



COMPRESSOR CALORIMETERS

A compressor calorimeter is used to measure the thermal performance and energy efficiency of a refrigeration compressor. ETC's calorimeter simulates various environmental and thermal loading conditions experienced during operation of a refrigeration compressor.

ETC's compressor calorimeter design is based on our decades of experience designing calorimeters for the HVAC and appliance industries. ETC's calorimeter uses the latest and most accurate sensors, controls, data acquisition system and is fully automated with a PC computer. The calorimeter creates very precise environmental and thermal loading conditions thus generating accurate and repeatable results.

CALORIMETERS SPECIFICATIONS

FEATURES

Hermetic and semi-hermetic compressor testing

Refrigerant: R134a, R22, R410A, R600a, A2L and volatile refrigerants such as R1234yf, R32 Propane 1234 ZE, R-455A AND R-445c

Calorimeter designed to ASHRAE 23 and ISO 917 standards

Ambient temperature control for compressor compartment and secondary refrigerant compartment

Support equipment skid can be integral or remote for A2L and volatile applications

Various communications interfaces including ASCII, Ethernet I/P, ModBus, CanBus

Capable of testing at AHRI conditions

APPLICATIONS

Performance and energy efficiency of compressors for refrigerators, freezers and A/C unit

Development of systems with new refrigerants

Compressor development and evaluation

Compressor lubricant R&D

OPERATING SPECIFICATIONS

Capacity range	150 to 600,000 BTU/hr (44 to 175 kw)
Evaporating temperature range	-25° to 59°F (-32° to 15°C)
Condensing temperature range	86° to 158°F (30 to 70°C)
Superheat (Suction) temperature range	Up to 100 F (40°C) (-10 to 40°C)
Sub-Cool Liquid temperature range	Up to 54F (30°C)
Compressor chamber	68° to 150°F (20 to 65°C)
Voltage	80 V to 500 V
Frequency	50/60 Hz

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