3B SCIENTIFIC® PHYSICS



Steam Engine, Transparent 1002997

Instruction sheet

04/12 JS



1. Description

A steam engine operates in a two-stroke cycle recognisable by the inward and outward motions of the piston.

The outward motion of the piston is the working stroke and is powered by steam pressure, which is then transferred via the connecting rod to the flywheel. The return motion of the piston is propelled in the simplest instance either by the energy stored in the flywheel or by using a "double acting" piston whereby steam pressure is used to push the piston in both directions.

The input of steam into the cylinder is controlled by a slide valve.

- 1 Steam outlet
- 2 Steam inlet
- 3 Steam boiler
- 4 Slide valve to determine steam input
- 5 Flywheel
- 6 Connecting rod
- 7 Piston
- 8 Cylinder

2. Operation

Additionally recommended:

Overhead Projector (230 V, 50/60 Hz)	1003264
or	
Overhead Projector (115 V, 50/60 Hz)	1003263

- Lay the transparency on the daylight projector.
- Move the components by hand to the places which correspond to the various strokes.