BRIGHTONIX IMAGING

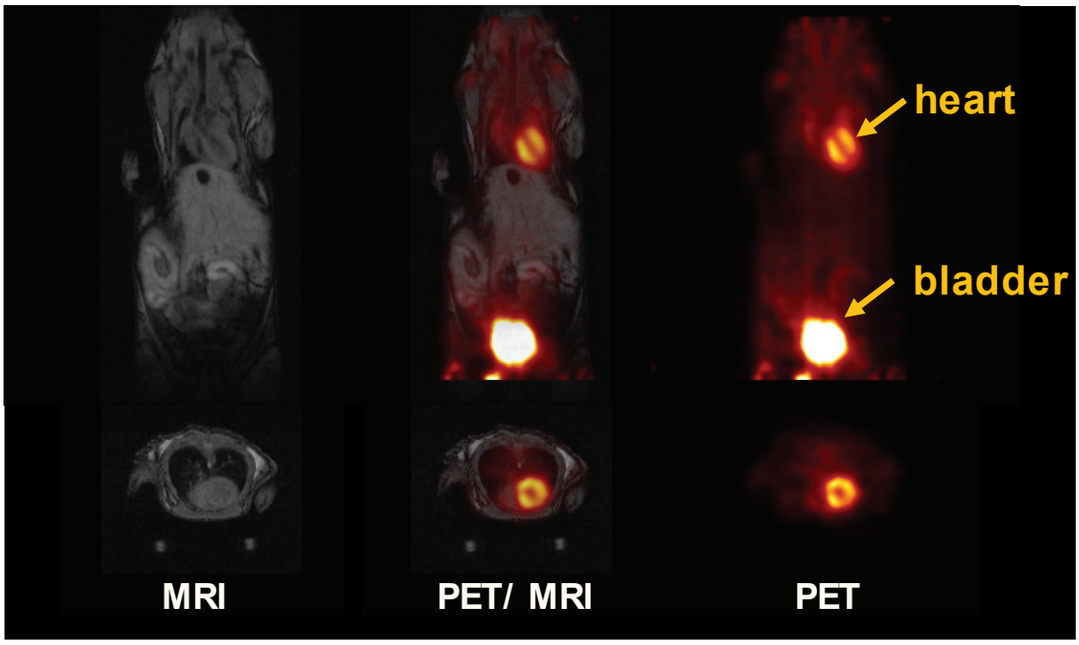
aspectimaging

Aspect SimPET

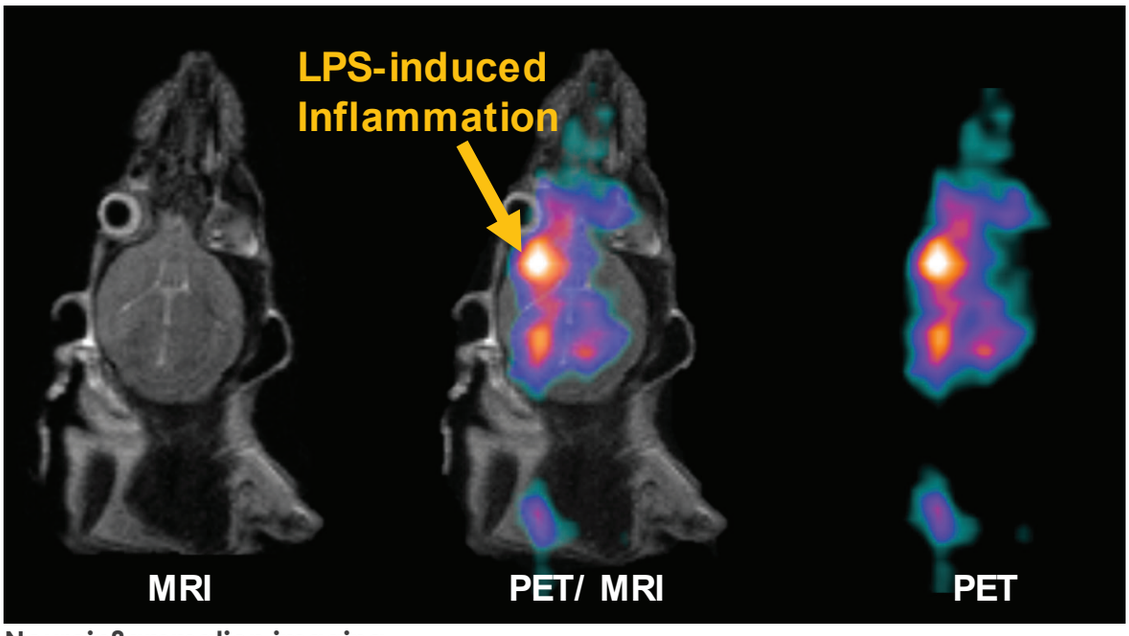
The world's first complete and most cost-effective permanent magnet simultaneous PET/MRI solution for preclinical research

> High image quality
> Exceptional PET performance
> Simultaneous or standalone operation
> MRI-based attenuation correction
> No cryogens
> Compact and Safe - no stray field
> Complete system installed in one day
> Low maintenance
> Lowest power consumption in the industry

DOC10001259 Rev. 2



Whole body mouse imaging
Balb/c nu mouse (18 g), PET: 300 µCi ^{18}F-FDG, 45 min uptake,
MRI: GRE3D (TR = 25 ms, TE = 3 ms)



Neuroinflammation imaging
C57BL/C mouse (20.1g), PET: 200 µCi ^{18}F-CB251, 20 min uptake,
MRI: T2wFSE (TR = 3000 ms, TE = 63.5 ms)

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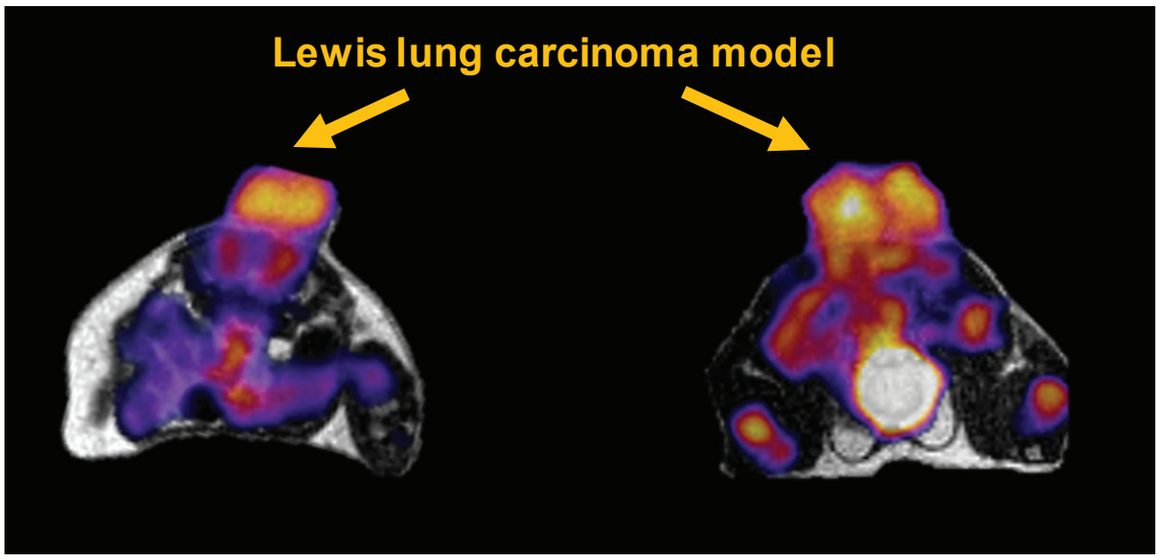
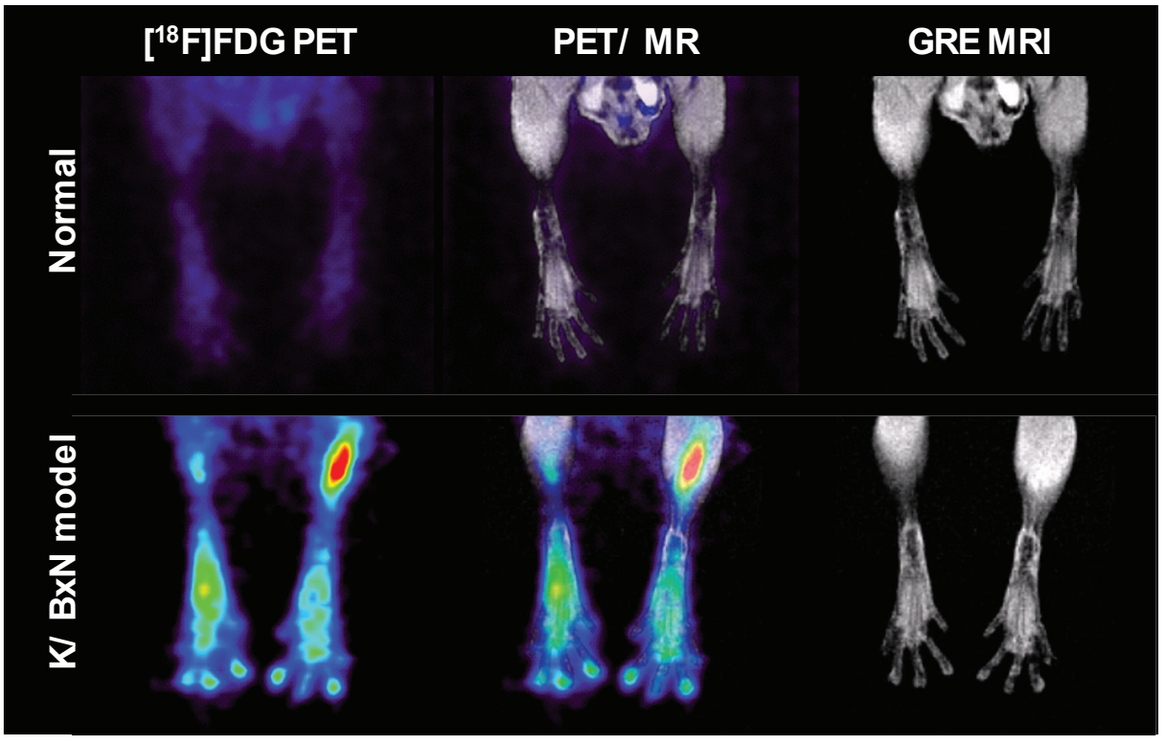
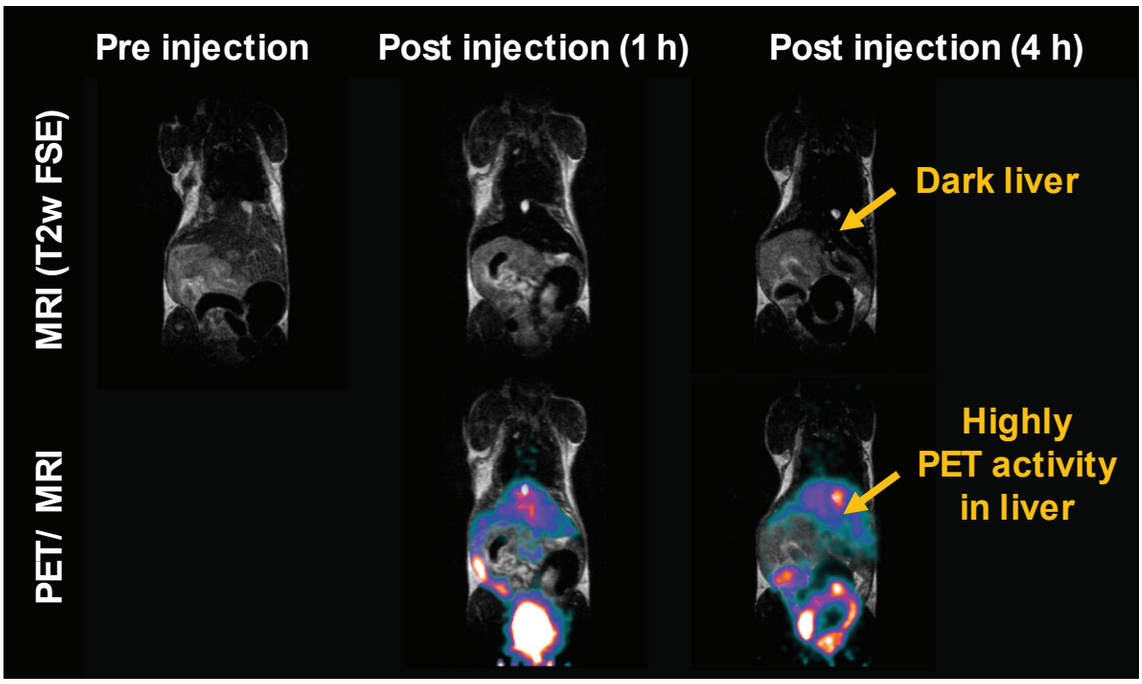


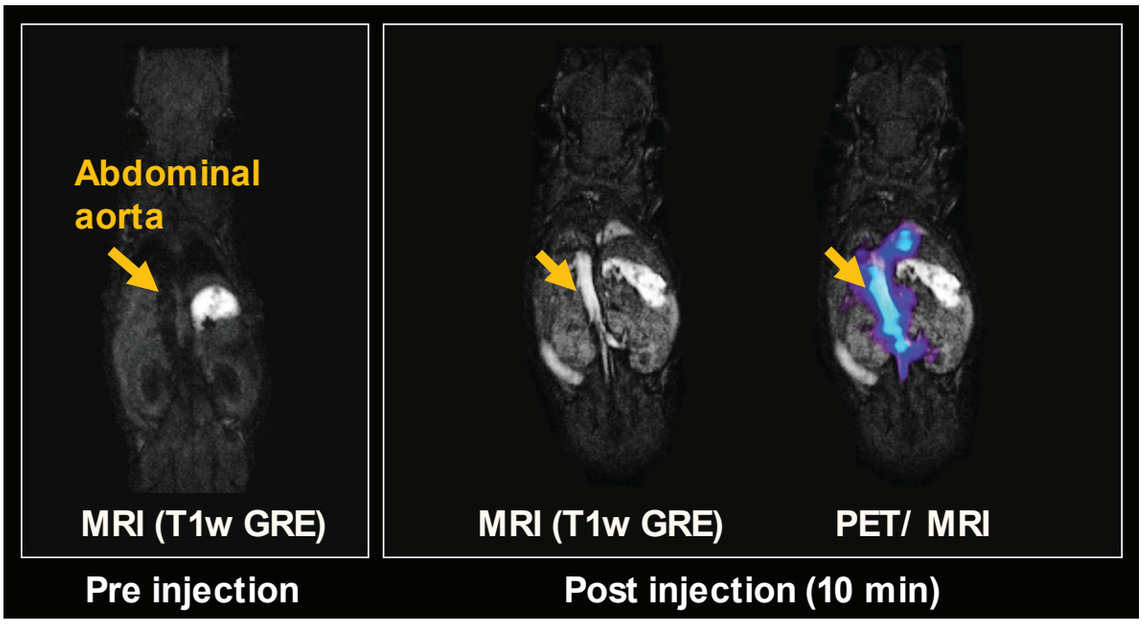
LLC tumor model imaging
C57BL/C Lewis lung carcinoma mouse model, PET: 200 µCi ^{18}F-FDG, 60 min uptake, MRI: T2wFSE (TR = 3070 ms, TE = 63.8 ms)



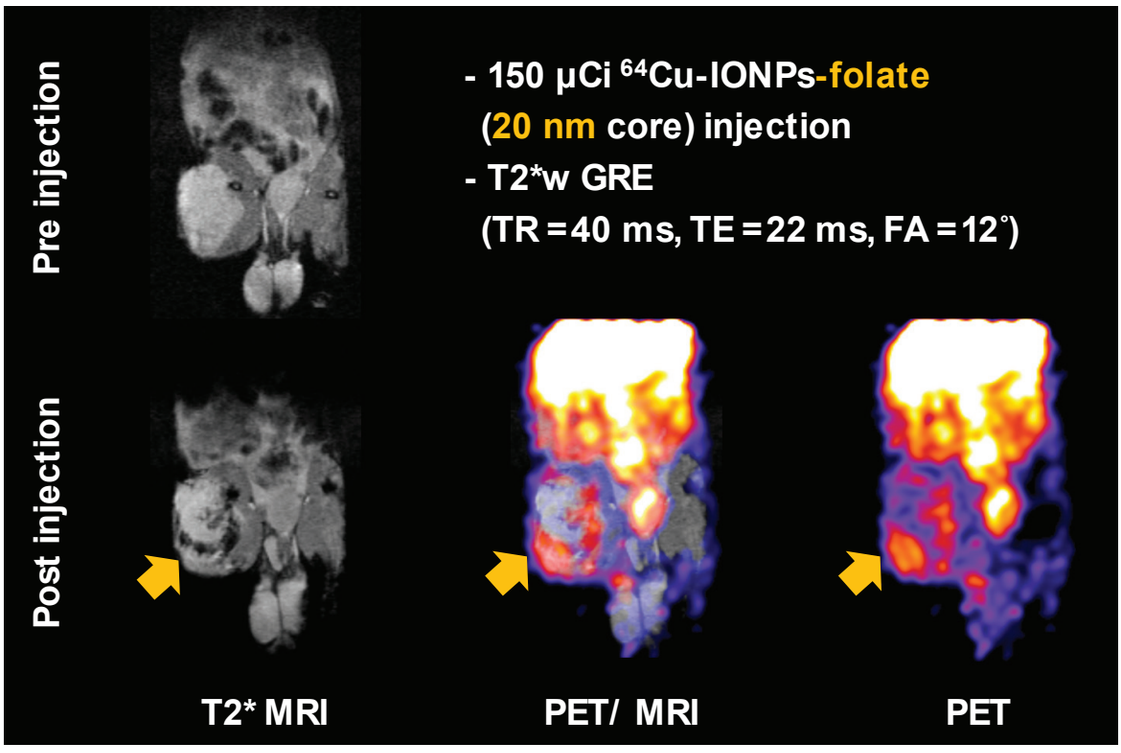
Mouse arthritis imaging
K/BxN arthritis model mouse, PET: 300 µCi ^{18}F-FDG, 60 min uptake, MRI: GRE3D (TR = 25 ms, TE = 3 ms)

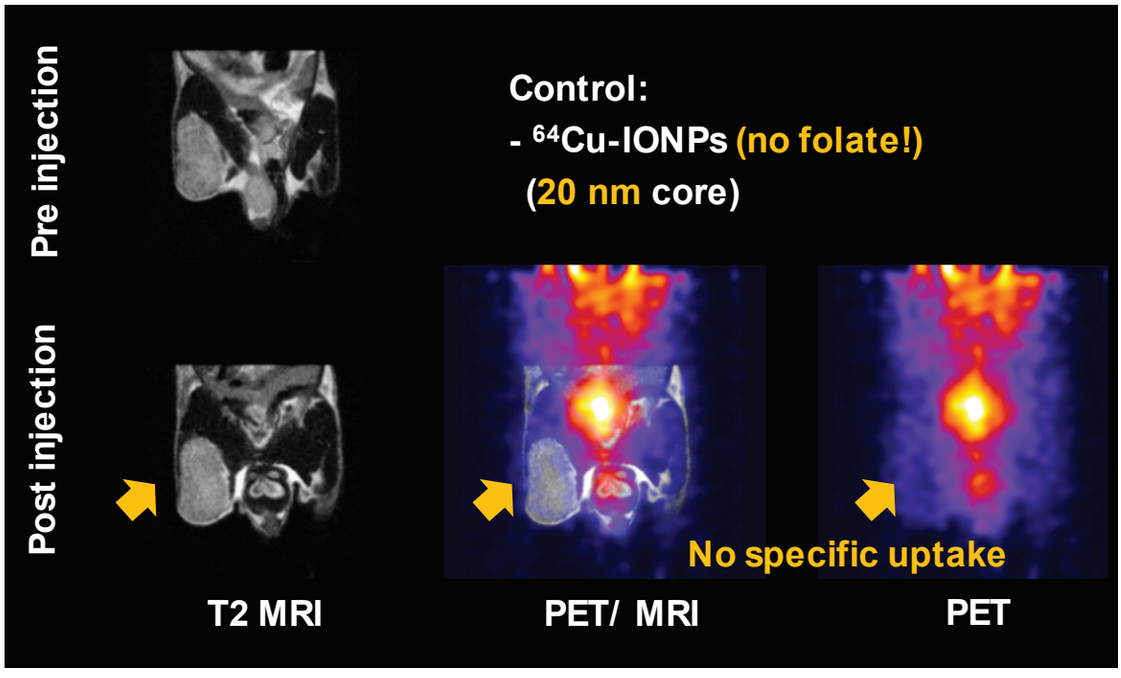


Iron oxide nanoparticle liver imaging
3 nm core size ^{64}Cu-IONP, MRI: T2wFSE (TR = 3000 ms, TE = 63.5 ms)



Iron oxide nanoparticle blood pool imaging
5 nm core size ^{64}Cu-IONP, MRI: T1wGRE (TR = 9 ms, TE = 2.8 ms, FA = 45˚)





Tumor imaging using 20 nm IONP and folate

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SimPET

Groundbreaking Technology

Compact and reliable MRI-compatible PET insert for simultaneous PET/MRI studies in small animals

Proven, future proof SiPM* PET technology

Excellent PET detector stability

Sub-mm spatial resolution

Flexible modes of operation

*Silicon Photomultiplier

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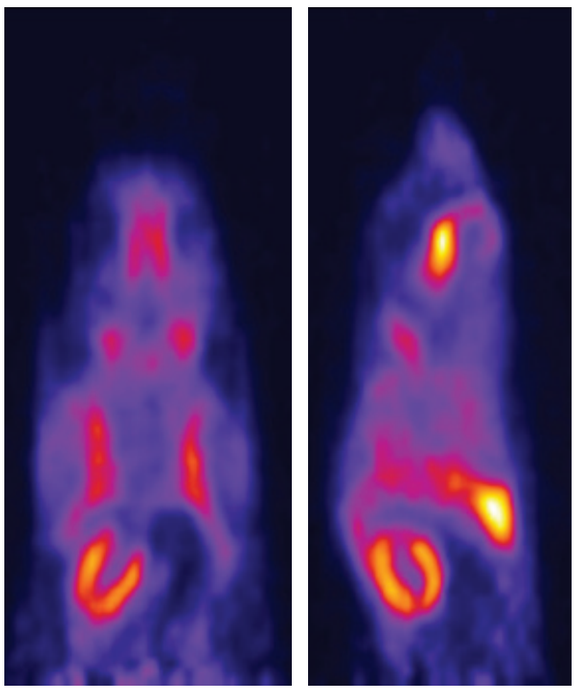
PET Specifications

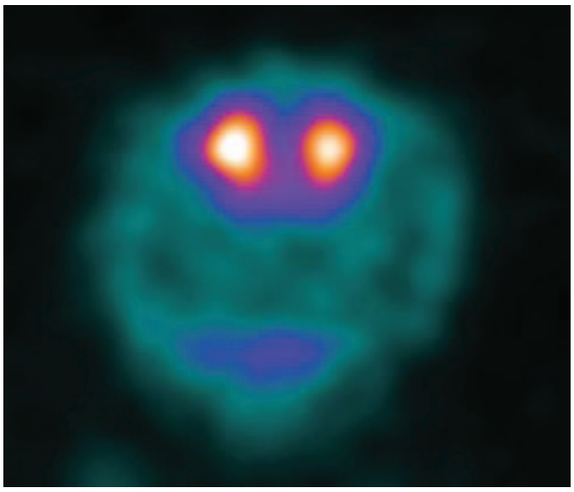
Characteristics	Value
Detector ring diameter (mm)	64
Scintillator materials	LSO
Crystal size (mm^3)	1.2 × 1.2 × 10.0
Number of crystal rings	36
Number of crystals/ring	144
Total number of crystals	5184
Axial FOV (mm)	55
Insert inner diameter (mm)	60

PET Performance

Characteristics	Value
Scatter fraction for mouse	17%
Peak sensitivity	3.4%
Spatial resolution with 3D OSEM	<0.8 mm
Spatial resolution with FBP	<1.3 mm
Energy resolution	15%



Mouse [^{18}F]FDG PET



Mouse [^{18}F]FP-CIT PET

M7™ Compact MRI Systems for Preclinical Imaging	
Front End (Magnet + Stand)	
Dimensions (Height x Width x Depth)	1320 x 790 x 950 mm
Weight	1550 Kg / 3415 lbs
Magnet Opening: Flange Insertion Diameter Inner Bore (Height x Width)	97 mm 220 x 90 mm
Imaging Volume	120 x 120 x 70 mm^3 spheroid
Bo (Tesla)	1 T
Back End (Electronics Cabinet)	
Dimensions (Height x Width x Depth)	1765 x 600 x 1150 mm
Weight	300 Kg / 660 lbs
Gradients	
Strength	150 (X, Y, Z) mT/m @ 50 A
Linearity (for entire imaging volume)	better than 6.5%
Slew rate (T/m/s)	750 T/m/s @50A/200us
Electrical Requirements	
220-240 VAC, 15 A, single phase in countries using 220-240V	
208 VAC, 15 A, single phase in countries using 120V	

* Product specifications are subject to change without prior notice.

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