

Product Name : " CAR AIR CONDITIONING TRAINER "
Product Code : " R.A.C 23 "



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Description :

CAR AIR CONDITIONING TRAINER:-

AIM:-

Principle of operation, layout and usage of a car air conditioner

- Recognition of typical malfunctions and repair on an air conditioner
- Simulation of eight system faults

INTRODUCTION:-

Air conditioning is the simultaneous control of the temperature, humidity, motion and purity of the atmosphere in a confined space. Air conditioning applies in the heating season as well as in the cooling season. The air conditioning has wide applications in submarine ships, aircrafts and rockets. Air conditioning is associated with the human comfort and controlling the humidity ratio.

How Air Conditioning Works

Air conditioning like it says 'conditions' the air. It not only cools it down, but also reduces the moisture content, or humidity. All air conditioners work the same way whether they are installed in a building, or in a car. The fridge or freezer is in a way an air conditioner as well. Air conditioning is a field in it's own right, but we'll stick to the main points of a car's air conditioning and the main parts used and a few hints to keep the air-con system running properly.

A number of people don't realise that turning on the air conditioning actually reduces the number of miles per gallon of your car. There is energy used in removing the heat and moisture from the air in the car, and this consumes petrol because of the extra engine load.

TECHNICAL SPECIFICATION:-

The refrigerant circuit contains a belt-driven compressor, an air-cooled condenser and an evaporator with cold air outlet and expansion valve. All components used in the trainer are typical parts found in automotive engineering, so it is relevant in practice.

Specification

1. Mobile, complete car air conditioning system.
2. Drive motor.
3. Axial piston compressor.
4. Compact evaporator with expansion valve and fan.
5. Moment transmission motor-compressor using magnetic coupling.
6. System switched on using ignition switch.
7. Refrigerant R134a, CFC-free.
8. Internal power supply: 12VDC.
9. 400V, 50Hz, 3 phases.
10. Drive motor
11. Compressor: 7 cylinders, refrigerating capacity: approx. 3kW at 3000rpm.
12. Condenser: capacity: 6.6Kw.
13. Evaporator: capacity: 5.3kW.

