Philips Achieva 1.5T Magnet

- Length: 5.15 ft (1.57m)
- Weight: 6393 lbs (2900 kg)
- Fringe Field Footprint: 3.8m x 2.4m - compact for maximum sitting flexibility
- Helium Consumption: as low as 0.03 l/hr - typical - allows for extended refill times
- Wide patient opening: 110cm (43in.) flare
- Patient bore diameter: 60cm (23.6 in., length 60cm
- Patient Comfort: Supports patients weighing up to 250kg (550 lbs) comfortably

Philips Achieva 1.5T Technical Specifications (Tech Specs)

Gantry - Philips Achieva 1.5T
Bore diameter/height of patient opening, cm 110
Overall bore length, cm 157
Bore length with minimum opening, cm 60
In-bore patient comfort features Indirect lighting, adjustable airflow, 2-way headset, soft mattresses, head coil mirror, knee wedge cushion

Magnet - Philips Achieva 1.5T
Strength: 1.5 Tesla
Configuration: Short-bore cylindrical
Homogeneity, ppm V-RMS 1.4 ppm @ 53 cm, 1.18 ppm @ 50 cm, 0.5 ppm @ 40 cm, 0.07 ppm @ 30 cm, 0.03 ppm @ 20 cm, 0.01 ppm @ 10 cm
Dimensions of maximum useful FOV and homogeneity (x, y, z): 53 x 53 x 48 cm
Frequency drift: Shielding: Active
Main magnet shimming: Combination
Patient specific shimming: Yes
Cryogen refill frequency: 3 years

Planning and Installation
Overall gantry dimensions (including covers) (W x H x L): 2.2 x 2.1 x 1.8 m
Minimum ceiling height: 3 m
Extent of fringe field (0.5 mT, 5 gauss) in x, y, z directions: 2.4 x 3.8 m
Total weight w/cooling, shielding, gradient/body coil: 6,380 kh (14,065 lbs)
Minimum dimensions of opening required for installation, (W x H): 2.1 x 2.5 m
Minimum installation area for magnet (W x L): 3.6 x 5.4 m
Minimum total installation area for system: 19.5 m2
Total number of cabinets required: 6
Power Consumption
Line Voltage: 480 VAC
Kva: 100
Clinical Use: Whole body
DICOM (Gantry)

Range of Movement
Modality worklist SCU: Standard
MR Image Storage SCU: Standard
Query/Retrieve SCU and SCP: Optional
Storage commitment SCU: Standard
IHE profiles supported: MWL, PPS
Clock speed, GHz (Reconstruction): 3.2
Operating system: Windows
Dedicated RAM: 4 GB

Reconstruction
Maximum number of 256 x 256 slices per acquisition sequence: 230
Number of slices per sec (256 matrix): 1230
Maximum matrix: 2048 x 2048
Minimum slice thickness 2-D/3-D: 0.05 mm
Minimum FOV: 0.5 cm
Maximum FOV: 53 cm

Quantitative image analysis tools
Perfusion imaging: Optional
fMRI: Optional
Diffusion imaging: Standard
Diffusion tensor imaging: Optional
Cardiac imaging: Standard
Body imaging: Standard
3-D image reconstruction: Standard

Scanning Techniques
Echo Planar Imaging: Yes, standard
Single shot: Standard
Multi shot: Standard
EPI pulse sequences: MS-EPI, SS-EPI
Maximum EPI factor: 256
Neurologic imaging: Standard
Perfusion: Optional
Diffusion weighted imaging: Standard
Functional MRI: Optional
Spectroscopy (nuclei of interest): Optional
MRA: Standard
Time of flight: Standard
Peripheral: Standard
Bolus tracking: Standard
Interventional MR: Optional
Cine: Standard
Coronary artery: Optional
Ecg gating: VCG standard
Motion compensation: Standard
Prospective respiratory gating: Standard
Maximum number of dimensions: 2

**Control Console Workflow**
Standard user interface: ScanTools
Number of stored scanning protocols: 999
Local hard disk capacity: 80 GB
RAM: 4 GB
Removable media: DVD
Image protocol sharing: ExamCards
Features designed to enhance workflow: SmartExam, NetForum, SameScan, ExamCards, SENSE, Utilization Management

**Patient Table**
Detachable (Rotor): Trolley
Horizontal speed: 2, 8, 18 cm/s
Elevating: Yes
Minimum height: 52 cm

**Table Load Limit**
Limited mobility: 250 kg (550 lb) horizontal travel
Fully mobile: 159 kg (350 lb) vertical travel

**Sequence Selection**
Spin echo (Minimum TR ms)
Minimum TR, 256 matrix, 30 cm FOV: 0.8 msec
Minimum TR, 256 matrix, 10 cm FOV: 0.8 msec
Minimum possible TE: 0.6 msec
Fast-spin-echo max train length: 256
**Acoustic Noise**
Sound pressure level (SPL) at peak gradient amplitude and slew rate: Reduction technology: SofTone

**Philips Achieva 1.5T RF System**
Power output: 18 kW
Amplifier type: Solid-state
Standard number of channels: 8
Optional channel configurations: 16, 32
Receiver bandwidth: 300 kHz
Location of coil connector (plug): Gantry face
Standard length of coil cables: 1.2 m
Number of coil connectors (plugs): 2
Coil tuning technique: Automatic

**Calibration Technique Automatic**
Maximum parallel acquisition acceleration factor: 16 (coil dependent)

**Gradient system**
Standard name: Pulsar HP
Standard strength, z-axis: 33 mT/m
Standard slew rate, z-axis: 100 T/m/s
Optional strength(s): 33, 66 mT/m
Optional slew rate(s): 180 T/m/s
Cooling type: Liquid
Amplifier cooling type: Liquid

**Philips Achieva 1.5T Coils**
Integrated body: Yes
Type: Linear/phase array
Number of elements: 8
Number of independent channels: 8
Head: Standard
Extremity: Lower: Foot/Ankle; Upper: SENSE wrist
Diameter, cm: Phased array
Number of elements: 8
Number of independent channels: 8
Parallel imaging compatible: Yes
Mirrors for patient head: Yes
Tmj: Flex S
Number of elements: 8
Number of independent channels: 8
Neck: SENSE head/neck
Coverage (head to foot): 43 x 35 cm
Number of elements: 8
CTL spine: SENSE head/spine
Coverage (head to foot): 95 x 54 cm
Number of elements: 8
Number of independent channels: 8
Cardiac/abdomen: SENSE torso, torso XL, cardiac
Flexible: Yes
Number of independent channels: Phased array
Breast: Optional
Bilateral: Yes
Biopsy access: Yes
Shoulder: Optional
Dimensions (L x W): 13 x 18 x 20 cm
Number of elements: 8
Number of independent channels: 8
Whole abdomen: SENSE torso XL
Dimensions (L x W): 45 x 65 cm
Number of elements: 8
Number of independent channels: 8
Endocavity: Optional
Length: 30 cm
Number of elements: 8
Number of independent channels: 8
Peripheral vascular: Coil combination
Circular general-purpose: Flex L,M,S
Dedicated parallel imaging: All anatomies
Combined: Yes
Additional (Alarms, high/low): Various, all SENSE compatible coils

Other - Philips Achieva 1.5T

Other Attributes: Available in mobile configuration/ I/T; optional Ambient Experience; 480 V, 65 kVA, 80 A for the system; 480V, 9 kVA, 30 A for the cryocooler compressor; 480 V, 55 A for the Schreiber chiller.
FDA CLEARANCE: Yes
CE MARK (MDD): Yes