

# HPT-2A, Heated Perfusion Tube

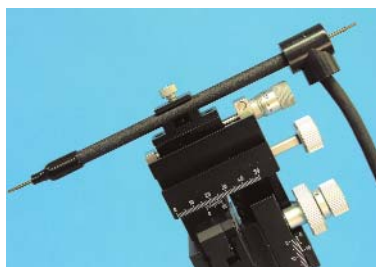
Performing electrophysiological experiments at ambient temperatures limits their physiological relevance. Specific ion channels are also exquisitely sensitive to temperature and temperature fluctuations. If you have considered performing experiments at non-ambient temperatures but have hesitated because of the difficulty, **ALA Scientific Instruments HPT-2A** and **npi electronic's** temperature controllers can make these important experiments easier to perform.

The **HPT-2A** gives high performance in a small robust package. Our proprietary packaging and cabling insures a noise free environment, and the unit can handle substantial power for rigorous heating applications requiring high flow rates.\*



## HPT-2A features:

- \* **Six-foot flexible cable for easy positioning of unit.**
- \* **Compact-front end simplifies positioning near cell.**
- \* **Isolated sensor & power outputs minimizes electrical noise.**
- \* **Compatible with all npi electronic temperature controllers.**
- \* **Can be cannulated w/Teflon tubing for a disposable lining.**
- \* **Accommodates high flow rates.\***



HPT-2A with a **MM-33** manipulator



**MTC-20/2S** single channel temperature controller with 2 temperature displays

### Specifications:

Tube length: 90cm  
 Tube diameter: 8.3mm  
 Resistance: 4 to 5 Ohms  
 Tubing: ID 1.2 mm, OD 1.5mm  
 Optional Teflon tubing: 0.66mmx1.2mm  
 Max. Voltage: 3V (For Short Periods)  
 Power: ~ 2 watts  
 Weight: 35g (without cable)  
 For high flow rates 4-5 volts can be used, but system must be shut down before solution stops flowing to avoid melt-down of heater core (not covered under warranty).

### Ordering Information

HPT-2A	Heated perfusion tube with integrated thermistor, flexible cable, and DIN connector
MM-33T	Manual mechanical manipulator with tilt stand, specify right or left hand operation
MTC-20/2S	Single channel desktop temperature controller with two temperature display channels
TS-1	Thermistor for 2nd temperature display
THERDIN	Thermistor connecting cable to MTC-20/2S

\*See manual for special precautions about use of HPT-2A in high-wattage, high flow mode  
 Specifications are subject to change without notice