A MIRROR, PLANE

Rectangular, glass, back silvered, with protective coating, pack of 10

	Size, mm
P30025/1	75 x 25
P30025/2	75 x 50
P30025/3	75 x 75
P30025/4	100 x 25
P30025/5	100 x 50
P30025/6	100 x 75
P30025/7	150 x 25
P30025/8	150 x 50

B MIRROR SUPPORT BLOCK

Wooden block 50x50x50 mm with slot to take rectangular mirrors.

P30030

C CYLINDRICAL MIRROR

Stainless steel, semi-circular, 150x25 mm diam x ht.

P30040 Concave
P30042 Convex

D CONCAVE MIRROR, SPHERICAL

Optically worked, back silvered, with protective coating.

	Diam, mm	Focal length, mm.
P30045/1	50	75
P30045/2	50	100
P30045/3	50	150
P30045/4	50	200
P30045/5	50	300
P30046/2	60	100
P30046/3	60	150
P30046/4	60	200
P30046/5	60	300
P30048/2	75	100
P30048/3	75	150
P30048/4	75	200
P30048/5	75	300

E CONVEX MIRROR, SPHERICAL

Optically worked, back silvered, with protective coating.

	Diam, mm	Focal length, mm
P30053/1	50	75
P30053/2	50	100
P30053/3	50	150
P30053/4	50	200
P30053/5	50	300
P30054/2	60	100
P30054/3	60	150
P30054/4	60	200
P30054/5	60	300
P30056/2	75	100
P30056/3	75	150
P30056/4	75	200
P30056/5	75	300

Front silvered mirrors giving sharper image and avoiding "double image" are also available.

F LENSES, SET OF SIX

Glass, one each double convex, plano-convex, concavo-convex, convexo-concave, plano-concave and double concave lens, in box.

P30060/1	Diam. 38 mm
P30060/2	Diam. 50 mm

G LENS, DOUBLE CONVEX, SPHERICAL

Clear glass, ground edges

	Diam, mm	Focal length, mm	Power
P30062/2	25	100	+10D
P30062/3	25	150	+6.6D
P30064/1	38	50	+20D
P30064/2	38	100	+10D
P30064/3	38	150	+6.6D
P30064/4	38	200	+5D
P30064/5	38	250	+4D
P30064/6	38	300	+3.3D
P30064/8	38	500	+2D
P30064/9	38	1000	+1D
P30067/1	50	50	+20D
P30067/2	50	100	+10D
P30067/3	50	150	+6.6D
P30067/4	50	200	+5D
P30067/5	50	250	+4D
P30067/6	50	300	+3.3D
P30067/8	50	500	+2D
P30067/9	50	1000	+1D
P30070/2	60	100	+10D
P30070/4	60	200	+5D
P30070/6	60	300	+3.3D

H LENS, DOUBLE CONCAVE, SPHERICAL

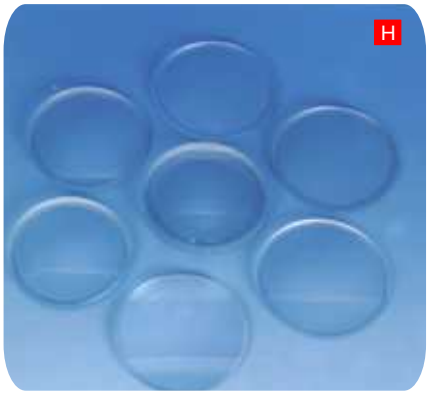
Clear glass, ground edges

	Diam, mm	Focal length, mm	Power
P30075/1	38	50	-20D
P30075/2	38	100	-10D
P30075/3	38	150	-6.6D
P30075/4	38	200	-5D
P30075/5	38	250	-4D
P30075/6	38	300	-3.3D
P30075/8	38	500	-2D
P30075/9	38	1000	-1D
P30078/1	50	50	-20D
P30078/2	50	100	-10D
P30078/3	50	150	-6.6D
P30078/4	50	200	-5D
P30078/5	50	250	-4D
P30078/6	50	300	-3.3D
P30078/8	50	500	-2D
P30078/9	50	1000	-1D
P30080/2	60	100	-10D
P30080/4	60	200	-5D
P30080/6	60	300	-3.3D

LENS, PLANO-CONVEX

Clear glass, ground edges.

	Diam, mm	Focal length,mm	Power
P30085/1	25	50	+20D
P30085/2	25	70	+14D
P30088/9	32	1000	+ 1 D
P30090/3	38	150	+6.6D
P30092/2	50	140	+7D
P30092/7	50	400	+2.5D
P30094/3	100	150	+6.6D



A LENS, CYLINDRICAL, DOUBLE CONVEX

Clear glass, with ground edges.

	Focal length, mm	Power
Size 50x50 mm		
P30101/3	80	+12.5D
P30101/6	150	+6.6D
P30101/7	200	+5D
Size 50x45 mm		
P30103/3	80	+12.5D
P30103/6	150	+6.6D
P30103/7	200	+5D

B LENS, CYLINDRICAL, DOUBLE CONCAVE

Clear glass, with ground edges

	Focal length, mm	Power
Size 50x50 mm		
P30105/2	70	-14D
P30105/6	150	-6.6D
P30105/7	200	-5D
Size 50x45 mm		
P30107/2	70	-14D
P30107/6	150	-6.6D
P30107/7	200	-5D

C LENS, CYLINDRICAL, PLANO-CONVEX

	Focal length, mm	Power
Size 50x50 mm		
P30109/1	60	+16.7D
P30109/2	75	+13.3D
P30109/3	100	+10D
P30109/4	150	+6.6D
Size 50x45 mm		
P30111/1	60	+16.7D
P30111/2	75	+13.3D
P30111/3	100	+10D
P30111/4	150	+6.6D

D LENS, CYLINDRICAL, PLANO-CONCAVE

	Focal length, mm	Power
Size 50x50 mm		
P30113/1	60	-16.7D
P30113/3	150	-6.6D
P30113/6	300	-3.3D
Size 50 x 45 mm		
P30115/1	60	-16.7D
P30115/3	150	-6.6D
P30115/6	300	-3.3D

E LENS HOLDER

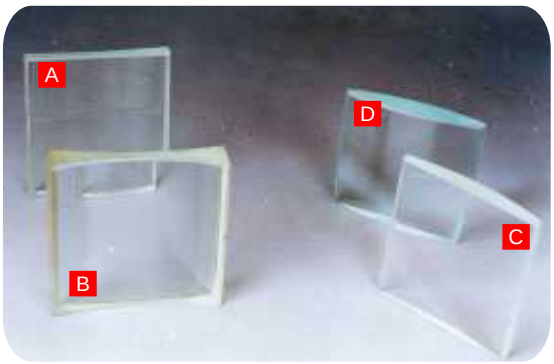
Wooden, with V shaped slot to take spherical lens or mirror upto 75 mm diam., with index mark.

P30125

F LENS HOLDER

for cylindrical lenses, to take 50x45 mm lenses. Spring locating strips hold lens firmly in place. Can be used in inver ted position with the lens in contact with the bench.

P30128



G LENS HOLDER

With 6 mm diam. metal rod, to fit into standard optical bench mounts & stands

P30137/2	To hold 38 mm lens
P30137/4	To hold 50 mm lens

H LENS HOLDER

Metal holder with sides grooved to hold lens.

	Diam of lens, mm
P30140/1	25
P30140/2	38
P30140/3	50

I LENS HOLDER

As above, on wooden support, for 50 mm diam. lens.

P30142

J SPHEROMETER

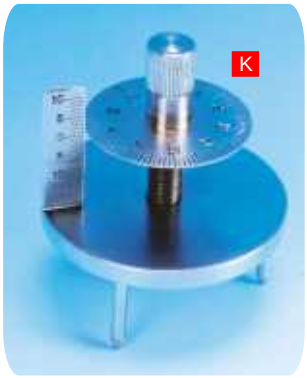
Brass dial head 40 mm diam, divided and marked in 100 divisions, vertical scale 10-0-10 mm, fitted on tripod stand, distance between legs 40 mm.

P30153/1	Screw pitch 1 mm.
P30153/2	Screw pitch 0.5 mm.

K SPHEROMETER

Brass dial head 40 mm diam, divided and marked in 100 divisions, vertical scale 10-0-10 mm, fitted on heavy brass disc, with 3 pointed legs, distance between legs 40 mm.

P30155/1	Screw pitch 1 mm.
P30155/2	Screw pitch 0.5 mm.



L MAGNIFIER, FOLDING

Pocket type, 25 mm diam. lens mounted in plastic frame.

P30175/1	Single lens
P30175/2	Two lenses
P30175/3	Three lenses

A MAGNIFIER, FOLDING

Fitted in plastic frame

P30177/5	Single,	x4
P30177/6	Double,	x7
P30177/7	Triple,	x10
P30177/8	Single,	x4, with leather pouch

B WATCHMAKER'S EYE GLASS

Diameter 25 mm, mounted in plastic Eye-grip frame.

	Magnification
P30180/1	x2.5
P30180/2	x3
P30180/3	x3.5
P30180/4	x4

C MAGNIFIER, FOLDING

Pocket type, doublet lens in plastic mount, metal case, lens diam.19 mm, magnification x8.

P30184

D MAGNIFIER

Glass lens, fitted in plastic mount, with handle, in different colours .

	Diam. mm
P30188/1	40
P30188/2	50
P30188/3	60
P30I88/4	75

E MAGNIFIER, READING GLASS

In metal frame and handle, chrome plated.

	Diam mm	F.L. mm	Magnification
P30192/1	40	100	x3.5
P30192/2	50	120	x3
P30192/3	50	150	x2.5
P30192/4	60	150	x2.5
P30192/5	75	150	x2.5
P30192/6	75	200	x2.2.5
P30192/7	100	150	x2.5
P30192/8	100	200	x2.25

F MAGNIFIER, READING GLASS

In metal frame with black plastic handle,

	Diam.mm	F.L. mm	Magnification
P30195/2	50	100	x 3.5
P30195/4	60	150	x 2.5
P30195/5	75	150	x 2.5
P30195/6	75	200	x 2.25
P30195/7	100	150	x 2.5
P30195/8	100	200	x 2.25

G MAGNIFIER, READING GLASS

In strong plastic frame and handle, diam. 75 mm.

P30197

H MAGNIFIER, TRIPOD

With adjustable screw top, metal frame, diam 38 mm

	Magnification
P30199/1	x 4
P30199/2	x 6
P30199/3	x 10

I BLOCK, GLASS

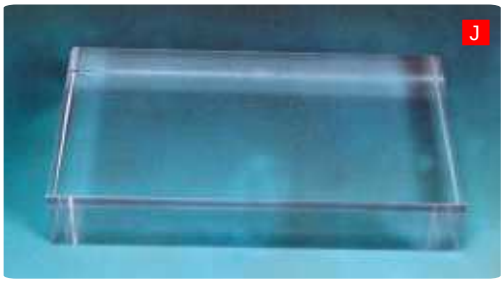
Free from air bubbles, all sides polished

	Size, approx,
P30251/1	75 x 50 x 12 mm
P30251/2	75 x 50 x 18 mm
P30251/3	100 x 50 x18 mm
P30251/4	100 x 60 x18 mm
P30251/5	115 x 65 x 18 mm

BLOCK, GLASS

Moulded glass, all sides polished,

	Size approx,
P30254/1	75 x 50 x 18 mm
P30254/3	100 x 60 x 25 mm

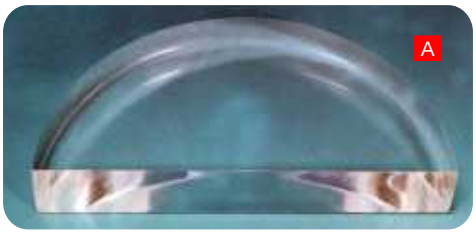


J BLOCK, ACRYLIC

Rectangular, clear, all sides polished

P30257/1	100x45x18 mm approx
P30257/2	115x65x20 mm approx

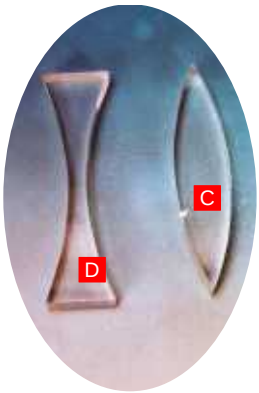
A BLOCK GLASS, SEMI-CIRCULAR,
90 mm diam.,16 mm thickness
P30260



B BLOCK ACRYLIC, SEMI-CIRCULAR
P30262/1 90 mm diam. X 16 mm thick
P30262/3 75 mm diam x20 mm thick

C LENS, BICONVEX, ACRYLIC
P30265/1 75 mm long,115 mm radii,25 mm thickness
P30265/2 75 mm long, 145 mm radii, 25 mm thickness

D LENS, BICONCAVE, ACRYLIC
P30268 75 mm long,115 mm radii, 25 mm thickness



E TRIANGLE, ACRYLIC
P30270/1 90° x 60° x 30°,75 mm hypoteneuse
P30270/2 90° x 45° x 45°,75 mm hypoteneuse

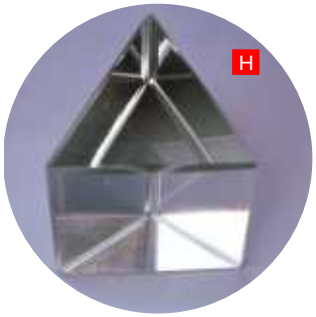
F TRIANGLE, ACRYLIC
Equilateral, 60° x 60° x 60°, 57 mm side
P30272

OTHER SIZES AVAILABLE AGAINST SPECIFIC REQUEST

G PINS
For optical experiments. Pack of 100 g
P30280/1 Length 50 mm, plated brass
P30280/2 Length 50 mm, plated iron
P30280/3 Length 75 mm, plated brass
P30280/4 Length 75 mm, plated iron

H PRISM
Glass, equilateral, polished faces, edges slightly bevelled, 60° x 60° x 60°

	Length x Face.
P30288/1	25 x 25 mm
P30288/2	38 x 38 mm
P30288/3	50 x 50 mm



I PRISM, GLASS

Right angle, polished faces, edges slightly bevelled, 90°x45°x45°

	Hypoteneuse x Length.
P30292/1	35 x 25 mm
P30292/2	50 x 38 mm
P30292/3	70 x 50 mm

J PRISM, GLASS,

Right angle, polished faces, edges slightly bevelled, 90°x60°x30°

P30295 28 x 38 mm (Hypoteneuse x Length)

PRISM, ACRYLIC,

Equilateral 60°x60°x60°

	Length x Face,
P30297/1	25 x 25 mm
P30297/2	25 x 38 mm
P30297/3	38 x 38 mm
P30297/4	63 x 63 mm

PRISM, ACRYLIC

Right angle,90°X45°X45°

	Hypoteneuse x Length,
P30299/1	35 x 25 mm
P30299/2	50 x 25 mm
P30299/3	70 x 40 mm

K SPECTROMETER PRISM

Optically worked working sides, equilateral Borosilicate crown glass, refractive index 1.510

	Length x Face
P30310/1	25 x 25 mm
P30310/2	32 x 32 mm
P30310/3	38 x 38 mm

Hard crown glass, refractive index 1.519 to 1.523

	Length x Face
P30315/1	25 x 25 mm
P30315/2	32 x 32 mm
P30315/3	38 x 38 mm

Dense flint glass, refractive index 1.620 to 1.623

	Length x Face
P30320/1	25 x 25 mm
P30320/2	32 x 32 mm
P30320/3	38 x 38 mm

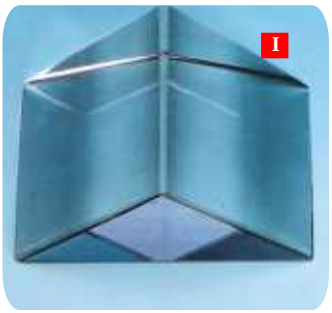
L PRISM, GLASS, HOLLOW

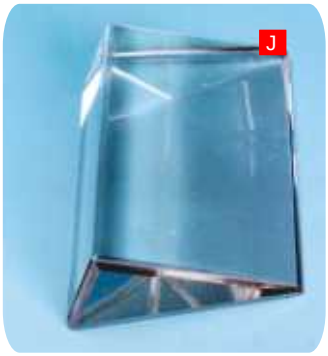
Equilateral, cemented, with hole & stopper at top

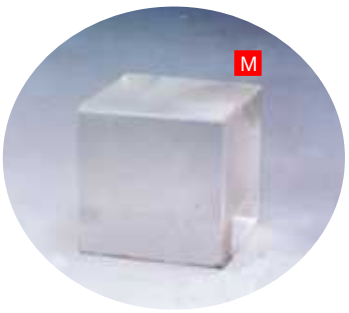
P30340/1	Side 38 mm
P30340/2	Side 50 mm

M CUBE, GLASS, SOLID

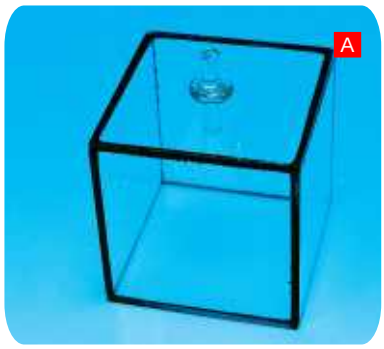
P30343 side 32 mm





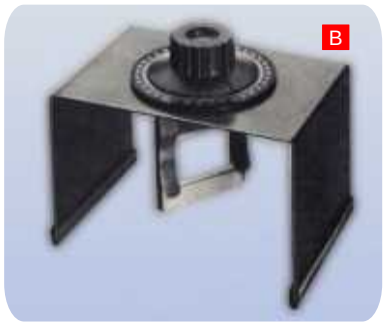


A CUBE, GLASs, HOLLOW
50 mm side, cemented, with hole & stopper at top
P30345



B REFRACTIVE INDEX OF WATER APPARATUS
By critical angle method,
A metal bridge fitted with air cell holder, knob & graduated circular scale, with one air cell,50 x 50 mm size.
P30351

TRANSPARENT TANK
For above, size 70x70x70 mm
P30352



RECTANGULAR TANK, PLASTIC
Size 175 x115 x 60 mm to demonstrate refraction of light rays in water, with matt white bottom.
P30354

C LARGE RECTANGULAR TRANSPARENT TANK
Clear plastics, approx 600 x 200 x 75 mm for use in wave motion & ray optics demonstrations.
P30356

D OPTICAL DISC
A 500 mm diam. disc marked every 5° is mounted on a heavy stand and is rotatable around its centre. It can be held in any desired position. The lamphouse, with a 12V 24 W special filament lamp has rotatable slots to provide light beams of varying widths & also narrow single, double & triple beams. Attached to the lamp house is an adjustable lens carrier with lens to provide diverging, parallel or converging light beams which are clearly visible in classroom. The lamphouse can be held in any desired position around the disc. Optical elements are two 50 x 25 mm plane glass mirrors, and a metallic cylindrical mirror, each mounted in a holder, for reflection. For refraction, 20 mm thick acrylic semi-circular block, bi-convex lens, bi-concave lens each 140 mm long & a trapezium with 125 mm base are provided. Each of these elements has embedded magnets to hold on to the disc.
P30360

SPARE LAMP FOR ABOVE
12V 24W
P30362

E OPTICAL DISC, JUNIOR

Comprising a 290 mm diam. metal disc, graduated 0-90° in each quadrant, supported at its centre in a vertical plane on a metal stand such that the disc can be rotated as desired. With a clip to clamp the optical accessories to the disc.

P30366

F OPTICAL ACCESSORIES

Set of accessories for use with above and also suitable for other ray optics work. Consists of 15mm thick acrylic plastic accessories i.e.

Biconvex lens, 90 mm length, radius of curvature 85 mm approx.
Biconvex lens, 90 mm length radius of curvature 210 mm approx.
Biconcave lens, 90 mm length, radius of curvature 120 mm approx.
Circular block diam. 90 mm
Semi-circular block diam. 90 mm
Right angle prism, hypoteneuse 90 mm
Trapezium block 87x24 mm. base x height
Plane mirror 95x10x4 mm
Curved mirror 95x10x4 mm

P30370

I RAY BOX

To provide a simple means of producing single or multiple rays of light for use in elementary optics. Made of die-cast alloy, the raybox has an open front and vertical internal grooves to accommodate a slit plate and a cylindrical lens. Supplied complete with a metal plate having single and triple slits, a 12 V 24 W SBC line filament lamp and a lampholder.

P30375

H Accessories

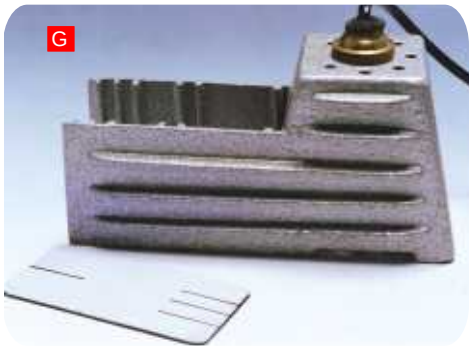
Lens Set, one each plano-convex and plano-concave cylindrical lens of focal length 150 and 300 mm respectively; Colour filter, set of 3 primary & 3 secondary.

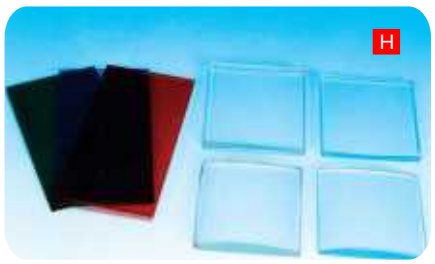
P30377

I LIGHT BOX

Consists of a robust light box in matt black finish with a 12 V 24 W axial filament lamp with flexible leads. One end of the box takes a cylindrical convex lens in an adjustable sliding mount to enable production of convergent, parallel or divergent beams. The other end of the box has a triple aperture system for colour mixing experiments. The two side apertures are provided with hinged mirrors. All apertures are provided with vertical channels to hold slit plates and/ or colour filters.

P30405



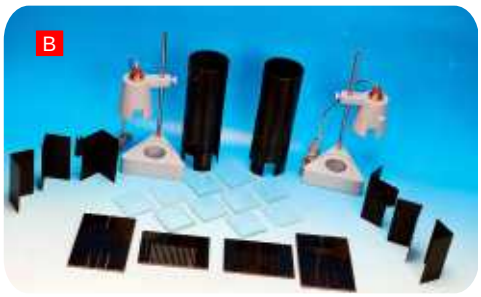


A LIGHT BOX & OPTICAL SET

As P30405 but complete with accessories which consist of:
5Plastic blocks, one rectangular, one semi-circular,one equilateral prism 60°x60°x60°, one right angle prism 90°x60°x30° and one right angle prism 90°x45°x45°.
3 Cylindrical acrylic lenses: one double convex, one double concave, both having the same radius of curvature and one thick convex lens.
3 Mirrors, one plane glass, one curved parabolic and one curved semi-circular.
2 Slit plates, one with three narrow and one narrow slits, the other with four narrow and one wide slits.
1 Set of eight colour filters, red, green, blue, cyan, violet, yellow, orange and magenta.
1 Set of coloured cards, red, green, blue, violet, orange, cyan, yellow and pink.
Complete with one spare lamp, in box.
P30407

B RAY OPTICS KIT

Consists of 2 lamps & two stands, I pair housing shields, 2 combined single & triple slit plates, 2 multiple slit combs, 2 holders for combs & slit plates, 4 wooden light barriers, & following cylindrical lenses, of size 50 x 50 mm.
4 No Lenses of +7D, 2 of +10D, 2 of +17D & 2 of -17D.
P30415



C COMPACT LIGHT SOURCE

A 12V 100W lamp in ventilated housing. Apertures are provided to enable lamp to be used as a horizontal 'line' source or a powerful pointer source. Mounted on a rod for being supported on a laboratory stand.
P30430

D PINHOLE CAMERA KIT

Comprising 8 cardboard boxes 150x100x100 mm each with hole, screen & lid, 50 sheets black paper 200x250 mm, one lamp, mounted on bulb holder with flexible wires and one packet of pins.
P30450

E PIN HOLE CAMERA

To illustrate images produced by small apertures.Comprises a polished wooden box with a ground glass screen at one end and a hole at the other.
P30455

F TELESCOPE / MICROSCOPE MOUNT

An angle section bar with a support rod for mounting on laboratory stand. Three spring lens holders, one for 50 mm and two for 25 mm diam. lenses, are mounted on spring clips to permit movement along the bar for focussing.

P30468

G PERISCOPE

To show principle of reflection, with two plane mirrors fixed at 45°, overall size 250 x 45 x 45 mm, polished wood.

P30475

H MODEL TELESCOPE, ASTRONOMICAL

A simple model to show the working of astronomical telescope, comprising a plano-convex lens diam.38 mm FL 100 mm, mounted in a metal tube which slides in an outer tube of 400 x 42 mm, size, with a convex lens objective diam.50 mm fl 500 mm, in case.

P30480

TELESCOPE MODELS

Each model is complete with lenses, a diagram showing path of rays, and is fitted on stand, for demonstration

I MODEL OF GALILEAN TELESCOPE

P30485

J MODEL OF ASTRONOMICAL TELESCOPE

P30490

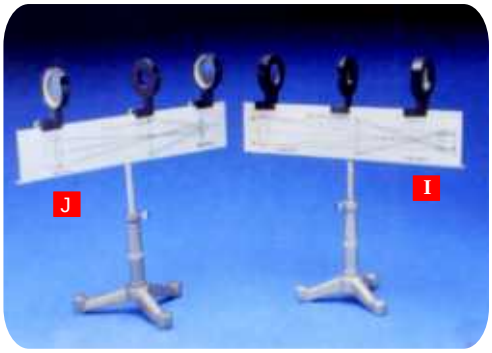
MODEL OF TERRESTRIAL TELESCOPE

P30495

MODEL OF COMPOUND MICROSCOPE

Complete with wire gauze held in frame to serve as object.

P30500



A READING TELESCOPE

Fitted with an achromatic objective of fl 175 mm. clear aperature of 23 mm and x8 Ramsden eye-piece with a cross- line graticule. The focussing is done by rack & pinion arrangement . Mounted on heavy metal stand.

P30505

B OPTICAL BENCH , WOODEN

A wooden base board with one meter scale divided into mms. with following accessories .:

1 each White face object & receiving screens each 150x100 mm,with aperture, mounted on wooden base with an index mark.

1 Plane mirror 150 x 100 mm mounted as above

1 Lens holder V shaped , wooden.

1 Needle vertically mounted in a short wooden rod, on base.

1 Candle holder on base.

The components have the same optical centre height.

P30515

C OPTICAL BENCH, JUNIOR

On wooden base, with 1.5 metre scale, with six sliding bases. Each siding base is with an index mark, a brass pillar & locking screw, with following accessories:

1 Lamphouse with 230 V lamp

1 Object screen, metal, white

1 Lens holder for 38 mm diam. lenses

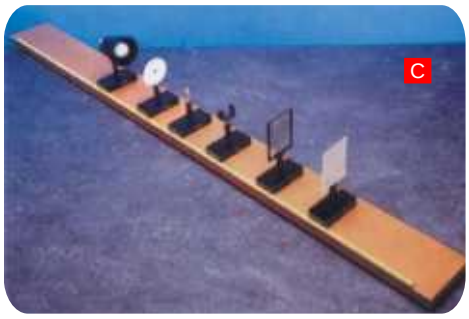
1 Receiving screen, metal, white, with slot for squared paper on reverse

1 Object needle, mounted in brass rod

1 Plane mirror in metal frame

Each of these accessories is mounted on a 6 mm brass rod which fits into the pillars and is adjustable for height.

P30518



D OPTICAL BENCH, SINGLE ROD

Consists of a single square section steel rod, accurately graduated, fitted on to two sturdy metal feet with levelling screws with four specially designed heavy sliders with fine index marks. Two of the sliders have fine transverse motion arrangement. Supplied complete with two lens holders and two object needles.

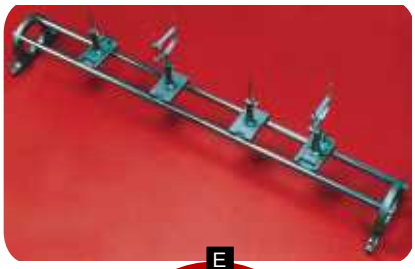
P30521 Graduated length 1 metre

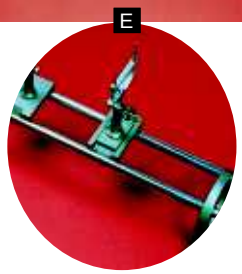
P30522 Graduated length 1.5 metre

E OPTICAL BENCH, DOUBLE ROD

Bench has two steel rods, one of which is graduated in mms. with heavy metal end supports with levelling screws with four metal slides which slide smoothly on the bench. Two of the slides have transverse motion arrangement. Complete with two lens holders and two object needles.

P30523 Graduated to 1 metre
P30526 Graduated to 1.5 metre





ACCESSORIES FOR OPTICAL BENCH

For P30521, P30522, P30523 & P30526

All accessories are with 6 mm mounting rods, where required, to fit in optical bench slides. The length of the rods and size of components are designed to provide approximately the same optical centre height.

F LENS HOLDER

V-section, to accommodate any lens or mirror upto 75 mm diam.

P30548

G PRISM TABLE

Brass disc 82 mm diam. mounted on 6 mm rod

P30550

H DIFFRACTION OBJECT HOLDER

For supporting diffraction objects or any other item in 50 mm square mount. Rectangular metal frame with spring clips and a mounting rod.

P30552

I OBJECT NEEDLE

Rod with pointed end, overall length 80 mm approx.

P30558

J CROSS-WIRES

75 mm diam. circular black metal screen having 10 mm aperture with cross-wires.

P30560

K OBJECT SCREEN

A 75 mm metal screen with 10 mm central aperture covered with wire gauze.

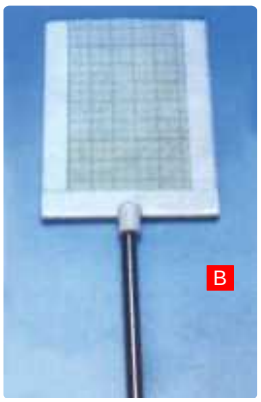
P30575

A ADJUSTABLE SLIT

A 75 mm diam. circular metal disc with 12.5 mm central aperture. A screw controlled spring loaded precision slit is mounted on one side of the disc.Max opening 4 mm wide and 10-12 mm long.
P30580

B RECEIVING SCREEN

White enamel metal frame 100 x 75 mm with a graph paper.
P30585



C CANDLE HOLDER

20 mm diam. x 22 mm deep cylindrical metal holder mounted on rod of 6 mm diam.
P30587

D GREASE SPOT PHOTOMETER

Comprises a waxed paper screen with a wax free central zone mounted on a black metal frame 100x75 mm, with a central aperture of 51 mm diam,mounted on rod
P30592

E POLARISER AND ANALYSER (POLAROID)

Two identical units each with a polaroid disc mounted in a rotatable mount with an aperture of 25 mm. Both mounts have a pointer moving over a 75 mm diam. scale divided 0-90°-0-90°-0 x1°
P30610

F STAND FOR OPTICAL BENCH ACCESSORIES

A metal pillar to take 6 mm diam. rod, with lockscrew, mounted on a heavy base 60 x 60 mm size, with index line, supported on three feet, overall height 63 mm.
P30625

G COMBINED OBJECT AND RECEIVING SCREEN

Comprising a black metal frame 150x100 mm with an aperture, and a removable white card screen. The card has an aperture with an index point for use as an object, or the card may be inverted and used as a receiving screen. Mounted on a base 100x50 mm.
P30635

H MATT WHITE SCREEN

The metal screen is painted matt white, with a cut-out in one side to locate over a metre rule. It may be used in either the vertical or the horizontal position as required.
P30637

I PHYSICAL OPTICS KIT

Consists of:
8 Plano-convex lens fl 500mm, 1 Plano-convex lens of fl 150mm
12 Lens holders
4 Plates of different apertures,32,22,11 & 5.5mm diam. resp.
3 Plates with small holes in circles of 29,22,10 mm diam.
1 Plate with circular aperture of 5.5 mm diam.
4 Multi-aperture plates
4 Stop plates
2 Slide holders
6 Translucent screens,
10 White cards
4 Eye-pieces
15 each Red, green and blue filters
40 Black cards with holes
40 Razor blades
120 Rubber bands
1 Piece black chiffon for diffraction effects
P30640

J YOUNG'S SLIT

A double slit 10 mm long x1 mm separation in 50x50 mm frame. Mounted in channel with a hinged joint & micrometer screw to give fine adjustment. For observation of fringes produced by interference between two beams of light from a common source.
P30657

YOUNG'S SLIT

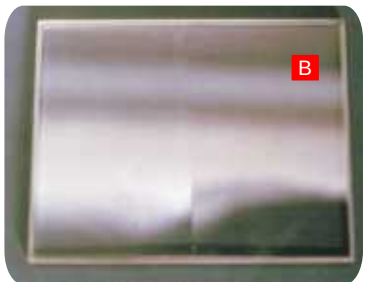
Double slit 10 mm with 1 mm separation in frame of 50x50 mm. Unmounted
P30659

K DOUBLE SLIT KIT

Containing four ruling devices, one box of 72 microscope slides, a bottle of colloidal graphite to prepare double slits. The slide is accommodated in a groove in the ruling device which has a 0.5 mm pitch feed screw for control of spacing.
P30665

A FRESNEL'S BIPRISM
The 40x30 mm biprism with optically worked surfaces is mounted in a frame with hinged joint and has a micrometer screw for adjustment. For determination of the wavelength of light by measurement of interference fringes produced by interference between two beams of light originating as a single beam from a common source and split by the biprism
P30670

B FRESNEL'S BIPRISM
Optically worked surfaces, 40 x 30 mm., unmounted
P30672



C NEWTON'S RINGS APPARATUS
A flat glass plate and a slightly convex lens of 50 mm diam. are placed in a metal frame with three pressure adjusting screws to produce Newton's Rings.
P30675

D NEWTON'S RINGS APPARATUS, REFLECTED SYSTEM
A frame 60 x 58 x 50 mm high with a glass plate mounted at an angle of 45° to reflect light downwards on a plano-convex lens of 1 metre focal length, resting on a glass plate 38 x 38 x 3 mm. complete with lens.
P30680

NEWTON'S RING MICROSCOPE
Please see our General Apparatus
Cat.No CV1012.

E DIFFRACTION GRATING REPLICA
Transmission type, 30 x 25 mm., 600 lines per mm, with protective glass cover.
P30685

F POLAROID FILM
Framed in cardboard frame
P30695/1 25 x 25 mm, pair
P30695/2 50 x 50 mm, pair

G NEWTON COLOUR DISC
Multi-coloured disc mounted on metal stand, rotated by a hand wheel.
P30700

H COLOUR FILTER SET

In cardboard frames, 50 x 50 mm, set of 6 primary and secondary colours.
P30705

I DIRECT VISION SPECTROSCOPE

For quick examination of spectral composition of white light. Consists of a metal tube with draw-out focussing and an adjustable slit, fitted with achromatic objective and prism, in case.
P30725

J SPECTROMETER, STANDARD

Reads to 6 minutes of arc (0.1°) 170 mm diam. metal scale graduated 360°x1°, independently rotatable, with locking screw, vernier attached to the telescope reads to 0.1° (6 minutes of arc). Collimator is mounted on a fixed pillar, with an achromatic objective of 150 mm focal length and 21 mm aperture, and has an adjustable slit 6 mm long. The telescope is on a movable pillar, with a fine adjustment screw, an achromatic objective of 170 mm focal length, 21 mm aperture, Ramsden eye-piece and glass crosswire graticule. Both collimator and telescope have spiral focussing system and have axis adjusting arrangement. The table has 3 levelling screws, with lines marked to assist prism placement. With prism and grating holders, one small screw driver & one tommy bar for axis adjustment. Without prism.
P30738

K SPECTROMETER, INTERMEDIATE

Reads to 1 minute of arc. 150 mm diam. scale with protective cover and acrylic windows to read verniers, is fixed to the telescope movement. The table is attached to double ended verniers reading to 1 minute of arc with magnifiers provided for the purpose. Both telescope and table rotations have fine adjustments. Collimator is on a fixed pillar with 175 mm fl achromatic objective of 25 mm aperture and an adjustable slit. The telescope is on a movable pillar with 175 mm achromatic objective x8 Ramsden eye-piece and glass crossline graticule. Both telescope and collimator have rack and pinion focussing and their optical axes can also be adjusted. Prism table has lines to assist prism placement and has three levelling screws.With prism clamp, diffraction grating holder & one tommy bar for axis adjustment, in case.
P30745

A SPECTROMETER, ADVANCED

Vernier reading to 30 seconds of arc. The 175 mm diam. scale is fixed. The table and telescope movements are completely independent of each other and read to 30 seconds of arc by means of double ended verniers & magnifiers. Both rotations have fine adjustment screws. Coarse adjustments can also be made by release of clamping screw.

Collimator is mounted on a fixed pillar and is fitted with 175 mm fl. achromatic objective with 32 mm clear aperture and a laterally adjustable slit 6 mm long.

Telescope is mounted on a movable pillar fitted with 175mm fl. achromatic objective of 32 mm clear aperture and x10 Ramsden eye-piece with a glass crossline graticule.

Both the telescope and collimator have rack and pinion focussing and can be adjusted for levelling the axes of both units as well as for adjusting to the axis of rotation.

Prism table is marked with lines to assist prism placement and has three table levelling screws. It also has an inter-changeable clamping unit for the prism and diffraction grating.

Complete with prism clamp, diffraction grating holder and a tommy bar for adjusting optical axes. In case.

P30750

ACCESSORIES FOR SPECTROMETERS

PRISM

Optically worked surfaces see **P30310/1 to P30320/3.**

DIFFRACTION GRATING REPLICA

See **P30685**

B SODIUM LAMP

For producing monochromatic light at high intensity.

P30758/1 35 watt
P30758/3 55 watt

C STAND FOR SODIUM LAMP

With E.S. holder mounted on aluminium bracket, fitted with 1.5 m 3-core cable, bracket adjustable for height, with shield having aperture 50x25 mm approx, mounted on a rod and a cast metal base.

P30760

D TRANSFORMER FOR SODIUM LAMP

Input 220-240 V ac, output to suit sodium lamp.

P30763