SCTR – Temperature Control System for Rodents

Neos Bitoec's SCTR system allows to control the temperature of a small rodent (mouse or rat) during surgery.

The endorectal probe measures the body temperature, and the control unit maintains this temperature within an interval of typically +/-0.5ºC around the setpoint.

The temperature of the heating surface is limited to avoid injuries to the animal skin directly in contact with this surface.

The target body temperature and the heater limit temperature can be easily modified by the user, and both of them are stored in non-volatile memory, so that these settings remain unchanged even after switching off the unit.

Robust control algorithm based on a cascaded double PID:

The SCTR system calculates the analog value of power to be applied to the heater element by means of two cascaded proportional – integral – differential (PID) algorithms. This configuration allows a correct operation both for rat and mouse.

Solid heater mat, finished in anodised alluminium:

To facilitate animal handling during surgery. Upper surface made in anodised aluminium (smooth, easy to clean finish).

Technical Specifications:

- Resolution 0.1ºC
- Accuracy 0.2ºC
- Endorectal probe setpoint ..... 25ºC ÷ 50ºC
  - Typical value 37ºC
- Heating element maximum temperature ..... 30ºC ÷ 55ºC
  - Typical value 41ºC
- Control unit dimensions ..... 230 x 170 x 55 mm
  - Weight ..... 1710 g
- Heater mat dimensions ..... 240 x 178 x 13 mm
  - Weight ..... 660 g
- Endorectal probe dimensions ..... 2 mm ∅ x 30 mm length
- Mains supply ..... 220 V AC, 50 Hz

  (Option available: 110V AC, 60 Hz with readings in ºF).