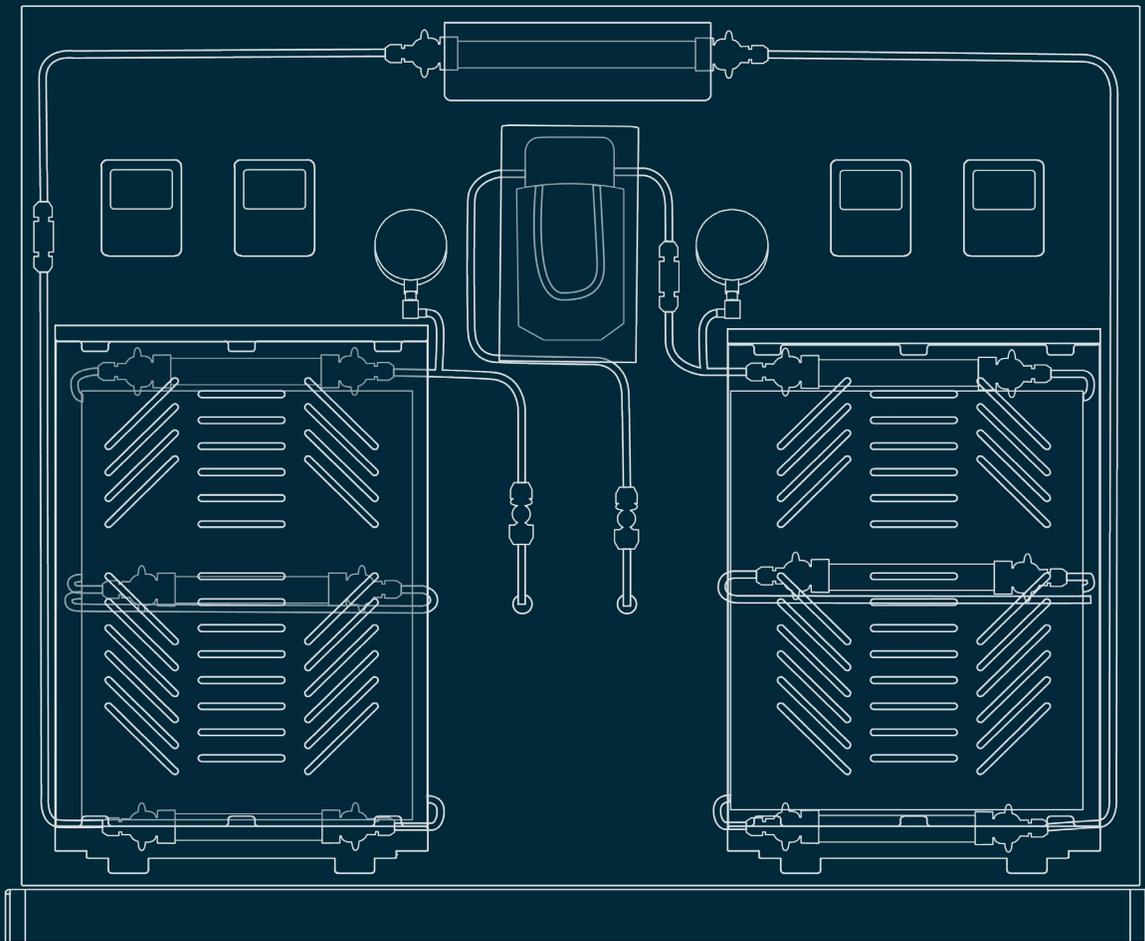




# Air conditioning system trainer with orifice tube





The Consulab EM-2000-OT 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 orifice tube design of refrigerant 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. Operates on a 120V 15A 60Hz circuit.

## EDUCATIONAL ADVANTAGES

- Clear sight glasses at the orifice tube, condenser and evaporator allow demonstration and observation of the refrigerant change of state, which reinforces vapor/liquid physics.
- Two rows of LED's help in viewing refrigerant flow in condenser and evaporator.
- High and Low side pressure gauges and OEM R134a service ports provide real-world diagnostic opportunities. A/C recycling/recovery machines and manifold gauges can be installed on the trainer.
- Clear accumulator equipped with an internal light to show refrigerant operation and change of state, and desiccant operation.
- Digital thermometers located at the inlet and outlet of both evaporator and condenser allow students to observe complete A/C system operation. (Thermometers can be controlled [on/off] by instructors).
- In-line ball valves allow creation of system restrictions or blockages on high and low sides.
- Multi-speed fans for evaporator and condenser can be used to demonstrate abnormal operating conditions.
- Various A/C system symptoms can be created and demonstrated.
- Cycling switch bypass to allow the evaporator to become cooler than normal.
- Magnetic component identification labels and refrigerant flow direction arrows for student learning/testing objectives.

## FEATURES

- Clear sight glasses at the orifice tube, condenser (3) and evaporator (3). Sight glasses located at the inlet, mid-way and outlet of both evaporator and condenser to show refrigerant change of state.
- Orifice tube system.
- Hermetically sealed piston type compressor with oil reservoir.
- Accumulator has transparent housing allowing observation of internal operation of refrigerant and desiccant.
- Cycling switch bypass to allow the evaporator to become cooler than normal.
- High and low-side A/C pressure gauges.
- A/C compressor has manual starter with internal thermal protection.
- Adjustable 3-speed fans at evaporator (1) and condenser (2) can be used to demonstrate abnormal conditions.
- Two rows of LED's help in viewing refrigerant flow in condenser and evaporator.
- High pressure (300psi) safety switch shuts off compressor.
- OEM R134a service ports.
- Stainless steel condensate drip pan with drain.
- Power "ON" indicator light.
- Removable magnetic component name labels and refrigerant flow direction arrows.
- Operation and Student assignment manual included.

## TECHNICAL INFORMATION

- Operates on a 120V 15A 60Hz circuit.
- Refrigerant: R134a (24 oz) (680 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/packaging).
- Weight: 250 lb (113.6 kg) / 395 lb (179.5 kg) (w/packaging).

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