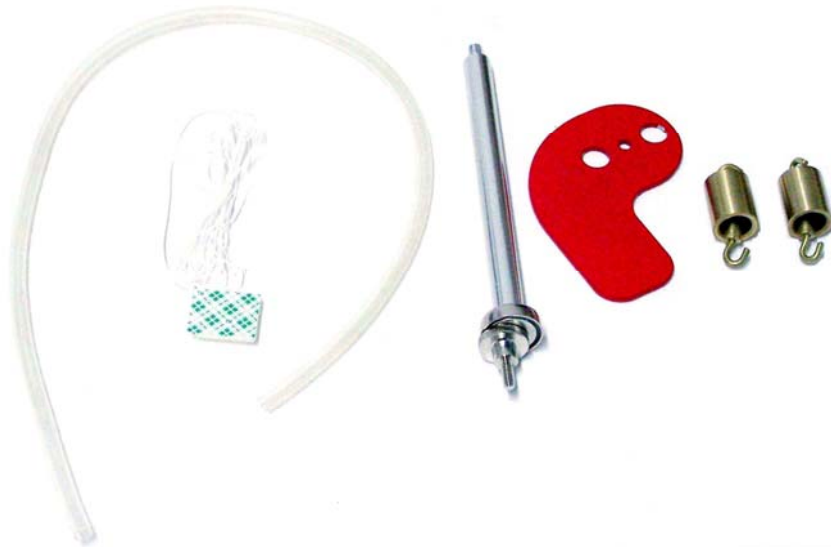


Supplementary Set for Stirling Engine D U8440455

Instruction manual

02/11 ALF



1. Description

The supplementary set for the D-series Stirling engine provides accessories necessary for mounting a displacement sensor (U11371) and a relative pressure sensor (U11321) to the Stirling engine D (U8440450), in order to record a pressure-volume diagram for the Stirling engine in conjunction with the 3B NETlog™ interface (U11300-115 or U11300-230).

2. Contents

- 1 Base plate to accommodate the pressure 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 ± 100 -hPa relative pressure sensor (U11321)
- 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

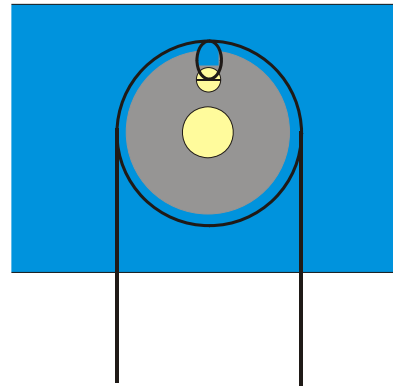


Fig. 4 Schematic illustration of how the thread is wound around the pulley of the displacement sensor (U11371)

- 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 (hoze nozzle “+”) to the hoze nozzle on the Stirling engine via silicone tubing.

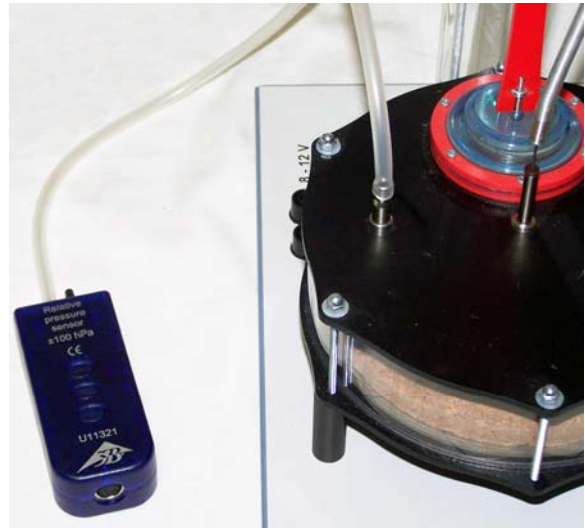


Fig. 7 Connecting the pressure sensor

- Connect the pressure sensor to analog input A of the 3B NET/log™ unit and the displacement sensor to analog input B.



Fig. 8 Set-up for recording a pressure-volume diagram

