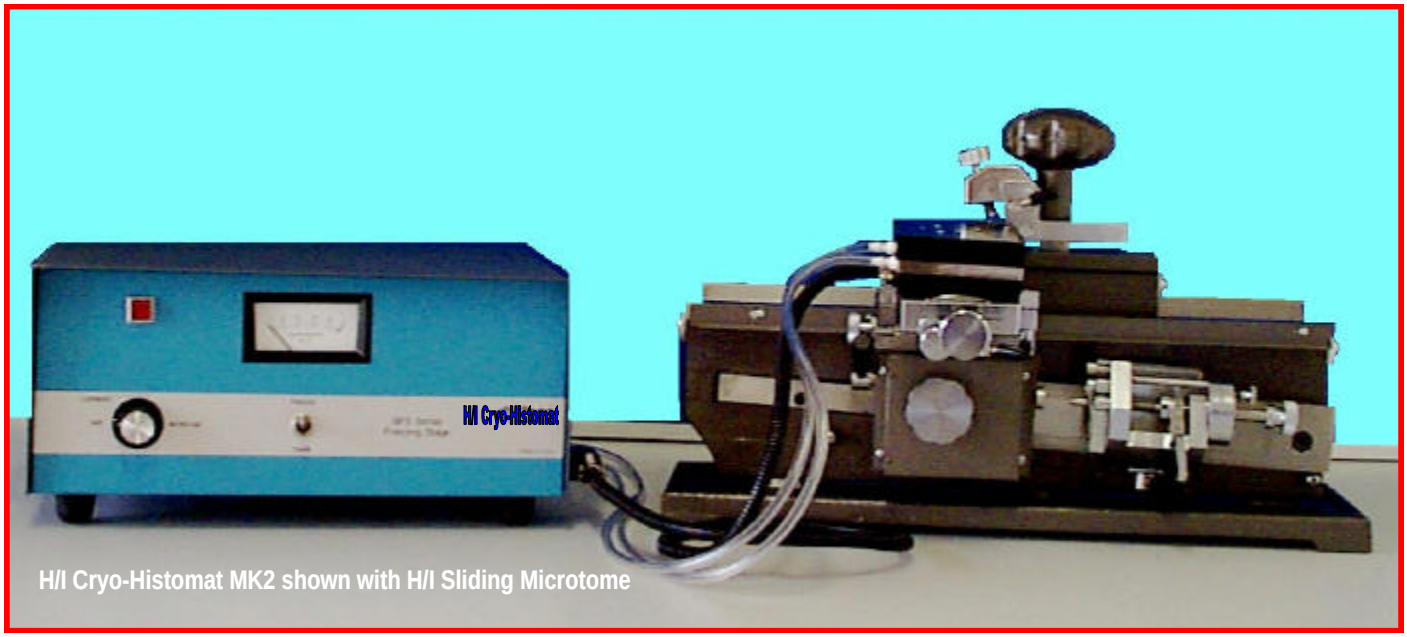
H/I Cryo-Histomat® MK-2



H/I Cryo-Histomat MK2 shown with H/I Sliding Microtome

THERMO-ELECTRONIC MICROTOME FREEZING ATTACHMENT

Features and Benefits:

- Converts any standard microtome for frozen sectioning
- Fast freezing preserves cell detail
- Positive thaw control for quick specimen change
- Low running cost - about 2 cents per hour
- Compact - conveniently portable
- "Solid State" - no moving parts, no wear, high reliability
- No circulating refrigerants or cumbersome CO_2 cylinders
- Section temperatures to -40º C
- Noiseless - vibration free

CRYO-HISTOMAT MK-2 *is a "new technology" freezing attachment for any microtome. Fundamentally different from other freezers,* ***Cryo-Histomat*** *dispenses with bulky, inconvenient refrigerants. Freezing is accomplished and maintained by the "Peltier Effect" in a compact, easy-to-operate thermo-electric device.*

Installation

Quick and easy ... just place the cryo-stage in the clamp of your microtome, plug into mains outlet and connect the plastic tube to a lab water faucet. Alternately, in areas remote from water supply, use the H/I closed circuit pump and reservoir. Only a moderate flow of water is needed to carry off heat removed from the specimen by the Peltier module.

Operation

Simple and convenient ... Place your specimen on the Peltier stage suitably orientated for the microtome, switch on and adjust the current control until meter reads 10 amps. Freezing at the specimen/stage interface in complete within seconds. If reorienting is necessary, or to remove tissue block after sectioning is completed, depress the spring toggle switch to "thaw" and hold. The block will free and refreeze to the stage when the switch is released. Freezing can be maintained indefinitely.

Safety is Built In

Only low voltage is transmitted to the cryo-stage; it never exceeds 25 v. The stage is protected from overheating by thermal switch within the module which cuts off power to the solid-state devices well before a destructive temperature is reached.

SPECIFICATIONS

CONTROL UNIT
Compact, contemporary design. Metal Chassis and case with two carrying handles and rubber feet. Finished in charcoal gray textured vinyl with light blue facia. On-off and freeze-thaw switches, red indicator light, current-temperature control and ammeter 0 - 15. Six (6) foot mains supply cord with molded 3-pin plug.

Input: 110-125 or 220v., A.C. Output to stage: Maximum 25v., D.C

OPERATING INSTRUCTIONS
Supplied for routine histology - plus suggestions for best temperatures and advanced applications.

CRYO-STAGE
"Solid State" exchanger employing "Peltier Effect"; special design maintains integrity under conditions of extreme thermal expansion/contraction; DC low voltage connector; soft vinyl tubing for water supply.

Stage Area Model A: 32 x 32mm - larger stage area available for sliding microtomes (see ordering information below)

FREEZING RANGE
To -40º C. under normal ambience of water and laboratory environment

MOUNTING HARDWARE
Three adaptors; block 19mm square; two short pillars 9.5 and 120mm diameter; for all standard microtomes.

PHYSICAL DATA
Width: 33 cm (13") plus 2 handles 6 cm; Depth: 25.5 cm (10"); Height: 16.5 cm (6.5"); Weight: 9 kilos net, 12 kilos gross.

ACKNOWLEDGEMENT: to Jean Peltier, who in 1834 discovered the principle of thermoelectric cooling. Utilization became possible only with spin-off from transistor technology.

Ordering Information:

MANUAL TEMPERATURE CONTROL
Models A and B control units are identical in appearance and operating Model B has increased output to operate larger stage.

Cat.No.

- Model A, 30 x 40 mm cryo-stage - recommended for clinical use on standard rotary, sliding and freezing microtomes. 110-125v 50/60Hz 11 00 01
- Model B, 75 x 80 mm cryo-stage - for larger sliding microtomes 11 00 02

AUTOMATIC TEMPERATURE CONTROL
Generally as manual control Cryo-Histomat but with specimen temperature feed-back via microprobe needle for automatic control. Desired temperature may be set in the range -40º C and read to 0.1º C. Probe and readout unit may be used independently as laboratory thermometer. Probe supplied 24 or 30 gauge. 110-125v; 50/60Hz

- Model A auto, 30 x 40 mm cryo-stage 11 00 03
- Model B auto, 75 x 80 mm cryo-stage 11 00 04

· **MICROPROBE THERMOMETER**

Use with manual control Cryo-Histomat to show temperature of tissue specimen - or as laboratory thermometer
Microprobe thermometer; temperature range - 100º to + 170º in 5 steps; reads to 0.1º C.
Probe supplied 23 gauge, 3cm long 11 00 12

· **CLOSED CIRCUIT COOLANT SYSTEM**

Allows Cryo-Histomat operation remote from water supply or where water must be conserved.
Water pump and 2 liter reservoir 110-125v, 60 cycle operation 11 00 10

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