TECHNICAL DATASHEET

MOONRAY COMPACT FD22 R PLUS25fps V2 1K 12kW

PRODUCT CODE: **EMFC 2212 P25**

moonray COMPACT

12 kW

FD 22x22

GSE DYNAMIC X-RAY IMAGING APPLICATION SOFTWARE

25 fps

Procedure and Applications
- Orthopaedics & Traumatology
- General Surgery
- Neurosurgery
- Pain Management
- Pneumology
- Cardiology
- Gastroenterology
- Urology

Dimensions and manual movement ranges

SID: ..... 1019 mm
Free space: ..... 866 mm
Depth of the c-arm: ..... 670 mm
Motorized vertical movement: ..... 420 mm
Horizontal movement: ..... 230 mm
Wig-wag: ..... 24° (± 12°)
Orbital movement: ..... 138° (+ 90° / - 48°)
Rotational movement: ..... 720° (± 360°)
Main Body dimensions: ..... 1931x784x1861 mm
Main Body Weight: ..... 238 kg
Powder coating for easy cleaning and disinfection
Aluminium C-Arm
Pedal for simultaneous locking of the wheels.

Generator

Type: high frequency monotank
Nominal Power: ..... 12 kW
Power available in Radiography: ..... 8 kW.
DDC (Dynamic Density Compensation)
LDC (Low Dose Control)
Voltage range: ..... 40-120 kV
Current range:
Fluoroscopy continuous and pulsed: ..... up to 3 mA
Boost pulsed and DR: ..... 6 or 10 mA
CINE PULSE DHD* 12pps and 25 pps: ..... up to 80 mA
Radiography: ..... 25 – 100 mA; 0,02 – 3 sec
Pulse rate in all pulsed modalities: ..... 0,5-1-2-4-6-12-25 pps

XR Tube & Radiogenic unit

Rotating anode: ..... up to 3000 rpm
Anode thermal capacity: ..... 150 KJoule (200 KHU)
Anode thermal dissipation: ..... 300 W (24 KHU/min)
Housing thermal capacity: ..... 1.600 KJoule (2.150 KHU)
Housing thermal dissipation: ..... 180 W (14,4 KHU/min)
Inherent filtration: ..... 1,4 mmAl @ 80 kV
Total filtration: ..... 3,2 mmAl @ 80 kV
Double focal spot: ..... 0,3 mm & 0,6 mm
Power on focal spot: ..... 5 kW (spot 0.3); 17 kW (spot 0.6)

Safety and Thermal Indicators

Digital dynamic indicator of x-ray tube thermal level.
Digital dynamic indicator of monotank temperature.
Fluoroscopy Timer with acoustic alarm and manual reset.
"X-ray on": light and acoustic signal

Collimators

Double pair leaves in Pb, with motorized movement and digital pre-view

Video Chain

Flat digital detector 22x22cm CMOS technology
Scintillator: ..... Caesium Iodide
Dimension: ..... 21.5 x 21.5 cm
Pixel resolution: 1416x1416
DQE(0)@20 uGy, RQA5 ..... 70%
ADC Conversion ..... 14 bit
Digital Pre-view of the image rotation, without rx exposure

Double TFT digital monitor, for medical applications,19", colored, positioned on the horizontal support of C arm, steerable:
Resolution: ..... 1280 x 1024 pixels
Brightness: ..... 480 cd/m²
Contrast: 800/1

Digital Memory

Keyboard & trackball built on the horizontal support of the C-Arm
Digital acquisition: ..... 25 fps with matrix 1k x 1k x 12 bit LIH (Last Image Hold)
Storage on HD: ..... Automatic/Manual
Memory capacity on HD: ..... 250.000 images
User-friendly database, divided into operative sessions
Several key words to search images
Storage images are visualized through icons.
Clipboard, to compare any stored image with live images
Possibility to erase single images or complete sessions.

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SIMAD X-RAY MEDICAL TECHNOLOGY

A Sago Medica Company

TECHNICAL DATASHEET

Image Processing

Digital setting in real-time and post processing to adjust brightness, window and level.
Real time and post-processing visualization in reversal grey scale
Real time and post-processing digital Zoom with magnification factor selectable by the user
Real time and post-processing "PAN" function, to select the position of the area to be magnified.
Digital rotation of the image
Digital Vertical and Horizontal Flip
Quantum Noise reduction with 4 levels Recursive Digital Filter
Edge enhancement

Digital Dynamic Storage Module 25 fps

Digital matrix of dynamic images:..... 1k x 1k
Storage on HD:..... Automatic/Manual
Selectable storage frequency:..... 1,2,4,6,8,12 and 25
Storage images are visualized through icons with identifying marker
Automatic play of the sequences at the end of the acquisition. This function is selectable according to user's needs.
"Cine Loop" function, to revise sequences in continuous mode or frame by frame
Possibility to delete sequences or complete sessions.
Possibility to revise, simultaneously, two different dynamic sequences on both monitor screens.

Cine Pulse DHD (Dynamic High Definition) digital module

Digital dynamic images storage synchronized with generator pulses:
Pulses rate:..... 25 pps
range kV: ..... 40 – 120 kV
range mA: ..... from 30 up to 80 mA

Digital Vascular and Endovascular module*

DSA (Digital Subtraction Angiography) modality, with:
Re-mask - Max Op - Land-mark - Pixel shift
ROAD MAPPING modality

Dedicated software*

Placement of digital markers on monitor screen.
Length and angles measurement on monitor screen.
Placement of text box on the image.
Storage of comments related to the digital images.

Procedure documentation

Standard net board for TCPIP connection
Digital interface to connect any digital printer Windows compatible USB port.
Built in CD-ROM & DVD writer
Digital images exportation as: JPG - AVI - BMP – Dicom*

Dose measurement and report: ADR (Automatic Dose Report)

DAP (Calculation Software).
Visualization of DAP for each image.
Total Exposure Report, visualized according to the different modalities of work (continuous or pulsed fluoroscopy, radiography).
The report can be printed by the local medical printer (optional)
Digital dose report exportation available as TXT – PDF - MDB file – Dicom*

Options*

Digital medical thermal printer
Smart Cable 2C
DICOM connection module, with the following service classes:
STORAGE – PRINT – WORKLIST - QUERY & RETRIEVE - CD DICOM Master Kit – Dicom DAP
Remote service module
UPS module
Video out D/A converter module
Infrared remote control
Two Monochrome TFT 19" monitor screens(1000cd/m^2) instead of the two standard Color Monitors
Interface for external "X-Ray ON" lamp
Firewall System
Wi-Fi Connection
Software DAP
DAP DATA Collection Software "StatLab"

Environments conditions and power supply

Temperature: .....+10°C / +40°C
Humidity: .....10% / 90%
Single phase, neutral ground, 220-240V ± 10%; 50Hz;
EN60309 current plug 16 A; out of isolation transformer.

Certifications

The equipment is CE certified (CE0051), is in conformance with European Directive 93/42 regarding medical devices and is in compliance with D.L. n°187/00.

* optional

ISO 9001:2008 ISO 13485:2004 CE 0051

REV 160118 - Features and specifications are subject to change without notice.

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