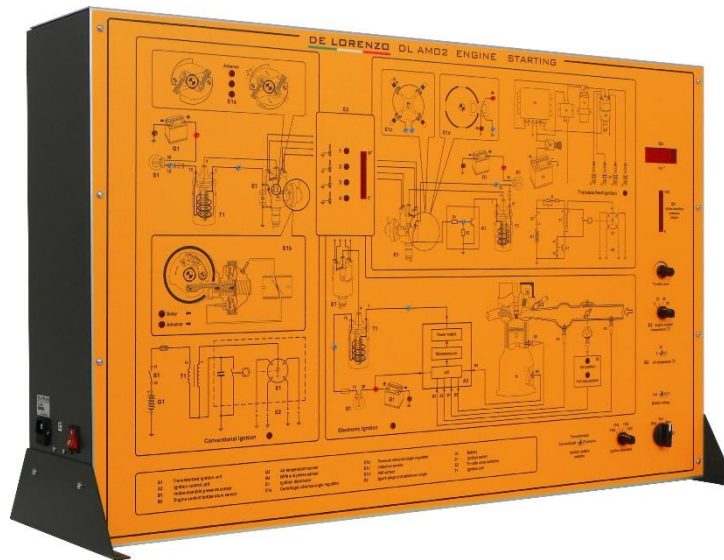
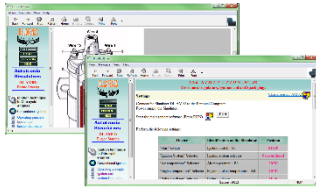




## ENGINE STARTING



**DL AM02**

### LEARNING EXPERIENCE

This simulation panel deals with the study of the starting techniques used in the Otto cycle motors. The main types of starting are here analysed: conventional with coil, with transistors and electronic starting.

As a first starting system, the simulator analyses the conventional starting with coil in which the system is controlled by contacts. This means that the current which flows through the starting coil is inserted or de-inserted mechanically through a contact in the starting distributor.

Then, the simulator analyses the starting system with transistors, where the starting contact-breaker does not have to control any more the current of the primary, but only the control current of a transistor which takes care of the switching of the current of the primary. In addition for the starting system with transistors and control through contacts also the versions of transistor starting system with priming system through Hall transducer or through inductive transducer are here analysed in detail. Finally, the simulation panel studies also the electronic starting in which the mechanical regulator of the spark advance is eliminated and the same spark advance is calculated by the electronic control panel.

### MAIN CHARACTERISTICS

The simulator analyses the starting techniques. In particular:

- Conventional ignition controlled through contacts
- Transistor based ignition controlled through contacts
- Transistor based ignition controlled through Hall transducer, with fixed closing angle
- Operating principle of the inductive sensor (used for the per transistor based ignition)
- Electronic ignition with transducer of the number of revolutions on the engine shaft

This vertical frame bench-top trainer is specially designed to show to students how automotive systems work. The simulator consists of a panel operated by the support of a computer with a coloured silk-screen diagram that clearly shows the structure of the system and allows the location of the components on it.

The display of the information available on the computer screen allows the continuous control of the educational system. The operational conditions can be entered by the students and the insertion of faults can be carried out through the computer by the teacher.

The trainer is supplied with a CAI Software and the supported documentation guides the students to the study and the performance of the simulation exercises.



## GENERAL CHARACTERISTICS

- Dim. mm approx (HxLxW) : 700x1000x150 - (470 with the base)
- Weight approx. kg 25
- Input power supply: AC 220V $\pm$ 10% 50 Hz
- Working temperature: -40°C ~ +50°C.

All components installed and given leads are made to protect the safety of the students.