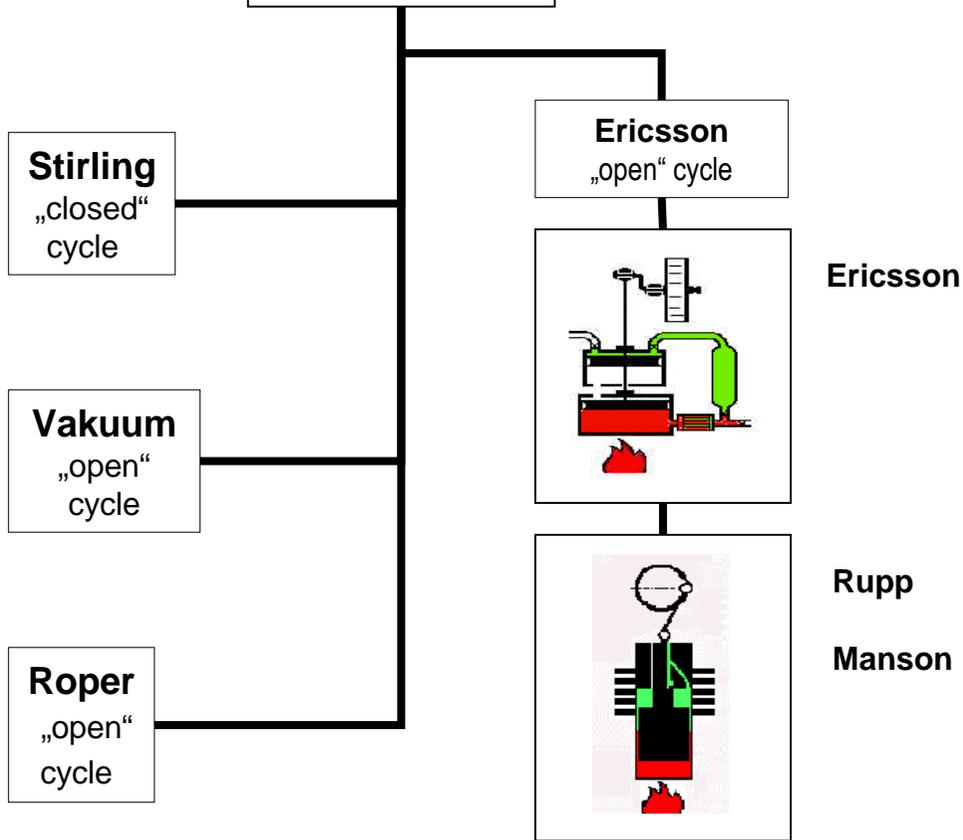


# HOT-AIR-ENGINE



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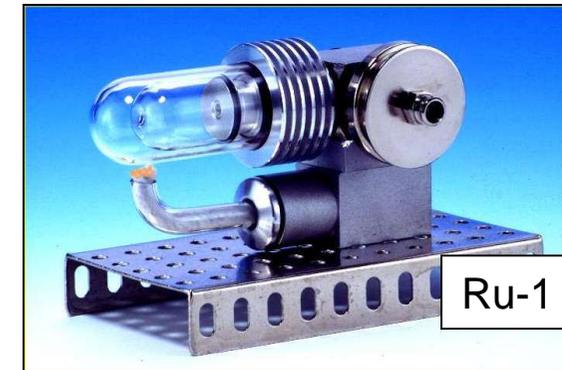
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# HOT - AIR - ENGINE

Model RU-0, Ru-1, RU-2



RU-0



Ru-1



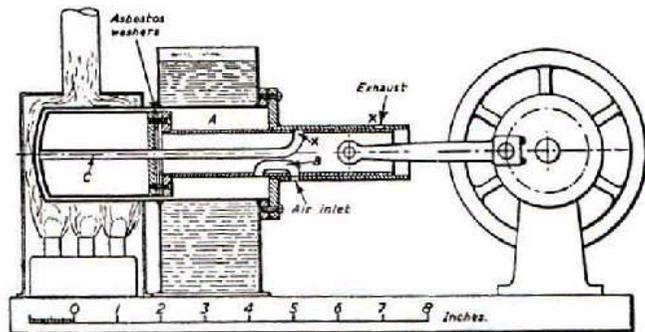
RU-2



**Operating Manual**

A similar engine was published by A.D Manson in 1952

More information: <http://www.geocities.com/kenboak/Manson.html>



From Newnes Practical Mechanics 1952.



RU-0



Ru-1



RU-2

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Also we supply books concerning stirling engines,  
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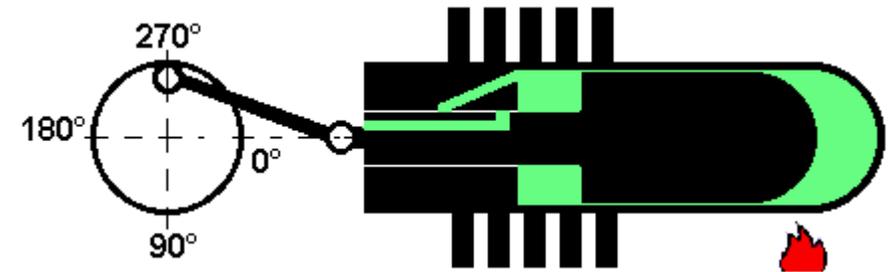
**Warning! Caution!**

This engine can be operated with liquid or solid fuel,  
concentrated sunlight, or open fire. Therefore it doesn't belong into the hands of  
children!

**Pay attention to the necessary supervision!**

**Function:**

The RU-1 is an "open" hot-air Engine. I.e. in contrast to  
the stirling engine which has a "closed" cycle. The cylinder  
space of the RU-1 allows access of outside air.



- 0 °** = pressure balance with outside air.
- 90 °** = displacer pushes cold air in hot area, = increase in pressure, power on working piston (= piston rod).
- 180 °** = pressure balance with outside air
- 270 °** = displacer pushes hot-air in cold area, = vacuum. power on working piston (= piston rod).

- The heat is supplied from the outside.  
Therefore you can use all kinds of fuel or heat sources e.g. also solar radiation.
- We recommend denaturated alcohol!**
- The engine can be operated in all positions.
- The Engine runs in both directions

The model RU-1 comes complete with burner, injection syringe and base plate.

The model RU-2 has 4 wheels, 2 axels and 1 driving-belt in addition to RU-1

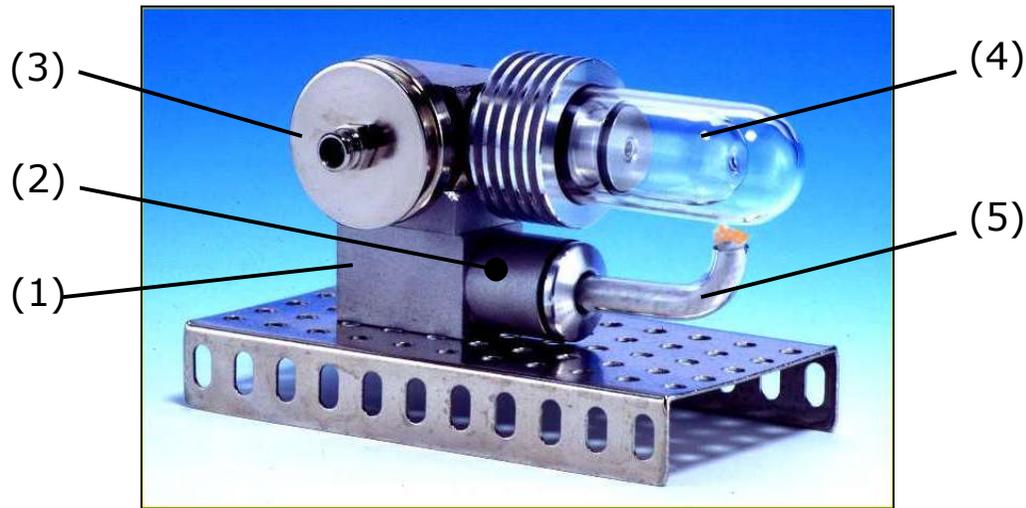
The model RU-0 has no burner (5) and fuel tank (1)

#### Operation:

The engine can be operated with liquid fuel (spirits). The fuel tank (1) which has a lateral hole (2) is filled by means of the 5cc injection syringe. After approx. 1 minute the wick (5) is soaked and can be ignited.

#### Important:

The model should be operated on a fireproof platform only.



#### Start:

Allow 30 seconds for warm up then turn the flywheel.

After a short time the engine will achieve the full number of revolutions of ca.1000U/min.

**The RU-engines are started by hand.**

Whereby the direction of rotation is arbitrary.

#### Operating:

Further references:

**Do not overfill the fuel tank (1)! Clean up spilled spirits immediately.**

**Never leave the engine unattended when the wick is burning**

**The Engine remains hot for a while after extinction of flame. Excercise caution when handling.**

#### Caution with the glass parts!

The pistons, cylinder (4) and burner pipe (5) are glass.

They are heat-resistant but **not impact resistant.**

A metallic article can shatter them.

Engine, fuel tank and base plate can be separated easily- just loosen the screws- and be put together in a different positon.

The flame is regulated by the size of the wick.



The engine is build for continuous operation. However it should be cooled down before refilling.

**Note! It's not a toy for children!**



#### Oiling:

The Engine is absolutely maintenance-free and should never ever be oiled!