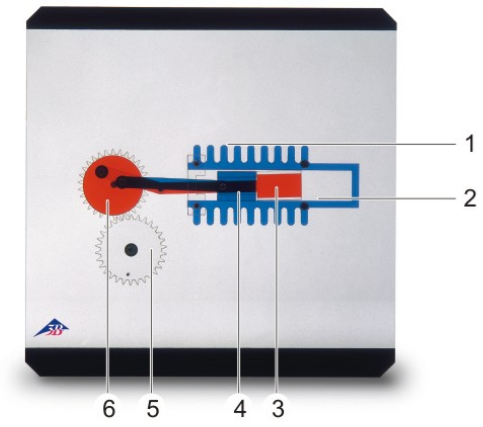
Stirling Engine, Transparent 1003000

Instruction sheet

04/12 JS



1 Cold side
2 Hot side
3 Working piston
4 Displacement piston
5 Flywheel
6 Crank shaft

1. Description

The way a Stirling engine works can be divided into four sections, or piston strokes.

1) Heat is fed to the system when the displacement piston pushes the air to the heated side of the displacement cylinder. At this time the piston is in a position known as top dead centre, here at its rightmost extreme.

2) Expansion of heated air drives the working piston towards the left. This causes mechanical work to be transferred via the crankshaft to the flywheel.

3) Heat is dissipated when the displacement piston causes the air to move to the cooler side of the displacement cylinder.

4) The cooled air is compressed as the working piston moves to the left, the mechanical energy (work) for this being provided by the flywheel.

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.