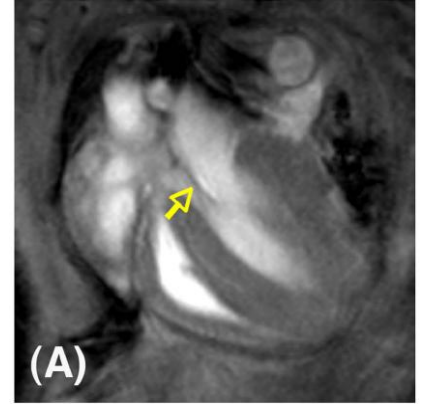
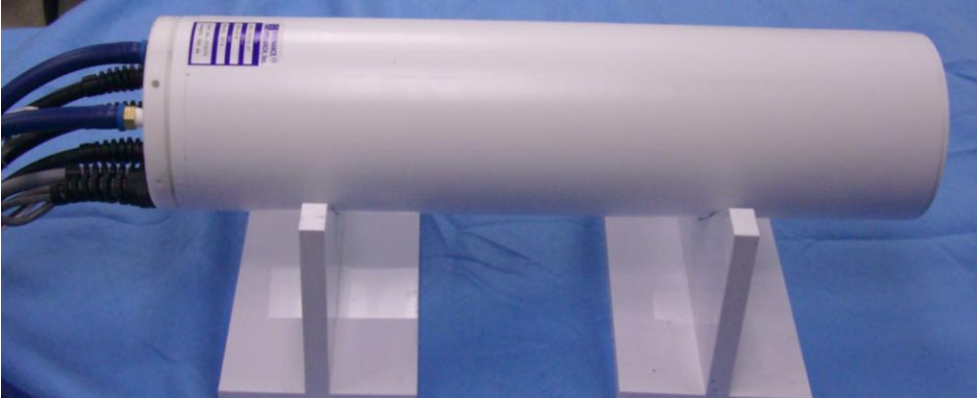


# 1,500 mT/m Integrated Gradient and Shim Coil for Small Animal MRI

## Model BFG-113/60-S6



### Gradient Sub-System

Gradient Strength	
150A, 300 V	1,500 mT/m
Dimensions	
External Diameter	113 mm
Internal Diameter	60 mm
Rise Time	
150 A, 300 V	<100 $\mu$ s
Field linearity	
45 mm DSV	+/-5%
Z0 Compensation	
	Yes

### Shim Sub-System

6 Shim Channels Maximum Current 5A per channel	
Shim Channel	Shim Strength $^1\text{Hz}/\text{cm}^n/\text{A}$
Z0	2,100 Hz/A
Z2 *	1,840
ZX/ZY	1,700
C2/S2	1,000

\* NetZero non-coupling coil

Specifications subject to change

### Normal Mouse Pup, 6-week old

The short TE reduced motion and flow artifacts 2D cine imaging in a mouse weighing significantly less than 20 g.

FLASH cine in a normal mouse with cardio-respiratory gating:

FOV=25 mm (matrix 200 x 200)

In-plane resolution=125 x 125  $\mu$ m

Slice thickness=1 mm

Flip angle=30 degrees

TE=1 ms, Nex=4.

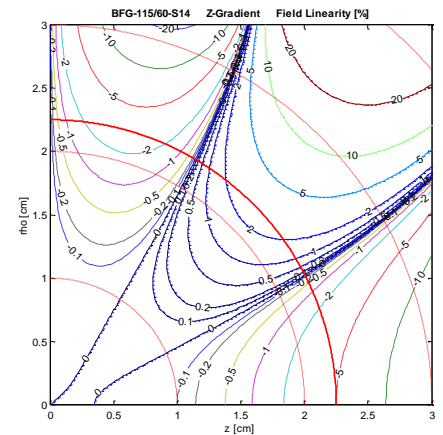
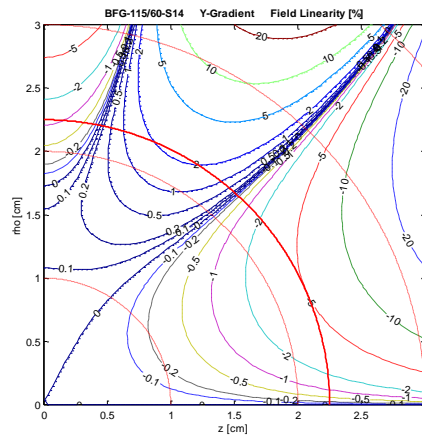
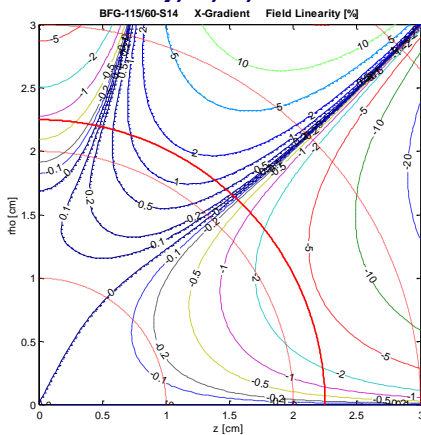
Courtesy of Dr. D. Sosnovik, MGH

### Construction Aspects

Materials
Oxygen free copper, fiber glass, epoxy resins
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

### Field Linearity, X, Y, Z



Resonance Research, Inc.

6 Cook Street, Billerica, MA, USA, 01821 - Phone: (1) 978.671.0811 - e-mail: rricorp@rricorp.com - www.rricorp.com