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Physics
CATALOGUE

SERVING SCIENCE SINCE 1965

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PHY-00001 ACCUMULATORS PLASTIC CONTAINER

Battery storage without acid in high impact plastic container with terminals and handle, uncharged.

	VOLTAGE	CAPACITY
PHY-00001/1	2 V	20 AH
PHY-00001/2	2 V	45 AH

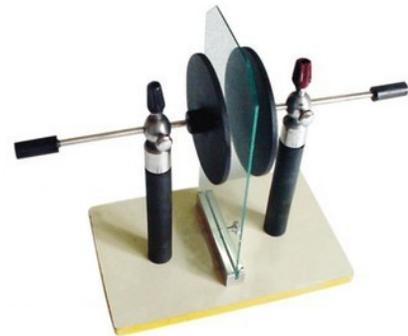
**PHY-00002 ACCUMULATORS TRANSPARENT CONTAINER**

Battery storage without acid in high impact transparent container with terminals and handle, uncharged.

	VOLTAGE	CAPACITY
PHY-00002/1	2 V	20 AH
PHY-00002/2	2 V	45 AH

PHY-00003 AEPINUS CONDENSER

Adjustable plates of 100mm dia with insulated handle and a dielectric plate. Supported on insulating pillars.

**PHY-00005 AMMETER (MOVING COIL)**

For d.c. measurement with color coded terminals, meters are housed in a dust proof cases. Provided with zero adjuster.

PHY-00005/1 single range - 0-1 Amp, 1.5 Amp, 3 Amp, 5 Amp, 10 Amp.

PHY-00006 AMMETER DUAL SCALE (MOVING COIL)

For d.c. measurement with color coded terminals, meters are housed in a dust proof cases. Provided with zero adjuster.

PHY-00006/1 DUAL RANGE – 1/3Amp, 1/5 Amp, 2.5/5 Amp, 3/5 Amp, 1.5/3 Amp, 3/10 Amp, 5/10 Amp.





PHY-00010

ARCHIMEDES PRINCIPLE KIT

Consisting metal shape solid regular type and irregular type along with the beaker to collect the displacement liquid, consisting displacement vessel, newton meter & glass beaker.

PHY-00011

ATWOOD'S MACHINE

Complete apparatus attached with a rod having two pulleys on both ends. a base is also fitted with the rod to fix the apparatus on the wall, provided with two weights for balancing or unbalancing



PHY-00018

BALANCE PHYSICAL

Most Convenient , economical and basic model for use in Schools or Colleges, fitted in wooden frame having glass windows , Agate knife edges , capacity 250 gm with sensitivity 2 mg. Pan dia 100 mm

PHY-00022

BALANCE COMPRESSION

Very useful balance in chemical labs or kitchens , most accurate, Made of plastic sturdy body. Easy readable scale with wide view, provided with zero adjustable knob.



PHY-00026

BALANCE DIGITAL

Digital Display workable on 220 volts AC or battery. Provided with adopter
2000 Gm x 1 gm

PHY-00026/1

PHY-00028 BALANCE ELECTRONIC

Very Accurate Electronic balance, LCD Display with back light platform size 115 mm dia Stainless steel workable on 220 volts AC or battery. Provided with adopter and wind shield

PHY-00028/1

600 Gm x 0.01 gm

**PHY-00030 BALANCE HYDROSTATIC**

General purpose balance for School & colleges for finding the specific gravities by Archimedes Principle two long and one short detachable & adjustable pans of dia 100 mm are provided. Mounted on nicely polished heavy wooden base with leveling screws. Capacity 250 Gm with sensitivity of 2 Gm.

PHY-00032 BALANCE LEVER

Single pan balance for direct reading with dual range reading 0-250 gm & 1000 gm provided with leveling screw for zero adjustment ,metallic frame ,all steel parts are chrome plated.

**PHY-00033 BALANCE ROBERVAL VISIBLE MECHANISM**

Base made of painted sheet iron with visible mechanism without any disassembly, the mobile and fixed parts are painted in different colors. Capacity 2 Kg x 1 Gm.

PHY-00034 BALANCE ROBERVAL ANTIQUE MODEL

Base made of Aluminium/ cast iron, duly painted Stainless steel pan of dia 150 mm. Capacity 2 Kg x 1 Gm





PHY-00036

BALANCE SIMPLE SCHOOL

A strong yet sensitive balance made of durable washable plastic with sliding compensators for zero adjustment Capacity 2 Kg.

PHY-00038

BALANCE SPRING ACRYLIC

Newton Meters Most elegant models available in various colors , tubular shaped made from first quality plastic , scaled in grams & Newton's , zero adjustment is incorporated with hooks .

	Capacity Gms	Capacity Newton	Sub-division Gms.
PHY-00038/1	100	1	2
PHY-00038/2	250	2.5	5
PHY-00038/3	500	5	10
PHY-00038/4	1000	10	20
PHY-00038/5	2000	20	40
PHY-00038/6	3000	30	60
PHY-00038/7	5000	50	100



PHY-00040

BALANCE SPRING HANGING TYPE

made from Polystyrene with zero adjustment facility, Large flat scales for clear & easy visibility with hooks .

	Capacity Gms	Sub-division Gms.
PHY-00040/1	50	1
PHY-00040/2	100	1
PHY-00040/3	250	5
PHY-00040/4	500	5
PHY-00040/5	1000	20
PHY-00040/6	2000	40

PHY-00041 BALANCE SPRING HANGING TYPE- DUAL SCALE

made from Polystyrene with zero adjustment facility, Large flat dual scales in metric & Newton range for clear & easy visibility with hooks .

Capacity Gms	Capacity Newton	
PHY-00041/1	100	1
PHY-00041/2	250	2.5
PHY-00041/3	500	5
PHY-00041/4	1000	10
PHY-00041/5	2000	20

PHY-00041/1	100
PHY-00041/2	250
PHY-00041/3	500
PHY-00041/4	1000
PHY-00041/5	2000

**PHY-00042 BALANCE SPRING METAL BODY- DUAL SCALE**

Framed in Metal case with zero adjustment facility, Large flat dual scales in metric & Newton range for clear & easy visibility with hooks .

Capacity Gms	Capacity Newton	
PHY-00042/1	100	1
PHY-00042/2	250	2.5
PHY-00042/3	500	5
PHY-00042/4	1000	10
PHY-00042/5	2000	20
PHY-00042/5	5000	50

PHY-00042/1	100
PHY-00042/2	250
PHY-00042/3	500
PHY-00042/4	1000
PHY-00042/5	2000
PHY-00042/5	5000

PHY-00044 BALANCE SPRING METAL TUBULAR

made of Brass with zero adjustment facility, scales for clear & easy visibility with suspension loop & hook .

Capacity Gms	Sub-division Gms.	
PHY-00044/1	100	1
PHY-00044/2	200	2
PHY-00044/3	500	5
PHY-00044/4	1000	10

PHY-00044/1	100
PHY-00044/2	200
PHY-00044/3	500
PHY-00044/4	1000

**PHY-00045 BALANCE SPRING POCKET SIZE**

Unique & elegant pocket sized balance made of Aluminum with zero adjustment facility, scales for clear & easy visibility with suspension loop & hook .

Capacity KG	Sub-division Gms.	
PHY-00045/1	1.5	25
PHY-00045/2	3	50
PHY-00045/3	6	100
PHY-00045/4	10	250

PHY-00045/1	1.5
PHY-00045/2	3
PHY-00045/3	6
PHY-00045/4	10



PHY-00047

BALANCE SPRING TUBULAR ALUMINIUM

Made of aluminum, tubular body, with zero adjustment facility, dual scale in metric & newton range, scales for clear & easy visibility with suspension loop & hook.

	Capacity Gms	Capacity Newton	Sub-division Gms.
PHY-00047/1	100	1	1
PHY-00047/2	250	2.5	5
PHY-00047/3	500	5	10
PHY-00047/4	1000	10	20
PHY-00047/5	2000	20	40
PHY-00047/6	3000	30	60
PHY-00047/7	5000	50	100

PHY-00048

BALANCE SPRING BULL TYPE

Unique & elegant tough designed balance, long scales for clear & easy visibility, length 200 mm with suspension loop & hook.

	Capacity KG	Sub-division Gms.
PHY-00048/1	1	5
PHY-00048/2	2	10
PHY-00048/3	5	25
PHY-00048/4	10	50
PHY-00048/4	15	100
PHY-00048/4	20	100



PHY-00052

BALANCE WEIGHTS "ANALYTICAL"

Brass, Polished packed in wooden case with lid. Complete with chrome plated forceps.

Capacity			
PHY-00052/1	1 mg	to	100 gm
PHY-00052/2	1 mg	to	200 gm
PHY-00052/3	1 mg	to	500 gm
PHY-00052/4	1 mg	to	1000 gm

PHY-00054

BALANCE WEIGHTS "PHYSICAL"

Brass, Polished, in wooden block.

PHY-00054/1

Capacity 500 gm Set of Eleven

Comprising 1 x 200 gm, 2 x 100 gm, 1 x 50 gm, 1 x 20 gm, 2 x 10 gm, 1 x 5 gm, 2 x 2 gm, 1 x 1 gm.

PHY-00054/2

Capacity 1000 gm Set of Twelve

Comprising 1 x 500 gm, 1 x 200 gm, 2 x 100 gm, 1 x 50 gm, 1 x 20 gm, 2 x 10 gm, 1 x 5 gm, 2 x 2 gm, 1 x 1 gm.



PHY-00058 BALLISTIC GALVANOMETER

Housed in Rigid and robust Bakelite case, used for the measurement of small quantities of electric charge.
Resistance in Ohm: 115, Time period/seconds: 12

**PHY-00061 BALLISTIC CARS**

The cars have friction free wheels for smooth movement. Consist of barrel mounted vertically on the cars, Complete with cord, lock pin & steel ball.

PHY-00063 BANANA PLUGS

Available in two colors Red & Black overall length 40 mm , pin size 4 mm

**PHY-00065 BAR & GAUGE**

Comprising Mild Steel Bar 110 x 10 mm on metal rod with wooden handle. Overall length 275 mm helpful in illustrating expansion of heating and contracting by cooling.

PHY-00066 BAR BREAKING APPARATUS

Comprising heavy metallic frame duly powder coated 340 x 120 x 100 mm with pillar to carry a stout iron bar, supplied with pack of ten breaking bars.

**PHY-00068 BARLOW'S WHEEL**

Workable on 4 volts Complete with Horse shoe magnet Star shaped copper disc on metal pillar. Mounted on wooden base.



PHY-00070

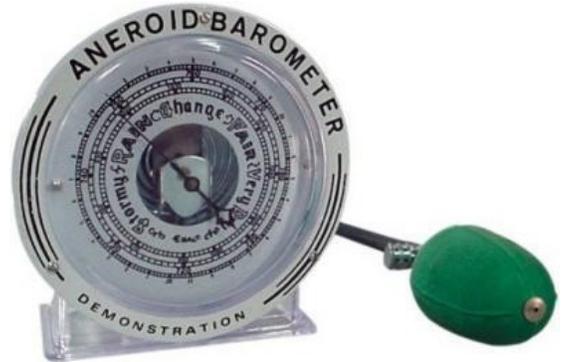
BAROMETER ANEROID

Basic model of Barometer, dial size 100 mm, graduated 28 to 31 inch of Hg and 960 to 1060 mill bars , Plated bezel.

PHY-00072

BAROMETER ANEROID DEMONSTRATION

For educative Demonstration model in transparent sealed case, 100 mm dial, pressure bulb is provided to force the movements.



PHY-00073

BATTERY HYDROMETER

Range 1100-1300 having colored zones for charged, partially charges and uncharged positions compressible bulb fitted to glass body.



PHY-00075

BELL DEMONSTRATION MODEL

Workable on 4-6 Volts DC All wiring circuits are visible for demonstration, mounted on board, working model.



PHY-00078

BELL IN VACUUM

Electric bell Workable on 4-6 Volts AC/DC . Terminals for connections are fitted on Rubber bung placed for sealing the jar

PHY-00078/1

Bell in Vacuum Acrylic

PHY-00078/2

Bell in Vacuum Glass



PHY-00083 BICYCLE DYNAMO ASSEMBLY

The Cycle dynamo mounted on a base, hand driven wheel provided to generate current to light the bulb placed on the base. Working model.

**PHY-00085 BIOTS CONDUCTOR**

Sphere of 50 mm dia mounted on insulated stand and insulated handles, demonstrating the charge resides only outside surface of an conductor. Fixed on base.

PHY-00088 BLOCKS ACRYLIC RECTANGULAR

All sided polished.

SIZE IN MM

PHY-00088/1	75 x 50 x 18
PHY-00088/2	100 x 65 x 18
PHY-00088/3	125 x 65 x 18

**PHY-00093 BLOCKS ACRYLIC SEMI-CIRCULAR**

All sided polished.

Dia x Thickness

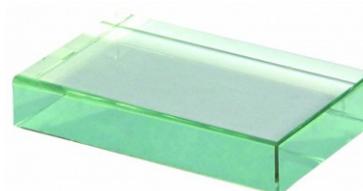
PHY-00093/1	100 x 18 mm
PHY-00093/2	100 x 12 mm
PHY-00093/3	90 x 16 mm

PHY-00095 BLOCKS GLASS RECTANGULAR

All sided polished. Clear Glass

SIZE IN MM

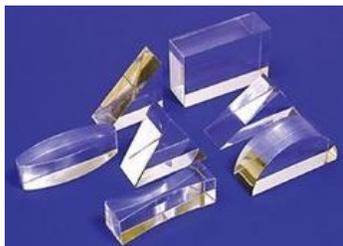
PHY-00095/1	75 x 50 x 12
PHY-00095/2	75 x 50 x 18
PHY-00095/3	100 x 60 x 18
PHY-00095/4	115 x 65 x 18
PHY-00095/5	125 x 65 x 18

**PHY-00096 BLOCKS GLASS SEMI-CIRCULAR**

All sided polished.

Dia x Thickness

PHY-00096/1	90 x 16 mm
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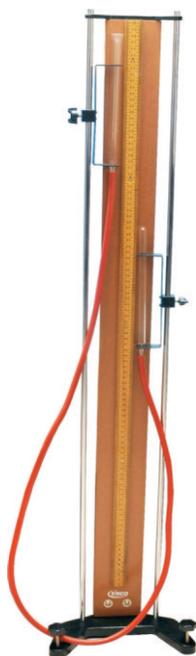


PHY-00098 BLOCKS SET ACRYLIC SET OF 6

Set Comprising seven acrylic block in a case
 Triangle 90 x 45 x 45 ° Size 75 mm Hypotenuse
 Triangle 60 x 60 x 60 ° Size 58 mm
 Rectangle 75 x 50 mm
 Semi Circular 75 mm dia
 Bi-Convex 75 mm & 100 mm radius curved faces
 Bi-Concave 75 mm & 100 mm radius curved faces

PHY-00100 BOURDEN GAUGE

Clear Perspex case of 100 mm Dia gauge reads 0 to 50 Lbs/in 2 X 1 & 0 to 3.5 Kg/cm 2 x 0.1 actual total pressure.



PHY-00101 BOYLE'S LAW APPARATUS

Demonstrate the relationship between pressure and a volume of a gas at a fixed temperature, Complete apparatus mounted on a stable cast iron base with leveling screws, Height 120 cm, scale 100 cm graduated in mm reading in both directions. The mercury reservoir is held in clamp sliding on metal rod. Supply with pressure rubber tubing & set of glass tubes supplied without mercury

PHY-00104 BOYLE'S LAW APPARATUS DEMONSTRATION TYPE

The apparatus comprises a thick walled, wide-bore glass tube mounted vertically in front of a scale graduated 0 to 65cm³, with zero corresponding to the inside of the top end . Air is confined by colored oil in a metal pressure chamber fitted with a gauge and a riffled inlet tube with stopcock.



PHY-00105 BOYLE'S LAW FOOT PUMP

The pump is used with Boyle's law apparatus demonstration type.

**PHY-00107 BUCKET & CYLINDER**

Used to demonstrate the Archimedes' Principle. The Cylinder has a suspension loop at the top and hook at the bottom. Size 6 cm long, overall length when extended 16 cm.

PHY-00108 BULBS LOW VOLTAGE

Low voltage lamps with double contact S. B. C

**PHY-00110 BUTTERFLY NET FARADAY**

Mounted on a Metallic base with insulating pillar , Fabric net to show that electrical charge resides on external surfaces of a conductor with cord .

PHY-00112 CALORIMETER COPPER

Supplied without stirrer rolled rim, two sizes available.

PHY-00112/1	75 x 50 mm	Ht x Dia.
PHY-00112/2	100 x 75 mm	Ht x Dia.

**PHY-00114 CALORIMETER ALUMINUM**

Supplied without stirrer rolled rim, two sizes available.

PHY-00114/1	75 x 50 mm	Ht x Dia.
PHY-00114/2	100 x 75 mm	Ht x Dia.



PHY-00116 CALORIMETER COPPER WITH STIRRER
Used for measuring the heat of chemical reactions or physical changes as well as their heat capacity , polished copper with lid fitted with rubber bung and stirrer

PHY-00116/1	75 x 50 mm	Ht x Dia.
PHY-00116/2	100 x 75 mm	Ht x Dia.

PHY-00117 CALORIMETER ALUMINIUM WITH STIRRER
Used for measuring the heat of chemical reactions or physical changes as well as their heat capacity , polished Aluminium with lid fitted with rubber bung and stirrer

PHY-00117/1	75 x 50 mm	Ht x Dia.
PHY-00117/2	100 x 75 mm	Ht x Dia.



PHY-00119 CALORIMETER COPPER WITH THERMOMETER SUPPORT & STIRRER
Twin Vessels calorimeter made of polished copper of size 75 x 50 mm dia. resting on a felt pad inside an outer vessel of size 100 x 75 mm. The outer vessel provided with thermometer support which can be detached. Complete with Stirrer.



PHY-00121 CALORIMETER COPPER WITH WOODEN BOX & STIRRER
Made of copper 75 x 50 mm dia resting on a felt pad inside wooden box with sliding cover, provided with Thermometer holder with stirrer.



PHY-00122 CALORIMETER JOULE'S
Comprises of Chrome plated Copper calorimeter of size 75 x 50 mm placed within an outer vessel of size 100 x 75 mm with ebonite cover, 4 mm socket terminals are connected , the resistance of coil is around 6 ohms it should be used with a current of 0.5 Amp. The calorimeter is best to determine the specific heat of liquid by electrical method supplied without thermometer.



PHY-00126 CAPACITANCE BOX FOUR DECADES

A useful equipment in resonance timing or wave shaping & oscillator experiments. With accuracy of $\pm 2.5\%$ Four Decades Voltage 250 Volts D.C

PHY-00126/1	0-1000 pf in steps of 100 pf
PHY-00126/2	0-10 kpf in steps of 1kpF
PHY-00126/3	0-100 kpF in steps of 10 kpf
PHY-00126/4	0-1 μ f in steps of 100 kpf
PHY-00126/5	0-10 μ fd in steps of 1 μ fd

**PHY-00130 CAPACITANCE SUBSTITUTION BOX**

The unit is housed in a robust ABS case measuring 75 x 100 x 40 mm and has a high quality rotary selector switch plus two 4 mm safety sockets.

With an easily select able range of 11 preferred capacitors from 100 μ F to 0.47 μ F with voltage rating of each range is 50 Volts.

PHY-00130/1	10 nF to 100 nF in steps of 100 pF
PHY-00130/2	100 nF to 1000 nF in steps of 100 pF
PHY-00130/3	1 kpf to 10 kpf in steps of 1 kpf
PHY-00130/4	10 kpf to 100 kpf in steps of 10 kpf
PHY-00130/5	100 kpf to 1000 kpf in steps of 100 pF

PHY-00133 CAPPILARY TUBE APPARATUS

Ideal for demonstrating the relationship between capillary pressure and the bore diameter of the capillary tube. The apparatus comprises a powder coated metal frame of height 90 mm holding six 150 mm capillary tubes of different bores vertically in a trough. The trough is filled with water and the difference in height of the resulting columns of water is immediately clear.

**PHY-00134 CARBON ROD WITH TERMINAL**

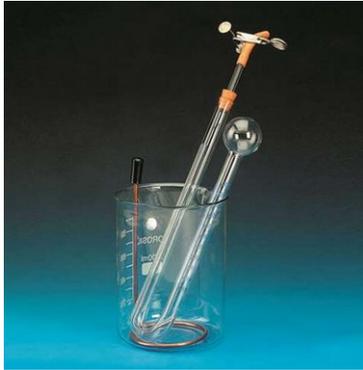
Length 150 mm x 15 mm dia

PHY-00136 CELL HOLDER

Made of Plastic to hold 1.5 Volt Dry cells
For Two batteries
For Four batteries

PHY-00136/1	For Two batteries
PHY-00136/2	For Four batteries





PHY-00138 CHARLES LAW APPARATUS GLASS PARTS

Comprising glass U shaped of 15mm dia with one plain limb 220mm long & one graduated limb. Overall length 120mm. With tall form beaker 1000 ML cap. and stirrer. Glass parts are made from Borosilicate glass. Complete apparatus.

PHY-00140 CHARLES LAW APPARATUS

Jolly's Apparatus, mounted on a elegantly polished wooden stand with metal base, Jolly air bulb made of borosilicate glass is mounted on a wooden frame, Complete with Rubber tubing & set of two glass tubes, supplied without mercury.



PHY-00143 CLOTH PIECE SILK

Square around 300 x 300 mm



PHY-00145 COMPASS MARINER'S

Mounted in a aluminum bowl & stand with floating dial.



PHY-00148 COMPASS PLOTTING ONE SIDE GLASS

Mounted in Aluminum case with marked dial

- PHY-00148/1 16 mm dial
- PHY-00148/2 25 mm dial
- PHY-00148/3 38 mm dial
- PHY-00148/4 50 mm dial
- PHY-00148/5 75 mm dial
- PHY-00148/6 100 mm dial



PHY-00150 COMPASS PLOTTING BOTH SIDE GLASS

Both side clear glass with dia 20 mm

**PHY-00151 COMPASS POCKET**

45 mm dia compass in a metal case with North & South indications.

PHY-00151/1

Brass

PHY-00151/2

Aluminum

PHY-00152 COMPOUND BAR, COPPER & IRON

Bimetallic strips of two metals with wooden handle

**PHY-00153 COMMUNICATING VESSEL**

Four glass tubes of different shapes mounted on a plastic stand to demonstrate the level of liquid in communicating vessels is same irrespective of their shape.

PHY-00155 CONDUCTIVITY APPARATUS INGEN HAUSSZ

Six rods of 150 mm fixed through rubber bung, one rod each of Iron, Glass, Copper, Aluminum & Brass, diameter of rods is 3 mm . all housed in powder coated metallic tank 15 x 9 x 10 cm

**PHY-00157 CONDUCTOMETER**

Consists of five rods of aluminum, brass, nickel, copper, and iron demonstrating the different heat conductivity of five metals by observing the melting of paraffin placed on the ends of the bars. Provided polished wooden handle



PHY-00159

CONDUCTOR SET OF THREE

Made of brass to demonstrate the charge distribution and charge holding capacity of the different shaped conductors and demonstrate the Gauss' Law relating to distribution of charge and dependence of field strength near a conductor on its radius of curvature. Comprises three hollow brass conductors of different shapes mounted on top of insulated pillar on a base. Spheres 80 mm dia, Cone 150 x 80 mm & cylinder 150 x 80 mm The conductors are interchangeable on pillars.

PHY-00160

CONDUCTOR CONICAL

Mounted on metal base, 100 mm x 50 mm brass cone fitted with ebonite insulator



PHY-00161

CONDUCTOR SPHERICAL

Mounted on metal base, 50 mm brass sphere fitted with ebonite insulator

PHY-00162

CONDUCTOR CYLINDRICAL

Mounted on metal base, 100 mm x 50 mm brass cylinder fitted with ebonite insulator



PHY-00165

CONNECTING LEADS BOTH SIDE CROCODILE CLIP

Lead with crocodile clips both end with strong spring & clamping screw for wire . Available in Red and black



PHY-00166 CONNECTING LEADS PLUG & CROCODILE CLIP

Lead with plug at one end & crocodile clip at other end with strong spring & clamping screw for wire . available in Red and black

**PHY-00168 CONNECTING LEADS BOTH SIDE BANANA PLUG**

Lead with banana plugs both end with strong spring & clamping screw for wire . Available in Red and black

PHY-00169 CONSTANTAN WIRE

A copper- nickel alloy of low temperature for resistance coils . Each reel weighs 125 gms of following s.w.g.

S.W.G.

PHY-00169/1	20
PHY-00169/2	22
PHY-00169/3	24
PHY-00169/4	26
PHY-00169/5	28
PHY-00169/6	30

**PHY-00170 CONTACT KEY SINGLE**

Mounted on a Bakelite base with 4 mm terminals, comprising a plated spring arm with pressing knob

PHY-00172 CONVECTION TUBE

To show convection of heat in water comprising a rectangular borosilicate glass tube 20 mm dia size 200 x 350 mm, one side having funnel for filling.

**PHY-00173 COPPER ROD WITH TERMINAL**

Length 140 mm x 8 mm dia



PHY-00175

COPPER WIRE BARE

Copper wire of 125 gms each reel with following s.w.g, rolled in a spool.

	Dia	s.w.g
PHY-00175/1	1.25	18
PHY-00175/2	0.90	20
PHY-00175/3	0.71	22
PHY-00175/4	0.56	24
PHY-00175/5	0.45	26
PHY-00175/6	0.40	28

PHY-00176

COPPER WIRE DCC

Double cotton covered copper wire for physics labs. 100 Gms reel.



PHY-00178

COTTON DUSTER

Yellow colour duster Suitable for instruments & microscope cleaning square around 300 x 300 mm size.

PHY-00180

CROCODILE CLIP

With strong spring, serrated jaws and clamping screw for wire. Available in two colors Red and black

PHY-00180/1

Pack of 20 pair (Red & Black)

PHY-00180/2

Pack of 50 pair (Red & Black)

PHY-00180/3

Pack of 100 pair (Red & Black)



PHY-00183

CUBE METAL ASSORTED

10 mm side of different metal for investigating density , set comprises of Copper, iron, zinc, brass , lead & aluminum

PHY-00185

CUBE ASSORTED MATERIAL

20 mm side of different materials for density investigation.

PHY-00185/1

Copper

PHY-00185/2

Aluminum

PHY-00185/3

Brass

PHY-00185/4

Lead

PHY-00185/5

Iron

PHY-00185/6

Steel



PHY-00187 CYLINDER SPECIFIC HEAT EQUAL IN MASS

Set comprises set of six metal cylinders brass, copper, aluminum, zinc, iron & lead of around 100 Gms , drilled for suspension.

**PHY-00188 CYLINDER SPECIFIC HEAT EQUAL IN SIZE**

Set comprises set of six metal cylinders 40 x 10 mm brass, copper, aluminum, zinc, iron & lead , drilled for suspension.

**PHY-00190 DANIEL CELL**

Comprises a copper vessel 125 x 75 mm ht x dia. With terminal and perforated shelf, provided zinc rod with terminal and porous pot size 150 x 50 mm.

**PHY-00192****DEMONSTRATION DYNAMO**

Fitted on Plastic Base with Hand wheel to generate alternating current A.C. and direct current D.C. represented by two LED bulbs with printed A.C. and D.C. thru selector switch.

**PHY-00194 DEMONSTRATION DYNAMO MODEL IN ACRYLIC FITTINGS**

Demonstration model in acrylic fittings with Hand wheel to generate alternating current A.C. and direct current D.C. represented by two LED bulbs with printed A.C. and D.C. thru selector switch fitted on Plastic Base.

**PHY-00196****DEMONSTRATION MOTOR GENERATOR**

Generator cum motor model. Fitted on Plastic base with terminals Working model , with hand wheel that light up the bulb while rotating , useful model to demonstrate the working of an GENERATOR as well as An D.C. Electric motor. (after putting a belt on the wheel and pulley of motor) the unit will work as a generator.





PHY-00198 DEMONSTRATION ELECTRIC MOTOR MODEL IN ACRYLIC FITTING

Working Model in Acrylic fittings to demonstrate the simple form of D.C. Motor, Two pole armature wound with enameled copper wire and permanent magnetic field provided with a , in addition newton colour disc is provided The Motor will operates on 6-12 volts , two 4 mm colour coded terminals are provided.

PHY-00200 DEMONSTRATION MOTOR MODEL

Working Model to demonstrate the simple form of D.C. Motor, Two pole armature wound with enameled copper wire and permanent magnetic field provided with two fixed round shaped magnet both sides , in addition newton colour disc is provided The Motor will operates on 6-12 volts , two 4 mm colour coded terminals are provided.

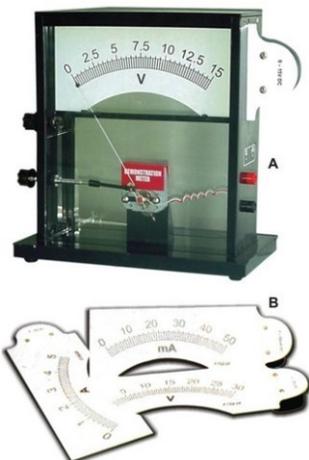


PHY-00202 DEMONSTRATION ELECTRIC MOTOR MODEL

Simplest form of electric motor workable on 6 volts D.C, the construction is completely visible and all components are readily observable. On stable base

PHY-00204 DEMONSTRATION METER

A demonstration meter housed in plastic case all working parts visible both side, can be converted to an A.C. or D.C. voltmeter or Am meter with the interchangeable dials, supplied without dials.



PHY-00205 DEMONSTRATION METER INTERCHANGEABLE DIALS

- PHY-00205/1 0-1 A
- PHY-00205/2 0-5 A
- PHY-00205/3 0-10 A
- PHY-00205/4 0-10 mA
- PHY-00205/5 0-1 V
- PHY-00205/6 0-5 V
- PHY-00205/7 0-10 V
- PHY-00205/8 10-0-10 V

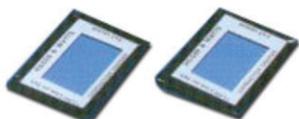
Other ranges also available on request



Ordering online is easier
www.sterlingco.com

PHY-00208 DEMOUNTABLE TRANSFORMER

Large scale demountable transformer to demonstrate the working of transformer all working parts visible, ideal for classroom, comes with 3 coils 12v, 6v, 220 v ac main.

**PHY-00210 DIFFRACTION GRATING**

Mounted on a 2 inches frame suitable for visual, 300 lines/mm.

PHY-00214 DIGITAL AMMETER

Digital meters for general purpose laboratory use housed in tough case having large display 3½ digits battery operated DC current range 0- 10 Amp

**PHY-00215 DIGITAL VOLTMETER**

Digital meters for general purpose laboratory use housed in tough case having large display 3½ digits battery operated DC Voltage range 0--20 V.

PHY-00217 DIP NEEDLE , SIMPLE PATTERN

Comprising circular scale supported on a base, the needle is balanced on a axis.

**PHY-00221 DISCHARGER**

Two small brass plated spheres on curved arms fixed to ebonite insulating handle.

PHY-00219 DIRECT VISION SPECTROSCOPE

Simple & convenient spectroscope for taking direct wavelength reading, packed in wooden case





PHY-00223

DISPLACEMENT VESSEL METAL

With overflow spout for specific gravity experiment size 10 x 5 cm

PHY-00224

DISPLACEMENT VESSEL GLASS

Borosilicate glass with overflow spout for specific gravity experiment.



PHY-00225

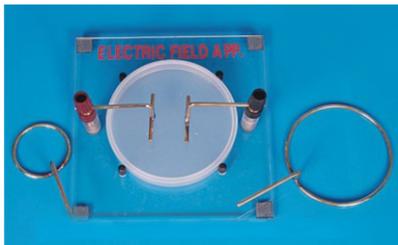
DYNAMIC TROLLEY

300 mm long metal reinforced at end having three wheels fitted with spring loaded impulse rod, comes in pair.

PHY-00228

DYNAMO WORKING MODEL

A Simple demonstration of dynamo model, mounted on base AC/DC with illuminated LED bulb, hand driven.



PHY-00232

ELECTRIC FIELD APPARATUS

Comprises a shallow dish with pair of socket terminals, for demonstration of electric field patterns due to various electrodes configuration. It can also be placed on overhead projector to show the demonstration.

PHY-00234

ELECTRIC WHIRL

Pointed star wheel of 75 mm dia with all points curved in one direction, wheel with pivot mounted on a stand helps to rotate it freely , with 4 mm connection.



PHY-00236

ELECTROMAGNET "U" SHAPED

Workable on 4-6 Volts D.C. bobbins wound with copper, with 4 mm terminals provided for easy connection, with armature & hook on the top.

PHY-00237 ELECTROPHOROUS BRASS

Consist of 160 mm disc, brass nickel plated plate & contact sphere with insulating handle

**PHY-00240 ELECTROSTATIC KIT**

A comprehensive kit of apparatus to enable students to investigate several aspects of electrostatic forces. The kit comprises of 1 Electroscope, spheres, Electrophorus, proof plane, nylon reel, polythene strip, 2 aluminum cans and two polyethylene tiles.

**PHY-00239 ELECTROSCOPE PITH BALL**

PHY-00239/1

Chrome Plated brass pillar mounted on a base with two pith balls sphere on unspun silk.

PHY-00239/2

Mounted On A Plastic Base With Two Pith Balls.

**PHY-00241 EUREKA WIRE**

A copper- nickel alloy of low temperature for resistance coils . Each reel weighs 125 gms of following s.w.g.

	S.W.G.
PHY-00241/1	20
PHY-00241/2	22
PHY-00241/3	24
PHY-00241/4	26
PHY-00241/5	28
PHY-00241/6	30

PHY-00244 EXPANSION APPARATUS

Comprising two iron casted stand of 180 mm height joined by two nickel plated metallic rods with an expansion rod of 380 mm, with graduated scale, provided with three expansion bars Brass, Aluminum & Iron.

**PHY-00246 EXPANSION OF LIQUID APPARATUS**

To show the differences in expansion of various liquids over the same temperature, five bulb tubes are fixed in a frame complete with powder coated trough & glass bulbs.



PHY-00248

FALLING BODIES APPARATUS

Also known as projectile apparatus , to illustrate that a body impelled horizontally will fall vertically at the same rate as similar body allowed to fall freely, L section launcher with holes for locating two 19 mm dia steel balls which act as a projectiles, mounted on a wooden polished block, provided with two nos steel balls.

PHY-00250

FLASH LAMP BULB

Round in shape with thread for firm grip, Suitable for spotlights with M.E.S cap

PHY-00250/1	1.25 Volts	Pack of Ten
PHY-00250/2	3.5 Volts	Pack of Ten
PHY-00250/3	6 Volts	Pack of Ten
PHY-00250/4	12 Volts	Pack of Ten



PHY-00252

FLASH LAMP BULB HOLDER

For flash lamp bulbs mounted plastic base with two screw connections. Dia around 25 mm



PHY-00253

FLOATING RING EXPERIMENT

Workable on 220 Volts AC provided with push button with pair of floating rings.



PHY-00254

FLUID PRESSURE APPARATUS

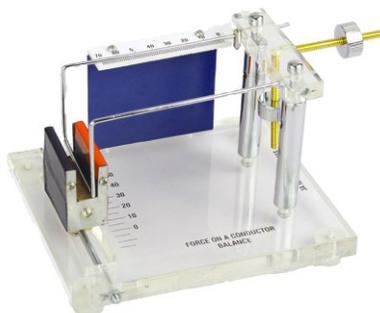
Also known as hydraulic press Comprising two cylinders 19 mm & 38 mm , fitted with pistons, the apparatus is fitted on a stable plastic base



PHY-00257

FLY WHEEL UNIT

Wheel of around 200 mm dia and 45 mm wide mounted on a horizontal shaft held in ball bearing there is a marking on the when on top the pointer is fixed, the iron bracket can be hanged on the wall through screw.



PHY-00260

FORCE ON A CONDUCTOR BALANCE

Mounted on a transparent sturdy base & two contact pillars with scale marked on it, with two screwed masses.

PHY-00263 FORCE PUMP

Mounted on wooden stand complete with Borosilicate glass parts, reservoir & rubber bungs, and working model.

**PHY-00268 FORTIN'S BAROMETER**

Mounted on polished wooden board with wall fixing plates, the barometer has a nominal bore of 6 mm., graduated in inches & mm range 675 to 810 mm & 26 to 32 inches read by vernier moving by rack and pinion. Supplied without mercury and wooden case.

**PHY-00270 FRICTION BOARD APPARATUS**

Complete apparatus made of wood, supplied with wooden slider, roller and pan

**PHY-00265 FORCE TABLE**

For verifying the laws of composition and resolution of forces, consist of aluminum table 40 cm dia with raised rim graduated 360°, on heavy vertical support and stable base unit complete with weight hangers & weight set & clamp pulleys.

**PHY-00269 FORTIN'S BAROMETER WOODEN CASE**

Made of nicely polished with glass panels on three sides. Only wooden case.



PHY-00274 FRICTION ROD HALF EBONITE, HALF BRASS

Electrostatic friction rods, Fixed from center half brass & half Ebonite overall length 300 mm and 12 mm dia.

PHY-00273 FRICTION ROD HALF GLASS, HALF BRASS

Electrostatic friction rods, Fixed from center half brass & half glass overall length 300 mm and 12 mm dia.



PHY-00276 FRICTION ROD EBONITE

Electrostatic friction rods, overall length 300 mm and 12 mm dia.



PHY-00277 FRICTION ROD GLASS

Electrostatic friction rods, overall length 300 mm and 12 mm dia.



PHY-00278 FRICTION ROD NYLON

Electrostatic friction rods, overall length 300 mm and 12 mm dia.



PHY-00279 FRICTION ROD PERSPEX

Electrostatic friction rods, overall length 300 mm and 12 mm dia.



PHY-00282 FUSE HOLDER

Fuse holder panel mounting type, easy to open.



PHY-00284 FUSES SPARE

This fuse comes in a range of amp ratings. If the fuse you require is not listed, please contact us , size 20 mm x 5 mm dia. Approx., comes in pack of 5

- PHY-00284/1 1 Ampere , pack of 5
- PHY-00284/2 3 Ampere , pack of 5
- PHY-00284/3 5 Ampere , pack of 5



PHY-00287 "G" BY FREE FALL APPARATUS

For determination of "g" by free fall method. Consists of two units, each mounted on a plastic base which can be clamped to a 12mm diam. retort stand rod. The solenoid unit ensures prompt release of a metal sphere as soon as the power to the electromagnet is switched off. The gate switch unit comprises a hinged steel plate held against an adjustable contact by a small magnet so that by proper adjustment, the plate falls promptly as soon as the falling sphere falls on it. Complete with spheres, stand & digital timer

**PHY-00289 GALVANOMETER MOVING COIL**

For D.C. measurement only mounted on square shaped base with colour coded terminals, Range 30-0-30 mA.

PHY-00292 GOLD LEAF ELECTROSCOPE SIMPLE FLASK TYPE

A conical Borosilicate glass flask, with brass rod with gold leaf attached, supported in rubber bung.

**PHY-00293 GOLD LEAF ELECTROSCOPE**

Housed in rectangular metal case and Bakelite base, with 4 mm socket terminal, front clear glass window, single gold leaf supported by a an insulating bush .

PHY-00294 GOLD LEAF ELECTROSCOPE NEW PATTERN

Housed in rectangular plastic case with stable base, with 4 mm socket terminal, front clear window, single gold leaf supported by a an insulating bush .

**PHY-00295 GUINEA & FEATHER APPARATUS**

A hard glass 500 mm tube with 15 mm dia with rubber corks carrying brass and rubber tubing.



PHY-00298

GYROSCOPE

Fitted on stand with sturdy base. Brass wheel of 75 mm balanced carefully all parts are adjustable

PHY-00300

HAIR HYGROMETER

For direct indication of percentage relative humidity in air 0-100 x 1% , in casing.



PHY-00303

HAND STROBOSCOPE

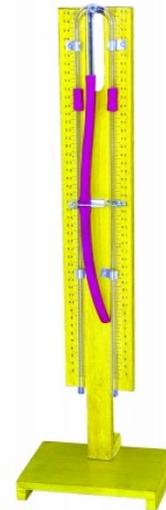
A slotted disc with handle, disc dia. around 250 mm



PHY-00305

HARE'S APPARATUS

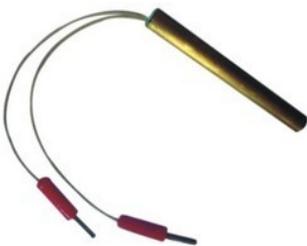
Mounted on stand, A three limbed glass tube is mounted on a wooden stand with a scale for each of the two 600 mm tubes. A rubber tube with Hoffman clip is provided for the short limb. Two metal sliding distance rods may be so adjusted that their lower ends just touch the surface of the liquid under experiment to facilitate column height readings. Overall dimensions 680 x 300 x 150 mm approx.



PHY-00308

HEATER IMMERSION

for use with metal block calorimeter , 12 volts, 50 watts heater , leads with heat resisting insulation with 4 mm sockets.



PHY-00309

HOOKED MASSES, SET OF 9

Polished cylindrical weight set with long hook., set of nine weights in a wooden block.



PHY-00312 HOOK'S LAW APPARATUS

Mounted on a sturdy support of 300 mm high, apparatus consist of 150 mm adjustable mirror scale, an hook and a spring with weight hanger are attached along with the pointer five pieces of 50 gm slotted weights are provided with the apparatus.

**PHY-00314 HOPE'S APPARATUS**

Made of G.I. sheet cylinder mounted on a base having two tabulators with rubber bungs for thermometers.

PHY-00316 HYDRAULIC PRESS BRAMAH

Mounted on wooden stand with all borosilicate parts.

**PHY-00318 HYDROMETER UNIVERSAL**

Direct reading relative density hydrometer with graduated stem, length 37 cm , shot loaded, range at 60° F 0.700 to 2.000 x 0.01

PHY-00320 HYPSONETER REGNAULT

For determining the upper fixed point of thermometers and boiling point at Barometer pressure than atmospheric. Lid with a tubule is provided which holds the thermometer, with rubber cork.

**PHY-00322 INCLINED PLANE METTALIC**

Made of heavy gauge metal, the base & plane are connected by a hinge enabling to be clamped at any angle upto 45°, complete with pulley, roller, scale pan.





PHY-00324

INCLINED PLANE WOODEN

For experiment on sliding friction, comprises inclined wood plane with pulley hinged on the top of wooden base. Provided with metal roller, wooden block with graduated arc.

PHY-00327

INDUCED CURRENT APPARATUS

Fitted on a wooden base with terminals, It has the bulb in secondary and make and break arrangement in primary to show the phenomenon of self and mutual induction and principle of induction coil, workable on 6 volts.



PHY-00333

INDUCTION COIL

The coils are housed in teakwood base, condensers are fitted inside it, handles are provided to get the spark, workable on 6 V D.C through 4 mm sockets terminal.



PHY-00336

INERTIA BALANCE KIT

Comprises two metallic trays measuring 130 x 50 x 20 mm held approx. 210 mm one tray is drilled to hold three equal cylindrical masses Complete with three masses and "G" clamp for mounting.



PHY-00338

INSULATED SOCKET TERMINAL

4 mm sockets, nuts & washers with molded captive head.



PHY-00342

IRON FILLING

Fine iron filling for Indicating line of force , in 500 gm pack.



PHY-00345 JOCKEY KNIFE EDGE

For Wheatstone bridge and potentiometer, knife edge mounted in plastic handle with terminal.

**PHY-00347 KALEDIOSCOPE**

To show formation of interesting geometrical image patterns by multiple reflections, long two mirrors at 30 degree and pieces of colored glass to form various patterns.

PHY-00350 KINETIC THEORY MODEL

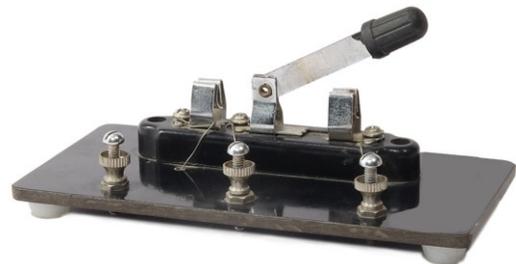
The apparatus consist of Perspex tube provided with a light freely expanded polystyrene piston and a cap. Mounted on a plastic base with terminals.

**PHY-00353 KNIFE SWITCH DOUBLE POLE**

Double pole double throw mounted on a insulating base with screw connectors.

PHY-00354 KNIFE SWITCH SINGLE POLE

Single double throw mounted on a insulating base with screw connectors.

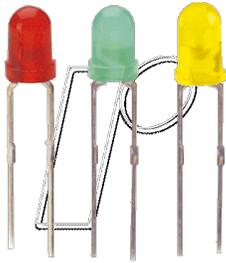
**PHY-00356 LAMP UNIT TRIPLE**

Three lamps are connected in parallel , mounted on base with terminals.

PHY-00358 LECLANCHE CELL

Comprises of container with charged porous pot and zinc rod with terminal.





PHY-00360

LED INDICATORS

LED Light Emitting Diodes, water drop shaped, Assorted Colors 5 mm, Pack of 10.

PHY-00363 LENS DOUBLE CONCAVE, SPHERICAL

Optically worked grounded edges.

- PHY-00363/1 50 mm Dia. F.L. 50 mm
- PHY-00363/2 50 mm Dia. F.L. 100 mm
- PHY-00363/3 50 mm Dia. F.L. 150, 200, 250 , 300 ,500 & 1000 mm



PHY-00365

LENS DOUBLE CONVEX, SPHERICAL

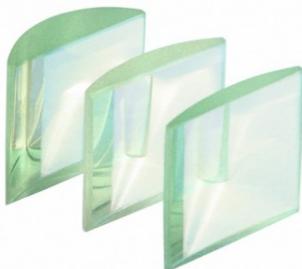
Optically worked grounded edges.

- PHY-00365/1 50 mm Dia. F.L. 50 mm
- PHY-00365/2 50 mm Dia. F.L. 100 mm
- PHY-00365/3 50 mm Dia. F.L. 150, 200, 250 , 300 ,500 & 1000 mm

PHY-00367 LENS PLANO CONCAVE, CYLINDRICAL

Grounded and polished faces with grounded edges, size 50 x 50 mm

- PHY-00367/1 60 mm F.L
- PHY-00367/2 150 mm F.L.
- PHY-00367/3 300 mm F. L.



PHY-00369

LENS PLANO CONVEX, CYLINDRICAL

Grounded and polished faces with grounded edges, size 50 x 50 mm,

- PHY-00369/1 60 mm F.L
- PHY-00369/2 75 mm F.L
- PHY-00369/3 100 mm F.L
- PHY-00369/4 150 mm F.L.

PHY-00371 LENS HOLDER WOODEN

V Shaped wooden lens or mirror holder upto 75 mm dia mounted on wooden rectangular base.



PHY-00373

LENS SET OF SIX

Optically worked grounded edges. Dia 50 mm, Set in a box , consist one each of plano-concave, plano-convex, double concave, double convex, converging concave-convex & diverging concave-convex

PHY-00376 LESLIE CUBE

Made of Tin plate around 100 mm sides , To demonstrate that different surfaces radiate heat at different rate, , the vertical faces are blackened bright, dull, white and tin color.

**PHY-00379 LEVER KIT**

Comprising wooden beam , supplied with pair of weights.

PHY-00381 LEYDEN JAR

Plastic or Glass vessel with removable metal internal & external coating, Inner metal coating in form of inverted cup to which a rod is fixed.

**PHY-00383 LIFT PUMP**

Made of Borosilicate glass with visible glass valves, mounted on stand with reservoir.

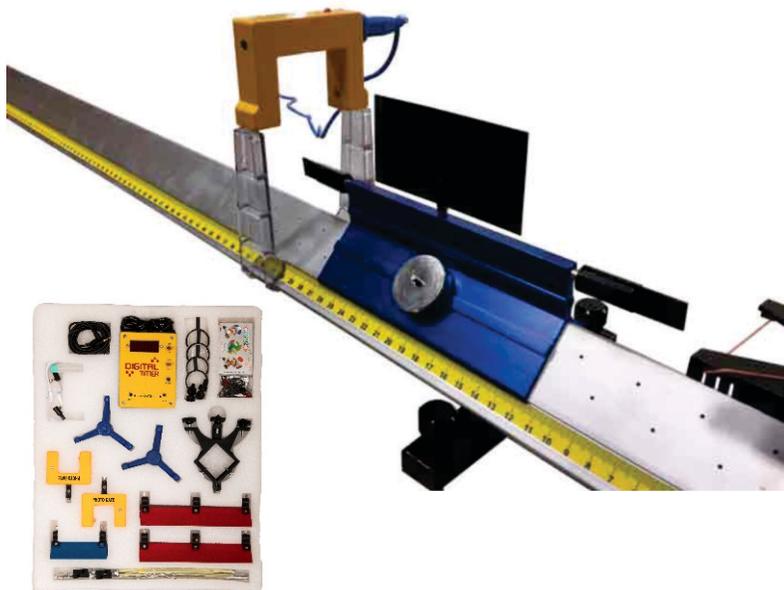
PHY-00385 LIGHT BOX SOURCE AND OPTICAL SET

To demonstrate reflection, refraction and color mixing experiments, complete with acrylic blocks, filters, slits, mirrors, bulb and other accessories.

**PHY-00388 LIGHT METER DIGITAL**

LUX meter Potable & economy model, Lux meter is used to check how much lux light is coming in the farms. 100 lux light is necessary for birds.

**PHY-00389
METER**



LINEAR AIR TRACK PRECISION 2.0

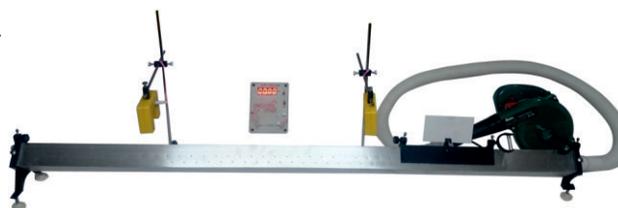
The Air Track is 2.0 meters long with a straightness to within .04 mm over its entire length. The track construction is a large triangular aluminum extrusion. A single foot support at one end and a double foot at the other end allows for lengthwise and sideways leveling

Accessories:

1. Rubber Band Bumper w/banana Plug3pc.
2. Flag 100mm 2Pc.
3. Bumper Blade on cylinder w/banana Plug 2pc.
4. Hook attachment w/banana plug
5. Needle on cylinder w/banana plug
6. 1 Wax filled cylinder w/banana plug
7. Pulley with banana plug
8. 1 Slotted Mass set 20gm.
9. 2 Gliders
10. Single leg
11. Double leg w/adjustable feet
12. Air Supply With Hose Pipe
13. 2 x50gm. weight

PHY-00390 LINEAR AIR TRACK SIMPLE PATTERN

Triangular section aluminum alloy track, with two rows of air holes through which air emerge forming air cushion on which the vehicles float. To demonstrate kinetic energy, concept of velocity acceleration, The kit includes various gliders, which float on the air cushion, together with a large number of attachments to permit a comprehensive range of experiments Complete unit with accessories.



PHY-00392 LINEAR AIR TRACK BLOWER

To be used with Linear air track. New design to operate with low noise.

PHY-00395 LINEAR EXPANSION APPARATUS

The elongation of rod is measured by a micrometer screw. The metallic tube with inlet and outlet tubes for steam and opening for thermometer. Consisting of a metal rod, enclosed in a well lagged, nickel plated brass tube with three tubules for steam, inlet, outlet and thermometer. Supplied complete with copper, brass , iron rods & thermometer.



PHY-00397 LIQUID LEVEL APPARATUS

Four glass tubes of different shapes mounted on a plastic stand to demonstrate the level of liquid in communicating vessels is same irrespective of their shape.

**PHY-00399 MAGDEBURG HEMISPHERE**

Brass 75 mm dia with stopcock with both side handles, one handle can be unscrewed enabling sphere connected to hand vacuum pump.

**PHY-00401 MAGNETIC FILED CHAMBER**

Housed in acrylic round chamber containing iron filling, With cylindrical bar magnet.

**PHY-00403 MAGNETIC FILED DEMONSTRATOR , LONG SOLENOID**

Mounted on acrylic base with terminals to demonstrate magnetic filed characteristic of a solenoid coil about 50×100 mm (dia. × length) of copper wire.

**PHY-00405 MAGNETIC KIT, STUDENT**

Magnetic kit consisting various shaped magnets and accessories in a compartmental storage tray kit contains:- Horseshoe magnet, neodymium magnet, bar magnets, Ceramic ring magnets, button magnets, Plotting compasses, horseshoe magnet.

**PHY-00407 MAGNETIC NEEDLE BRASS BEARING**

A carbon steel needle with brass cup bearing , one side red.

PHY-00407/1

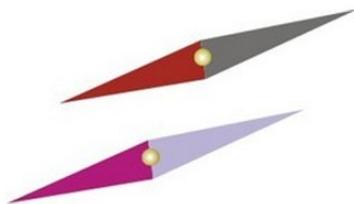
Size 50 mm

PHY-00407/2

Size 75 mm

PHY-00407/3

Size 100 mm

**PHY-00409 MAGNETIC NEEDLE JEWEL BEARING**

A carbon steel needle with jewel bearing , one side red.

PHY-00409/1

Size 50 mm

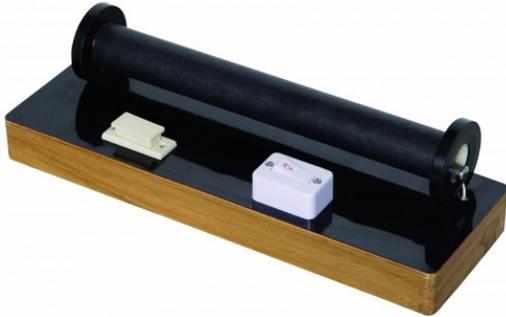
PHY-00409/2

Size 75 mm

PHY-00409/3

Size 100 mm





PHY-00412 MAGNETISING AND DEMAGNETISING SOLENOID

For magnetizing and demagnetizing of magnets but also useful for magnetizing old magnets, compass needles and for general use as a powerful electromagnet. It comprises a solenoid wound with insulated copper wire and mounted on a base with switch and 4 mm terminals. Solenoid 250 x 35 mm length x diameter. Workable on 12 V a.c. or d.c. at 6 A. Magnetizing possible by A.C. or D.C. but Demagnetizing can be done by A.C. only.

PHY-00414 MAGNETOMETER DEFLECTION

Mounted on wooden base fitted with meter scale in the center, comprises a magnetometer of 100 mm dia with dial graduated in degrees and anti parallax mirror.



PHY-00416 MAGNETS BAR , “CHROME STEEL”

Made of steel size 12 x 5 mm, Half Red and half Blue painted (N and S) with keepers, in pair. In cardboard case.

- PHY-00416/1 50 mm
- PHY-00416/2 75 mm
- PHY-00416/3 100 mm
- PHY-00416/4 150 mm

PHY-00417 MAGNETS BAR , “ALNICO”

Made of Cobalt Steel 13 x 10 mm, Red painted with keepers, in pair. In cardboard case.

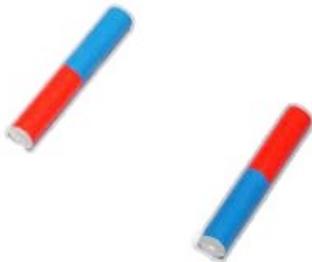
- PHY-00417/1 50 mm
- PHY-00417/2 75 mm
- PHY-00417/3 100 mm
- PHY-00417/4 150 mm



PHY-00418 MAGNETS CYLINDRICAL , “CHROME STEEL”

Made of Steel Dia. 10 mm, Half Red and half Blue painted (N and S) , in pair. In cardboard case.

- PHY-00418/1 50 mm
- PHY-00418/2 75 mm
- PHY-00418/3 100 mm
- PHY-00418/4 150 mm



PHY-00419 MAGNETS CYLINDRICAL , “ALNICO”

Made of Cobalt Steel Dia. 10 mm, Half Red and half Blue painted (N and S) , in pair. In cardboard case.

- PHY-00419/1 50 mm
- PHY-00419/2 75 mm
- PHY-00419/3 100 mm



PHY-00420 MAGNETS HORSE SHOE “CHROME STEEL”

Made of Steel 12 x 5 mm, Red painted with keepers, In cardboard case.

PHY-00420/1	50 mm
PHY-00420/2	75 mm
PHY-00420/3	100 mm
PHY-00420/4	150 mm

**PHY-00423 MAGNETS HORSE SHOE “ALNICO”**

Made of Cobalt Steel 12 x 5 mm, Red painted with keepers, In cardboard case.

PHY-00423/1	50 mm
PHY-00423/2	75 mm
PHY-00423/3	100 mm

PHY-00425 MAGNETS U - SHAPED “ALNICO”

Made of Cobalt Steel 13 x 10 mm, Gap of around 20 mm in center Red painted with keepers, In cardboard case.

PHY-00425/1	50 mm
PHY-00425/2	75 mm
PHY-00425/3	100 mm

**PHY-00427 MAGNETS RING CERAMIC**

Made of Ceramic ,Hole in center.

PHY-00427/1	32 x 16 x 8 mm
PHY-00427/2	36 x 18 x 8 mm
PHY-00427/3	45 x 22 x 8 mm

PHY-00429 MAGNETS RING FLOATERS

Base & rod with ring magnets shows the floating when repel each other.

**PHY-00433 MAGNIFIER POCKET**

Multiple lenses mounted in folding plastic case. Clear diameter of 22 mm.

	No of Lenses	Magnification
PHY-00433/1	1	x4
PHY-00433/2	2	x7
PHY-00433/3	3	x10



PHY-00436 **MAGNIFIER WITH FLASH LIGHT**
Can be used as a magnifier as well flashlight. Operates on batteries.



PHY-00438 **MAGNIFIER PLASTIC**
Clear lens mounted in unbreakable plastic frame with handle.
PHY-00438/1 50 mm Dia.
PHY-00438/2 75 mm Dia.



PHY-00440 **MAGNIFIER METAL FRAME**
Clear lens mounted in metallic chrome plated frame and handle.
PHY-00440/1 50 mm Dia.
PHY-00440/2 75 mm Dia.
PHY-00440/3 100 mm Dia.
PHY-00440/4 150 mm Dia.



PHY-00442 **MAGNIFIER METAL FRAME , BAKELITE HANDLE**
Clear lens mounted in metallic chrome plated frame with Bakelite handle.
PHY-00442/1 50 mm Dia.
PHY-00442/2 75 mm Dia.
PHY-00442/3 100 mm Dia.



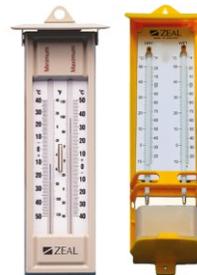
PHY-00445 **MANGANIN WIRE**
Manganin wire bare is used for resistance standards, precision wire wound resistors, potentiometers, shunts and other electrical and electronic components.



PHY-00452 **MANOMETER GLASS**
Mounted on a graduated back plate with glass parts.

PHY-00454 MAXIMUM & MINIMUM THERMOMETER

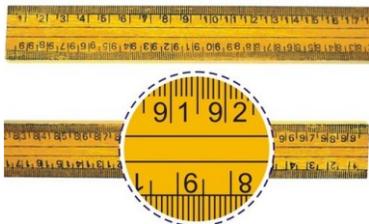
Zeal Made in England max & min bulb hygrometer, plastic body with humidity chart Range -40 to 50° C

**PHY-00456 MELDE'S APPARATUS**

To demonstrate the behaviors of standing waves, steel rod is clamped near one end through 4 mm terminals. Adjustable contact points fitted through a second pair of terminals make alternating connection with a adjustable contact on the rod, housed in a wooden base. Provided pulley, bench clamp & scale pan.

PHY-00459 METAL BLOCK CALORIMETER

Each block is drilled with two holes, center hole for immersion heater and small hole for thermometer, the set is perfect to show specific heat capacity of different metals. Without thermometer and heater.

**PHY-00461 METER SCALE , HARDWOOD**

25 mm wide and approx. 6 mm thick one meter long scale with double scale, clear graduation in inches & centimeters

PHY-00464 MICROMETER SCREW GAUGE

Made of Brass with ratchet stop with zero error screw, sand blast nickel plated finish, scale 0-25 mm x 0.01 mm packed in plastic case.

**PHY-00466 MICROMETER SCREW GAUGE WITH LOCK**

Made of Brass with ratchet stop , zero error screw with locking facility, sand blast nickel plated finish, scale 0-25 mm x 0.01 mm packed in plastic case.

PHY-00469 MILLI- VOLTMETER MOVING COIL

Housed in plastic case with colour coded terminals, square shape, most accurate D.C., any single range 0-25, 0-50 & 0-100 mV





PHY-00471

MILLI- AMMETER MOVING COIL

Housed in plastic case with colour coded terminals, square shape, most accurate D.C., any single range 0-5, 0-10 & 0-50 mA

PHY-00474

MINI MOTOR

Mounted on plastic base with 4 mm terminal with fan operates on 3 Volts DC



PHY-00476

MIRROR CONVEX

Optically worked, back silvered with protecting coating.



	Diameter	F.L
PHY-00476/1	50	50 mm
PHY-00476/2	50	75 mm
PHY-00476/3	50	100 mm
PHY-00476/4	50	150 mm
PHY-00476/5	50	200 mm
PHY-00476/6	50	250 mm
PHY-00476/7	50	300 mm

PHY-00478

MIRROR CONCAVE

Optically worked, back silvered with protecting coating.

	Diameter	F.L
PHY-00478/1	50	50 mm
PHY-00478/2	50	75 mm
PHY-00478/3	50	100 mm
PHY-00478/4	50	150 mm
PHY-00478/5	50	200 mm
PHY-00478/6	50	250 mm
PHY-00478/7	50	300 mm



PHY-00480

MIRROR PLANE WITH SUPPORT

Mirror Strip 100 x 25 mm with Plastic support



PHY-00484

MODEL OF FOUR STROKE DIESEL ENGINE

To demonstrate the working of four stroke Petrol engine, all parts are visible, with a crank handle, mounted on base.



PHY-00485 MODEL OF FOUR STROKE PETROL ENGINE

To demonstrate the working of four stroke Petrol engine, all parts are visible, with a crank handle, mounted on base.



PHY-00486 MODEL OF TWO STROKE DIESEL ENGINE

To demonstrate the working of four stroke Petrol engine, all parts are visible, with a crank handle, mounted on base.



PHY-00487 MODEL OF TWO STROKE PETROL ENGINE

To demonstrate the working of four stroke Petrol engine, all parts are visible, with a crank handle, mounted on base.



PHY-00488 MODEL OF STEAM ENGINE

The model mounted on a sturdy base showing all components clearly visible to understand the working. Elegantly painted.

PHY-00489 MODEL OF STEAM ENGINE WITH BOILER

The demonstration model mounted on a sturdy base showing all components clearly visible to understand the working with boiler. Elegantly painted.



PHY-00491 MODEL OF TURBOJET ENGINE

Demonstration Model of Gas Turbine, the section cut model elegantly constructed of light & strong metal showing air intake, axial flow, fuel supply, double stage compressor, combustion chamber, turbine rotor, jet thrust exhaust. Fitted on base with printed diagram showing the working.





PHY-00493

MODEL OF WATER TURBINE

To demonstrate the working of water turbine with dynamo, mounted on base with outlet & inlet tubes.

PHY-00495

MORSE KEY

Mounted on base, with adjustable pivots & terminals.



PHY-00496

MORSE SOUNDER

Mounted on wooden base, with Electromagnet & terminals.



PHY-00497

MULTIMETER ANALOG

Low cost moving coil multimeter for A.C / D.C and resistance measurement, having a knife edge pointer moving over a two-color scale. With sensitivity 4000 Ω per volt in DC and 2000 Per Ω in AC. Up to 1000 Volts in AC & DC voltage included with batteries and leads.



PHY-00498

MULTIMETER DIGITAL

D. C Voltage 200mV-1000V $\pm 0.5\% \pm 2$ digits
 A.C. Voltage 200 V – 750 V $\pm 1.2\% \pm 10$ digits
 D.C. Current 200 μ A-10 A $\pm 1\% \pm 2$ digits
 Provided with Battery, Testing Probes.



PHY-00500

NEWTON COLOR DISC HAND DRIVEN

Comprising a multi colored disc mounted on a stand driven by hand wheel.



PHY-00501

NEWTON COLOUR DISC MOTORISED

Comprising a multi coloured disc mounted on a stand driven by motor.



PHY-00502 NEWTON'S RING APPARATUS

Mounted in Metal frame, pressure between plates adjustable by three brass screws with glass plates.

**PHY-00503 NICHROME WIRE BARE**

Bare, in a reel of 125 gms.

PHY-00504 NYLON ROD

300 mm length, diameter 12 mm approx..

**PHY-00505 OERSTED'S APPARATUS**

To demonstrate the relationship between magnetism and magnetic effect of electric current flowing in a wire. Comprised of a magnetic needle with brass bearing supported by pivot mounted on a base.

PHY-00506 OHM'S METER

Mounted on a base with colour coded terminals, square shaped, To measure the resistance in electric circuit, shunt type 0-2 k Ω

**PHY-00507 OPTICAL BENCH WOODEN**

Comprises of wooden polished board with sliding bases to accept the accessories like holder, needle, receiving screen, plane mirror lamp house.

PHY-00508 OPTICAL BENCH METTALIC

Suitable for advanced research work, consist of two metallic rods supported by heavy cast iron feet with levelling screws, complete with accessories, i.e Lens holders, optical pins, candle holder, screen ground glass.

**PHY-00509 OPTICAL BENCH ACCESSORIES**

- PHY-00509/1 Prism Table
- PHY-00509/2 Object Needle
- PHY-00509/3 Candle holder
- PHY-00509/4 Object Screen
- PHY-00509/5 Lens Holder
- PHY-00509/6 Lamp



PHY-00511

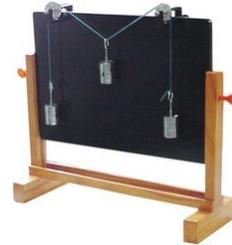
ORGAN PIPE

Simplest form, made of polished wood.

PHY-00514

PARALLELOGRAM OF FORCES APPARATUS

for demonstrating the principles of parallelogram. The apparatus comprises a strong drawing board fitted with two hooks for fixing to a wall. The whole board is painted black. It is supplied with two nos. pulleys and 3 sets of iron chrome plated slotted weights of 50 gms .



PHY-00516

PASCAL LAW APPARATUS

To demonstrate the pressure of liquids varies with depth and not the shape of vessel with glass vessels of four different shapes, mounted on a base with plastic bowl.

PHY-00518

PENDULUM BOB IRON

Comprising a solid sphere suspension ring screwed.

- PHY-00518/1
- PHY-00518/2
- PHY-00518/3

- 13 mm
- 19 mm
- 25 mm



PHY-00520

PENDULUM BOB LEAD

Comprising a solid sphere suspension ring screwed.

- PHY-00520/1
- PHY-00520/2
- PHY-00520/3

- 13 mm
- 19 mm
- 25 mm

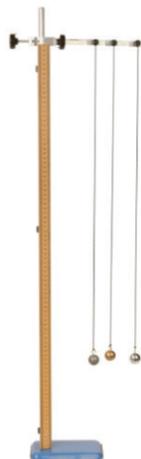
PHY-00521

PENDULUM BOB BRASS

Comprising a solid sphere suspension ring screwed.

- PHY-00521/1
- PHY-00521/2
- PHY-00521/3

- 13 mm
- 19 mm
- 25 mm



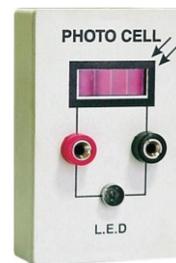
PHY-00523

PENDULUM ON STAND

Comprises a meter rule with zero at the bottom, graduated in millimeters and reading every centimeter, attached vertically on a support rod. Towards the upper end of the rod a hanger is fixed, from which three pendulum bobs, each of 25mm diameter and of different material – wood, steel and aluminum, are suspended.

PHY-00525 PHOTO ELECTRIC CELL UNIT

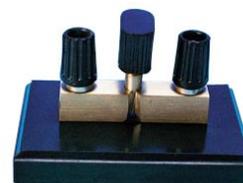
Mounted on base with color coded sockets, provided with LED.

**PHY-00528 PIN HOLE CAMERA**

Two rectangular open ended light proof polished wooden boxes slides into each other consisting frosted translucent glass plate upon which the image is formed with the help of small aperture.

PHY-00530 PLUG SWITCH ONE WAY

Thick brass block with terminals mounted on a molded base.

**PHY-00532 PLUG SWITCH TWO WAY**

Thick brass block with terminals mounted on a molded base.

PHY-00534 POLARIMETER LAURENT'S HALF SHADE

Consists of Laurent half shade, polariser, analyzer, brass scale graduated from 0 to 360° or 0-180° with vernier reading 6" and accommodates a 200mm. glass tube. Mounted on a sturdy base.

**PHY-00536 POLYTHENE ROD**

300 mm long insulators dia 12mm approx.

PHY-00538 POLYTHENE STRIP

10 Inches long and one inch wide strip used for friction or electrostatic.





PHY-00541 POST OFFICE BOX

(Plug in type) the heavy brass contact blocks are bond to the vulcanite plated by the double nut system Each ratio arm has resistance of 10, 100 and 1000 ohms. The series arm has a resistance of 11,110 x 1 ohm given by 16 coils. Battery and galvanometer keys are provided. Accuracy ratio coils $\pm 0.05\%$, others $\pm 0.1\%$.

PHY-00543 POTENTIOMETER

Potentiometer slide wire pattern with one bare constantan wire stretched along a meter rule, subdivided in cms and mm and clamped to stout plated brass end plates. The clamping system is designed to make good electrical contact with the wire at the exact ends of the scale .The terminating strips are provided with heavy-duty 4mm socket terminals and the complete assembly is mounted on a long baseboard. Supplied with sliding type jockey .

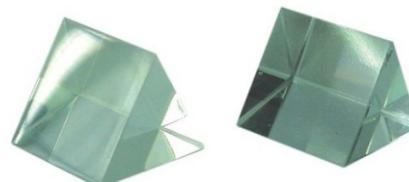


PHY-00545 PRESSURE IN LIQUIDS

To demonstrate the equality of pressure in liquids, comprising spherical glass flask with several holes with piston plunger at one end.

PHY-00548 PRISM ACRYLIC EQUILATERAL

60 x 60 x 60 ° , polished acrylic surfaces , size 38 mm



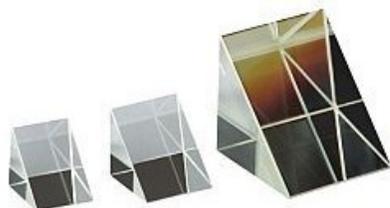
PHY-00550 PRISM GLASS EQUILATERAL

60 x 60 x 60 ° , polished surfaces , available in two sizes.

PHY-00550/1 38 mm
PHY-00550/2 50 mm

PHY-00552 PRISM ACRYLIC HOLLOW

To study refraction in liquids of different refractive indices. Equilateral, 50 mm acrylic sides.



PHY-00554 PRISM FOR SPECTROMETER

Equilateral, size 32 x 32 mm , borosilicate crown glass Refractive index 1.51

PHY-00556 PROOF PLANE

22 mm Brass disc chrome Plated, mounted on a metal shaft & fitted to a 6 mm insulating handle. Overall length 150 mm approx.

**PHY-00560 PULLEY SINGLE PLASTIC**

Polypropylene pulley of dia 50 mm mounted in an aluminum frame with hooks both side.

PHY-00562 PULLEY DOUBLE PLASTIC

Two pulleys of polypropylene of dia 50 mm mounted in an aluminum frame with hooks both side.

**PHY-00564 PULLEY TRIPLE PLASTIC**

Three pulleys of polypropylene of dia 50 mm mounted in an aluminum frame with hooks both side.

PHY-00567 PULLEY DOUBLE IN LINE PLASTIC

Two pulleys of polypropylene of dia 50, 40 & 30 mm mounted in an aluminum frame with hooks both side.

**PHY-00568 PULLEY TRIPLE IN LINE PLASTIC**

Three pulleys of polypropylene of dia 50, 40 & 30 mm mounted in an aluminum frame with hooks both side.

PHY-00570 PULLEY ROD MOUNTED

Mounted on a rod dia 10 mm, length 150 mm.

**PHY-00572 PULLEY BENCH MOUNTING**

Pulley framed in a bracket with facility to clamp on boards or benches.



PHY-00575 PUMP PLATE

Aluminum disc fixed securely on top of a pillar. A nozzle at the center of the plate provides route to the flow of air through the pillar. Pillar has stop-cock for air regulation and riffled nozzle for connection to vacuum pump through suitable rubber tubing. Complete assembly mounted on a heavy cast-metal tripod base.



PHY-00579 RADIOMETER CROOK'S

Evacuated glass bulb of 70 mm dia having fine pivot at its center which supports four light weight vane, mounted on a Bakelite stand.



PHY-00581 RAIN GAUGE

Made of G I Sheet, complete with plastic measure.

PHY-00583 RAIN GAUGE BRASS

Made of Brass, complete with plastic measure

PHY-00584 RAY BOX METAL

Housed in a case, with straight filament lamp. The lamp holder, is mounted in sliding metal bridge piece which provides sufficient adjustment to covering, parallel or diverging rays. The enameled steel body has slots to support a cylindrical lens & a triple slit screen. Extra slots are provided for filters. The box is supplied complete with lens & triple slit.



PHY-00585 RAY BOX PLASTIC

Housed in a plastic case, with straight filament lamp. Extra slots are provided for filters. The box is supplied complete with lens & triple slit



PHY-00588 READING TELESCOPE

Designed for general laboratory work. The telescope is mounted on 16 mm dia. & 45 cms. high rod fitted on heavy tripod base.

**PHY-00590****REFLECTION OF SOUND APPARATUS**

For proving that angles of incidence and reflection are equal for any setting. A protector (actual 'D') is screen printed on a superior quality laminated board. It consists of two independent arms containing 16" long stainless steel pipes. One arm is set at any arbitrary angle and other is adjusted till one listens to the maximum sound. At the position of maximum sound to angles will be equal as indicating by the 'D' reading.

**PHY-00593 RESISTANCE BOX PLUG TYPE**

Precision quality consisting of thick rectangular brass block, non-inductive, double covered Eureka Constantan wire is wound on Bakelite spool, enclosed in a teak wood box. Accuracy $\pm 0.1\%$
Range in Ω

PHY-00593/1	1-100
PHY-00593/2	1-500
PHY-00593/3	1-1000
PHY-00593/4	1-5000

**PHY-00594****RESISTANCE BOX PLUG TYPE NEW PATTERN**

Precision quality consisting of thick rectangular brass block, non-inductive, double covered Eureka Constantan wire is wound on Bakelite spool, enclosed in a Plastic case. Accuracy $\pm 0.1\%$
Range in Ω

PHY-00594/1	1-100
PHY-00594/2	1-500
PHY-00594/3	1-1000
PHY-00594/4	1-5000
PHY-00594/4	1-10000

**PHY-00596 RESISTANCE COIL TRANSPARENT**

Non inductively wound on plastic bobbin in transparent tube provided with terminals both side.

**PHY-00598****RESISTANCE COIL**

In round case with two terminals on the top, accuracy $\pm 0.2\%$.

PHY-00598/1	1 Ω
PHY-00598/2	2 Ω
PHY-00598/3	5 Ω
PHY-00598/4	10 Ω
PHY-00598/5	20 Ω
PHY-00598/6	50 Ω





PHY-00600

RESISTANCE COIL NEW PATTERN

In Rectangular case with two terminals on the top, accuracy $\pm 0.2\%$.

PHY-00600/1	1 Ω
PHY-00600/2	2 Ω
PHY-00600/3	5 Ω
PHY-00600/4	10 Ω
PHY-00600/5	20 Ω
PHY-00600/6	50 Ω

PHY-00602

RESONANCE APPARATUS

Consists of a resonance tube brass N.P. 100 cms, reservoir brass N.P. 250ml & meter scale both sides millimeters, which are mounted on wooden polished board. The reservoir is caged in wooden block that has sliding & clamping arrangement on the board. The board is mounted vertically on heavy metal base with synthetic hammer finish with levelling screws.

Complete with rubber tubing.



PHY-00605

RHEOSTAT SLIDING CONTACT

Comprising a layer of resistance wire wound on an insulating heat resistance porcelain tube, supported by sturdy feet both side, sliding contact and three socket terminals are provided. Tube dia 43 mm



	Maximum Amperes	Maximum Ω	Tube Length
PHY-00605/1	0.8	160	150 mm
PHY-00605/2	1.6	50	150 mm
PHY-00605/3	6,5	4.4	200 mm
PHY-00605/4	4.2	12	200 mm
PHY-00605/5	0.8	240	200 mm
PHY-00605/6	0.3	1700	200 mm
PHY-00605/7	5.0	11	300 mm
PHY-00605/8	4.2	20	300 mm
PHY-00605/9	3.3	27	300 mm
PHY-00605/10	2.3	56	300 mm
PHY-00605/11	0.3	2850	300 mm

PHY-00608

RHEOSTAT SINGLE TUBE PROTECTED

Enclosed type in metal case with wounded with oxidized resistance wire, with 4 mm socket terminals

Resistance Ω Current Ampere

PHY-00608/1	10	4 Amp.
PHY-00608/2	33	2.2 Amp.
PHY-00608/3	100	1.25 Amp.
PHY-00608/4	330	0.7 Amp.
PHY-00608/5	1000	0.4 Amp.



PHY-00609 RING AND BALL APPARATUS

Comprises a brass sphere 18 mm and brass ring mounted on rod with handle. Chain is provided to hold the ball with the ring.

**PHY-00611 RING AND BALL ON STAND**

Comprises a brass sphere 18 mm and brass ring mounted on stand with sturdy base. Chain is provided to hold the ball with the ring.

PHY-00612 RIPPLE TANK LED ILLUMINATION

This compact unit provides an elegant method of demonstrating the wave phenomena of reflection, diffraction, refraction and interference with none of the setting-up problems usually associated with ripple tanks. The concept has been developed to offer new features in this design. A 10cm tank on a base unit provides the wave generator and light source to project wave images on to the translucent screen which can then be viewed from above. The LED light source has been upgraded to give super-bright images and can now be controlled independently of the wave generator. Three settings give light ON, SYNC and FREE. Sync has wave frequency synchronized to light frequency to give perfectly stationary images. Free gives independent control of the light frequency to give slowly moving images. Supplied with a full set of interchangeable dippers, barriers, refraction plates and plug top power unit.

**PHY-00614 RIPPLE TANK**

Ripple tank is a device to illustrate the laws of wave phenomenon-using ripples on the surface of water as the prototypes of all transverse waves. Ripple tank illustrates important wave motions like rectilinear and circular. It can also demonstrate refraction, diffraction and interference of water waves. Tank is supported by four legs having leveling screws. supplied complete with ripple assembly, two straight obstacles, one straight obstacle, curved reflector, transparent refraction plate, wooden wave roller, one pack of rubber bands, water dropper, sponge, illuminator, electrically operated.



PHY-00615

RISING TABLE

For determining the surface tension of liquid by capillary rise method The apparatus comprise metal frame, on which four capillary tubes of 10cm. long and of different internal diameters are clamped with the help of small metal brackets. The 9 mm. rod is also attached to metal plate, so that complete clamp can be held in any stand. Consisting a cast aluminium 100 mm dia table with adjustable stand.

PHY-00618

RIVETS METAL

Rivet is placed inside the hole in the piece and the tail It is deformed and expanded in various ways, including by a hammer supplied in a pack of 100



PHY-00623

SEARL'S SURFACE TENSION APPARATUS

To determine the surface tension of liquids. Comprises a metal bridge attached to a vertical rod, which in turn is mounted on pillar of a heavy cast metal stand adjustable for height and has leveling screws supplied with rectangular wire frame, slide clip, six micro slides and spare length of torsion wire.

PHY-00624

SERIES AND PARALLEL EXPERIMENT

Workable on 220 Volts AC, housed in a plastic case, with six bulbs, six push buttons input sockets for 9 Volts DC, to perform various experiments.



PHY-00625

SET OF GEOMETRICAL MODELS

Set comprises of 15 solid geometric shapes, the solid shape are made of hardwood supplied a box.



PHY-00627

SET OF GEOMETRICAL MODELS COLORED

Set comprises of 15 solid geometric shapes in various colours, the solid shape are made of hardwood supplied a box.



PHY-00631

SIMPLE CELL IN GLASS JAR

Jar size 150 x 100 mm complete with Copper & zinc plates.

PHY-00633 SIMPLE CELL PLATES

Plates to be used in simple cell with size 125 mm with terminal .

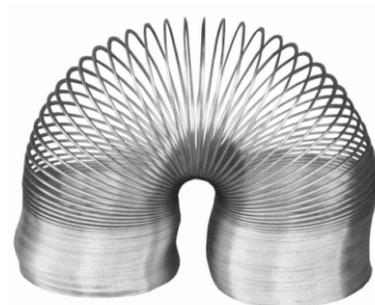
- PHY-00633/1 Copper Plate
- PHY-00633/2 Zinc Plate
- PHY-00633/3 Lead Plate
- PHY-00633/4 Carbon Plate

**PHY-00635 SIMPLE THERMOCOUPLE**

Constantan and copper wire of 12 inches long twisted together.

PHY-00636 SLINKY SPRING

To demonstrate wave motion. A flat section anodized steel wire is wound in 75mm dia helix coil. Closed length 100mm and fully extended to approx. 3meters.

**PHY-00638 SLOTTED MASSES SET BRASS 100 GMS**

The set comprises a 100 gms, wire hanger with nine slotted masses each of 10 gms accuracy $\pm 5\%$

PHY-00640 SLOTTED MASSES SET BRASS 200 GMS

The set comprises a 200 gms, wire hanger with nine slotted masses each of 20 gms accuracy $\pm 5\%$

PHY-00643 SLOTTED MASSES SET BRASS 500 GMS

The set comprises a 500 gms, wire hanger with nine slotted masses each of 50 gms accuracy $\pm 5\%$

PHY-00645 SLOTTED MASSES SET BRASS 1000 GMS

The set comprises a 1000 gms, wire hanger with nine slotted masses each of 100 gms accuracy $\pm 5\%$



PHY-00649 SLOTTED MASSES SET IRON 100 GMS
Iron Chrome Plated ,the set comprises a 100 gms, wire hanger with nine slotted masses each of 10 gms accuracy $\pm 5\%$

PHY-00652 SLOTTED MASSES SET IRON 200 GMS
Iron Chrome Plated ,the set comprises a 200 gms, wire hanger with nine slotted masses each of 20 gms accuracy $\pm 5\%$

PHY-00654 SLOTTED MASSES SET IRON 500 GMS
Iron Chrome Plated ,the set comprises a 500 gms, wire hanger with nine slotted masses each of 50 gms accuracy $\pm 5\%$

PHY-00656 SLOTTED MASSES SET IRON 1000 GMS
Iron Chrome Plated ,the set comprises a 1000 gms, wire hanger with nine slotted masses each of 100 gms accuracy $\pm 5\%$

PHY-00659 SMOKE CELL
The set consist a smoke set to Demonstrate Brownian motion, designed for use with a microscope.



PHY-00662 SODIUM VAPOR LAMP
35 watt , 220 V AC 50 Hz.

PHY-00664 SODIUM VAPOUR LAMP TRANSFORMER
For Sodium vapour lamp 35 watt 220 V AC 50 Hz.



PHY-00666 SOLDERING FLUX
The Soldering paste for use when soldering to avoid dry joints through oxidization. Nett Weight 50 Gms.



PHY-00668 SOLDERING IRON
Workable on 220 V AC



PHY-00670 SOLDERING WIRE

Without lead, for soldering reel of 100 gms.

**PHY-00672****SONOMETER**

Wooden polished resonance box, pulley fixed on one side with strings & Meter rules. Used to measure the tension, frequency or density of vibrations. Supplied without weights.

**PHY-00675 SPADE TERMINAL CONNECTOR**

Fork/Spade Terminals are Nylon Insulated, Color Coded Insulation for easy identification.

**PHY-00678****SPECTROMETER ADVANCED**

Stable Heavy cast-iron base, The main scale (diameter 150 mm) is divided 0 to 360° and fixed to a table that also holds the telescope. There are two verniers reading up to 1 minute of arc, located 180° apart at opposite sides of the main scale. Both vernier are visible through two protective acrylic windows. Telescope Mounted on a movable pillar, the telescope has a fine adjustment screw, locking screw and axis adjustment. Achromatic objective of focal length 178 mm. Ramsden eye-piece 15 X with cross-line graticule. With rack & pinion focusing. Collimator has achromatic objective of focal length 178 mm. Rack & pinion focusing. Adjustable slit, length 6 mm, is made of stainless steel.

Prism Table Marked with grooved lines to assist positioning of prism in relation to leveling screws. Has interchangeable clamping units for prism and diffraction grating. Packed in wooden case.

**PHY-00680 SPHEROMETER SINGLE DISC**

Made of Brass with Scale tripod legs, Circular Scale
Graduations: 100, Pitch Scale Graduations: 10-0-10 mm

**PHY-00684 SPHEROMETER DOUBLE DISC**

Heavy pattern, Brass graduated dial with vertical scale
10-0-10 mm with feet.





PHY-00686 SPOT REFLECTING GALVANOMETER

Spot Reflecting Galvanometer finds extensive use as a D.C. null detector in wheat stone bridges and potentiometers.

Mains feed: It is a 'mains' operated instrument but can operate on a 6 volt battery also. There is provision to operate this instrument can be operated on both as well as main supply 220 volts, 50Hz or 6 Volt Capacity.

Light Source: The light Source is 6 Volt and 0.3Amp bulb giving a bright spot on the scale.

Construction: The galvanometer has built in lamp and scale arrangement and housed in a bakelite case. The highly sensitive moving coil system is suspended in a taut band manner in a uniform field of permanent magnet.

Scale: The scale is 150mm long and end zero use.

Zero Adjustment: The spot of light can be set at any point on the scale with the help of zero adjusting knob.

PHY-00689 SPOUTING CYLINDER

To demonstrate that pressure increases With Depth, made of sheet metal, powder coated with three outlets of same size and dia. On stable base.



PHY-00691 SPRING SET ASSORTED

Set of 20 springs of assorted sizes with hooks both side.

PHY-00694 STEAM GENERATOR

Copper cylindrical body with conical top and short neck for bung. Fitted with steam outlet tube riffled for rubber tubing. Capacity 1 Liter.



PHY-00697 STEAM HEATER

Copper vessel with filling tube, steam vent and vertical tube terminating in chute passing through side of the vessel, without thermometer.

PHY-00699 STOP CLOCK

Fly back action in card box. Slider at the right side provided to stop and start, the operation of which enables a timer start and stop as desired with subsidiary dial recording 0 to 60 minutes



PHY-00700 STOP CLOCK DIGITAL

Stop Clock for schools & colleges with digital display. 8 digit count up and count down fly back accuracy 1/100 sec. large display.

**PHY-00701 STOP WATCH DIGITAL RACER**

Large LCD display, with hours, minutes, seconds, 1/100th second, provided with alarm.

**PHY-00702 STOP WATCH DIGITAL ROUTINE**

LCD display, with hours, minutes, seconds, 1/100th second.

**PHY-00705 TANGENT GALVANOMETER**

A Bakelite or plastic ring or bobbin is 6½ Diameter with three windings of 2, 50 & 500 turns, magnetometer supported on a brass tube fitted on a ebonite plate, mounted on the base with levelling screws.

**PHY-00707 TELESCOPE MODEL ASTRONOMICAL**

Fitted with achromatic objective, focusing is provided with rack and pinion, metallic duly painted with adjustable tripod stand, also provided terrestrial attachment for erect image, packed in a carrying case.

**PHY-00709 TELESCOPE MODEL SIMPLE**

Basic model for students, Consisting two tubes one in each other, giving view by sliding the inner tube.





PHY-00710 TESLA COIL

This hands-free Tesla coil is used to demonstrate the unusual properties of high-frequency electrical phenomena. This electrifying device teaches about transformers, electromagnetism, resonating electrical circuits, electric inductance, capacitance, and electrical power transmission. Transmit electricity without wires. Watch light bulbs glow in your hand. Study the ionization of gases and the behavior of insulators and conductors. This powerful, compact apparatus is a completely safe source of high frequency high voltage electricity. Arcs to 30mm, illustrate its maximum output of 50,000 volts. Its design includes cord and plug; primary coil; secondary coil with 1000 turns of wire; and high impact resistance plastic housing that protects you from the spark gap. Fully assembled. 220 volts operation (110V operation on special order). Also Includes two antenna plates, small neon light bulb, mini discharge electrode and lamp socket.

PHY-00711 THERMAL CONDUCTIVITY APPARATUS

Thermal conductivity apparatus Lee & chorlton for Determining the Relative Conductivity of Thin Layers Of Materials, Complete with accessories.



PHY-00714 THERMAL CONDUCTIVITY KIT

Kit comprises of 5 different metal material rods 250 x 3 mm (Length x Dia.) for comparing thermal conductivity of different material carrying Copper, Aluminum, Iron, brass & glass rods.

PHY-00716 THERMAL CONDUCTIVITY OF COPPER SEARLE'S APPARATUS

Fitted in a superior quality polished wooden case. Comprises copper bar 25mm in diameter and 300mm in length fitted with a steam jacket at one end to be supplied from a steam boiler and a copper water cool spiral at the other end. The bar has tubes for inlet of water and for thermometers Packed with felt for thermal insulation .



PHY-00718 THERMAL CONDUCTIVITY OF METAL

Also knows as conductivity apparatus, consisting four metal strips meeting at the center point of Brass, Copper, aluminum & iron having small cups at outer side mounted on wooden frame.

PHY-00722 THERMOMETER ALCOHAL

Mercury free precision glass thermometer ,yellow backed for clear visibility, 300 mm, packed in a case.

	RANGE	DIVISION
PHY-00722/1	- 10 to 50 Deg C	1/5
PHY-00722/2	- 10 to 50 Deg C	1/10
PHY-00722/3	- 10 to 110 Deg C	1/5
PHY-00722/4	- 10 to 110 Deg C	1/10

**PHY-00724 THERMOMETER CLINICAL**

Used to measure human body temperature, accurate and sensitive, because it has a narrow place where the mercury level rises very fast. Packed in a case. Range 94 Degree F to 108 degree F.

PHY-00725 THERMOMETER MERCURY

General purpose glass thermometers, length 300 mm, packed in a case.

	RANGE
PHY-00725/1	- 10 to 50 Deg C
PHY-00725/2	- 10 to 110 Deg C
PHY-00725/3	- 10 to 150 Deg C
PHY-00725/4	- 50 to 50 Deg C
PHY-00725/5	- 50 to 100 Deg C
PHY-00725/6	- 0 to 220 Deg F
PHY-00725/7	- 0 to 400 Deg F

**PHY-00727 THERMOMETER WALL**

	Mounted on screen printed scale
PHY-00727/1	Maximum minimum Thermometers -30 to 60 Deg. C
PHY-00727/2	Maximum minimum Thermometers -40 to 50 Deg. C
PHY-00727/3	Wall Thermometer Small Size -10 to 50 Deg. C
PHY-00727/3	Wall Thermometer Big Size -10 to 50 Deg. C

PHY-00729 THERMOMETER WET & DRY

Mounted on screen printed scale

PHY-00729/1	Wet & dry Thermometers Routine, -10 to 50 Deg. C
PHY-00729/2	Wet & dry Thermometers Deluxe, -10 to 50 Deg. C

**PHY-00731 THERMOPILE**

Sensitive apparatus for demonstrates of thermo electrical concepts such as see beck-effect. Consists of Bismuth (Bi) and Antimony (Sb) junction12 pairs connected in series with insulation between them and mounted inside a metal ring. Two terminals provided for connections, mounted on a stand.



PHY-00734

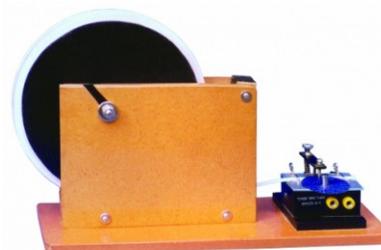
THERMOSCOPE ETHER

For detecting thermal radiation. Two glass bulbs about 33mm diameter, attached to the ends of a U-shaped glass tube having one limb smaller than the other. Glass bulb attached to the smaller limb painted matt black. Fixed on wooden stand.

PHY-00737

TICKER TAPE TIMER

Housed in wooden casing Designed to operate on a 12 V A.C supply For the measurement of velocity and acceleration, using timing marks made on a moving paper tape by a vibrating. Supplied with a roll of self marking paper tape.



PHY-00739

TRIPLE BEAM BALANCE

Stainless steel pan of 150 mm dia.with three notched weighing beams with Centre indicating sliding masses, giving total weighing capacity of 610g. Additional supplementary masses are available to hang on the end of the beam increasing the capacity upto 2610g.Beams: 0-500g x 100g, 0-100g x 10g, 0-10g x 0.1g, inclusive of masses.

PHY-00741

TROLLEY RUNWAY WOODEN

Made of wood, with metal side rails and plastic feet ,Designed to provide a smooth flat easily inclinable surface for dynamic experiments using trolleys.. Size 1.5 meters. Supplied with pair of dynamic trolleys.



PHY-00743

TUNNING FORK

Steel chrome plated, Fork-shaped acoustic resonator used in many instruments to produce a fixed tone. Frequencies marked (C1 256 to C2 512) , set of 8, packed in a case.

PHY-00746

TUNNING FORK ON RESONANCE BOX

Four steel chrome plated forks with frequencies C256, E320,G384,C512 fixed on a polished wooden resonance box For demonstration of the formation of a basic major chord. Provided with hammer.



PHY-00748 TUNNING FORK ELECTRIC

Workable on 6 volts . Size, Prong size 10 x 25 x 300 mm, fitted on stable base.

**PHY-00753 U TUBE MOUNTED**

Scale with U shaped Glass tube Fitted in center of wooden board, on base.

PHY-00754 VACUUM PUMP OIL FREE

Oil free vacuum pump , portable diaphragm type. Motor Flow Rate 45 Litre per minute , maximum pressure 40 PSIG, with superior electrical motor of 1/8 Horse power.

**PHY-00755 VACUUM PUMP OIL FILLED**

Oil filled vacuum pump , single stage, Motor Flow Rate 50 Litre per minute , with superior electrical motor of 1/4 Horse power.

PHY-00758 VAN DE GRAFF GENERATOR HAND DRIVEN

Hand operated, mounted on base. For the generation of electric charge, useful in electrostatics and for studying various phenomena associated with electric charge. Comprises a near spherical dome supported on top of an insulated, clear Perspex pillar on the base. A removable flat rubber belt rotates through rollers mounted at both the ends of Perspex pillar. Lower roller shaft has a pulley driven by a hand operated crank through rubber belt. Supplied with a discharging sphere 100 mm dia.





PHY-00761 VAN DE GRAFF GENERATOR MOTOR DRIVEN

The low voltage powered model is designed for Electrostatic experiments, Fitted on base with smooth running DC Motor, operates on 220 volts A.C. 50 Hz. Power input is via a pair of color coded 4 mm sockets. Mains operated versions are provided with 1.5 meters of 3 core mains cable. The earth core of the mains leads being connected to the metal structure of the apparatus. Both voltage & mains versions also have independent 4 mm earth sockets with spherical discharger of 75 mm dia with insulated handle.

PHY-00764 VENTILATION APPARATUS

Comprises a metal powder coated box of size 200 x 100 x 75 mm (Length x width x height) with sliding glass front, provided with two glass tubes & candle holders.



PHY-00765 VERNIER CALIPER BRASS

Made of Brass. with inner & outside gauge, knob for sliding, also known as pocket caliper.

- PHY-00765/1 50 mm
- PHY-00765/2 75 mm
- PHY-00765/3 100 mm

PHY-00767 VERNIER CALIPER IME TYPE

With depth, inner & outside gauge, with sliding lock, 0-15 cm x 0.1 mm , packed in a plastic case.



PHY-00768 VERNIER CALIPER WHEEL DRIVEN

Iron Chrome Plated with depth, inner & outside gauge, wheel driven , locking facility 0-12.5 cm x 0.1 mm , packed in a case.

PHY-00769 VERNIER CALIPER WHEEL DRIVEN STAINLESS STEEL

Made of Stainless steel. with depth, inner & outside gauge, wheel driven , locking facility 0-12.5 cm x 0.1 mm , packed in a plastic case.



PHY-00771 VERNIER TRAVELLING MICROSCOPE

Traveling microscopes are specially designed to meet the requirements of Research, colleges, schools and Industrial laboratories, Consists of a heavy cast iron base fitted with three levelling screws with the top machined over which slides a gun metal carriage. The slide can be clamped at any position by means of a clamping screw. Fine adjustments for final reading is done with a micrometer screw. A vertical slide operating in a similar way is fitted on the horizontal carriage. The microscope with rack and pinion is fitted on the vertical or horizontal position of microscope. Microscope tube is fitted with 10x ramsden eye piece with cross line graticule & an achromatic objective of high quality.

**PHY-00774 VOLTAMETER COPPER**

In a glass jar with insulated cover consisting three copper plates with terminals.

PHY-00777 VOLTMETER ' SINGLE RANGE

FOR D.C. MEASUREMENT WITH COLOR CODED TERMINALS, METERS ARE HOUSED IN A DUST PROOF CASES. PROVIDED WITH ZERO ADJUSTER.

PHY-00777/1	0-1 Volts
PHY-00777/2	0-3 Volts
PHY-00777/3	0-5 Volts
PHY-00777/4	0-10 Volts
PHY-00777/5	0-30 Volts

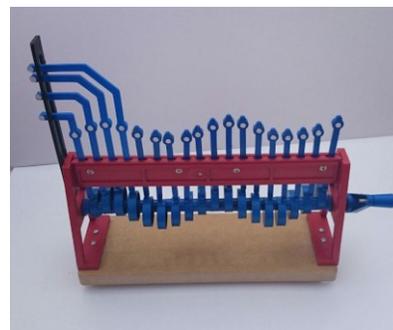
**PHY-00779 VOLTMETER ' DUAL RANGE**

FOR D.C. MEASUREMENT WITH COLOR CODED TERMINALS, METERS ARE HOUSED IN A DUST PROOF CASES. PROVIDED WITH ZERO ADJUSTER.

PHY-00779/1	0-1/5 Volts
PHY-00779/2	0-5/10 Volts
PHY-00779/3	0-5/15 Volts

**PHY-00782 WAVE APPARATUS**

Consists of a number of eccentric disc series of metal rods to demonstrate Transverse Longitudinal motion. Eccentric discs supporting a series of rods, On revolving the handle, transverse waves are obtained.



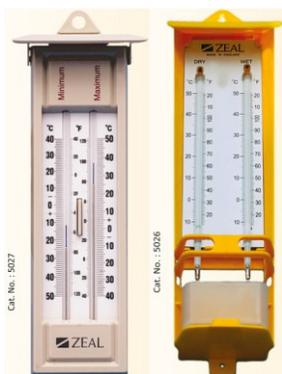


PHY-00784 WAVE MACHINE' POWELL'S

For demonstrating the movement of progressive transverse waves. Comprises 22 small balls on wire rods, with eccentric motion attachment, with driving handle and fitted on polished wooden base.

PHY-00786 WESTMINSTER ELECTROMAGNETIC KIT

A very effective and motivating learning aid in elementary electromagnetism. Consists of iron filings 250 gm. ,8 anisotropic alloy magnets, 8 ceramic ferrite magnets, steel magnet yokes, 6 plotting compasses, 4 hardboard former's to take compasses, , 4 dispensers for iron filings ,4 double C-cores, 4 clips for C-cores,4 aluminum rings, 4 aluminum split rings,4 armatures with axle tubes,4 aluminum axle rods, 8 split pins, 16 rivets, 4 former's for coils, 4 reels cello tape,4 reels copper wire, 4 sheets white pasteboard,4 plain postcards,4 reels white cotton thread, 1 length latex rubber tubing, 4 each resistors 100 ohms and 10 ohms,4 support bases,10 bulbs, 4 bulb holders, 1 wood clamp, 1 wooden block. Packed in plastic case.

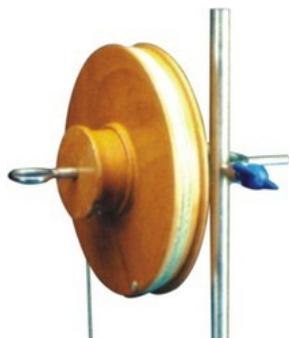


PHY-00788 WET & DRY BULB HYGROMETER

Zeal Made in England wet & dry bulb hygrometer Range -10 to 50° C

PHY-00791 WHEATSTONE BRIDGE

Polished wooden base, one meter long, scale fitted in the center, brass parts with jockey.



PHY-00795 WHEEL & AXLE

Double wheel polished wooden, dia 50 & 150 mm with flat bottomed grooves pivoted on a spindle 10 mm. diameter which projects for a distance of 100 mm. so that the apparatus may be clamped to a normal retort stand. The apparatus is supplied with two hooks and whipcord, without stand & masses.

PHY-00798 WHIRLING HYGROMETER

To measure the relative humidity of the air to an accuracy of $\pm 2\%$ RH. This instrument has a folding handle Range: -5°C to $50^{\circ}\text{C} \times 0.5^{\circ}\text{C}$.

**PHY-00800 WHIMSHURST MACHINE**

Made of plastic stand with acrylic disc size dia 300mm or 12 inch and lyden jars made of plastic tube with wooden base. The length of spark is 50mm.

**PHY-00802 WIND WANE**

Fully balanced, mounted on bearing on steel pivot, on heavy metal base.

**PHY-00805 WIRE STRIPPER**

Wire Stripper, Made with High Carbon Steel, Hardened Jaws

**PHY-00806 WORCESTER CIRCUIT BOARD**

This circuit board is made on polished nuwood and attached with terminals. Provided with bulb holders attached with the strips which is suitable to insert in the terminals to make the circuit in series or parallel as required. Complete with the accessories.





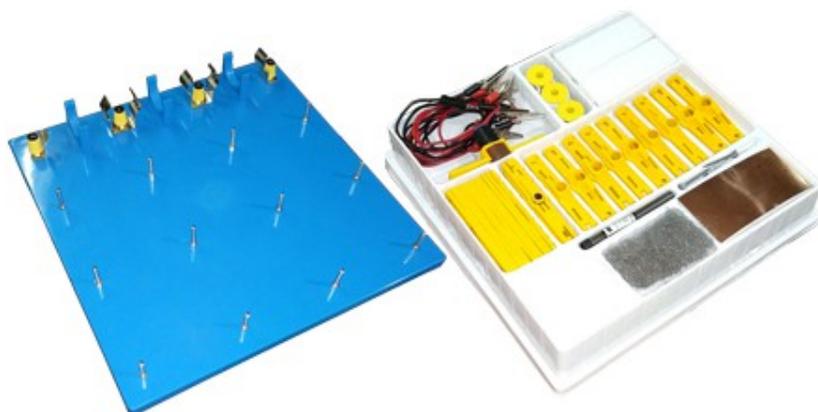
PHY-00807

**WORCESTER CIRCUIT BOARD
ADVANCED MODEL**

This is a circuit board, 300mm square, with 16x strong upstanding pins for the interconnection of components for the teaching of basic electricity. Each component has a metal tab that makes a reliable connection to the pins. Kit is complete with joiners, various types of wire for heating and melting experiments, globes, cables with alligator clips, battery holders for 'D' cells, lamp holders, press switch, thin copper foil, carbon electrodes and an excellent experiment book. Experiments are limited to very basic electricity, series and parallel connection of lamps, basic electroplating, electro magnetism, conductivity and more.

KIT CONTENTS:

- 1 Base board with 16x pins
- 12 Plain connectors to fit pins
- 9 Lamp holders with tabs to fit pins
- 3 Cell holders for 'D' cells with tabs to fit pins
- 2 Press switches with tabs to fit pins
- 1 Rheostat (small, rotary) with tabs to fit pins
- 1 Rectifier diode with tabs to fit pins
- 1 Resistor, 3.9 ohms, with tabs to fit pins
- 20 MES lamp globes
- 2 Soft iron nails
- 1 Electrode support disc (insulating)
- 1 Pair cables with 4mm banana plug and alligator clip
- 1 Pair cables with alligator clips
- 1 Coil of bare copper wire
- 1 Coil of bare resistance wire
- 1 Coil of PVC covered wire
- 1 Packet of pencil leads for electrodes
- 1 Sheet of copper foil
- 1 Iron wool
- 1 Experiment manual



PHY-00808 YOUNG'S MODULUS APPARATUS ' SEARLE'S PATTERN

Consists of two iron frames with ceiling bracket. The frames are fitted with self centering chucks. An accuracy cut micrometer screw to read to 0.01mm and main scale of 0-10mm is fitted in one frame. One end of a sensitive spirit level is pivoted to one of the frames and the other end rests on the point of a micrometer screw fitted on the other frame.



PHY-00810

ZINC ROD WITH TERMINAL

Length 150 mm, terminal connected at one end dia 12 mm approx..

**MORE
NEW PRODUCTS**

PHY-00235/1 ELECTROLYSIS APPARATUS

Electrolysis Apparatus, Consists of a Acrylic Rectangular container 100 mm x 140 mm x 75 mm mounted on a plastic base with two electrodes with banana plugs for easy connection.



PHY-00235/2 ELECTROLYSIS APPARATUS ROUND SHAPED

Electrolysis Apparatus, Consists of a Acrylic Circular container 100 mm x 75 mm (Dia x Ht.) with two electrodes with banana plugs for easy connection.

PHY-00255 FLEMING,S LEFT HAND RULE

Simple model showing Fleming's Left Hand Rule applicable in electric motors which are used in fans, mixers, printers, etc. demonstrating a current carrying conductor in a magnetic field experiences force due to it. By using Fleming's Left Hand Rule the direction of force acting on the conductor can be found. Mounted on a plastic base with terminals.



PHY-00256 FLEMING,S RIGHT HAND RULE

Simple model showing Fleming's Left Hand Rule apparatus shows the generation of electricity from a moving magnet. Mounted on a plastic base with terminals.





PHY-00512 LASER OPTICAL TANK

Made of acrylic sheet on plastic base with levelling screws to level the water in the tank, Dia of the dial is 150 mm this simple apparatus lets students observe angles of reflection, refraction, and complete internal reflection for a light ray that passes through two clear media. The apparatus consists of an acrylic water tank and a pivoting arm with a battery operated revolving laser source. The tank is half-filled with water and has a protractor printed on its back side.

PHY-00380 LEVITATING PENCIL

Six ring magnets, Four fitted on base and two on the ends of Pencil, It help kids to learn basics of magnetism, attraction, repulsion, discuss applications of magnetic levitation Quality and smooth material used, very easy to make it levitate



PHY-00692 ST. LOUIS MOTOR

Mounted on bakelite base Comprised of a 2-pole D.C. armature with coils and mounted in an aluminium bracket with two binding posts and 4mm socket terminals. The armature is held on brass cone bearings and a shaft fitted with split commutator. Complete with two permanent magnets in adjustable holders.



PHY-00742 TROLLEY RUNAWAY

Made of plastic, To demonstrate dynamic experiment using trolleys, provided with set of trolley. Complete with Accessory

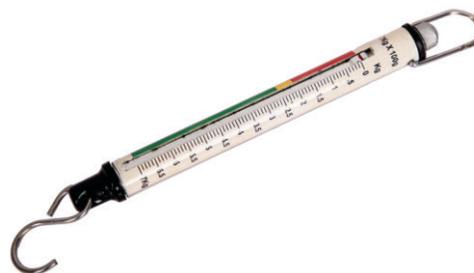
- 1. Track
- 1. Plain Trolley
- 1. Plunger Trolley
- 1. Pulley
- 1. Mass with Hanger 10 x 10 Total 100 Gms
- 1 Ticker Tape timer AC
- 1 Ticker Tape
- 1 Power Supply for Ticker Tape Timer
- 1 Cottol Reel
- 1 Carbon pack of 50
- 1 Measuring Tape
- 5 Mass of 100 Gms (100 x 5=500 G)
- 1 Stop watch digital
- 1 Pair of Legs
- 1 Line Level
- 1 Rubber Bands
- 1 Prestik



PHY-00049 BABY WEIGHING SPRING SCALE

Baby Weighing Scale Hanging Tubular Spring Balance Dynamometer 7 Kg x 100 gm Tough Aluminium tubular body.

Capacity : Maximum Load Capacity 7 kg Color coded reading scale- Zero Adjustment Non- Corrosive Metallic ring on top and S shaped hook at the Bottom for suspending the sling bag Spring used in the scale made of heavy duty steel spring,

**PHY-00325 INCLINED PLANE PLASTIC**

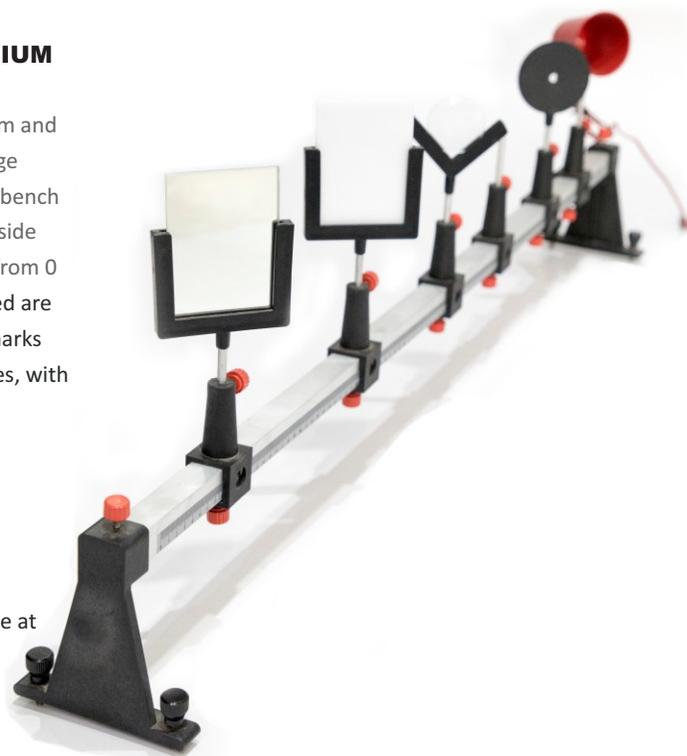
For experiment on sliding friction, Size 600 x 65 mm comprises inclined plastic moulded plane with pulley hinged on the top. Provided with plastic cart, plastic pan with plastic graduated arc.

PHY-00510 OPTICAL BENCH METTALIC ALUMNIUM

New Pattern optical bench allows you to perform and observe the fundamentals of optics such as image formation, reflection, refraction, and more. The bench consists of a square aluminum bar, two molded side supports with leveling screws, and graduations from 0 cm to 100 cm, subdivided in millimeters. included are six riders mounted on free sliding bases, with marks on one side of the base, for mounting accessories, with heights of the accessories adjustable.

The Basic Optical Bench includes the following accessories:

- 1) Lamp house with a lamp & leads.
- 2) Object screen of 75mm diameter with wire gauze at the center
- 3) Holder for lenses
- 4) White receiving screen 100 x 75mm
- 5) Object needle
- 6) Plane mirror mounted in a frame 100 x75mm.





PHY-00230

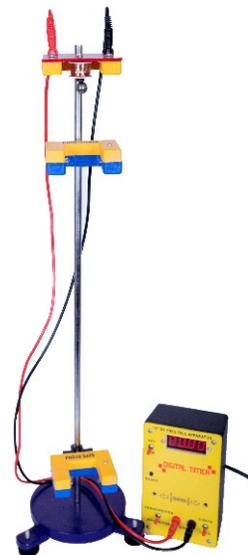
DEMONSTRATION DYNAMO WORKING MODEL

Demonstrations dynamo of Ac /Dc output individual on single base with both side armature in acrylic casing with illuminated LED bulb, hand driven center wheel. Base size 300 x 150 mm



PHY-00288 "G" BY FREE FALL APPARATUS ADVANCED

G By Free Fall Apparatus New Pattern For determination of "g" by free fall method. Consists of two units, each mounted on a plastic base which can be clamped to a 12mm diam. retort stand rod. The solenoid unit ensures prompt release of a metal sphere as soon as the power to the electromagnet is switched off. The gate switch unit comprises a hinged steel plate held against an adjustable contact by a small magnet so that by proper adjustment, the plate falls promptly as soon as the falling sphere falls on it. Complete with spheres, stand & digital timer



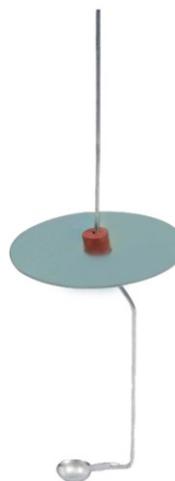
PHY-00499 NEWTON COLOR DISC HAND DRIVEN(EURO MODEL)

Comprising a multi colored disc mounted on a plastic stand driven by hand wheel.



SMC-00191 DEFLAFRATING SPOON

Die pressed steel spoon, 20 mm dia., welded with rod. Complete with cover of 90 mm diam having cork in center for holding the rod



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