

D i r e c t D i g i t a l R a d i o g r a p h y



VIDIX·*B*



These days, hospitals are rapidly digitalizing and you can easily find a digital diagnostic system in most modernized hospitals. The radiology department, especially, is leading the digitalization and evolving in a rapid speed which you cannot see in other suite. The biggest change is the adoption of PACS(Picture Archive Communication System), and for this it is hard to find a film processor, in modernized hospitals. This brought a big change in the radiology department by accelerating the use of the CR(Computer Radiography). If the film scanning is the 1st generation, you can say that the digital scanning is the 2nd generation, which was opened by the CR. However, the digitalization of the radiography department does not stop here. An epochal digital system called the FPD (Flat Panel Detector) opened the gates of the 3rd generation where you do not need a middle method such as a film processor or CR reader to achieve images, but can scan and achieve images at the same time. Wherewith, Choongwae Medical Corporation steps into the 4th generation leading the digital medical environment of the 21st century in Korea with a unique technology using the direct detector. Choongwae Medical Corporation promise you that we will keep on contributing to develop the digitalization of hospitals as a leader of global digital healthcare, for accurate application and better care provision.

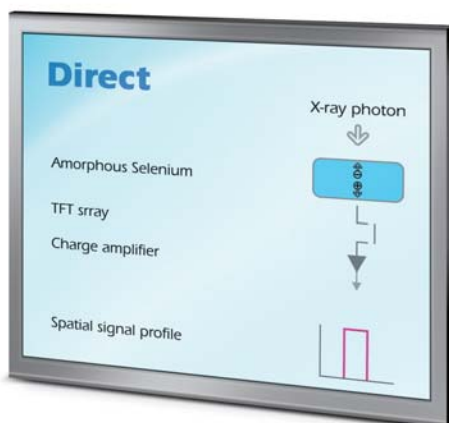


FPD (Flat Panel Detector) is a core technology of radiology department equipments. It has developed the CR and made it possible to obtain precise and high quality images. Not many companies in the world can provide such technology, and in Korea most companies which introduces DR imports the detector which is the key technology of the system, Choongwae Medical introducing the latest DR system with its own technology was a surprise in Korea, and now, as a representative of the DR in Korean market, Choongwae Medical is introducing its high technology to the world.

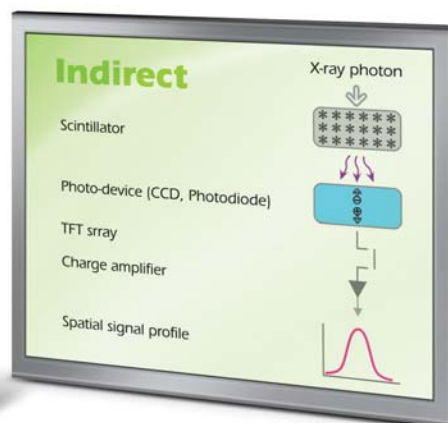
The detector "Flaatz", which is developed by Choongwae Medical is a direct conversion type detector. The detector can be divided into two types: in-direct conversion type and direct conversion type. By using the direct conversion type, there is no light generated when the radiology signal is converted into an electronic signal. This will decrease the diffusion and you will be able to keep most of the data and get a high quality diagnostic image which will provide you clean and clear information of the patient.

Another big difference with "Flaatz" and other 17x17 detectors is that the noted size is the original size itself. If you consider other 17x17 sized detectors, which are made up with 4 panels, you will be able to avoid bad influence on the image after long term of usage, due to the unstable decrement of the semiconductor.

Direct vs Indirect

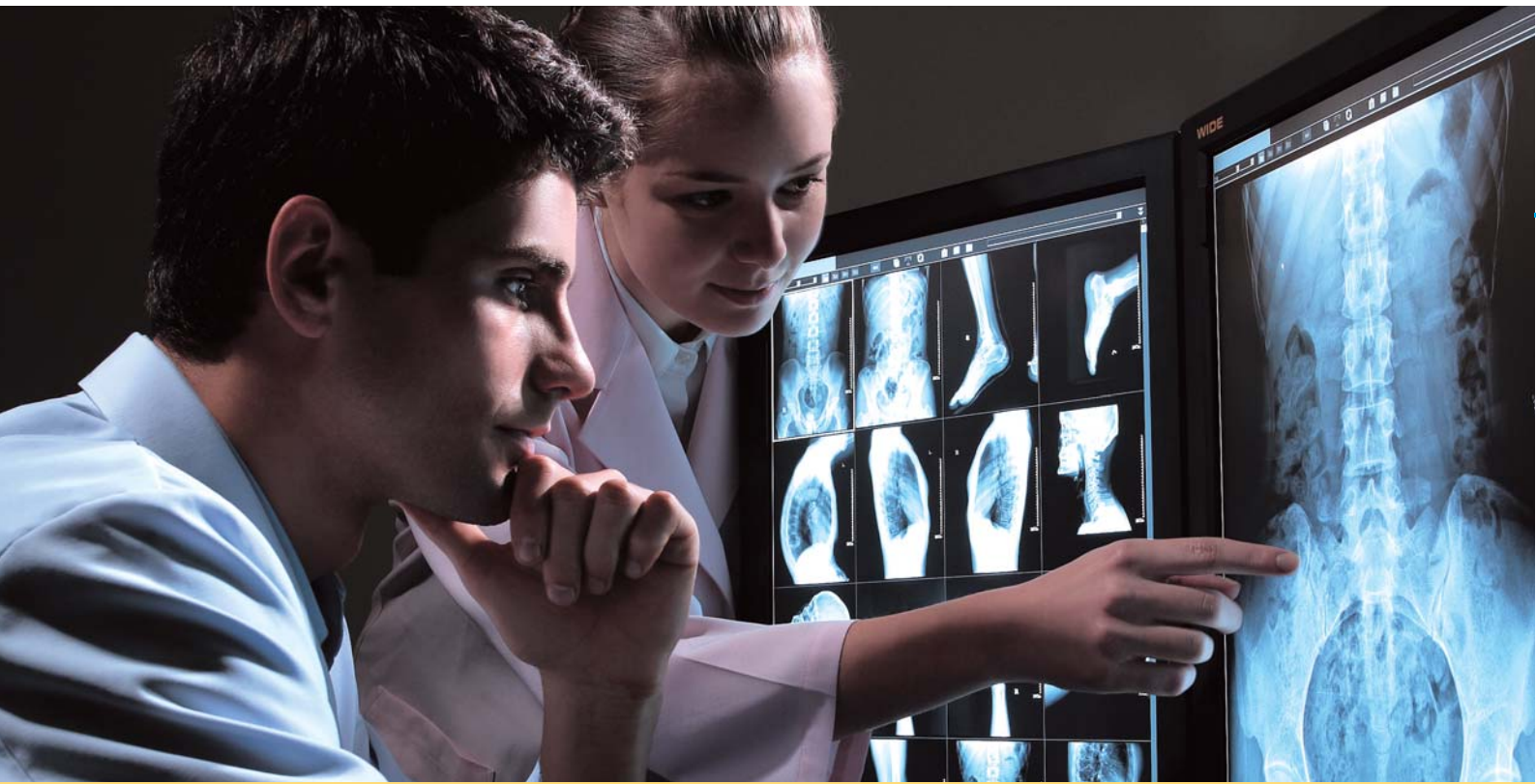


Thanks to no light blurring, very high MTF value can be acquired. Furthermore, high efficiency in detection can be acquired through a direct conversion.



Light is generated by the 1st step interaction at a scintillator, resulting in dispersion of light. Therefore, it causes the decrease of the image resolution.

The Indirect Conversion Detector cannot be produced in normal TFT production facilities. Furthermore, a process of producing photodiodes is required to be added. Therefore, an independent production line should be constructed.



Simple and stable **operating solution**

Functional changes of the existing imaging systems have been increasingly required as the informationalization of the hospitals has been accelerating so rapidly. In the meantime, importance of compatibility and connectivity to all kinds of medical devices and information solution has been getting larger and larger. VIDIX System provides the network compatibility and the functions that meet the work flows of the hospital.



User Friendly Interface

It provides the operational environment in which users can operate the system with ease and simplicity by arrangement of the operating order and the functions satisfying the work flow of the users: the user interface with a simple design of the structure reflected, the patient information communication system for rapid examination, etc.

Versatile functions

The partitioned X-ray photography and the photography technique by its field size used for conventional film-type X-ray and CR are applied to this DDR system as they are. It helps users feel familiar with the VIDIX system in operation. And by displaying the information on the patient and examination results, it can prevent an occasion of re-examination caused by a wrong operation in advance. The functions necessary for hospital conditions such as automatic management and search of saved data, editing function of the patient information wrongly obtained by an X-raying, etc. are provided.

Standard Imaging Information and Connectivity

The VIDIX Series integrated at DICOM network can provide all strong features of the up-to-date network. Transmission of the waiting patient information, X-ray photography and the images can be realized, as the VIDIX Series were developed in conformity with DICOM standard. A very quick and rapid examination can be made, as instant searching and judging of the diagnostic results right after X-raying.

Stable and optimized Image Processing Workstation

The operating software of the VIDIX S series is developed to provide various functions and is designed as an optimal system to realize stable operation. Saving the images, it can restore the image information in case of missing or a loss. Therefore, in any case, just an easy handling can make it possible to resume the operation of the system in normal condition quickly.

Direct Digital X-ray Images



Simple Design

VIDIX B is designed simply and sharply and it harmonize with the whole equipment. The all-free button attached on the handpart lets you operate the ceiling more comfortably which is a unique design of Choongwae for the users comfort.



X-ray tube supporting unit



Standing patient imaging unit



Lying patient imaging unit

Specifications

X-ray high-voltage generator for medical use

Control method	
Max. input power	Max. 50kVA
Tube voltage	40kV ~ 150kV
Tube current	10mA ~ 800mA

Flat panel detector [FLAATZ 750]

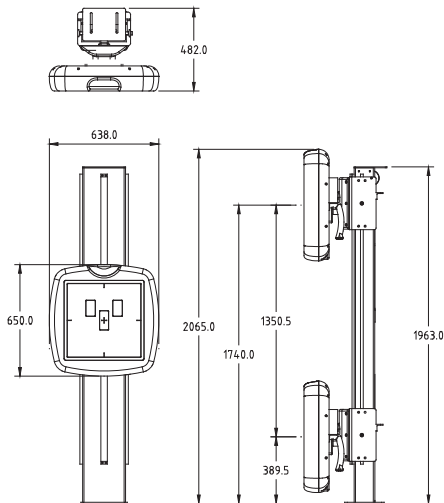
FOV size	43mm x 43mm
Type	Flat Pannel Detector(Direct conversion)
	TFT – Amorphous Selenium

Lying patient imaging unit [CXD-BT-50]

Shape of tabletop	Flat 4-way table
Size	2200mm x 906mm
Longitudinal movement of tabletop	Moving range 400 ± 50mm
Transversal movement of tabletop	Moving range 120 ± 30mm
Longitudinal movement of FPD	Moving range ± 230mm

Standing patient imaging unit [CXD-DS-50]

Supporting column height	2065mm
Vertical movement	389,5mm ~ 1350,5mm(from floor to FPD center)



Standing patient imaging unit

X-ray tube supporting unit [CXD-TC-50]

Ceiling height	2535mm
Longitudinal stroke	3500mm
Transversal stroke	3800mm
Vertical stroke	1500mm

X-ray tube unit [RAD-14]

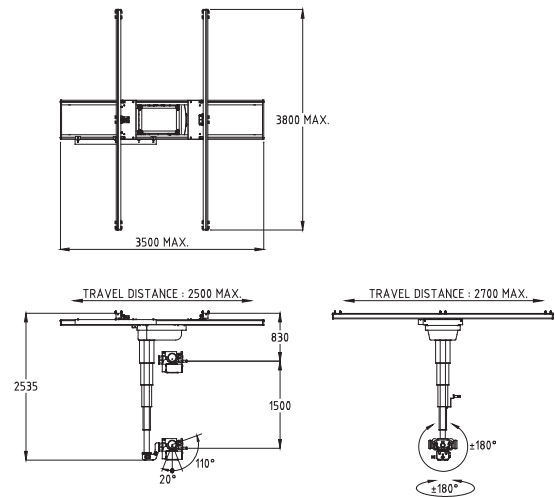
Max. anode heat capacity	140,000 HU
Focus size	0,6 / 1,2mm
Max. tube voltage	150kV
Target angle	12°

Workstation

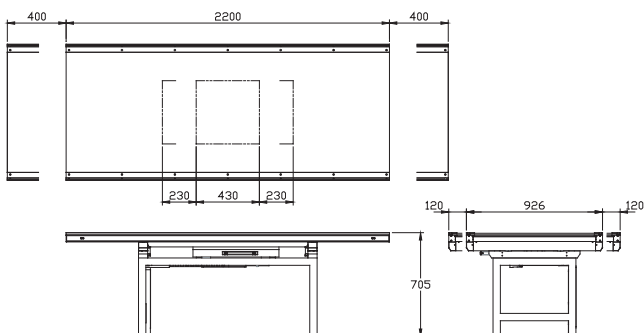
CPU	Pentium IV 3,0 GHz
RAM	1GB
HDD	160GB

Power requirements

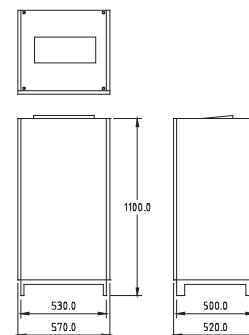
Rated standard voltage	triple phase 380V ± 10%
Mains frequency	50/60-Hz
Recommended distribution transformer capacity	50kVA



X-ray tube supporting unit

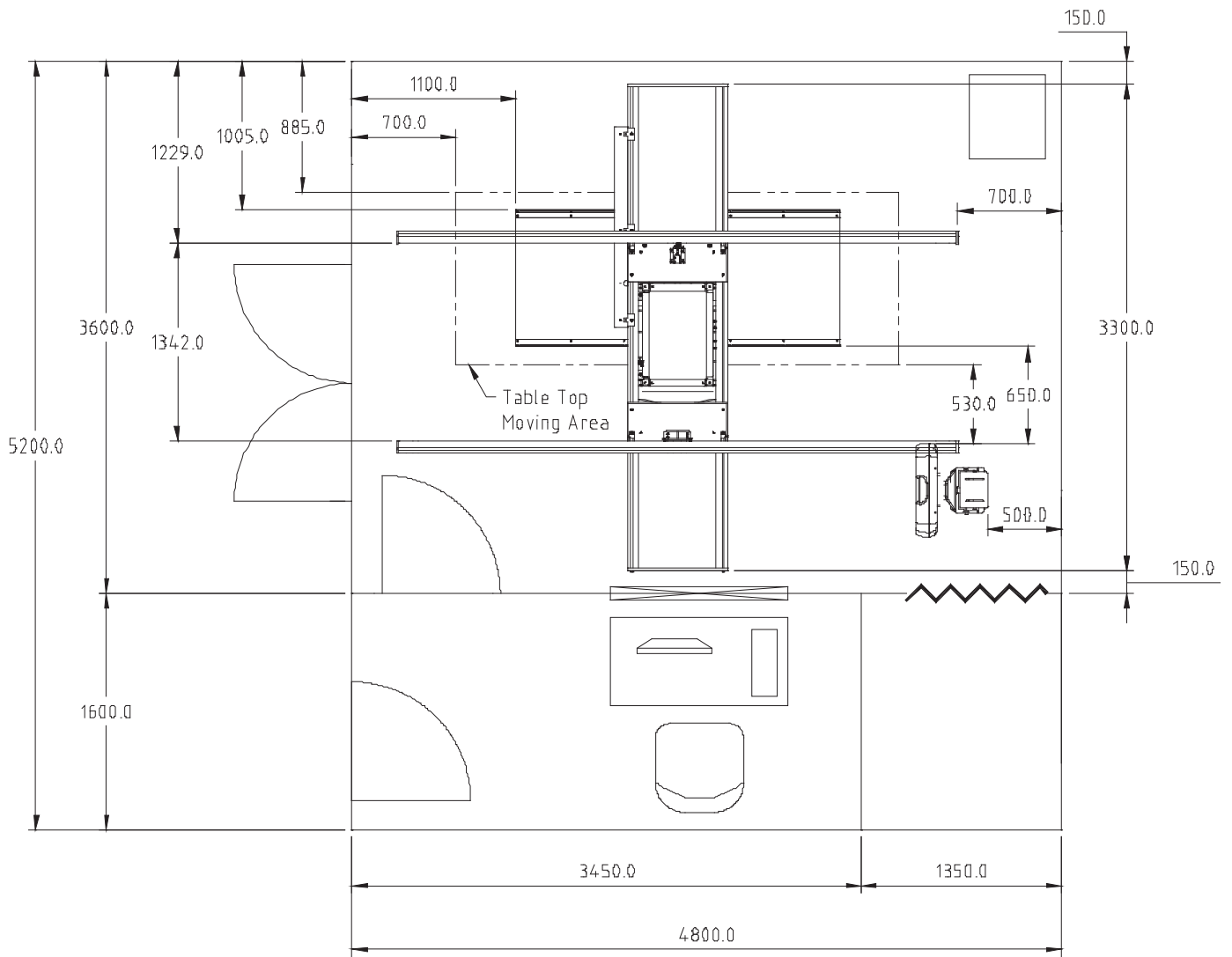


Lying patient imaging unit



X-ray Generator

Layout for Digital X-ray System Room



VIDIX·B



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