters)
<b>Field lamp</b>	100 W, 24 VAC
<b>Lighting timer</b>	30 sec.
<b>Average luminosity</b>	160 lx.
<b>Alignment light</b>	LED
<b>Inherent filtration</b>	2.0 mm aluminum (EN 60601-1-3)
<b>SID measuring</b>	Retractable measuring tape

## OPTIONS

<b>External DAP for Manual Collimator</b>	External DAP with rails for a Manual collimator upgrade. Dose area meter VacuDAP 2004 inter-phased with the generator. cable 15m.
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## WALL STAND

<b>Standard type</b>	Non-tilting Bucky
<b>Vertical Bucky travel</b>	150 cm (from 40 to 190 cm)
<b>Vertical movement</b>	Manual, fully counterbalanced
<b>Film center to Floor</b>	43 cm
<b>Minimum distance</b>	40 cm
<b>Detector Bucky Sizes</b>	Sizes from 35x43 cm either orientation and 43x43 cm
<b>Auto-charging system with LED indicator</b>	
<b>Easy rotational detector</b>	
<b>Grid*</b>	40 lines/cm - 12:1 - linear ratio Focused at 150 cm
<b>Al. equivalence</b>	< 0.85 mm at 100 kVp
<b>Locks</b>	Electromagnetic brakes
<b>Detector load</b>	Left or Right load
<b>Weight</b>	145 kg

\*See optional grids available

## HIGH FRECUENCY GENERATOR SHF

	50 KW	65 KW	80 KW
<b>KW Maximum Power</b>	Single-Phase 220/240 VAC		Three-Phase 380/480 VAC
<b>KVp Range (1kVp steps)</b>	40 – 125 Kv (150Kvp optional) Accuracy: ±(3% + 1 kVp)		40 – 150 Kv Accuracy: ±(3% + 1 kVp)
<b>mA Range</b>	10 – 640 mA (19 steps, Renard scale )	10 to 630**	10 to 800mA (20 steps, Renard scale)
	10, 12.5, 16, 20, 25, 32, 40, 50, 64, 80, 100, 125, 160, 200, 250, 320, 400, 500/ 630** Accuracy: ±(4% + 1 mA)		
<b>Power Output (0,1s)</b>	640 mA @ 78 KVp 500 mA @ 100 KVp 400 mA @ 125 KVp 320 mA @ 150 KVp	630 mA @ 100 kVp 630 mA @ 103 kVp 500 mA @ 125 kVp 500 mA @ 130 kVp 400 mA @ 150 kVp	500 mA @ 150 KVp 640 mA @ 125 KVp 800 mA @ 100KVp
<b>Exposure Time Range</b>	0.001 – 10 seconds Accuracy: ± (2% + 0.1 ms)		
<b>mAs Range</b>	0.1 mAs – 640 mAs ( 38 steps Renard scale) Accuracy: ± (10% + 0.2 mAs)		
<b>High Voltage Ripple (Typ.)</b>	<1kVp @ 100 kVp		
<b>Anatomical Programming</b>	534 Anatomical Views		
Battery Powered (option)	110 / 230 VAC - 500 W (1Phase) (Uninterruptible Power Supply)	N.A	
Automatic Line Comp.	± 15%		

### Low Speed or High Speed (optional) Rotor Controller 1 Tube

#### Microprocessor Controlled

#### Auto diagnostic System

#### Tube overload protection monitoring of the remaining X-Ray Tube Heat Units

#### Prep./ Exposure X-ray Hand-switch

#### AEC

## TUBE




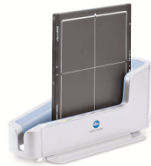
<b>E7884X</b>	X-ray tube Toshiba 12° 150 kVp dual focal spots 0,6 and 1,2 mm 300KHU LS 20/50 Kw (50Hz) 22/54 Kw (60Hz)
<b>HSS-1T</b>	High speed starter (3.000/9.000 r.p.m.) for one x-ray tube

Rad. X-Ray Tube			
Generator output power	50KW	65KW	80 KW
Tube Type	Rotating Anode (LS)	Rotating Anode (HS)	
Anode Voltage	150 kVp		
Speed starter	3,000 r.p.m.	(3,000 / 9,000) r.p.m.	
Focal spots	0.6 - 1.2 mm		
<b>Power ratings</b>			
Small Focal Spot	20 kW	27 kW	40 kW (180 Hz)
Large Focal Spot	50 kW	75 kW	102 kW (180 Hz)
Anode heat storage capacity	300 KHU		400 KHU
Target angle	12°		

GRIDS
Grid 103 Lines (40 lines/cm), 10 :1, Focalized at 1 m
Grid 103 Lines, 10 :1, Focalized at 1,5 m
Grid 103 Lines 12:1, Focalized a 1,8 m
Grid 103 Lines, 10:1, Focalized at 1 m Carbon Fiber Cover
Grid 103 Lines, 12 :1, Focalized at 1,5 m Carbon Fiber Cover
Grid 103 Lines, 12 :1, Focalized at 1,8 m Carbon Fiber Cover

OPTIONS
Hands support for Wall stand
Hand Grip for Wall stand
Compression Band for table
Lateral detector Holder up to 35x43 cm
Lateral detector Holder movable on tabletop
Lateral detector size on trolley with wheels

# WIRELESS DETECTORS

Manufacturer	Konica Minolta	Konica Minolta	Konicaminolta	Konicaminolta
<b>Product Name</b>	AeroDR 2 1417HQ AeroDR XE	AeroDR 1417LT	AeroDR 1717HQ 17"x17"	AeroDR 1012HQ 10"*12"
				
<b>Detection Technology</b>	Indirect-Conversion	Indirect-Conversion	Indirect-Conversion	Indirect-Conversion
<b>Scintillator</b>	CsI - Hi Quality Type	CsI - Standard Type	CsI - Hi Quality Type	CsI - Hi Quality Type
<b>Dimensions (mm) (Width x Depth X Height)</b>	383. x 460.27 x 15.9	383. x 460.27 x 15.9	459 x460.2 x15.9	281.1 x 333.0 x 15.9
<b>Weight</b>	2.6 kg (including battery)	2.5 kg / 5.5 Lbs. (including Power cel)	3.6 kg (including battery)	1.7 kg
<b>WLAN Standard</b>	IEEE 802.11a, 5 GHz IEEE 802.11n, 5 GHz/2.4GHz	IEEE 802.11a, 5 GHz IEEE 802.11n, 5 GHz/2.4GHz	IEEE 802.11a, 5 GHz band	IEEE 802.11a, 5 GHz band
<b>DQE</b>	at 1 mR, RQA5 65% (@ 0 cycle/mm) 51% (@ 1 cycle/mm)	at 1 mR, RQA5 42% (@ 0 cycle/mm) 35% (@ 1 cycle/mm)	at 1 mR, RQA5 65% (@ 0 cycle /mm) 51% (@ 1 cycle/mm)	at 1 mR, RQA5 65% (@ 0 cycle /mm) 51% (@ 1 cycle/mm)
<b>MTF</b>	Over 0.53 at 1cycle/mm	Over 0.53 at 1cycle/mm	Over 0.53 at 1cycle/mm	Over 0.53 at 1cycle/mm
<b>Pixel Spacing</b>	175µ	175µ	175µ	175 µ
<b>Image Area Size (mm)</b>	348.95 x 425.25 (1994x2430 Pixels)	348.95 x 425.25 (1994x2430 Pixels)	424.9 x 424.9	245.7 x 296.8
<b>Image Pixel Size (pixels)</b>	1,994 x 2,430	1,994 x 2,430	2,428 x 2,428	1,404 x 1,696
<b>Preview time</b>	less than 2 seconds (S-SRM Portable: approx. two seconds)	less than 2 seconds (S-SRM Portable: approx. two seconds)	less than 3 seconds	less than 2 seconds
<b>Cycle Time (Exposure linkage with X-ray)</b>	(CS-7) Approx. 4 seconds (wired) Approx. 6 seconds (wireless)	(CS-7) Approx. 4 seconds (wired) Approx. 6 seconds (wireless)	8.0 seconds with wired connection / 13.8 seconds with wireless connection	7 seconds with wired connection 9 seconds with wireless connection
<b>AED function</b>	Y	Y	Y	Y
<b>Battery Technology</b>	Lithium Ion Capacitor	Lithium Ion Capacitor	Lithium Ion Capacitor	Lithium Ion Capacitor
<b>Battery Life time</b>	Same duration as panel	Same duration as panel	Same duration as panel	Same duration as panel
<b>Battery recharging time empty to full</b>	Within 0.5 hour with AeroDR battery charger, AeroDR battery charger 2, AeroDR I/F cable	Within 0.20 hour (13 minutes) with AeroDR Docking Station II or AeroDR I/F cable	Within 0.5 hours when an AeroDR battery charger is used / within 1 hour when a decicated cable is used	Within 0.5 hours



<b>Battery Performance (Exposure linkage with X-ray)</b>	Up to 300 exposures and 8.2 hours	Up to 150 exposures and 4.1 hours *	Up to 173 exposures or 4.8 hours  * under condition that the time interval between each study is five minutes and three images are captured in each study, assuming that it takes 20 seconds to position a patient. * Three minute recharging enables more than 10 images to be captured.	Up to 146 exposures or 4 hours  * under condition that the time interval between each study is five minutes and three images are captured in each study, assuming that it takes 20 seconds to position a patient.
<b>Battery Performance (AED)</b>	Up to 250 exposures and 6.8 hours (General X-ray)	Up to 125 exposures and 3.4 hours (General X-ray)		
<b>Memory function inside a panel</b>	YES - Back-up only	YES - Back-up only		
<b>Battery duration</b>	Approx. 20 hours in standby mode	Approx. 16 hours in standby mode		Approx. 7.6 hours
<b>Water resistance</b>	IPX6	IPX6		
<b>Drop impact resistance</b>	Drop test from the height of 1m has been cleared.	Drop test from the height of 1m has been cleared.		
<b>Digital shock sensor</b>	Yes	Yes		
<b>Max. withstanding load</b>	150 kg @ 40 mm in diameter/ 300kg @ whole area	150 kg @ 40 mm in diameter/ 300kg @ whole area	150 kg @ 40 mm in diameter 300kg @ whole area	150 kg @ 40 mm in diameter 300kg @ whole area

## CS-7 Universal Control Station Hardware

- Intel Core i5-2520 vPro processor, 3.2GHz, CD/DVD RW,
  - 4GB RAM
  - Win 7 PRO
  - 320 GB HDD
  - Intel PRO/1000 GT Network Connection
- 23" LCD Multi-touch Monitor - 178 degree Viewing Angle
  - 1920 x 1084 Native Resolution

### Also Includes:

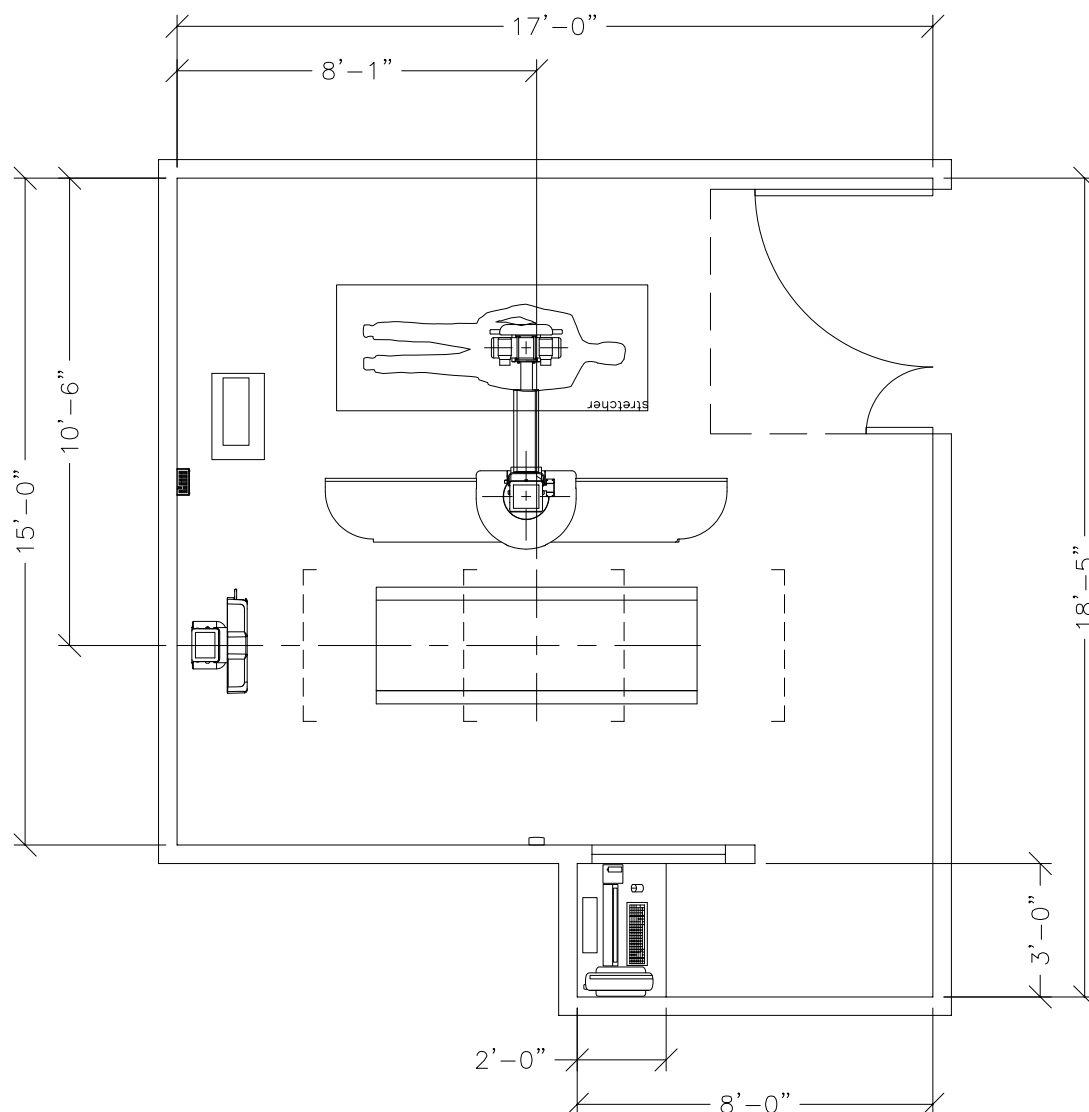
- Image Quality Optimization
- DICOM Store (x4 connections)
- DICOM Print (x2 connections)
- DICOM Modality Worklist
- MPPS Software License
- Aero DR Gen I/F SSRM kit
- Procedure Code Mapping
- Installation and Applications Training

## CS-7 Universal Control Station Software

### Features:

- CS-7 Operating Platform
- Hybrid Premium Image Processing Algorithm
- Equalization, Frequency & Gradation Processing
- Study Append
- Multi-Study capability
- Free Text Annotation
- Automatic Masking
- Study List Filter
- History Search
- Image Zoom
- Grid Suppression
- HIPAA compliance enabling features (Audit trail, Auto log-out)

## ROOM LAYOUT



### FULLY FUNCTIONAL LAYOUT:

**NOTE:** Layout allows for 3.5" deep surface wall duct between wall stand and generator. X-ray tube cable will drape from a ceiling box. This layout is ADA compliant.



