



# AUTOMOTIVE A/C SYSTEM TEST ROOM

For automotive full A/C systems testing, ETC's Automotive A/C Systems Test Room is designed with the customer's configuration in mind. This self contained research lab will allow the user to simulate a range of temperature, humidity and refrigerant/coolant conditions for automotive a/c system, heater core, evaporator and condenser testing.

For dual HVAC testing, the automotive a/c systems test room enables the testing of multiple test units for vans, mini-buses and SUV's, decreasing the time required to test multiple units in a single unit test configuration.



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# A/C SYSTEM TEST ROOM SPECIFICATIONS

## APPLICATIONS

### A/C SYSTEM AND COMPONENT PERFORMANCE

Evaporator, Condenser, Heater core and Radiator test configurations

## CONTROL SYSTEMS

Allen Bradley Process Automation Controller (PAC) with TSAC HMI in a user friendly Windows environment

## FEATURES

### CONDENSER

Temperature Range	59° to 122°F (15 to 50°C)
Relative Humidity	20 to 90%
Frontal Velocity	0 to 26 ft/sec. (0 to 8.0 m/sec.)
Maximum Capacity	60 KW

### EVAPORATOR/HEATER CORE

Air Temperature	32° to 122°F (0 to 60°C)
Relative Humidity	20 to 90%
Evaporator/Heater Core Airflow	50 to 500 cfm (85 to 850 m <sup>3</sup> /hr)
Maximum Capacity	45 KW

### REFRIGERATION LOOP

Refrigerant	134a
Compressor Drive Motor	30 HP
Capacity	45 KW
Speed Range	400 - 6,000 RPM

### COOLANT LOOP (50/50 GLYCOL)

Flow Rate	0 to 10 gpm (0 to 37 l/min)
Temperature Range	Ambient to 212°F (100°C)
Airflow Rate	50 to 500 cfm (85 to 850 m <sup>3</sup> /h)
Heating Capacity	45 KW

### CONTROL PARAMETERS

Room Dry Bulb Temperature Range	50°F to 122°F (10 to 60°C)
Room Dry Bulb Control	PID with remote setpoint
Stability	± 0.3°C
Room Dewpoint Range	41°F to 95°F (5 to 35°C)
Room Dewpoint Control	PID with remote setpoint
Stability	± 0.3°C
Evaporator Air Supply Temperature Range	32°F to 122°F (0 to 60°C)
Evaporator Air Supply Temperature Control	PID with remote setpoint
Stability	± 0.3°C
Condenser Frontal Air Velocity Range	0 to 26 ft./sec. (0 to 8 m/s)
Condenser Frontal Air Velocity Control	PID with remote setpoint
Stability	± 3%
Compressor Drive Speed	400-6000 rpm PID with remote setpoint

*\*Extended temperature/RH ranges available*

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