

OEC® 9800 Plus

Technical Data Specifications



X-ray System

Generator

- 60kHz high frequency
- 15kW power
- Up to 120kVp
- Up to 75mA for radiographic film exposure
- Continuous high level fluoro (HLF) up to 20mA
- Digital spot up to 75mA
- Digital cine pulse
 - 15 pulses per second, 60 Hz
 - 12 pulses per second, 50 Hz
 - Up to 150mA
 - 10ms pulse width
- Full power from standard wall outlet
- Patented battery buffered design

X-ray Tube

- Rotating anode X-ray tube
- 0.3 and 0.6 nominal focal spots
- Anode heat capacity: 300,000 HU
- Anode cooling rate: 85,000 HU/min.
- Housing heat capacity: 1,600,000 HU
- 9" (23cm) Standard C-arm housing cooling rate 15,000 HU/min.
- 9" (23 cm) Super C-arm and 12" (31 cm) standard C-arm housing cooling rate 22,500 HU/min.

Digital Image Rotation

- Digitally adjusts image display
- Image update
 - Image rotation
 - Image reversal (side-to-side)
 - Image invert (top-to-bottom)
- Image positioning without additional exposure

PreView™ Collimator

- On-screen collimator position indication
- PreView™ iris collimator
- PreView™ Tungsten rotatable double leaf collimator
- Adjusts collimators without X-ray exposure

Fluoro Mode

- kVp range: 40 -120
- mA range: 0.2 - 10 normal mode
0.2 - 20 HLF (high level fluoro)
- Auto and manual fluoro modes
- AutoTrak™ ABS varies mA, kVp, camera gain

Pulsed Fluoro Mode

- kVp range: 40 - 120
- mA range: 0.2 - 10
- Pulse rate: 1, 2, 4, 8
- Pulse Width: 25 or 50ms
- AutoTrak™ ABS, mA, kVp, camera gain
- Reduces X-ray dose to patient and operator

High Level Pulsed Fluoro

- kVp range: 40 - 120
- mA range: 0.2 - 40
- Pulse rate: 1, 2, 4, 8
- Pulse width: 25 or 50ms
- AutoTrak™ ABS, mA, kVp, and camera gain

Digital Cine Pulse Mode

- kVp range: 40 - 120
- mA range: up to 150
- Pulse rate: 15 pps (60 Hz), 12 pps, (50 Hz)
- Pulse width: 10ms
- AutoTrak™ ABS, mA, kVp, camera gain

Digital Spot Mode

- kVp range: 40 - 120
- mA range: Up to 75
- Automatic exposure termination and automatic image save

Radiographic Mode

- mA range: up to 75
- mAs range: up to 300
- Computer controlled exposure time
- Optional Film Cassette Holder
 - 10" x 12" (24cm x 30cm) for 9" I.I.
 - 14" x 14" (35cm x 35cm) for 12" I.I.

Video Imaging System

9" Image Intensifier

- Tri-mode 9"/6"/4.5" (23cm/15cm/11cm) image intensifier
- Minimum central resolution (at monitor):
 - 9" (23cm): 2.1 lp/mm
 - 6" (15cm): 2.9 lp/mm
 - 4.5" (11cm): 3.4 lp/mm
- DQE: 65% (typical)

12" Image Intensifier

- Tri-mode 12"/9"/6" (31cm/23cm/15cm) image intensifier
- Minimum central resolution (at monitor):
 - 12" (31cm): 1.5 lp/mm
 - 9" (23cm): 2.1 lp/mm
 - 6" (15cm): 2.6 lp/mm
- DQE: 65% (typical)

AutoTrak™

Automatic Brightness Stabilization (ABS)

- Automatically seeks the subject anatomy anywhere within the imaging field and selects the optimum imaging technique
- Automatically adjusts to anatomical size and location
- Provides uniform image quality throughout entire image
- Simplifies operation

Image I.Q.

- Smart Window
 - Dynamically senses the collimator position and automatically adjusts brightness and contrast to produce high image quality.
- Smart Metal
 - Allows user to adjust automatic brightness and contrast sensitivity levels to metal
 - Provides optimum image quality even when metal is introduced to the field
- Tungsten Collimator
 - Denser collimator limits X-ray exposure area
 - Reduces scatter radiation
 - Improves image detail

Video Camera

- High resolution 1k x 1k CCD camera
- Full frame capture
- Motorized rotation
- On-screen orientation indicator (real-time feedback without fluoro)
- Left-right image reversal
- Top-bottom image invert

Video Display

- Dual 16" (41cm) square monitors
- Anti-glare, progressive full frame scan monitor
- Touch screen system control
- 1,000 line high resolution monitors
- Ambient room-light compensation

Configurations

ESP Platform

- 1k x 1k x 16 bit image processing
- Noise filter with on-screen indicator
- Real-time variable edge enhancement
- Automatic digital brightness and contrast control
- Manual digital brightness and contrast control
- Negate mode
- Save and auto-save feature
- Swap and auto-swap feature
- Patient information
 - Examination list
 - Customized patient information
- Customize functions
 - Workstation set-up
 - Mainframe set-up
 - Patient information set-up
 - Date/time set-up
 - DICOM 3.0 interface set-up
- Last image hold
- 400 image storage
- Integrated DICOM interface (store, print, worklist)
- HIPAA SecureView®
 - Password protection
 - Blank screen function
 - Delete all
- Zoom and roam function
- Image annotation
- Measurement software

PMCare Platform

Includes all the ESP features and:

- Real-time Digital subtraction (DSA)
- Peak opacification
- 8fps Dynamic digital disk
 - Recording /playback rate: 1, 2, 4, 8fps
 - Recording time: 5 minutes @ 8fps

Vascular Platform

Includes all the ESP features and:

- Real-time subtraction
- Roadmapping
- Peak opacification
- Re-registration
- Variable landmarking
- Mask save/recall
- Auto cine loop playback
- Digital cine pulse mode
 - 15 pulses/sec
 - Up to 150mA
 - 10ms pulse width
- 15fps Dynamic digital disk
 - Recording/playback rate: 1, 2, 4, 8, 15fps
 - Recording time: 10 minutes @ 15fps (time depends on record frame rate)

Additional Features

Other Image Storage Options

- CD/DVD Writer digital interface (external)
- Integrated DICOM 3.0 interface

Hardcopy Options

- Integrated film/paper printer
 - No film developing required
 - 8" x 10" (20.3 cm x 25.5 cm) laser quality film/paper
 - Multi-format, 1, 2, 4 on 1
 - Multi-copy capability
- Thermal printers

User Interface

- Entire system is computer controlled and software upgradeable
- Touchscreen control simplifies operation
- Automated system operation requires minimum operator interface
- Multi-functional controls
 - Footswitch
 - IR remote (optional)
 - Hand-held control
- Simplified keyboard
- Multi-purpose image directory
 - Retrieve and review images
 - Compose hardcopy films
 - Copy images
- X-ray dose summary

Electrical

- Input power (60Hz or 50Hz) 9800 Plus
 - 100V @ 20 A (Japan)
 - 120V @ 12 A
 - 200V, 220V, 230V, 240V @ 10A

Regulatory Compliance

- U.S. 21 CFR Subchapter J
- NFPA 99
- UL 60601-1 (CSA/NRTL)
- IEC60601-1 (plus relevant Collateral and Particular Standards)