ANKE

ASR-4000E

Product Datasheet for
Digital Mammography System

Make personalized breast care a reality

ASR-4000E digital mammography system

ASR-4000E digital mammography system is equipped with a tungsten target X-ray tube and dose control technology, enabling high-resolution imaging of dense breasts and increasing the detection rate of early-stage breast cancer. The Multi-frequency self-induced breast compression system intelligently adjusts the compression force to enhance each patient’s comfort. It provides a complete solution for early screening, accurate diagnosis, and biopsy positioning of breast cancer, caring for the need of every woman.

System Hardware

Flat Panel Detector

Detector material	Amorphous silicon
Detector size	24cm×30 cm
Pixel matrix	4096×3072
Spatial resolution	No less than 7.0lp/mm
A/D	16 bits
Pixel size	77μm *77 μm
DQE	28kV, 0.5mGy. Mo/Mo ~56%……(@4 lp/mm)
MTF	43% (4.0lp/mm) ， 25% (6.0lp/mm)

Collimator

Control	Auto
Light	LED / > 160Lux
Size (light field)	24×30/18×24cm/5×18cm/0×0
Filtration material	Mo/AL for Molybdenum X-ray tube or Ag/Al for X-ray RT-TZM X-ray tube
Aluminum equivalent	0.3mmAl

Tube Assembly

Focus size	Small focus 0.1mm, large focus 0.3mm
Anode angle	15°
Anode material	Mo/RT-TZM
Window material	Beryllium
Anode heat storage capacity	300kHU
Xray tube voltage	40kv
Tube current range	40KV (Mo)/49KV(RT-TZM). Division adjustable
Inherent filtration	0.5mmBe
Anode rotation speed	3000min^{-1} 10000min^{-1}
Maximum continuous heat dissipation	500W (Mo) / 715W (RT-TZM)

Generator

Maximum power	5kW
Voltage range	20kV-40kV
Output current range	10mA-200mA
Exposure time	10-10000ms
Generator frequency	27.5kHz
Tube current time product range	1-600 mAs
Input voltage	200-240V~～
Input voltage frequency	50Hz/60Hz

C-arm System

C-arm lifting range	620mm-1420mm
C-arm rotation range	-160°- +180°
Tube rotation range	-22°- +22°
SID	65±1cm

Compression System

Compression/release mode	Electric/manual
Compression paddle	24×30cm
Compression accuracy	±20N
Pressure range	0N～200N
Pressure stroke	5mm～285mm

System Software

Console Workstation

CPU	4 cores 3.0GHz
RAM	8.0GB
Hard disk storage	1TB
Monitor	24-inch
Monitor resolution	1920 x 1200
System	Windows 10
Network	100/1000Mb adaptive

Workstation Software

Patient Information Management	Patient information, checking and image management
Worklist	Standard DICOM 3.0 Worklist query service, can query and download information from HIS /PACS

Working Conditions

Environmental Conditions

Environment temperature	15° C～35° C
Relative humidity	30%~75%
Atmospheric pressure	70kPa～106kPa

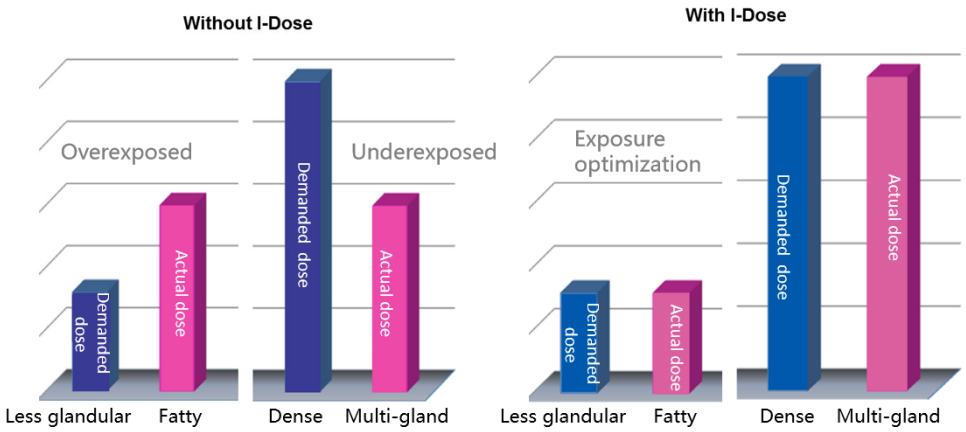
Power Conditions

Mains Requrement	220-230V～
Frequency	50Hz/60Hz
Internal resistance	≤0.6Ω
Power	10kVA

Standard Functions for Application

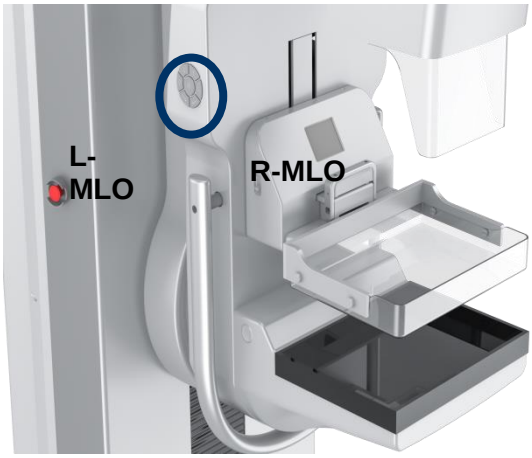
Low dose optimized exposure technology

It can automatically and accurately detect breast thickness, breast gland density, automatically set the best photographic conditions and filtration methods to achieve the highest image quality, the lowest radiation dose.



Pose smart placement

Through intelligent and high-precision motion control, the tube rotates around the center of the detector. The one-touch positioning function makes the movement smooth and flexible, and the operation is efficient. Intelligent switching between CC position and MLO position, with convenient operation panel, it greatly improves the efficiency of doctors.



Protected Intelligent Protection System

Threshold pressure control technology: automatically locks the compression device when the pressure reaches 200N, protecting the patient's safety;

Motion interlock function: the pressure reaches 30N or above automatically locks all patients with mechanical movement protection;

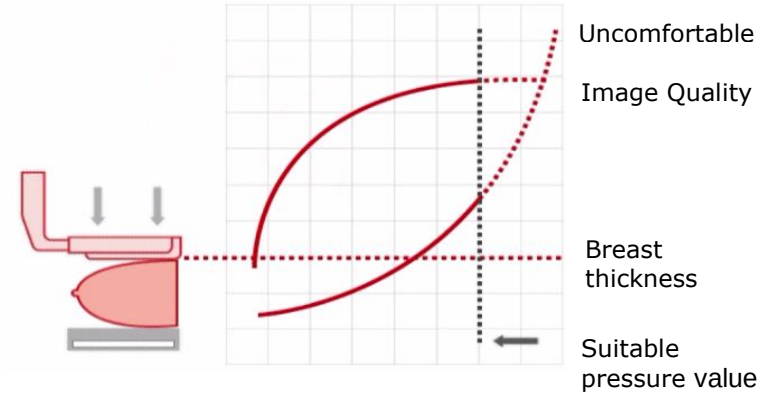
The automatic release technology of the compressor: the compressor can be automatically released after the shooting is completed, thereby shortening the pressing time and reducing the patient's discomfort.

Show multi-screen instant display system

The multi-screen will instantly show the information of the compression force, lifting range, rotation angle and SID. It will be convenient for doctor to judge condition and easy to change the parameter to fit the need.

Comp intelligent flexible compression technology

According to the female breast compression curve, the pressure and speed are automatically adjusted intelligently, and the most suitable pressure value is selected to ensure the best image quality while ensuring the patient's comfort.



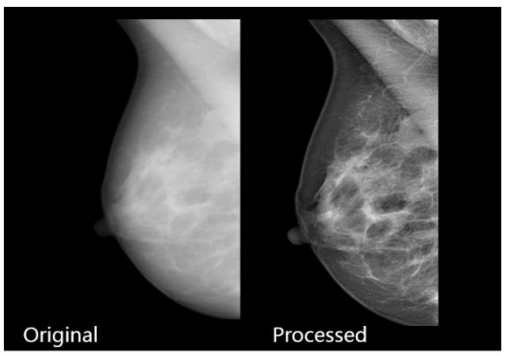
Efficient work platform

The self-developed integrated software control platform provides clinicians with a convenient and smooth workflow.

.

Breast-specific image processing algorithm

With more than 30 years of professional image algorithm accumulation and strong research and development strength, Anke can obtain unparalleled medical image images, make breast tissue clear and greatly improve the accuracy of clinical diagnosis.



Standard Functions on console

Patient Information Management

Case management functions including patient information, checking and image management

Standard DICOM 3.0 Worklist query service, can query and download information from HIS /PACS

Image Acquisition

Integrated X-ray generator control interface, can adjust X-ray generator parameters directly from the software

The patient parameters preset of each placement

AEC Functions

DICOM image generation
(combination of image pixel, patient information, exposure information)

Image preprocessing

Exposure（For high voltage generator and flat-panel detector linkage control, exposure, detection, image acquisition）

Real time adjustment of the wide window position

Image Output

Standard DICOM3.0 output laser camera, can easily select configured scheme (film size, layout) printing

Standard DICOM3.0 archive service, can put the image file to the server, supports the background automatically sent

Image Processing

Report template selection and editing

Automatic display and modification of hospital information, inspection department information, inspection information

The image display module can be dragged to the report

Editing of images and diagnostic opinions

Report template selection and editing

Automatic display and modification of hospital information, inspection department information, inspection information

1×1、1×2、2×2 varieties of display mode

Report writing

Report template selection and editing

Automatic display and modification of hospital information, inspection department information, inspection information

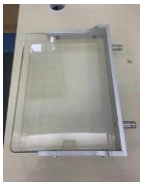
Patient information is automatically displayed

The image display module can be dragged to the report

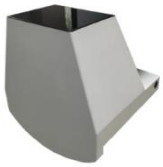
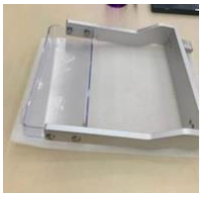
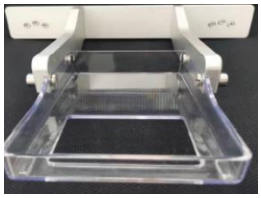
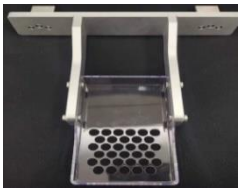
Editing of images and diagnostic opinions

Accessories

Standard Accessories

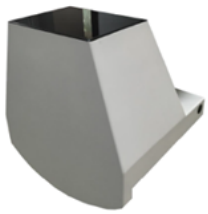
	
Compression Paddle	**Foot Switch**

Optional Accessories

			
Magnification platform	**Magnification paddle**	**Small size paddle**	**Small Breast paddle**
			
Spot contact paddle	**Open localization paddle**	**Perforated paddle**	**Lead glass on OC desk**

Advanced paddles

Magnification*

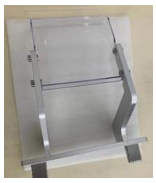


Use a small magnification table which brings the breast closer to the x-ray source and further away from the film plate. This allows the acquisition of "zoomed in" images (1.8 times magnification) of the region of interest. Magnification views provide a clearer assessment of the borders and the tissue structures of a suspicious area or a mass.

Small breast paddle*

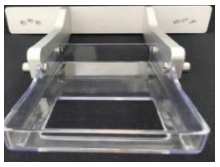
Screening compression paddle used for smaller breasts and implant views.

Magnification paddle*



Diagnostic compression paddle used with the Magnification Platform for acquiring diagnostic magnification views.

Open localization paddle*



Localization paddle with single large opening and radiopaque alphanumeric markings to be used for cross-reference

Perforated paddle*

Localization paddles with perforated openings and radiopaque alphanumeric markings to be used for cross-reference during localization procedures.

Spot contact paddle*

Diagnostic D-shaped spot compression paddle used for diagnostic views.

*Optional

Site Planning

We redesigned ANKE mammography with compact design language fits your demanding clinical requirements and outstanding system performance

Components

Dimensions	L (mm)	W (mm)	H (mm)	Weight (kg)
Main Frame Component	1050	756	2211	247
Console	974	600	1219	70

Power Supply

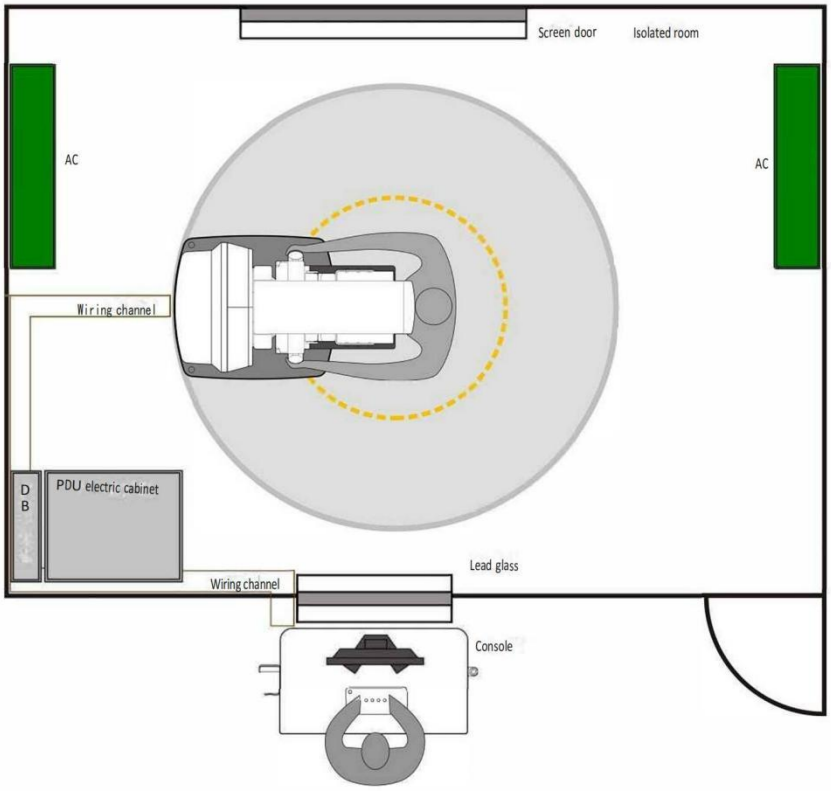
Output power	⩾10KW
Frequency	50Hz ± 1Hz
Voltage	220 VAC± 10% Single Phase AC power
UPS for whole system	30 mins for power failure*

*Optional

Environmental Requirements

Temperature of Ambient temperature	15°C~35°C
Temperature of Working environment	25°C±1°C
Relative humidity	30%～75%
Atmosphere pressure	70kPa～106kPa

Recommended Area of Room



X-ray room: length ⩾4m, width⩾3m, height⩾3m

Operation Room length:⩾2m, width⩾1.5m, height⩾3m

Shenzhen Anke High-tech Co., Ltd.

Address: Block B, LingYa Industrial Zone, Tangtou No.1 Road, Bao'an District, Shenzhen, 518108, P.R. China
Tel: +86-755-21622518 26688889
Fax: +86-755-26695307 26685908
Email: anke@anke.com

Twitter: ANKE (@ankeint)
Facebook: ANKE (@ankemri)
Instagram: ANKE (@ankemarcom)