

Technical Specifications of OPER-0.35T System

Magnet

Type: Permanent magnet, eddy current free, open C type & self-temperature control

Field strength: $0.35T \pm 3\%$

Field homogeneity: $< \pm 2\text{ppm}(\text{FWHH})/20\text{cm DSV}$

$< 2\text{ppm}(\text{VRMS})/40\text{cm DSV}$

Vertical gap distance: 40cm

Gradient system

Amplifier:

Field strength: single axis 18mT/m, effective 30.6mT/m

Slew rate: single axis 55mT/m/ms, effective 93.5mT/m/ms

Nonlinearity: $40\text{cm} * 40\text{cm} * 38\text{cm}$ ellipsoid $< 5\%$

RF transmitting & receiving system

Type of transmitter & receiver: Digital

Frequency range: DC-22MHZ

Maximum receiver bandwidth: 1.25MHZ

Pre-amplifier: gain 30dB

Noise figure: 0.3dB

RF amplifier: $\geq 6\text{kw}$

RF transmitting coil: panel transmitting coil

RF receiving coil: quadrature coil

Auto pre-scan function

Auto RF correction, auto frequency lock, auto gain, auto coil identification, auto coil tuning, active shim

Image specifications

Image types: T1 weighted image, T2 weighted image, T2* weighted image, PD weighted image, diffusion weighted image, fat suppressed image, water suppressed image, Magnetic resonance hydrography (MRCP MRM MRU), MRA

Field of view: 40mm-400mm

Acquisition matrix: 64x64-512x512

Graphics matrix max.: 1024x1024

Body in 30cm FOV: 1.5mm

Head in 24cm FOV: 1mm

Orientation:

Slice orientation: transverse, sagittal, coronal, free oblique, multi-slice & multi-range

Slice gap: 0-20mm

Pulse sequence

Spin echo (SE)

Multi-slice & Multi-echo (MSME)

Fast Spin Echo (FSE)

Single shot fast spin echo (SSFSE)

Multi shot fast spin echo (MSFSE)

Inversion recovery (IR)

Short inversion time IR (STIR)

Fluid attenuated IR (FLAIR): T1W, T2W

Inversion recovery fast spin echo (IRFSE)

Gradient echo (GRE): 2D/3D

Steady state process GRE (SSPGRE)

MRA: TOF 2D/3D

Echo Planar Imaging (EPI)

Image display & post processing

Image post processing: filter, zoom, cut, text illustration & elimination, image offset, auto adjustment of window length & width

Image analysis: interested area illustration, distance measurement

Patient Management

Talkback system

Patient bed bearing - 240Kg Max.

Computer system

Main: dual-core processor (≥ 2.8 GHz)

Network controller: 1000Mbps

Memory: 2 GB

Graphics memory: 128MB

Hard driver: 160 GB

Removable storage: DVD + RW

Image reconstruction: (256x256) 285 Frames/s

21" TFT monitor with at least 1280x1024 resolution

DICOM 3.0 with compatibility