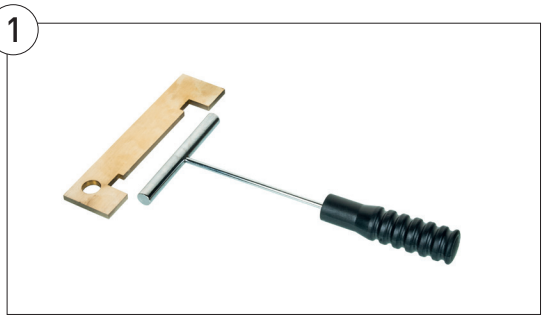
1



1. Bar Gauge Apparatus

For illustrating expansion by heating and contraction by cooling. Comprising a bar of iron mounted on a support rod with wooden handle and a brass gauge with a cut out, which only admits the bar lengthways, and a hole which passes the bar endways when cold.

Code	Pack	Price
P378	Each	£6.48

2

2. Ball & Ring Apparatus

Two piece apparatus for demonstrating thermal expansion.

Code	Pack	Price
BRNG	Each	£7.78

3

3. Bar Breaking Apparatus

To show the forces which can be exerted during thermal expansion or contraction. Comprising a heavy cast iron frame 340 x 120 x 100mm with slotted end pillars to carry a stout iron bar. The bar is threaded at one end for a large tensioning nut and has holes at the other end to accommodate the cast iron breaking bars. The apparatus is supplied with a pack of ten breaking bars. Size 75mm x 5mm.

Code	Description	Pack	Price
EDU092	Bar breaking apparatus	Each	£40.25
EDU093	Spare bars	10	£4.40

4

4. Leslie Cube

Each 100mm side of the copper cube has a different surface: dull black, bright black, white and bright. The top opening is 15mm diameter and is fitted with a lid. The apparatus is filled with water maintained at boiling point by a low Bunsen flame. Infra red sensors may be used to compare the relative radiant heat output from each of the four faces.

Code	Pack	Price
P411	Each	£13.22

5 NEW

5. Radiation Cans

A set of three cans of different colours. If the cans are irradiated using a lamp it can be easily shown that black surfaces absorb heat energy better than lighter colours. If the lamp is switched off then the black flask will radiate heat more rapidly than the others. Students will see clearly that the rate of absorption and radiation of heat energy for the black flask is greater than the other two.

Code	Pack	Price
PH202512	3	£22.39