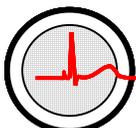


MR-compatible Single Pump Animal Heating System



Control animal temperature in MR

- Flexible heating pads for small animals
- Heating blankets for large animals
- Good temperature response
- System components located near the magnet
- Easy to use



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MR-compatible Single Pump Animal Heating System

The Single Pump Animal Heating System consists of a Fluid Heater Module, a Single Pump Circulator Module, a Reservoir and tubing to connect the Heater Module to a Heating Pad or Blanket in the magnet bore. The system operates with a constant flow of less than 2 GPH with pressure less than 10 psi. Fluid volume is approximately 2 liters. The outlet temperature of the Heater Module is controlled around a user selected set point by SAll software running on a Windows based PC. The Circulator Module consists of a circulation pump, radiator and fan. The pump is low noise, 30 dB at 1 meter, with a service life of 30,000 hours. The Circulator Module will operate in a magnetic field of 100 gauss or less. It has a high magnetic field warning light which illuminates in a field greater than 100 gauss.

Response is better than 30 seconds for a 1 °C temperature rise. Cooling is adequate to maintain the reservoir more than 5 °C below the output temperature of the Heater Module which allows a response for a 1 °C temperature fall of less than 45 seconds.

Specifications

Fluid Heater Module

Input connections	power, control, fluid (2)
Output connections	fiber optic data, fluid (2)
LED indicators	power on – green heater on - yellow
Control	fiber optic pulse width modulation
Power	115 VAC, 4 Amps 230 VAC, 2 Amps
Size HxWxD, cm	16.4x8.9x26.0
Weight, with water	3.3 Kg

Single Pump Circulator Module

Input connections	power, fluid
Output connection	fluid
LED indicators	power, high magnetic field
Power	12 VDC, 1 Amp
Size HxWxD, cm	10.8x22.9x20.3
Weight	2.3 Kg

Reservoir

Size HxWxD cm	8.3x10.2x20.3
Weight, with water	1.0 Kg

Flexible heating pads ODxLxT mm:

mouse	38x76x3
large mouse	48x102x4
rat	57x152x5

Curved heating pads WxLxT mm:

mouse	30x76x3
large mouse	35x102x4
rat	40x152x5

Flat heating pads WxLxT mm:

mouse	30x76x3
large mouse	35x102x4
rat	40x152x5

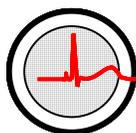
In bore tubing for heating pads

length	2.0 m inlet 2.0 m return
OD	4.0 mm

Heating Blankets WxLxT mm:

medium	240x450x5
large	300x560x5

Note: heating blankets have 3 m of free tubing to allow connection to the Heater Module without the use of connectors.



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