

SUPER A
SCIENTIFIC

GAS LIQUID SOLID

www.super-a-scientific.com

sales@super-a-scientific.com

Gas Liquid Solid

Table of Contents

Archimedes Principle	3
Overflow Can, aluminum with Pour Spout 1502	3
Overflow Can, Plastic with Spout 1502-P.....	3
Catch Bucket 1503	3
Overflow Can and Catch Bucket Set 1504	3
Archimedes Principle (Bucket and Cylinder) 1505.....	3
Archimedes Principle Apparatus, Plastic 1506	3
Archimedes Principle	3
Air Thermometer 102	3
Vacuum Pump 206.....	4
Condenser 302	4
condenser, Leibig	4
Convection Apparatus for Gases 303-1	4
Drying Tubes (flint Glass) 401	4
Eudiometer 503	4
Gas Measuring Tube 701	4
Fermentation Tubes 601.....	4
Harbottle Apparatus 791	5
Quiet Air source 794	5
Magdeburg Hemisphere, Cast Iron 806.....	5
Miniature Magdeburg Hemisphere, Rubber 810	5
Bell Jar with Clear Knob Top 1371	5
Venturi Tube 2201	5
Bell in Jar MS406-C	5
Hand Pump MS4001	6
Gas Generating Bottle SA-01	6
Liquid	6
Burette Tip, Burette Tip Assembly 205	6
Condenser 302	6
Condenser, Leibig	6

condenser Adapter	6
Convection Apparatus for Liquid 303	6
Convection Apparatus for Liquid 305	6
Cartesian Diver Unit 305-1.....	6
Specific Gravity Bottle 412	6
Hydraulic Press Demonstration 803	7
Hydrometers 804	7
Hydrometer Jar	7
Osmosis Apparatus 1501	7
Pressure Syringe 1602.....	7
Funnel Tube, Thistle Tubes	7
Ventri Tube 2201	7
Steam Generator 2301.....	7
Pascal Ball 63521	3
Floating & Submergence Demonstrator MS108.....	3

Specific Gravity and Density	8
Specific Gravity Bottle 34601.....	8
Equal Mass Density Set 611-2005.....	8
Density Block Set 611-2020	8
Density Blocks 1082	8
Specific Gravity Cube with Hook 1082-1	8
Equal Mass Cylinder Set 1396.....	8
Equal Mass Cylinder Set 1396-1.....	9
Specific Gravity Cylinder Set 1867	9
Specific Gravity Block 205.1	9
Specific Gravity Cylinder 206	9
Solid Geometric Block MS903.2.....	9

Archimedes Principle



Overflow Can, Aluminum with Pour Spout 1502

This unit is made of aluminum. Angled spout drains all displaced water for high accuracy. Measures 12.5 cm high and 8 cm diameter with 450ml capacity.



Overflow Can, Plastic with Pour Spout 1502-P

Graduated Scale Provides Easy-to-Read Measurements. Use this transparent overflow can for more accurate determinations of density, displacement, and specific gravity. Its specially angled spout prevents spillback so all the liquid leaves the container. Overall dimensions: 85mm height; 50mm diameter; 115ml capacity.



Catch Bucket 1503

The traditional catch bucket and overflow can used for density and specific gravity determinations, Archimedes' principle, etc. Good grade aluminum construction.



Overflow Can and Catch Bucket Set 1504

Overflow Can and Catch Bucket Set is used to find the volume of a body and to determine its specific gravity or for proving Archimedes' Principle. Consist of 3" dia. 5" high aluminum canister with spout and a 3" dia. 3" high seamless aluminum bucket.



Archimedes's Principle (Bucket and Cylinder) 1505

This all metal unit demonstrates the principles of buoyancy and displacement. Experiments prove that the weight loss equals the weight of water displaced.



Archimedes Principle Apparatus, Plastic 1506

This new model has a much large capacity (100ml) than the traditional aluminum model (22ml) for higher accuracy and easier operation. In addition, both the cylinder and the cup have marked divisions which allow the students to repeat the experiment with different volumes. Made of white nylon. This unit is used with a 200g spring scale, an overflow can and a beaker.

Gas



Vacuum Pump

206-1 Vacuum Pump, with gauge

206-2 Vacuum Pump, without gauge

Supplied with or without a pressure gauge that reads in both centimeters & inches of mercury. Pumping rate is 15ml per stroke, fitted with a valve to release vacuum without disconnecting the pump.



Air Thermometer

102

This 2" bulb is used as an accessory in many heat experiments when studying the expansion of liquids and gases.

Condenser



- 302-0** Condenser, inner tube supported with rubber connection 250mm
- 302-1** Condenser, inner tube supported with rubber connection 300mm
- 302-2** Condenser, inner tube supported with rubber connection 400mm
- 302-3** Condenser, inner tube supported with rubber connection 500mm
- 302-20** Condenser Adapter, Bent
- 302-21** Condenser Adapter, Straight

Condenser, Leibig

- 302-8** Condenser, Leibig, Borosilicate 100mm
- 302-9** Condenser, Leibig, Borosilicate 200mm
- 302-10** Condenser, Leibig, Borosilicate 300mm
- 302-11** Condenser, Leibig, Borosilicate 400mm
- 302-12** Condenser, Leibig, Borosilicate 500mm

Convection Apparatus for Gases

303-1

The enamel coated metal box has a sliding glass front and two glass chimney stacks. Smoke is introduced in one chimney using either smoldering paper or a punk stick. The smoke can be observed traveling down into the box and back out through the other chimney that stands over a flaming candle. The principles of convection currents and wind is made very clear through this demonstration.



Drying Tubes (Flint Glass)



- 401-1** Straight, with one bulb. . .100 mm
- 401-2** Straight, with one bulb. . .150 mm
- 401-3** Straight, with one bulb. . .200 mm
- 402-1** "U". . .100 mm
- 402-2** "U". . .150 mm
- 402-3** "U". . .200 mm
- 403-1** "U" with side arm. . .100 mm
- 403-2** "U" with side arm. . .150 mm
- 403-3** "U" with side arm. . .200 mm



Eudiometer

- 503-1** 50 ml, Subdivisions at 0.1 ml
- 503-2** 100 ml, Subdivisions at 0.2 ml

Gas Measuring Tube

- 701-1** Gas Measuring Tube, 50 ml
- 701-2** Gas Measuring Tube, 100 ml



Fermentation Tubes

- 601-1** Large without foot
- 601-2** Large with foot
- 601-3** Small without foot
- 601-4** Small with foot
- 601-5** Graduated 5ml



Harbottle Apparatus 791

The Harbottle helps students understand the meaning of fluid pressure and pressure reduction.

A Harbottle is a round, glass, container with a balloon stretched over its opening and a hole in the flattened base that is fitted with a rubber stopper. Students are amazed when the balloon remains inflated inside the bottle even though it is not tied off or sealed.



Bell Jar with Clear Knob Top

Item #	I. D. (mm)	Height (mm)
1371-120	120	180
1371-150	150	200
1371-180	180	250
1371-200	200	300
1371-250	250	40



Quiet Air Source 794

This piece of equipment can be used on any apparatus requiring an air source such as air tables or air tracks. Very quiet in operation and comes complete with a 1-1/8" diameter hose. Operates on 110 volt AC.



Venturi Tube 2201

A glass tube 7" long and 3/4" in diameter with a constriction at the center, and three vertical tubes. When manometers are attached to the three openings the lower pressure at the constriction becomes evident. A verification of Bernoulli's principle.

Magdeburg Hemisphere, Cast Iron 806

Machined from cast iron, this is an excellent replica of traditional Magdeburg Hemisphere. One of the hemispheres contains a mounted brass valve for withdrawing and sealing a vacuum.



Miniature Magdeburg Hemisphere, Rubber 810

An economical version of a classic physics experiment, these miniature Magdeburg Hemispheres are constructed from two matching rubber cups with sturdy chrome-plated steel handles. Although the cup diameter is only 55mm, once they are pressed together, a force of 125N is needed to separate them. Students will find them difficult to pull apart!



Bell in Jar MS406-C

Nature, of course, abhors a vacuum - and sound waves won't travel through one. Prove it with a ringing bell inside a sealed glass jar. As air is gradually pumped out of the jar, the bell becomes faint, then dies. Includes jar, vacuum plate with valve, rubber seal, bell system, and instructions. You need a vacuum pump and two AA batteries (not included). Bell may be removed for other vacuum experiments. The inside height is 8", and the diameter is 8". Includes bell jar, electric bell, base plate with seal, and instructions. Grades 6-12.

Gas Liquid Solid

Hand Pump MS4001



This heavy duty hand pump is a combination of a pressure pump and a vacuum pump, specifically designed for physics labs to evacuate small amounts of air. Made of seamless metal pipe with a hardwood handle.

14x4x1.25", 13oz.

Gas Generating Bottle SA-01



These gas generating bottles come complete with flint glass bottle, thistle tube, stopper and flint tube bent at 90 degree angle.

GLS-00101

For preparing gases such as hydrogen, carbon dioxide etc. in a convenient manner.

Includes a flint glass bottle 250mL capacity, thistle funnel, a bent glass (made of borosilicate glass) and a rubber stopper.

Liquid



Burette Tip, Burette Tip Assembly

205 Capillary glass tip with ground tip.

205-1 Assembly with glass burette tip, pinch clamp and 3" of latex tubing.



Condenser Adapter

302-20 Condenser Adapter, Bent

302-21 Condenser Adapter, Straight



Convection Apparatus for Liquid 303

Convection of Liquid Glass Frame

Illustrate the properties of convection currents! The water and dye-filled glass frame is heated at the bottom corner. When observed, the movement shows the path of the convective current.

(8" x 8-1/2" x 1/2"; .02lb).



Convection Apparatus for Liquid 305

An all glass constructed Cartesian Diver with a red band to make the diver more visible.



Cartesian Diver Unit 305-1

Supplied with a Diver and Hydrometer Jar. A diver is placed in a cylinder of water. Pressure on the cap forces water into the diver causing it to sink.



Specific Gravity Bottle 412

These uncalibrated specific gravity bottles are excellent for determining the specific gravity of liquids. The borosilicate bottles feature a ground stopper for a precision fit.

10ml, 25ml

Hydraulic Press Demonstration

803



The transmission and multiplication of forces through a hydraulic system can be observed in this glass model.

The force piston has a handle and a concave top for holding weights.



Hydrometers

Item	Description	Length	Divisi
804-1	Heavy Liquids, 1.000-2.000	300mm	0.01
804-2	Light Liquids, 0.700 -1.000	300mm	0.01
804-3	Universal, 0.700 - 2.000		

Hydrometer Jar

The hydrometer jars are made from a heat-resistant borosilicate glass with a rolled upper edge and a wide support foot. Perfect for use with our heavy and light liquid hydrometers.

804-4 hydrometer jar 38x254mm

804-5 hydrometer jar 50x305mm



Osmosis Apparatus

1501-3

Single Thistle Tube with Membrane



Osmosis Apparatus

1501-4

Double Thistle Tube with Membrane



Osmosis Apparatus

1501-6

Bladder Form with Glass Tube

A glass tube 45cm long with a membrane is attached to one end. When the membrane is filled with sugar solution and immersed in water, the liquid in the tube will rise, which shows osmotic pressure in a clear demonstration. Instructions included

Pressures Syringe.

1602

Demonstrates that pressure is transmitted uniformly in all directions. Unit consists of 2" diameter glass bulb and plunger. The bulb has a series of holes in a plane. When pressure is applied to the plunger water is expelled at an equal distance in all directions. Instructions included.



Funnel Tube, Thistle Tubes

Flint Glass

604-2 Funnel Tube, Semi-Micro, 6" x 4mm Stem

2001-1 Thistle Tube, 7mm x 300mm Stem

2001-2 Thistle Tube, 7mm x 400mm Stem

2001-3 Thistle Tube, 7mm x 150mm Stem



Steam Generator

2301

Designed for use with a steam generator or boiler to trap condensed steam. The unit is made of Pyrex glass and is 15.5 cm long.





Overflow Can, Plastic with Pour Spout 61031

Light weight, clear plastic can with an angled spout to prevent spillback. Easy viewing from all angles. Single piece construction eliminates leakage. Used for accurate determination of volume, density and specific gravity. Weighs 2.9 oz.

Pascal Ball 63521

This device is used to show that water pressure will transmit in all directions. Consists of a hollow sphere connected to a hand pump. The sphere has an outer diameter of 3" and a capacity of 250ml. Ten projected nozzles are evenly distributed on the sphere. 14x4x4"



Floating & Submergence Demonstrator MS108

Specific Gravity and Density



Specific Gravity Bottle

These uncalibrated specific gravity bottles are excellent for determining the specific gravity of liquids. The borosilicate bottles feature a ground stopper for a precision fit.

34601 10ml

34602 25ml



Equal Mass Density Set 611-2005

Show the inverse relationship between density and length for cylinders of the same mass and diameter. Includes: PVC, brass, polyethylene, aluminum and nylon specimens. Each is 12 mm in diameter, but of varying length. Includes instructions.



Density Blocks Set/4 611-2020

Four 1" cubes: copper, steel, brass and aluminum. Stamped with chemical symbol.



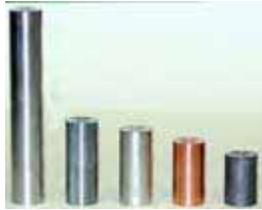
Density Blocks 1082

These blocks demonstrate the density of four different materials-aluminum, brass, steel and lead. Each cube is 3.2cm³ and has a hook.



Equal Mass Cylinder Set 1396

These cylinders demonstrate the inverse relationship between density and the length for cylinders of the same mass and diameter. This set consists of 5 cylinders (copper, aluminum, nylon, polyvinyl chloride, polyethylene) of the same mass and diameter. All the cylinders are 12 mm (1/2") in diameter and range from 14 mm to 120 mm in length.



Equal Mass cylinder Set

1396-1

Five cylinders (aluminum, copper, lead, tin and zinc) of same mass (30g) and same diameter (1/2"). The metal is identified with a stamped symbol on one end. Used for experiments on density and specific gravity. Specification sheet included.



Specific Gravity Cylinder Set

1867

5pcs/set, 58g (tin, alum., lead, zinc, brass)
This set contains four metal rods (aluminum, brass, steel & copper) of equal size. 13mm diameter & 50mm length.



Specific Gravity Block

205.1 Cubic 12pcs/set, 2cm

(acrylic, soft wood, wood, plastic, risen, iron, alum, zinc, tin, lead, brass, copper)

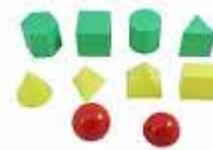
205.2 Cubic 10pcs/set, 2.5cm

(acrylic, wood, plastic, iron, alum, zinc, lead, brass, copper)

205.3 Cubic 6pcs/set, 2cm, 2x3x1cm, 1x1x1cm (iron, alum, zinc, lead, brass, copper)

205.4 Cubic with ring, 4pcs/set, 3.2cm (iron, alum, lead, copper)

205.5 Cubic, 4pcs/set, 1.3x1.3x5cm (alum., lead, brass, copper)



Specific Gravity Cylinder

206.1 specific cylinder, 3pcs/set, D2xH3.2cm (iron, alum., brass)

206.2 specific cylinder, 4pcs/set, D1.27xH5.1cm (iron, alum., brass, copper)

206.3 specific cylinder, 4pcs/set, D2xH4.7cm (iron, alum., brass, copper)

206.4 specific cylinder, 5pcs/set, 19g (copper, alum., PVC, nylon, risen)

206.5 specific cylinder, 5pcs/set, 58g (tin, alum., lead, zinc, brass)

Solid Geometric Block

MS903.2

These solids demonstrate the relationships between volume, size and shape. This set contains 10 pieces which are made of dura material.

MS912