



The ConsuLab EM-2000-HB-R1234yf Air Conditioning trainer is a complete A/C system with unique features designed to enhance the instruction of air conditioning physics. The trainer uses the H-Block TXV design with R1234yf flow control. The trainer uses common automotive components and can be used in both classroom and shop environments. The trainer utilizes a hermetically sealed and internally protected compressor. Oper-ates on 120V 15A 60Hz circuit.

### EDUCATIONAL ADVANTAGES:

- Trainer has all major components required for an automotive air conditioning system using the H-Block TXV system.
- Fully operational with typical component layout and organization.
- Clear sight glasses provide clear understanding of the H-Block (TXV) air conditioning refrigeration cycle.
- Allows student observation of refrigerant changes of state (liquid/vapor) at the receiver/drier, evaporator and condenser.
- Trainer can be connected to any A/C Recycling/Recovery equipment using R1234yf ports.
- Allows visual inspection of the role and operation of the H-Block (TXV) and receiver/drier.
- Provides pressure and temperature measurement displays of evaporator and condenser.
- Is equipped with an Internal Heat Exchanger (IHX) to increase subcooling of the refrigerant.
- Allows the introduction of system restrictions and blockages for diagnostic learning.
- Adjustable fan speeds for demonstrations of typical performance problems for evaporator and condenser.
- Removable magnetic component identification labels and refrigerant flow arrows for student learning.
- Equipped with high pressure cut-out switch, evaporator deicing switch and internal compressor protection.
- High and low side ball valves can be adjusted to demonstrate various system restrictions resulting in abnormal operation.
- Trainers condenser, evaporator and compressor cycling switches can be adjusted to demonstrate various abnormal symptoms.

### SPECIFICATIONS

#### FEATURES:

- OEM R1234yf ports.
- High and Low side A/C pressure gauges.
- Adjustable temperature control switch for evaporator temperature levels.
- Digital thermometers (4) at inlet and outlet of evaporator and condenser.
- Internally protected hermetically sealed A/C compressor.
- A/C compressor has manual starter with internal thermal protection.
- High pressure (300psi) safety switch shuts off compressor.
- Adjustable 3-speed evaporator (1) and condenser (2) fans.
- Cycling switch bypass toggle switch.
- Stainless steel condensate drip pan with drain.
- Power "ON" indicator light.
- Removable magnetic component name and refrigerant flow arrow labels.
- Operation Manual with student assignments included.

#### TECHNICAL INFORMATION:

- Operates on a 120V 15A 60Hz circuit.
- Refrigerant: R1234yf (28 oz or 1.75 lb) (794 g).
- Refrigerant Oil: Ester 100 ISO, viscosity at 100.
- Sturdy powder coated metal stand with two locking swivel and two fixed casters.
- Dimensions: 46" x 30" x 67" (116.8 x 76.2 x 170.1 cm) / 48" x 40" x 69" (121.9 x 76.2 x 170.1 cm) (w/package).
- Weight: 250 lb (113.6 kg) / 395 lb (179.5 kg) (w/package).