

Please ask for a copy of our free publication 'The Care and Use of Diamond Knives'.

'Old' knives of a different make can often be used to buy diamond knives at a discount - please ask

TAAB Diamond Knife Wetting Agent

Most new diamond knives are hydrophilic and should not present problems with edge wetting. However have you got an older knife that causes problems or is the exception to the rule? Then our wetting agent either full strength or diluted should solve your problem for several weeks before re-treatment is needed.

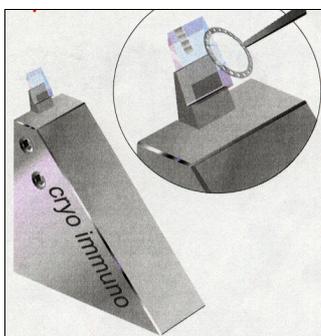
W101 Diamond knife wetting agent



Standard 35°/45°



Cryo 35°/45°



Cryo immune knife



Ultrasonic knife with controller

Diamond Knives

We are able to offer a choice of the market leading brands of diamond knives for ultrathin and semithin sectioning. All knives are guaranteed and details of their care and use are available in data sheet form from TAAB free of charge. For those people who have never used a diamond knife or who would like to try another brand, loan knives are available.

Diamond knives are not only for those people with tough specimens where they produce results unobtainable with glass knives, but also for the hard pressed modern laboratory where time is of the essence and results are required without time-loss. Diamond knives have the ability to cut all manner of soft and hard specimens and section samples with mixed densities within the same block. They have a remarkable tolerance for producing results from difficult specimens that makes them an invaluable tool for any modern electron microscope laboratory.

The cost of the diamond knives is more than compensated for by the speed of production of useable results from imperfect embeddings or from samples unavoidably accepted from third parties where preparation quality is unknown. Diamond knives supplied by TAAB can be resharpened an infinite number of times at a price a little over half that of a new knife.

Diatome Diamond Knives for EM

Swiss diamond knives with an enviable reputation for reliability and performance.

Diatome knives for ultrathin ambient sectioning

Standard ambient knives

The standard holder is blue anodised with the diamond is ground to a 45° angle. **We now recommend 35° as a no-cost option for all standard work being the best compromise between performance and edge life.** We can offer black anodised boats for those who prefer them. The choice of holder does not affect the purchase price. The edge lengths available are as follows:

K065/15 1.5mm, **K065/20** 2.0mm, **K065/25** 2.5mm, **K065/30** 3.0mm, **K065/35** 3.5mm
K065/40 4.0mm

Diatome Cryo Knives

Standard cryo knives

Holders for cryosectioning are normally triangular (without flotation bath) and manufactured from a special alloy. They can be specified with a flotation bath and 35° or 45° angles at no extra cost. Knife sizes available:

K065/C/15 1.5mm, **K065/C/20** 2.0mm, **K065/C/25** 2.5mm, **K065/C/30** 3.0mm, **K065/C/35** 3.5mm and **K065/C/40** 4.0mm

Cryo immune knife for sucrose droplet and frozen hydrated sections

The cryo immune knife has a 35° or 25° diamond for lowest section compression and is the first cryo diamond knife with a plateau. The 35° gives optimised section pick-up resulting in the best section quality for immunocytochemistry using a loop and sucrose/methyl cellulose droplet. This method reduces the stress applied to the section and leads to better structural preservation. The 25° knife is designed for frozen hydrated specimens. Both are available only with 3mm edge.

K065/30/C/35 3mm Diatome Cryo immune diamond knife 35° for sucrose
K065/30/C/25 3mm Diatome cryo immune 25° for frozen hydrated

Please ask about cryo 25° knife for frozen hydrated sections

Diatome Ultrasonic Knife

A totally new concept in ultrathin sectioning giving practically zero compression, thinner sections, better structural preservation and easier sectioning of 'difficult' materials. The oscillations are strictly controlled in the horizontal plane. The results at room temperature are exciting but at low temperature are exceptional.

K067/30 3.0mm Diatome Ultrasonic oscillating diamond knife with controller

Diatome Cryo Trimming Knives

For successful ultramicrotomy precise trimming of the specimen is essential. The extreme sharpness of the Diatome trimming blades ensures accurate trimming with minimum mechanical damage resulting shiny surfaces that make alignment easier and safer. All three versions can be fitted into Leica or RMC cryo ultramicrotomes:

Cryotrim 20 and 45

The Cryotrim 45 produces pyramidal sides with an inclined angle of 45° and the Cryotrim 20 produces 20° sides. Both are ideal for:

- sucrose protected biological samples
- frozen hydrated samples
- polymers

K094/45 Cryotrim 45
K094/20 Cryotrim 20

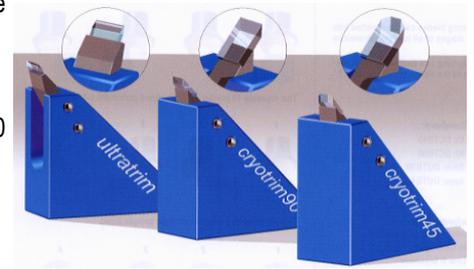
For all trimming and sectioning we recommend the use of the Static Line II Deioniser (see page 21)

Ultratrim

Produces 90° square sides and although useful for cryo sectioning is more suitable for:

- epoxy and acrylic embeddings
- polymers
- non ferrous metals

K094 Ultratrim trimming diamond 3mm
K094/4 Ultratrim trimming diamond 4mm

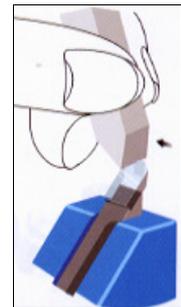


K094

Knife Cleaning Sticks

Ideal materials for cleaning diamond knives. Bevel one end to a 60° "V" with a degreased razor blade. Dip in ethanol 100% ethanol (50% for biological samples) and shake off the excess. Gently run the rod across the cutting edge without applying lateral pressure.

C097 Pithwood bundle of 10 pieces
C259 Polystyrene cleaning stick pack of 5



Diatome Diamond Knives for Light Microscopy

Histoknives for Light, Semithin and Materials Microscopy

Polished to a degree which provides excellent results for ultrathin materials sectioning, these knives are resilient enough to produce first class sections over a long period of time in the micron range for light microscopy.

Available in the following sizes:

K090/40 4.0mm, **K090/50** 5.0mm, **K090/60** 6.0mm, **K090/80** 8.0mm **K090/100** 10.0mm

Histo Jumbo

A 6mm Histoknife with a water bath large enough to accept 3" x 1" microscope slide.

K090/60/J 6mm Diatome Histoknife with jumbo water bath

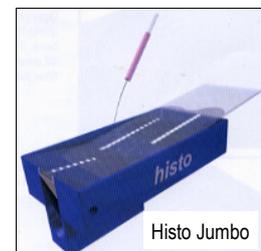
Diatome Cryohistoknife

A triangular knife with holder of special alloy suitable for low temperature cryostat sectioning in life science and materials applications.

K090/4/C Diatome 4mm Cryo Histoknife



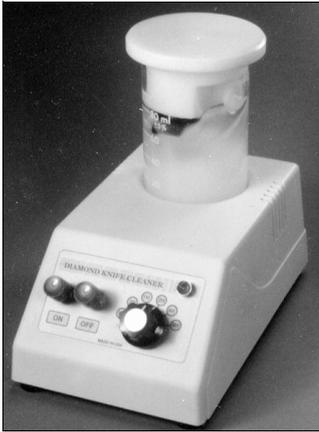
Histo



Histo Jumbo

Drukker Diamond Knives

These knives are no longer available

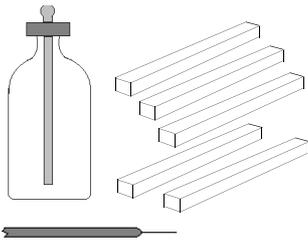


Diamond Knife Cleaner

This instrument has been specially designed for cleaning diamond knives. The diamond knife (any make with a 9.5mm base) is held in a special holder which fits into a 100ml beaker mounted on top of a magnetic stirrer turning at approximately 1800 rpm. Direction is reversed twice every minute. The cleaning liquid can be distilled water or one of the mild surfactants recommended in our "Care and use of diamond knives" data sheet. The six position timer can be set from 15 minutes to eight hours. Dimensions 4¾" x 3" x 2½" high (with beaker in place 5½")

C205/1 Diamond knife cleaner 240V

C205 Diamond knife cleaner 120V



Diamond Knife Cleaning Kit

A kit for cleaning the edge of diamond knives consisting of Tween 80 solution (100mls), dropper bottle, polystyrene sticks, single bristle brush and cleaning instructions.

C262 Diamond knife cleaning kit

Microstar Diamond Knives

American knives with a huge range of holders. Each knife has a 12 month warranty against any defects. The following types of knife are available:

SU Standard Ultramicrotomy **CW** Cryo Wet **CD** Cryo Dry

MT Materials Science **LH** Light Microscopy **LC** Light Microscopy Cryo

There are eight different boat styles but we supply standard black anodised holder type SU with oval cavity unless otherwise instructed, or for cryo, triangular stainless steel with non-glare finish. Normal knife angle is 45° but 35° and 55° are no-cost options for some applications.

Microstar ultrathin knives Types SU, CD, CW, in sizes:

K080/10 1.0mm	K080/12 1.2mm	K080/14 1.4mm	K080/15 1.5mm
K080/16 1.6mm	K080/18 1.8mm	K080/20 2.0mm	K080/22 2.2mm
K080/24 2.4mm	K080/25 2.5mm	K080/26 2.6mm	K080/28 2.8mm
K080/30 3.0mm	K080/32 3.2mm	K080/34 3.4mm	K080/35 3.5mm
K080/36 3.6mm	K080/38 3.8mm	K080/40 4.0mm	K080/42 4.2mm
K080/44 4.4mm	K080/45 4.5mm	K080/46 4.6mm	K080/48 4.8mm
K080/50 5.0mm	K080/52 5.2mm	K080/54 5.4mm	K080/55 5.5mm
K080/56 5.6mm	K080/58 5.8mm	K080/60 6.0mm	

Microstar ultrathin knives type MT (Materials Science)

Ultramicrotomy knives suitable for difficult materials samples and not polished to the same degree as SU knives. Available in the following sizes:

K081/20 2.0mm	K081/25 2.5mm	K081/30 3.0mm	K081/35 3.5mm
K081/40 4.0mm	K081/45 4.5mm	K081/50 5.0mm	K081/55 5.5mm
K081/60 6.0mm	K081/65 6.5mm	K081/70 7.0mm	

Microstar light microscope knives types LH

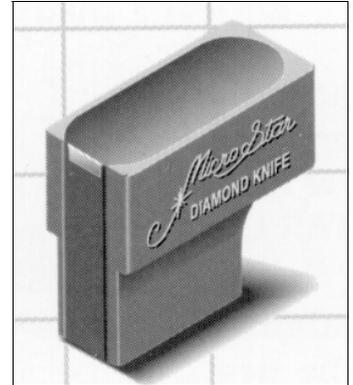
Knives suitable for thicker sections (>1µm) on ultramicrotomes or special motorised rotaries. Available in the following sizes:

K082/40 4.0mm	K082/45 4.5mm	K082/50 5.0mm	K082/55 5.5mm
K082/60 6.0mm	K082/65 6.5mm	K082/70 7.0mm	K082/75 7.5mm
K082/80 8.0mm	K082/85 8.5mm	K082/90 9.0mm	K082/95 9.5mm
K082/100 10.0mm			

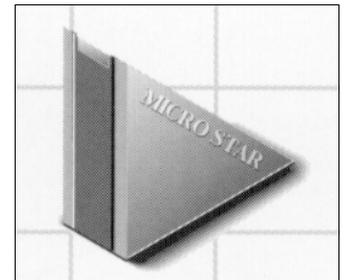
Microstar light microscope knives types LC

Knives suitable for cryostat sectioning (>1µm) or low temperature materials EM. Available in the following sizes:

K083/40 4.0mm	K083/45 4.5mm	K083/50 5.0mm	K083/55 5.5mm
K083/60 6.0mm	K083/65 6.5mm	K083/70 7.0mm	K083/75 7.5mm
K083/80 8.0mm	K083/85 8.5mm	K083/90 9.0mm	K083/95 9.5mm
K083/100 10.0mm			



Microstar type SU



Microstar type CD

Glass Knives and Accessories

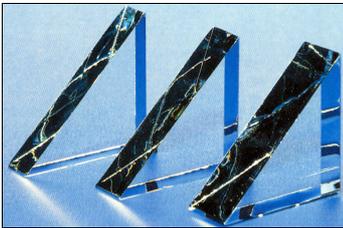


Leica EM KMR2 Glass Knifemaker

This new design EM KMR2 glass knifemaker from Leica has simpler operation and more consistent results from all thicknesses of glass knives than other models. The knives are triangular after Latta and Hartman. With the breaking mechanism now above the glass, easier manipulation of the glass and a new design scoring wheel and cartridge, the "Balanced Break" technique can be utilised using a slower break providing better knives with less distortion. New adjusters with self-locking screws allow the glass to be positioned so that two knives with similar sized counterpieces can be made. Previously, glass knives would have a final angle of 55-60° but with the EM KMR2 they are much nearer to 45° and much more suitable for cryosectioning.

Glass of thicknesses 6, 6.4, 8 and 10mm can be routinely broken making the knifemaker suitable for ultramicrotomy or histology.

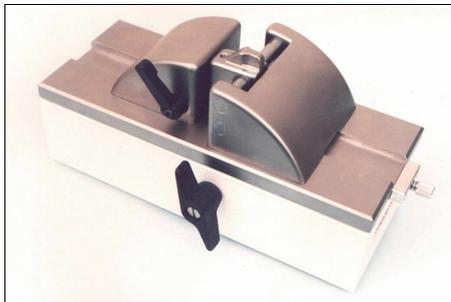
K111 Leica EM KMR2 glass knifemaker



TAAB Histoknifemaker

An easy to use knifemaker of substantial construction for the reliable production of Ralph glass knives for use in histology or plastic sectioning.

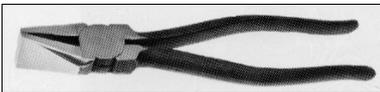
Preset with simple controls the instrument allows inexperienced operators to quickly produce knives of excellent quality. The standard instrument will produce knives from 25.4mm (1 inch) wide Superglass strips (or any other 6mm thick glass). An instrument for 38mm (1½") glass is available to special order. Both instruments are easily cleaned to maintain years of accurate and safe knife making. Instruments delivered with tools and a pack of appropriate glass.



K058

K058 TAAB Histoknifemaker for 25.4mm glass
K058/W TAAB Histoknifemaker for 38mm glass

Glass Breaking Pliers



G103 Very strong to give life-long trouble free use. They have alignment marks for accurate positioning on the glass

Manual Glass Scorer



G051 High quality tungsten cutting wheel with shaped handle for comfort and control

Knifemaker Glass for Electron and Light Microscopy

TAAB Superglass is specially selected high quality glass precision cut for reproducible results. Glass ages quickly after scoring so it is always best to score and break immediately and not store previously scored glass strips. We recommend all glass is washed with a dilute detergent in water before use and dried using non fibrous cloth or tissue.

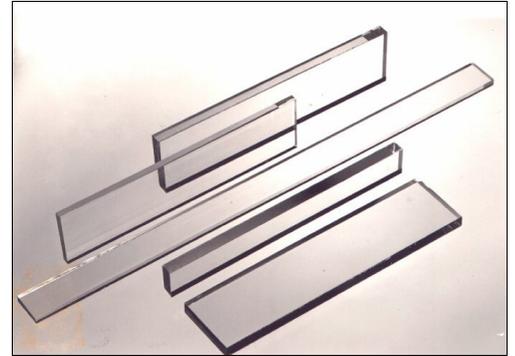
Glass for TAAB and older Sorvall/RMC Knifemakers

- G065** TAAB Superglass 8" x 2" x 6mm pack of 50 sheets
- G066** TAAB Superglass 8" x 2" x 10mm pack of 30 sheets
- G070** TAAB Superglass 8" x 2" x 12mm pack of 25 sheets

Glass for LKB/Reichert/Leica and newer RMC Knifemakers

- G067** TAAB Superglass 16" x 1" x 6mm pack of 30 strips
- G067/1**TAAB Superglass 16" x 1" x 6mm pack of 10 strips
- G067/T**TAAB Superglass 16" x 1" x 6.4mm pack of 30 strips
- G137** LKB/Leica ultramicrotome glass 16" x 1" x 6.4mm pack of 30
- G105** TAAB Superglass 16" x 1" x 8mm pack of 24 strips
- G159** TAAB Superglass 16" x 1" x 10mm pack of 15
- G154** TAAB Superglass 8" x 1" x 6mm pack of 32 *
- G106** TAAB Superglass 8" x 1" x 8mm pack of 28 strips *
- G068** TAAB Superglass 8" x 1" x 10mm pack of 20 strips *
- G081** TAAB Superglass 16" x 1½" x 6mm pack of 20 strips

* Can also be used on TAAB Glass Knifemaker Mk2

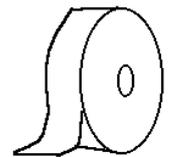


Histological Grade

- G084** TAAB Superglass 16" x 1½"(38mm) x 6mm pack of 20 strips
- G085** TAAB Superglass 16" x 1"(25.4mm) x 6mm pack of 30 strips

Boat Making Materials

- T066** **Silver Tape** roll 9mm wide x 66m long for making boats (non conducting)
- T402** **Silver Tape** roll 12mm wide x 66m long for boats
- T065** **Heavy duty tape dispenser** for reels with internal dimension of 75mm
- T366** **SLEEK Tape.** Self sealing tape one inch wide for making boats without wax. Easy-to-follow guide available on request
- W050** Dental wax pink, toughened, 1 box. Each box contains 1lb (454g), 22 sheets

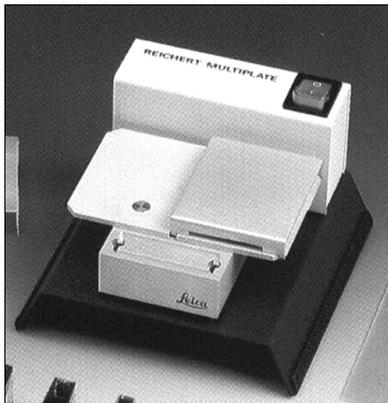


LKB/Leica Preformed Trufs

Moulded disposable black plastic troughs that speed up and simplify the preparation of glass knives for ultramicrotomy without the use of tape. The uniform shape gives reproducible lighting parameters and water levels. They are easily sealed to the glass knife with molten wax using the LKB/Leica Multiplate and the large water bath allows large area sectioning or long ribbons to be produced.

- T336** Trufs for boats 6.4mm wide sealed pack of 50
- T341** Trufs for boats 6.4mm wide sealed pack of 500
- T445** Trufs for boats 8mm wide sealed pack of 500 pieces
- T446** Trufs for boats 8mm wide sealed pack of 50 pieces
- T447** Trufs for boats 10mm wide sealed pack of 500 pieces
- T448** Trufs for boats 10mm wide sealed pack of 50 pieces





LKB/Leica Multiplate

A compact ultramicrotomy hotplate with three decks at 95°C, 80°C, and 60°C.

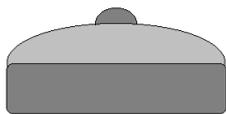
Attaching Trufs

The wax melting deck is at 95°C to provide wax for attaching Trufs. By placing Trufs on this deck the wax is distributed evenly on the edges so they attach easily and securely to the knives.

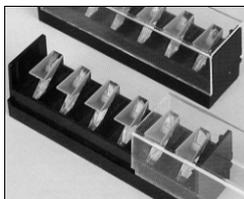
Drying and heating

The drying deck has a temperature of 80°C, ideal for drying and attaching semi-thin sections to slides. The deck is large enough to dry 6 slides at a time. By mounting a raised plate over half of the drying deck a heating deck of 60°C is produced for staining sections.

H065 Multiplate 220/240V 50 Hz



K063/64



K107

Glass Knife Storage Boxes

TAAB have available two economically priced storage boxes for 6mm or 10mm and 12mm triangular glass knives. The 6mm storage box with accommodate 10 knives and the 10/12 box 6 knives in a secure and clean environment. The knives are held in slots formed in a silicon rubber insert and protected by a removable plastic dust cover. Ideal for transit around the laboratory.

K063 Knife storage box 6mm

K064 Knife storage box 10/12mm

The **Leica** knife box has a clear sliding lid and can hold up to six 6mm knives with or without Trufs.

K107 Leica knife storage box (3 pieces)

Ultramicrotomy Heat Pen



P184

A controlled, safe and efficient way of reducing compression in plastic sections. Eliminates the disadvantages of vapour methods which subject the operator to a health hazard. Provides an easily controllable amount of heat just above the floating sections. Potentiometer control for adjustment of output voltage and LED auto zero current meter.

Specification

220V 50Hz or 120V 60Hz

Dimensions: 65 x 130 x 114mm Power cable 1.8m Penholder cable 1.5m

Weight approx. 480gms

P184 Heat pen 220V

PP184/1 Heat pen 120V

P184/F Replacement filament

Disposable Heat Pen



P273

Low priced disposable units using alkaline batteries as the power source. Compact and portable, 20cm long with protective cap. Safer and more controllable than organic vapours for expanding sections in the ultramicrotome water bath.

P273 Disposable heat pen

Absorbent Paper Points

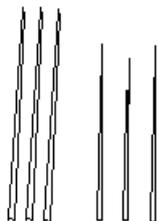
Machine rolled paper with a tapered end which offers good water absorbency and assists in the accurate removal of surplus water from the knife boat, the block face, between the tines of tweezers or from grids. No random fibres to obstruct or damage the specimen.

Available in several sizes:

P400 200 assorted point sizes 15, 20, 25, 30, 35 and 40

P401 200 assorted point sizes 45, 50, 55, 60, 70 and 80

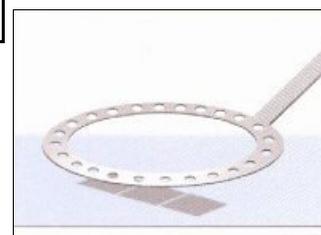
Also available in individual sizes. Point size increases as the number increases.



Section Perfect Loop for light and electron microscopy

The Perfect Loop allows consistent section pick-up. The outside diameter is the same as the grid and the thickness about 40µm. As the grid and loop are the same diameter they attract one another without section stress or creasing and the section remains in place on the grid without fail.

L138 Perfect Loop EM set **L141** 3mm loop only **L141/5** 3mm loop (set of 5) **L142** Handle only
L143 Perfect Loop LM set 7mm Ø **L144** 7mm loop only **L144/5** 7mm loop (pack of 5) **L145** 7mm loop handle



Section Pick-Up Loop

For those people requiring a ready-made EM loop. Made from nichrome wire and fitted into a black anodised aluminium handle, it is ideal for transferring sections from water surfaces to a specimen grid or microscope slide. Also useful for replica and freeze fracture work. Available with stand.

L089 Section pick-up loop **L090/S** Stand **L090** Section pick-up loop with stand



L090



L092/93

Wire Loops (to Fit Wire Holder W080)

L092 Nichrome wire loop pack of 3

L093 Platinum wire loop pack of 3

Wire Holder

Nickel plated brass fitted with screw chuck. Suitable for wire or needles up to 0.56mm (24SWG)

W080 Wire holder 150mm long



W080

Nickel/Chrome Wire 80%/20% 'Nichrome'

For making nichrome section loops by hand, 0.25mm Ø (30SWG)

W079 Nichrome wire 10m



W079

Razor Blades

Standard single edged, rigid backed blades ideal for sectioning, trimming etc. Packed in boxes of 100 blades

B054 Blades grade 2 carbon steel box of 100

B301 Blades grade 2 carbon steel **Teflon coated** box of 100

B055 Blades grade 2 carbon steel 10 x 100

B056 Blades grade 1 *stainless steel* box of 100

Heavy Duty. For those wishing for a stronger, more rigid blade. Similar to B054 but without the end notches. Added strength with a superior cutting edge.

B146 Blades grade 2 heavy duty carbon steel box of 100

Holder for Single Edge Blades

This holder will accept any of the B054, B055 or B056 blades. The blade holder offers a much safer method of use of single edge blades, keeping the fingers further away from the cutting edge when cutting hard materials. The blade is retracted when not in use. It is easy to reverse the blade to reveal a new cutting edge or to refill with a new blade. Comes complete with one blade.

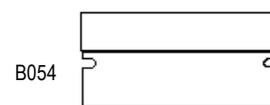
B181 Holder for single edge blade

GEM Blades in Dispenser. Acclaimed as the first quality carbon steel blade 0.009" thick. The GEM blades from the USA come in a safety dispenser containing 10 blades and used blades are stored in the base of the dispenser for safe disposal.

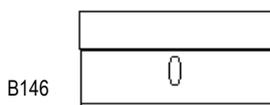
B147 GEM blades 10 in dispenser

B147/1 GEM blades pack of 12 dispensers

See more Razor Blades also on page



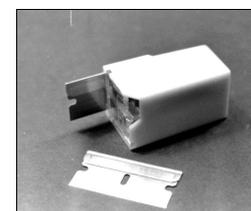
B054



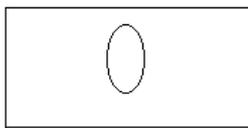
B146



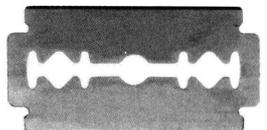
B181



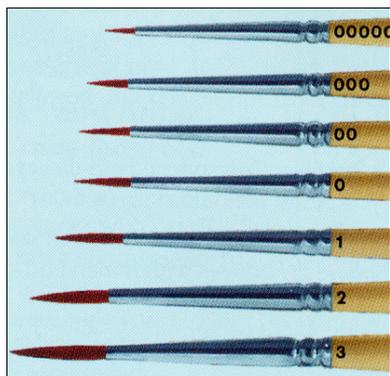
B147



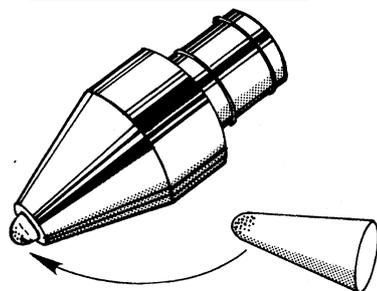
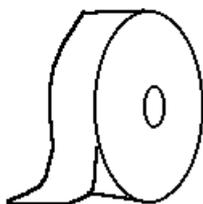
B335



B253



B246



Blades Unbacked

B335 Blades unbacked rigid carbon steel box of 100

Blades Double Edge

B253 Double edge stainless steel 0.004" thick box of 10

B253/1 Double edge stainless steel 0.004" thick box of 10 x 10

Sable and Squirrel Hair Brushes

A range of high quality brushes for handling and manoeuvring delicate sections.

Sable Hair

B187 Brush size 3 pack of 5

B191 Brush size 00 pack of 5

B188 Brush size 2 pack of 5

B192 Brush size 000 pack of 5

B189 Brush size 1 pack of 5

B193 Brushes one of each size (6)

B190 Brush size 0 pack of 5

Squirrel Hair an economical alternative to sable for many applications

B194 Brush size 0 pack of 5

B126 Brush size 3 pack of 5

B124 Brush size 1 pack of 5

B127 Brush size 4 pack of 5

B125 Brush size 2 pack of 5

B195 Brushes one of each size (5)

Single Bristle Brush

Single Bristle Brush for very fine manipulation of sections.

B246 Single bristle brush (pack of 5)

Ultraclear Specimen Tape

A super-clear tape ideal for collecting particles, fibres etc. for identification in the optical microscope, or where optical clarity is vital whilst maintaining the integrity of difficult sections such as bone or teeth.

T 392/12 Ultraclear tape 12mm x 60m

T392/50 Ultraclear tape 50mm x 60m

U/M Chuck for Flat Embeddings

This specimen chuck is suitable for all Leica and RMC ultramicrotomes and enables secure clamping of flat embedded plastic blocks of varying thicknesses.

M366 Ultramicrotome flat embedding chuck (specify make of microtome)

U/M Chuck for Eppendorf Embeddings

After using Eppendorf tubes for processing and spinning down cells etc, the material is embedded *in-situ*. The resulting conical block is difficult to mount in a standard ultramicrotome specimen holder. These chucks have been specially designed to hold such embeddings securely.

M401/R Eppendorf chuck Leica/Reichert

M401/L Eppendorf chuck LKB

M401/RM Eppendorf chuck for RMC

M401/RT Eppendorf chuck RMC threaded

Grid Coating Pen

A convenient system for providing an adhesive surface on TEM grid bars for secure attachment of sections and film coatings. Simply touch the pen onto the grid and a solvent containing an adhesive is released which finely coats the grid bars.

P293 Grid coating pen

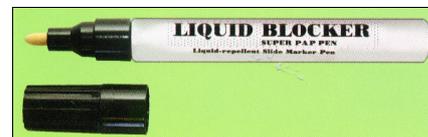
Delimiting, Slide Adhesive and Film Writing Pens

Super Pap-Pen Liquid Blocker

The Super Pap-Pen is designed to provide a water barrier when drawn around a specimen/section. It minimises antibody wastage on paraffin, plastic or frozen sections and cytological preparations. The formulation is water repellent, insoluble in alcohol and acetone and is stable for long periods up to 120°F. It is available in clear, red and blue all of which can be removed with xylene.

P283 Super Pap-Pen *Clear*
P283/R Super Pap-Pen *Red*
P283/B Super Pap-Pen *Blue*

P284 Super Pap-Pen *Clear* pack of 5
P284/R Super Pap-Pen *Red* pack of 5
P284/B Super-Pap Pen *Blue* pack of 5



Super Pap Pen Mini

A smaller version but with the same performance as the Super Pap-Pen.

P554 Super Pap-Pen Mini - *Clear*
P554/B Super Pap-Pen Mini - *Blue*
P554/R Super Pap-Pen Mini - *Red*

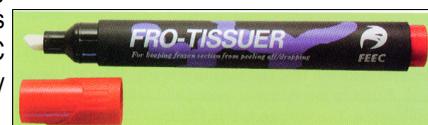
P555 Pap-Pen Mini *Clear* pack of 5
P555/B Pap-Pen Mini *Blue* pack of 5
P555/R Pap-Pen Mini *Red* pack of 5

The coloured Pap-Pens have a shorter usable life than the neutral (clear) versions both in the tube and on the slide.

Frozen Section Pen

A wide tipped pen designed to prevent frozen sections from falling off, moving or wrinkling on the slide during immunostaining procedures. The pen provides a sticky membrane that is applied to the slide before placement of the section. The membrane is stable up to 110°C and is suitable for vigorous applications such as *in situ* hybridisation and antigen retrieval by microwaving for frozen sections.

P285 Fro Tissuer Pen



Tissue Capture Pen

This pen provides an adhesive membrane on the slide to prevent loss or wrinkling of paraffin sections. The sticky membrane flattens the section and can eliminate the need for hot water extension. It is suitable for microwave use and can be used with the Super Pap-Pen for small scale cultures. It is stable up to 120°C.

P498 Para-Tissuer Pen (tissue capture pen)



Film Register Pen

With its dense opacity this Film Register pen is perfect for writing letters and numbers onto film in photo, medical and chemical applications. It is waterproof and writes on glass and metal as well as film. Available in black and red inks plus a solvent pen for easy correction.

- Flows smoothly on the surface of the film
- Produces an extra fine line
- Near perfect resistance to film cleaner
- Long lasting ink
- Does not contaminate by contact

P556 Black film register pen
P556/R Red film register pen
P556/S Solvent pen



See also page 22.34 for additional products

Mounting Media

Mount-Quick



A mounting medium in a tube. It dries quickly, gives easy control of dispensing, there is no density change if capped after every use and it has high transparency with no bubbles. It is long lasting both in the tube and on the slide. Soluble in xylene.

Specific gravity 0.89SP, Viscosity 33cP @ 25°C.

M402 Mount-Quick coverslip mounting medium 30g tube

Mount-Quick Aqueous

A mounting medium developed for lipid and immunocytochemistry staining, especially with soluble chromogen solutions e.g. AEC when used with an organic solvent. Simply blot water from the slide, drop Mount-Quick Aqueous onto the section and gently lower the coverslip.

Refractive index 1.41 Specific gravity 0.88 sp Viscosity 33cp @ 25°C pH 7.0

M403 Mount-Quick Aqueous 30g dropper



Canada Balsam in Xylene

Refractive Index 1.522, Weight per ml @ 20°C 0.98g

C403 Canada balsam in xylene 100ml

Hystomount

A polystyrene mountant for stained, dehydrated specimens with a R.I. of 1.50. Easy to use, mobile, crystal clear, rapid drying, non shrinking and stable. pH 6.6-7.1. *No fluorescence under UV.*

M124 Hystomount 500ml

Mountex

A specially formulated acrylic resin to enable slides to be coverslipped from absolute alcohol thus eliminating the final xylene stages. Low viscosity, soluble in xylene and alcohol, neutral and colourless. R.I. 1.488

M199 Mountex 1 litre

DPX Mountants

A mixture of distyrene, a plasticiser and xylene. Perhaps the most well known of all mountants replacing xylene-balsam. A colourless synthetic mountant preserving the stain and drying quickly.

M192/L Low viscosity 500ml

M192 Standard viscosity 500ml

M192/T Thick viscosity 500ml (Specially thickened for Cytology)

Multipurpose Sealant/Varnish

A clear or black liquid sealant (nail varnish) that can be used to seal troughs or tape boats for ultramicrotomy, to attach hairs or fine wires to sticks to make fine probes, or to make a temporary seal around coverslips.

S343 Clear sealant/varnish

S343/B Black sealant/varnish



See also
Mountants
page 22.34

Static Line 2 Static Neutraliser

The Diatome 'Static Line 2' ionizer can dramatically improve ultramicrotomy of **frozen** and **room temperature** sections. The 'Static Line 2' emits negative and positive ions thus neutralising the static charges built up during sectioning. The variable voltage ensures the exact emission for the work in hand is achieved including trimming of cryo specimens.

At room temperature the high cutting forces that are needed to separate an ultrathin section from an insulating block of epoxy or acrylic material, leads to a highly charged sample surface. With a water bath this can result in the block face wetting, sections being pulled back over the knife edge, wrinkles distortion etc. The 'Static Line 2' can achieve perfect ribbons with virtually all specimens. With dry sections e.g. Lowicryl, the 'Static Line 2' prevents the loss of sections due to static attractions around the knife holder.

Further literature available - please ask.



S348 Static Line 2 Ioniser 230V/115V 50-60Hz

Specialised Filter/Blotting Papers

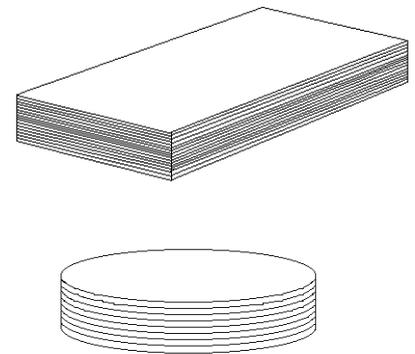
We can offer a range of fibre-free papers with a variety of properties for laboratory use. In the following tables the physical test data were obtained as follows:

Filtration Time - time in seconds to collect 100ml of water under a constant hydrostatic head as in BS6410.

Retention Size - the minimum size of spherical particles measured in micrometers, 90% of which will be retained by the paper under laboratory test conditions. The actual retention achieved under operating conditions will depend on the specific application.

Pore Size - the minimum and mean pore sizes have been determined using a Coulter Porometer and Porofil wetting fluid, both of which are industry standards for this test.

Size - The standard size we offer is 89 x 140mm but any size rectangular or circular is available on request. Minimum quantity of any size is 100 sheets.



Product	Basis weight gm/sq meter	Filtration time secs	Retention size microns	Minimum pore size microns	Mean pore size microns	Catalogue number 89 x 140mm
Creped Cellulose						Box of 100 sheets
H w/s	60	23	25	7.9	16.5	F250
B w/s	90	72	10	6.1	9.8	F251
B140 w/s	140	28	13	7.8	14.2	F252
BT	180	195	9	4.3	8	F253
Smooth Cellulose						
TW w/s	70	135	6	5.5	8.1	F254
MW w/s	90	161	5	5.1	7.4	F255
E w/s	140	320	4	4.1	7.3	F256
P w/s	225	749	2.5	3.3	5.7	F257
W26 w/s	225	89	5	7.1	12	F258
TO w/s	280	459	3	3.9	6.7	F259
Smooth Synthetic						
V130	40	<1	160			F260
P150	50	<1	120			F261
R300	90	1.2	50			F262

Vibratome Automatic Tissue Slicers

Vibratome 1000 Classic

1000
Classic



The Vibratome 1000 is the original vibrating tissue sectioning system and provides semi-automatic sectioning with simple precise controls and adjustments for cutting fresh or fixed tissue down to 20µm thickness. It is quiet in operation, has click stops at 10µm intervals, height and tilt adjustments, stable blade holder and a cool lamp magnifier.

The vibrating stainless steel blade operates in a fluid bath which cools and lubricates the specimen and makes the results suitable for enzyme histochemistry, tissue pathology, autoradiography, immunocytochemistry etc.

V075 Vibratome 1000 220/240v 50/60Hz

B294 100 S/S injector blades in safety holder for Vibratomes

B294/RF 100 blade refill for B294 (return to TAAB for loading)

1000 Plus



Extended Model Range

v093 Vibratome 1000 Plus 230v 50Hz Similar to the Vibratome Classic with added features and benefits.

v094 Vibratome 1500 230v 50Hz A fully automatic tissue sectioning system with programmable section thickness and quantity through LED display.

v095 Vibratome 3000 230v 50Hz The ultimate tool for fresh and fixed material. Built-in cooling system and fully automatic operation.

1500



3000



All instruments have holders for Standard Unbacked Blades, Injector Blades, Glass Knives and Sapphire knives.

Model Comparison Table

Specification	Vibratome 1000 Classic	Vibratome 1000 Plus	Vibratome 1500	Vibratome 3000
Total vertical specimen stroke	10mm	15mm	15mm	15mm
Adjustable sectioning window	No	Yes	Yes	Yes
Section thickness increments	10µm	5µm	5µm	5µm
Maximum specimen size	25 x 25 x 10mm	60 x 40 x 15mm	60 x 40 x 15mm	60 x 40 x 15mm
Sectioning speed	0-1.25mm/sec	0-2mm/sec	0.2mm/sec	0-2mm/sec
Return speed	1.25mm/sec	2.0mm/sec	2.0mm/sec	2.0mm/sec
Maximum sectioning range	30mm	40mm	40mm	40mm
Drain	No	Yes	Yes	Yes
Dual bath system as standard	No	Yes	Yes	Yes
Bath dimensions	146 x 146 x 50mm	146 x 146 x 50mm	146 x 146 x 50mm	146 x 146 x 50mm
Repeatable height adjustment	10µm	5µm	5µm	5µm
Use of disposable microtome knives	Yes	Yes	Yes	Yes
Rotating specimen mount	Yes	Yes	Yes	Yes
Adjustable specimen angle	0-50°	0-50°	0-50°	0-50°
Stroke pause switch	No	Yes	Yes	Yes
Separately adjustable light and magnifier	No	Yes	Yes	Yes
Footswitch	No	Optional	Optional	Optional
Black buffer bath	Yes	Yes	Yes	Yes
Fully automatic operation	No	No	Yes	Yes
Insulated bath	No	Yes	Yes	Yes
Built-in refrigeration	No	No	No	Yes
Cumulative section counter	No	No	No	Yes
Full text LCD display	No	No	No	Yes
1µm increment sections	No	No	No	Yes
Specimen auto bypass	No	No	No	Yes
Arcuate blade path adjustment	Yes 0-1.25mm	Yes 0-1.5mm	Yes 0-1.5mm	Yes 0-1.5mm

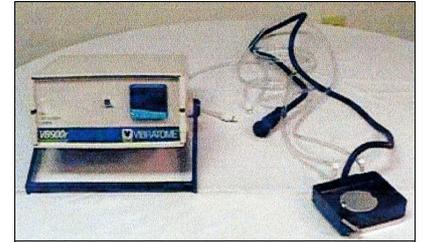
Vibratome Specimen Cooling Module

Many Vibratome users cutting fresh tissue report considerably improved results when they cut sections at, typically, 4°C. To achieve this temperature they add ice or frozen buffer solution cubes to the sectioning bath but is a procedure requiring care to avoid spillage. The new Vibratome Cooling Module can be 'retro fitted' to all unrefrigerated Vibratome models 502 or 1000 vintage and the new 1000 Plus and 1500 models and its use eliminates the inconvenience of ice cubes and the risks associated with spills.

The new system employs the "Peltier effect" solid state electronic cooling and requires only the provision of mains electricity and cooling water to lower the temperature to a limit of -10°C. Control sensitivity is $\pm 0.02^\circ\text{C}$.

Fitting is simple and requires no engineering skills or tools.

V096 Vibratome specimen cooling module 230v 50Hz



Vibroslice Automatic Tissue Slicers

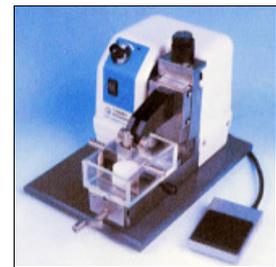
British designed and built vibrating tissue slicers that will cut 50 to 700 μm sections of fresh, unfixed tissue for in vitro recordings, tissue culture and microassay work. They can cut fixed material down to 20 μm without previous embedding or freezing.

The blade oscillates at a fixed lateral displacement of 1.0mm at a frequency set by the user. Operation is actuated by a footswitch. The instruments have a removable tissue holder and bath which allows tissue to be prepared and stored ready for later use.

Vibroslice HA752

This instrument offers manual advance of the section thickness and is recommended for use in producing a small number of sections or for use with tissues with differing mechanical properties.

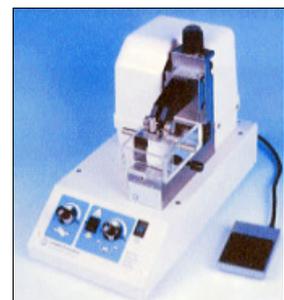
V090/230 Vibroslice HA752 230v 50Hz or **V090/115** 115v 60Hz



Vibroslice MA752

This model offers motorised advance of the section thickness. Section thickness is selected on a rotary dial and the instrument is then operated via a footswitch leaving both hands free for other operations. Recommended for cutting serial sections for reconstruction or for producing multiple sections.

V091/230 Vibroslice MA752 230v 50Hz or **V091/115** 115v 60Hz



Vibroslice ROMA752

This remote motorised Vibroslice was designed specially for use with hazardous tissues such as those containing Prions or rabies infection. The cutting head, tissue bath and associated drive mechanisms are operated via an umbilical from the control box and thus can be placed inside a controlled environment. A tissue bath and cutting head capable of withstanding autoclaving at 140°C are included.

V092/230 Vibroslice ROMA752 230v 50Hz or **V092/115** 115v 60Hz



Vibroslice Accessories

All Vibroslices can be fitted with cutting heads and tissue baths that can be removed and sterilised by autoclave. Please ask.

B294 100 S/S injector blades in safety holder for Vibroslice

B294/RF 100 blade refill for B294 (return to TAAB for loading)

Temperature controllers for Vibroslice on next page

Model Comparison Table

Specification	Vibroslice HA752	Vibroslice MA752	Vibroslice ROMA752
Section thickness increments	5µm	5µm	5µm
Section thickness range	50-700µm (unfixed) 50-700 (fixed)	50-700µm (unfixed) 50-700 (fixed)	50-700µm (unfixed) 50-700 (fixed)
Section thickness advance	Manual	Motor driven	Motor driven
Sectioning speed	0.07mm/sec	0.07mm/sec	0.07mm/sec
Chamber dimensions	55 x 82 x 31mm	55 x 82 x 31mm	55 x 82 x 31mm
Chamber volume	140ml	140ml	140ml
Adjustable blade angle	90° horizontal to vertical	90° horizontal to vertical	90° horizontal to vertical
Removable tissue holder & bath	Yes	Yes	Yes
Footswitch	Yes	Yes	Yes
Blade speed	4500 cuts/min	4500 cuts/min	4500 cuts/min
Automatic operation	No	Yes	Yes
Refrigeration	Optional	Optional	Optional
Vibration speed	User adjustable	User adjustable	User adjustable
Blade displacement	1.0mm nominal	1.0mm nominal	1.0mm nominal



MA752 with 765LP

Temperature Controllers for Vibroslice

Research has shown that unfixed brain slices sectioned at 4°C give better tissue preservation and are viable for longer in-vitro recordings. Additionally, some enzyme histochemical techniques give better staining results when sectioned at low temperatures.

The 765LP and 765HP Temperature Controlled Tissue Baths are designed for use with models HA752 and MA752. They are 'Peltier' based systems and are able to heat as well as cool. Just set the required temperature, slide the switch and the digital readout displays the actual temperature. Failsafe devices protect against interruptions to water flow. Current from the power supply flows through one side of the thermoelectric elements which act as heat transfer units. Heat is drawn off, cooling the solution in the tissue bath. The heat generated by this process is removed by the water supply fed through the heat exchanger. The 765LP enables the cooling of physiological fluid and tissue from room temperature to freezing point in 5- 6 minutes. The more powerful 765HP will achieve zero in around 4 minutes and will achieve -10°C.

The bath assembly will fit onto the Vibroslice without modification and the bath chamber has the same volume as the standard tissue bath. The tissue holder remains standard.



765LP

765HP



MA752 with 765LP

Specifications

	Model 765LP	Model 765HP
Display resolution	0.1°C	0.1°C
Temperature accuracy	± 1°C	± 1°C
Temperature range model 765LP	+40°C to -1°C	+40°C to -10°C
Voltage requirements (set via switch on rear of unit)	230v 50Hz fused at 1A 110v 60Hz fused at 2A	230v 50Hz fused at 2A 110v 60Hz fused at 4A
Power consumption	250W	350 W

T538/230 Temperature controller 765LP for Vibroslice 230v 50Hz
T538/110 Temperature controller 765LP for Vibroslice 110v 60Hz

T539/230 Temperature controller 765HP for Vibroslice 230v 50Hz
T539/110 Temperature controller 765HP for Vibroslice 110v 60Hz

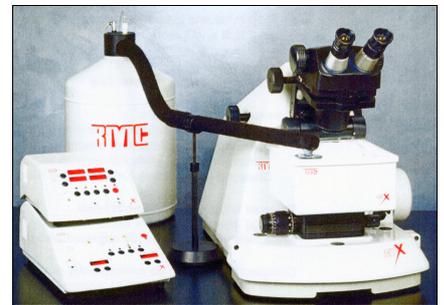
RMC EM Products

A range of well designed and beautifully engineered instruments for specimen preparation and embedding and sectioning of specimens for electron microscopy at ambient and cryo temperatures.

MT-XL Ultramicrotome

The ultramicrotome with all the features for successful sectioning. Power driven cutting stroke, fibre optic back illumination, adjustable fluorescent incident illumination, specimen transillumination, specimen viewing mirror for mesa trimming, "scan and tilt" stereo zoom optics, self locking micrometer drives on all specimen and knife holder movements, balanced handwheel, built-in hand rests and multi-shell design for efficient vibration damping. Separate control unit with digital section counter and feed totaliser, RS232 interface, self diagnostic functions and memory channels for retaining personal feed settings. Adjustable cutting window, manual step advance.

M404 MT-XL Ultramicrotome 230v 50Hz or 115v 60Hz

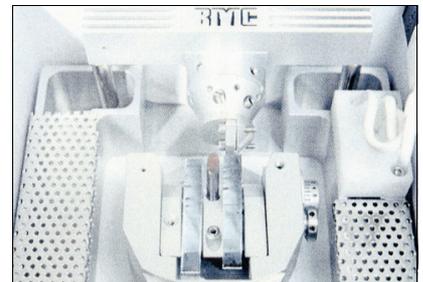


CR-X attached to MT-XL

CR-X Cryosectioning System

An adaptable, user friendly cryosectioning system for RMC or Reichert/Leica ultramicrotomes. Quick fitting and removal, very low liquid N₂ consumption from 9 litre table top Dewar (< 0.75l/hour) yet giving quick response to temperature adjustments. Easy access into insulated cryo chamber with sectioning possible from +35° to -185°C (display resolution 0.1°C). External knife controls, dual rotating knife holder with trimming tool and complete accessory kit to start immediate cryosectioning. Separate power supply and control unit with microprocessor giving 4 user-adjustable programmes for knife and specimen temperatures. 10 each specimen mounting pins 2mm, 3mm, 6.5mm and flat specimen holder (clamping).

M405 CR-X cryosectioning system 230v 50Hz or 115v 60Hz



Interior view of cryochamber

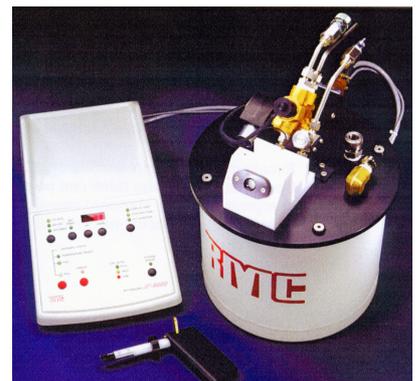
CR-X attached to Ultracut ultramicrotome

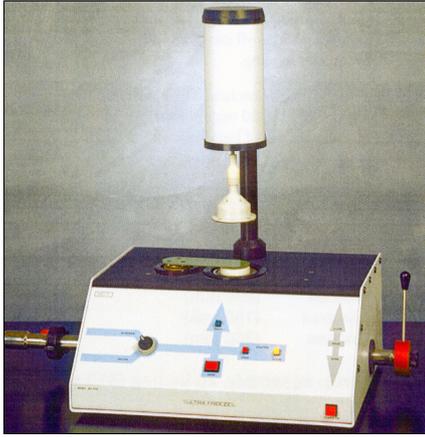
JF-8000 Propane Jet Freezer

Cryofixation by spraying liquid propane cooled to -186°C on both sides of the specimen held between two thin copper platelets. Gives excellent, reproducible cryofixation of specimens up to 40µm thick without cryoprotectants or chemical fixatives. Cryoprotected specimens can be cryofixed up to 80µm in thickness.

Compact, free-standing design with no specimen loss during freezing. Adjustable jet duration and cryogen temperature.

J056 Propane jet freezer 230v 50Hz or 115v 60Hz





MF-7000 Metal Mirror Freezer

Simple to operate and designed for years of continuous use the MF-7000 has a Drop-Anvil design using gravity to impact the specimen against the surface of a cold copper anvil. A combined electromagnetically operated shutter and dry inert gas venting over the surface of the anvil prevent water vapour condensation. Typical drop speed of 1mm/msec. The electromagnetic anti-bounce mechanism prevents the sample from losing contact with the anvil after impact. The copper anvil can quickly be replaced when necessary and samples can be mounted in position on magnetic holders for quick changing.

Liquid nitrogen or helium can be used as the coolant and freezing rates are typically 50-100,000 K/sec and commonly results in freezing depths of 10 to 20 μm . A vacuum insulated transfer line and manifold ensure quick and economical cooling whilst minimising the use of coolant.

F316 MF-7000 metal mirror freezer 230v 50Hz or 115v 60Hz



FS-7500 Freeze Substitution System

Trouble-free freeze substitution and low temperature embedding.

- Performs conventional and PLT (Progressive Lowering of Temperature) substitution
- User friendly controller holds up to 10 programmes
- 4 soak and 3 ramp settings for maximum process flexibility
- Low LN_2 coolant consumption
- Dewar refillable whilst substitution is in progress
- Wide choice of specimen holders

New "IMPS" processing chamber and flat embedding system incorporated.

F317 FS-7500 freeze substitution system 115v 60Hz or 230v 50Hz



Glass Knife Maker (RMC)

A precision instrument with micrometers for precise control and repeatable scoring. Uses "balanced break" method that allows for controlled slow breaking for optimum knife edges. The instrument body is machined from a solid block of metal for long term stability and precision. Uses 25mm wide glass strips from 6 to 12mm thick and can produce knives with cutting angles of 35° to 55° using micrometer adjustments.

Dimensions:

Width 360mm (14")
 Height 160mm (6.3")
 Depth 170mm (6.8")
 Weight 13.6Kg (30lbs)

Comes complete with:

Protective goggles
 brush
 Instruction manual
 Replacement scoring wheel and axle

K110 Glass knife maker RMC