

INTEGRATED GRADIENT AND SHIM COIL SYSTEM FOR ANIMAL MR Model BFG-400/260H-S5

Application in imaging of primates - Designed for high speed EPI and DWI.

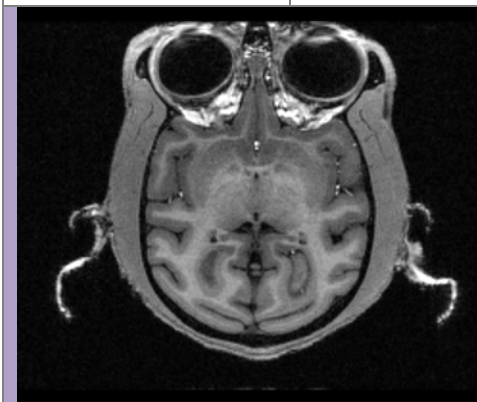
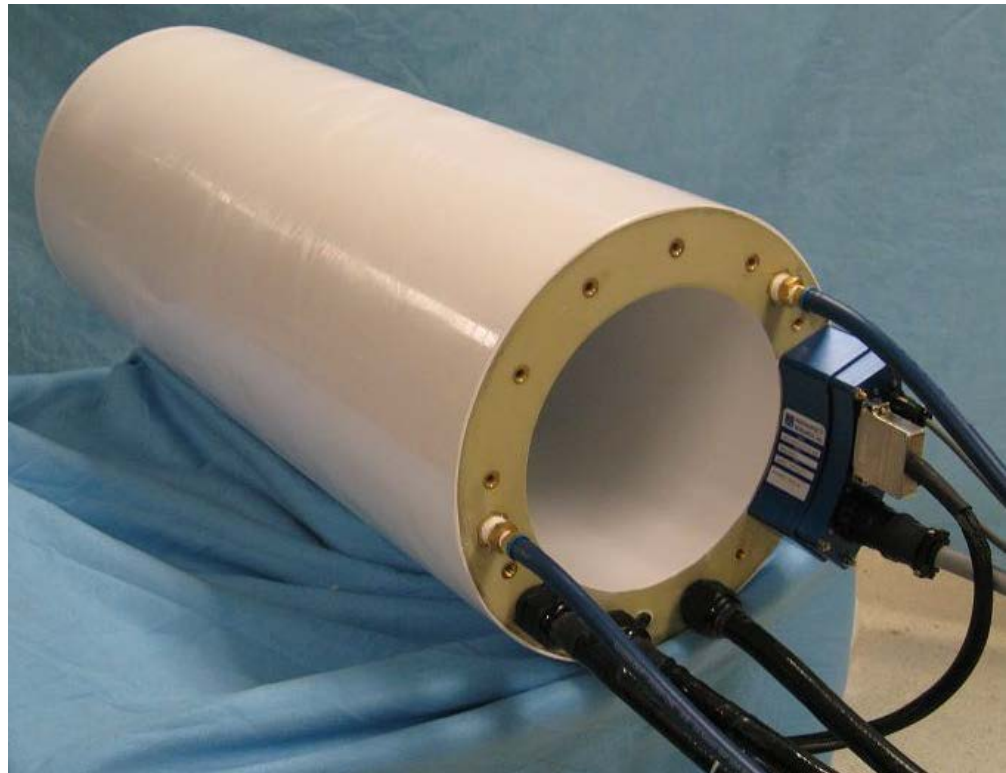
Technical Specifications

Shielded Gradient Sub-System	
Gradient Strength	
600A Peak	465 mT/m
Peak Values	
Peak Current	600A
Peak Voltage	1500V
Rise Time	
Max Slew Rate	1800 T/m/s
600 A, 1500 V	300 us
Shim Sub-system 10A typ.	
5 Shim Channels	Strength
Power supply 10A	$^1\text{H Hz/cm}^n/\text{A}$
Z2	27
ZX/ZY	81
C2/S2	33
Dimensions	
Internal Diameter	260 mm +/-1
External Diameter	400 mm +/-5
Field linearity (design)	
150 mm DSV	+/- 5%
170 mm DSV	+/- 10%
Cooling system	
Water	Flow at 6 bar
Typical	10 l/min
Temperature monitoring	
Type	Number
PT-100	6
PTC	6
NTC-32	6

Construction Aspects

Materials
Oxygen-free copper, fiber glass, epoxy resins, ceramics
Cooling system
Forced water circulates in multi-path cooling circuits with independent feeds. Redundant temperature sensors ensure accurate temperature control. The whole system is impregnated with high thermal conductivity resin.
Cabling
Imagrad™ coaxial cables
Support fixtures
Compatible with standard magnet structures
Durability
Vacuum impregnated with resin for decreased vibration and increased durability

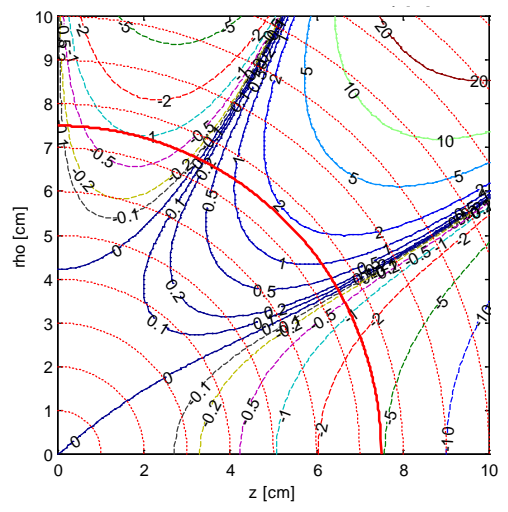
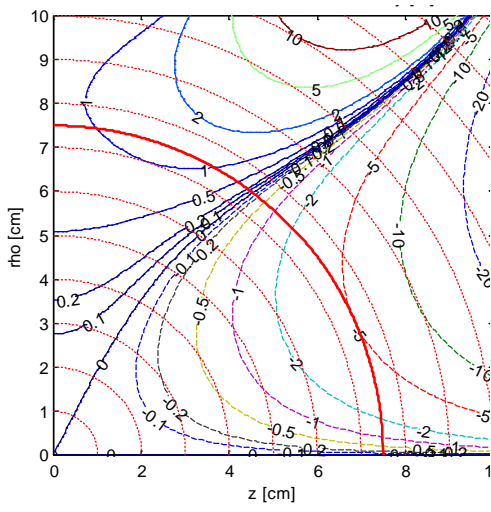
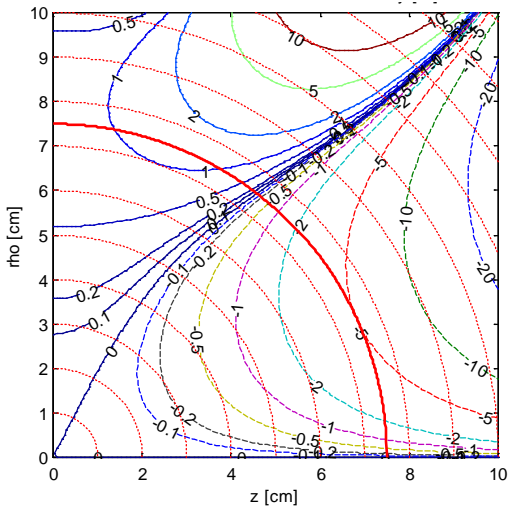
System ready for insertion (mounting fixtures not shown)



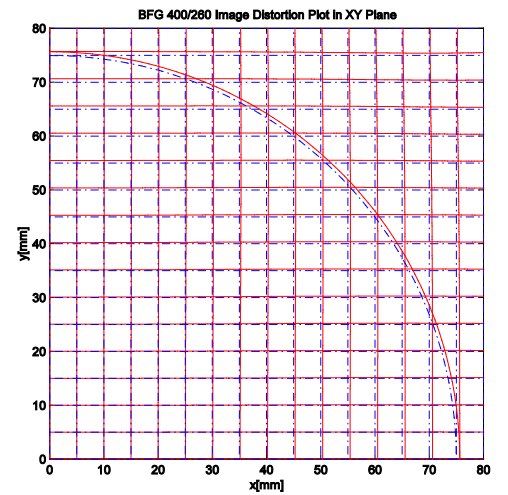
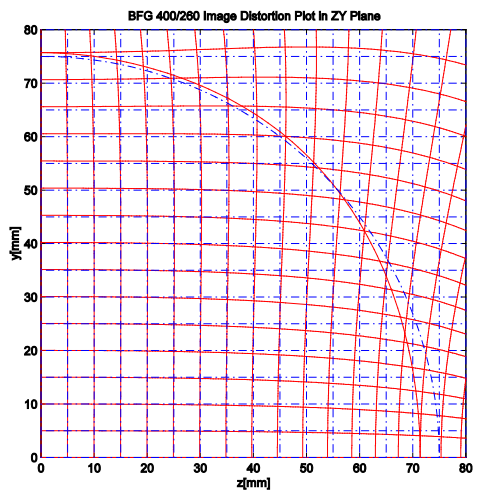
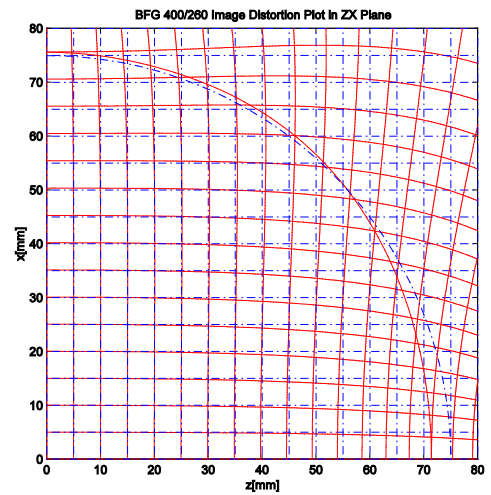
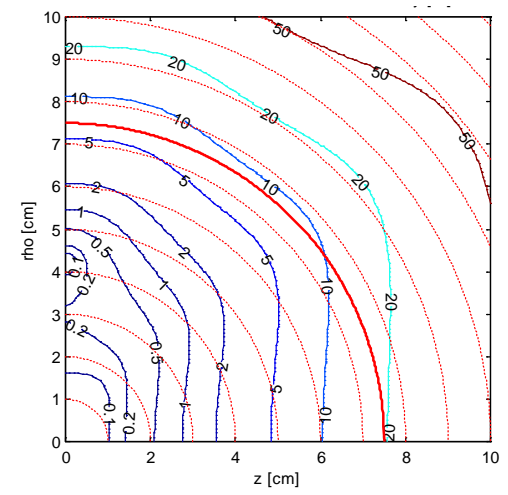
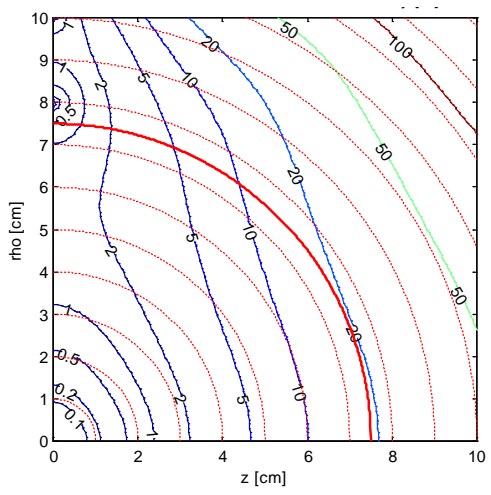
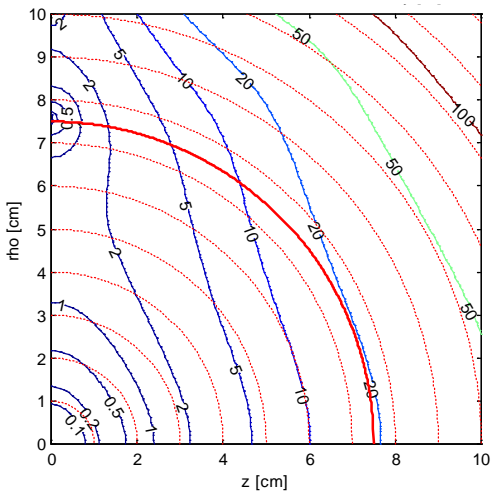
RARE monkey brain image with 12 echoes and TR/TE(eff) = 7000/36, resolution = .5x.5, and 1mm slice.
Images, acquired at 4.7T Bruker
Courtesy Dr. Martin Lizak, NIH Magnetic Resonance Facility

For investigational use only

Field Linearity, X, Y, Z



Gradient Uniformity, X, Y, Z



**Specifications subject to change pending improvements in technology and design.
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