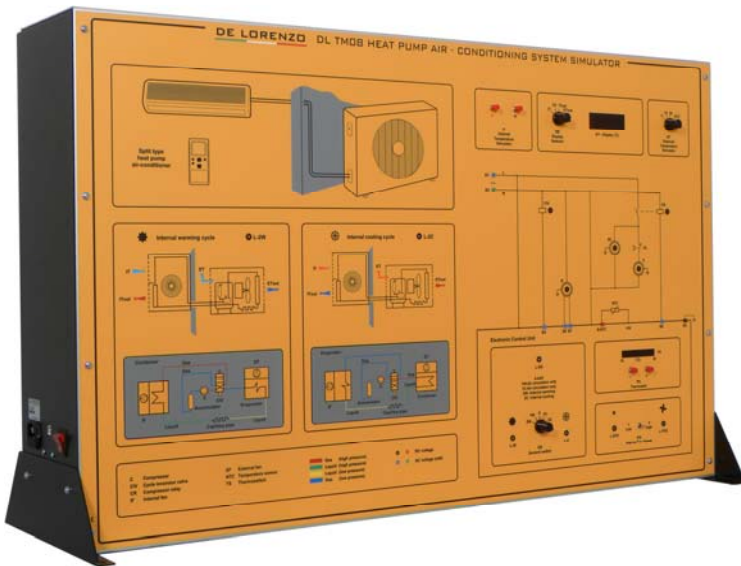# HEAT PUMP AIR-CONDITIONING SYSTEM

DL TM08

The simulator allows the study, the performing of experiments and the troubleshooting for the following system:

- Fixed air-conditioner, split type, with air-air heating pump, for cooling and heating the ambient

This system is reproduced on the panel, through a colour representation which allows a complete analysis of the fluid circuit, of its components and of the electrical/electronic circuit for control and regulation.

TRAINING OBJECTIVES

It is possible to simulate the behaviour of components and systems, on the basis of the operating conditions which can be monitored directly on the panel or through Personal Computer by teacher and students.

The Personal Computer constantly keeps under control the simulation in progress and displays its behaviour through analog and digital signals and meters; in this way the student, through measurements and tests, can go on with the troubleshooting.

Dimensions: 0.66 x 1.04 x 0.35 m.
Net weight: 16 kg.
Average training hours: 10 h.

The system is supplied with a Student Navigator software that allows students to perform their learning activities through a Personal Computer, without the need for any other documentation.

Moreover, the Student Navigator is provided with an interface to the Laboratory Management software.

TECHNICAL DESCRIPTION

The fixed air-conditioner, split type, with air-air heating pump, for cooling and heating the ambient is composed of the following main elements:

- Single-phase motor compressor
- Condenser/evaporator with ventilation through single-phase electric motor
- Evaporator/condenser with ventilation through single-phase electric motor
- Two expansion thermostatic valves
- Two single-direction valves for by-pass circuits
- Monostable electro valve for inversion of the refrigerating cycle
- Liquid tank
- Regulation thermostat
- Internal fan speed selector
- Main switch
- Cooling/heating selector
- Possibility to simulate the internal and external temperatures
- Possibility to display the temperature values of the treated air