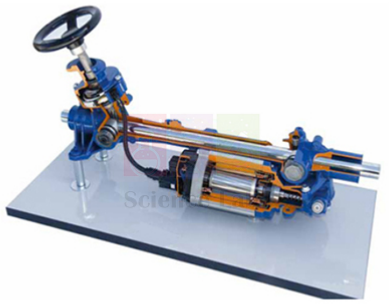
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Product Name :

Cut Model Of Rack And Pinion Steering

Product Code :

SLE/MCE/64



Science Lab
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Description :

The Cut Model Of Rack And Pinion Steering is a sectioned model: turn its crank handle and the pinion drives the rack sideways, just as it does when a driver turnsthe steering wheel. Beside the rack type steering box, the tubular frame carries a hydraulic pump, an oil tank with its filter and the connecting pipes, so students can trace the power-assist circuit as well as the gears.

Rack and pinion steering model specifications

Parameter	Detail
Steering type	Rack and pinion, rack type steering box
Hydraulic components	Hydraulic pump; oil tank with filter; connecting pipes
Operation	Manual, by crank handle
Mounting	Tubular frame on a base
Finish	Imported colour paint with gloss coating; hardware and gears electroplated
Dimensions	1000 × 600 × 550 mm
Weight	Approx. 25 kg
Product code	SLE/MCE/64
Minimum order	10 units
Dispatch	Usually within 7 to 10 working days
Manufacturer	ScienceLab (Jain Scientific Equipments Pvt Ltd), Ambala, India

Steering exercises with the rack and pinion model

Rack travel per pinion turn. Mark the crank handle and the rack, turn the handle through one full turn and measure how far the rack moves with a vernier caliper or steel rule. Then count the turns from one end of travel to the other and work out the total rack stroke.

Tracing the power-assist circuit. Follow the pipes from the oil tank and filter to the hydraulic pump, on to the steering box and back again. Students label the pressure and return lines and say where a leak or trapped air would make the steering heavy. The power steering gear trainer gives a second design to compare.

Fluid pressure in chassis systems. Set the model next to the working model of hydraulic braking system and compare how each system uses fluid under pressure. Power steering oil helps the driver push the rack, while brake fluid applies the brakes at the wheels.

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