

Ray Nova DRdu

Digital fluroscopy X-ray system



Beyond Boundaries in Healthcare:
Pioneering the future with Medical Imaging

www.kuanteng.com info@kuanteng.com

400-848-6088

* The actual product shall prevail. All pictures in this manual are for reference only. *

Beijing R&D Center/Production Base

Address: Unit 701, Building No.7, Yongchang Industrial Park, No.3, Yongchang North Road, Beijing Economic and Technological Development Zone, Beijing
Tel.: +86-10-85718101
Fax: +86-10-85718102

Fuzhou R&D Center/Production Base

Address: 3rd Generation Semiconductor Digital Industrial Park, Xinyuan Road, High-tech District, Fuzhou, Fujian Province

Henan R&D Center/Production Base

Address: No.18, North Side of Yudongnan Avenue, Yudongnan High-tech Industrial Development Zone, Huangchuan County, Xinyang City, Henan Province

Liaoning R&D Center/Production Base

Address: Kuanteng Science & Technology Park, No.9, Yaodu Street, Economic and Technological Development Zone, Benxi, Liaoning
Tel.: +86-24-45555355
Fax: +86-24-45689287

Anhui R&D Center/Production Base

Address: Building No.4, Bengshan Intelligence Industrial Park, Yanshan Town, Bengshan District, Bengbu, Anhui Province



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Excellent Core Image Chain System

Perfection between Motion and Stillness

Self-developed Millisecond Dynamic Flat Panel Detector

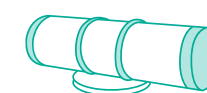
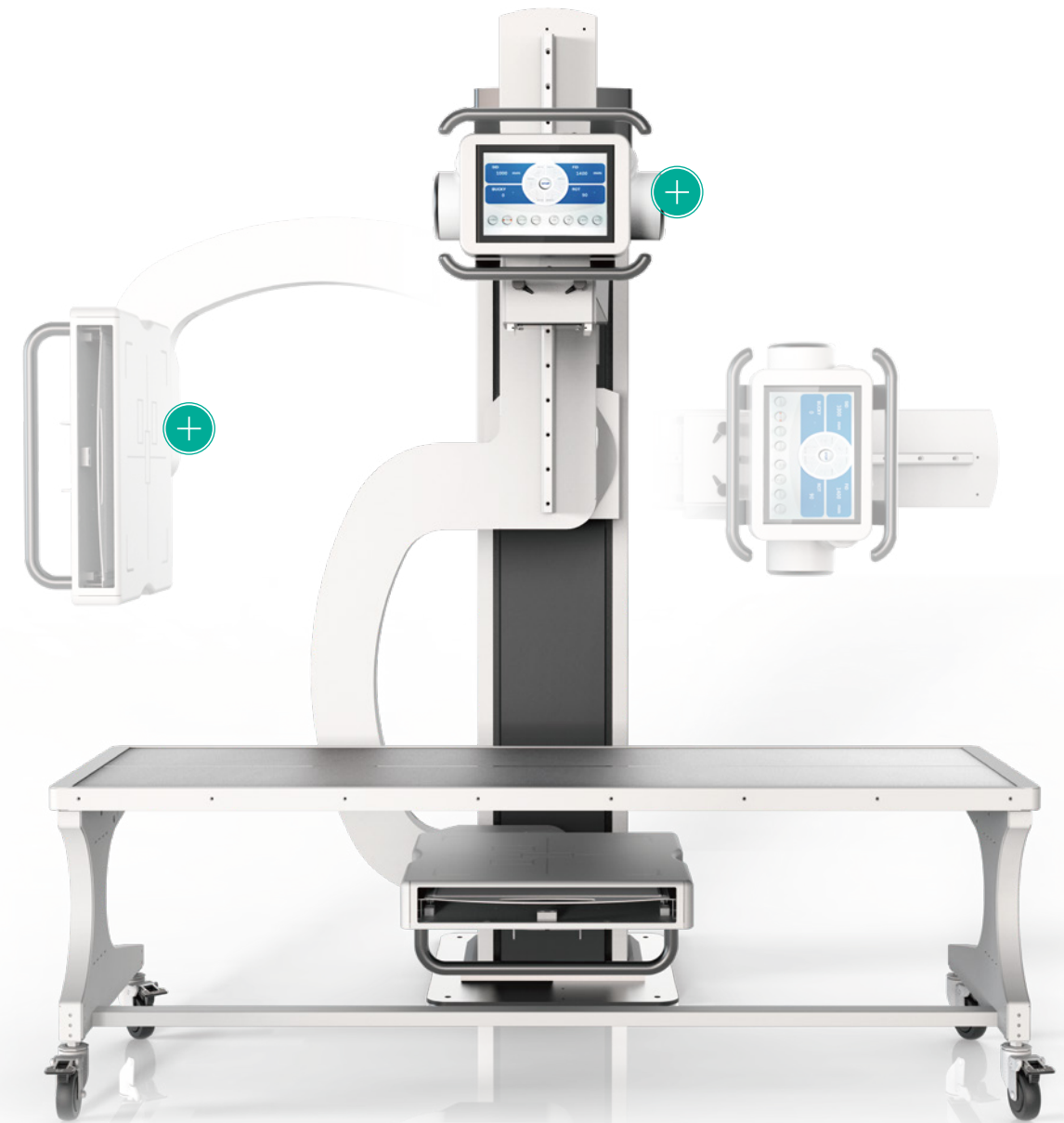


- The 17x17 inch large size dynamic detector technology can effectively solve the radiation examination of problem of chest, abdomen, and pelvis etc. large parts during the clinical static radiography. During the dynamic radiography, the large size dynamic flat panel detector can provide up to 80% more coverage and viewing area than that of the traditional 7"-12" image intensifier. Meanwhile, compared with the image intensifier, there is no geometric distortion in the real-time image.
- During the fluoroscopy process, the dynamic detector can reach the ultra-high acquisition rate of 30 frames/second. The image is smooth without stuttering. The 9.4 million total pixel, 139 μ m pixel pitch, 16bits image dynamic range, rich image layers and fine image details can provide better support for clinical diagnosis.
- The direct-deposit cesium iodide needle-like structure with ultra-high DQE enables lower radiation dose to display more image details while minimizing the noise.

Self-developed HV Generator with Large Power and UHF Inverter Technology



- The 500kHz microcomputer-controlled HV generator with UHF inverter, with the max. 65kW output power and max. 800mA tube current and 630mAs, can cover the demand of all clinical static radiography and dynamic acquisition parameters.
- The 1,000 built-in APRs help the operators complete the radiography rapidly and accurately.
- The fault detection and control function can effectively ensure the safety of key parts such as tube and detector etc., and greatly reduce the failure rate of the system.
- The open digital debugging interface not only can effectively improve the highly effective and fast digital debugging capacity of the system, but also greatly improve the compatibility with the X-ray tube.



Self-developed X-ray Tube with High Rotation Speed and Large Heat Capacity

- The latest rotating magnetic field high speed driving technology makes the rotation anode realize the rotation speed of up to 8,400 rpm/min. The higher rotation speed of the tube makes the emitted X-rays more uniform and significantly increases the service life of the tube.
- The 300kHU anode heat capacity ensures the continuous operation of the tube without interruption when there is large circulation of patients during clinical use, and no external cooling device is required for heat dissipation.

Focused on Intelligent Concept Devoted to Humanized Design



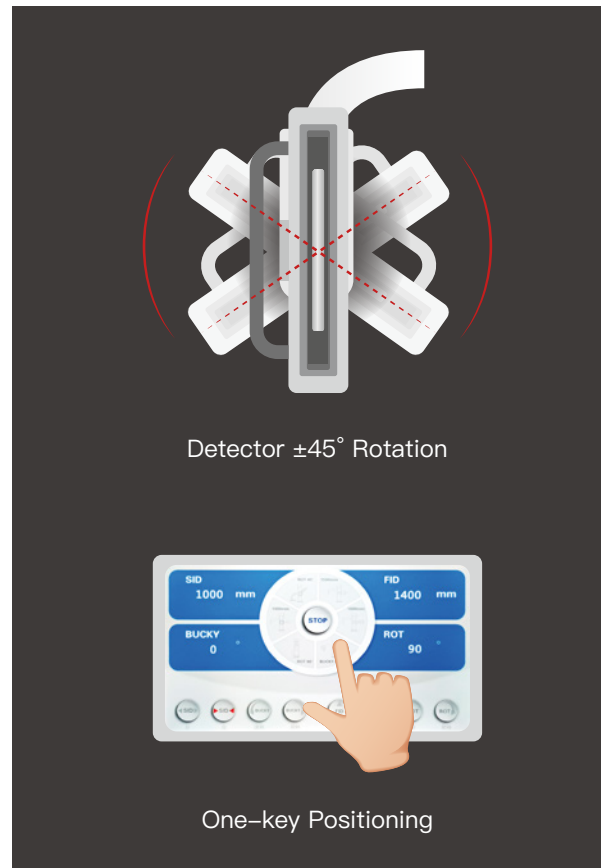
Compartment Remote Control System

Adopt radio frequency transmitter, which is featured by long transmitting distance, no interruption by the wall, and smooth operation. The operator can control the movement position of the mechanical system in a separated room, and complete the imaging examination easily, improving the working efficiency by at least 80%.



Oversized Touch Screen

It can directly adjust the mechanical movement and provide multiple one-key positioning functional area; clearly and real-timely display the movement data information of the mechanical system, to achieve the perfect integration of appearance and function through the human-computer interaction design.



Full Angle Radiography + One-key Positioning

The fully motorized UC-arm can realize the rapid rotation switch of vertical and horizontal positions, height adjustment, and SID adjustment. Meanwhile, the $\pm 45^\circ$ rotation of the detector effectively resolves the design defect that the old UC arm cannot examine the functional position of the joint, and realizes the full angle radiography.

Classic Motorized UC-arm Stand Structure

The motorized integrated high-precision lifting system with adjustable balancing device ensures the balance and smoothness of the overall movement.

Multiple One-key Positioning Areas for the whole system

You can realize rapid switch of SID=1000mm, SID=1800mm, ROT=45°, and ROT=90° and other positions by pressing the button, which effectively saves the operation time and greatly improves the examination efficiency in clinical use.

One-key Start

Realize the one-key overall start/shutdown control of the mechanical system, electrical system, HV generator, software system and computer system, which can start quickly, simply, and effectively. No warm-up is required after start. The whole system enters the working state at the first time.

Dynamic Acquisition System, Enabling Clinical Examination



Enabling Orthopedic Examination

The dynamic fluoroscopy can be used to observe the entire respiratory cycle, and more effectively capture the intercostal microfracture to avoid missed diagnosis.

The long bone stitching function can provide reliable image support for patients with extensive lesions in both lower limbs and lateral fornix deformity before and after surgery.

The accurate postoperative assessment of joint reduction, joint repair and joint movement condition can be performed under the dynamic fluoroscopy

For radiography of complex parts, you can observe from multiple angles to avoid missed diagnosis caused by anatomical position coincidence.



Enabling Internal Medicine Examination

Dynamic fluoroscopy can be used for digestive tract radiography to accurately assist doctors in the diagnosis of chronic gastritis, gastric ulcer, proctitis, colitis, gastroptosis and other diseases.

Dual-energy subtraction can separate the image components of the chest radiograph and obtain the only soft tissue or bone component images, which has a qualitative change in the accuracy of clinical diagnosis.

Professional pneumoconiosis components can screen for pneumoconiosis and silicosis, and cooperate with physical examination hardware system to avoid missed diagnosis and misdiagnosis, which effectively solve the shortcomings of traditional dynamic DR that cannot perform occupational disease physical examination.



Enabling Pediatric Examination

It is difficult to identify the common radiopaque foreign bodies swallowed by kids with the existing imaging equipment. The dynamic DR can be used to observe the entire respiratory cycle and the pulmonary image changes, and improve the detection rate.

Since the kids often move a lot, the dynamic DR can realize dynamic visual positioning capture, reduce the radiation dose, and improve the Grade A image rate.



Enabling Gynecological Examination

The hysteron-salpingography is the most common gynecological examination. The dynamic DR can realize real-time image reading. The video playback function can avoid the condition that the specific focal points cannot be seen due to the random radiography of ordinary DR and the real-time flow of the contrast agent.

Professional Medical Acquisition Workstation Created with Ingenuity



Five-in-one Workstation

The system includes five modules such as patient management, image acquisition and HV generator control, image processing, film printing and diagnosis report, truly realizing one-stop operation so that one workstation plays the role of multiple workstations, which saves a lot of costs for users.



Rich Clinical Application Software

The system contains rich image processing and management functions, among which a variety of advanced processing functions can optimize the acquired images.



Windows OS

The medical image acquisition and processing workstation based on this OS is currently the highest level in terms of technological content, stability and working efficiency.

