



P5689 THERMO-ELECTRIC ENGINE

DESCRIPTION

This apparatus has been developed to demonstrate the conversion of heat into electricity and hence into useful work. It comprises a multiple cell Thermo-Electric generator sandwiched between a hot source and a cold sink where the hot source is a conventional laboratory spirit burner and the cold sink is cold air cooled by convection assisted by the action of the propellor. The current generated by the thermo-electric effect is then used to drive an electric motor on which the propellor is mounted.

On open circuit the generator has an emf of about 2 volts and the maximum current is about 1 amp and from this the output can readily be measured. The heat input is supplied by a spirit lamp and therefore the rate of fuel supply can be measured. The temperatures of the hot and cold surfaces may be recorded.

Measuring approximately 25 cm (10 in) high by 13 cm (5 in) by 13 cm (5 in) the Thermo-Electric Engine is of a simple and robust construction and can be used either for demonstration before a class or for making quantitative experiments of great interest.

TENDER SPECIFICATION

Thermo-Electric Engine comprising semi conductor pile with heater source and cooled sink supplied complete with electric motor, alcohol burner and high and low temperature thermometers.

PHYSICAL DETAILS

| | Nett Weight | | Length | | Width | | Height | |
|-------|-------------|----|--------|----|-------|----|--------|----|
| | kg | lb | m | in | m | in | m | in |
| P5689 | 2 | 4 | 0.13 | 5 | 0.13 | 5 | 0.25 | 10 |