

## NAMA ALAT & SPESIFIKASI

Nama Alat : Mobile X-Ray System  
Merk – Asal : Allengers - India  
Tipe : C Arm HF 59

### TECHNICAL SPECIFICATIONS

<b>Special features</b>	<ul style="list-style-type: none"> <li>• <b>Soft collimator for optimizing the image by reducing glare.</b></li> <li>• <b>Cine loop recording reduces the frequency of repeated exposures in turn low dose to doctor and patient.</b></li> <li>• <b>Image enhancement (Image plus) increases contrast and sharpness of images.</b></li> <li>• <b>19" Medical Grade monitors with modular trolley.</b></li> </ul>
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<b>A) IMAGE INTENSIFIER:</b>		
1.	Image Intensifying Tube	9 inches, triple field Normal = 9", Zoom <sub>1</sub> = 6", Zoom <sub>2</sub> = 4.5".
2.	Nominal Entrance Field Size	230 mm
3.	Output Image diameter	20 mm
4.	CCD Camera	High resolution compact CCD camera ½" size. Pixels: 752(H) X 582(V)
5.	Monitors and Trolley	<ul style="list-style-type: none"> <li>▪ 2 Nos. 19" medical grade monitors along with modular trolley having features like:</li> <li>▪ Foldable monitors.</li> <li>▪ LCD display of the servo stabilizer output voltage</li> <li>▪ Actuator assisted up/down movement of monitors to facilitate viewing of images at most convenient eye level positions</li> <li>▪ Specially designed integrated keyboard having feather touch keys and touch pad is provided instead of double unit keyboard and mouse</li> <li>▪ 5 inch wheels for better mobility with kick stop provision in two wheels for parking stability.</li> </ul>
6.	Image Intensifier head safety lock.	Provided.

<b>B) C-ARM MOBILE STAND</b>		
1.	Rotation	± 180 Degrees.
2.	Up/Down movement with Actuator	430 mm
3.	Horizontal Travel	210 mm
4.	Arc Orbital Movement	120 Degrees.
5.	Wig Wag	±12.5 Degrees.

<b>C) X-RAY GENERATOR</b>		
1.(a)	Tube Head	50 KHz. Stationary anode x-ray tube
b)	Max. Voltage	110 KV
c)	Fluoroscopic mA	0.1- 5mA (Normal Mode)
d)	Pulse Fluoroscopy mA	8-12mA
e)	Radiographic mA	70 mA (max.)
2.	<b>INVERTOR</b>	AC/DC converter for H.F. x-ray generator.
a)	Mains Voltage	230V AC ± 10%, 50 Hz.

b)	Max. output power	3.5 KW
<b>CONTROL</b>		
1.	LCD Display for	20 X 3 (column x rows) display on which KV, mAs, fluoro time, FmA and cine mA, I.I ZOOM and body part, view of radiography, error inter lock display for KV, filament, thermal are displayed on wide angle LCD.
2.	Radiography	Manual and APR mode.
3.	Technic Selection	Fluoro and radio mode selection.
4.	Radiographic Timer	An inbuilt radio timer enables to select upto 250 mAs in 14 steps for radiography.
5.	Fluoroscopic Timer	Five minutes cumulative timer with buzzer.
6.	Fluoro mA	Continuously variable.
7.	Monoblock Temp. Sensor.	Thermal safety cut off provided.
8.	Self Diagnostics	Error indication display is shown on LCD display in character form i) KV interlock ii) Filament interlock iii) Thermal interlock
9.	Automatic Brightness Stabilizer	Provided for hands free imaging.
<b>D)</b>	<b>COLLIMATOR</b>	Single leaf parallel shutter collimator is provided.
<b>E)</b>	<b>Image memory features - Green image (LDHD)</b> <ol style="list-style-type: none"> <li>1. Image plus software</li> <li>2. 2 LCD monitors system for LIH, LIVE and stored images.</li> <li>3. Permanent image storage capacity of approx. 10,000 images.</li> <li>4. 50 temporary image storage for quick review.</li> <li>5. DVD writer to store images on CD/DVD for giving it to patients.</li> <li>6. Flicker free images on a flat screen.</li> <li>7. 32 bit image storage for excellent resolution.</li> <li>8. Image sharpening (real-time or stored images).</li> <li>9. Image rotation of 15<sup>o</sup> step.</li> <li>10. Image EMBOSS for three-dimensional relief presentation.</li> <li>11. Colorized images.</li> <li>12. Dynamic contrast control (Gray Level Stretch).</li> <li>13. Negative images (Gray Level Invert).</li> <li>14. Frames averaging for smoothing of images. (Real time) 256 frames.</li> <li>15. 32 bit at 800 x 600 resolutions.</li> <li>16. Digital subtraction of peripheral images.</li> <li>17. QUAD view (4 images on monitor).</li> <li>18. Cine loop of 500 frames (Multiple cine loops can be stored permanently).</li> <li>19. Variably frame rate of 2, 5, 10, 15 &amp; 27 frames per second for cine loop.</li> <li>20. Image orientation: Left/ Right – Top/ Bottom.</li> <li>21. Patient's Name, operator name, hospital name, date and time display on monitor.</li> <li>22. Images can be stored in folders of individual patient's name.</li> <li>23. Quick exploration of stored images.</li> <li>24. ON screen help mode.</li> <li>25. ON screen measurements – Length (X and Y) and Area.</li> <li>26. Area of interest marker.</li> <li>27. Contrast enhancement of area of interest.</li> <li>28. Histogram of area of interest.</li> <li>29. Facility for image printing.</li> <li>30. Text annotations and provision of removal of all text from the image.</li> <li>31. Automatic capture and storage of cine loop with cine foot switch</li> <li>32. Offset and gain adjustments for improved image quality.</li> <li>33. Thumb nail use of complete study</li> <li>34. Frame by frame review.</li> <li>35. Printing options in different formats (frames of different loops can be printed on the same sheet, 1x1, 1x2, 1x4, 1x8 formats)</li> </ol>	

	<p>36. Frame rate selection  37. LAN connectivity.  38. DICOM Compatible (Optional).  39. Branded processing unit  40. Specifications: Dell Desktop Vostro-220/Lenovo</p> <ul style="list-style-type: none"> <li><b>a. Intel dual core 2.5Ghz or above processor</b></li> <li><b>b. Intel mother board</b></li> <li><b>c. 1 GB DDR-II RAM</b></li> <li><b>d. 160GB or above hard disk drive</b></li> <li><b>e. DVD writer</b></li> <li><b>f. 512 MB dual head VGA card</b></li> <li><b>g. Specially designed integrated keyboard having feather touch keys and touch pad is provided instead of double unit keyboard and mouse</b></li> </ul>	
<b>11.</b>	<b>Power supply</b>	Single phase 230 V, ± 10% AC, 50 Hz (equipment operatable on standard 15 ampere power socket) with independent earthing.