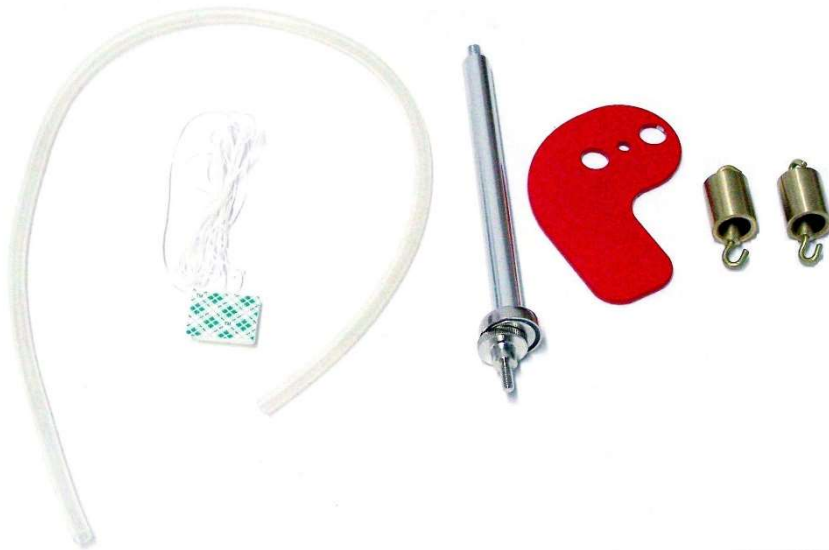


Supplementary Set for Stirling Engine D 1008516

Instruction manual

11/23 ALF/UD



1. Description

The supplementary set for the D-series Stirling engine provides accessories necessary for mounting the displacement sensor (1021534) and the relative pressure sensor (1021532) to the Stirling engine D (1000817), in order to record a pressure-volume diagram for the Stirling engine in conjunction with a data logger. More information about digital measurement can be found on the product's webpage in the 3B Web-shop.

2. Contents

- 1 Base plate to accommodate the displacement sensor
- 1 Knurled screw for fastening the base plate to a stand rod
- 1 Stem with magnetic base for displacement sensor
- 1 Silicone tubing for connecting relative pressure sensor
- 1 Set of threads with suction pad
- 2 Weights with hook, 20 g each

3. Set-up

- Attach the base plate to the stand using the knurled screw.



Fig. 1: Assembly on base plate

- Screw the stem with the magnetic base into the displacement sensor and place it on the base plate.



Fig. 2: Assembly of displacement sensor

- Loosen the screw on the displacement sensor's pulley. Wind a thread once around the pulley and lead it out of the recess placing a loop around the screw. Use the screw to fix the thread in place.



Fig. 3: How the thread is wound around the pulley

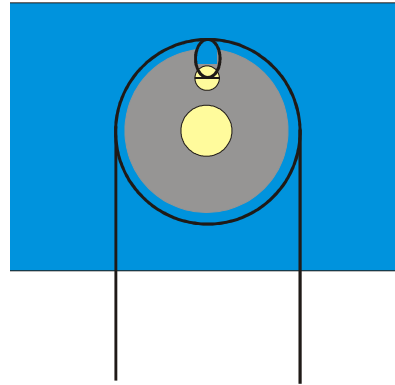


Fig. 4: Schematic illustration of how the thread is wound around the pulley of the displacement sensor

- Attach one end of the thread to the hook of the connector rod and suspend a weight from the other end.



Fig. 5: Attaching the thread to the hook on the connector rod

- Use the suction pad to attach a second thread to the base plate. Thread this over the groove in the eccentric and use the other weight as a load on the free end.

This load ensures that the pV diagram comes out better.



Fig. 6: A weight is attached to the end of the thread

- Connect the relative pressure sensor (hose nozzle "+") to the hose nozzle on the Stirling engine via silicone tubing.

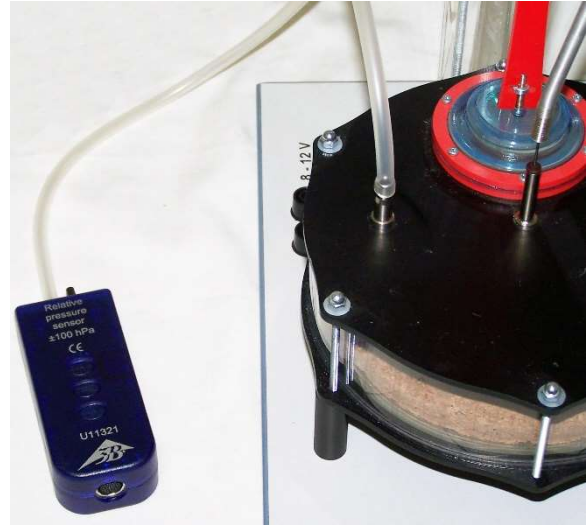


Fig. 7: Connecting the pressure sensor

- Connect the pressure sensor and the displacement sensor to the data logger.

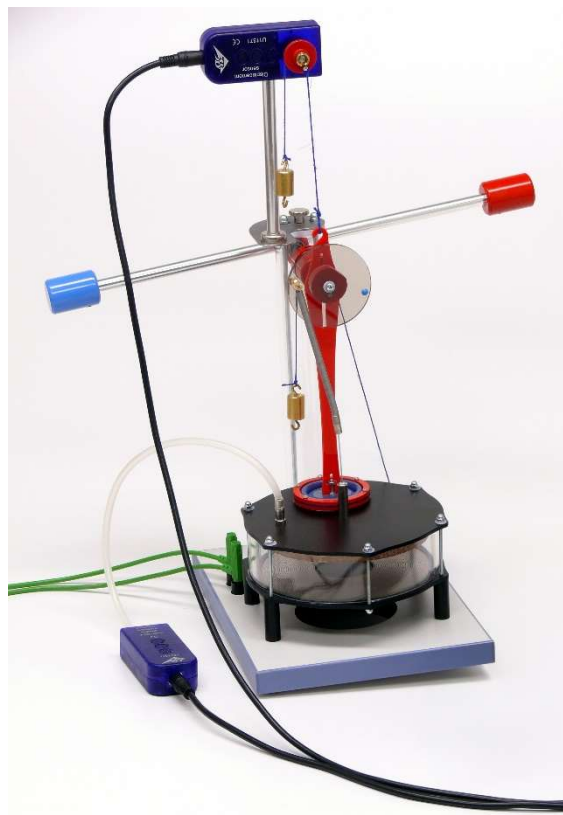


Fig. 8: Stirling engine D with installed sensors for recording the pV diagram