

ProXima V Digital Radiography System



SUMMARY

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INTRODUCTION & TECHNICAL DATA

ProXima family of digital radiography (DR) systems covers the complete range of general and specialized radiographic imaging. Many positioning platforms make them suitable for a wide range of imaging needs from walk in clinics to trauma units and hospitals with immobile patients. Direct digital acquisition based on market leading, high sensitivity DR flat panel detectors produces exceptional quality images at a significant reduction in exposure dose compared to conventional CR systems. Automated exposure settings and powerful image post-processing with customized algorithms for each anatomy provide optimal image quality and reliability. X-ray power pack including a modern very high-frequency generator and high-speed tube provide reliable imaging with optimal dose use.

ProXima V is a floor mounted general radiography system with automatic positioning, vertical bucky stand and elevating height floating patient table.

ProXima V features tube auto tracking functions and keeping of the preset focus to detector distance.

ProXima V - POSITIONING SYSTEM FLOOR MOUNTED TUBE STAND	
Longitudinal travel	2540 mm (floor rails 3016 mm)
Rotation around tube column	$\pm 180^\circ$
Focus-floor distance	400 to 1930 mm, stroke 1530mm
Tube rotation	$\pm 135^\circ$
Lateral tube movement	± 125 mm
Counter-balanced tube elevation	✓
Safety system against breaking of rope	✓
Focus-detector distance on table	up to 1170 mm on standard 760 mm table height
Tube Stand has safety limits on the rails	✓
Outer system dimensions (length, width, height)	3024x1485x2156
Minimum Ceiling Height	2500mm

Minimum room dimensions	3m x4m
10.1" touchscreen system console on tube	Information display and controls: generator parameters, stand positioning, SID, tube angle, interlock, filtering, X-ray image preview, worklist management
Buttonless all-release handle	
Manual and automatic collimator	
Automatic shutter positioning from APR for selected techniques in console worklist	✓
Adjustable shutter opening for each technique in APR	✓
Motorised additional filtration, automatically set from APR for chosen technique	- 1mm Al + 0.1mm Cu - 1mm Al + 0.2mm Cu - 2mm Al + 0.3mm Cu
Inherent filtration, Al equivalent @75kV	1.2 mm
Bucky centering light	Long life power LED
Collimator light luminance	230 lux
Leakage radiation, EN60601-1-3	≤ 0.5 mGy/hr
Two tiers of shutters for fine field definition and to off-focal scatter radiation	✓
kV rating	Max 150 kVp
Light timer	✓
Digital read out of collimator field size and SID	With motorised system only
Collimator tilt angle display	✓
Centring indication	Laser crosshair and shadow crosshair

AUTO TRACKING FUNCTIONS

Tube tracking the motorised vertical movement of the wall stand

Tube tracking the motorized vertical movement of the elevating table

Table bucky tracking the MANUAL longitudinal and rotational movement of the tube

Wall bucky stand tracking the motorized movement of the tube

6-WAYS FLOATING TABLE

Elevating radiography table with 4-way floating tabletop	✓
Patient tabletop	Carbon fiber
Tabletop transparency	<0.6mm Al equivalent
Tabletop dimensions	2.300 x 806 x 515 mm
Longitudinal range	±450 mm
Transversal range	±130 mm
Elevation range	337 mm, lowest point 495 mm
Elevation from minimum to maximum height:	<10sec
Tabletop - detector distance	7 cm
Max. patient weight	300 Kg
Horizontally adjustable bucky carriage range	500 mm
Electromagnetic brake with footswitch control for fixing the tabletop	✓
Footswitches for control of table motions	✓
Fully enclosed table base	✓
Integrated detector bucky housing	✓
Emergency stop button	✓
Non-protruding edge rails for attachments	✓

Wall Stand	
Vertical bucky stand with motorized movement and EM brakes	
Vertical wall bucky stand with fully integrated detector bucky housing	✓
Smart Bucky unit for wireless detector	4343
Buttonless manual elevation handle	✓
Counterbalanced for smooth vertical travel with easy handling	✓
Electromagnetic brake secures vertical position	✓
Vertical travel	1520 mm
Designed for easy installation	✓
Minimum height from floor to centre of detector	280 mm
Maximum height from floor to centre of detector	1800 mm

Chest PA and LAT handgrips	✓
Automatic Exposure Control	
Measuring fields	5 fields for symmetric operations
Sensitivity	Typical at 70 kV, 21mm Al:0.6V/mG
kV range	40-150 kV
Exposure time	1ms - 6sec
Absorption	Eq. 0.8 mm Al
Detector housing integration	✓
X-ray Grid	
Anti-scatter grid in aluminium	85l/cm R10:1, ffd=110 cm
Anti-scatter grid in aluminium	85l/cm R10:1, ffd=180 cm
DAP Meter	
Digital readout into system console (display, information and storage of issued dose)	✓
Equivalent filtration	0.2mm Al
Light transparency	>75%
Resolution	0.1 μ Gym=1 mGycm ² , 0.01
Accuracy	25%
kV range	40-150

Brand	I.A.E (Italy)		
Tube Model	RTM90HS	RTM101HS	RTC600HS
Anode heat capacity	300 KHU (225 kJ)	400 KHU (300kJ)	600 KHU (450kJ)
Standard focus	0.6x1.2mm	0.6x1.2mm	0.6x1.2mm
Power	24-60 low speed 35-85 high speed	26-63 low speed 40-100 high speed	24-63 low speed 43-100 high speed
Voltage	150 kV	150 kV	150 kV
Anode Angle	12,5°	12,5°	13°
Anode Diameter	90 mm	102 mm	102mm
Maximum anode dissipation	1300 W (104.000 HU/min)	1000 W (80.000 HU/min)	1000 W (80.000 HU/min)
Max continuous heat dissipation	750 W (60.000 HU/min)	1500 W (125.000 HU/min)	1500 W (125.000 HU/min)

Anode speed	3000 rpm 10000 rpm (depending on generator board)	3000 rpm 10000 rpm (depending on generator board)	3000 rpm 10000 rpm (depending on generator board)
Inherent filtration	0.7 mm Al eq.	0.7 mm Al eq.	0.7 mm Al eq.
Housing	C352	C52Super	C52Super
High voltage	150 kV	150 kV	150 kV
Heat storage capacity	1280 kJ 1700 KHU	1280 kJ 1700 KHU	1280 kJ 1700 KHU
Cooling rate	230 W (18400 HU/min)	230 W (18400 HU/min)	230 W (18400 HU/min)

High Frequency Generator			
Brand	EMD, Canada		
Model	EPS RAD 50	EPS RAD 65	EPS RAD 80
Generator power	50 kW	65 kW	80 kW
mA range	10-630 mA	10-800 mA	10-1000 mA
Full microprocessor control	✓	✓	✓
Power Supply	400 VAC	400 VAC	400 VAC
Number of phases	3	3	3
Frequency	Up to 240 Khz	Up to 240 Khz	Up to 240 Khz
High speed starter	✓	✓	✓
Regulation range in mAs	0.1-1000 mAs	0.1-1000 mAs	0.1-1000 mAs
Exposure time	1ms - 10 sec	1ms - 10 sec	1ms - 10 sec
AEC board	Yes, two chambers	Yes, two chambers	Yes, two chambers

AVANSE DR - ADVANCED ACQUISITION AND IMAGING SYSTEM	
Imaging Console with dedicated UPS	
High performance PC	✓
Multi core processor	I6
RAM	8 Gb
Hard disk drive	256GB SSD + 1Tb HD (>50.000)

	images store at highest resolution
CD/DVD RW for image export in DICOM format	✓
Operating system	Windows 10
WiFi router, one for each wifi detector	✓
UPS	SVEN Pro 600VA

Display	
LCD monitor	23" BN/Color high resolution
Display resolution	1920x1280 (Full HD), TFT/LCD, 2MP
Max luminance	500 cd/m2
Image depth	8 bits
Software specification	
Multilingual Software Interface	The system includes a user interface available in English , Russian, and Romanian, allowing language selection based on user preference or clinical workflow requirements
APR	Up to 2000 anatomical programs can be loaded.
Complete collimator management	Including automatic shutter positioning, motorized filtration, and digital readout of the exposure field size and SID
The system supports DICOM communication and is capable of transmitting medical images to at least 10 configured DICOM nodes	Including PACS, printers, and workstations
DICOM 3.0 MWL SCU import of modality worklists	✓
DICOM 3.0 STORE SCU export to PACS	✓
DICOM 3.0 PRINT SCU print to DICOM printer	✓
DICOM 3.0 Query, Retrieve, MPPS, Storage Commitment	✓
Tools for image processing: zoom, contrast, brightness, rotate, flip, inverse, magnification	✓
Algorithm for automatic harmonization	✓
Controlling and digitally displaying the dose values via the integrated DAP meter	✓

Advanced tools for image processing with enhanced visualization of bones and soft tissues	✓
Integration with PACS and RIS enabled	✓
Image printing on paper or film	✓
Image archival and export in DICOM format	✓
Image publishing on CD/DVD media in DICOM format with free DICOM viewer	✓
Managing generator parameters	Including voltage, current, and exposure time
Patient registration	Input patient data or import from DICOM MWL Local patients database with list of search and patient load Additional info Patient details automatic fill-up Patient input emergency procedure
Patient database or patient file modification	Modify patient details Patient delete Possibility to change, replace images/series/studies in the patient data base Re-send correct DICOM images to PACS Clear database

Image Stitching Option
Single focus stitching in stand and table technique
Stitching up to 5 images
Stitching time for 3 images exams: 45 seconds
Up to 150 cm patient coverage
Automated stand position and exposure on one button
Easy start/end point on tube side console with collimator laser
Possibility to adjust x-ray technique for each individual image

Full size stitching positioning trolley with 4 independent wheel locks
Standing step for full leg studies and step folding for safe long spine studies (patients stand of floor)
Dimension 200x86x95 cm, max patient weight 250 Kg
Positioning detents and slider for accurate ruler positioning
Radio-opaque ruler with positioning detents on stitching trolley
APR entries for whole legs and spine, additional stitching programs can be configured
Automated image registration and stitching on imaging console
Possibility to stitch all or only some of the acquired image
Manual stitching function for any two images with easy selection

FLAT PANEL DETECTOR

- **IRAY MARS 1717 V / 1417V**
- **IRAY MARS 1717X / 1417X**

DRAWINGS

PROXIMA V

