Film Drying Cabinets

The Marrutt range of film drying cabinets are strongly constructed from zinc and epoxy coated steel making them resistant to scratching and corrosion. The internal construction is of stainless steel and the units are fitted with a *TURBOFLOW* air system that is filtered to a 96% efficiency. They are supplied complete with no hidden extras. The model 36/35 will accept 12 full length 35mm films completely extended and will also accept the 220 film length of 1625mm. A certain amount of cut film can also be accommodated. For larger amounts of cut film the model 80 is recommended.

Dimensions:

Model 36/35   203cm High x 36cm Wide x 36cm Deep

Model 80   175cm High x 63cm Wide x 57cm Deep

D124   Film drying cabinet Model 36/35 240v

D124/1   Film drying cabinet Model 36/35 110V

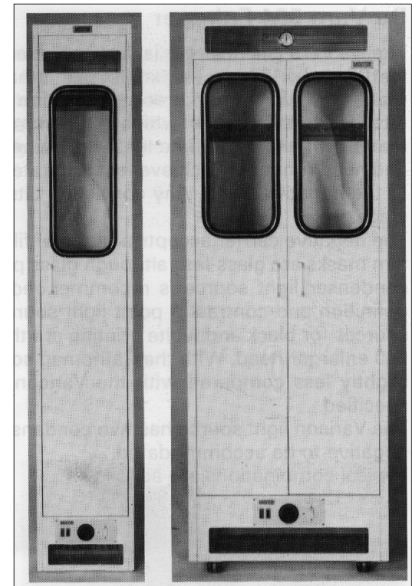**D125**   Film drying cabinet Model 80 240v

D125/1   Film drying cabinet Model 80 110v

Important Note:

The drying cabinets contain high efficiency **filter elements** which must be checked and replaced if necessary every 6 months.

D124/F   Filter for model 36/35 cabinet

D125/F   Filter for model 80 cabinet

Pen-tek Lens Cleaner for lenses and LCD screens

A unique solution for cleaning optical lenses. Removes fingerprints, dust and debris from all optical lenses. Pen-tek is a small, lightweight cleaning pen with a unique non-liquid **invisible carbon compound** and a retractable cleaning brush that removes fingerprints without damaging the surface and that never dries out. Perfect for cleaning binocular lenses, watches, microscope eyepieces, digital cameras, cell phones, magnifiers and many other optical items.

NLP-1 comes with a round, concave cleaning tip designed to clean digital camera lenses and filters, binoculars and many more optical items.

NDK-H is for digital screen cleaning. Has a semi triangular tip for cleaning into the corners of the screen

C337 NLP-1 Pen-tek come with NLP-H Filter-tek for lens and optical filter cleaning
C338 Spare tip for NLP-1
C339 NDK-H Pen-tek for digital screen cleaning

Zerostat Anti-Static Gun

Anti-static generator for neutralising static charges of either polarity on any insulating surface. Ideal for easing many problems in the photographic laboratory, to reduce the risk of EM grids jumping out of boxes and to eliminate or reduce the block/section charging effects during ultra or cryomicrotomy.

G083 Zerostat™ gun

Cut Film for Electron & Light Microscopy

Kodak 4489 Film

A slow-medium very fine grain emulsion that is favoured for routine applications. If the application requires a faster film, for example in very high resolution microscopy, then SO-163 is recommended. Coated onto a 0.17mm (0.007") polyester base overcoated with a hardebed gelatin for protection. Use a red or brown safelight (1A, OA, or OC) and D19 developer.

P083	Kodak 4489 6.5 x 9cm Box of 100 sheets
P083/M	Kodak 4489 6.5 x 9cm 250 sheet Multipack
P550	Kodak 4489 3¼" x 35/16" (83 x 84mm) Box of 100 sheets
P082	Kodak 4489 3¼" x 4" (83 x 102mm Box of 100 sheets
P082/M	Kodak 4489 3¼" x 4" 250 sheet Multipack
P126	Kodak 4489 7 x 7cm Box of 100 sheets
P084	Kodak 4489 9 x 12cm Box of 100 sheets

Kodak EM Image Film SO-163

A faster film than 4489 (double) and is useful in high resolution electron microscopy. Applied to a 0.17mm (0.007") polyester base and coated with a hardened gelatin to increase abrasion resistance. Use safelights as for 4489.

P086	Kodak SO-163 6.5 x 9cm	box of 100 sheets
P086/M	Kodak SO-163 6.5 x 9cm	250 sheet Multipack
P085	Kodak SO-163 3¼" x 4" (83 x 102mm)	box of 100 sheets
P085/M	Kodak SO-163 3¼" x 4" (83 x 102mm)	250 sheet Multipack

TEM Roll Film

Agfa 70mm CSR film suitable for TEM cameras (base thickness 0.1mm)

P082/2	Agfa CSR roll film 70mm x 43m

Eastman 35mm fine grain positive film is the closest replacement for 35mm unperforated TEM camera film (now discontinued).
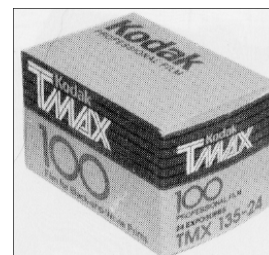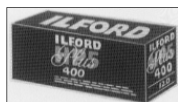
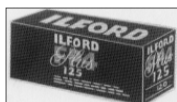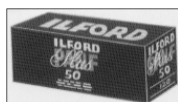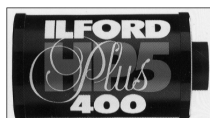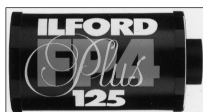|	
P091	Eastman perforated fine grain film 35mm x 30m

Kodak T-Max Professional Film

T-Max 100 An outstanding high definition fine grained film for photomicrography giving excellent quality enlargements (25x plus). Recommended for copying black and white photographs and making B & W prints from colour transparencies. Expanded exposure latitude. **T-Max 400** is a high speed film for use in many areas of biomedical and scientific work especially fluorescence microscopy. Use developers T-Max, D76, Microdol-X in total darkness.

P269	Kodak T-Max 100 35mm 36 exp pk of 5
P270	Kodak T-Max 100 35mm x 100ft
P267	Kodak T-Max 400 35mm 36 exp pk of 5

Roll Film Suitable for SEM Imaging

35mm Camera Film all perforated (unperforated no longer available).
P091 Kodak fine grain positive film 35mm x 30m
P120 Ilford PAN F 35mm x 36 exposures, pack of 10 rolls
P121 Ilford PAN F 35mm x 17m
P122 Ilford FP4 35mm x 36 exposures, pack of 10 rolls
P123 Ilford FP4 35mm x 17m
P124 HP5 35mm x 36 exposures
P125 Ilford HP5 35mm x 17m

Kodak Technical Pan Film 2415
A film very suitable for photomicrography having a very flat response over the visible spectrum with a high resolving power and fine grain. It can be developed to a wide range of contrasts.
P092 Kodak technical pan film 35mm x 36 exposures

120 Format Film
A range of 120 roll films suitable for recording SEM images.
P115 Ilford PAN F   pack of 10 rolls
P116 Ilford FP4   pack of 5 rolls
P117 Ilford FP4   pack of 50 rolls
P118 Ilford HP5   pack of 10 rolls
P119 Ilford HP5   pack of 50 rolls

Colour Reversal Film
P127 Kodak Ektachrome 64 35mm x 36 exposures
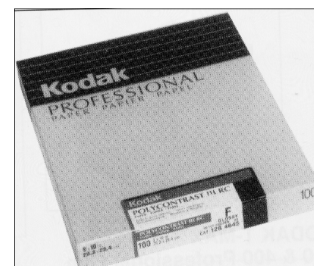**P128** Kodak Ektachrome 200 35mm x 36 exposures

Photographic Papers

The following papers are normally stocked in **boxes of 100 sheets.** Other sizes and grades may be available on request.

Kodak Kodabrome 11 RC F

A fast paper now in three grades for machine and tray printing. It has a resin coated base for rapid processing and drying and a neutral black image tone. Use light amber safelight OC and Kodak recommend Dektol developer.

P094   Kodak Kodabrome 11 RC F 12.7 x 17.8cm grade 1
P095   Kodak Kodabrome 11 RC F 12.7 x 17.8cm grade 2
P096   Kodak Kodabrome 11 RC F 12.7 x 17.8cm grade 3
P098   Kodak Kodabrome 11 RC F 20.3 x 25.4cm grade 1
P099   Kodak Kodabrome 11 RC F 20.3 x 25.4cm grade 2
P100   Kodak Kodabrome 11 RC F 20.3 x 25.4cm grade 3
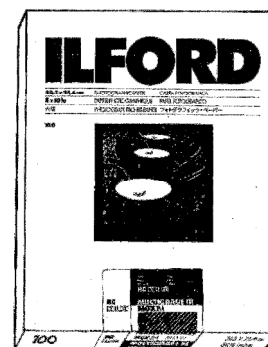
Ilford Multigrade 3 RC Deluxe

This system offers variable contrast paper with 'whiter' whites and 'blacker' blacks. The system offers high print quality and a full contrast range from a single paper. There is an impressive eleven distinct contrast grades spaced in half grade steps from 0 to 5 is achieved by the selection of filters. For a grade 3 contrast filter no. 3 is selected, no. 4 filter for contrast 4 etc.

With eight of the eleven filters the paper has exactly the same effective speed which means that exposure times do not differ. The three grades that do differ are 4, 4½ and 5 and all that is required is to double the exposure time or open the aperture one stop.
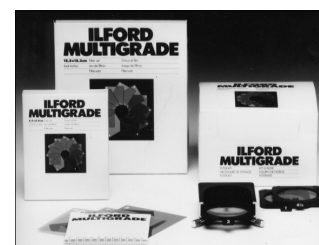
P103   Multigrade 3 RC Deluxe 12.7 x 17.8cm
P103/1 Multigrade 3 RC Deluxe 16.5 x 21.6cm
P104   Multigrade 3 RC Deluxe 20.3 x 25.4cm

Ilfospeed Multigrade 3RC Filters

This is a below the lens fit that converts black and white enlargers for printing Multigrade 3 RC Deluxe papers. The kit is complete with mounted filters for all contrast grades in half grade steps, a filter holder and a red safelight filter.
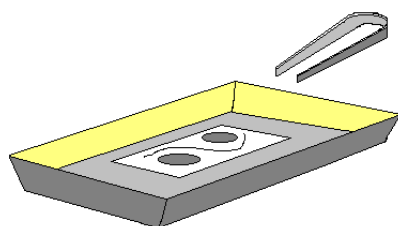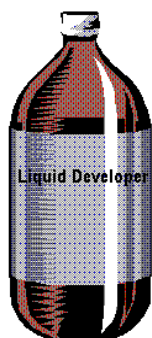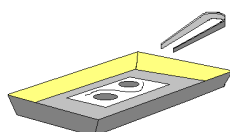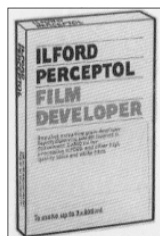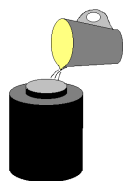
L086   Multigrade 3 RC filters below lens kit

Emulsions for Autoradiography

Due to the limited shelf life of these emulsions (which should be stored at 5°C) stocks are not normally held but ordered on request. They should not be frozen.

P144   Ilford nuclear emulsion G5   50ml
P145   Ilford nuclear emulsion K5   50ml
P146   Ilford nuclear emulsion L4   50ml
P291   Ilford nuclear emulsion K2   50ml

Processing Chemicals

Black and White Powder Developers

Ilford ID-11 the standard developer for fine grain results with PAN F, FP4 and HP5 films without loss of film speed.

D137 Ilford ID-11 powder developer to make 2.5 litre
D134 Ilford ID-11 powder developer to make 5 litre

Ilford Perceptol for extra fine grain with PAN F and FP4 films and can be used with HP5 films for subjects having excessive contrast.

D135 Ilford Perceptol powder developer 1 litre

Kodak D-19 a high contrast, high capacity, clean working dish and tank developer.

D066 Kodak D-19 powder developer 800gm to make 5 litre

Black and White Liquid Developers

Kodak T-Max Liquid for use with T-Max and Tri-X Pan films. A liquid concentrate for bringing out the best from T-Max film.

D196 Kodak T-Max developer liquid makes 2 x 1 litres
D197 Kodak T-Max developer liquid makes 5 litres

Ilfospeed an extremely fast working developer for use with Ilfospeed RC Deluxe paper. At a working solution of 1 + 9 an image appears after only six seconds and development is complete in 35-60 seconds.

D107 Ilfospeed developer 5 litres to make 50 litres
D108 Ilfospeed developer 500ml to make 5 litres

Ilfospeed Multigrade an extremely fast working developer for use with Multigrade 3RC Deluxe and Multigrade FB papers.

D109 Ilfospeed Multigrade developer 1 litre to make 10 litres
D109/1 Ilfospeed Multigrade developer 5 litres to make 50 litres

Ilford PQ Universal a very economical 'standard' paper developer designed for use with Ilfobrom Galerie FB and Multigrade IV FB as well as Ilfospeed RC Deluxe. At a working solution of 1 + 9 paper development is complete in 2 minutes and at 1 + 4 in 45-90 seconds. It is also recommended where a slower acting developer is needed for Multigrade IV. It has excellent keeping qualities as stored concentrate and in the dish.

D145 Ilford PQ Universal developer 5 litres
D145/1 Ilford PQ Universal developer 1 litre

Stop Baths

Ilford IN-1 a liquid concentrate to be diluted 1 + 39. It stops development immediately as well as extending the working life and maintaining the pH level of the fixer.

S134 Ilford IN-1`stop bath 500ml to make 10 litres

Kodak Max Stop - Stop bath with indicator designed to stop development instantly and extend the life of the working solution. It minimises dichroic fog and removes hard water development scum. Yellow when mixed it turns mauve when exhausted.

S211 Kodak indicator stop bath

Fixers

Unifix a sodium thiosulphate fixer with hardener supplied in powder form and recommended for films and papers.

F074 Unifix to make 5 litres
F074/1 Unifix powder 500gm to make 5 litres

Ilfofix II an economical non-hardening fixer for B & W papers and films. Can also be used for graphic arts and X-ray materials.

F169 Ilfofix powder fixer 5 litres to make 50 litres

Ilford Paper Fixer Liquid is the same formulation as the Ilfospeed fixer it replaces. It is a rapid acting fixer supplied as a liquid concentrate. Designed for use with Ilfospeed RS Deluxe, Multigrade IV RC Deluxe and Multigrade RC Xpress resin coated papers. At a 1 + 3 dilution fixing is complete in 30 seconds.

F100 Ilford paper fixer liquid 5 litres to make 20 litres

Ilford Hypam Liquid a non hardening rapid fixer diluted either 1 + 4 or 1 + 9 depending on speed of fixing action required. Suitable for fixing films and papers.
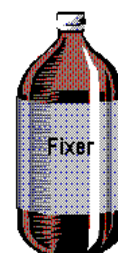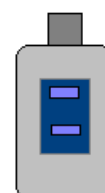
F168 Ilford Hypam liquid fixer concentrate 5 litres

Agfa G328 Fixer a general purpose fixer for films and papers.

F179 Agfa G328 fixer 5 litres to make 25 litres

Fixer Testing Strips to monitor the active strength of the fixer bath.

F182 Fixer testing strips pack of 100

Wetting Agents

Photoflo is a concentrated liquid to decrease water surface tension in the wash so minimising water marks and drying streaks on the film. Also promotes rapid drying.

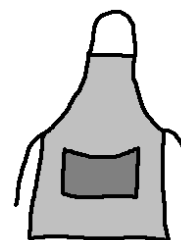**W081** Kodak Photoflo wetting agent 1 litre

Ilfotol is a wetting agent added to the processed films final rinse to reduce surface tension. This aids drying time and prevents drying marks on the surface.

W084 Ilford Ilfotol wetting agent 1 litre

Darkroom Apron

A tough chemical resistant vinyl apron with a large front pocket. Ideal as immediate protection over clothing or additional protection for a lab coat.
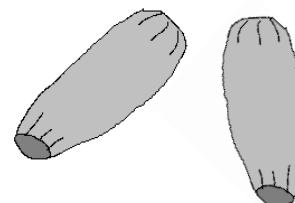
A076 Darkroom apron

Polythene Oversleeves

Made from strong white Polythene, the oversleeves are approx. 17" (40cms) long and are elasticated at both ends for comfort and security. They are the perfect protection for sleeves when handling reagents harmful to cloths.

P217 Polythene oversleeves   pack of 100

35mm Film Retriever

This simple tool enables the film's leader to be retrieved from inside a 35mm cassette without the use of a darkroom or changing bag.
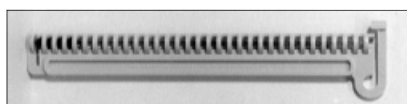**P182**   35mm film retriever

Cassette End Cap Remover

This tool is designed to remove crimped and push-fit 35mm film cassette end caps quickly and easily in total darkness.
P183   Cassette end cap remover

Thermometer Photographic

Certified spirit thermometer guaranteed accurate to 0.5°F (0.3°C). Dual scale with permanent markings, Range 56 – 86°F and 10 – 30°C. Housed in a plastic carrier.
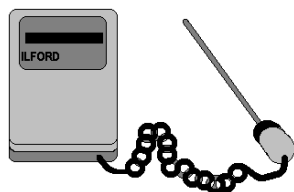**T142**   Photographic thermometer

Thermometer Dial Type

Easy to read dial type thermometer scaled both in Centigrade and Fahrenheit over the range –20°C to +60°C (0° to 130°F) with widely spaced calibrations. The head is hermetically sealed and has an accuracy of 1°C. A sliding clip fitted to the sensing rod conveniently hooks to the side of a tank or beaker.
T120   Dial type thermometer

Thermometer Digital

The Ilford DT30 has an operating range of –50°C to 150°C to an accuracy of 0.3°C. A four digit LED display gives a stabilised reading after 15 seconds immersion of the probe in dish, bottle or graduate. Uses a 9V battery.
T300   Digital thermometer DT30
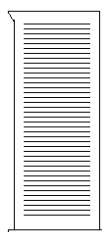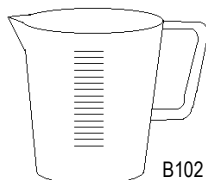**T300/B** Battery for digital thermometer DT30 pack of 5

Developing Dishes

Sets of three plastic developing dishes
D067   Plastic developing dishes (set of 3) 10" x 12" (25.4 x 30.5cm)
D223   Plastic developing dishes (set of 3) 12" x 16" (30.5 x 40.5cm)

Measuring Beaker

Plastic graduated beaker 1200ml capacity. Ideal for measuring and transfer of photographic chemicals.
B148   Graduated beaker 1200ml

B148

Graduated Beaker

Polypropylene graduated beaker suitable for photographic chemicals.
B102   Beaker 2 litre capacity
B123   Beaker 500ml capacity

B102

Air-Vac Collapsible Bottles

Useful containers especially manufactured for storing expensive colour developers and other chemicals that deteriorate rapidly by oxidation. As the liquids are used the bottle is compressed to exclude any air remaining above the liquid.
B094   AIR-VAC collapsible bottle 1 litre
B095   AIR-VAC collapsible bottle 3.8 litres

Funnels

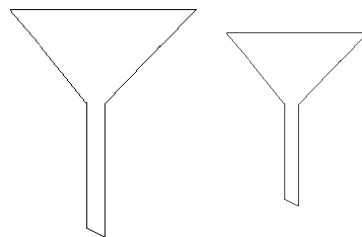*Polyethylene* for transfer of liquids.
F075   Funnel 8" (20.3cm) diameter
F076   Funnel 6" (15.25cm) diameter
Polypropylene, tolerant of strong acids and alkalis and most organic solvents – heat resistant.
F083   Funnel 37mm dia.
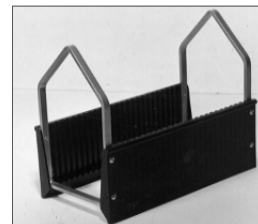**F084**   Funnel 65mm dia.

Cut Film Developing Racks

Robust and durable glass reinforced nylon racks with slots for holding 25 sheets of cut film.
D056   for film 2½" x 3½" (64 x 85mm) and 6.½ x 9cm
D057   for film 3¼" x 3¼", 3.¼" x 4", 3¼" x 4¼" and 9 x 12cm
D138   for film 90 x 120mm
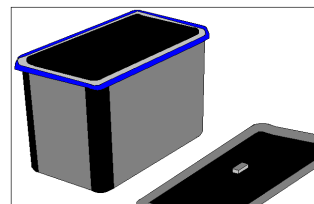**D091**   Stainless steel tongs for lifting developing racks from tank

Cut Film Developing Tank

Pressure moulded plastic developing tank with floating lid.

D171   Cut film developing tank 15 x 9.5 x 14cm   1.9litrs
D090/P Cut film developing tank 12.5 x 17.5 x 14cm   3.5litrs
                Takes racks D152 & 153

35mm Developing Tank and Lid

Highest quality stainless steel film processing equipment to take 36 exposure 35mm film. The reels are of the easy load type with a strong centre clip. The tanks are fitted with special baffle lids to ensure rapid filling and emptying of solutions. Tight fitting caps allow inversion without leaks.
D068   Developing tank 35mm
D069   Developing tank to take 4 x 35mm films
D071   Reel 35mm, 36 exposure
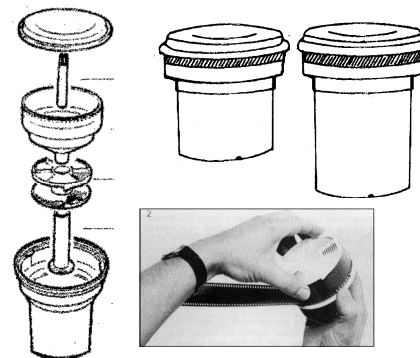
Film Developing Tank Super System 4

A plastic tank by Paterson with lid equipped with an auto load reel for 35mm, 120, 126, 127 or 220 film. Features include pressure relief valve – no chemical spray and an anti-swirl funnel. Accepts 300ml in 3 seconds!
D110   Film developing tank complete
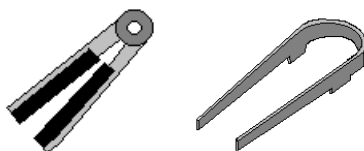**D139**   Film developing tank – 2 reel model
D139/S Spare reel for above
H062   Film washer hose – tap to tank

Stainless Steel Developing Tank & Spiral 120mm

D168 Stainless steel developing tank 120mm
D169 Stainless steel spiral 120mm
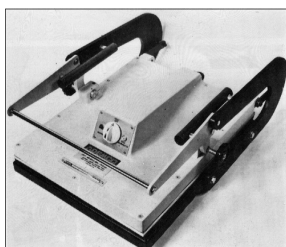**F183** Film Loader

Film Wiper and Print Tongs

P062 Film wiper rubber blades, plastic handle
P061 Print tongs – plastic

Film Clip Set

A pair of plastic film clips one weighted and one unweighted to ensure films hang straight during drying. Both clips have metal pointed pins for secure fixing.
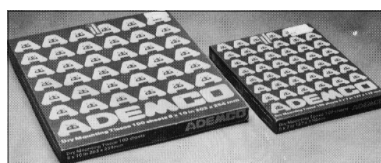**C134** Film clip set

Dry Mounting Press

A robust soft bed machine with adjustable pressure control and self-levelling platen. Maximum mount width 1065mm (42in) by any length. Capillary tube thermostat for temperature control. Dimensions: 490mm wide x 735mm long x 235mm high. Weight: 37.5Kg 110 or 230V (please specify) 1600W
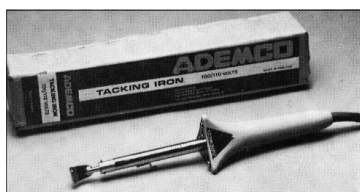**P077** Dry mounting press

Dry Mounting Tissue

Available in two sizes:
P079 Dry mounting tissue 203 x 254mm   box of 100 tissues
P080 Dry mounting tissue 127 x 178mm   box of 100 tissues

Tacking Iron

An electrically heated iron for tacking dry mounting tissue onto the backs of photographic prints 25W.
P078 Tacking iron 230V
P078/1 Tacking iron 110V
P081 Tacking iron stand

Spray Mount Adhesive

An aerosol spray adhesive for mounting photographic prints etc. The adhesive remains tacky and the photograph can be removed at any time.
A052 Spray mount adhesive 391gm (414ml)

Photo Mount Adhesive

An aerosol spray adhesive for permanent mounting of photographic prints onto paper or card.
A055 Photo mount adhesive 268gm (400ml)

Timers

Countdown Timer

Digital timer measuring elapsed time from 1 second to 99 minutes. Quartz battery operated clock with setting keys and an end of period audible alarm that will sound for 60 seconds. With pocket clip, bench stand, magnetic attachment and battery.
C173   Countdown timer

Dual Channel Timer

Digital countdown, count up 2-channel timer with large display which will indicate either channel via separate push buttons. Both channels count up or down from 1 second to 24 hours and have an audible alarm at the end of the period. The case includes a stand, clip and magnet attachment. Supplied with 1.5v AAA battery. Dimensions 90x67x19mm Weight 68gm. MCAL-TM calibration certificate available.
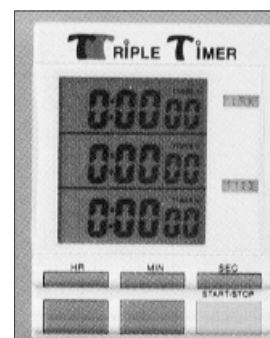
T353   Dual channel timer

Triple Channel Timer

Digital reading, 3 separate timing units with display, count up, count down from 1 second to 20 hours. Each unit has a different audible alarm at the end of the counting period. 12/24 hour clock and memory presets are also selectable. Supplied with 1.5v AAA battery.
T354   Triple channel timer

Twin Outlet Darkroom Controller/Timer

Two separate outlet receptacles can control an enlarger or printer and safelight by a combination time/focus switch. Each outlet has 750 watts capacity but can be used with a relay for heavier loads. The 6½" diameter face has easy to read numerals and is illuminated by phosphor fluorescence. It shows minutes and seconds in complete darkness. The 60-minute time range can be set in minutes for developing and seconds for enlarging control. The analogue display permits quick setting by seconds, minutes or combinations of seconds or minutes.
T519   Twin outlet darkroom timer 210/250V 50Hz
T520   Twin outlet darkroom timer 115V 60Hz
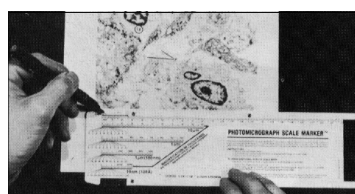
Rotatrim Print Trimmers

A comprehensive range of this popular professional rotary cutter/trimmer that cut varying materials with precision from the lightest tissue papers and film up to 2mm card. Self-sharpening tungsten steel rotary cutter wheel.

R066   Rotatrim 31cm (12in) cut
R067   Rotatrim 39cm (15.5in) cut
R068   Rotatrim 45cm (17.5in) cut
R069   Rotatrim 62cm (24in) cut
R082   Rotatrim 77cm (30in) cut
R083   Replacement cutting wheel for all models

Art Knife

This knife incorporates a strong nylon handle and a finely machined aluminium locking mechanism. Supplied with No. 11 blade

A053   Art knife
A054   7 blade dispenser containing No. 11 blades

Photomicrograph Scale Marker

Precision slide rule designed to provide a rapid and accurate method of drawing scale marks on light and electron micrographs. Will apply any size of scale mark at any magnification with no formula to remember. Constructed from high quality rigid plastic. Printed in English, German and French. Supplied in protective pouch 3" x 10".

S080   Photomicrograph scale marker
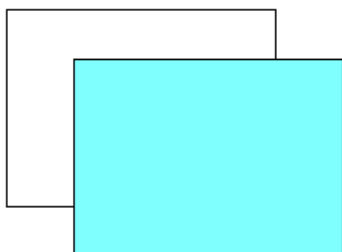
Ultrastructure Size Calculator

Gives readings of sizes on prints per millimetre in µm, nm and Ångstroms.
C093   Ultrastructure size calculator

Lens Pen

Lenspen MiniPro safely removes smears and contamination from small photographic lenses using the 'dab on' tip which dispenses the right amount of the unique non-liquid cleaning compound in just the right place. It reduces static charge build-up and will not spill or dry out. This quality product is manufactured in a "clean room" environment to ensure MiniPro is free of any contamination.

L061   Lens pen
L062   Lens pen pack of 10

Film and Negative Storage Envelopes

Translucent paper or clear acetate envelopes suitable for plate, film or print storage and simply referred to as 'Negative Envelopes'. Dimensions are given as length x width, pack sizes are of 1000 except **N055** which is a pack of 500.

N052   Negative envelopes - translucent $4\frac{5}{8}$ " x 3"
N053   Negative envelopes - translucent $3\frac{3}{4}$" x 4"
N054   Negative envelopes - translucent 5" x 4"
N055   Negative envelopes - translucent 10" x 8"
N057   Negative envelopes - clear acetate $4\frac{5}{8}$ " x $3\frac{1}{2}$"
N058   Negative envelopes - clear acetate $5\frac{1}{4}$" x $4\frac{1}{4}$"
N059   Negative envelopes - clear acetate $3\frac{3}{4}$" x $2\frac{3}{4}$"