

# H/I Cryo-Histomat® MK-3



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
- “Solid State” - no moving parts, no wear, high reliability
- Fast freezing preserves cell detail
- No circulating refrigerants or cumbersome CO<sub>2</sub> cylinders
- Positive thaw control for quick specimen change
- Section temperatures to -40° C
- Low running cost - about 2 cents per hour
- Noiseless - vibration free
- Compact - conveniently portable

**CRYO-HISTOMAT MK-3** 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 black facia. On-off and freeze-thaw switches, red indicator light, current-temperature control and ammeter monitored via digital display. 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 areas available for sliding microtomes (see ordering information below)

**FREEZING RANGE**

To -40° 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.

**Ordering Information:**

HACKER INDUSTRIES CRYO-HISTOMAT MK-3 FREEZING STAGE UTILIZES A NEW INNOVATIVE CONTROLLER FEATURING SWITCHING POWER SUPPLIES THAT ARE OPERATED 100% TO ENSURE COOL OPERATION AND CONTINUOUS SERVICE. MICROPROCESSOR CONTROLLED. OVER TEMPERATURE ALARM WITH POWER SHUT DOWN IN THE EVENT OF INADEQUATE FLOW OF COOLING WATER OR OVER USE OF THAW FEATURE.

Continuous display of both set and run temperatures. 110V and 220V operation by switch selection

Model 1 controller with 30 x 40 mm stage .....	11 00 21
Model 2 controller with 75 x 80 mm stage .....	11 00 22
Model 3 controller with 1.5 x 1.5 inch stage .....	11 00 23



- **ECV-1**  
electronically operated solenoid valve enables user to activate tap water supply with the controller power switch  
..... 11 00 12

- **CLOSED CIRCUIT COOLANT SYSTEM**  
Consists of pump and tank to provide a convenient reservoir of cooling water when no source of tap water is near work area. Seven gallon capacity is adequate for operating Model 1, 30 x 40 stage up to 8 hours and larger stages for up to 4 hours  
..... 11 00 10



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