

# **C - Arm - 3100**

## **Digital Mobile C-arm X-ray machine**



EPCC / PRODUCTS / APPLICATION / SOFTWARE / ACCESSORIES / CONSUMABLES / SERVICES

**Analytical Technologies Limited**

An ISO 9001 Certified Company

## ►► Advance digital imaging technology, sharp image

- Full view FPD, outstanding image quality and large field of view coverage even during image rotation
- High dynamic field of view, achieve the optimal image of human body's soft tissue and skeletal tissue
- A-si detector with CSI screen, excellent spatial resolution



Perfect digital imaging chain makes the routine operation easily as follow:

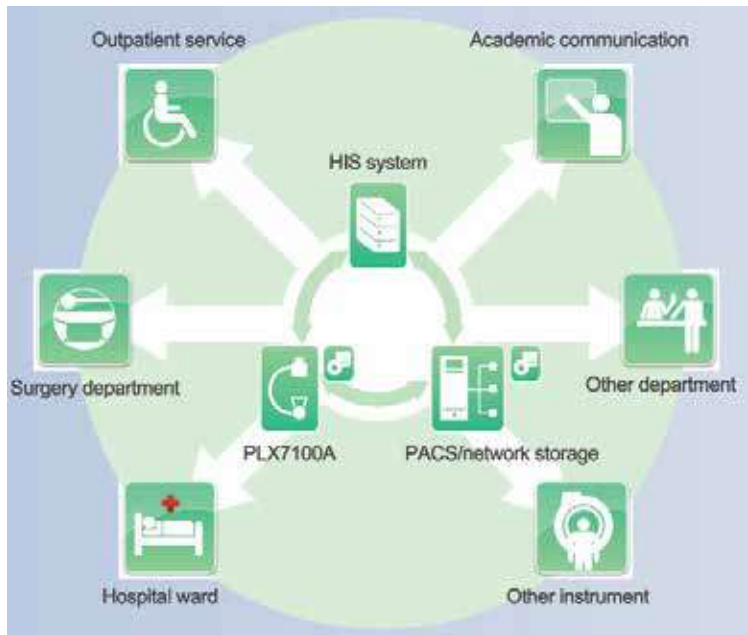
- |   |   |
|---|---|
| <input checked="" type="checkbox"/> Orthopedics department  | <input checked="" type="checkbox"/> Spine surgery               |
| <input checked="" type="checkbox"/> General surgery         | <input checked="" type="checkbox"/> Pain surgery                |
| <input checked="" type="checkbox"/> Orthopedic surgery      | <input checked="" type="checkbox"/> Gastroenterology department |
| <input checked="" type="checkbox"/> Traumatology department | <input checked="" type="checkbox"/> Gynecology                  |
| <input checked="" type="checkbox"/> Urinary surgery         |   |





- Perfect image processing system with extraordinary function ensures what you get
- Built-in advanced image automatic optimum and enhancing module realize the sharp clinical fiage
- Based on the Laplacian pyramid algorithm to achieve image contrast enhancement and n-time tissue equalization
- Professional working station has more image post-processing function such as the image W/L adjustment, region of interest balance, GAMMA tnrrrection, flip, noise reduction, smoothing, sharpening etc
- Professional high-definition LCD medical display system presents you the ideal clinic images

- A high performance imaging workstation and image processing system serves you a convenient interface for integration with network.
- Work-list registration for seamless integration in your hospital environment.
- Dicom 3.0 network interface for integration with PACS or RIS.
- CD buming for easy image transfer.
- Multi-storage methods for easy image transfer.



- C-arm widely vertical movement range meets various height demand of operation table
- Longer orbit sliding range brings you more visible area.
- C-arm back and forward movement can make non-central parts be covered easier.
- SID can be adjusted by detector movement to expand exposure area, bring you outstanding image and more operation space.
- Simultaneous movement in 5 axes
- Rapid motorized control, meet accurate position demands



## ►► Advance digital imaging technology, sharp image



Double rotatable flat-screen monitors on the trolley, clearly visualize the smallest anatomical details even at an angle.

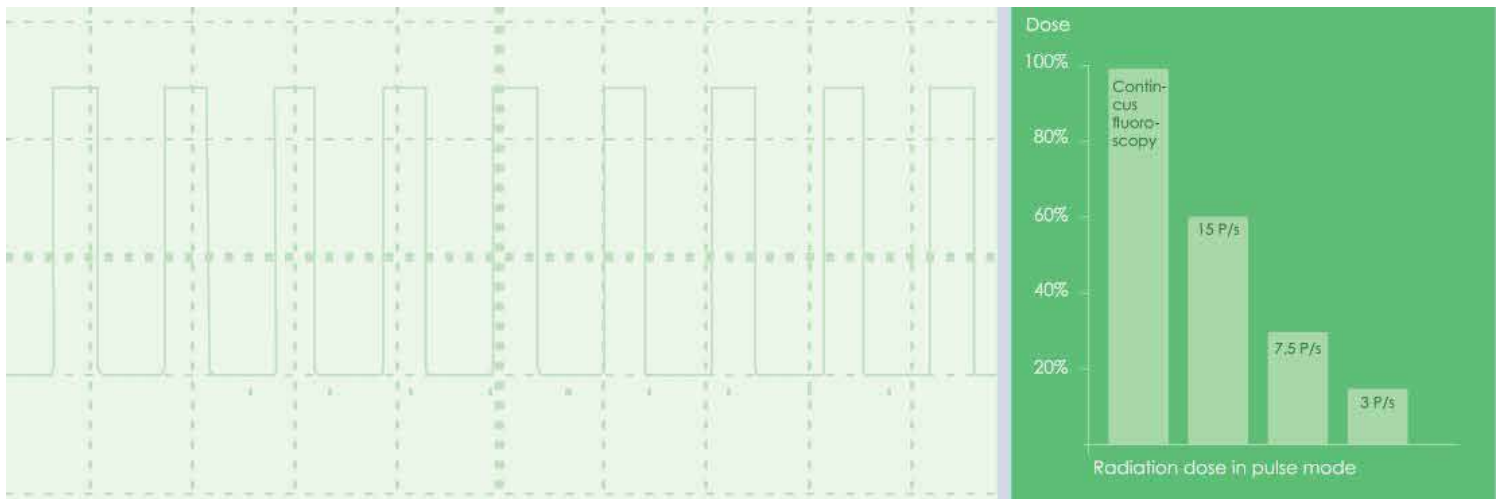
Human graphical LCD touch screen with accurate APR parameters setting realizes convenient operation.



Hand controller on C-arm stand: control the mechanical and collimator movement, improve your workflow even you are away from the unit.

## ►► Intelligent digital pulse, Low dose, High quality

Digital pulse dose intelligent control technology meet EU requirements of medical equipment. Real time, continuous pulse fluoroscopy technology, multiple frequency adjustment, instantaneous high tube current output assures the high quality image and low dose.



**Digital pulse dose intelligent control technology**

1. High-frequency generator deliver the power you need for all the typical applications in spine surgery, orthopedics, traumatology, urology and pain management.
2. Unique design of large thermal capacity (>1000KJ) with advanced heat dissipation technology, allows for clear images, even for long or repeated procedures.
3. Motorized iris collimator help achieve outstanding and optimized dose.
4. Advanced digital working station with versatile image post-processing functions.



Hand-held and panel dual-control system, control mechanical movement from long distance or at your hand all the time.

Multi-Functional foot switch for hand free direction access to fluoroscopy and radiography, convenient for close table and compartment operation



Item	C – Arm- 3100
Power Output	25kW
Inverter Frequency	60kHz
Continuous Fluoroscopy Mode(manual & automatic)	Tube Voltage: 40kV ~ 125KV
	Tube Current: 0.3mA ~ 5mA
Enhance Fluoroscopy	Tube Voltage: 40kV ~ 125KV
	Tube Current: 0.3mA ~ 10mA
Pulse Fluoroscopy Photography Mode	Tube Voltage: 40kV ~ 125KV
	Tube Current: 0.3mA ~ 100mA
	Tube Voltage: 40kV ~ 125KV
	Tube Current: 70 ~ 200mA



Crosshair overlay corresponding with laser light, designed for easily checkpoint location before operation, avoiding unnecessary exposure.



## ►► Technical specification

### 1. High frequency high voltage generator

- 1.1 Power output:25kW
- 1.2 Inverter Frequency:60kHz
- 1.3 Continuous fluoroscopy(Manual, Auto)
  - 1.3.1 Tube voltage:40kV~125kV,continuous adjustable
  - 1.3.2 Tube current:0.3mA~5mA,continuous adjustable
- 1.4 Enhance fluoroscopy (Manual, Auto)
- 1.5 Tube voltage:40kV~125kV,continuous adjustable
  - 1.5.1 Tube Current:0.3mA~10mA,continuous adjustable
- 1.6 Pulse fluoroscopy
  - 1.6.1 Tube voltage:40kV~125kV,continuous adjustable
  - 1.6.2 Tube current:0.3mA~100mA,continuous adjustable
  - 1.6.3 Pulse frequency:0.1~15 frame per second, continuous adjustable
- 1.7 Radiography tube voltage:40kV~125kV
- 1.8 Radiography tube current:70mA~200mA
- 1.9 Radiography mAs:0.1mAs~320mAs

### 2.X-ray tube assembly

- 2.1.1 Dual focuses X-ray tube: 0.6 / 1.3, rotating anode heat capacity:80kJ
- 2.1 Heat capacity:1000KJ

### 3.Digital imaging system

- 3.1 Flat panel detector
  - 3.1.1 Model:THALES Pixium Surgical 2630
  - 3.1.2 Effective area size is: 30\*30cm
  - 3.1.3 Maximum pixel size:1956x1956
  - 3.1.4 Pixel size:154μm
  - 3.1.5 16-bit analog-to-digital converter
- 3.2 Display: 21-inch 2M gray-scale medical liquid crystal display
- 3.3 Digital image processing system

3.3.1 Image acquisition module: real-time zoom, real-time rotation of any angle, vertical / horizontal mirror, real-time enhanced processing, sub-window display, single frame / sequence image storage and echo

3.3.2 Image processing module: For the images that have been collected or saved, the images can be processed in this module: labeling, zooming, measuring, window display, 90 ° rotation, horizontal mirror and vertical mirror.

3.3.3 Report module: provide a variety of diagnostic terms can be modified to facilitate the user to write a report to provide the report print function

3.3.4 Film print module: complies with the DICOM standard medical film typesetting and printing functions

#### **4. Structural performance**

4.1 Focus - Image receiver distance: 955~1155mm

4.2 Flat panel detector up and down, adjustable SID: 955~1155 mm

4.3 C arm Slide angle along the rail arc:  $\geq 135^\circ$

4.4 C arm Rotate along the horizontal axis:  $\pm 200^\circ$

4.5 C arm swing left to right:  $\pm 15^\circ$

4.6 Forward and backward: 200mm

4.7 Upward and downward: 400mm

4.8 C arm opening: 744~944mm

4.9 C arm depth: 826mm

4.10 Guide Wheels can be rotated in any direction, main wheel  $110 \sim 90^\circ$

#### **5. Power conditions**

5.1 Power supply voltage:  $220V \pm 22V$

5.2 Power frequency:  $50Hz \pm 1Hz$

#### **6. Bedside control system**

The bedside control system has the functions of working mode selection, parameter selection, dose display, motion control, and coordination: DSA, Interventional surgery software packages such as Roadmap and Landmark can assist doctors in completing various clinical operations (including interventional Surgery), which provides convenience for doctors' near-stage operations beside the operating table.



## ►► Standard configuration

1. Five-dimensional electric mobile C-arm main frame	1 set
2. High-frequency high-voltage X-ray generator and high-frequency inverter power supply (25.0kW, 60kHz, 125kV)	1 set
3. 21-inch 2M gray-scale medical liquid crystal display	2 sets
4. Flat Panel Detector	1 set
5. Digital image processing system	1 set
6. Dense grain filter wire grid	1 pc
7. Electric adjustable beam limiter	1 set
8. Human graphical touch screen	2 pcs
9. Hand controller for specification	1 pc
10. Hand controller for mechanical movement	1 pcs
11. Foot brake for exposure	2 set
12. X-ray image transmission and processing software	1 set

## ►► Performance characteristics

C-Arm-3100 uses imported large-size flat panel detector, a larger field of view, access to high-definition distortion-free images to ensure accurate and reliable image information to meet a variety of clinical special surgical needs. Product

## ►► Features

1. High dynamic display range, can achieve the best human soft tissue and bone tissue imaging.
2. Cesium iodide amorphous silicon dynamic flat panel detector, the limit spatial resolution of 2.7LP / mm, gray 16bit.
3. A complete image processing system, with extraordinary processing power, to ensure that you are thinking that your income.
4. Built-in automatic optimization of advanced image processing, enhanced module, real-time display automatically optimized after a clear clinical image.
5. Real-time histogram equalization and real-time dynamic Gamma correction through real-time Laplacian pyramid enhancement.

6. Real-time window width and window adjustment, real-time arbitrary angle rotation, real-time zoom, pan, point of interest, reverse phase, noise reduction, smoothing, sharpening and other rich and powerful image processing function gives you a stronger diagnostic confidence.
7. Dedicated high-definition medical LCD display system, presented to you with high brightness, high contrast to the clinical image; contrast to nature, useful for diagnosis of the image details show clearer, more richer level.
8. The perfect digital image chain, to ensure that you can easily deal with multiple sections of a variety of conventional surgery.
9. Leading digital pulse dose intelligentized control technology, indeed real time high mA continuous pulsed fluoroscopy application, which achieving multi frequency intelligentized regulation and supplying high quality images for accurate diagnosis while ensure low dose.

## ►► **Application**

It can be used for orthopedics, general surgery, orthopedics, traumatic surgery, urology, spinal surgery, pain surgery, cardiology, gastroenterology, gynecology and operating rooms.

## HPLC Servicing, Validation, Trainings and Preventive Maintenance :

**HPLC Servicing** :HPLC Servicing : We have team of service engineers who can attend to any make of HPLC promptly @the most affordable cost.

**Trainings** :We also take up preventive Maintenance to reduce downtime of HPLC's Trainings.

**AMC's/CMC** :AMC's/CMC :We offer user training both in-House and at customer sites on HPLC principles, operations, trouble-shooting.

**Validations** :Validations :We have protocols for carrying out periodic Validations as per GLP/GMP/USFDA norms.

**Instruments** :Instruments :We offer instruments/Renting Services Modules like pumps,detector etc. on Rent.



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3007



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2979 Plus



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Chromatograph



Atomic Absorption  
Spectrophotometer



Liquid Particle  
Counter



Optical Emission  
Spectrophotometer



DSC/TGA



Semi Auto Bio  
Chemistry Analyzer



HEMA 2062  
Hematology  
Analyzer



Micro Plate  
Reader/Washer



URINOVA 2800  
Urine Analyzer



Total Organic  
Carbon 3800



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CLIA



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RTPCR



TOC  
Analyzer



Laser Particle  
Size Analyzer



Ion Chromatograph



Water purification  
system

## Regulatory compliances



## Corporate Social Responsibility

Analytical Foundation is a nonprofit organization (NGO) found for the purpose of:



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1. Research & Innovation Scientist's awards/QC Professional Award : Quality life is possible by innovation only and the innovation is possible by research only, hence ANALYTICAL FOUNDATION is committed to identify such personalities for their contributions across various field of Science and Technology and awarding them yearly. To participate for award, send us your details of research / testing / publication at [Info@analyticalfoundation.org](mailto:Info@analyticalfoundation.org)

2. Improving quality of life by offering YOGA Training courses, Work shops/Seminars etc.

3. ANALYTICAL FOUNDATION aims to DETOXYFY human minds,souls and body by means of yoga, Meditation, Ayurveda, Health Care, Awards, Media, Events, Camps etc.



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