VetiX S300

# **Veterinary Digital Radiography System**

# **Specification**





# 1 General Description

It is clinically indicated for digital radiography of the chest, abdomen, bone and soft tissue.

### 2 High voltage generator

- 2.1 Overview
  - Maximum inverter frequency: 460 kHz
  - Manufacturer: Mindray Animal Medical
  - Model: AM30G
  - KV-mA-ms. KV-mAs real-time adjustment control with high accuracy
  - General 100 -240 V AC power distribution

#### 2.2 Parameter

- Nominal electric power: 32kW
- Maximum electric power: 32kW
- Tube current range: 10 mA~500 mA Large mAs reduce blurring due to organ movement, especially beneficial for chest x-ray
- Current-time product: 0.1mAs~125mAs
- Loading time range: 1 ms~8000 ms
- Tube voltage range: Adjust the 40 kV~125 kV number key, and the minimum adjustment step is 1 kV
- Maximum output power loading parameters: 80kV 400mA 100ms
- Cooling mode: Natural air cooling
- Input power specifications: AC single-phase, 100 -240VAC, ±10% 50/60 Hz±1 Hz

• Radiation Dose: Displayed on the Workstation DROC User Interface

## 3 X-ray tube assembly

#### 3.1 Overview

X-ray emitting elements in the DR device

#### 3.2 Parameter

- Rotating anode X-ray tube
- Manufacturer: Canon
- Model: E7239X
- Anode Speed: 50 Hz at a minimum of 2700 min or 60 Hz at a minimum of 3200 min
- Anode heat content: 100 kJ (140 kHU)
- Maximum anode heat dissipation: 475 W (667 HU/s)
- Target angle: 16°
- Target material: Rhenium-Tungsten faced Molybdenum
- Nominal Focal Spot Value: Dual focus 1.0/2.0
- Nominal anode input power:
  - 50 Hz: 21kW/42.5kW
  - 60 Hz: 22.5kW/47kW (60 Hz)
- Maximum tube current:
  - Small focus 340 mA
  - Large focus 570 mA
- Tube voltage: 125 kV
- Nominal continuous input power: 180 W (15 kHU/min)
- X-ray tube assembly heat content: 900 kJ(1250kHU)
- Cooling mode: Natural air cooling
- Permanent filtration of tube assembly: 0.9mmAl/75 kV



# 4 Flat panel detector

#### 4.1 Overview

Light and thin design, reliable performance

#### 4.2 Parameter

- Model: AME4343R
- Scintillator fluorescent material: Csl
- Detector array material: a-Si
- DQE: DQE values at spatial frequencies 0 lp/mm, 0.5 lp/mm, 1.0 lp/mm, 1.5 lp/mm, 2.0 lp/mm, 2.5 lp/mm, 3.0 lp/mm, and 3.5 lp/mm with doses of RQA5 and 10 μGy. The typical values are 0.56, 0.42, 0.35, 0.29, 0.25, 0.21, 0.17, and 0.11, with a deviation of no more than -0.06.
- Typical value of effective dimension: 43 ×43 cm
- Pixel spacing: 140 μm
- Pixel matrix: 3072 × 3072 pixels
- Valid data bits (AD conversion bits): 16 bits
- Spatial resolution: ≥3.6lp/mm
- Imaging time: ≤5.0 s
- Preview time: ≤2.3 s
- Cooling mode: Natural cooling
- Data transmission mode: Wired
- Protection class: IP54
- Power-on/off function: The monitor can be powered on and off synchronously with the main unit.

# 5 Collimator

- 5.1 Overview
  - Zoom and collimate the X-ray beam

- Manufacturer: Mindray Animal Medical
- Model: XS-01

#### 5.2 Collimator parameters

- Intrinsic filtration: ≥1.3mmAl/75 kV
- Light field indicator: LED,
- Maximum beam size: ≥ 43×43 cm (When the SID is 1 m)
- Minimum beam size: 0×0 cm
- Input power: 24 V DC
- Illuminance: ≥ 150 lux/SID 1m
- Total Filtration: ≥2.5mmAl (70kV)

# Stationary floating table

- Size of table top (Length and width): 1500 mm×650 mm
- Bed height: 770 mm
- Tabletop weight bearing: 80 kg
- Tabletop movement:
  - Horizontal: ≥200 mm
  - Longitudinal: ≥100 mm
- Filter on the tabletop: ≤1.2mmAl/100 kV
- 7 System

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- 7.1 Physical Information
  - Dimension (W×D×H: mm): (1500 ±20) × (810 ±20) × (1895±20)
  - Net weight: 235 ±10 kg (Standard configuration)
  - Length of exposure hand switch cable: ≥1.5 m
  - Footswitch cable length: About 3m
- 7.2 Others
  - LED exposure indicator: Status indicator color



- Blue: Normal operation
- Green: Ready for exposure
- Yellow: Load exposure

# 8 Image Acquisition Workstation

# 8.1 Basic Information of Acquisition Station

- Operating system: Windows 10 Enterprise LTSC, 64 bit
- CPU: 2.0 GHz or above
- Hard disk capacity: ≥500 GB
- Memory: ≥4 GB
- Image Acquisition Station
  Monitor: Color, LCD
- HP monitor, screen size: ≥ 21 inches
- Maximum resolution: 1920× 1080
- Touch screen size: ≥15 inches

#### 9 DROC system

#### 9.1 Overview

DROC is the operating software system used for animal exam management.

#### 9.2 DROC Function

- Animal information entry: emergency treatment, follow-up, Worklist list, Manual registration
- Search multiple exam data of the same animal by one click
- Animal data query, editing and management
- Animal data recycle bin
- Animal data backup reminder and automatic cleaning
- Data backup and recovery: Support U disk and removable hard disk

- Multiple PACS nodes can send data at the same time.
- DICOM Task Manager
- Adjusting exposure parameters
- Common positions are provided and configurable.
- Image Post-processing
- Image Stitch
- Image preview, review and backup
- Image printing, supports connection of multiple printers
- User authority hierarchical management: Administrators and common users
- Position assistance
- Report editing, comment template and report template can be configured
- 10 Image Review/Key Functions

#### 10.1 Overview

Support multi-image post-processing to provide users with convenient image adjustment.

#### 10.2 Adjustable function

- WW/WL Adjustment
- Image cutting
- Global Zoom
- Orientation
- Image comment
- Image roaming
- Fixed size cutting
- Magnifier
- Local window
- Rotate at any angle
- Invert
- General measurement and application measurement



- 90 ° rotation
- Image
- Multi-pane display
- 11 Levels algorithm
- 11.1 Overview
  - Professional customized image optimization function to provide high-quality images for diagnosis.
- 11.2 Function
  - Enhanced style switching
  - Lookup Table
  - Compress
  - Enhance
  - Noise suppression
  - Auto WL Ratior
  - Simplified enhancement parameters: Brightness, contrast, sharpness, noise reduction
- 12 Network and Data Connection
- 12.1 Overview
  - The analyzer supports connection to the wireless/wired Internet and LAN.
- 12.2 Function
  - DICOM 3.0
    - DICOM Verification
    - DICOM Storage
    - DICOM Storage
      Commitment
    - DICOM Print
    - DICOM MPPS
    - DICOM Q/R
    - DICOM DIR
  - To support PACS connection.

# 13 Environment

- 13.1 Operating Environment
  - Temperature: 10°C~38°C;
  - Relative humidity: 20 %~75%
  - Atmospheric pressure: 62kPa~106kPa
- 13.2 Storage and transportation environment
  - Temperature: -20°C ~55°C
  - Relative humidity: 20 %~90%
  - Atmospheric pressure: 62kPa~106kPa
- 14 Safety and Conformance
- 14.1 Quality standards
  - ISO 9001
- 14.2 Design standards
  - EN 60601-1 and IEC 60601-1
  - EN 60601-1-2 and IEC 60601-1-2
  - EN 60601-1-3 and IEC 60601-1-3
  - EN 60601-1-6 and IEC 60601-1-6
  - EN 60601-2-28 and IEC 60601-2-28
  - EN 60601-2-54 and IEC 60601-2-54
  - EN 62304 and IEC 62304
  - EN 62366-1 and IEC 62366-1
- 14.3 CE declaration

The device is fully in conformance with the EC Low Voltage Directive (2014/35/EU) and EC Directive of Electromagnetic Compatibility (2014/30/EU).

#### NOTICE:

Not all features or specifications described in this document may be available in all probes and/or modes.



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