PERLOVE MEDICAL

# HF Mobile Digital C-arm System (Flat Panel Detector)

PLXC7100C

## BROCHURE

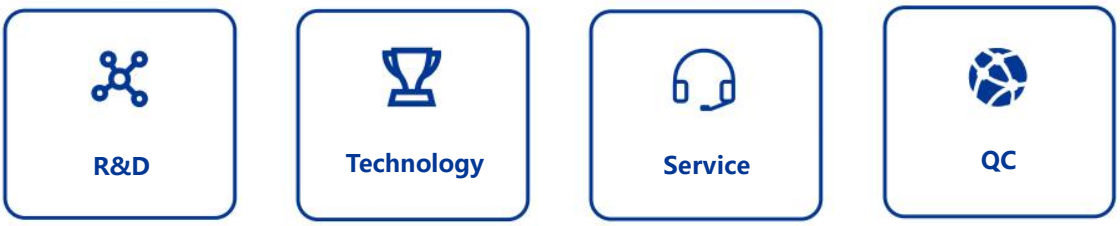
# Part 1. Company Introduction

## ➢ Company Profile

Ever since Perlove Medical was founded in 2003, the company has been a high-tech enterprise integrating the research, production, sales and service of medical imaging equipment and orthopedic surgery robots. Although the concerns of these activities are different, one thing remains the same: Perlove Medical is customer demand-oriented and has always demonstrated a strong commitment to society with qualified products and services. As a high-tech enterprise, Perlove Medical firmly engages in self-research and technological innovation to make products meet clinical demands and continuously promote medical technology. All this is to help improve global healthcare and reduce medical costs. Located in Nanjing, China, Perlove Medical's products are serving clients in over 100 countries and districts across the globe.

## ➢ Company Strength

- ✧ **More than 200 patents of R&D**
- ✧ **20 years of technology accumulation**
- ✧ **Quality control system**
- ✧ **Worldwide service network**



# Part 2. Product Description

PLXC7100C is a digital mobile C-arm with a large flat panel detector that provides an excellent and stable digital image chain with better image quality while significantly reducing radiation exposure.

PLXC7100C can be used for intervention. With good mobility, low operating room space requirements and high-level performance, the model can meet the demand forlong -time X-ray fluoroscopy and adds unique DSA functions, making it an ideal device for performing interventional procedures.

## *Product Specification*

| *Category* | *Item* | *Main Contents* |
|---|---|---|
| **Generator** | Output Power: | 2 5 kW/Inverter Frequency: 60kHz |
| | Continuous Fluoroscopy | Tube Voltage: 40kV ~ 125kV |
| | | Tube Current:0.3mA ~ 5mA |
| | Pulse Fluoroscopy | Tube Voltage:40kV ~ 125kV<br>Tube Current:0.3mA ~ 100mA |
| | Radiography | 40kV ~ 125kV 1mAS-320mAs |
| **X-ray Tube** | Rotary Anode Focus | 0.6/1.3mm |
| | Anode Thermal Capacity | 80kJ |
| | Tube Thermal Capacity | 1000kJ |
| | Tube Thermal Dissipation | 60W |
| | Anode Target Angle | 16° |
| **Flat Panel Detector** | Imported | Thales |
| | PDF Size | 30cm*30cm |
| | Pixels | 1534*1534 |
| | Spatial Resolution | 2.5LP/mm |
| | DQE | 77% |
| | Gray Scale | 16 bits |
| | Grid (Removable) | Density: 80L/CM Grid Ratio: 8:1 SID100cm |
| | Pixel Size | 200μm |
| | Collimator | Motorized |
| **Mechnical Movement** | SID | 955mm--1155mm |
| | Free space | 744mm--944mm (Motorized) |
| | Depth | 826mm |
| | Backward and Forward Movement | 200mm (Motorized) |
| | | Swing Angle |
| | Vertically Movement | 400mm (Motorized) |
| | Swing Angle | ±15° |
| | Rotation Angle | ±180° (Motorized) |
| | Orbit Slide Angle | 120°(-30°/+90°) (Motorized) |
| Workstation Exposure Controller | Monitor Size | 21"*2 2048*1536(3M medical monitor) 2000cd/㎡ |
| | Touchscreen panel | 10.1"*2 Resolution:1280*800 Foot brake:1 Set |
| | Red Cross Laser | 1 set DAP Tableside console：touch screen, 10.1 |

## 2.1 Clinical Application

Mobile C-arm PLXC7100C with a dynamic FPD integrates radiography, fluoroscopy with DSA, which can perform various examinations of the head, chest, abdomen, limbs,etc., and can also complete high-definition film spot, effectively avoiding missed diagnoses and misdiagnoses caused by blind shots.

| | | | |
|---|---|---|---|
|  **Integrated intervention** Tumor and non-vascular interventions, such as TACE and percutaneous biopsy, etc. |  **Gynecology** Fallopian tube recanalization, uterine artery embolization, etc. |  **ERCP** ERCP, PCT, etc. |  **Vascular Surgery** Stent and thrombolysis lower extremity vein and artery, carot, etc. |
|  **Urology** Urography, urethral stricture,ureteral calculi therapy, etc. |  **Orthopedic Surgery** Orthopedic reduction, pedicle screw placement etc. |  **Trauma Surgery** Help surgeons to accurately implant screws, improve the success rate of surgery and reduce the probability of post-operative complications. |  **Spine & Joint Surgery** Vertebroplasty, joint replacement and anatomical repositioning of elbow, hip and knee joints, etc. |

## ➢ High-pressure Injector Interface

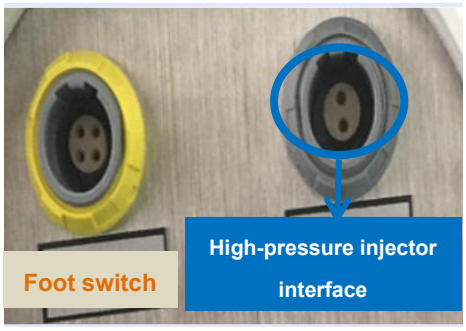
The high-pressure injector interface is reserved. When the C-arm starts fluoroscopy, the high-pressure injector automatically injects the contrast media, which simplifies the imaging workflow of the surgeons and helps them to obtain high-quality images in a short time.

## ➢ Five-dimensional Motion Control

The motion control of the equipment adopts electric modes, including vertical motion, horizontal motion, orbital rotation sliding along the track, rotary motion along the horizontal axis and vertical motion of FPD, which can be adapted to different surgical beds and make it more convenient for surgeons to perform surgeries.

## ➢ Adjustable FPD

The flat panel detector can be raised and lowered in a wide range (20cm), and the SID can be flexibly adjusted to control the detector closer to the exposed part, allowing for clearer fluoroscopic images.




High-pressure injector interface

Adjustable FPD

Vertical motion of FPD

Horizontal motion

Vertical motion

Orbital rotation

Rotary motion

## 2.2 High-quality Digital Image Chain

### ➢ Large Dynamic Flat Panel Detector

PLXC7100Cadopts a 30 cm×30 cm (12 inch) large flat panel detector, which more than doubles the imaging area and presents a broader field of view during surgery.

The large dynamic FPD is with smaller pixel size, so the images are distortless with high clarity; a 12-inch field of view can achieve large full coverage of the thoracic, abdominal and pelvic cavity parts, avoiding overlap and omission, reducing exposure time, lowering radiation dose and shortening the operation time.


### ➢ Stable High Voltage Generator

The maximum output power of the equipment is up to 25kW, which effectively ensures the imaging requirements of pulse fluoroscopy for obese patients or thicker tissues, fully satisfying the need for high-power instantaneous exposure during digital radiography, especially suitable for clinical applications of peripheral intervention and comprehensive interventional treatment.

### ➢ High Heat Capacity Tube

The device adopts rotating anode tube with high heat capacity. With intelligent heat capacity management technology and advanced heat dissipation technology, the comprehensive heat dissipation efficiency is greatly improved, and the lasting working ability of the device is greatly enhanced. It can support multiple interventional procedures to be performed continuously.

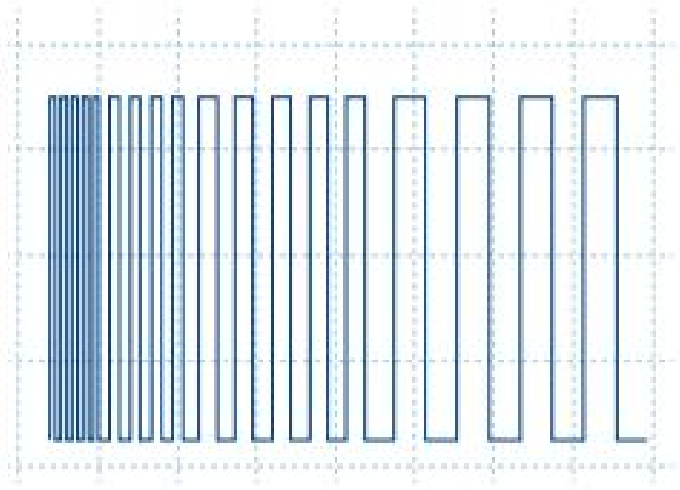
## 2.3 Multiple Dose Protection

### ➢ Intelligent Pulse Control

New intelligent pulse control technology is adopted, so the pulse width can be intelligently adjusted, improving the instantaneous X-ray quantity and the image quality of each frame. Service time of the equipment can be extended to more than 3 times of continuous fluoroscopy under the same X-ray condition.

### ➢ Intelligent Dose Control

Intelligent dose control technology is adopted, so the dose can be accurately adjusted according to different body types and different parts. The surgeon can obtain clear images with low radiation under any environment.



### ➢ Collimator Preview Function

PLXC7100C is equipped with a collimator preview function, which can reduce unnecessary testing exposures by previewing the effective field of view in the screen, thus reducing the radiation damage to medical staff and patients

### ➢ Removable Grid

Equipped with a pluggable high-density filter grid, it can effectively filter scattered X-rays, and improve image contrast and reduce haze. At the same time, for dose-sensitive people, the filter grid can be easily and manually pulled out, which can reduce the dose required for exposure and reduce radiation absorption.

## 2.4 Mobile Design

### ➢ Easy Installation

The operating room does not need to be modified and install ground rails and hangers, reducing the initial construction cost of intervention department.

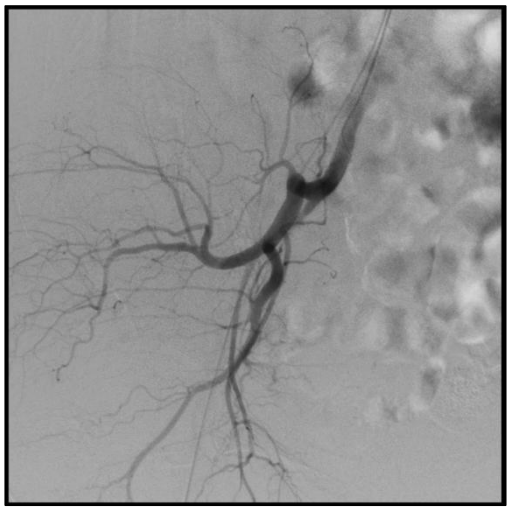
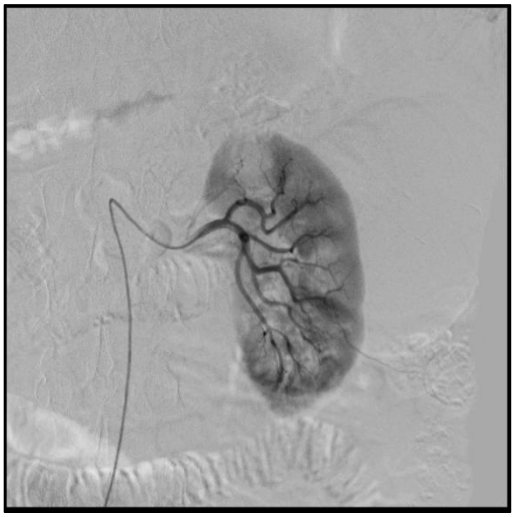
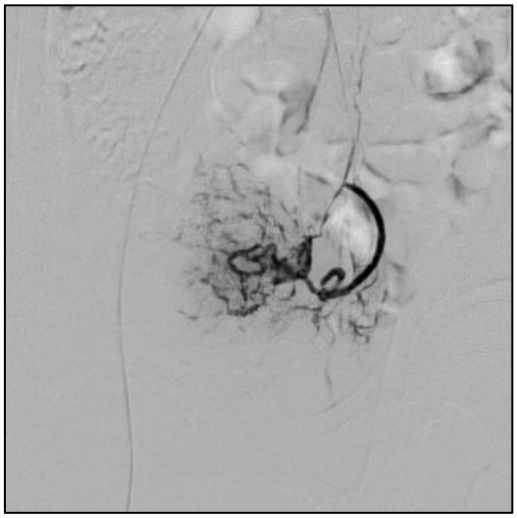
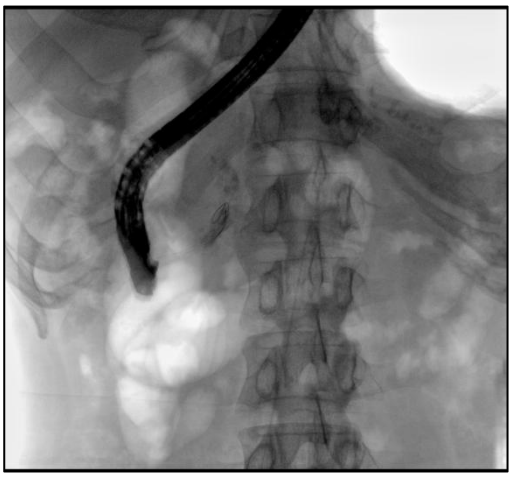
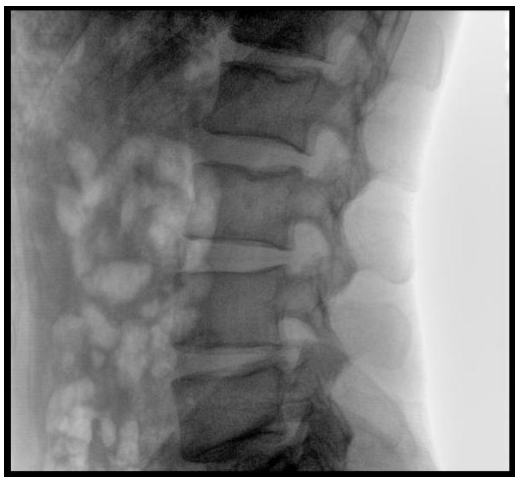
### ➢ Mobile Design

The equipment can be freely moved to any operating room, which greatly improves the utilization rate of the equipment.

### ➢ Small Footprint

The equipment covers an area of only about 2 $m^2$, saving the operating room space to place other equipment, which is convenient for constructing a hybrid operating room.

# Clinical Images

# Part 3. Service

## Move forward steadily, keep improving

- Professional service team for pre-sales, in-sales and after-sales
- More than 100 overseas local engineers in 60 countries
- More than 100 Chinese after-sales engineers serve the world
- Cooperate with professional sea, air and land logistics to ensure safe delivery

## After-sales Service Centers All Over the World

- Reply within 24 hours
- Sufficient accessories, quick solutions
- 7/24 hours remote after-sales service
- Barrier-free commu -nication in English
- Qualified training and issua -nce of operation certificate


**Since Perlove Medical's establishment for 20 years, it has provided high-quality products and services to**

**nearly 10000 customers around the world!**