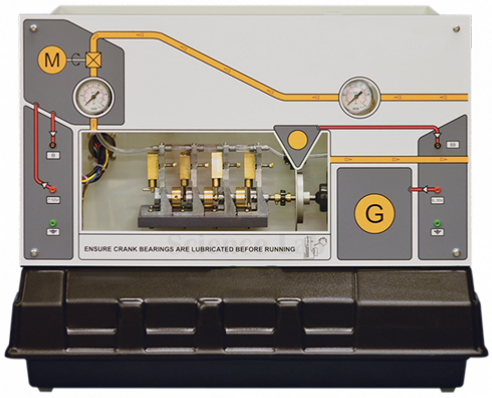
Email : sales@scilabexport.com
Phone: +91-7082934803

Product Name :

Engine Speed Control Apparatus

Product Code :

SLE/ETC/04



Description :

Engine Speed Control Apparatus (Product Code: SLE/ETC/04) is a speed-regulation trainer used to show the problems of controlling rotating machines, especially non-linear controlsystems, in engineering laboratories. It uses a scale-model engine driven by compressed air forsafety, a motorised valve that sets engine speed, and a d.c. generator that loads the engineoutput.
Jain Scientific Equipments Pvt Ltd (ScienceLab), an OEM manufacturer, produces it atits own factory in Ambala, India.

Key Details

Parameter	Detail
Engine	Scale-model engine driven by compressed air, for safety
Compressed air	Not supplied — provided by the user's laboratory
Speed actuator	Motorised valve adjusted to regulate engine speed
Load	d.c. generator connected to the engine output
Basic control task	Regulate engine speed under load
Advanced experiments	Non-linearity compensation using dither signals; multiple loop and minor loop control; system modelling from step response information; P+I control and root locus methods
Product code	SLE/ETC/04
Manufacturer	Jain Scientific Equipments Pvt Ltd (ScienceLab) — OEM
Country of origin	India (made in Ambala, Haryana)

What Is the Engine Speed Control Apparatus Used For?

The basic purpose is to adjust the motorised valve so the engine holds a set speed while the d.c. generator loads it. Valves and air-driven engines seldom respond in a straight line, so students meet non-linear behaviour directly and learn why a controller tuned at one operating point may struggle at another.

Advanced sessions use dither signals to compensate for non-linearity, compare single-loop control with multiple-loop and minor-loop structures, build a model from step-response data and design P+I controllers with root-locus methods. Running the model engine on compressed air rather than fuel keeps the exercise safe for teaching, which makes it a practical addition to engineering lab equipment for mechanical, automotive and control courses.

OEM Manufacturer

Jain Scientific Equipments Private Limited — known to customers as ScienceLab — is the OEM for the Engine Speed Control Apparatus and builds it at its own licensed factory at Saha, Ambala, Haryana, India. Engineering colleges, training centres, dealers and importers order directly from the c dled at sou

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Email : sales@scilabexport.com
Phone: +91-7082934803