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
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 SAII 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.