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**Product Name :**

Gear Train Model

**Product Code :**

SLE/MCE/28



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## Description :

**Gear Train Model** (Product Code: SLE/MCE/28) is a mechanism model used to demonstrate a differential gear train built entirely from spur gears, in theory of machines and automobile engineering laboratories. It combines two planetary gear trains whose sun gears are coaxial, so students can hold either wheel and watch how the remaining gears keep turning. It is made by **Jain Scientific Equipments Pvt Ltd (ScienceLab)**, an OEM manufacturer, at its own factory in Ambala, India.

### Key Details

| Parameter | Detail |
|---|---|
| Mechanism | Differential gear train |
| Gear type | All spur gears |
| Arrangement | Combination of two planetary gear trains with coaxial sun gears |
| Both wheels free | With the mechanism driven, all spur gears run |
| Right wheel held | Right sun gear becomes fixed; the other gears still rotate |
| Left wheel held | Left sun gear becomes fixed; the other gears still rotate |
| Application shown | Situations that require two controllable inputs |
| Product code | SLE/MCE/28 |
| Manufacturer | Jain Scientific Equipments Pvt Ltd (ScienceLab) — OEM |
| Country of origin | India (made in Ambala, Haryana) |

### What Is the Gear Train Model Used For?

A differential lets two outputs turn at different speeds from one input, which is why a vehicle's wheels can take a corner without scrubbing. Textbook diagrams can make this hard to picture; this model shows the same function with spur gears only, arranged as two planetary trains sharing a common axis. Holding one wheel fixes its sun gear, and students can watch the other gears keep turning and relate what they see to the kinematic equations of planetary trains.

A good exercise is to drive the model slowly, count output turns with one wheel held and then the other, and compare the results with calculated values. The model also illustrates mechanisms that need two controllable inputs, a topic that links theory of machines with robotics and control. Handle it at low speed and keep fingers clear of meshing gears. It is well suited as engineering lab equipment for demonstration tables and student practicals alike.

### OEM Manufacturer

The Gear Train Model is manufactured by Jain Scientific Equipments Private Limited (CIN U29309HR2020PTC087597), which trades as ScienceLab and is the OEM (original equipment manufacturer) of this model. Production takes place at the company's licensed factory at 449, HSIID

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