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Product Name :

Two Shaft Gas Turbine

Product Code :

SLE/EE/05



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Description :

Two Shaft Gas Turbine (Product Code: SLE/EE/05) is a self-contained, fully instrumented educational gas turbine used to demonstrate and test the gas turbine cycle in engineering laboratories. Its steel frame carries a gas generator, a separate power turbine, combustion chamber, oil and fuel tanks, pumps and guards, run from a labelled control panel with a mimic diagram. It is supplied by **Jain Scientific Equipments Pvt Ltd (ScienceLab)**, Ambala, India, as part of its range of TVET lab equipment.

Key Details

Parameter	Detail
Type	Self-contained, fully instrumented educational two-shaft gas turbine
Frame	Steel frame holding the gas generator, power turbine, combustion chamber, oil and fuel tanks, pumps, ancillaries and guards
Air path	Calibrated nozzle and air box, then compressor, then combustion chamber
Fuel system	Pump transfers fuel from the fuel tank to spray through a specialnozzle into the combustion chamber
Ignition	High-energy spark ignites the air and fuel mixture, which flows to the gas generator turbine
Combustion chamber	Designed for good combustion, low pressure loss and good flame stability over a wide range of conditions
Speed control	Fuel flow control valve on the instrumentation and control panel regulates turbine speed; the design reduces the possibility of overspeed
Control panel	Clearly labelled, with schematic mimic diagram, instrument displays, controls and warning lights
Product code	SLE/EE/05
Supplied by	Jain Scientific Equipments Pvt Ltd (ScienceLab), Ambala, India

What Is the Two Shaft Gas Turbine Used For?

The trainer brings the Brayton (Joule) cycle into the laboratory. Students follow the air from the calibrated nozzle, which allows the air flow to be determined, through compression, combustion and expansion, and see how a two-shaft layout divides the work: the gas generator turbine drives the compressor, while the free power turbine on its own shaft delivers the useful output.

Typical sessions cover the start-up and shutdown sequence, the effect of fuel flow on speed, and recording the panel readings at several fuel settings to study how output and efficiency change. Always follow the start-up order shown on the mimic panel and keep the guards in place. Among engineering educational equipments in India, it lets one laboratory introduce the turbine principles behind aircraft, marine and power-generation engines.

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