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Product Name :

Coupled Drives Apparatus

Product Code :

SLE/ETC/05



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Description :

Coupled Drives Apparatus (Product Code: SLE/ETC/05) is a multi-variable drive trainer used to study the control of speed and tension in belt-coupled drives in control and electrical engineering laboratories. Two electric motors are linked by a continuous flexible belt that also passes over a swinging arm, where a jockey wheel measures belt speed and tension. It is built by **Jain Scientific Equipments Pvt Ltd (ScienceLab)**, an OEM engineering lab equipmentmanufacturer, at its own factory in Ambala, India.

Key Details

Parameter	Detail
Motors	Two electric motors
Coupling	Continuous flexible belt
Measurement	Swinging arm with a jockey wheel measuring belt speed and tension
Manual adjustment	Manual control for the spring tension at the swinging arm
Basic control task	Vary the torque in the motors to regulate belt speed and tension
User guide topics	Speed and tension control; simultaneous control of velocity and tension; analysis of multi-variable control systems
Industrial examples	Magnetic tape drives, textile machines and paper mills
Product code	SLE/ETC/05
Manufacturer	Jain Scientific Equipments Pvt Ltd (ScienceLab) — OEM
Country of origin	India (made in Ambala, Haryana)

What Is the Coupled Drives Apparatus Used For?

In a coupled drive, changing either motor's torque affects belt speed and belt tension at the same time, so the two outputs interact. Students first control speed and tension separately, then attempt simultaneous control of velocity and tension, and discover why a multi-variable system needs a coordinated strategy rather than two independent loops.

Adjusting the spring tension at the swinging arm changes the plant, giving instructors a simple way to test how robust a controller is. The same problems occur in magnetic tape drives, textile machines and paper mills, which helps mechanical and electrical students connect theory to industry — a useful addition to any technical educational equipment list.

OEM Manufacturer

The Coupled Drives Apparatus is an OEM product of Jain Scientific Equipments Private Limited, which trades as ScienceLab. It is manufactured at the company's own licensed factory at Saha, Ambala, Haryana, India and dispatched from there to universities, colleges, dealers and importers. If you later need matching units or a replacement part such as a belt, ask us directly — you w nd.

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