Email : sales@scilabexport.com
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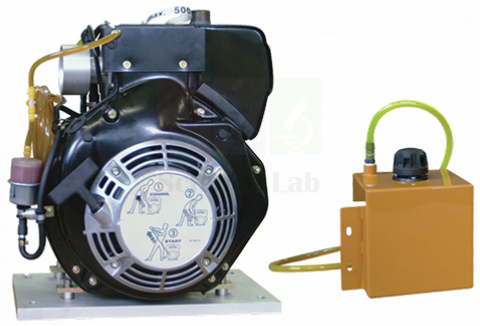
Product Name :

4 Stroke Diesel Engine

Product Code :

SLE/EE/04



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Description :

This compression-ignition engine is prepared for the engineering laboratory. It runson a dynamometer test set for performance tests, and its cylinder head and crank are modified to take a cylinder head pressure transducer and a crank angle encoder.With those connected to an engine cycle analyser, the same engine moves on to in-cylinder combustion studies.

4 stroke diesel test engine details

Parameter	Detail
Engine type	Four-stroke diesel engine for laboratory testing
Modifications	Modified cylinder head and crank
Instrumentation provision	Takes the Cylinder Head Pressure Transducer and the Crank Angle Encoder
Extended experiments	Transducer and encoder connect to the Engine Cycle Analyser
Mounting	Precision bed plate with dowels and slots that align and locate it on the dynamometer test set
Engine changeover	Located bed plate keeps the time to swap one engine for another short
Product code	SLE/EE/04
Minimum order	10 units
Dispatch	Usually within 7 to 10 working days
Manufacturer	ScienceLab (Jain Scientific Equipments Pvt Ltd), Ambala, India

Diesel engine experiments on the test set

Load test. Locate the engine on the dynamometer test set by its bed plate dowels and run it at a steady speed. Add load in steps, and at each step record torque, speed and the time taken to use a fixed volume in the manual volumetric fuel gauge. Plot brake specific fuel consumption and brake thermal efficiency against brake power.

Combustion analysis. Fit the pressure transducer and crank angle encoder, connect them to the engine cycle analyser and record pressure against crank angle at light and at heavy load. Read off ignition delay and peak pressure, convert the trace to a pressure-volume loop and compare indicated power with brake power.

Before the first run. Use the section model of a four-stroke diesel engine to show the injector, piston crown and valve timing, and the inline injection pump trainer to explain how fuel is metered and timed. Students then know which events the pres

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