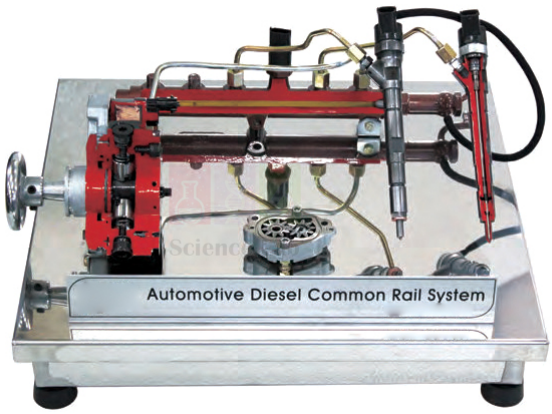
Email : sales@scilabexport.com
Phone: +91-7082934803

Product Name :

CRDI (Common Rail Direct Injector) System

Product Code :

SLE/ATE/19



Science Lab
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Description :

The CRDI (Common Rail Direct Injector) System is a compact teaching set with a CRDI engine fuel pump, an injector nozzle cut open to show its inside, and a complete injector nozzle. The incised sections are painted in different colours. The pump and nozzles are production units on a training stand built in Ambala, and at about 5 kg the set passes easily round a table group.

CRDI pump and nozzle set specifications

Parameter	Detail
Type	Educational unit for the CRDI fuel pump and injector nozzle
Composition	CRDI engine fuel pump, incised injector nozzle, injector nozzle
Finish	Each incised section painted in a different colour
Pump and nozzles	Sourced production units (as listed)
Weight	Approx. 5 kg
Size	Approx. 400 × 300 × 300 mm
Product code	SLE/ATE/19
Minimum order	10 units
Dispatch	Usually within 7 to 10 working days
Manufacturer	ScienceLab (Jain Scientific Equipments Pvt Ltd), Ambala, India

Common rail lessons with the pump and nozzle set

Tank-to-nozzle fuel path. Starting from the pump, students put the common rail circuit in order: low-pressure supply, filter and water separator, high-pressure pump, rail, then injector. For each stage they write one line on what it adds, with the pump on the bench as the reference point.

Common rail against pump-timed injection. Set the unit beside a VE distributor pump system and an inline pump system. Students note that in those older designs the pump meters and times every injection, while in common rail the pump only builds pressure and the control unit opens each injector to set timing and quantity.

Nozzle cutaway study. Compare the incised nozzle with the complete one. Students sketch the needle, its seat, the pressure chamber and the spray holes, then mark which surfaces must stay clean for a sharp cut-off at the end of each injection.

From parts to symptoms. Move on to the diesel engine fault diagnosis trainer and link misfire, smoke and rough idle on a running engine to the nozzle parts the group has just d

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