

# Siemens MAGNETOM Trio, A Tim system Tech Specs (Technical Specifications)

## General Specifications

- RF frequency MHz: 123.2
- Shielding: Active
- Homogeneity (V-RMS): 0.1
- Number of measurement planes: 24
- Number of points per plane: 20
- Field stability ppm/hr: <0.1
- Cooling System: Liquid helium
- Boil-off rate l/hr: <0.12
- Helium refill: ~9 months

## Magnet Shimming

- Passive on installation: Yes
- Number of shim plates: 16 trays, 15 pockets per tray
- Active with patient in position: Yes 3D autoshim
- Number of independent channels: 3 linear terms via gradient offsets with 20 coils, Additional 5 non linear second order terms with 32 coils\*

## Patient Aperture

- Width (Patient aperture at narrowest): 60 cm
- Length (Patient aperture at narrowest): 142 cm
- Height (couch to pole) (Patient aperture at narrowest): 45.5 cm
- Length (with covers) (Patient aperture at maximum) 213 cm

## Patient couch

- Min height: 57 cm
- Max height: 100 cm
- Table top width: 54 cm
- Body mass limit: 200 kg
- \* 250 kg with no vertical movement

## Siemens Trio Magnet

- Depth (with covers) (z): 213 cm
- Width (with covers) (x): 244 cm

- Height (with covers) (y): 221 cm
- Radial (x,y) 0.5 mT fringe field: 3.4 m
- Axial (z) 0.5 mT fringe field: 5.9 m
- Minimum installed area m<sup>2</sup>\*: <33
- Minimum ceiling height cm\*: 273
- \*To include 0.5 mT fringe field

### **Electronic Cabinets**

- Number of cabinets: 2 cabinets, additional RF-amplifier
- Total width: 156 cm
- Maximum depth: 65 cm
- Maximum height: 197 cm
- Cooling System: Water

### **Siemens Trio RF System**

- Name/type/ version of the system: Tim Tim Tim [102x8] [102x18] [102x32]
- Number of independent RF receiver channels: 8 18 32
- Bandwidth of each independent RF receiver channel (MHz): 1 1 1
- Number of Analog-to-Digital Converters for each independent RF channel: 1 1 1
- Sampling frequency of each Analog-to-Digital Converter (MHz): 10 10 10

### **Siemens Trio Gradient System**

- Shielding: Active
- Single axis maximum amplitude mT/m - x (horizontal): 40
- Single axis maximum amplitude mT/m - y (vertical): 40
- Single axis maximum amplitude mT/m - z (along the bore axis): 45
- Single axis slew rate mT/m/ms - x (horizontal): 200
- Single axis slew rate mT/m/ms - y (vertical): 200
- Single axis slew rate mT/m/ms - z (along the bore axis): 200
- Duty cycle at max amplitude %: 40;40;
- Minimum FOV: 5 mm
- Maximum imaging matrix: 1024 x 1024
- Minimum 2D slice thickness: 0.1 mm
- Minimum 3D slice thickness: 0.05 mm